LCX603
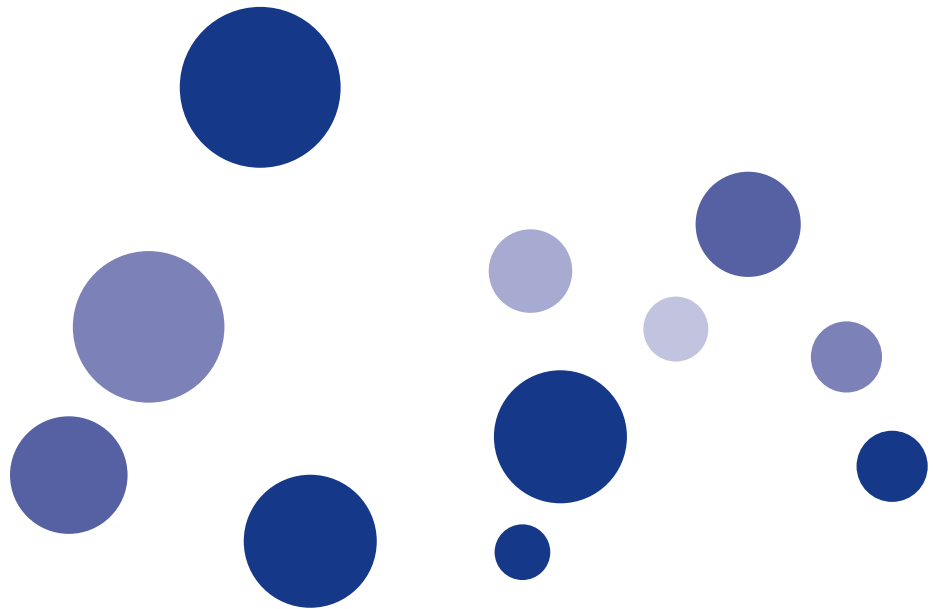
LABELROBO

USER'S MANUAL

GRAPHTEC

To Ensure Safe and Correct Use

- To ensure safe and correct use of your label printer, read this Manual thoroughly before use.

- After having read this Manual, keep it in a handy location for quick reference as needed.

- Do not permit small children to touch the label printer.

- The following describes important points for safe operation. Please be sure to observe them strictly.

Conventions Used in This Manual

To promote safe and accurate use of the label printer as well as to prevent human injury and property damage, various safety symbols are used. The indications and meanings are as shown below. Please read the full text once these contents are fully understood.

⚠ DANGER	This category provides information that, if ignored, is highly likely to cause fatal or serious injury to the operator.
⚠ WARNING	This category provides information that, if ignored, is likely to cause fatal or serious injury to the operator.
⚠ CAUTION	This category provides information that, if ignored, could cause injury to the operator or physical damage to the label printer.

Description of Safety Symbols

⚠	The symbol ⚠ indicates information that requires careful attention (which includes warnings). The point requiring attention is described by an illustration or text within or next to the symbol ⚠.
🚫	The symbol 🚫 indicates action that is prohibited. Such prohibited action is described by an illustration or text within or next to the symbol 🚫.
❗	The symbol ❗ indicates action that must be performed. Such imperative action is described by an illustration or text within or next to the symbol ❗.

Safety Precautions

⚠ WARNING

During a cutting/printing operation, do not touch the roller, tool carriage, and other moving parts.

• Such action may cause human injury.

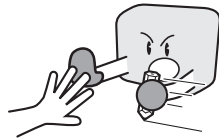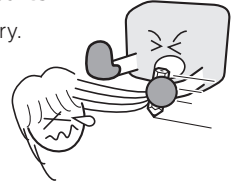**No touching**

During a cutting/printing operation, be sure to keep your hands, hair, and so forth away from the roller, tool carriage, and other moving parts.

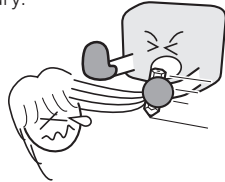• Such action may cause human injury.

No touching

Even when the label printer is stopped, it may suddenly start operating if it receives data, so be sure to keep your hands, hair, and so forth away from the vicinity of the roller, tool carriage, and other moving parts.

• Such action may cause human injury.

No touching

Make sure that the label printer is grounded.

• If the printer is not grounded, the operator could suffer an electrical shock in case of current leakage.
• Always make sure the ground connection is in place before connecting the power plug into the power supply. In addition, always disconnect the power plug from the power supply when removing the ground connection.
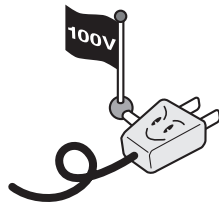
Ground the Plotter
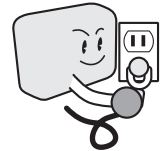
Do not connect the label printer to a non-rated power supply.

• Use of a different supply voltage may result in electrical shock or a fire hazard due to current leakage.

100V

Prohibited

Do not use the label printer in a location where it will be exposed to water, rain or snow.

• Use of a different supply voltage may result in electrical shock or a fire hazard due to current leakage.

Avoid water **Beware of electrical shock**
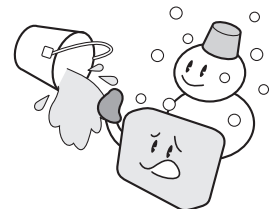
If the label printer generates smoke, is too hot, emits strange odor, or otherwise functions abnormally, do not continue using it. Turn off its power and unplug its power cord from the electrical socket.

• Use of the label printer in such status may result in a fire hazard or electrical shock.
• After confirming that smoke is no longer being generated, contact your sales representative or nearest Graphtec vendor to request repair.
• Never try to perform repair yourself. Repair work by inexperienced personnel is extremely dangerous.

Prohibited

Do not disassemble or remodel the label printer.

• Use of a different supply voltage may result in electrical shock or a fire hazard due to current leakage.
• Contact with the high-voltage parts within the label printer may cause electrical shock.
• Contact your sales representative or nearest Graphtec vendor to request repair.

No disassembly

Safety Precautions

⚠ WARNING

### Do not allow dust or metallic matter to adhere to the power plug.

- Use of a different supply voltage may result in electrical shock or a fire hazard due to current leakage.
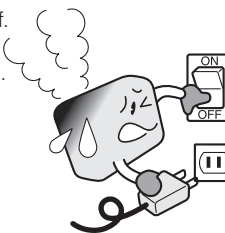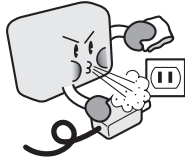
Prohibited

Beware of electrical shock

Do not use the power cord if it is damaged.

- Use of a damaged cord may result in electrical shock or a fire hazard due to current leakage.
- Replace the power cord with a new one.

Disconnect power plug from outlet

Handle cutter blades with care.

- Avoid direct contact with the cutter blade. Touching the blade with your bare hand may cause injury.
- During a cutting operation, keep away from the cutter blade.

No touching
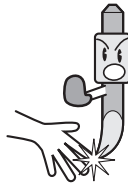
⚠ CAUTION

Do not use or store the label printer in a location exposed to direct sunlight or the direct draft of an air conditioner or heater.

- Such locations may impair the performance of the label printer.
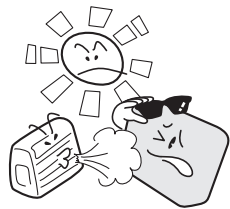
Prohibited

Do not use or store the label printer in an excessively dusty or humid location.

- Such locations may impair the performance of the label printer.

Prohibited

Do not place a coffee cup or any other receptacle containing water or other fluid on top of the label printer.

- Fluid falling inside the label printer may cause electrical shock or a fire hazard due to current leakage.

Avoid water

Beware of electrical shock

Do not install, use, or store the label printer in a location subject to excessive mechanical vibration or electrical noise.

- Such locations may impair the performance of the label printer.
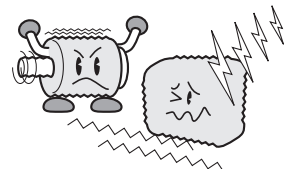
Prohibited

Safety Precautions

⚠️ CAUTION

When disconnecting the power cord or an interface cable, do not pull on the cord/cable.

• Such action will damage the cord/cable, resulting in a fire hazard or electrical shock.

🚫 **Prohibited**
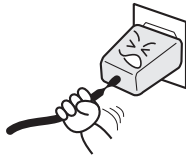
If water or foreign matter enters inside the label printer, do not continue using it. Turn off its power and unplug its power cord from the electrical socket.

• Use of the label printer in such a status may result in electrical shock or a fire hazard due to current leakage.
• If the label printer requires repair, contact your sales representative or nearest GRAHTEC vendor.

Disconnect power plug from outlet
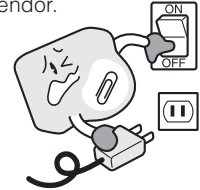
Do not clean the label printer using a volatile solvent (such as thinner or benzene).

• Such action may impair its performance.

🚫 **Prohibited**
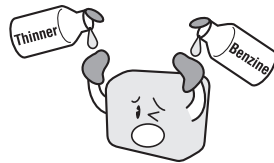
Do not place magnetic cards, diskettes or similar items in the vicinity of the tool carriage.

• The magnetic force may destroy the data on the magnetic cards or diskettes.

🚫 **Prohibited**
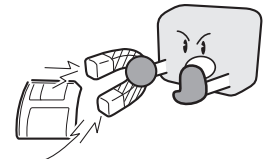
Do not attempt to lubricate the label printer's mechanisms.

• Such action may cause it to break down.

🚫 **Prohibited**
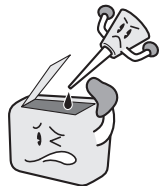
Provide sufficient space around the label printer so that the media does not strike any objects in the label printer's vicinity during cutting or plotting.

• Such contact may cause cutting or plotting to go out of alignment.

🚫 **No touching**
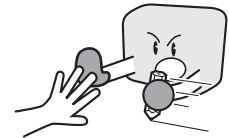
Do not place the label printer on an incline, areas subject to many vibrations, or other unstable locations.

• If the label printer falls, it may sustain damage.

🚫 **Prohibited**

When using the cutter pen, take care not to extend the cutter blade excessively.

• An excessive blade length will damage the cutting mat and impair the label printer's cutting quality.

❗
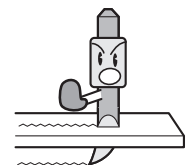
Safety Precautions

⚠ CAUTION

Move the pen carriage slowly when moving it manually in order to load the medium or for other reasons.

- Moving it quickly may damage the label printer

When using indoor lighting such as fluorescent lamps and desk lamps, make sure the label printer is separated by at least 1 m.

- Placing the label printer too close to such lighting may cause sensor malfunctions and the paper detection to not function efficiently.

Run a test cut when cutting materials with unknown condition settings.

- Running a cut operation with incorrect setting values may cause a large overload to the blades and device or a system breakdown.

Before use, check that the power is turned off by pressing the Emergency Stop Switch.
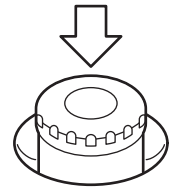
PREFACE

Thank you for purchasing a LABELROBO LCX603.
This label printer is a multifunction device mounted with a cutting machine for label cutting in thermal label printers.
To ensure optimum use of the plotter's various functions, be sure to read this manual thoroughly before use.

This product is manufactured and sold pursuant to a license under Gerber Scientific International, Inc.'s U.S. Patent No. 5,537,135 and its foreign counterparts.

Notes on the Use of This Manual

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(2) The specifications and other information in this manual are subject to change without notice.

(3) While every effort has been made to supply complete and accurate information about this product, please address any inquiries about unclear information, possible errors, or other comments to your sales representative or nearest Graphtec vendor.

(4) Notwithstanding the preceding paragraph, Graphtec Corporation assumes no liability for damages resulting from the use of the information contained herein or of the product.

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Copyright

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⚠ Precautions on the Handling of Cutter Pens

This product uses a cutting blade. To prevent injuries (when replacing the cutter blade, installing the cutter pen, etc.), take the following precautions when handling the cutter blade.

Cutter Blade

The blades are sharp. Be careful not to cut your fingers or prick yourself when handling the cutter pen.

Blade tip

Return used blades to the accessory cutter blade case and throw them all out together when the whole case has been filled.
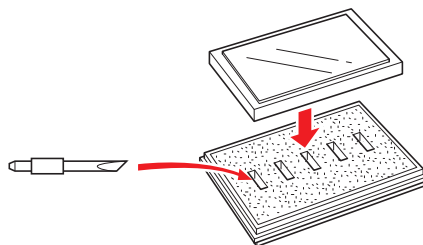
Cutter Pen

The tip consists of a sharp blade. Do not extend it too far.
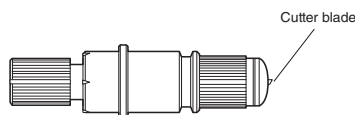
Cutter blade

The methods for extending the blade and replacing it are described in Chapter 2 of this manual.

After Mounting the Cutter Pen

After the power has been turned on, and during operation, do not touch the pen tip. It is dangerous.

Precautions After Turning on the Label Printer

During operations, immediately after completion of operations, and when setting the cutting label printer functions, the pen carriage, Y bar, and other parts which are not fixed, may move suddenly. Do not let your hands, hair, or clothing get too close to the moving parts or within their range of movement. Do not place any foreign objects in or near these areas either. If your hands, hair, clothing, or the like get caught in, or wrapped around moving parts, you may be injured and the machine may be damaged.

⚠ 警告
カット／作図中はローラーや、キャリッジ等の可動部に絶対さわらないでください。

⚠ WARNING
During a cutting or plotting operation, do not touch the writingpanel or moving parts such as the carriage.
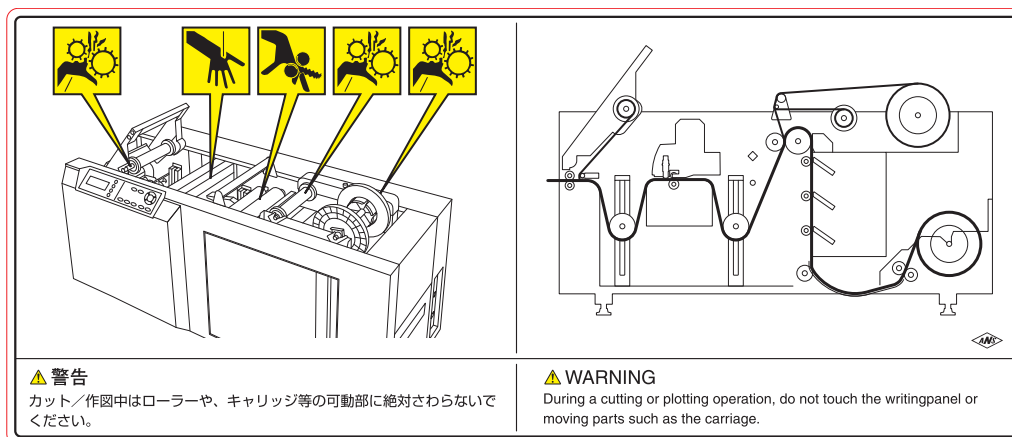
Sensors

There are a variety of sensors in this device.

Do not touch the sensors as this may cause a malfunction.

Separator
Take-up Full Sensor

Laminate Backing She‹
Take-up Full Sensor
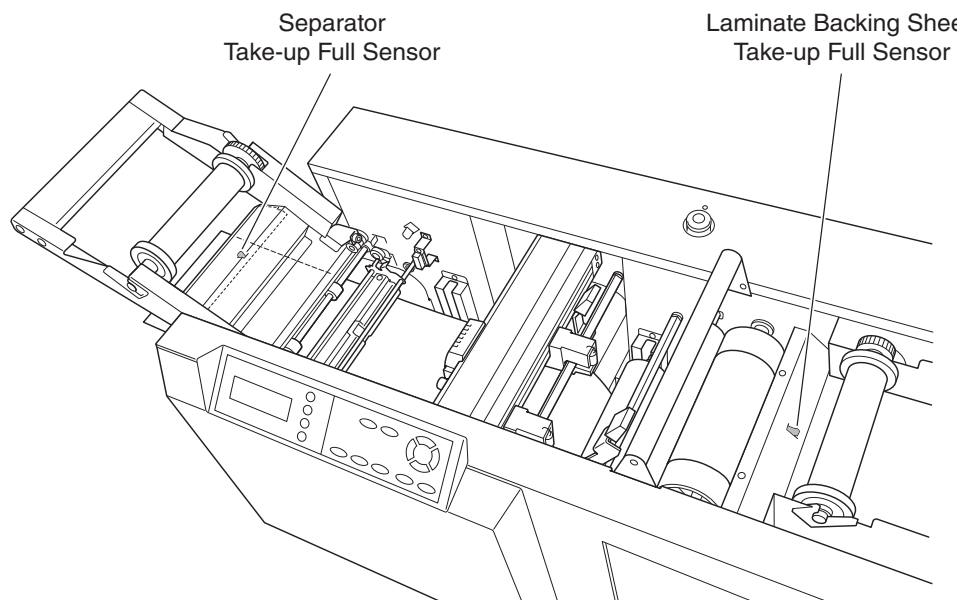
Laminate Backing Sheet Take-up Full Sensor: Detects when the bobbin that rolls up the laminate backing sheet has become full.

Separator Take-up Full Sensor: Detects when the bobbin that rolls up the unwanted parts of the separator has become full.

Usage

This document contains precautions to be adhered to upon using this product. Please read it carefully prior to use.

Safety Precautions for Attaching Labels

Various functions and attributes of the label may differ depending on the conditions of the environment in which it is used.

Before use, please be sure to confirm whether the product is appropriate for its intended use.

Precautions when affixing labels to moldings (shaped products)

In situations where labels are affixed to resin moldings, it is possible that the air bubbles from the outgas emerging out of the resin could enter the label and cause it to soften.

As this occurs especially easily with polycarbonate, polystyrene, ABS, and acrylic, please carry out thorough testing when using.

The following measures are not covered in the warranty.

• Use strong pressure when applying by hand.

• Change to composite paper instead of an aluminum evaporator coil mat such as the FNS KESHI N25.

• Apply strong adhesion for adhesive materials.

Thermal Heads

The temperature of the thermal head can rise easily when the surrounding environment temperature is high, and the occurrence of a head temperature error becomes more likely during fill printing or outline character printing.

It is recommended that the product be used in an environment below 25°C.

Usage Environment

When printing is carried out in a hot and humid environment, this may cause the label materials to change and become defective, and the separator winder to become faulty.

Furthermore, the surface of completed labels may change from flat to rounded.

Please refrain from using in a hot and humid environment.

Media

When using label materials that have been stored for a long period of time in the low-temperature environment of a warehouse, leave them in a normal-temperature setting at least half a day before usage as the print quality is reduced when the central interior portion of the material is chilled.

Consumable Parts

The thermal head and cross cutter unit are consumable parts. They are consumed as they are used, and must eventually be replaced.

After Use

After use, cover the main unit with the soft cover supplied or a cloth to keep dust off.

Precautions when using this product

For this device, please use genuine supply products, an environmental temperature range (16-32°C, 35-70% R.H.) for accuracy assurance and set the MEDIA TYPE.

In order to continue stable operation, please take the "Ideal Density Settings for Ink Ribbons and Label Materials (Media)" into consideration.

If the MEDIA TYPE is set to OFF (No settings), it is possible that the values will be set to outside those given in the Density Settings (PRINTING DENSITY) guarantee.

If used in a way not covered by the Density Settings (PRINTING DENSITY) guarantee, depending on the print data, the printing may be satisfactory but the ink ribbon may be burned onto the print head and it may become necessary to clean it frequently.

If genuine supply products are used, even if values outside of the Density Settings (PRINTING DENSITY) guarantee are used, it will not cause the device to break down.

If values outside of the Density Settings (PRINTING DENSITY) guarantee are used, then the responsibility lies with the customer.

In the case of values outside of the Density Settings (PRINTING DENSITY) guarantee being used, a warning message will be displayed.

Precautions Regarding Installation

⚠ **CAUTION**   Please take sufficient note of the surroundings of the installation area.

Use of this device in a temperature outside the environment temperature range (16-32°C, 35-70% R.H.) for accuracy assurance may adversely affect printing quality.

Even should you move this unit or ink ribbons, label materials (media) or laminate materials from an environment exhibiting a temperature outside the environment temperature range for accuracy assurance to an environment exhibiting a temperature inside said range, use the relocated items only after leaving them dormant for a sufficient amount of time (2 hours is ideal) to adjust to said environment.

Depending on where the unit is installed or where ink ribbons, label materials or laminate materials are stored, they may be exposed to the likes of dirt and dust, which has the potential to negatively affect printing quality and result in product failure.

Upon storing materials that have been partially used, remove the materials from the main unit, fully seal them inside a plastic bag, and store them in a manner that keeps them free of outside air.

Be Sure to Read Prior to Printing

Before using the LABELROBO LCX603, please check the "Emergency Stop Switch" operation instructions.

For information on the "Emergency Stop Switch", please refer to the aforementioned "1.3 Label Printer Part Names" in the User's Manual.

Upon setting print density, please be sure to refer to the Ideal Density Settings in Before Using the Printer (LCX603 Additional User's Manual).

Settings for print density differ between data with a high volume of fill printing (high coverage rate) and data with a high volume of characters, etc. (low coverage rate).

Please select the appropriate print density in accordance with the data being printed.

Trial printing to verify printing quality is recommended.

Upon printing, ensure that a black ribbon is set in Head 3.

Please note that should a non-black ribbon be set in Head 3, the sensor will be unable to pick up registration marks printed with a non-black ribbon, causing the unit to not function properly.

WARNING

The United States Federal Communications Commission has specified that the following notice must be brought to the attention of users of this product.

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

USE SHIELDED CABLES

To comply with FCC Class A requirements, all external data interface cables and connectors must be properly shielded and grounded. Proper cables and connectors are available from GRAPHTEC's authorized dealers or manufacturers of computers or peripherals. GRAPHTEC is not responsible for any interference caused by using cables and connectors other than those recommended or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

Selecting a Power Cable

Be sure to refer to the following tables if you wish to use a cable other than the one supplied as an accessory.

Table 1. 100 V to 120 V Power Supply Voltage Range
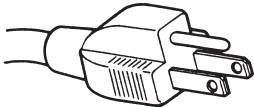
Plug Configuration	Plug Type	Supply Voltage Selector Settings	Reference Standards	Power Cable
	North America 125 V 10 A	100/120 V	ANSI C73.11 NEMA 5-15 UL498/817/62 CSA22.2 NO. 42/21/49	UL Listed Type SJT No.18AWG × 3 300 V, 10 A

Table 2. 200 V to 240 V Power Supply Voltage Range
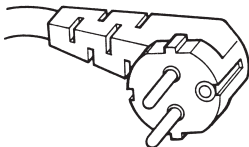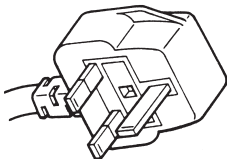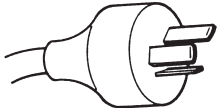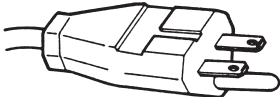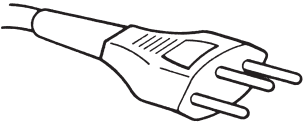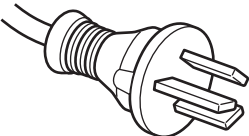
Plug Configuration	Plug Type	Supply Voltage Selector Settings	Reference Standards	Power Cable
	Europe 250 V 10 A	200 V	CEE(7)VII IEC320 CEE13	TYPE: H05VV-F 3×1.0 mm^2
	UK 250 V 5 A	200 V	BS1363 BS4491 BS6500	TYPE: H05VV-F 3×1.0 mm^2
	Australia 250 V 10 A	200 V	AS3112 AS3109 AS3191	TYPE: OD3CFC 3×1.0 mm^2
	North America 250 V 15 A	200 V	ANSI C73.20 NEMA 6-15 UL 198.6	UL Listed Type SJT No.18AWG × 3 300 V, 10 A
	Switzerland 250 V 6 A	200 V	SEV1011 SEV1004 SEV1012	TYPE: H05VV-F 3×0.75 mm^2
	China 250 V 6 A	200 V	GB15934 GB2099.1 GB1002 GB/T 5023.5	TYPE: H05VV-F 3×1.0 mm^2

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Chapter 5 Replacing Consumable Items

Chapter 6 Maintenance

Chapter 7 Troubleshooting

Chapter 8 Specifications

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Chapter 1 Product Summary

This chapter explains how to connect this device your computer.

Product Summary

1.1   Installation

Installation Space

Please secure a space for installation as according to the below illustration.

When establishing the device on a table, please use a durable, solid table with a surface larger than 1000 mm × 400 mm.

⚠ **CAUTION**   **Leave sufficient space for operations in front of and behind the printer.**
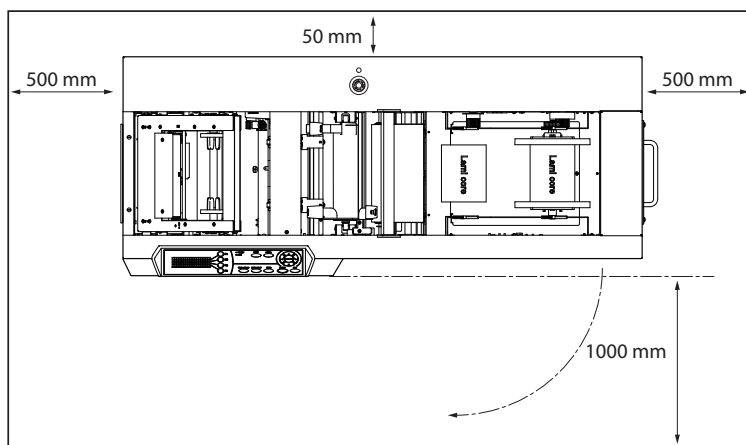
Device Installation

⚠ **CAUTION**   • **When setting up on a desk or work table, make sure there are two people to carry out the task.**
• **Use the assist handle in the media stocker section and avoid lifting the main unit.**

Handle
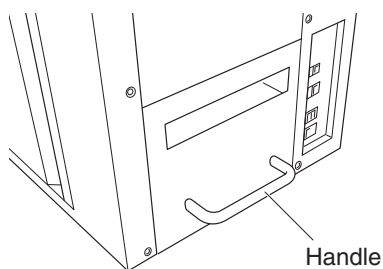
(1) Install in a flat location.

(2) Adjust the four levelers (adjusters) so that the device is flat.
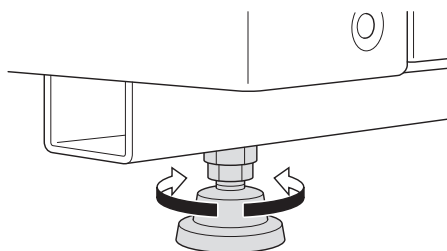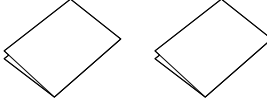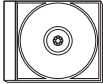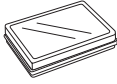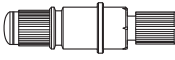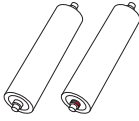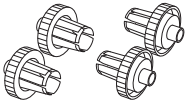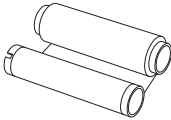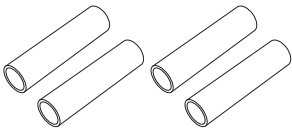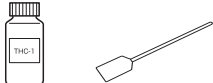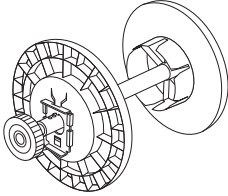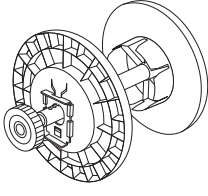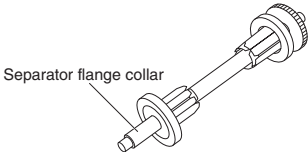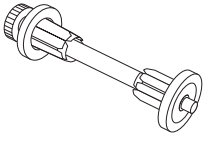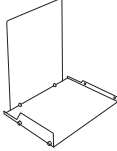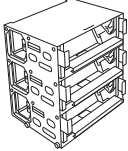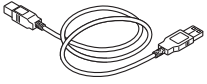
CHECKPOINT 🖊   • **Move Holding the Bottom of the Main Unit When Installing**
• **When the installed side is tilted, printing quality may be adversely affected.**
• **It is recommended that the device be installed on a flat surface.**

1.2   Standard Accessories

Check to confirm that all of the items shown below are present. If any item is missing, promptly contact the store where you purchased your printer or your nearest Graphtec vender.

Item	Q'ty	Item	Q'ty
Power cable	1 Set	User's Manual (This Manual), Additional User's Manual	1 pc.
CD (Driver)	1 pc.	Cutter blade (CB09UA-1)	1 pc.
Cutter plunger (PHP32-CB09N-HS)	1 ps.	Dancer roller (1, 2)	2 pcs.
Ink ribbon flange	12 pcs.	Ink ribbon (Black: Semi-RESIN)	1 Set
Winding up form tube (Uses for a separator and laminate winder bobbins,)	4 pcs.	Thermal Head Cleaner • Cleaning fluid • Cleaning stick	1 pc.
Media stocker flange (Long shaft)	1 Set	Laminate stocker flange (Short shaft)	1 Set
Separator winder bobbin, Separator flange collar (Large white gear) Separator flange collar	1 Set	Laminate stocker flange (Small black gear)	1 Set
Media assistance	1 Set	Ribbon stocker (3 ribbon cassettes are set)	1 Set
USB cable	1 pc.		

1.3   Label Printer Part Names

Part Names 1
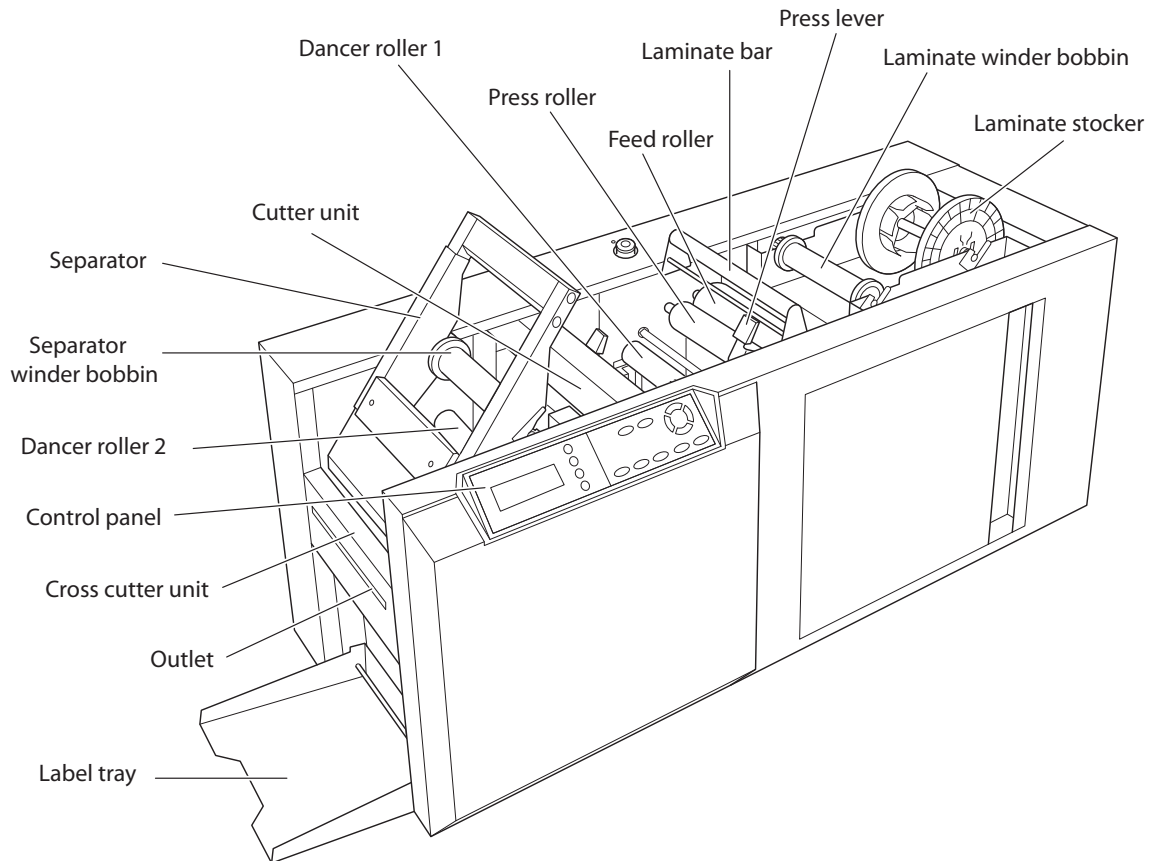
Control panel ....Carry out operations and various settings.

Separator...Set when unnecessary media is detached.

Separator winder bobbin ....Rolls up detached unnecessary media.

Press lever......................................Opens and closes the press roller when the media is set.

Laminate bar...................................Used when laminate is set.

Laminate winder bobbin ....Rolls up the laminate backing sheet.

Laminate stocker ....Sets the laminate.

Feed roller......................................Feeds the media.

Press roller ....Thrusts the media into the feed roller.

Dancer roller (1, 2) ....Used when setting/feeding media.

Cutter unit ....Cuts (stenciling, frame-cutting) media.

Label tray ....Tray that receives completed labels.

Cross cutter unit ....Cutter used for cross-cutting (horizontal cutting) media.

Outlet..Section that outputs media.

Part Names 2

Emergency Stop Switch

USB interface

Network interface

Power switch

AC line inlet

Media stocker

Ribbon stocker
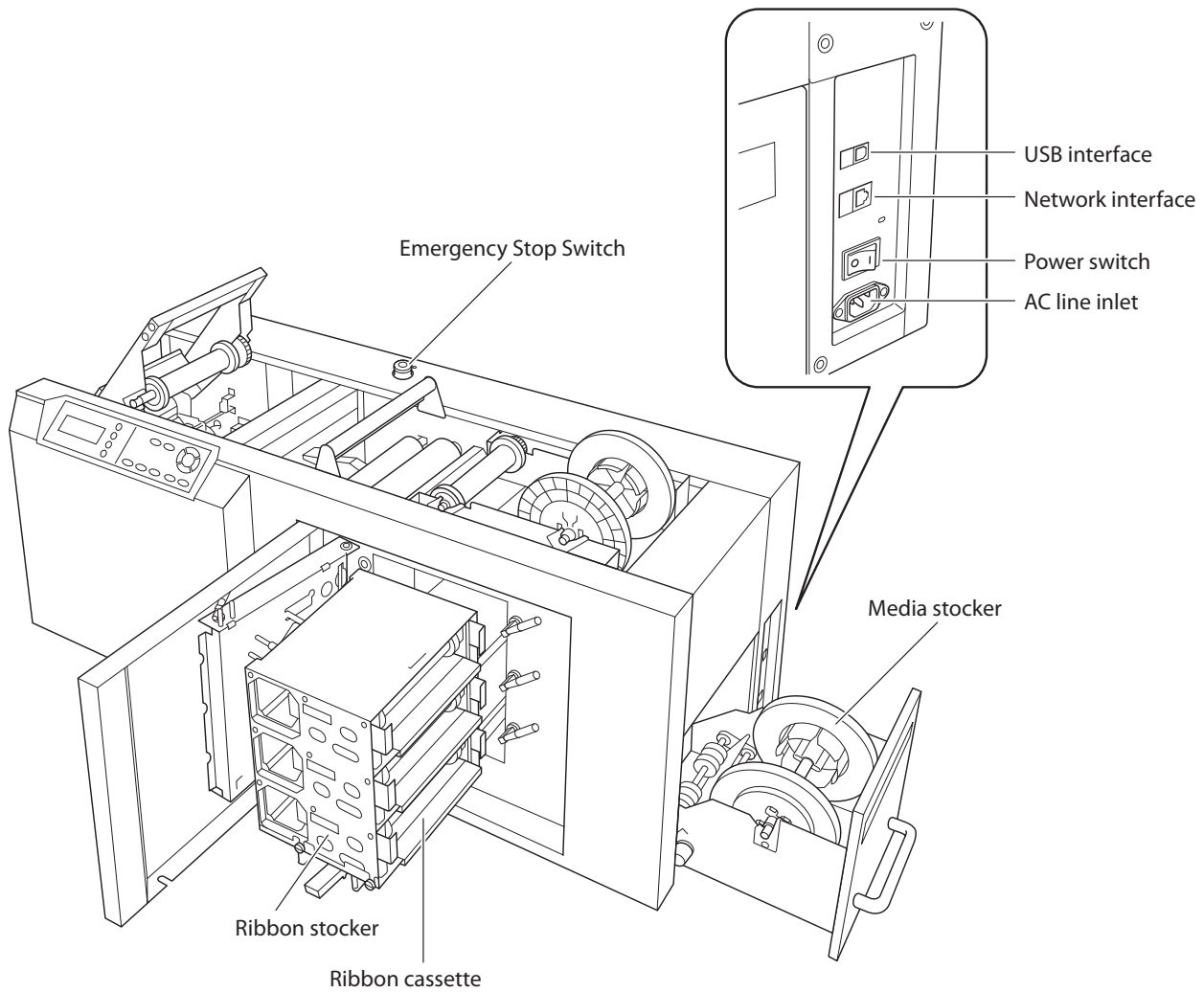
Ribbon cassette

Ribbon cassette..............................Used when setting the ribbon.

Ribbon stocker................................Unit that sets the ribbon cassette.

Media stocker ....Unit that sets the media.

USB interface ....Connector used when connecting this device via USB I/F.

Network interface ....Connector used when connecting this device via network I/F.

Power switch....................................Switch for turning the power on/off.

AC line inlet.....................................Connector that connects the power cord.

Emergency Stop Switch ....Press to stop the unit. Please use this in case of emergency.

Emergency Stop Switch

RESET
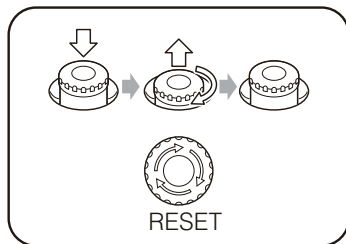
Only use this in case of emergency or check before use.
Pressing the switch will cause the switch to become depressed.
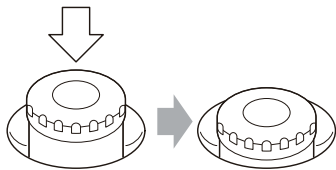
In this state, turning the power switch to the On position (|) will not turn the power on.

Cautionary notes for turning power on again

Be sure to confirm that the power switch is in the Off (○) position.

When the power switch is in the Off position, you can turn it On by turning the emergency stop switch clockwise until you hear the click and the switch pops up.
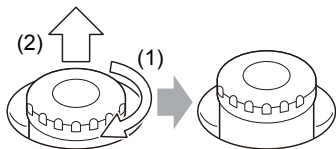
After confirming safety, turn the unit's power switch to the On (|) position.

⚠ **CAUTION**   **When turning the power on for the first time after implementing the emergency stop switch, push the switch to the On position strongly.**

Part Names 3
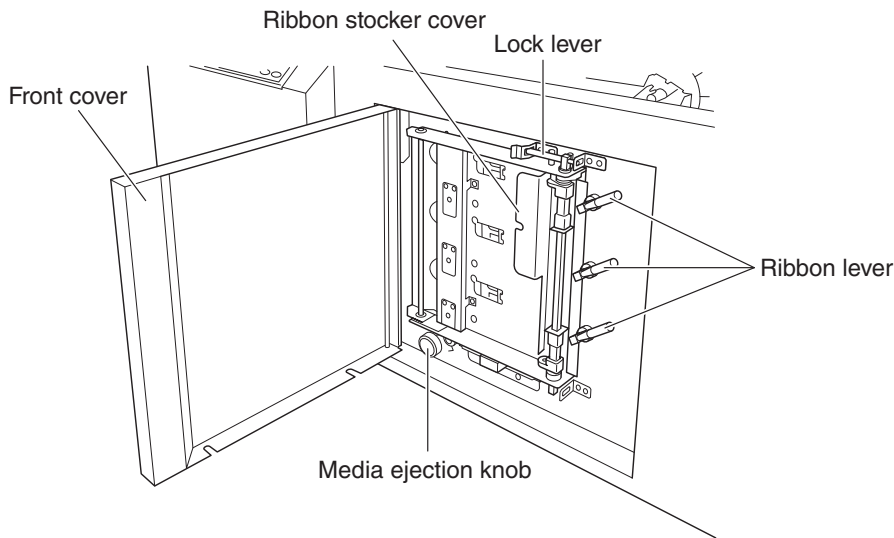
Ribbon lever ....Makes it possible to print the ribbon cassette by closing the lever.

Ribbon stocker cover......................Cover that closes after the ribbon stocker is set.

Lock lever ....A lever that secures the ribbon stocker cover when it is closed.

Media ejection knob ....Used when the media is detached.

Front cover.......................................Cover for the ribbon stocker section.

Cutter Unit
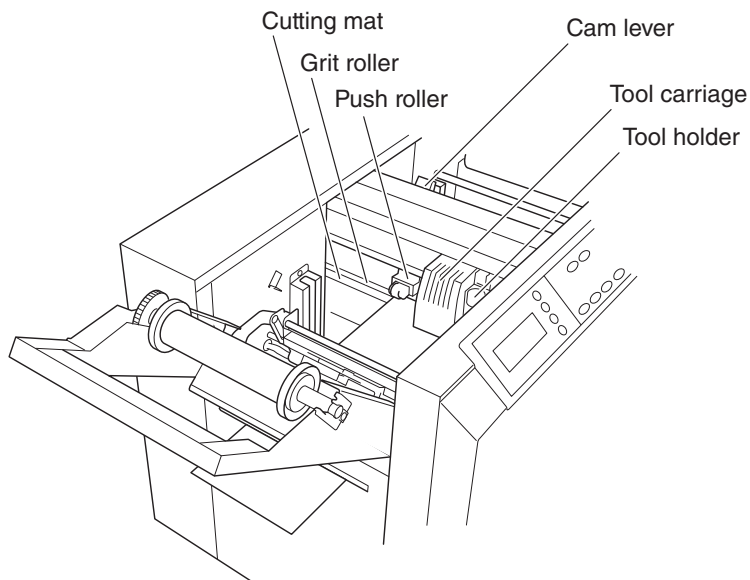
Cutting mat ....Moves the top of the cutter blades and prevents blade abrasion.

Grit roller...Feeds media and can move from side to side.

Push roller.......................................Thrusts the media into the grit roller.

Tool carriage...................................Section that moves the cutter forward or backward.

Tool holder.......................................Section that holds the cutter and moves up and down.

Cam lever ....Moves the push roller vertically and secures/releases media when the media is set
in the cutting section.

1.4   Connecting to Your Computer

This device connects to your computer with a communication cable. When connecting this device to your computer, use either the USB port or network (LAN) port. Select which port to use according to the requirements of your application software and/or which of your computer's interface ports are available for use.

Use a USB cable or a network cable in accordance with the port chosen. Obtain a cable that is compatible with your computer.

Connecting

CHECKPOINT **Refer to "4.23 Setting Interface" for setting the interface.**

(1) Confirm that the power switch is in the Off (O) position.
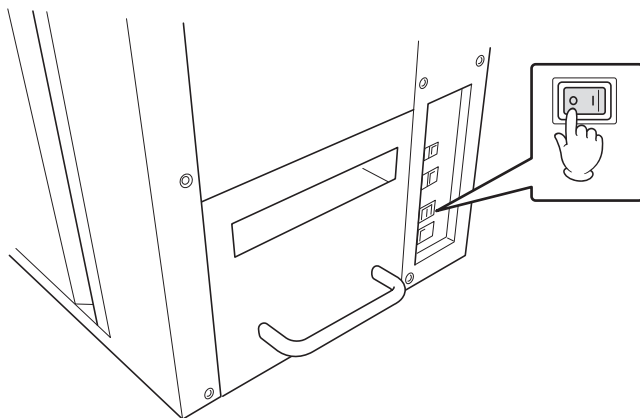
(2) This device connects to your computer with a connection cable.

Connecting With USB Interface

Computer

USB cable
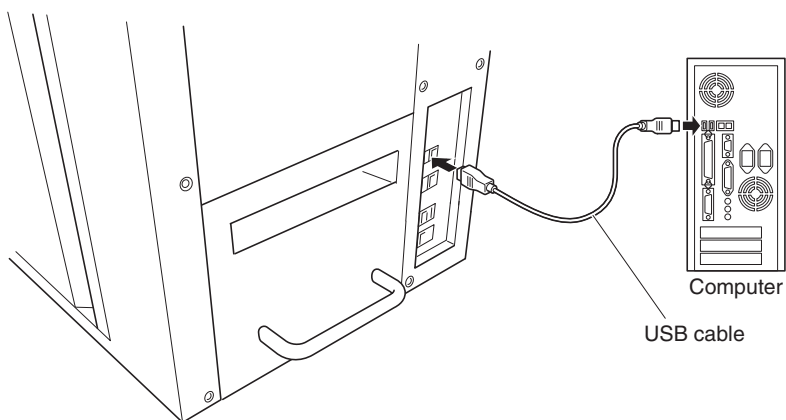
Connecting With Network Interface

Computer

Network

Network (LAN) cable
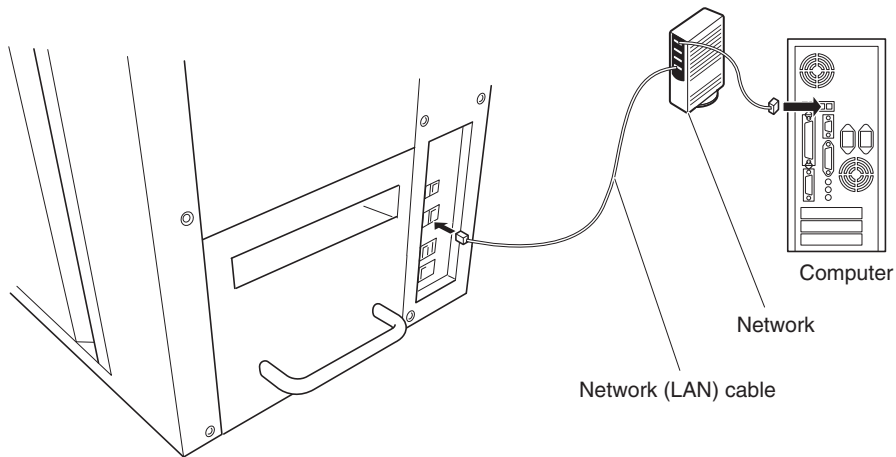
1.5   Basic Operational Flow Up To Label Creation

Refer to the information below regarding the process up to label creation as well as reference items in the User's Manual.

Basic Operational Flow Up To Label Creation	The User's Manual Reference Items
(1) Install the Cutter Pen	1.3 Label Printer Part Names 2.1 Preparing the Cutter Pen 2.2 Installing Tools (cutter pen)
(2) Turn on the power	2.4 Connecting to the Power Supply
(3) Load Label Materials (media) • Set Media Assistance • Set the Push Roller • Set the Separator (when necessary) • Set the Laminator (when necessary)	2.3 Using the Control Panel 2.5 Setting Label Materials (media) 2.6 Loading Label Materials (media) 2.7 Setting the Push Roller 2.10 Using the Separator 2.11 Using the Laminate
(4) Set the Ink Ribbon • Set the Head Pressure Plate while being careful of the ribbon type—RESIN or Semi-RESIN	2.8 Setting the Ink Ribbon
(5) Do a test cut • Confirm the cutting condition	2.12 TOOL COND. Key 2.13 Selecting Tool Condition 2.14 Adjusting the Blade Length 2.15 Cutting Test
(6) Set the printing density	4.9 PRINTING DENSITY
(7) Transfer the printing data • Install the driver if it is not installed	3.1 Printer Driver 3.2 Installing Printer Driver 3.3 Printer Driver Operation
(8) Output and copy • If necessary output and copy all printing data	4.5 OUTPUT ALL 4.6 COPY

Chapter 2 Preparation for Printing

This chapter explains the preparation prior to printing.

2.1   Preparing the Cutter Pen

The nomenclature and types of cutter pens are explained

Cutter Pen Part Names

In this device, the cutter blades are set and used in the cutter plunger. Set and use the blades in the suitable cutter plunger.

Cutter blade   Plunger

Plunger cap   Blade length adjustment knob
                     (For Blue: Ø 0.9 mm)
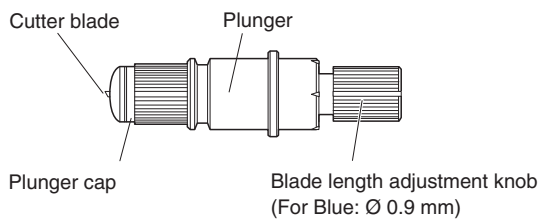
⚠ **CAUTION** **When handling the cutter blades, take full care not to cut your hands.**

Cutter Pen Nomenclature

Ø0.9mm Cutter pen

Blade length
adjustiment knob
(Blue)

Plunger

Ø0.9mm Cutter blade

Spring

Plunger cap
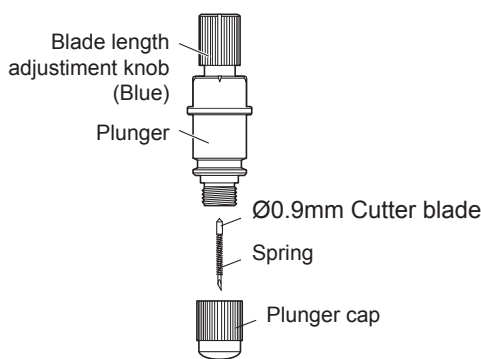
Adjusting the Blade Length

The blade length must be adjusted to provide the most appropriate cut. Run the test cut several times and set the most appropriate blade length.
The blade length varies depending on when the laminate is used/not used.
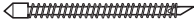
⚠ **CAUTION**   **When handling the cutter blades, take full care not to cut your hands.**

CHECKPOINT • **Refer to "2.15 Cutting Test" with regards to the cutting test.**
            • **Refer to "2.14 Adjusting the Blade Length" with regards to blade length adjustment methods.**

The blade length is adjusted by turning the blade length adjustment knob. To extend the cutter blade, turn the knob in the A direction. To retract the cutter blade, turn the knob in the B direction. When the knob is turned the distance of one scale unit, the cutter blade moves 0.1 mm. When the knob is given one full turn, the cutter blade moves 0.5 mm.

The cutter blade
moves 0.1 mm with
one scale unit.

B   A   (Blade extends)
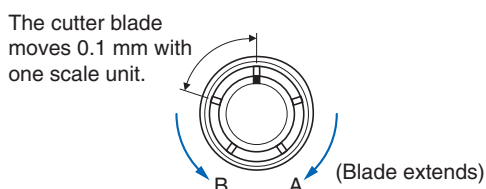
Types of Cutter Blades and Their Features

Model Name & Shape	Diameter	Utilized Plunger	Use & Features
CB09UA	Ø 0.9 mm	PHP32-CB09N-HS	Standard cutter for cutting colored film. The below cut is appropriate for media with a thickness under 0.25 mm. Possible Cutting Length: App. 4000 m

⚠ **CAUTION** **When handling the cutter blades, take full care not to cut your hands.**

If the cutter length is not adjusted with the utilized label materials (media), it will not be possible to achieve an optimal cut. After adjusting the blade length, run a test cut and adjust further.

2.2 *Installing Tools (cutter pen)*

The tools (cutter pen) are set in this device.

When installing the cutter pen in the tool holder, fully insert the cutter pen section in the below order until it bumps into the top side of the tool holder. After the cutter pen is installed, tighten the screw. Furthermore, do not touch the pen tip when the power has been turned on or during operation.

⚠ **CAUTION**   **When pushing up the tool holder, take full care not to injure your fingers on the cutter blades.**

(1)   Loosen the tool holder screw.
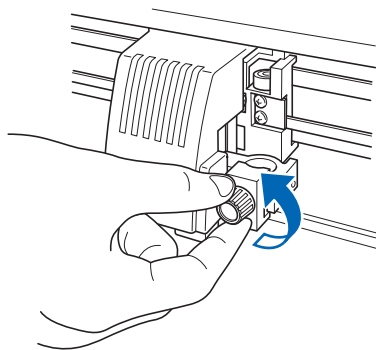
(2)   While pushing up the tool holder, fully insert the cutter pen section until it bumps into the top side of the tool holder. Set the bracket to hold tool to cover the flange section of the cutter pen.

Flange

Bracket to hold tool
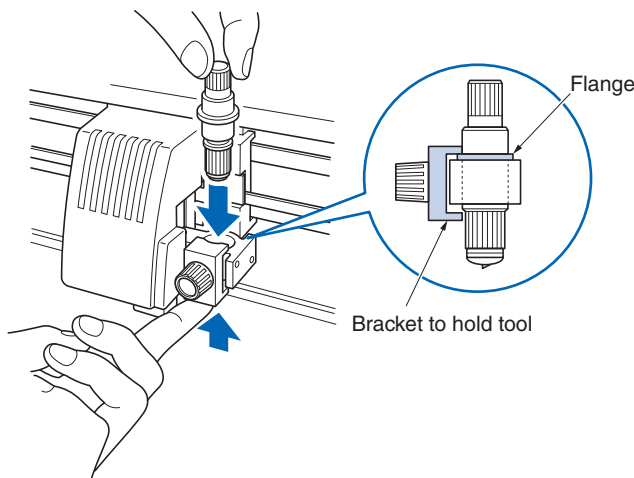
(3)   When the cutter pen is set, set the bracket to hold tool to cover the flange section and tighten the screw.

Flange

Bracket to hold tool
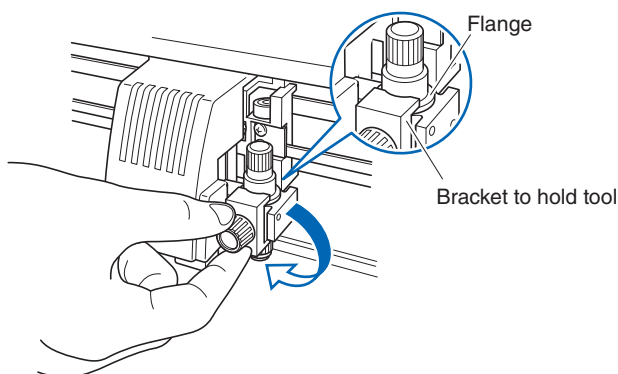
2.3   Using the Control Panel

The functions of the control panel lamps and keys are explained.

Do not turn the power on until the label materials have been set.
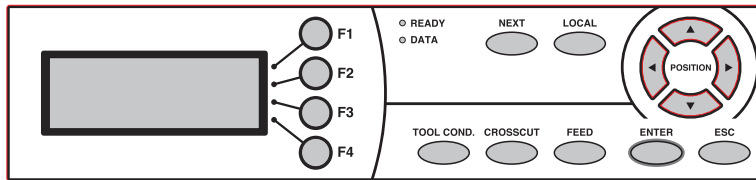
Indicator Lamps

READY .... The READY lamp lights (green) while the label printer is on.
If the LOCAL key is pressed, the green lamp goes off when the menu screen appears.

DATA .... The DATA lamp flashes (red) when the label printer receives data. The red lamp lights when data is saved in the internal memory. When data has been cleared (or there is no data), the red lamp goes off

Panel Keys

F1, F2, F3, F4 .... Select the desired sub-menu in a menu screen and move to the next setting screen.
(FUNCTION)

NEXT .... Switch to the next item in the menu screen.

LOCAL .... Switch between the READY screen and menu screen.
If pushed during an operation, the operation will terminate after one page has completed on the cutting side upon pushing the key, and the display will return to the READY screen.

TOOL COND .... Switch to the Cutting Conditions Menu in the READY screen.

CROSSCUT .... Crosscut media (horizontal cutting) in the READY screen.

FEED .... Send label materials (media) while the key is being pushed.
Send label materials close to the press roller with one push of the key only when the label materials are set. (Source feed)

↑, ↓, ←, → .... Adjust various settings, select numerical value changes, move the cursor, and change positions.
(POSITION) (Arrow keys)

ENTER .... After setting a function or condition at the control panel, press the [ENTER] key to register your setting.

ESC .... Cancel setting change and return to the previous screen in the menu. Return to the previous screen in the menu.

Notes on the Use of the FEED Key

• When sending label materials normally, unset the ribbon lever.

• When label materials (media) are sent with the FEED key, the labels that are partway through printing cannot be completed normally. If the labels partway through printing need to be completed, carry out the "OUTPUT ALL" operation instead of the FEED key.

• After sending label media with the FEED key, carry out the initial transfer system action prior to the next printing. The label materials (media) can then be sent. Be careful as there will be wasted and blank labels.

Viewing the Screen

The control panel screen displays information responding to the situation at the time.

Confirm Combination! Screen

This is displayed when the power is turned on, all of the ribbon levers keep in the open position, and Media Materials is replaced.

```
Confirm Combination!    (F1)
H3=******  H2=******    (F2)
H1=******  *********    (F3)
YES:ENTER    NO:ESC     (F4)
```
"*****" depends on Media Type or the type of ink ribbon.

Select "YES" (ENTER) or "NO" (ESC).
When selecting "YES", "READY" is displayed.
When selecting "NO", "CONDITION LOAD/PRINTING DENSITY" is displayed.

```
      CONDITION LOAD>   (F1)
     PRINTING DENSITY>  (F2)
                        (F3)
                        (F4)
```

Return to Ready status by loading the saved "CONDITION" settings
Or return to Ready status by setting the media materials and ink ribbon set in "PRINTING DENSITY".
For information on "CONDITION" and PRINTING DENSITY, please refer to "4.8 CONDITIONS and "4.9 PRINTING DENSITY" respectively.

CHECKPOINT
- **When the ENTER key or ESC key is pressed while all of the ribbon levers keep in the open position, the following is display for about 3 seconds, and then returns to" Confirm Combination!" Screen.**

```
Confirm combination    (F1)
of ribbon and media!   (F2)
Then set the ribbon    (F3)
lever.                 (F4)
```

- **When all of the ribbon levers are opened while they are cloed," Confirm Combination!" Screen. Is displayed. Close the ribbon levers that are to be used for print.**

READY Screen

```
READY                  (F1)
                       (F2)
    CONDITION-01       (F3)
                       (F4)
```
Displays the set condition number.

CHECKPOINT
- **This screen is referred to as "Basic Screen: READY" in the manual.**
- **In this status, the settings for print conditions, cut conditions, and communication conditions are carried out from the LOCAL key or TOOL COND. key.**

Printer Menu Screen

```
            COPY>       (F1)
      DATA CLEAR>       (F2)
       CONDITION>       (F3)
1/4                     (F4)
```

↓ NEXT Key

The ">" sign which is displayed on the right-hand edge of the Menu indicates that the item has subordinate items in the menu hierarchy assigned to keys F1-F4.

```
    PRINT SETTING>      (F1)
 PRINT TEST PATTERN>    (F2)
    HEAD ADJUSTMENT>    (F3)
2/4   PRINTED LENGTH>   (F4)
```

↓ NEXT Key

The menu switches by pressing the NEXT key only in the print menu.

```
  REGISTRAION MARK>     (F1)
      UNIT LENGTH>      (F2)
   FUNCTION SETTING>    (F3)
3/4                     (F4)
```

Load Number Selection Screen

```
LOAD NO.
                    <01>
SELECT:↑↓
YES:ENTER      NO:ESC
```

The selected item is shown.

The setting value within
the "< >" can be changed.

Cutting Conditions Setting Screen

```
<1 09U ←1 14 30 2→
[TOOL TYPE]
SELECT:←→↑↓
YES:ENTER        NO:ESC
```

An "_" (underbar) is shown underneath
the selected cut conditions. The items
are shown below.

During Operation Screen

```
PROCESSING

        54/100
```

The number of copies is shown.
(Present number/Total number)

2.4   Connecting to the Power Supply

This section explains how to turn on the power in this device.

Do not turn the power on until the label materials have been set.

CHECKPOINT **When turning the power off and back on again, wait over ten seconds before switching back on. The device may cease to work regardless of the reset if this time is not given.**

(1)   Make sure the power switch is in the Off (O) position.
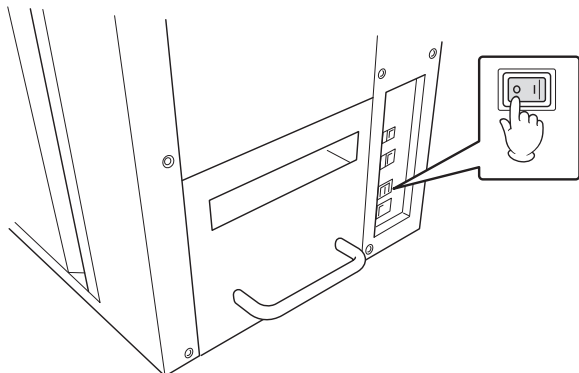
(2)   Connect one end of the attached power cables to the AC line inlet and the other end to an AC power outlet of the rated supply voltage.
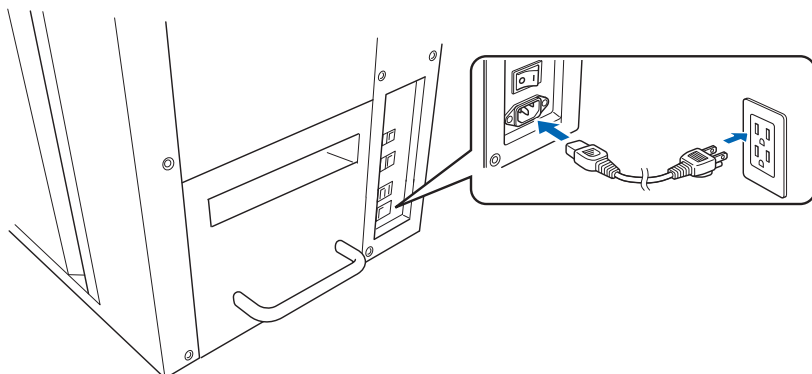
(3)   Set the device power switch to the On (|) position. After initial operations, the control panel's READY lamp will light up.
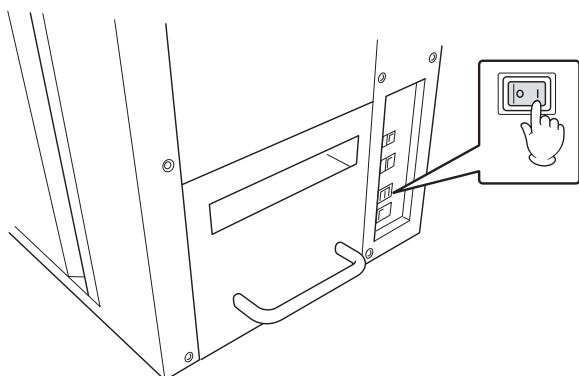
In cases where the label materials are set normally, it is possible to load the label materials.

CHECKPOINT **If the label materials are not set, the below message will display after showing the version.**

```
L01:No Media
 Set the media into
stocker.
Then press FEEDkey.
```
F1
F2
F3
F4

2.5　Setting Label Materials (media)

CHECKPOINT • **Lightly wipe the label and laminate materials with paper or non-tissue paper, and remove foreign matter and dust.**

• **If printing is carried out while there is still dust or foreign matter on the label materials, head failure or missing text may occur.**

Label materials that can be set are selectable within the range below.

- Width: 70, 80, 90, 100, 110, 120, 130 mm
- O.D.: Up to 195 mm

Label materials that can be set is selectable within the range below. Use laminate materials with a width 20 mm shorter than the label materials.

- Width: 50, 60, 70, 80, 90, 100, 110 mm
- O.D.: Up to 150 mm

Refer to the below diagram for the relationship between the label and laminate material and the printing range.

<Printing Range>
- Label materials (media) width: 40 - 100 mm (depending on utilized media)
- Label materials (media) sending direction: 65 - 200 mm

Label material width = W

| 15 | | 15 |
Material clip area | | Material clip area

Printing range (Cut width)
= W - 30 ≤ 100

| 10 | Laminator material width = W - 20 ≤ 110 | 10 |

*Unit: mm

Feeding direction
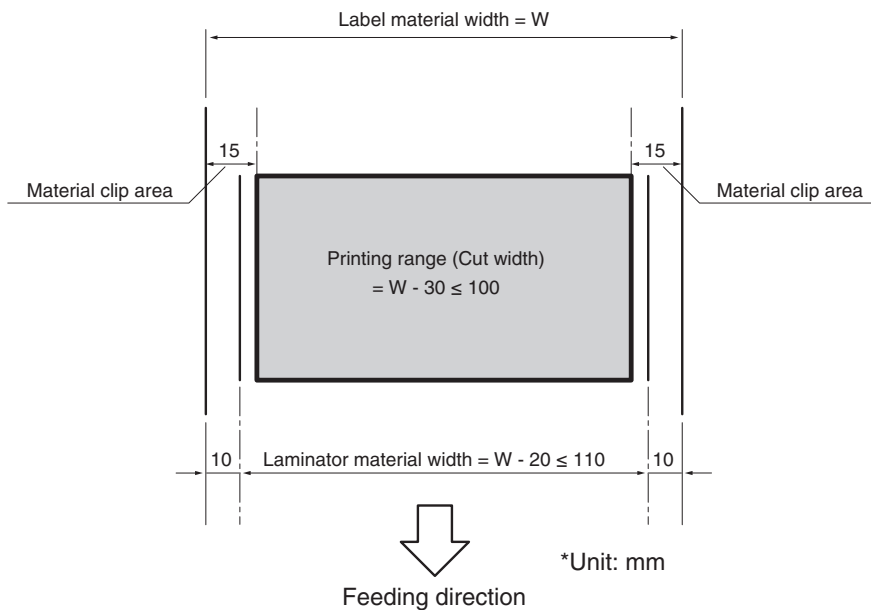
Types of Label Materials (media)

Although there is an involution and revolute in the label materials, <u>use the revolute in this model.</u>

Revolute — Printing surface — **OK**

Involute — Printing surface — **NG**
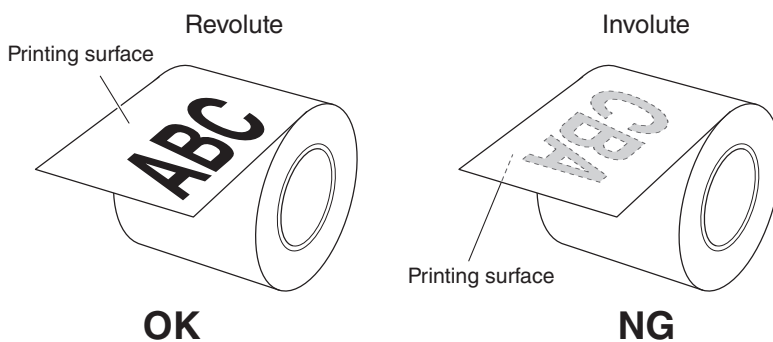
Setting the Label Materials (media)

(1)   Remove the media stocker from the printer body

CHECKPOINT
- **Be careful of dropping the media stocker as it is heavy.**
- **When taking out the flange, take hold with both hands.**
- **The flange cannot be taken out when the media stocker is attached to the main body.**
- **The shape of the media stocker flange resembles the laminate stocker flange. The object with the long shaft is the media stocker flange.**
- **Hold the assist handle of the media stocker section and don't lift up the main body.**
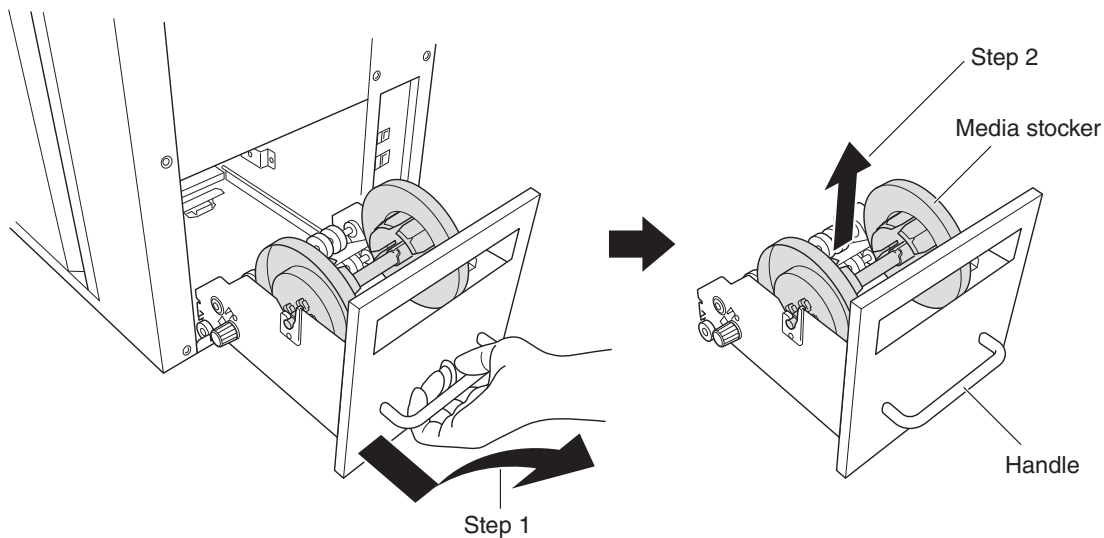
(2)   Remove the media stocker flange. The object with the long shaft is the media stocker flange.
       Set the gear side in front.
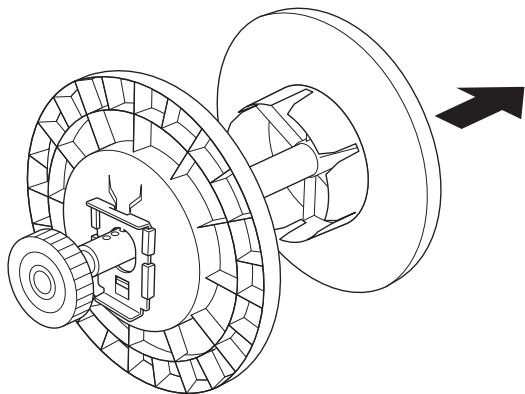
(3)   In order to adjust to fit the label material width, release the lock from the flange and shift the shaft.

(4)   Determine the position of the flange to match the label material width.

CHECKPOINT ✎ **The width of the settable label materials are 70, 80, 90, 100, 110, 120, 130 mm.**

Media material width (mm)

130 ·· 110 ········ 70

(5)   Lock in the shaft groove and set the flange.

Step 1

Step 2
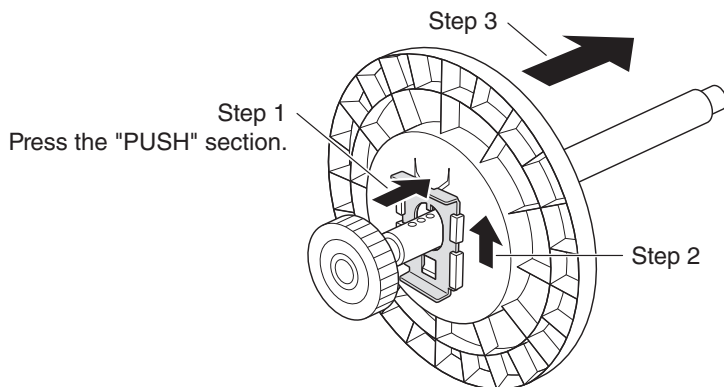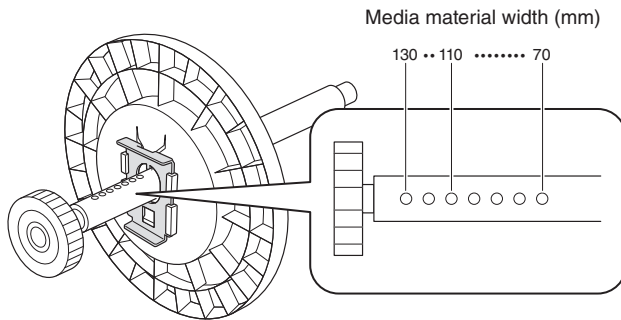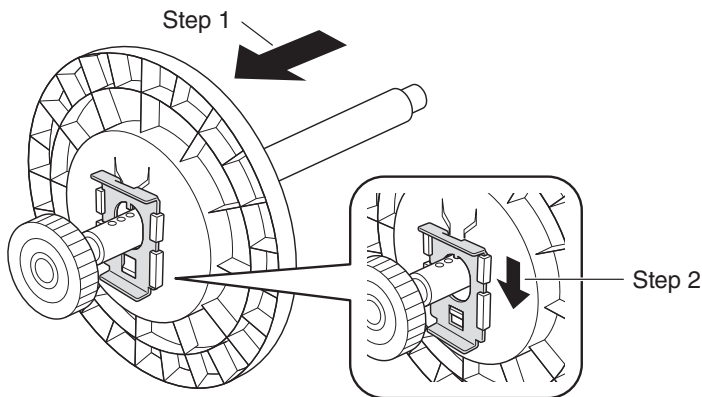
(6)   Set the label materials and install the flange.

Set it so that the label materials are the revolute.

Push so that there is no opening in between the paper tube and flange.

CHECKPOINT ✎ • **During set-up, be careful not to confuse the revolute with the involution.**

• **Make sure the set label materials do not slack.**

• **There is the possibility of inclining to one side if media glue attaches to the inside of the flange. Please clean regularly. (Refer to "6.12 Cleaning Media Stocker & Media Stocker Flange".)**

---
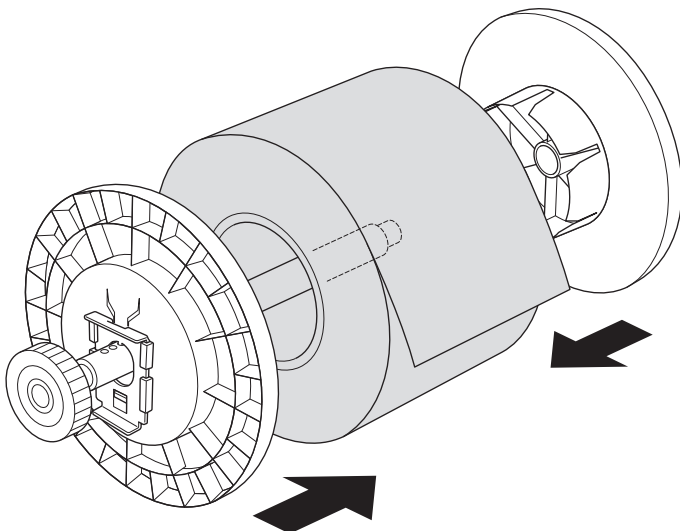
(7)   Set the media stocker. Withdraw the label material tip up to the stocker tip and set it exactly straight along the scale of the media width.

However, be sure not to go over the tip of the label material.

CHECKPOINT 📝
- **When setting the flange, do so with both hands.**
- **Set the label materials exactly straight along the scale seal.**

- **Slightly draw out the label material, insert it below the roller, and withdraw twisting the knob.**
- **Do not bend or rip the tip of the label materials. Furthermore, trim the end straightly.**
- **Set so that the tip of the label materials are in the position shown in the below diagram. An error will occur if it isn't set correctly.**
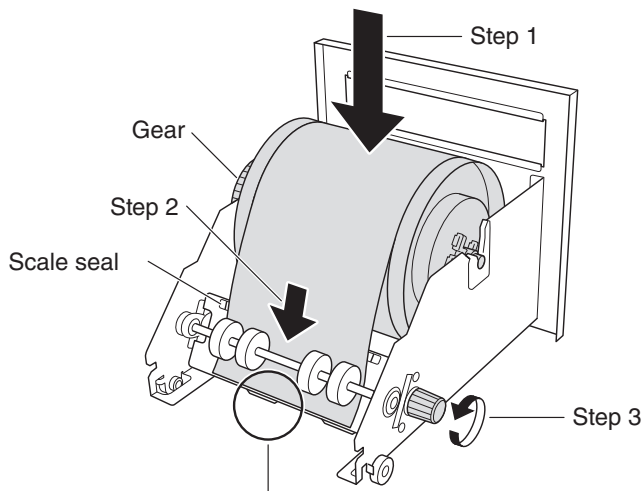
Set the label material tip to be at this position.

(8)   Set the media stocker in the printer body.

CHECKPOINT 📝
- **Close the media stocker while slightly lifting it.**
- **Be careful of dropping the media stocker as it is heavy.**
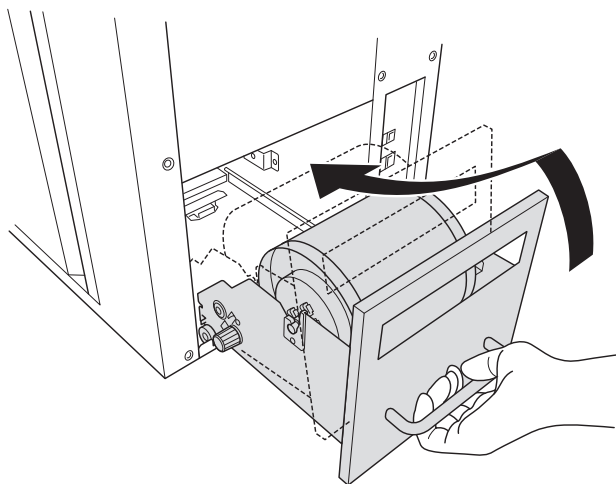
CHECKPOINT 📝 With the exception of replacing label materials, do not pull out the media stocker. If the media stocker is pulled out when it is set, the label materials may loosen and printer banding might occur.

2.6   Loading Label Materials (media)

Pull out the label materials set by the media stocker and set when ready to use.

CHECKPOINT
- **Be sure to load when media assistance has been installed.**
- **Refer to "2.5 Setting Label Materials (media)" for setting label materials in the media stocker.**
- **When using the separator, turn on the separator when the label materials are set and set the separator.**
- **When setting the laminate, turn on the laminate when the label materials are set and set the laminate.**
- **The separator can be run smoothly when the stocker is set in the separator section prior to setting the label materials. (Refer to "2.10 Using the Separator".)**
- **With the exception of replacing label materials, do not pull out the media stocker. If the media stocker is pulled out when it is set, the label materials may loosen and printer banding might occur.**
- **Resuming use of the device after it has been left unattended for a long time with label materials set in place may negatively impacr the carrier motion for the label materials depending on the surrounding environment and nature of the label materials being used. Be sure to remove label materials if the device is going to be left unattended for a long time.**

<Media Route>
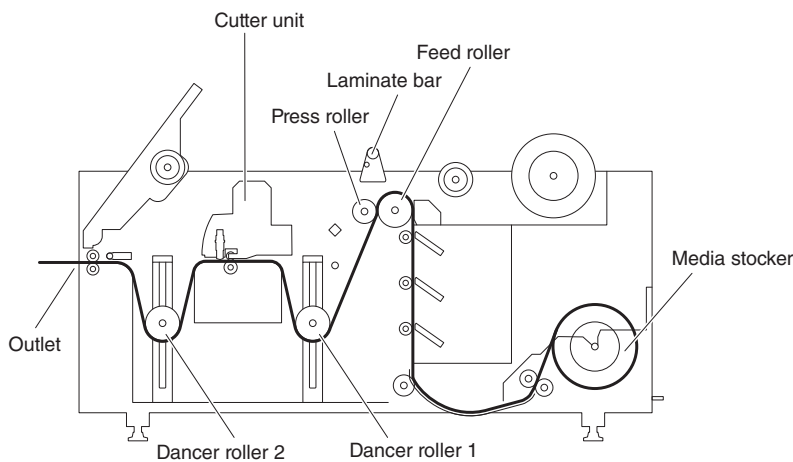
Setting Media Assistance

When setting the label materials (media) and feeding the source, always do so when media assistance is installed. If the ribbon stalker is already set, replace it with media assistance.

⚠ CAUTION   **If the label materials (media) are source fed when the ribbon stocker is set, the label materials may become jammed. Always set the label materials when media assistance is installed.**

(1)   Open the main body front cover.
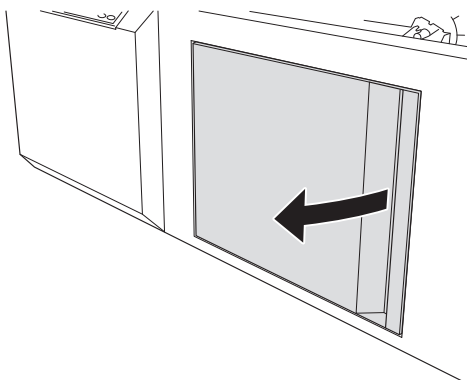
(2)   Release the ribbon stocker section ribbon lever.
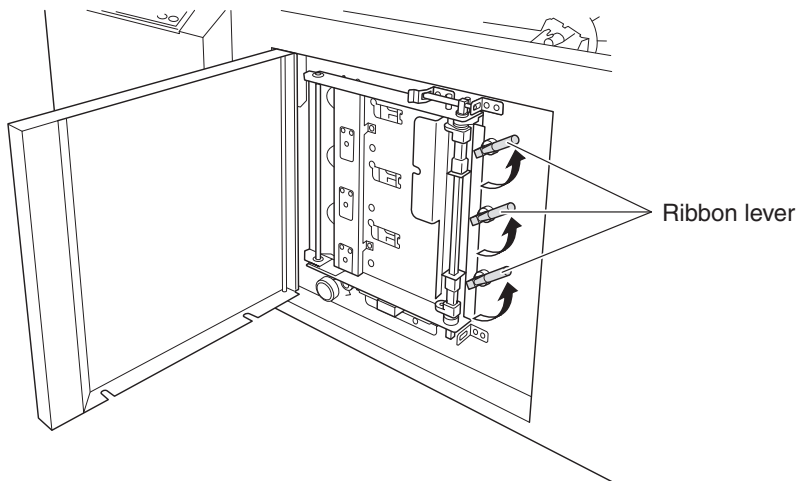
Ribbon lever

(3)   Release the lock lever on top of the ribbon stocker section and open the ribbon stocker cover.
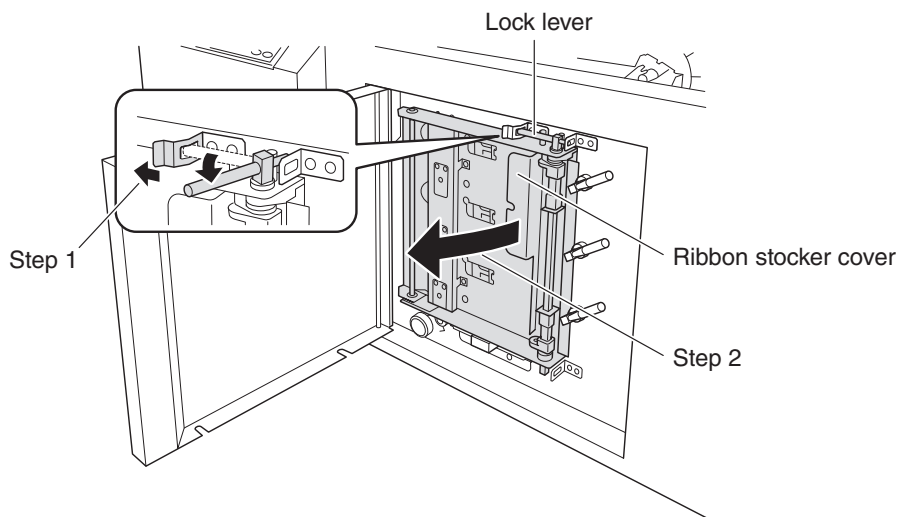
Lock lever

Step 1

Step 2

Ribbon stocker cover

(4)   Pull up the lever (below diagram) which secures the ribbon stocker and pull out.

Step 1

Step 2
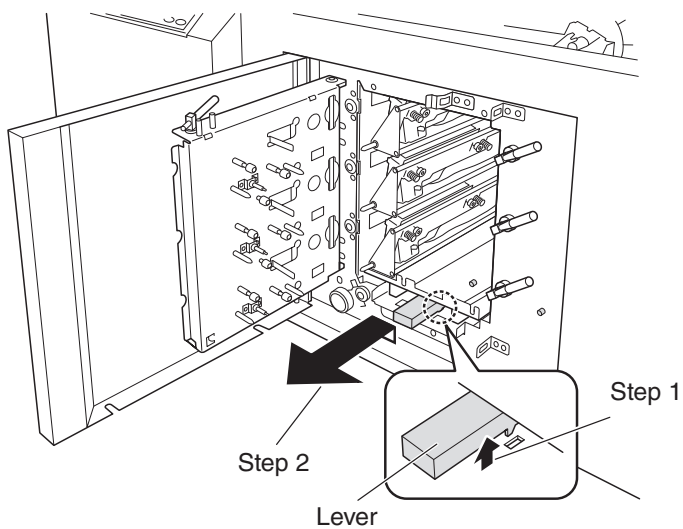
Lever

(5)   Set the media assistance. Makes sure the screw pin fits firmly in the slot.

CHECKPOINT **Please confirm that the screw pins are properly fitted.**

Media assistance

The pins must be
properly fitted
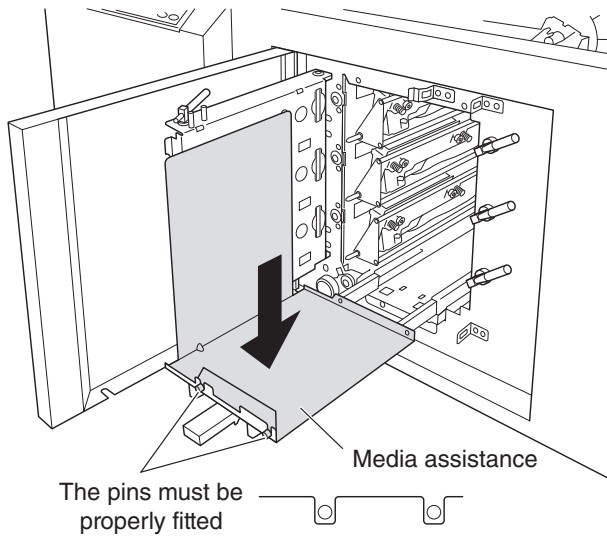
(6)   Push the lever and **slowly and quietly** return media assistance to the main body. Push until there is a clicking sound.
Push and secure the lever so that it is firmly fastened in the slot.
Keep the ribbon stocker cover open.

CHECKPOINT • **Insert media assistance deep into the main body.**
• **Make sure the lever's bulge is fastened in the slot.**
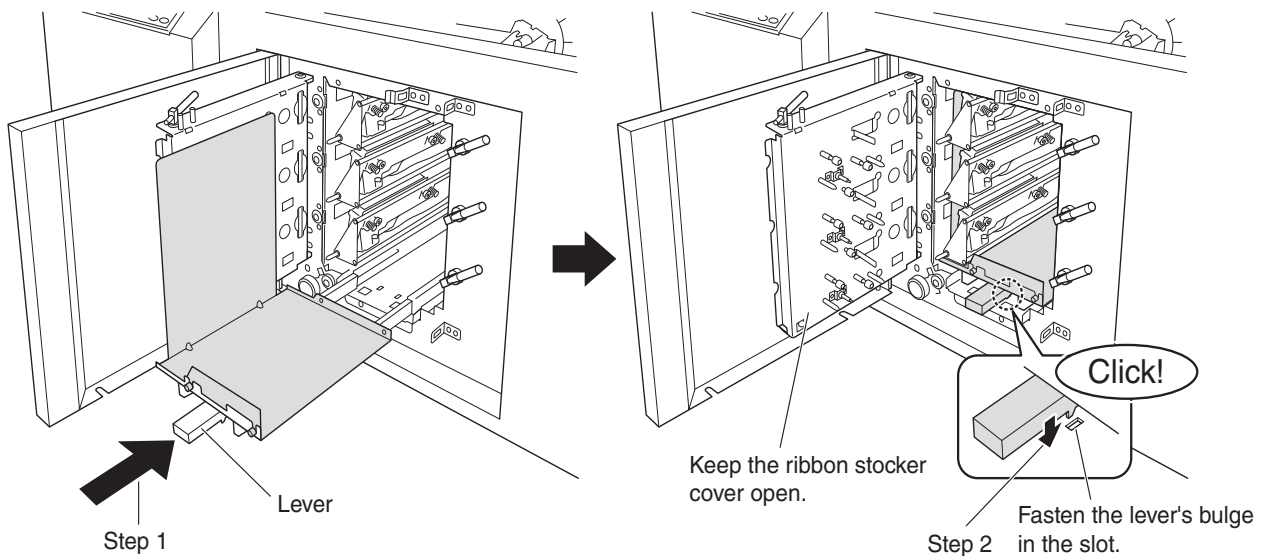
Lever

Step 1

Keep the ribbon stocker
cover open.

Click!

Step 2

Fasten the lever's bulge
in the slot.

When setting the label materials (media) and feeding the source, always do so when media assistance is installed.

After you have finished feeding the label materials, refer to "2.8 Setting the Ink Ribbon" when removing media assistance and setting the ribbon stalker.

Loading Label Materials (media)

CHECKPOINT When setting the label materials (media) and pushing the FEED key when the source is fed, do so when media assistance is installed. Refer to "2.8 Setting the Ink Ribbon".

(1)   Keep the press lever, cam lever, separator, and separator suppression unit open.
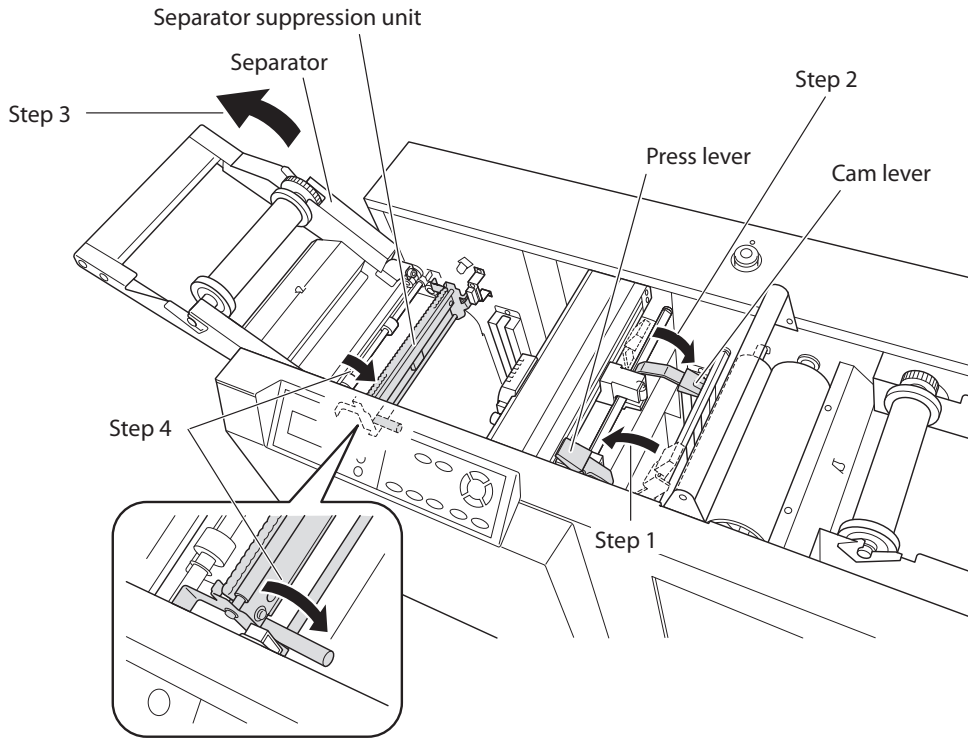
CHECKPOINT Refer to the below diagram for when the press lever, cam lever, separator, and separator suppression unit are set (closed) and when they are open.
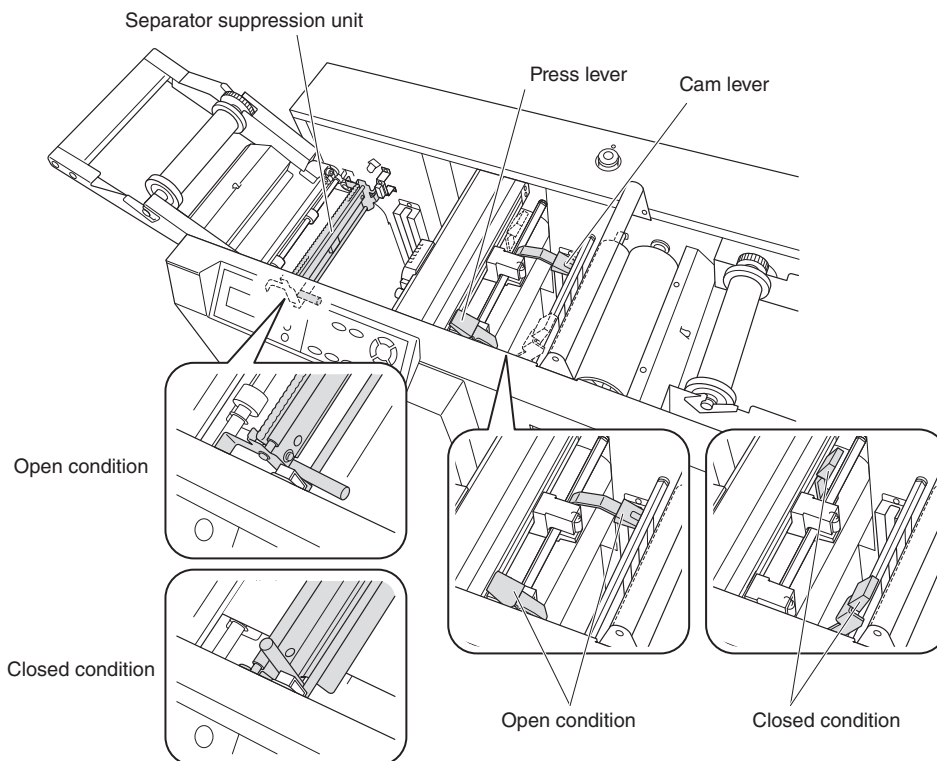
(2) Press the FEED key following the instructions from the control panel when the label materials are set in the media stocker.

The label materials will be sent to the feed roller and stop.

CHECKPOINT ✍ **The below message will display if the label materials are not set. Set the label materials in the media stocker. Refer to "2.5 Setting Label Materials (media)".**

```
L01:No Media          (F1)
 Set the media into   (F2)
stocker.              (F3)
Then press FEEDkey.   (F4)
```

Label materials tip
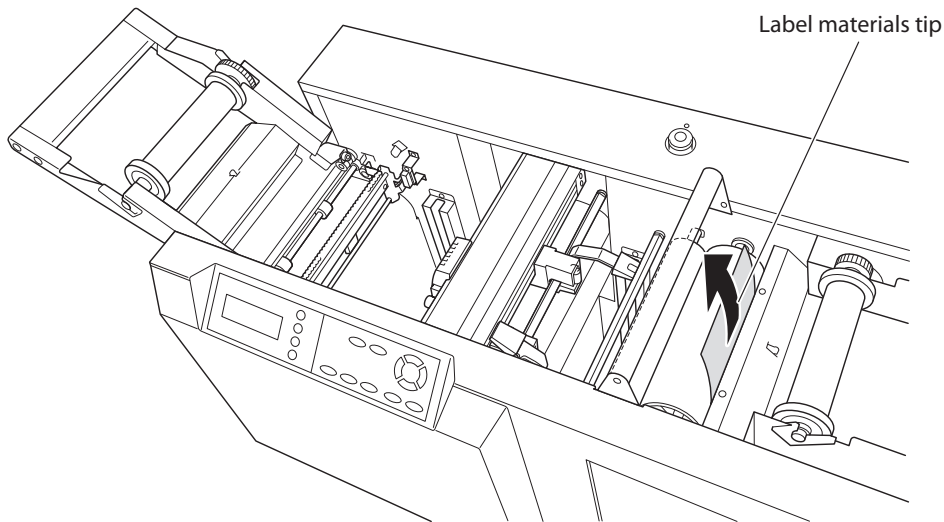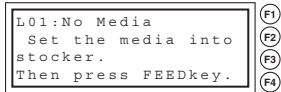
(3) Pass the label materials straight through the space between the feed roller and press roller, and close the press lever.

CHECKPOINT ✍ • **Set the label material exactly straight along the scale seal.**

▐▐▐▐▐▐▐▐▐▐▐   ▲   ▐▐▐▐▐▐▐▐▐▐▐

• **The below message will display when the label materials are fed.**

```
L02:Pass the media    (F1)
through Press-roller  (F2)
and close the lever.  (F3)
Then press FEEDkey.   (F4)
```

Step 3   Press lever   Step 2   Step 1

Scale seal
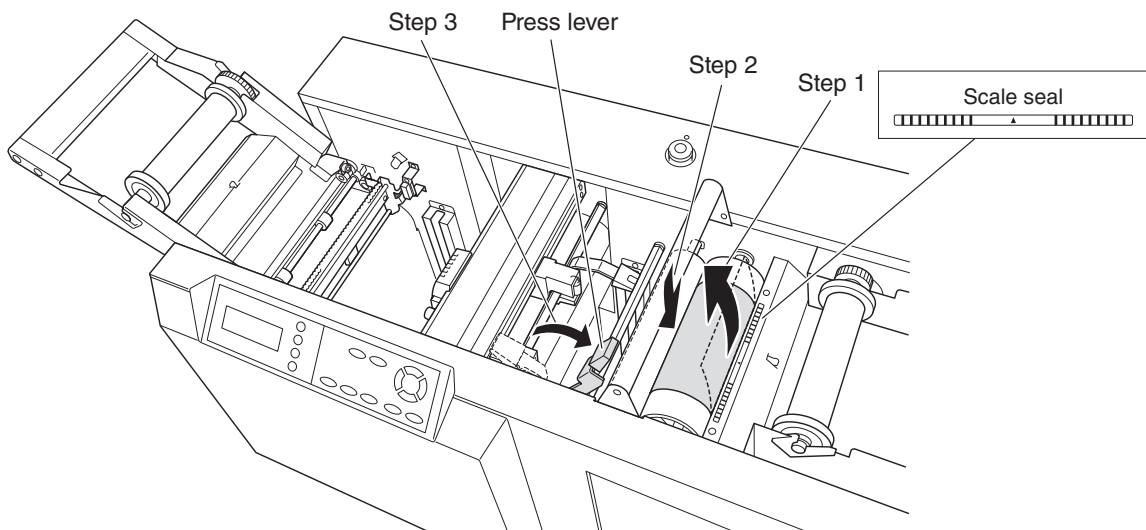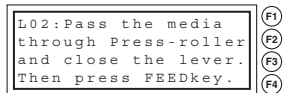
(4)   Press and hold down the FEED key, and pull out the label materials fully while extracting it to the upper side. Once it has been fully extracted, release the FEED key.

CHECKPOINT   • **The below message is shown when the FEED key is pressed.**

```
L03:Press FEEDkey      F1
for feeding and        F2    Alternating    L03:Press ENTERkey     F1
setting the media.     F3    ◄────────►      when finished          F2
                       F4                     setting the media.     F3
                                                                     F4
```

• **Refer to "2.11 Using the Laminate" for how to set the laminate material.**

• **Setting is possible when pulling out the label materials, even through the cutter unit.**

Pull up till here

Step 1 Pull upwards

Step 2
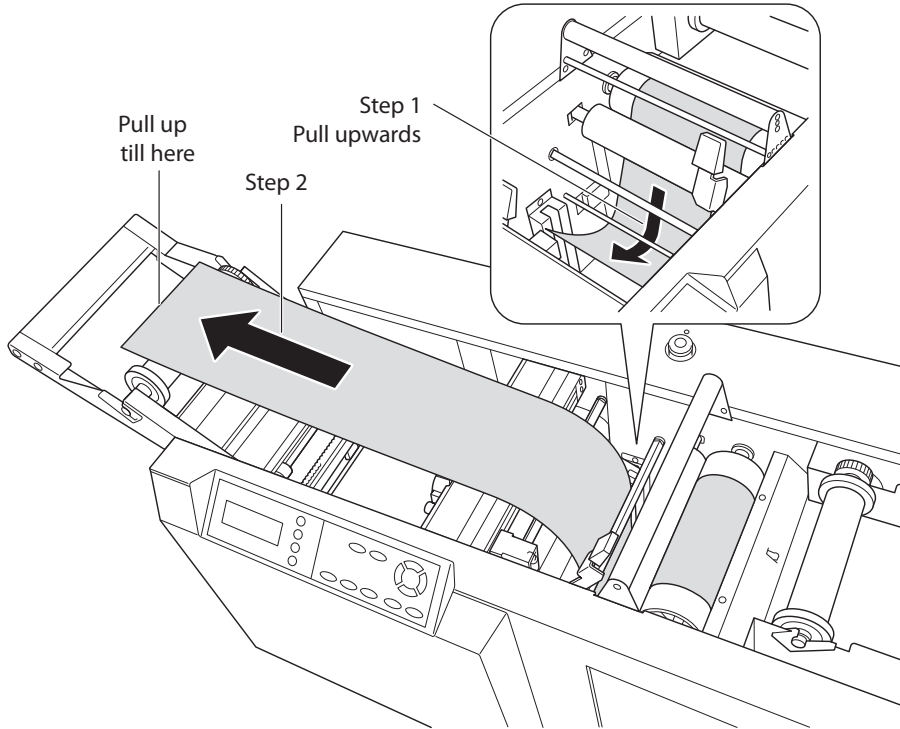
(5)   Open the separator suppression unit and pull the label materials out to the outlet.

CHECKPOINT 🖋 **When passing through the label materials, make sure the cam lever, separator, and separator suppression unit are open.**

Pass through the cutter unit. (Step 1)

In this case, match the position of the push roller. (Step 2) (Refer to "2.7 Setting the Push Roller".)

Pass through the separator section and label materials until the outlet. (Step 3 & 4)

Adjust and match the roller of the separator unit outlet to both ends. (Step 5)
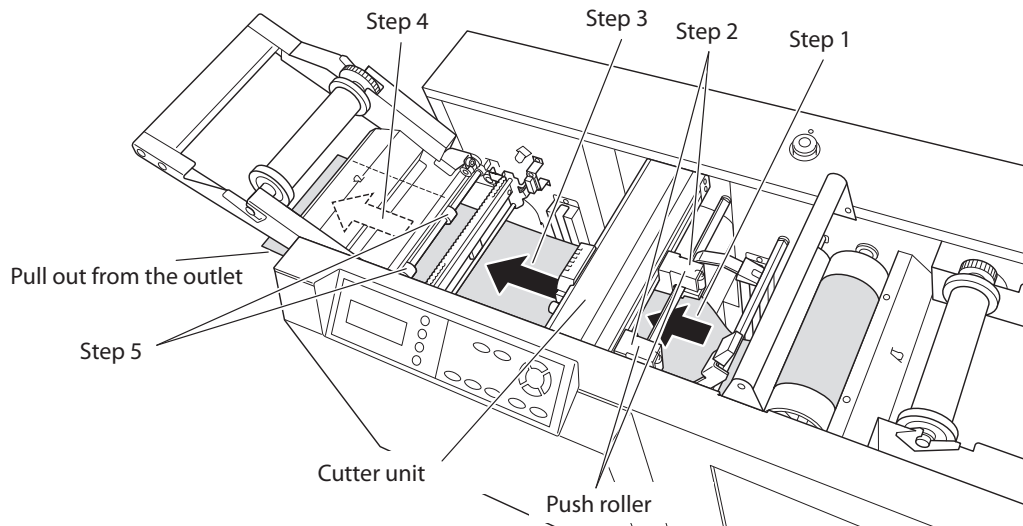
The route is as shown below.
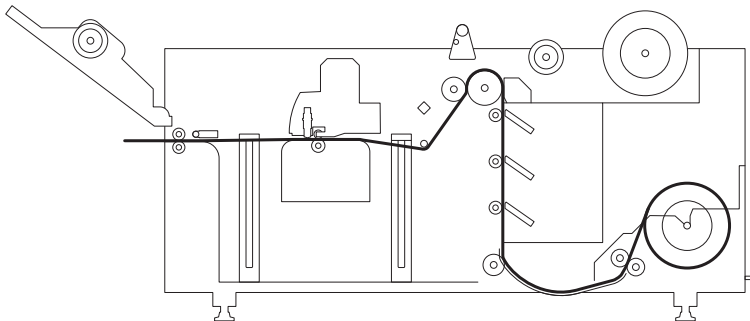
When using the separator

When using the separator, it is possible to set it at this phase. When setting, set in the separator section before setting the dancer roller. (Refer to "2.10 Using the Separator".)

⚠ **CAUTION** **After setting the label materials, roll the media stocker flange and don't wind back the label materials. Winding back forcibly could result in a malfunction.**

(6)   Pull the label materials from the outlet side, and straighten them as they are being pulled. (Step 1)

While it is straight, close the cam lever while pulling the label materials from the outlet side. (Step 2)

Close the separator suppression unit. (Step 3)

CHECKPOINT • **Set the label material exactly straight along the scale seal.**

• **Make sure the roller position of the separator unit outlet matches both sides of the label materials.**
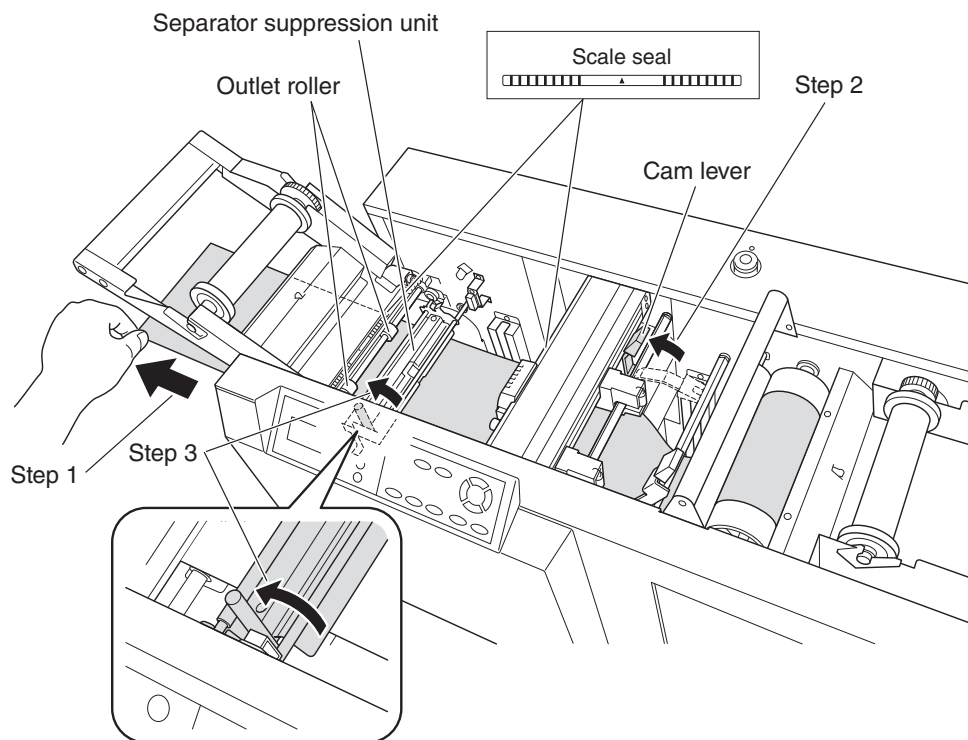
(7)   Close the separator while pulling the label materials from the outlet side.
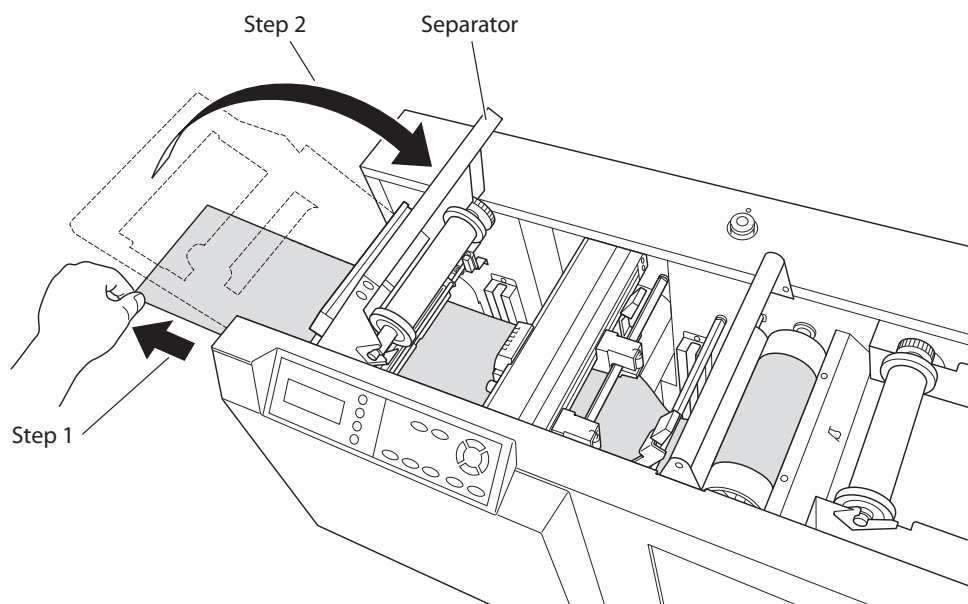
(8) Press the ENTER key when it is possible to set the label materials at the time the below message is shown.

```
L03:Press FEEDkey    (F1)
for feeding and      (F2)   Alternating
setting the media.   (F3)
                     (F4)
```
⟷
```
L03:Press ENTERkey   (F1)
when finished        (F2)
setting the media.   (F3)
                     (F4)
```

(9) When the below confirm screen appears, press ENTER.

When setting each item, set and press enter as according to the message. (Press ENTER to confirm even when the separator and laminate are not set.)

■ Confirm Separator

```
L04:Confirm. Was the   (F1)
winder bobbin set?     (F2)
                       (F3)
YES:ENTER              (F4)
```

■ Confirm Laminate

```
L04:Confirm. Was the   (F1)
laminate install?      (F2)
                       (F3)
YES:ENTER              (F4)
```
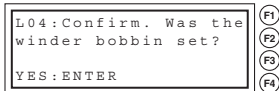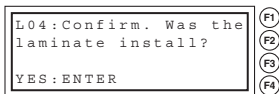
(10) The below message will appear.

Set the dancer roller. (Refer to the next items (11) and (12).)

```
L04:Confirm. Was the   (F1)
dancer roller set?     (F2)
Initialize will        (F3)
start.      YES:ENTER  (F4)
```
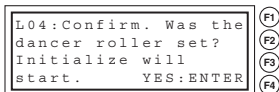
(11) Set dancer roller 1. Insert both sides of the dancer roller into the slot that accepts it.

*Set dancer roller 1 on the side with the red mark.

Dancer roller 1
(Has a red ring mark on both sides)

Red mark
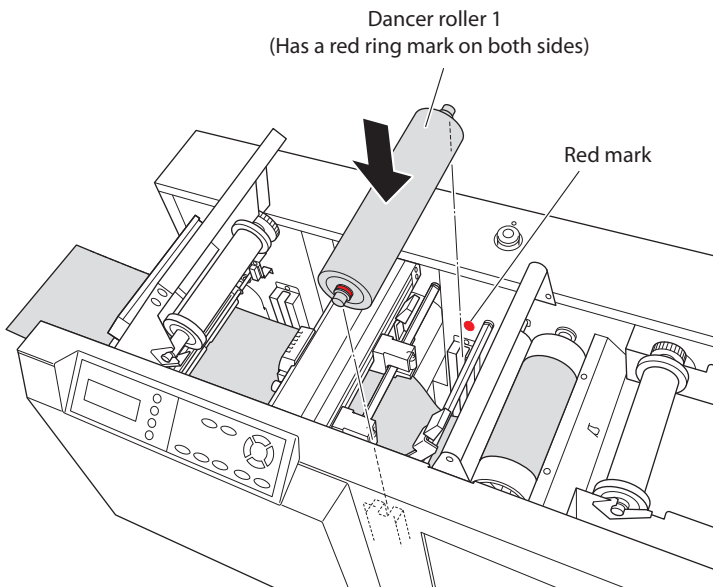
CHECKPOINT **There are two types of dancer rollers. Don't mistake one for the other when setting them.**

Dancer roller 2

There is no red ring.
Used in between the cassette unit
and the separator unit.

Dancer roller 1

Red ring

There are red rings on both sides.
Used in between the press roller and
cutter unit.
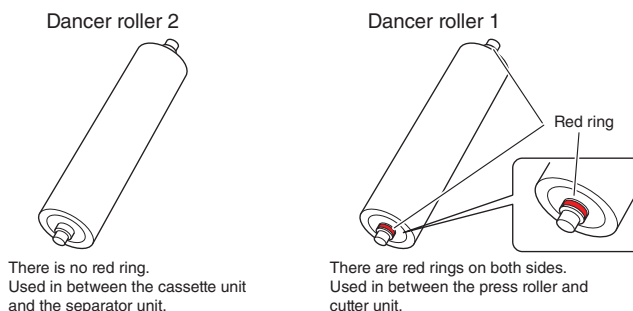
(12) Set dancer roller 2. Insert both sides of the dancer roller into the slot that accepts it.
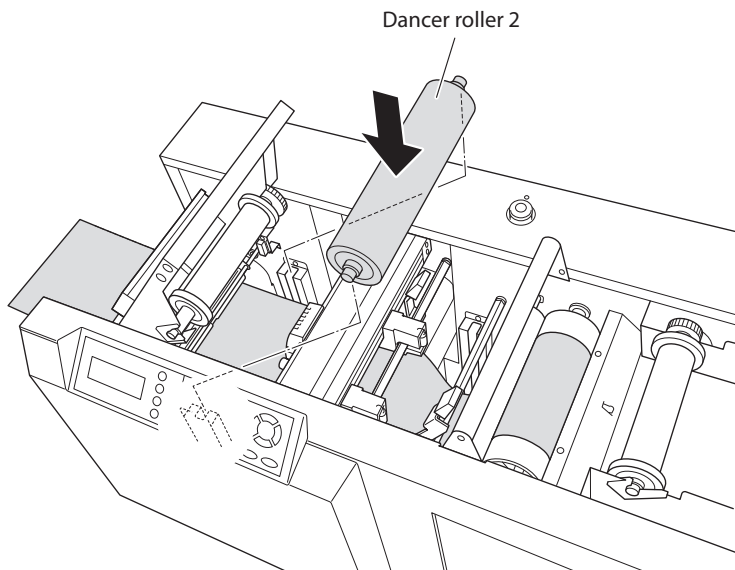
Dancer roller 2

(13) Press the ENTER key when the dancer rollers have been set.

CHECKPOINT ✎

- **The following messages will display during initial operations if the separator or laminator settings are "On", or when the settings and actual set condition differ.**
- **Cases in which the separator winder bobbin is not set when the separator setting is "On".**

```
W18:Media winder      (F1)
Set winder bobbin     (F2)
and press ENTER. Or   (F3)
press F4 to continue  (F4)
```

- **Press F4 to turn Off.**

- **Cases in which the laminate is not set when the laminate setting is "On".**

```
W09:No laminate       (F1)
Load laminate!        (F2)
Then press ENTER. Or  (F3)
press F4 to continue  (F4)
```

- **Press F4 to turn Off.**

- **The following messages will display during the initial operations if the separator or laminator settings are "Off", or when the settings and actual set condition differ.**
- **Cases in which the separator winder bobbin is not set when the separator setting is "Off".**

```
W19:Media winder      (F1)
Remove winder bobbin  (F2)
and press ENTER. Or   (F3)
press F4 to continue  (F4)
```

- **Press F4 to turn On.**
- **Cases in which the laminate is not set when the laminate setting is "Off".**

```
W10:Laminate is ins-  (F1)
talled. Remove it!    (F2)
Then press ENTER. Or  (F3)
press F4 to continue  (F4)
```

- **Press F4 to turn On.**

Run initial operations.

(14) When initial operations are completed, the below "Confirm Combination" screen is displayed. Please refer to "2.3 Using the Control Panel".

```
Confirm Combination!       (F1)
H3=Semi-R H2=Semi-R        (F2)
H1=Semi-R FNSmat N50       (F3)
YES:ENTER     NO:ESC       (F4)
```

(15) Remove media assistance and set the ribbon stocker. (Refer to "2.8 Setting the Ink Ribbon".)

Set the ribbon lever (when printing is possible)

When confirming pattern quality, output test pattern. (Refer to "4.12 PRINT TEST PATTERN").

2.7   Setting the Push Roller

This section explains how to adjust the push roller position of the cutter unit

CHECKPOINT
- **Move the position of the push roller when the cam lever is opened (lowered).**
- **If the push roller is mounted on end of the label materials, the label material glue will adhere to the push roller and may affect the degree of accuracy.**
- **Clean the push roller regularly (per one label material roll). Refer to "6.9 Cleaning Push Roller".**

Setting the Push Roller

Adjust the position of the right and left push roller to match the width of the label materials.

Grit roller

Left/Right sides are even
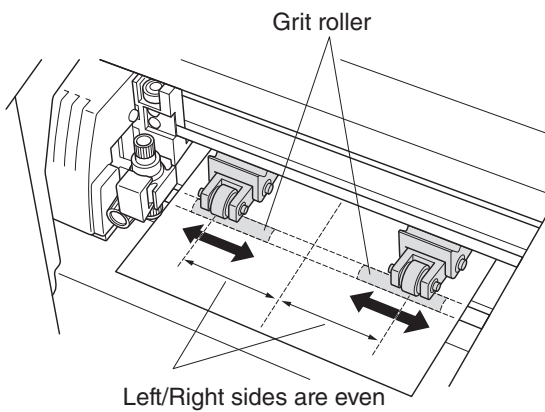
Move to position above both sides of the label materials (center is equal distance from left and right side) and grit roller.

✕ NG
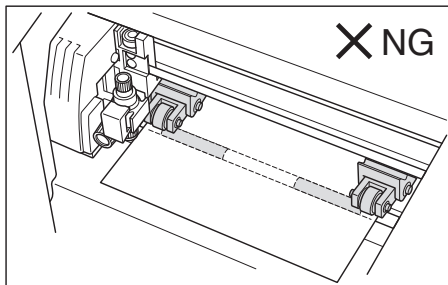
Not attached on the grit roller

✕ NG
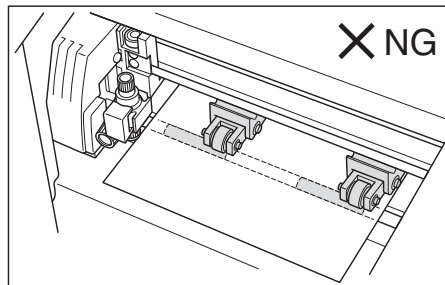
Not attached on the center,
left or right side of the label material

✕ NG
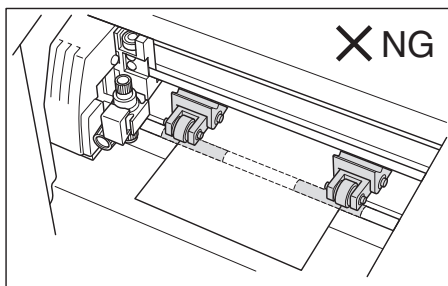
Attached on the label material

○ OK

Left/Right sides are even
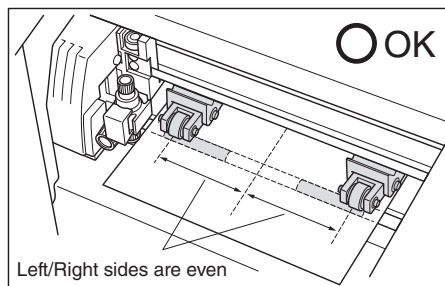
Attached on the center,
left or right side of the label material

2.8   Setting the Ink Ribbon

Set the Ink Ribbon.

CHECKPOINT

- **Do not make a mistake with the pull-out and wind-up directions. If the pull-out and wind-up directions are reversed, this may lead to ink sticking in the print head which disables printing.**
- **If there are wrinkles in the ink ribbon, this could lead to malfunctions including print omissions. If there are wrinkles in the ink ribbon, wind the ink ribbon flange on the taking-up side in order to remove the wrinkles, and roll up the ribbon.**
- **When exchanging the ink ribbon during usage such as when changing the color, place the ribbon in the bag it was packaged in without getting any dust on it, and store it in a box.**
- **Always set ribbon stocker 3 with black. If black is not used, this may lead the cut mark read sensor to malfunction, or the cutting and cross cut functions to stop working correctly.**
- **In initialization of printing after setting a Resin-type ink ribbon, it is possible that white stripes affected by approximately 2 m of dust and aberrant transcriptions may occur.**
- **Color (RESIN) + Black (RESIN) printing is not possible with overlap printing. Use with color (RESIN or Semi-RESIN) + Black (Semi-RESIN). Overlap printing is not possible with two Resin-type ink ribbons.**
- **Roll and set the transparent section of the ink ribbon as explained in this section.**
- **After setting the ink ribbon, a clicking noise may occur when printing begins. This is the sound of the ink ribbon shaft and ribbon cassette connecting, which is a normal occurrence.**
- **When printing, use the ribbon lever when it is set. For example, if the utilized ribbon cassette is not set, an error will occur during printing and other printer parts will fail.**
- **Since Semi-RESIN (Wax-type) has a low level of concealment compared to the Resin-type, the ground work may become transparent and appear like stains if fill printing is carried out. In addition, if a wide area is painted over such as with fill printing, ink ribbon stains may become visually apparent.**
- **Depending on the type of ink ribbon, switch the position of the head pressure adjustment plate. If the position does not match, this may negatively affect the printing quality.**

Types and Characteristics of Ink Ribbons

There are two types of ink ribbons: RESIN and Semi-RESIN. Use as according to the intended purpose.

Type	Model Name	Color	Characteristics	Light Resistance (reference)
RESIN (Resin-type)	RP120-B-R4A	Black	Chemical Resistance: ⊙, Scuffing Resistance: ⊙	6 years
	RP120-R-R4A	Red		6 years
	RP120-BL-R4A	Blue		6 years
	RP120-Y-R4A	Yellow		3 years
	RP120-W-R4A	White		6 years
Semi-RESIN (Wax type)	WD120-B-R4A	Black	Chemical Resistance: O, Scuffing Resistance: x	6 years
	WD120-R-R4A	Red		1 year
	WD120-BL-R4A	Blue		1 year
	WD120-G-R4A	Green		1 year

* ⊙: Very good, O: Good, x: Bad
Note: The above light resistance numerical value is a reference value in an approximate standard.

Ideal Density Settings for Ink Ribbons and Label Materials (media)

Set to ideal Density Settings (PRINTING DENSITY) for the combination of ink ribbons and label materials based on Additional User's Manual.

Proper printing requires that appropriate Density Settings that match the label materials and ink ribbons are necessary. If the Density Settings are not appropriate, printing may become impossible, the ink ribbon may melt, and the main body might suffer damage.

For how to configure Density Settings, please refer to "4.9 PRINTING DENSITY".

Ink Ribbon Stocker

> **CHECKPOINT**
> - **In cases in which label materials are fed through the FEED key during when the label materials are set, make sure the ribbon lever of the ribbon stocker is opened (released).**
> - **When printing, close the ribbon stocker cover and secure the lock lever.**
> - **When printing, set (close) the ribbon lever of the utilized ribbon.**
> - **Always set a black ribbon for ribbon 3 (Head 3).**

Ribbon stocker position

The ribbon and head number order from the bottom is 1, 2, and 3.
Always set a black ribbon for ribbon 3 (Head 3). Refer to the latter section "Setting Ink Ribbons" regarding setting the ribbon.
The below diagram shows the ribbon stocker cover in the opened position.

Ribbon 3 (Head 3)

Ribbon 2 (Head 2)

Ribbon 1 (Head 1)
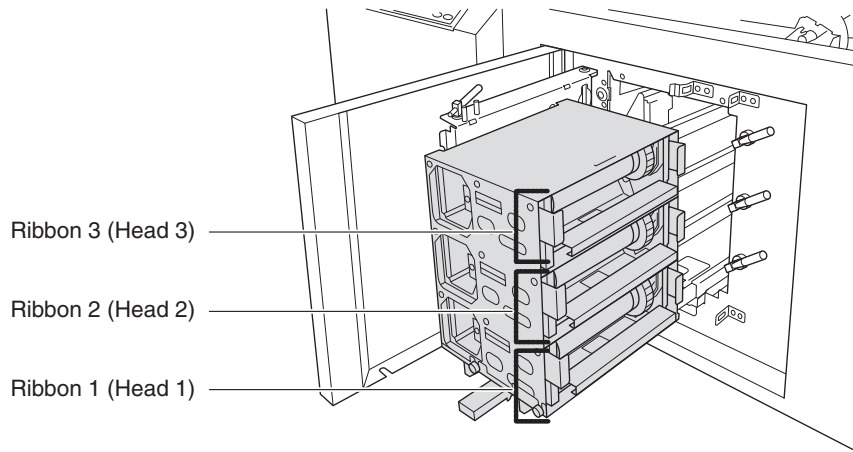
Ribbon lever

Set the ribbon lever when printing.
Release (open) the lever when feeding.
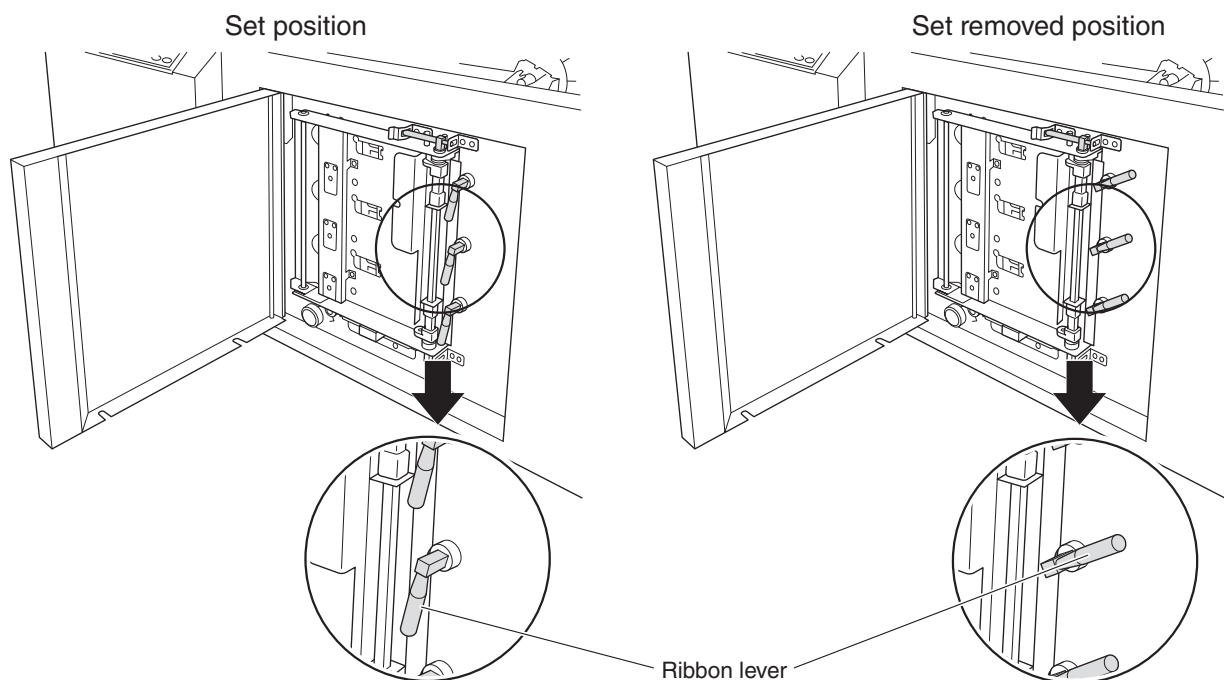
Set position   Set removed position

Ribbon lever

Switching Between RESIN and Semi-RESIN Ink Ribbons

There are two types of ink ribbons: RESIN and Semi-RESIN.

• RESIN (Resin-type)......................RP120-***

• Semi-RESIN (Wax-type) WD120-***

Refer to the previous section "Types and Characteristics of Ink Ribbons" regarding ribbon types.

The ribbon cassette contains a head pressure adjustment plate whose position is switched depending on the type of ink ribbon used.

Switch the position of the head pressure adjustment plate in accordance with the ink ribbon used.

⚠ **CAUTION**	**Should the position of the head pressure adjustment plate and the ink ribbon type be inconsistent, printing quality may be adversely affected.**
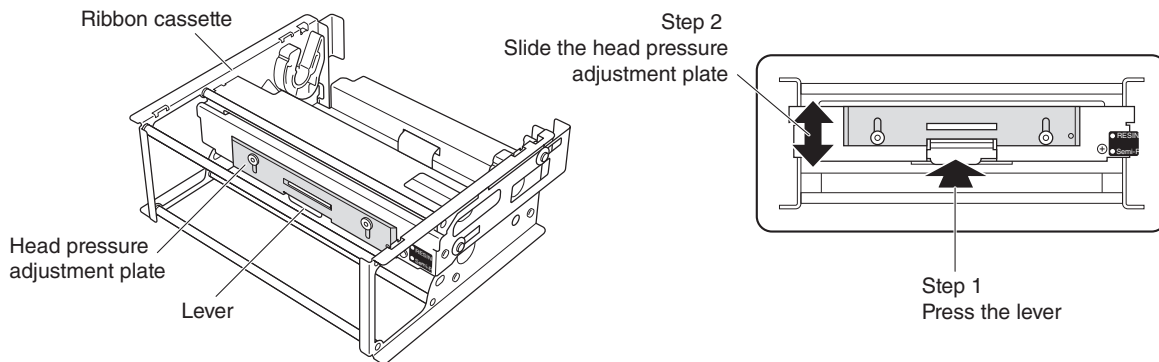
How to Switch the Head Pressure Adjustment Plate

• When using a RESIN ribbon, set the head pressure adjustment plate to the upper side.

• When using a Semi-RESIN ribbon, set the head pressure adjustment plate to the lower side.

CHECKPOINT	**When switched to the proper position, the head pressure adjustment plate makes an audible click.**
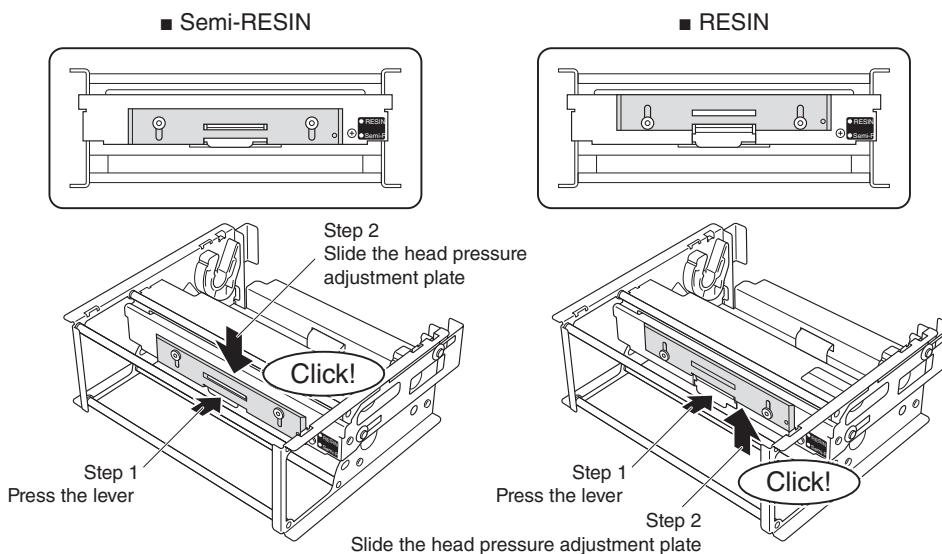
Setting the Ink Ribbon

⚠️ **CAUTION**
- **When treating the ink ribbon, be careful not to let dust attach to the ribbon front and posterior. The significant presence of dust can lead to a thermal head malfunction.**
- **When setting the ink ribbon, take full care not to get your fingers caught.**

(1) Pull up the lever (below diagram) which secures the ribbon stocker, and pull out the media assistance. Remove the set media assistance.

Step 1

Step 2

Lever

Media assistance

Pin
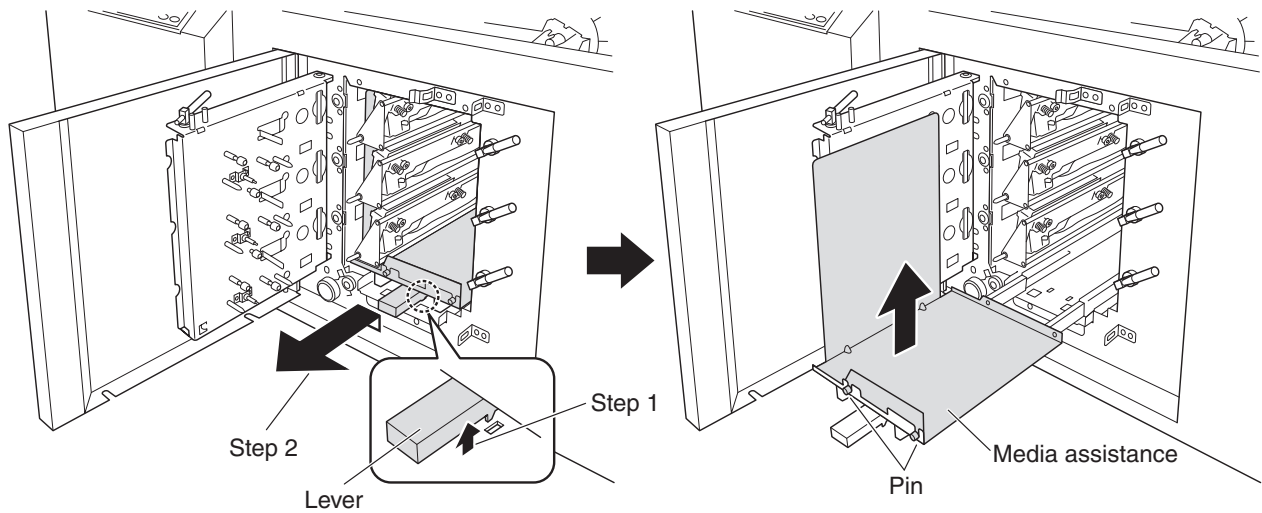
(2) Set the ribbon stocker.

CHECKPOINT **Makes sure the screw pin fits firmly in the slot.**

Ribbon stocker

The pins must be properly fitted
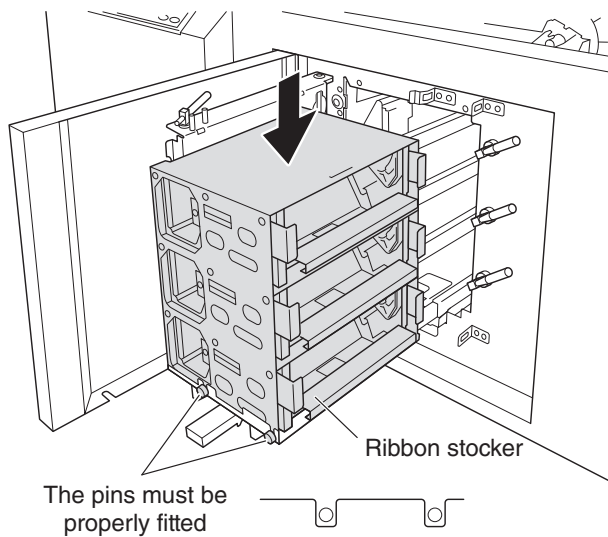
(3)   Pull the stopper lever situated on the center back slightly, and pull the ribbon cassette **slowly and gently**.
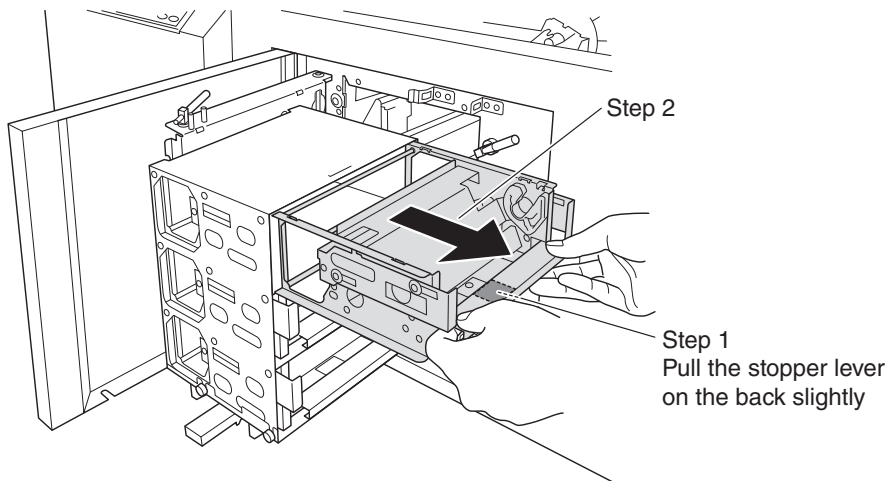
Step 2

Step 1
Pull the stopper lever
on the back slightly

(4)   Set the ink ribbon flange in the ink ribbon.

When peeling the tape, be careful not to peel the film section of the ribbon.

CHECKPOINT
   • **Push so that there is no opening in between the paper tube and ink ribbon flange.**
   • **The ink ribbon can be set on either side of the ink ribbon flange as they all are the same.**
   • **When exchanging the ink ribbon in between, set the cutout in the mark.**
   • **Roll and set the transparent section of the ink ribbon preliminarily.**

Cutout section
A

Not yet printed side

Printed side

Printed side   Not yet printed side

Ink ribbon flange

(5)   Expand the ink ribbon.

Not yet printed side

Printed side
(The side, which rolls the transparent part
when the ribbon is new)
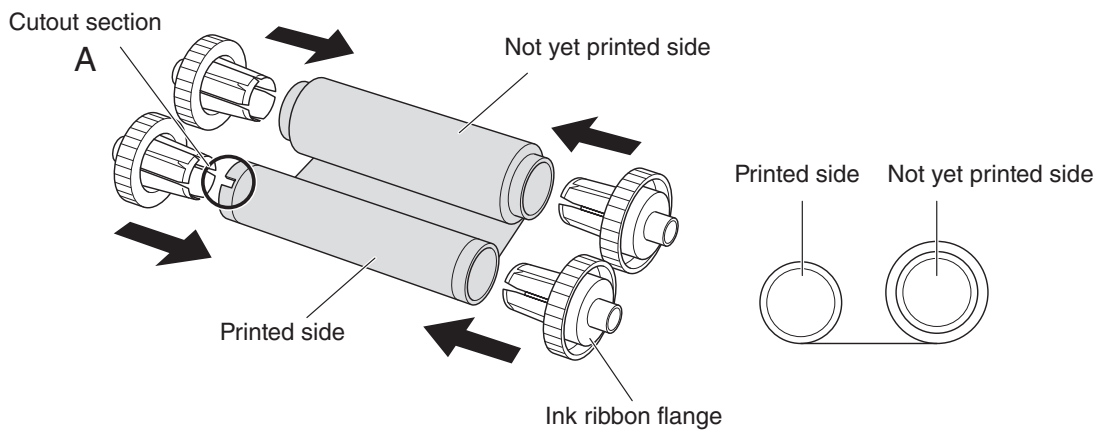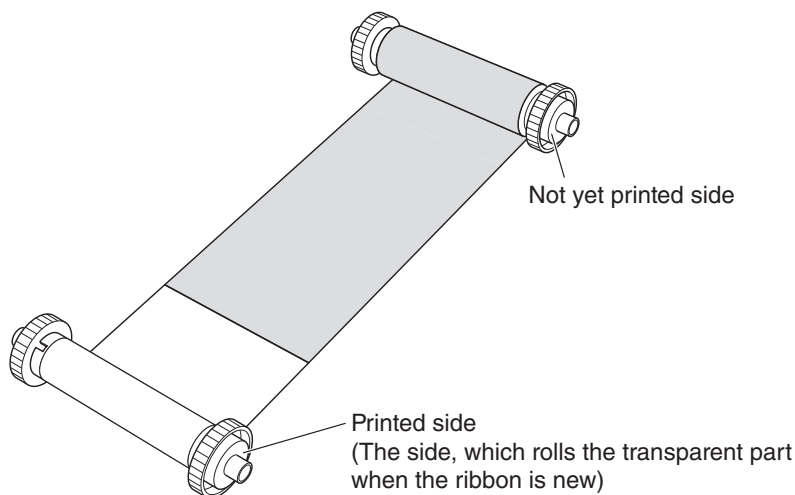
(6)   Prior to setting the ink ribbon in the ribbon cassette side, switch to the head pressure adjustment plate for the ribbon cassette.

Refer to the previous section, "Switching the RESIN and Semi-RESIN Ink Ribbons", switch to the utilized ink ribbon, and set it in the ribbon cassette.

(7)   Set the ink ribbon in the ribbon cassette.

Set the ink ribbon and hold the flange section when setting it. Push until there is a clicking sound.

Set the cutout section of the ink ribbon paper core into the position shown in the below diagram.

⚠ **CAUTION**   • **During set-up, be careful not to confuse the sending side with the wind-up side. (When set in the ribbon stocker, make the area coming toward the upper side the wind-up side.)**

• **When exchanging the ink ribbon in between, set the cutout in the mark.**

• **Take care not to let dust into the cassette bar or ribbon. The significant presence of dust can lead to a thermal head malfunction. If dust has settled on the cassette bar or ribbon, slightly wind the wind-up side.**

Set the cutout section (**A**) in this position.

Click!

Click!

Not yet printed side

Printed side

(8)   Hold the flange section in the reverse side also and set it into the ribbon cassette. Push until there is a clicking sound.

CHECKPOINT 🖊   • **Make sure the ink ribbon is not slack. Roll up the ribbon if it is slack.**

• **Rewind until the transparent film is no longer visible.**

• **Make sure there are no wrinkles in the ink ribbon. Missing text occurs when there are wrinkles.**

Click!

Click!

Set the cutout section (**A**) in this position.

Printed side
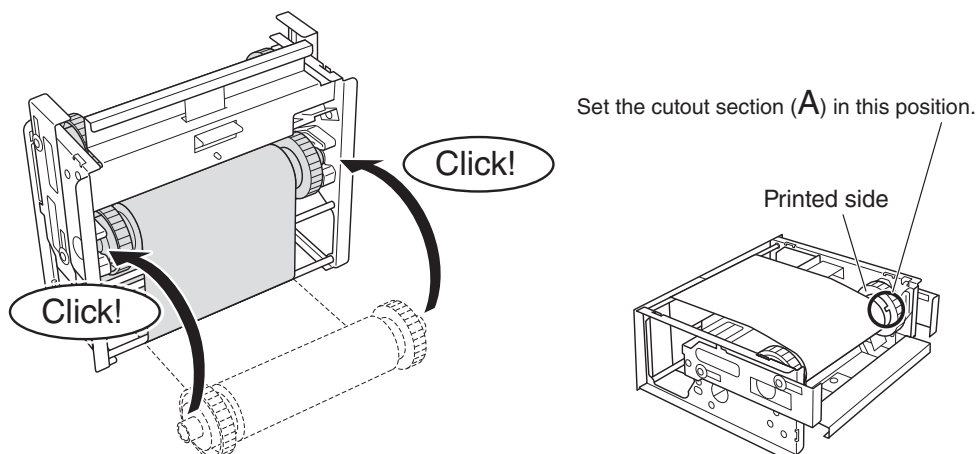
(9)   Set the ribbon cassette in the ribbon stocker.

> **CHECKPOINT** • **Push the ribbon cassette all the way to the back of the ribbon stocker and make sure it doesn't come back.**
>
> • **Carefully set the up/down direction.**
>
> • **Make sure the ink ribbon is not slack. Roll up the ribbon if it is slack.**
>
> • **Make sure there are no wrinkles in the ink ribbon. Missing text occurs when there are wrinkles.**
>
> • **Always set a black ribbon for ribbon 3 (Head 3).**
>
> • **Set non-black ribbons in ribbon 1 (Head 1) and ribbon 2 (Head 2)**
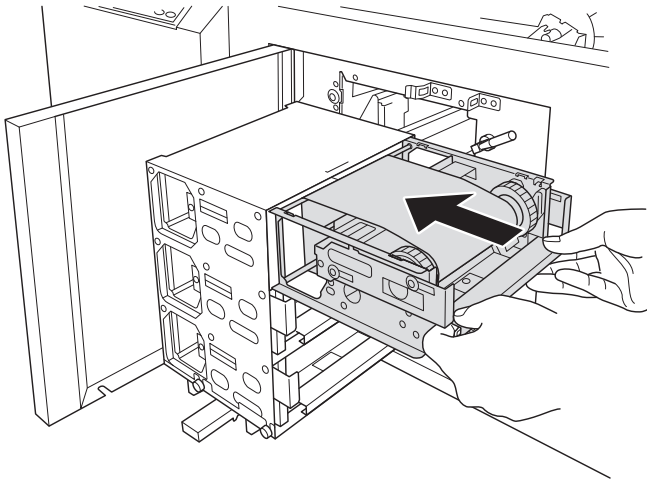
Set other ink ribbons in the same manner.

(10)   Push the lever and **slowly and quietly** return the ribbon stocker to the main body. Push until there is a clicking sound. Push and fasten the lever so that it is secured in the slot, and close the ribbon stocker cover.

Insert the ribbon stocker deep into the main body.

> **CHECKPOINT** • **Insert the ribbon stoker deep into the main body.**
>
> • **Make sure the lever's bulge is fastened in the slot.**

Lever

Step 1

Step 3

Ribbon stoker cover

Click!

Step 2

Fasten the lever's bulge in the slot.
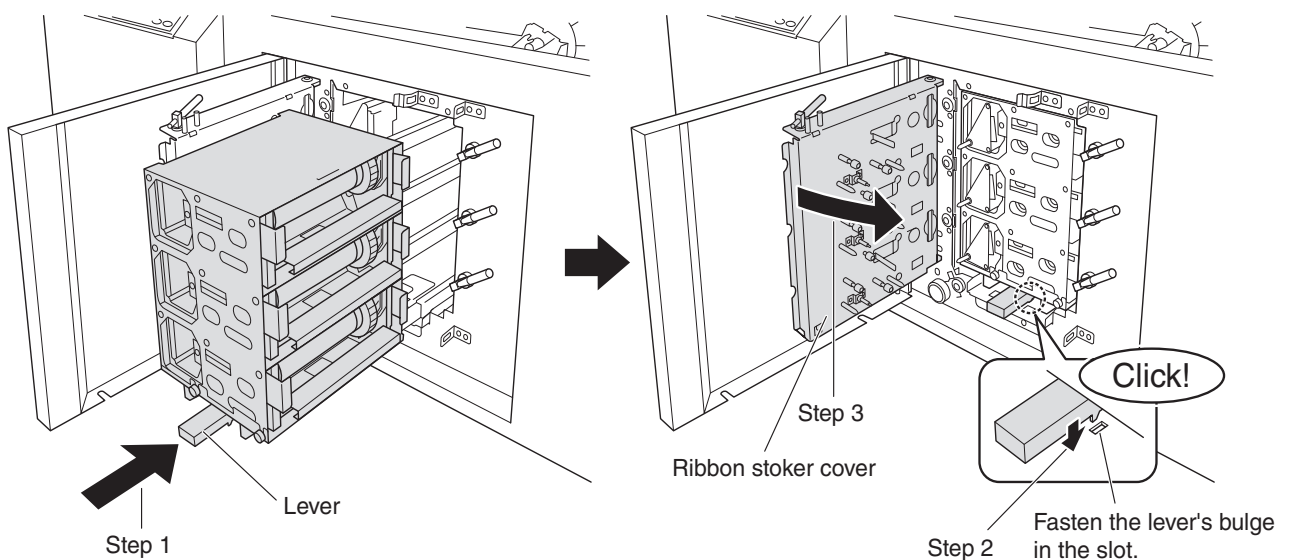
(11) Set the above lock lever and close the main body front cover.

CHECKPOINT 🖋 **When feeding, make sure the ribbon lever is released (opened).**

Lock lever

Step 1

Step 2

Setting the ink ribbon is now complete.
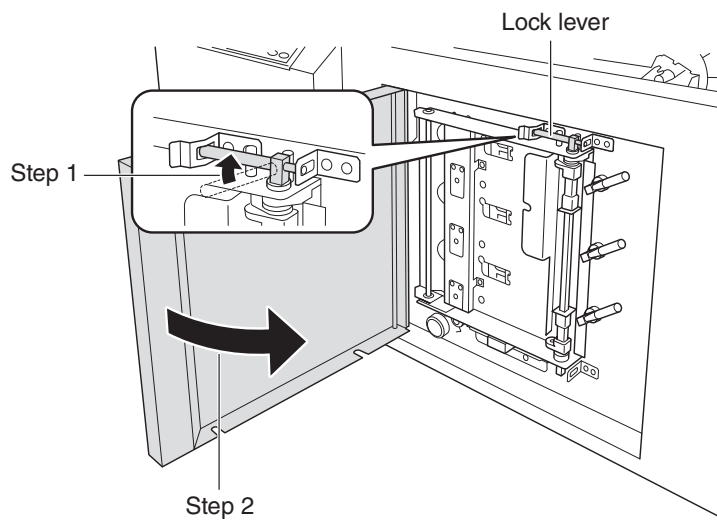
After finishing setting the ink ribbon, refer to "4.9 PRINTING DENSITY" and adjust the density to match the set ink ribbon.

CHECKPOINT 🖋 **When printing, use the ribbon lever when it is set.**

Set the ribbon lever when printing.
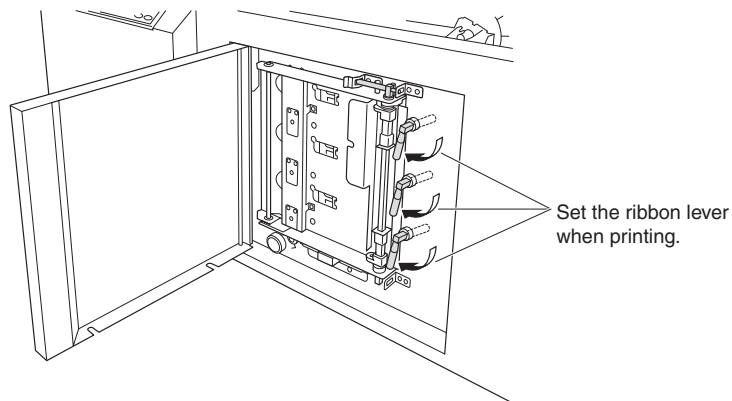
2.9 Adjusting the Function Setting

With the function setting you can turn on/off laminate, separator, and cross cut.

CHECKPOINT ✍ **During feeding, release all ribbon levers and open the press lever.**

(1) Press the LOCAL key on the control panel.
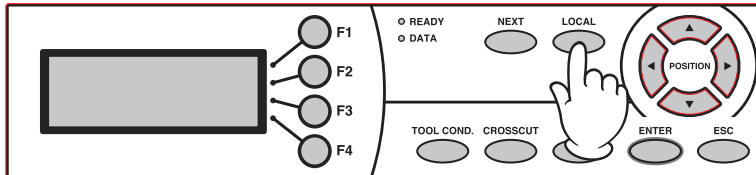
(2) Press the F1 key (PRINTER MENU) and press the NEXT key twice. Press the F3 key (FUNCTION SETTING) in the [3/4] screen.

Select PRINTER MENU (F1 key).

The menu switches by pressing the NEXT key only in the print menu.

Select FUNCTION SETTING (F3 key).
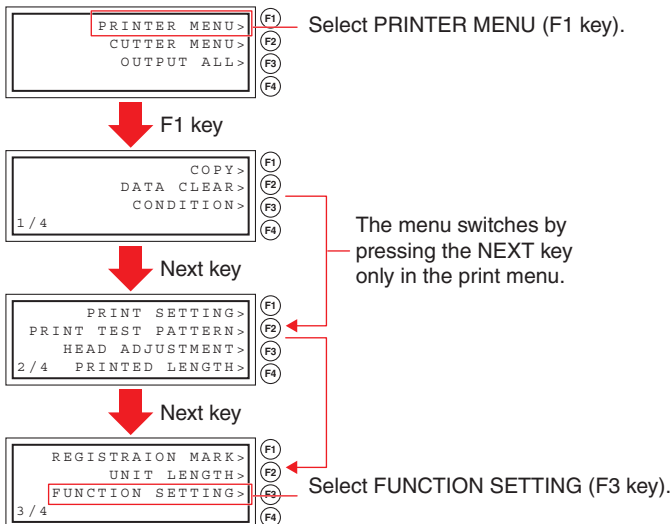
(3) Press F1 - F3 for laminate, separator, and cross cut, and use the POSITION keys (▲▼) to switch ON/OFF. Press the ENTER key to confirm.
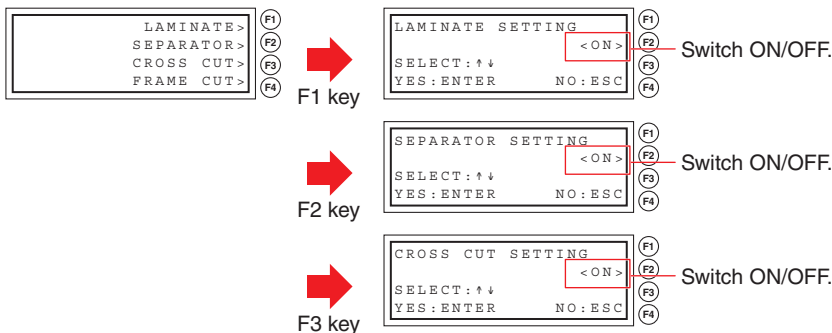
Switch ON/OFF.

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

2.10 Using the Separator

Once the label materials are set, set the separator in the separator section.

CHECKPOINT
- **Set the separator when the label materials have been set.**
- **Refer to "2.6 Loading Label Materials (media)" regarding setting label materials.**
- **Prior to using the separator function, refer to "2.9 Adjusting the Function Setting", and then turn the "separator" on.**
- **When using the separator, it is possible to use it smoothly if the separator winder bobbin is set in the separator prior to setting the label materials.**
- **When the set label materials are nearly new (many rolls remaining), the separator winder bobbin becomes full before using up all the label materials. The extent to which it becomes full depends on the cutting pattern and surrounding environment.When operated for a long period of time, set a new paper tube in the separator winder bobbin.**
- **The rewindable outer diameter varies according to the cutting pattern.**
- **The shape of the separator winder bobbin is similar to the laminate winder bobbin. The section with the large gears attached to shaft is the separator winder bobbin.**

<Steps For When Using the Separator>

Step / Present Condition	Turn the power ON (READY Status)	Set label materials	Turn on separator settings	Set in the separator section
Power ON (READY Status) Finished setting label materials	—	—	Step 1	Step 2
Power ON (READY Status) Not finished setting label materials	—	Step 1	Step 2	Step 3
Power OFF Finished setting label materials	Step 1	—	Step 2	Step 3
Power OFF Not finished setting label materials	Step 1	Step 2	Step 3	Step 4

●Reference
[Turn power ON]: Refer to "2.4 Connecting to the Power Supply".
[Setting label materials]: Refer to "2.5 Setting Label Materials (media)", "2.6 Loading Label Materials (media)".
[Turn on separator setting]: Refer to the latter "Turning On the Separator" section.
[Set in the separator section]: Refer to the latter "Setting the Separator" section.
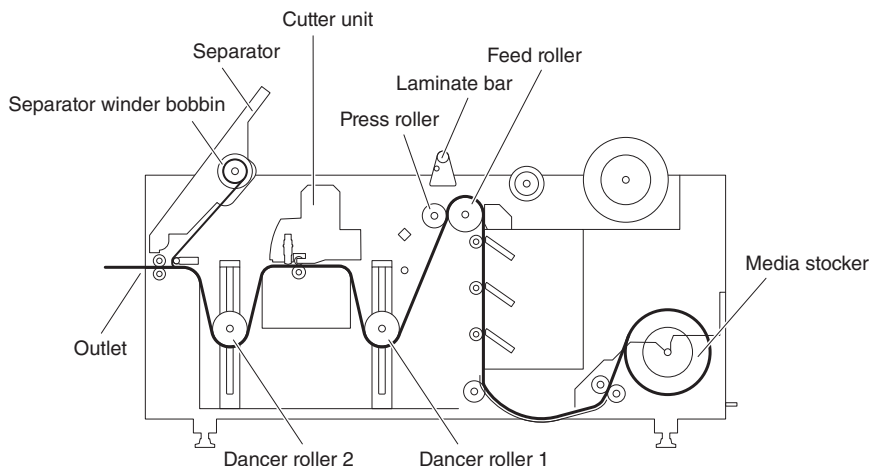
<Media Route>

Turning on the Separator

(1) Press the LOCAL key on the control panel.

(2) Press the F1 key (PRINTER MENU) and press the NEXT key twice. Press the F3 key (FUNCTION SETTING) in the [3/4] screen.

```
PRINTER MENU>   (F1) ── Select PRINTER MENU (F1 key).
 CUTTER MENU>   (F2)
  OUTPUT ALL>   (F3)
                (F4)
```

↓ F1 key

```
         COPY>  (F1)
   DATA CLEAR>  (F2)    The menu switches by
    CONDITION>  (F3)    pressing the NEXT key
1/4             (F4)    only in the print menu.
```

↓ Next key

```
  PRINT SETTING>     (F1)
PRINT TEST PATTERN>  (F2)
  HEAD ADJUSTMENT>   (F3)
2/4  PRINTED LENGTH> (F4)
```

↓ Next key

```
REGISTRAION MARK>  (F1)
    UNIT LENGTH>   (F2)
FUNCTION SETTING>  (F3) ── Select FUNCTION SETTING (F3 key).
3/4                (F4)
```
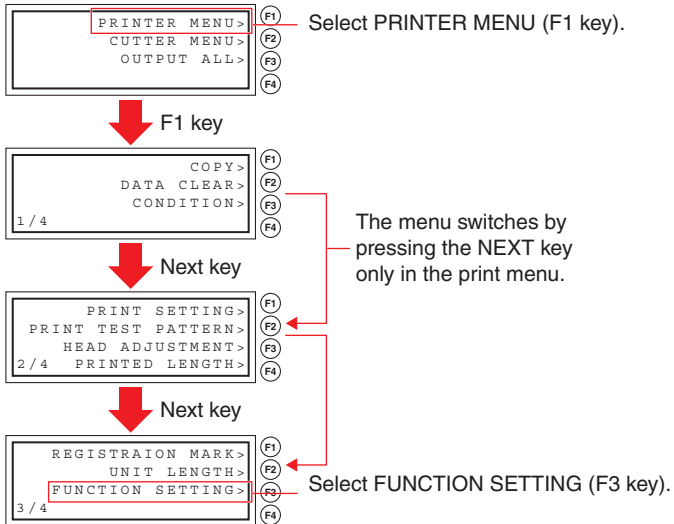
(3) Press the F2 key (SEPARATOR), use the POSITION keys (▲▼) to turn the separator on, and press the ENTER key to confirm.
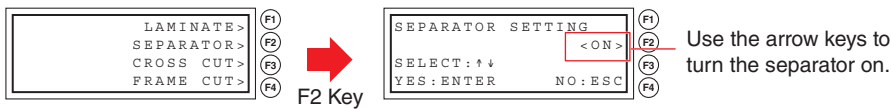
```
   LAMINATE>  (F1)          SEPARATOR SETTING      (F1)
  SEPARATOR>  (F2)   ➡                             (F2)   Use the arrow keys to
  CROSS CUT>  (F3)         SELECT:↑↓        <ON>   (F3)   turn the separator on.
  FRAME CUT>  (F4)         YES:ENTER    NO:ESC     (F4)
                   F2 Key
```

Press the ESC key to return to the previous screen.
Press the LOCAL key to return to READY status.

Setting the Separator

(1) Remove dancer roller 2 from the separator side and open the separator section.

CHECKPOINT **Always remove the dancer roller before opening the separator.**

Separator   Step 2   Step 1   Dancer roller 2
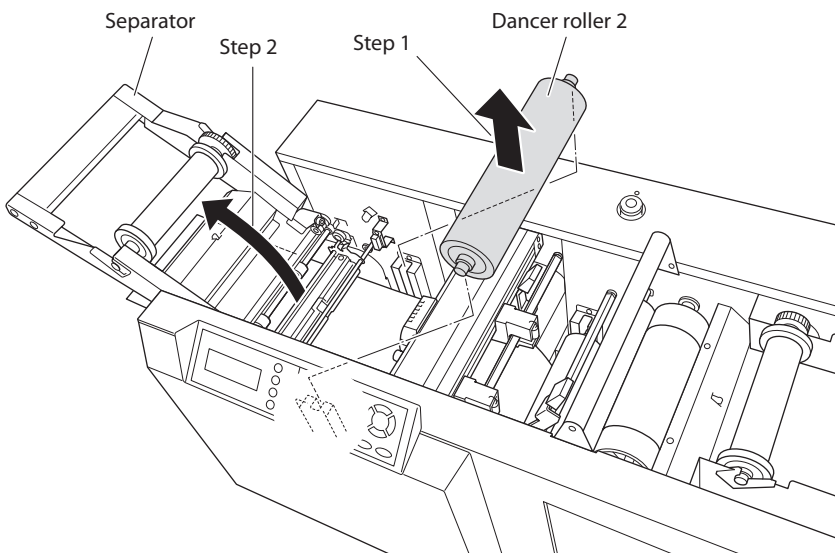
(2)   Remove when the separator winder bobbin is set.

Separator winder bobbin
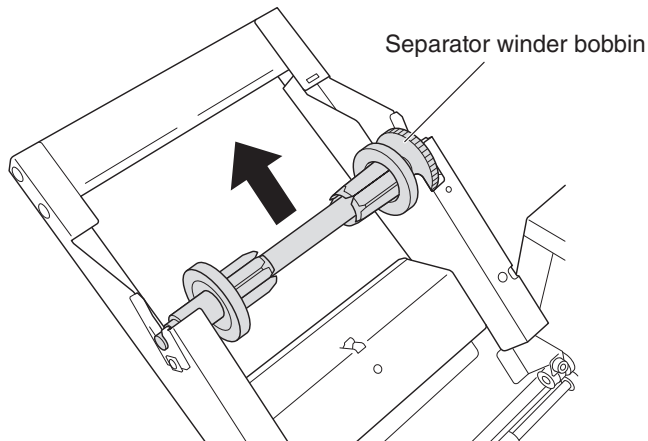
(3)   Loosen and remove the separator flange collar, then remove the separator winder bobbin flange. (The flange on the gear-side is fastened.)

CHECKPOINT   • **The larger white gear is for winding.**

• **Be carefull that the separator flange collar doesn't drop.**

Separator flange collar

(4)   Install the flange into the form tube of the separator winder bobbin. Fasten so that there is no opening in between the form tube and flange.

CHECKPOINT   • **Use either an auxiliary form tube or the form tube of a used ink ribbon.**

• **Fasten the separator flange collar all the way in when installing.**

Separator flange collar

(5)   Install the separator winder bobbin. Push until there is a clicking sound.

(6)   Open the separator suppression unit and pull out the label materials from the separator unit.

Cut the adhesive area of the label materials approximately 100 mm from the posterior end.

Peel the adhesive section of the label materials.

Pull out the adhesive section from deep in the separator suppression unit.

CHECKPOINT • **Set-up becomes easy when the label materials are drawn out from the separator section, the adhesive sections are peeled, and the remaining backing sheet section is passed through the separator section once more.**

• **When setting label materials for use with the separator, set-up becomes easier when the separator section is also set at the same time.**

---

(7)   Pull out the backing sheet from the outlet. Feed the label materials by pressing the FEED key when the length is too short.

Apply the adhesive section of the peeled label materials to the separator winder bobbin section.

Step 2
Apply the adhesive section
of the label material.

Step 1
Pull out the
backing sheet.

(8)   Pull the backing sheet section from the outlet and close the separator suppression unit.

Separator suppression unit

Step 1
Pull out
the backing sheet.

Step 2

CHECKPOINT • **If the label material is overly sagging, slowly twist the separator winder bobbin and wind up the label material. Since there is a rotational direction in the separator winder bobbin, refer to the below illustration when winding.**

• **When twisting to roll up the separator winder bobbin, push while slowly twisting. If the separator winder bobbin might drop if it is twisted too quickly. Exercise caution.**

(9) Pull the backing sheet from the outlet side, and straighten it as the label materials are being pulled.

Close the separator and set dancer roller 2.

CHECKPOINT **Set the dance roller exactly straight along the scale seal.**

Step 2   Step 3

Separator   Dance roller 2

Step 1
Pull out
the backing sheet.

Press the FEED key, and always make sure the label material loads and is rolled up in the separator winder bobbin.

When the below message is displayed, release the ribbon lever set-up.

```
W04:Loading check
Ribbon lever is set.
Can not feed.
YES:ENTER
```
F1
F2
F3
F4

2.11   Using the Laminate

Once the label materials are set, set the laminate section.

CHECKPOINT • **Set the laminate function when the label materials have been set.**
- **Refer to "2.6 Loading Label Materials (media)" regarding setting label materials.**
- **Prior to using the laminate function, refer to "2.9 Adjusting the Function Setting", and then turn the "laminate" on.**
- **Refer to "2.10 Using the Separator" regarding the separator.**
- **The degree of accuracy can be affected when the laminate material glue attaches to the push roller. Regularly clean the push roller.**
- **The shape of the media stocker flange resembles the laminate stocker flange. The object with the long shaft is the laminate stocker flange.**
- **The shape of the separator winder bobbin is similar to the laminate winder bobbin. The section with the small gears attached to shaft is the laminate winder bobbin.**
- **Even when the laminate settings are off, exercise caution as a laminate error can occur when the laminate section is rotated by hand.**

<Steps For When Using Laminate>

Step Present Condition	Turn the power ON (READY Status)	Set label materials	Turn on separator settings	Set the laminate section
Power ON (READY Status) Finished setting label materials	—	—	Step 1	Step 2
Power ON (READY Status) Not finished setting label materials	—	Step 1	Step 2	Step 3
Power OFF Finished setting label materials	Step 1	—	Step 2	Step 3
Power OFF Not finished setting label materials	Step 1	Step 2	Step 3	Step 4

●Reference
[Turn power ON]: Refer to "2.4 Connecting to the Power Supply".
[Setting label materials]: Refer to "2.5 Setting Label Materials (media)", "2.6 Loading Label Materials (media)".
[Turn on laminate setting]: Refer to the latter "Turning On the Laminate" section.
[Set in the laminate section]: Refer to the latter "Setting the Laminate" section.
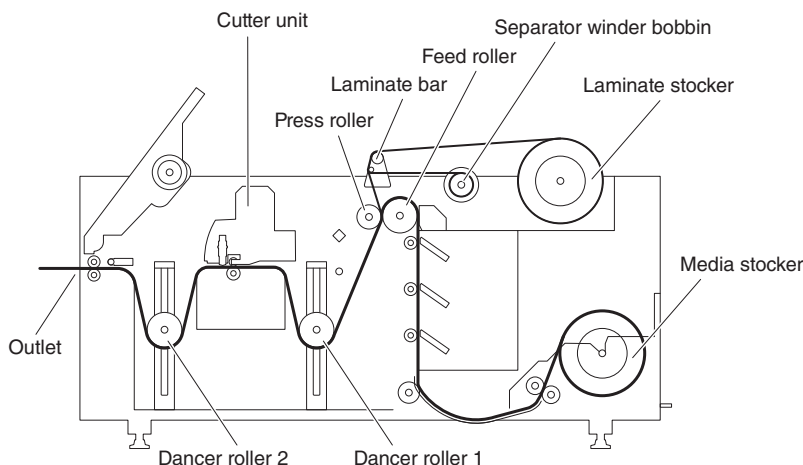
<Media Route>

Turning On the Laminate

(1)   Press the LOCAL key on the control panel

(2)   Press the F1 key (PRINTER MENU) and press the NEXT key twice. Press the F3 key (FUNCTION SETTING) in the [3/4] screen.

```
PRINTER MENU>   (F1)  —— Select PRINTER MENU (F1 key).
CUTTER  MENU>   (F2)
OUTPUT  ALL>    (F3)
                (F4)
```

F1 key ↓

```
        COPY>   (F1)
  DATA CLEAR>   (F2)
   CONDITION>   (F3)     The menu switches by
1/4             (F4)     pressing the NEXT key
                         only in the print menu.
```

Next key ↓

```
   PRINT SETTING>   (F1)
PRINT TEST PATTERN> (F2)
  HEAD ADJUSTMENT>  (F3)
2/4   PRINTED LENGTH> (F4)
```

Next key ↓

```
REGISTRAION MARK>   (F1)
    UNIT LENGTH>    (F2)
FUNCTION SETTING>   (F3)  —— Select FUNCTION SETTING (F3 key).
3/4                 (F4)
```
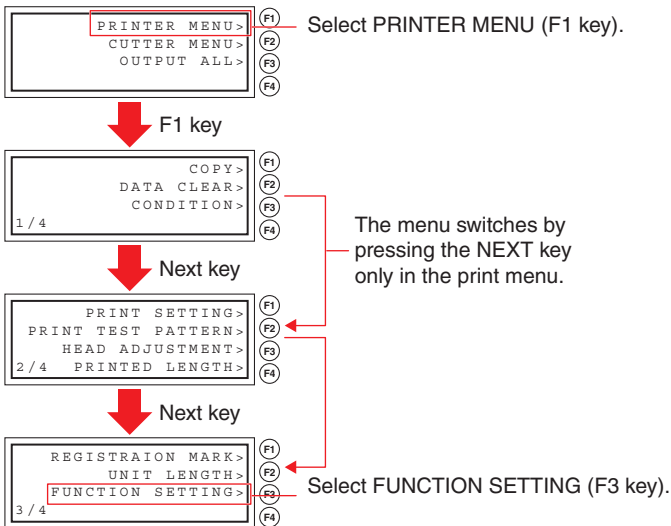
(3)   Press the F1 key (LAMINATE), use the POSITION keys (▲▼) to turn the separator on, and press the ENTER key to confirm.
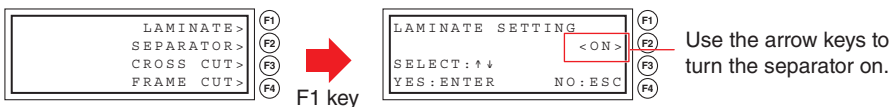
```
   LAMINATE>   (F1)          LAMINATE SETTING    (F1)
  SEPARATOR>   (F2)                      <ON>   (F2)     Use the arrow keys to
  CROSS CUT>   (F3)          SELECT:↑↓           (F3)    turn the separator on.
  FRAME CUT>   (F4)          YES:ENTER   NO:ESC  (F4)
              F1 key
```

Press the ESC key to return to the previous screen.
Press the LOCAL key to return to READY status.

Set the laminate

(1)   Remove the laminate stocker and laminate winder bobbin.

CHECKPOINT **Pull out the laminate winder bobbin, making sure that the left and right sides are pulled out evenly.**

Laminate stocker

Laminate winder bobbin
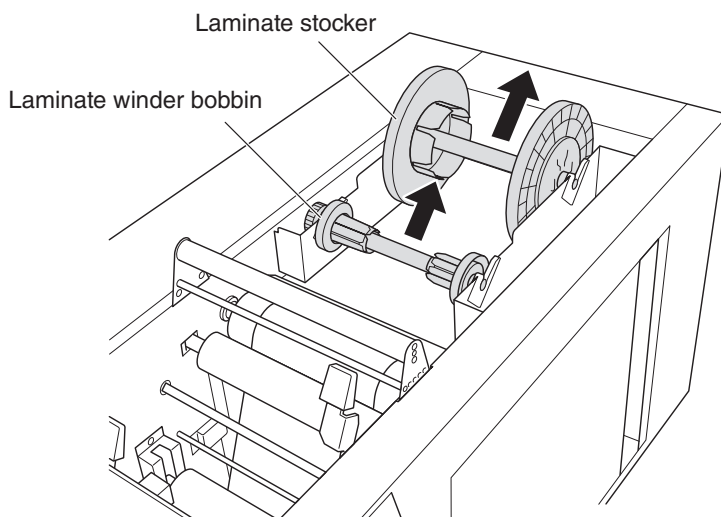
(2)   Remove the laminate stocker flange. The object with the short shaft is the laminate stocker flange.
Set the gear side in front.

(3)   In order to adjust to fit the laminate material width, release the lock from the flange and shift the shaft.

Step 3

Step 1:
Press the "PUSH" section.

Step 2

(4)   Determine the position of the flange to match the laminate material width.

CHECKPOINT   **The width of the settable laminate materials are 50, 60, 70, 80, 90, 100, 110 mm.**

Laminate material width (mm)

110 •• 90 •••••••• 50

(5)   Lock in the shaft groove and set the flange.

Step 1

Step 2
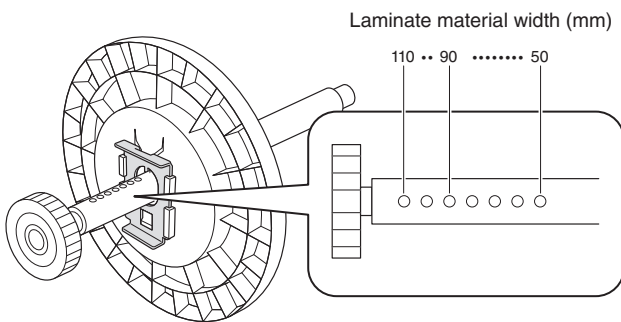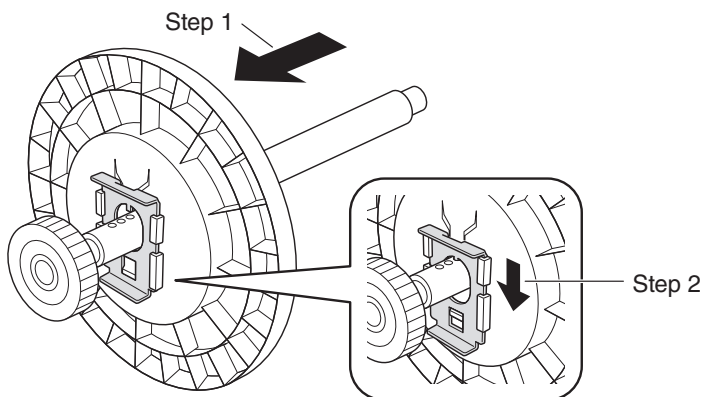
(6)   Set the laminate materials and install the flange.

Set it so that the laminate materials are the revolute.

Push so that there is no opening in between the form tube and flange.

CHECKPOINT 📝 • **During set-up, be careful not to confuse the revolute with the involution.**

• **Make sure the set laminate materials do not slack.**

• **There is the possibility of inclining to one side if media glue attaches to the inside of the flange. Please clean regularly. (Refer to "6.12 Cleaning Media Stocker & Media Stocker Flange".)**

---

(7)   Remove the laminate winder bobbin flange. (The flange on the gear-side is fastened.)

CHECKPOINT 📝   **The smaller black gear is for the laminate winding.**

---
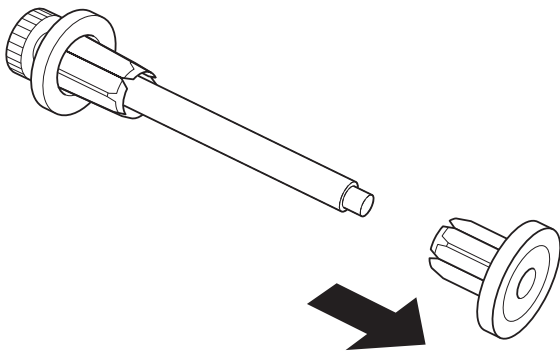
(8)   Install the flange into the form tube of the laminate winder bobbin. Push so that there is no opening in between the form tube and flange.

(9)   Install the laminate stocker and laminate winder bobbin. Push until there is a clicking sound.

Click!

Click!

(10)   Pull out the laminate material.

Cut the adhesive area of the laminate materials approximately 150 mm from the forefront.

Cut and peel the adhesive section of the laminate tip.

CHECKPOINT   **Set-up is easier when the adhesive section of the label material is cut first.**

Step 2
Only cut
the adhesive section.

Approx. 150 mm

Step 1

Step 3
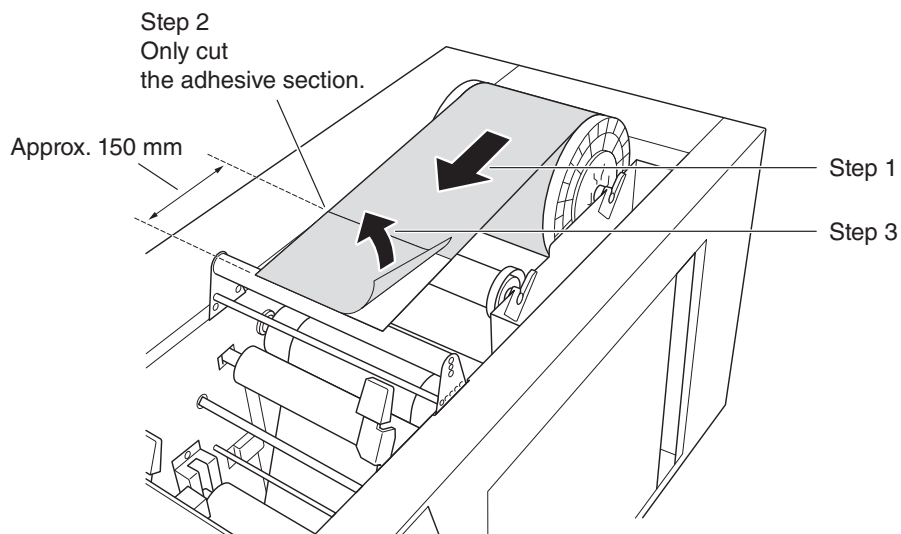
(12) Apply the laminate (adhesive section) straight over the laminate bar and laminate tension bar to the label material. Fold back the backing sheet side from the laminate tension bar and attach to the laminate winder bobbin with tape. If the laminate material backing sheet is overly sagging, twist the laminate winder bobbin to wind it up.

CHECKPOINT   **Set the dance roller exactly straight along the scale seal.**

Laminate bar

Laminate tension bar

Step 1
Apply to the label material to the adhesive section.

Step 2
Attach the backing sheet section to the laminate winding flange usng tape.

Adhesive section

Backing sheet section

CHECKPOINT   **If the laminate material backing sheet is overly sagging, twist the laminate winder bobbin to wind it up. Since there is a rotational direction in the laminate winder bobbin, refer to the below illustration when winding.**

Press the FEED key, and always make sure there are no wrinkles when feeding the label material and that the backing sheet is wound in the winder bobbin when the laminate material is fed.

When the below message is displayed, release the ribbon lever set-up.

```
W04:Loading check
Ribbon lever is set.
Can not feed.
YES:ENTER
```
F1
F2
F3
F4

2.12   TOOL COND. Key

When the TOOL COND. key is pressed from the READY status, confirmation is carried out for cutting condition (tool condition settings) settings, cutting test, and cutting range width.

Tool Conditions: Tool condition settings are carried out for the cutter.

Test Cut: Cutting test is carried out.

Cutting Range Width Display: The possible range (width) of cutting is shown.

TOOL COND. Menu

Ready Status

```
┌─────────────────────┐ (F1)
│ READY               │ (F2)
│                     │ (F3)
│    CONDITION-01     │ (F4)
└─────────────────────┘
```

          │ [TOOL COND.]
          ▼

```
┌─────────────────────┐ (F1)        ┌─────────────────────┐ (F1)
│ TOOL CONDITIONS>    │ (F2)───────▶│ <1 09U +1 14 30 2>  │ (F2)    Move to the various settings via the ←, → keys
│        TEST CUT>    │ (F3)        │   [CONDITION NO.]   │ (F3)
│    CUTTING WIDTH>   │ (F4)        │ SELECT:←→↑↓         │ (F4)
└─────────────────────┘            │ YES:ENTER    NO:ESC │
                                   └─────────────────────┘

                                   ┌─────────────────────┐ (F1)
                                   │ TEST CUT?           │ (F2)
                                   │                     │ (F3)
                                   │ POSITION:↑↓         │ (F4)
                                   │ YES:ENTER    NO:ESC │
                                   └─────────────────────┘

                                   ┌─────────────────────┐ (F1)
                                   │ CUTTING WIDTH       │ (F2)
                                   │            xxxmm    │ (F3)
                                   │                     │ (F4)
                                   │ RETURN:ESC          │
                                   └─────────────────────┘
```
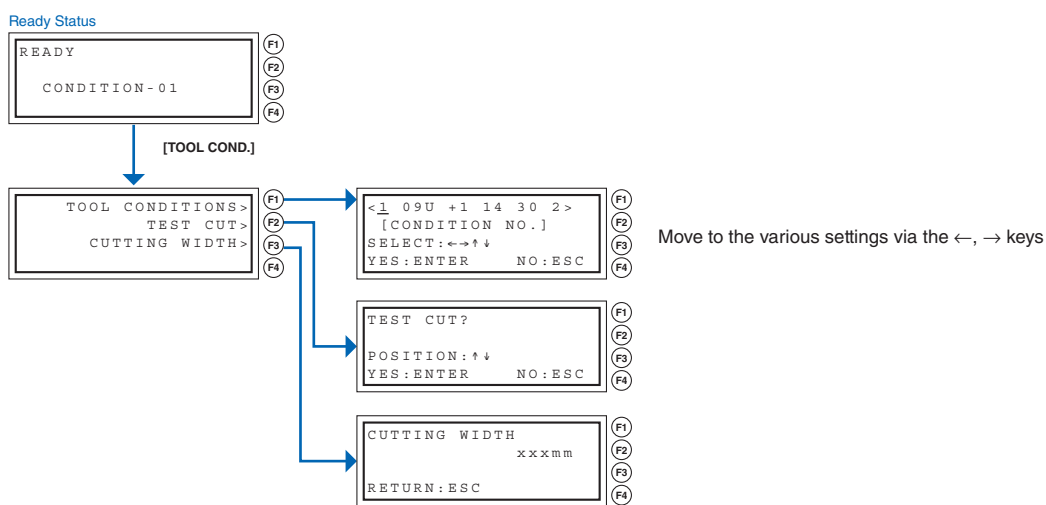
Operation Method

(1)   Press the TOOL COND. key from READY status.

```
┌─────────────────────┐ (F1)
│ TOOL CONDITIONS>    │ (F2)
│        TEST CUT>    │ (F3)
│    CUTTING WIDTH>   │ (F4)
└─────────────────────┘
```
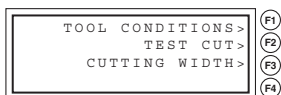
(2)   Press F1 - F3 keys in the above display.

2.13   Selecting Tool Conditions

Adjust settings for "Tool Conditions", "Tool", "Offset", "Fource", "Speed", and "Acceleration".

LCD Display

TOOL CONDITIONS Offset   Speed
       Tool   Force   Acceleration

```
<1 09U +1 14 30 2>   (F1)
  [TOOL TYPE]        (F2)
SELECT:←→↑↓          (F3)
YES:ENTER    NO:ESC  (F4)
```

An "_" (underbar) is shown underneath the selected tool condition.

Selected
tool condition name

Selected tool condition
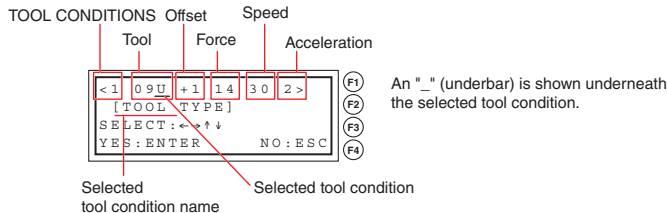
Selecting Tool Conditions

Tool Condition can memorize 8 settings from 1 to 8. In addition, based on switching between these settings, it is possible to switch between 8 different types of label material settings that are programmed beforehand.

(1)   Press the TOOL COND. key from the READY status and the below message will display.
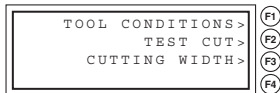
```
   TOOL CONDITIONS>  (F1)
          TEST CUT>  (F2)
      CUTTING WIDTH> (F3)
                     (F4)
```

(2)   Press the F1 key (TOOL CONDITIONS), and the below message will display.

```
<1 09U +1 14 30 2>   (F1)
  [CONDITION NO.]    (F2)
SELECT:←→↑↓          (F3)
YES:ENTER    NO:ESC  (F4)
```
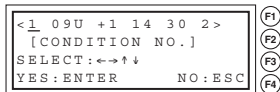
(3)   Press the POSITION keys (▲▼) to change the tool conditions.
     The settable range is 1-8.

(4)   If the programmed content is acceptable, press the ENTER key.
     If you press the LOCAL key before again pressing the ENTER key, the condition settings will clear without applying the condition settings.

Setting Tool Condition

This section will explain the settings for Tool, Offset, Force, Speed, and Acceleration. The tool conditions for cutting label materials are decided in the following 5 items:

(1) TOOL ....Set the utilized blade. ("09U" Fixed)

(2) OFFSET ....Set the offset value depending on the utilized blade.

(3) FORCE ....Set the following chart as the standard.

(4) SPEED ....Set the following chart as the standard.

(5) ACCEL (ACCELERATION)........Set the following chart as the standard.

CHECKPOINT **Refer to "2.14 Adjusting the Blade Length" with regards to blade length adjustment methods.**

Tool condition for each tool (cutter blade)

Label materials/laminate materials	Thickness (mm)	Blade type	FORCE	SPEED	ACCEL
Cut within 0.25 mm of thickness	Up to 0.25	CB09UA	10 to 24	Up to 30	Up to 3

Blade Type Name, Displayed Blade Type and Offset Value

Cutter blade type	Cutter blade number	Default	Setting range
Supersteel	CB09UA	0	±5

⚠ CAUTION **In order to improve residue removal**
Keep in mind the following for improving residue removal efficiency.
- **Select a blade that matches the purpose.**
  CB09UA: General cutting with color adhesive film
- **Use an unworn blade.**
  When the blade becomes blunt, residue removal efficiency is also affected.
- **Use the amount of remaining blade trace in the release paper as the standard for the blade length/cutting.**
  When deciding the cutting force, set the lowest value possible for the remaining blade trace.
- **Use the lowest setting possible for speed/acceleration.**

CHECKPOINT
- **If the settings for speed/acceleration are made high, the end result will be course but the cutting time will shorten. It is especially possible with large-width media that quality cutting cannot be achieved due to media-tearing. Therefore, adjust speed/quality to the lowest settings in such cases.**
- **If the settings for speed/acceleration are made low, the end result will be a clean cut but the cutting time will lengthen.**

Setting Tool

Tool settings are "09U" secured.

Setting Offset

The offset setting adjusts the correction amount of the blade used during cutting. Program tool conditions by tool type as the standard. (Refer to the previous "Blade Type Names, Displayed Blade Types, and Offset Values".)

Refer to "2.15 Cutting Test" and adjust accordingly.

(Setting Range: -5 to +5)

(1)   Press the TOOL COND. key from the READY status and the below message will display.

```
    TOOL CONDITIONS>   (F1)
           TEST CUT>   (F2)
        CUTTING WIDTH> (F3)
                       (F4)
```

(2)   Press the F1 key (TOOL CONDITIONS), and the below message will display.

```
<1 09U +1 14 30 2>    (F1)
 [CONDITION NO.]      (F2)
SELECT:←→↑↓            (F3)
YES:ENTER    NO:ESC   (F4)
```

     *The displayed content will vary depending on the selected tool condition setting area.

(3)   Press the POSITION keys (◄►) to go to offset settings.

```
<1 09U +1 14 30 2>    (F1)
 [OFFSET]             (F2)
SELECT:←→↑↓            (F3)
YES:ENTER    NO:ESC   (F4)
```

(4)   Press the POSITION keys (▲▼) to change offset.
     The settable range is -5 to +5.

(5)   If the programmed content is acceptable, press the ENTER key.
     If you press the LOCAL key before again pressing the ENTER key, the condition settings mode will be cleared.

Setting Cutting Force

The cutting force setting adjusts the cutting force during cutting. Program tool conditions by label material type and tool type as the standard. (Refer to the previous "Tool Conditions by Tool Type".)

(Setting range: 1 - 31)

(1)   Press the TOOL COND. key from the READY status and the below message will display.

```
    TOOL CONDITIONS>   (F1)
           TEST CUT>   (F2)
        CUTTING WIDTH> (F3)
                       (F4)
```

(2)   Press the F1 key (TOOL CONDITIONS), and the below message will display.

```
<1 09U +1 14 30 2>    (F1)
 [CONDITION NO.]      (F2)
SELECT:←→↑↓            (F3)
YES:ENTER    NO:ESC   (F4)
```

     *The displayed content will vary depending on the selected tool condition setting area.

(3)   Press the POSITION keys (◄►) to go to cutting force setting.

```
<1 09U +1 14 30 2>    (F1)
 [FORCE]              (F2)
SELECT:←→↑↓            (F3)
YES:ENTER    NO:ESC   (F4)
```

(4)   Press the POSITION keys (▲▼) to change cutting force.
     The settable range is 1 - 31.

(5)   If the programmed content is acceptable, press the ENTER key.
     If you press the LOCAL key before again pressing the ENTER key, the condition settings mode will be cleared.

Setting Speed

The speed setting adjusts the tool speed during cutting. Program tool conditions by label material type and tool type as the standard. (Refer to the previous "Tool Conditions by Tool Type".)

(Setting range: 1 - 10 (every 1 cm/s), 10 - 30 (every 5 cm/s))

(1) Press the TOOL COND. key from the READY status and the below message will display.

```
     TOOL CONDITIONS>   (F1)
            TEST CUT>   (F2)
        CUTTING WIDTH>  (F3)
                        (F4)
```

(2) Press the F1 key (TOOL CONDITIONS), and the below message will display.

```
<1 09U +1 14 30 2>   (F1)
  [CONDITION NO.]    (F2)
SELECT:←→↑↓          (F3)
YES:ENTER    NO:ESC  (F4)
```

*The displayed content will vary depending on the selected tool condition setting area.

(3) Press the POSITION keys (◄►) to go to speed setting.

```
<1 09U +1 14 30 2>   (F1)
  [SPEED]            (F2)
SELECT:←→↑↓          (F3)
YES:ENTER    NO:ESC  (F4)
```

(4) Press the POSITION keys (▲▼) to change speed.
     Setting range is 1 - 10 (1-step) · 15 · · (5-step) · · 30 (cm/s).

(5) If the programmed content is acceptable, press the ENTER key.
     If you press the LOCAL key before again pressing the ENTER key, the condition settings mode will be cleared.

Setting Acceleration

Acceleration during cutting adjusts the quality. Program tool conditions by label material type and tool type as the standard. (Refer to the previous "Tool Conditions by Tool Type".)

(Setting range: 1 - 3)

(1) Press the TOOL COND. key from the READY status and the below message will display.

```
     TOOL CONDITIONS>   (F1)
            TEST CUT>   (F2)
        CUTTING WIDTH>  (F3)
                        (F4)
```

(2) Press the F1 key (TOOL CONDITIONS), and the below message will display.

```
<1 09U +1 14 30 2>   (F1)
  [CONDITION NO.]    (F2)
SELECT:←→↑↓          (F3)
YES:ENTER    NO:ESC  (F4)
```

*The displayed content will vary depending on the selected tool condition setting area.

(3) Press the POSITION keys (◄►) to go to acceleration setting.

```
<1 09U +1 14 30 2>   (F1)
  [ACCEL]            (F2)
SELECT:←→↑↓          (F3)
YES:ENTER    NO:ESC  (F4)
```

(4) Press the POSITION keys (▲▼) to change acceleration.

(5) Press the ENTER key and the below message will display.
     The settable range is 1 - 3. The lowest setting will reduce acceleration and increase quality.

(6) If the programmed content is acceptable, press the ENTER key.
     If you press the LOCAL key before again pressing the ENTER key, the condition settings mode will be cleared.

2.14   Adjusting the Blade Length

If the blade length is not adjusted to fit the utilized label materials (media) and cutter blade, it will not be possible to achieve an optimal cut. After adjusting the blade length manually, run a test cut and adjust further.

⚠ **CAUTION**
- **When handling the cutter blades, take full care not to cut your hands.**
- **If the blade tip extends too far, this may cause damage to the cutter blade and cutting mat.**
  Keep the blade length below the thickness of the label material.

CHECKPOINT 🖊   **Refer to "2.15 Cutting Test" with regards to the cutting test.**

(1)   Align with the tip of the cutter pen, and then extend until it reaches the surface of the label material.
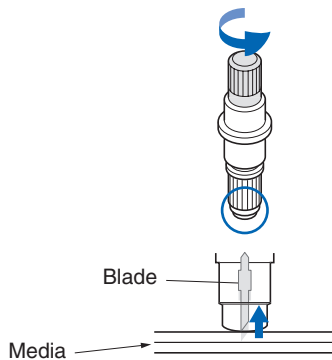
(2)   Extend the gradually to the thickness of the label material. A blade length that is lesser than the thickness of the backing sheet matched to the film, and greater than the thickness of the film is optimal. Try cutting the film, and adjust so that there are cutting trace marks in the backing sheet. If the backing sheet has been completely cut, increase the blade length if it is too short and there are remaining cuts in the film.
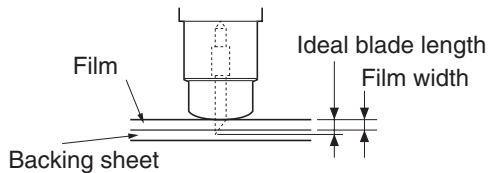
CHECKPOINT 🖊
- **The blade length is adjusted by turning the blade length adjustment knob. Turn the blade clockwise to lengthen the blade; turn counterclockwise to retract. The blade extends ap. 0.1 mm for every calibrated rotation.**

The cutter blade moves 0.1 mm with one scale unit.

(Blade extends)
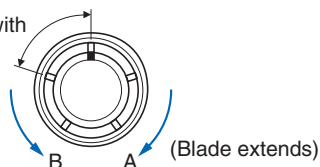
- **Ideal blade length setting**
  Refer to "2.13 Selecting Tool Conditions" regarding the thickness of label materials.

2.15   Cutting Test

Run the cutting test after programming the blade type/cutting force/speed settings. Check the cutting conditions of the label materials and whether the corners are rounded or not. If the cutting conditions are not acceptable, re-program the tool conditions and run a cutting test. Repeat until optimal conditions are achieved.

CHECKPOINT   **X-axis movement based on the POSITION keys (◄►) is not possible.**

TEST CUT

(1)   Set the label materials you desire to cut.

(2)   Press the TOOL COND. key in READY status and the below message will display.

```
TOOL CONDITIONS>   (F1)
        TEST CUT>   (F2)
     CUTTING WIDTH>  (F3)
                     (F4)
```
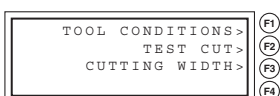
(3)   Press the F2 key (TEST CUT), and the below message will display.

```
TEST CUT?           (F1)
                    (F2)
POSITION:↑↓         (F3)
YES:ENTER   NO:ESC  (F4)
```
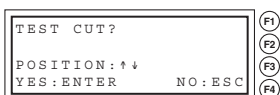
(4)   Press the POSITION keys (▲▼) move the tool carriage to the position where the cutting test will be carried out.

⚠ **CAUTION**   **The cutting section operates at the same time as when this function is programmed. As such, keep your hands and face away from moving parts.**

(5)   Press the ENTER key to cut a triangular test pattern in the middle of the square in the current position. The below message will appear.

```
TOOL CONDITIONS>   (F1)
        TEST CUT>   (F2)
     CUTTING WIDTH>  (F3)
                     (F4)
```
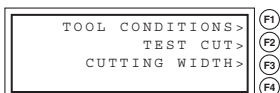
(6)   Perform a check of the cut pattern. Peel the square section of the test pattern exterior and observe the triangular corner section in the middle. If the corner sections are round, the correction amount (offset) is lacking. By contrast, if there are sharp whisker-like areas in the corner sections, the offset is too high.

| Correction amount too low: Increase offset value (+1 to +5) | Adequate offset value | Correction amount too high: Lower offset value (-1 to -5) |

Peel the triangular section and the remaining thinly cut traces in the backing sheet will be just the right cutting force. In cases where the backing sheet has been fully cut, the cutting force is too high or the blade length is too long. In cases where cutting traces are not present in the backing sheet, the cutting force is too low or the blade length is too short.

(7)   Press the F1 key (TOOL CONDITIONS) and adjust the cutting force/correction amount (offset) in the condition setting menu.

(8)   Repeat steps (2) - (7) until a favorable cut has been achieved.

(9)   If a favorable cut has been achieved, press the ESC key to return to READY status.

2.16   When the Machine Stops During a Printing/Cutting Operation

It is possible to stop an operation during printing or cutting by pressing the LOCAL key.

In such a case, the operation stops within the data/operation range and the LOCAL menu displays.

If the LOCAL key is pushed in the middle of printing, the labels in the process of printing or haven't been cut yet (in suspension) will not be completed normally.

After stopping the operation, use "copy" to resume printing/cutting.

Operating Instructions

(1)   Press the LOCAL key when in operation.

The operation will stop within the data/operation range, and the following message will display.

```
PRINTER MENU>    (F1)
 CUTTER MENU>    (F2)
  OUTPUT ALL>    (F3)
                 (F4)
```

2.17   CROSS CUT Key

If the CROSS CUT key is pushed in READY status, the label materials will be cut horizontally.

⚠ **CAUTION**
- **The cross cutting operation occurs close to the outlet. Take full care not to injure your fingers from the blade.**
- **Cross cut is for cutting the backing sheet of label materials following the separator. There may be uncut materials if you try to cut label materials by backing sheet or with attached laminate materials. Also, the crosscut section might be damaged if the label material glue attaches to the blade.**

CHECKPOINT   **Do not cut anything other than the backing sheet. Refer to "4.21 CROSS CUT" for crosscut settings.**

Operating Instructions

(1)   Press the CROSS CUT key from READY operation status.
The below message will display, and backing sheet section of the label materials will be horizontally cut at the current position.

```
PROCESSING
```
F1
F2
F3
F4
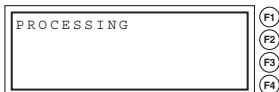
The status will return to READY once cutting is completed.

Chapter 3 Printer Driver

This chapter explains the printer driver.

Product Summary

3.1   Printer Driver

3.2   Installing Printer Driver

3.3   Printer Driver Operation

3.1   Printer Driver

Printer Driver

The printer driver (OPS632) is for use with the Windows LCX603 driver.

By using this driver software, it will be possible to use the LCX603 with Windows and to create labels with software that runs on Windows. This driver software can be run on Windows 2000/XP/Vista/7.

When using this driver software, please understand that it may not comply with functions in Windows based on the functional limitations of this device. In addition, display screens from Windows 7 will be used to explain the menu.

CHECKPOINT • **Depending on the application software, line widths set in mm units will be printed in inch units on this device.**

• **Printing screens will appear differently in every application software.**

• **When "bitmap print" appears in the printing screen, un-check the check box.**

• **When using software that can set the color mode, set to RGB color.**

3.2   Installing Printer Driver

This chapter explains how to install the print driver.

Display screens from Windows 7 will be used for explanation.

Refer to "1.4 Connecting to Your Computer" regarding connecting the interface cable.

CHECKPOINT • **Close any virus detection programs or system resident programs that are running.**

• **When installing, it is necessary to log in as an administrator group member.**

---

(1)   Insert the CD provided with your printer into the CD-ROM drive of your computer.
The "User Account Control" screen of the software appears.
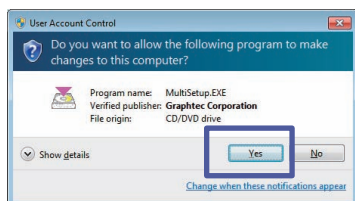
Click "Continue".

(2)   The installer "Start" screen will appear.

In order to start the installation of each software, click the button displayed in the screen to start installing.

When software AutoPlay is not programmed

Windows 7

(1)   Select "Run MultiSetup.exe" from the Windows "AutoPlay" selection menu.

When the "AutoPlay" selection menu is not displayed

(1)   Select the CD-ROM drive from the computer, right click and select "Open".
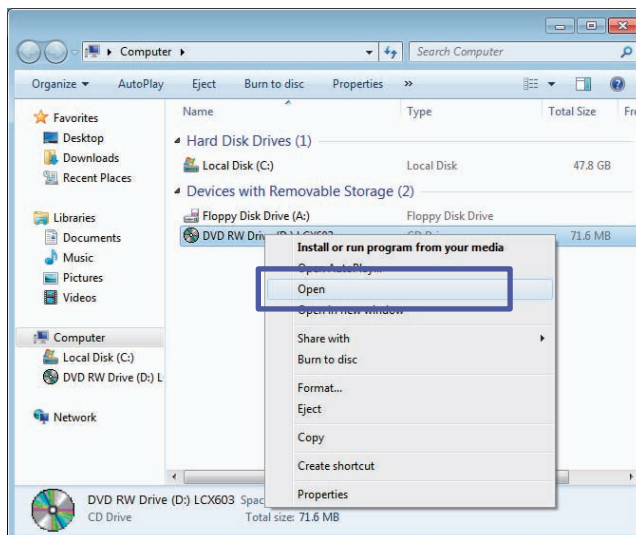
(2)   Select "MultiSetup.exe" and double-click.
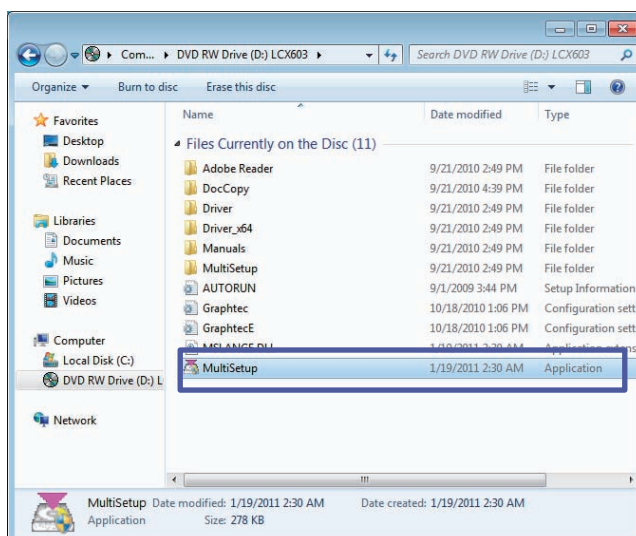
*The process is the same for Windows 2000/XP/Vista.

Installing

CHECKPOINT 📝   **Before installing the printer driver, make sure to NOT connect the interface cable between this device (LCX603) and your computer.**

---

(1)   Make sure the power is switched off (O) in this device, and then connect the AC power cord for this device.

⚠ **CAUTION**   • **Make sure that the printer is grounded.**

• **If the printer is not grounded, the operator could suffer an electrical shock in case of current leakage.**

---
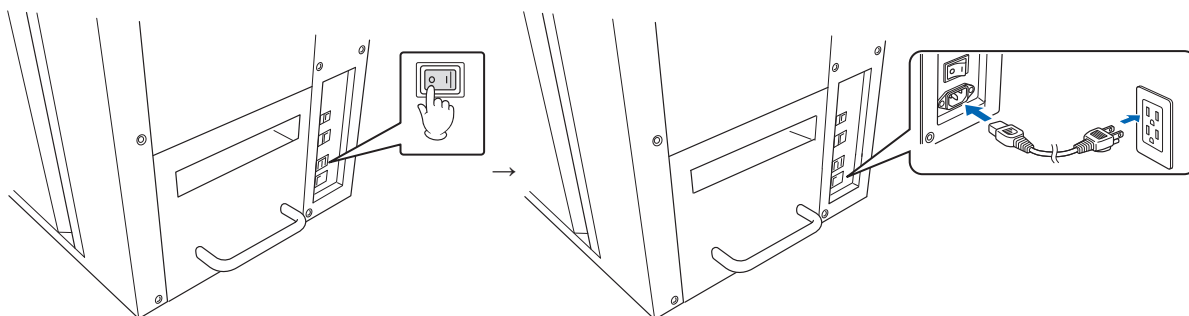
(2)   When "LCX603 Setup" in the start screen is clicked, the setup screen will appear.
Follow the instructions shown on the screen.
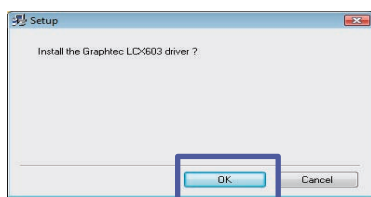
(3)   Makes sure the LCX603 is not connected, and then click "Next".
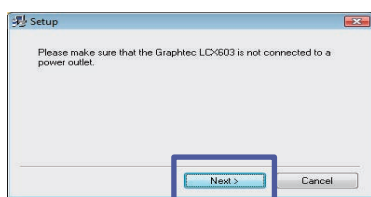
(4)   Click "Next".
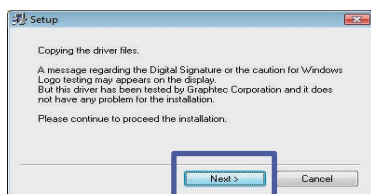
Next, Select a port name. Select according to the utilized interface.

CHECKPOINT **Select the "port name" according to the utilized interface.**

Interface	Port	Step
Connect with USB cable	USB	P3 - 5
Connect with Network Cable	TCP/IP	P3 - 6
Output the plotting data to a file without connecting with the main unit	FILE	—

When connecting with USB cable

(5)   Select Interface.
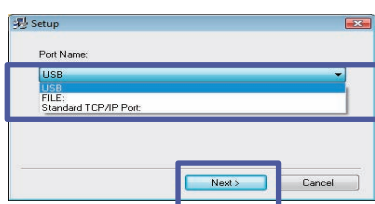
Select "USB" from the pull down list and click "Next".

The below message will appear.
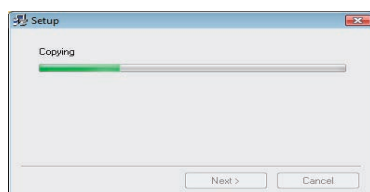
(6)   Install the driver software.
Click on the checkbox entitled "Always trust software from 'Graphtec Corporation'" to place a checkmark inside it and click on "Install".
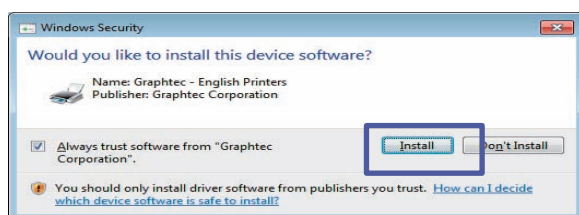
(7)   The below screen will appear. Click "OK".
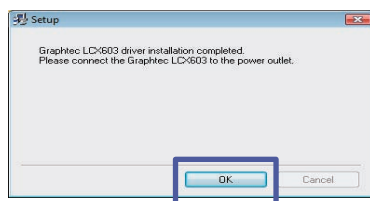
(8)   Use the USB cable to connect this device to your computer, and then turn on the power to this device.
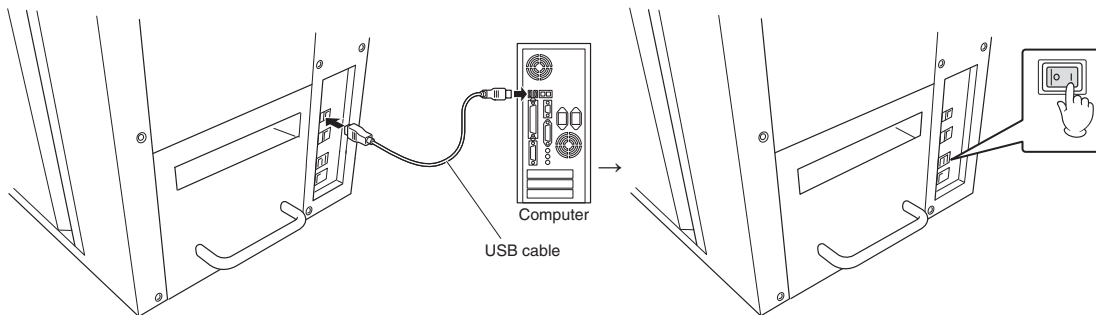
(9)   The device driver will be installed.
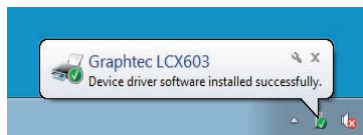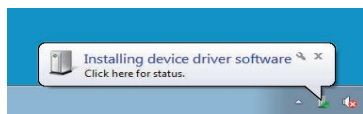
↓

CHECKPOINT   If the installation is successful, "Graphtec LCX603" will display within "Start" → "Devices and Printers" using Windows 7.

When connecting with a network cable

(5)   Select Interface.
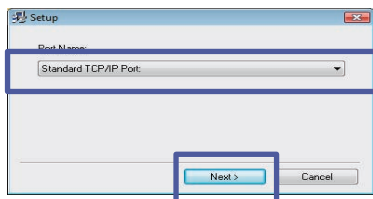
Select "Standard TCP/IP Port: (Network)" from the pull-down list and click on "Next".

(6)   Use the network cable to connect this device to your computer, and then turn on the power to this device.

CHECKPOINT   A CAT5 (Category 5) network cable is recommended.
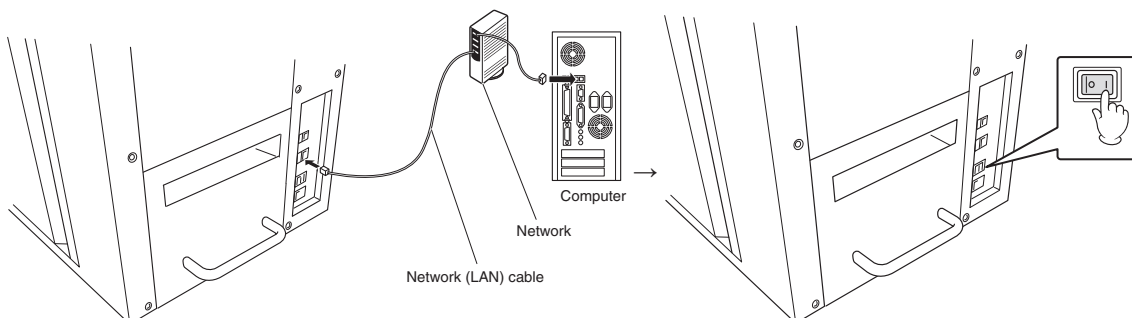
(7)   Confirm the IP address.

CHECKPOINT • **The IP address is different due to the network environment. Consult with your network administrator.**

• **Refer to** ˮ**4.23 SETTING INTERFACE**ˮ **for how to search for the IP address.**

---

(8)   Enter the unit's IP address, then click on "Next".
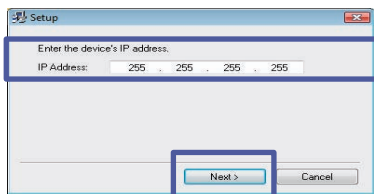
*An example IP address is shown in the picture.

(9)   When the installation has finished, the following screen is displayed. Click on the "OK" button.
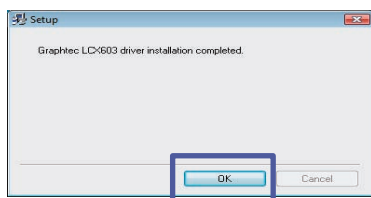
CHECKPOINT **If the installation is successful, "Graphtec LCX603" will display within "Start" → "Devices and Printers" using Windows 7.**

3.3   Printer Driver Operation

This is a description with regard to the printer driver use when printing label data created in the application software etc.

*The display screens are different in each application software.

Open the Print window.
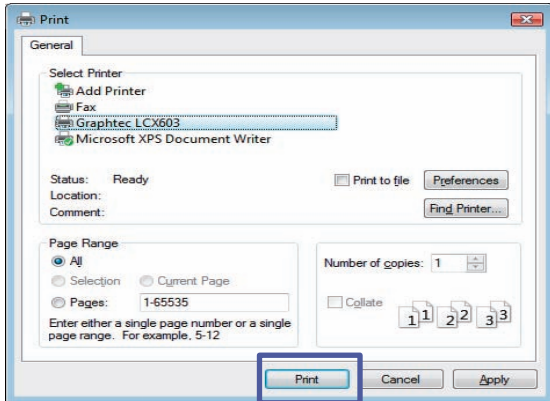
Select each of the following tabs and make settings.

• Paper tab: make settings with regard to paper size, area, print orientation, display units, etc.

• Graphics tab: make settings with regard to the color setting for each print head, cutlines, etc.

• Options tab: perform settings for resolution, transfer data type, and designing.

Click on [Print], and open the window.

[Paper] Tab

When you click on the [Paper] tab, the following screen appears.
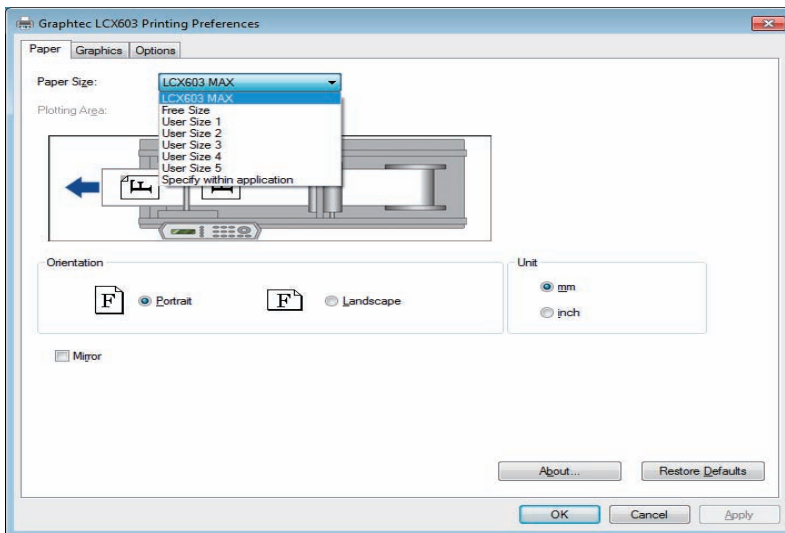
Paper Size......................Specifies the driver paper size used to determine the actual paper when creating the label data.

> There are eight available paper sizes: "LCX603 MAX", "Free Size", "User Size 1 - 5", and "Specify within application".

> Size "LCX603 MAX" is 100 mm x 200 mm.

> "Free Size" can be set within the "LCX603 MAX" settings.

> Please set the plotting area above 40 mm*.

> The name of the user-defined size can be changed and the settings can be recorded.

Plotting Area ....Selecting "Free Size" allows specifying an effective plotting area of the desired dimensions.

Orientation ....The printing direction can be set to either "Portrait" or "Landscape".

Mirror ....Prints the label as a mirror image.

Unit ....The plotting area numerical values unit of measurement can be changed.

About ....Click to display the copyright and version information of the printer driver currently in use.

Restore Defaults ....Resets the settings to their original values.

* The minimum size of the media feed direction of the LCX603 main unit is 65 mm.
  Even if a value lower than 65 mm is set, output will be 65 mm.

[Graphics] Tab

When you click on the [Graphics] tab, the following screen appears.
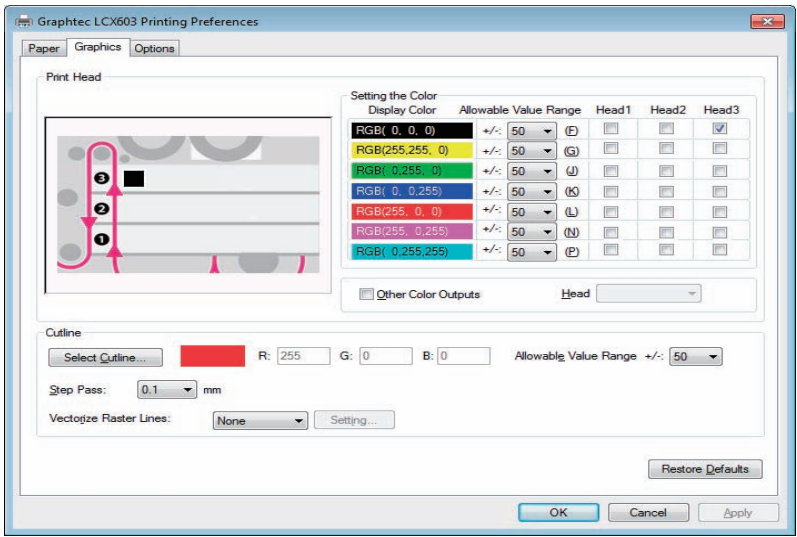
| Print Head | Displays the head number output settings of the label data color made by the application. The display changes through the color selection set in "Setting the Color".

The body heads are installed as Head 1, Head 2, and Head 3 from bottom to top with Head 3 being the basic one. |
| --- | --- |
| Setting the Color | Selects the output color of Head 1, Head 2, and Head 3. The available colors are seven: black, red, blue, green, magenta, cyan, and yellow. The color with a check next to it is selected.

The color specified here is the application color. The actual printing color is the color of the set ink ribbon. |
| Other Color Outputs | To be selected when using a label color different from the seven display colors.

Selection among Heads 1 - 3 can be made, but even if Head 3 is not selected, it is used in the cut mark printing, so please set black ribbon in Head 3. |
| Select Cutline | Specifies the color of the line data, which carries out the label's half-cutting. The cutline recognized by the driver is the color specified here and is only the thinnest line that can be set in the application.

The exact wording differs according to the application, but please use the thinnest line thickness such as zero and make the cutline as a hairline.

When thin lines with the same colors as those set for the cutlines are present on the data, depending on the application being used, said lines may be perceived as being cutlines and cut as a result. In such instances, either widen the width of the lines that were excessively cut, or change the data-based color of the lines set for the cutlines, followed by changing the color under "Select Cutline" in the driver to match the actual cutlines. |
| Color Settings | When clicking "Select Cutline", "Setting the Color" will be displayed. You can then choose from the basic colors, or add a new one through "Add Color".

The allowable value range for a given color is set as ± 50 as default. |
| Allowable Value Range | The allowable value range with respect to color setting 255 is displayed, which can then be set in the 0 - 100 range.
For example, if the value is set to 50, up to 205 is recognized as a set color. |

Step Pass.......................This function carries out processing while skipping the blade tip control. By lowering the setting value, the arc's fine blade tip control is carried out smoothly, which improves the image quality.

If a very big value is selected, then the cut shape could not be executed properly.

Typically, please use the default settings.

Depending on the application, because the circle or ellipse data is output in fine lines, the cutter vibrates due to the blade tip control, which may cause distortion in the cut. If this happens, by increasing the value here, the cutline will become smooth and the cutting speed will be improved.

Vectorize Raster Lines

.........................Depending on the application, the line processing method is different, and the cutline extraction may not be possible. Using this function allows the cutline extraction in some cases.

Typically, please use it with "None".

None:.............Raster lines are not vectorized. Only data, which has been sent as vector lines from the application, is handled as Cutlines.

Method 1: ......The same as "None", with one addition. Certain types of rectangular solid fill data are handled as thick vector line data.

Method 2: ......The same as Method 1, with one addition. When circles, ellipses or other curved lines are sent as raster data, Cutlines will also be extracted from the raster data.

Method 3: ......Cutlines are extracted from the raster data only. Use Method 3 if you have problems such as rectangles being output as separate segments when you use Method 1 and 2.

Vectorize Raster Lines Settings

.........................The vectorize settings can be set only during Method 2 and 3.
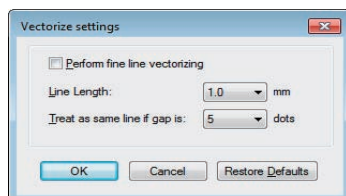
Perform fine line vectorizing

.........................Vectorizing is performed after the data has been converted to fine lines. If the lines to be vectorized are too wide, the driver will not recognize them as Cutlines and they will not be output. If you want to output such lines as Cutlines, check this box. Use this option with applications where fine lines cannot be output.

Line Length ....Specifies the minimum length of the cutlines to be output. The driver ignores lines which are shorter than this length, and does not output them. The settings range is 0.1 mm - 5.0 mm.

Treat as same line if gap is

.........................Specifies the dot gap, which is acceptable as same line data. Depending on the application used, gaps can occur in an output raster line, making it difficult to determine whether the segments are from the same line or separate lines. This option fills in the dots and enables output as one continuous line. However, if this value is too large, separate lines may be treated as one continuous line. The settings range is from 0 to 20 dots.

Restore Defaults ....Resets the settings to their original values.

[Options] Tab

When you click on the [Options] tab, the following screen appears.
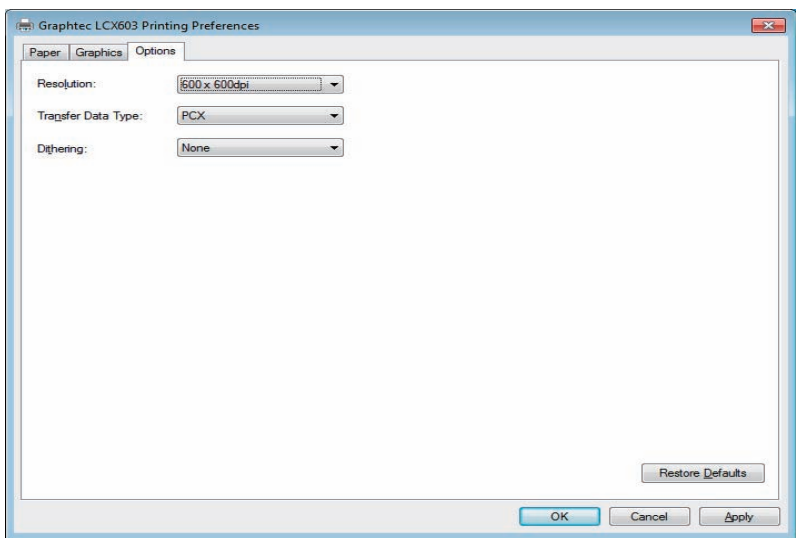
Resolution......................Select the resolution for data output from either 600 dpi × 600 dpi or 600 dpi × 1200 dpi.

Typically, please use 600 dpi × 600 dpi.

> **CHECKPOINT** **When switching resolution from the driver software (600 × 600 dpi←→600 × 1200 dpi), if there is data currently being output, perform the switch once all data has been output. Please use caution, since changing the resolution during data output consumes non-print media.**

Transfer Data Type.........Specify the type of data to be transferred from either PCX or RAW.

Typically, please use PCX.

Dithering ...."None", "Coarse" or "Fine" can be selected.

Typically, use "None".

Restore Defaults ....Resets the settings to their original values.

Chapter 4 Menu Operation

This chapter describes basic operation, printer menu operation, and cut menu operation.

4.1 Display When the Power is Turned On

Turn on the power to the unit.
When the media has been set, the following is displayed.

```
INITIALIZE          (F1)
                    (F2)
                    (F3)
PLEASE WAIT!        (F4)
```

↓

```
INITIALIZE          (F1)
 PRINTER-VER:       (F2)
 CUTTER -VER:       (F3)
PLEASE WAIT!        (F4)
```
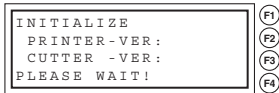
(The unit's PRINTER version number and CUTTER version number are displayed.)

↓

```
Confirm Combination!    (F1)
H3=Semi-R  H2=Semi-R    (F2)
H1=Semi-R  FNSmat  N50  (F3)
YES:ENTER      NO:ESC   (F4)
```
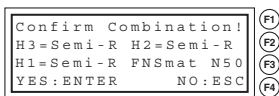
("Confirm Combination" is displayed.): "Confirm Combination!" Screen

Ink ribbon 3   Ink ribbon 2
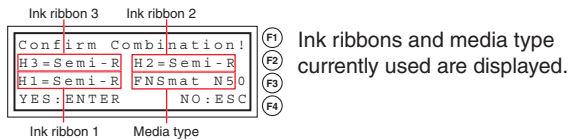
```
Confirm Combination!    (F1)
H3=Semi-R  H2=Semi-R    (F2)    Ink ribbons and media type
H1=Semi-R  FNSmat  N50  (F3)    currently used are displayed.
YES:ENTER      NO:ESC   (F4)
```

Ink ribbon 1   Media type

Select "YES" (ENTER) or "NO" (ESC).
When selecting "YES", "READY" is displayed.
When selecting "NO", "CONDITION LOAD/PRINTING DENSITY" is displayed.

```
       CONDITION LOAD>    (F1)
    PRINTING DENSITY>     (F2)
                          (F3)
                          (F4)
```

Return to Ready status by loading the saved "CONDITION" settings
Or return to Ready status by setting the media materials and ink ribbon set in "PRINTING DENSITY".
For information on "CONDITION" and PRINTING DENSITY, please refer to "4.8 CONDITIONS" and "4.9 PRINTING DENSITY" respectively.

CHECKPOINT
- **When the ENTER key or ESC key is pressed while all of the ribbon levers keep in the open position, the following is display for about 3 seconds, and then returns to' Confirm Combination!" Screen.**

```
Confirm combination    (F1)
of ribbon and media!   (F2)
Then set the ribbon    (F3)
lever.                 (F4)
```

- **When all of the ribbon levers are opened while they are cloed," Confirm Combination!" Screen. Is displayed. Close the ribbon levers that are to be used for print.**

↓

```
READY                (F1)
                     (F2)
   CONDITION-01      (F3)
                     (F4)
```

READY Screen

```
READY                (F1)
                     (F2)
   CONDITION-01      (F3)  —— Displays the set condition number.
                     (F4)
```

CHECKPOINT
- **This screen is referred to as "Basic Screen: READY" in the manual.**
- **In this situation, the settings for print conditions, cut conditions, and communication conditions are carried out from the LOCAL key or TOOL COND. key.**

4.2   Display During Printing

4-3

During printing, the display appears as follows.

During Printing Menu (When printing)

```
┌─────────────────────┐  Ⓕ1
│ PROCESSING          │  Ⓕ2
│                     │  Ⓕ3
│                     │  Ⓕ4
└─────────────────────┘
```

During Printing Menu (When copying)

```
┌─────────────────────┐  Ⓕ1
│ PROCESSING          │  Ⓕ2
│     xxx/xxx         │  Ⓕ3
│                     │  Ⓕ4
└─────────────────────┘
```
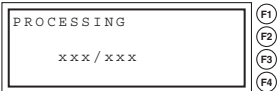
*Row 3 displays the number of copies printed/the number of copies.

After printing, it returns to the READY status.

4.3   Display During (media) Feeding

Display during feed.

When the FEED key is pressed, the following is displayed.

FEED MENU

```
MEDIA IS FEEDING
```
F1
F2
F3
F4

4.4   Basics of PRINTER MENU and CUTTER MENU

PRINTER MENU: settings are performed for Print, Transmit, and Laminate/Separate/Cross Cut settings, etc.

CUTTER MENU: perform Cut settings.

OUTPUT ALL: output all unprinted data and uncut data being received.

When in PRINTER MENU

(1)   Press the LOCAL key from the READY status.
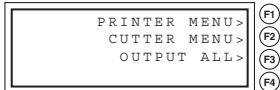
```
            PRINTER MENU>   (F1)
             CUTTER MENU>   (F2)
              OUTPUT ALL>   (F3)
                           (F4)
```

(2)   When you press the F1 key (PRINTER MENU), the PRINTER MENU is displayed as follows.

```
                   COPY>   (F1)
             DATA CLEAR>   (F2)
              CONDITION>   (F3)
  1/4                      (F4)
```

When in CUTTER MENU

(1)   Press the LOCAL key from the READY status.

```
            PRINTER MENU>   (F1)
             CUTTER MENU>   (F2)
              OUTPUT ALL>   (F3)
                           (F4)
```

(2)   When you press the F2 key (CUTTER MENU), the CUTTER MENU is displayed as follows.

```
  BLADE CONSUMPTION>   (F1)
        TOOL UP/DOWN>   (F2)
        OFFSET FORCE>   (F3)
                       (F4)
```
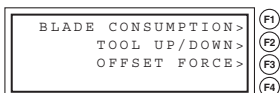
When in OUTPUT ALL

(1)   Press the LOCAL key from the READY status.

```
            PRINTER MENU>   (F1)
             CUTTER MENU>   (F2)
              OUTPUT ALL>   (F3)
                           (F4)
```

(2)   When you press the F3 key (OUTPUT ALL), the OUTPUT ALL MENU is displays as follows when there is incoming
       data.

```
  OUTPUT ALL?           (F1)
                        (F2)
                        (F3)
  YES:ENTER    NO:ESC   (F4)
```

Menu List

READY

```
READY                F1
                     F2
    CONDITION-01     F3
                     F4
```

[LOCAL]

```
                     F1
  PRINTER MENU>      F2
   CUTTER MENU>      F3
   OUTPUT ALL>       F4
```

```
                     F1
         COPY>       F2
   DATA CLEAR>       F3
    CONDITION>       F4
1/4
```

[NEXT]

```
COPY?                F1
           <001>     F2
NO. OF COPIES:←→↑↓    F3
YES:ENTER    NO:ESC   F4
```
[4.6 COPY]

```
CLEAR THE DATA?      F1
                     F2
                     F3
YES:ENTER    NO:ESC  F4
```
[4.7 CLEAR]

```
CONDITION            F1
                     F2
    LOAD CONDITION>  F3
    SAVE CONDITION>  F4
```
[4.8 CONDITIONS]

```
    PRINT SETTING>   F1
PRINT TEST PATTERN>  F2
   HEAD ADJUSTMENT>  F3
2/4   PRINTED LENGTH> F4
```

[NEXT]

```
  PRINTING DENSITY>  F1
  PAGE PRINT MODE>   F2
     ANTI-WRINKLE>   F3
                     F4
```
[4.9 PRINTING DENSITY]
[4.10 PAGE PRINT MODE]
[4.11 ANTI-WRINKLE LINES]

```
  PRINT TEST PATTERN> F1
ADJUST P&C POSITION> F2
                     F3
                     F4
```
[4.12 PRINT TEST PATTERN]
[4.13 PRINT AND CUT POSITION ADJUSTMENT]

```
ADJ. PATTERN PRINT>  F1
    DISTANCE ADJ.>   F2
   HEAD1 POS. ADJ.>  F3
   HEAD2 POS. ADJ.>  F4
```
[4.14 DISTANCE ADJ. (Distance Adjustment)]
[4.15 HEAD POSITION ADJUSTMENT]

```
PRINTED LENGTH       F1
         xxxxxm      F2
                     F3
      RETURN:ESC     F4
```
[4.16 PRINTED LENGTH]

```
REGISTRATION MARK>   F1
    UNIT LENGTH>     F2
  FUNCTION SETTING>  F3
3/4                  F4
```

[NEXT]

```
REGISTRATION MARK    F1
      TYPE<3POINT>   F2
SELECT:↑↓            F3
YES:ENTER    NO:ESC  F4
```
[4.17 REGISTRATION MARK]

```
UNIT LENGTH          F1
          <  mm>     F2
SELECT:↑↓            F3
YES:ENTER    NO:ESC  F4
```
[4.18 UNIT LENGTH]

```
       LAMINATE>     F1
      SEPARATOR>     F2
      CROSS CUT>     F3
      FRAME CUT>     F4
```
[4.19 LAMINATE]
[4.20 SEPARATOR]
[4.21 CROSS CUT
[4.22 FRAME OUT]

```
    LAN SETTING>     F1
    MAC ADDRESS>     F2
                     F3
4/4                  F4
```

[NEXT]

```
          DHCP>      F1
    IP ADDRESS>      F2
   SUBNET MASK>      F3
       GATEWAY>      F4
```
[4.23 SETTING INTERFACE]

```
MAC ADDRESS          F1
<00:03:76:08:**:**>  F2
                     F3
RETURN:ESC           F4
```
[4.23 SETTING INTERFACE]

```
BLADE CONSUMPTION>   F1
    TOOL UP/DOWN>    F2
   OFFSET FORCE>     F3
                     F4
```

```
BLADE CONSUMPTION    F1
                     F2
        DISPLAY>     F3
          CLEAR>     F4
```
[4.24 CUTTER CONSUMPTION]

```
TOOL UP/DOWN         F1
                     F2
UP/DOWN:↑↓           F3
RETURN:ESC           F4
```
[4.25 TOOL UP / DOWN]

```
OFFSET FORCE         F1
           <04>      F2
INPUT:↑↓             F3
YES:ENTER    NO:ESC  F4
```
[4.26 OFFSET FORCE]

```
OUTPUT ALL?          F1
                     F2
                     F3
YES:ENTER    NO:ESC  F4
```
[4.5 OUTPUT ALL]

4.5   OUTPUT ALL

New incoming data is output through the outlet.

Thus, all previously incoming data (including pending data during print and before cut) is output until the final cut and print process.

CHECKPOINT **When label materials (media) are sent with the FEED key, the labels that are partway through printing (pending) cannot be completed normally. If the label material (media) partway through printing need to be completed, carry out the "OUTPUT ALL" operation instead of the FEED key.**

---

(1)   Press the LOCAL key from the READY status.

```
PRINTER MENU>   F1
CUTTER MENU>   F2
OUTPUT ALL>   F3
               F4
```

(2)   Press the F3 key (OUTPUT ALL) and the following message is displayed.

```
OUTPUT ALL?        F1
                   F2
                   F3
YES:ENTER    NO:ESC  F4
```
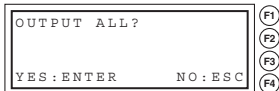
(3)   When the ENTER key (YES) is pressed, all incoming data (including pending data during print and before cut) is output until the final cut and print process.
When the ESC key (NO) is pressed, the display returns to the previous screen.

(4)   When all data is output, the display returns to the READY status.

CHECKPOINT • **When this menu is executed, a large amount of media, ribbon, and laminate are used fun until the end of the length of the final output process.**

• **When a warning message is displayed while printing, data being printed (on hold) ill not be completed.**
In this situation, the "OUTPUT ALL" function cannot be performed. Please use "Copy" and execute read-out one more time.

• **When there is no output data, the following is displayed.**

```
NO DATA for OUTPUT   F1
 Press ENTER,        F2
 to return menu.     F3
YES:ENTER            F4
```
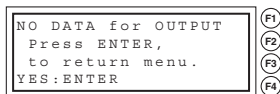
When the ENTER key (YES) is pressed, the display returns to the previous screen.

• **This menu generates media white space, but it is effective when there is no continuous output data or when you want to quickly use the completed labels (output).**

4.6　COPY

The designated number of copies of newest incoming data in memory is reproduced.

he designated number can be copied from 001 to 999.

(1)　Plot the data that you would like to copy once. (The plot data is stored in the buffer.)

(2)　Press the LOCAL key from the READY status, and the following is displayed.

```
        PRINTER MENU>   F1
         CUTTER MENU>   F2
          OUTPUT ALL>   F3
                        F4
```

(3)　Press the F1 key (PRINTER MENU) and the following is displayed.

```
                COPY>   F1
          DATA CLEAR>   F2
           CONDITION>   F3
  1/4                   F4
```

(4)　Press the F1 key (COPY) and the following is displayed.

```
  COPY?                 F1
               <001>    F2
  NO. OF COPIES:↑↓←→     F3
  YES:ENTER    NO:ESC    F4
```

(5)　With the POSITION keys (◄►), select the row you want to enter, then with the POSITION keys (▲▼), change the
number (0 to 9), and set the number of copies.
Execute the COPY with the ENTER key.

Press the ESC key to return to the previous screen.

When you want to stop a COPY in progress, press the LOCAL key.

CHECKPOINT **After a while, the screen returns to the READY status. When there is no output data, the following
is displayed.**

```
  NO DATA for COPY      F1
   Press ENTER,         F2
   to return menu.      F3
  YES:ENTER             F4
```

When the ENTER key (YES) is pressed, the display returns to the previous screen.

4.7   CLEAR

Erase the data in memory.

(1)   Press the LOCAL key from the READY status, and the following is displayed.

```
┌─────────────────────┐ (F1)
│       PRINTER MENU> │ (F2)
│       CUTTER MENU>  │ (F3)
│       OUTPUT ALL>   │ (F4)
└─────────────────────┘
```

(2)   Press the F1 key (PRINTER MENU) and the following is displayed.

```
┌─────────────────────┐ (F1)
│             COPY>   │ (F2)
│       DATA CLEAR>   │ (F3)
│       CONDITION>    │ (F4)
│ 1/4                 │
└─────────────────────┘
```

(3)   Press the F2 key (DATA CLEAR) and the following is displayed.

```
┌─────────────────────┐ (F1)
│ CLEAR THE DATA?     │ (F2)
│                     │ (F3)
│ YES:ENTER    NO:ESC │ (F4)
└─────────────────────┘
```

(4)   Execute the CLEAR with the ENTER key.
      Press the ESC key to return to the previous screen.

      When the CLEAR is executed, the display returns to the READY status.

4.8   CONDITIONS

You can record several setting conditions of all types, recall the setting conditions according to your objective, and switch between them.

It is convenient when you record settings for each combination of media (materials) such as labels, ink ribbon, and laminate.

Ten CONDITIONS can be recorded.

The setting conditions SAVE MENU is as follows.

> MEDIA TYPE
> RIBBON TYPE
> PRINTING DENSITY
> ANTI-WRINKLE LINES
> HEAD ADJUSTMENT
> REGISTRATION MARK
> UNIT LENGTH
> FUNCTION SETTING
> LAN SETTING
> TOOL condition number (1 through 8) set with the TOOL COND. key.

Save the setting condition over the existing CONDITION 1 through 10.

Matching the media (material), set the recorded CONDITION number 1 through 10 and execute printing.

CHECKPOINT   **Refer to the respective items for each menu setting method.**

```
READY                 (F1)
                      (F2)
    CONDITION-01      (F3) — Displays the set condition number.
                      (F4)
```

CONDITION LOAD

This section will explain the CONDITION LOAD operation when the ESC key is pressed during displaying Confirm Combination upon replacing the ink ribbon or media materials.

(1)   Press the ESC key when "Confirm Combination" is displayed and the following is displayed.

```
        CONDITION LOAD>  (F1)
      PRINTING DENSITY>  (F2)
                         (F3)
                         (F4)
```

(2)   Press the F1 key (CONDITION LOAD) and the following is displayed.
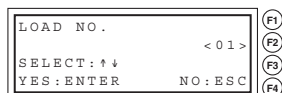
```
LOAD NO.             (F1)
            <01>     (F2)
SELECT:↑↓            (F3)
YES:ENTER    NO:ESC  (F4)
```

(3)   Change the number (1 to 10) with the POSITION keys (▲▼), and set the CONDITION number that is to be called up.
      Execute the CONDITION LOAD with the ENTER key to return to READY status.
      Press the ESC key to return to the CONDITION (LOAD/SAVE) screen.

How to register CONDITION

Set the conditions that perform the CONDITION record.

(1)   Press the LOCAL key from the READY status and the following is displayed.

```
      PRINTER MENU>  (F1)
       CUTTER MENU>  (F2)
        OUTPUT ALL>  (F3)
                     (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the following is displayed.

```
                    COPY>   (F1)
             DATA CLEAR>    (F2)
              CONDITION>    (F3)
1/4                         (F4)
```

(3)   Press the F3 key (CONDITION) and the following is displayed.

```
CONDITION                   (F1)
                            (F2)
     LOAD CONDITION>        (F3)
     SAVE CONDITION>        (F4)
```

(4)   Press the F4 key (SAVE CONDITION) and the following is displayed.

```
SAVE NO.                    (F1)
                 <01>       (F2)
SELECT:↑↓                   (F3)
YES:ENTER     NO:ESC        (F4)
```

(5)   Change the number with the POSITION keys (▲▼), and set the CONDITION number (1 to 10) that is recorded. Record the CONDITION with the ENTER key, and the display returns to the READY status. (The setting condition currently used is recorded to the number selected.)

When the ESC key is pressed, the display returns to the previous screen without saving (recording).

⚠ **CAUTION**   • **When "MEDIA TYPE" in "CONSTRUCTION" is set to" OFF", the following is displayed.**

```
Caution:Ribbon is       (F1)
damaged by the High     (F2)
Density. Continue?      (F3)
YES:ENTER      NO:ESC   (F4)
```

• **Press the ENTER key (YES) to return to READY screen.**
Press the ESC key (NO) to return to CONDITION screen without saving the settings.

How to Call Up CONDITION

Set the condition to be called up.

(1)   Press the LOCAL key from the READY status and the following is displayed.

```
         PRINTER MENU>   (F1)
          CUTTER MENU>   (F2)
           OUTPUT ALL>   (F3)
                         (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the following is displayed.

```
                    COPY>   (F1)
             DATA CLEAR>    (F2)
              CONDITION>    (F3)
1/4                         (F4)
```

(3)   Press the F3 key (CONDITION) and the following is displayed.

```
CONDITION                   (F1)
                            (F2)
     LOAD CONDITION>        (F3)
     SAVE CONDITION>        (F4)
```

(4)   Press the F3 key (LOAD CONDITION) and the following is displayed.

```
LOAD NO.                    (F1)
                 <01>       (F2)
SELECT:↑↓                   (F3)
YES:ENTER     NO:ESC        (F4)
```

(5)   Change the number (1 to 10) with the POSITION keys (▲▼), and set the CONDITION number that is to be called up.

Call up the CONDITION with the ENTER key, and the display returns to the READY status.

When the ESC key is pressed, the display returns to the previous screen without loading (calling up).

4.9 PRINTING DENSITY

Perform the print printing density.

This device is a thermal ink-transfer printer using a thermal head. The "DENSITY" here is the setting of the thermal units (temperature) for the ribbon that transcribes ink.

It is necessary to set the optimal value for both the label material (media) and the head (ribbon).

Set to the Media Type Setting (MEDIA TYPE) and Density Settings (PRINTING DENSITY) based on the Before Using the Printer (LCX603 Additional User's Manual).

⚠ **CAUTION**

- **If the MEDIA TYPE is set to OFF (No settings), it is possible that the values will be set to outside those given in the Density Settings (PRINTING DENSITY) guarantee.**

- **If used in a way not covered by the Density Settings (PRINTING DENSITY) guarantee, depending on the print data, the printing may be satisfactory but the ink ribbon may be burned onto the print head and it may become necessary to clean it frequently. If genuine supply products are used, even if values outside of the Density Settings (PRINTING DENSITY) guarantee are used, it will not cause the device to break down. If values outside of the Density Settings (PRINTING DENSITY) guarantee are used, then the responsibility lies with the customer.**

- **In the case of values outside of the Density Settings (PRINTING DENSITY) guarantee being used, a warning message will be displayed.**

- **When "MEDIA TYPE" in "CONSTRUCTION" is set to "OFF", the following is displayed.**

```
Caution:Ribbon is        (F1)
damaged by the High      (F2)
Density. Continue?       (F3)
YES:ENTER    NO:ESC      (F4)
```

Press the ENTER key (YES) to return to CONSTRUCTION screen with saving the settings.
Press the ESC key (NO) to return to MEDIA TYPE screen without saving the settings.

- **In the case of values outside of the Density Settings (PRINTING DENSITY) guarantee being used, when "MEDIA TYPE" in "CONSTRUCTION" is set to "OFF", the following is displayed.**

```
High Density will be     (F1)
set. Ribbon may be       (F2)
damaged. Continue?       (F3)
YES:ENTER    NO:ESC      (F4)
```

Press the ENTER key (YES) to return to CONSTRUCTION screen with saving the settings.
Press the ESC key (NO) to return to MEDIA TYPE screen without saving the settings

---

CHECKPOINT

- **For this device, because of the thermal ink-transfer printing using a thermal head, the color will not be darker just by increasing this value. Also, please use caution, because if this value is increased more than necessary, cracking or ribbon breakage can occur.**

- **The heads (ribbons) are in the order 1, 2, and 3 from the bottom of the ribbon stocker.**

- **When selecting ribbon 2 color printing or ribbon 3 color printing, be sure to set Head 1, Head 2, and Head 3 respectively.**

- **When the media is changed in "MEDIA TYPE" in" CONSTRUCTION", the following is displayed.**

```
Confirmation:DENSITY     (F1)
is set to default        (F2)
value. Continue?         (F3)
YES:ENTER    NO:ESC      (F4)
```
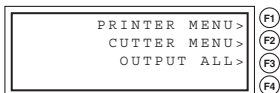
Press the ENTER key (YES) to return to CONSTRUCTION screen with saving the settings.

Press the ESC key (NO) to return to MEDIA TYPE screen without saving the settings.

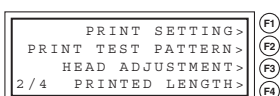## MEDIA TYPE

Set the media materials that are to be used.

(1)   Press the LOCAL key from the READY status, and the following is displayed.

```
       PRINTER MENU>   (F1)
        CUTTER MENU>   (F2)
         OUTPUT ALL>   (F3)
                       (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the following is displayed.

```
              COPY>    (F1)
        DATA CLEAR>    (F2)
         CONDITION>    (F3)
1/4                    (F4)
```

(3)   Press the NEXT key until the following is displayed.

```
      PRINT SETTING>   (F1)
 PRINT TEST PATTERN>   (F2)
     HEAD ADJUSTMENT>  (F3)
2/4   PRINTED LENGTH>  (F4)
```

(4)   Press the F1 key (PRINT SETTING) and the following is displayed.

```
   PRINTING DENSITY>   (F1)
    PAGE PRINT MODE>   (F2)
 ANTI-WRINKLE LINES>   (F3)
                       (F4)
```

(5)   Press the F1 key (PRINTING DENSITY) and the following is displayed.

```
CONSTRUCTION   MEDIA>  (F1)
        DENSITY HEAD3> (F2)
        DENSITY HEAD2> (F3)
        DENSITY HEAD1> (F4)
```
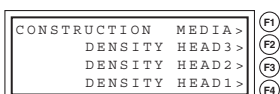
(6)   Press the F1 key (MEDIA) and the following is displayed.

```
MEDIA TYPE             (F1)
         <FNSmat N50>  (F2)
SELECT:↑↓              (F3)
YES:ENTER     NO:ESC   (F4)
```
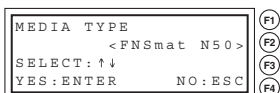
(7)   Change the number with the POSITION keys (▲▼), and set the MEDIA TYPE.
       Confirm the message, decide with the ENTER key, the display returns to the previous screen.
       Press the ESC key to return to the previous screen.
       Press the LOCAL key to return to READY status.

PRINTING DENSITY

Set the type of ink ribbon and printing density.

(1)   Press the LOCAL key from the READY status and the following is displayed.

```
       PRINTER MENU>   (F1)
        CUTTER MENU>   (F2)
         OUTPUT ALL>   (F3)
                       (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the following is displayed.

```
              COPY>    (F1)
        DATA CLEAR>    (F2)
         CONDITION>    (F3)
1/4                    (F4)
```

(3)   Press the NEXT key until the following is displayed.

```
        PRINT SETTING>    F1
 PRINT TEST PATTERN>      F2
    HEAD ADJUSTMENT>      F3
2/4   PRINTED LENGTH>     F4
```

(4)   Press the F1 key (PRINT SETTING) and the following is displayed.

```
   PRINTING DENSITY>      F1
    PAGE PRINT MODE>      F2
 ANTI-WRINKLE LINES>      F3
                         F4
```

(5)   Press the F1 key (PRINTING DENSITY) and the following is displayed.

```
CONSTRUCTION   MEDIA>     F1
       DENSITY HEAD3>     F2
       DENSITY HEAD2>     F3
       DENSITY HEAD1>     F4
```

(6)   Press the F4 key (DENSITY HEAD1) and the following is displayed.
        In the case of HEAD 2 press, the F3 key; in the case of HEAD 3, press the F2 key.

```
HEAD1 RIBBON TYPE         F1
         <Semi-RESIN>     F2
SELECT:↑↓                 F3
YES:ENTER       NO:ESC    F4
```

With the POSITION keys (▲▼), to set the Semi-RESIN and RESIN that are to be used, change them.

Set only the Semi-RESIN, depending on the media currently used.

(7)   Press the ENTER key (YES) and the following is displayed.

```
HEAD1 DENSITY             F1
              <35>        F2
ADJUST:↑↓                 F3
YES:ENTER       NO:ESC    F4
```

(8)   Change the number with the POSITION keys (▲▼), and set the printing density. The lower the number, the lower
        the printing density and vice versa.
        The valid range depends on the types of media and ink ribbon currently set.
        Confirm the message, decide with the ENTER key, the display returns to the previous screen.
        Press the ESC key to return to the previous screen.
        Press the LOCAL key to return to READY status.

CHECKPOINT   **Set to the Media Type Setting (MEDIA TYPE) and Density Settings (PRINTING DENSITY) based on
the Before Using the Printer (LCX603 Additional User's Manual).**

4.10   PAGE PRINT MODE

In the PAGE PRINT MODE, set HEAD 3, HEAD 2, or Do Not Use (OFF).

Typically, use with the Head 3 setting.

When the page length exceeds 65 mm, there are cases where the printing inconsistency is conspicuous at the print stop position. When using this function, it is possible to move the printing inconsistency into the front or back margin along the media feed direction.

*Page length refers to length of the print area media feed direction for one page.

Head 3 ....Perform Head 3 printing on each page, and the above printing inconsistency can be moved into the front or back margin of the page.

Head 2 ....Perform Head 2 printing on each page, and the above printing inconsistency can be moved into the front or back margin of the page.

OFF ....Do not use this function.

When shipped from the factory, the device is set to Head 2.

In the PAGE PRINT MODE setting, please pay attention to the following items.

- When changing the setting details, perform the OUTPUT ALL operation when there is data being printed.

- The length of the margin page is automatically adjusted according to the length of the page being printed, and the maximum length is 215 mm. When the length of all pages being printed is 150 mm or more, a margin is not generated.

- When using a page length less than 150 mm, frequently switching, and a lot of margin pages are generated, try using the OFF setting.

- When the printing inconsistency described above is conspicuous in the Head 2 printing results due to printing data, try using the Head 2 setting.
  In this case, since the Head 3 print stop position is within the page, if there is both Head 3 and Head 2 printing data, please use caution.

- When the PAGE PRINT MODE is set to either Head 2 or Head 3, consecutively printing data with varying page lengths may cause Dancer Roller 1 to touch the bottom, thereby causing the media to slacken. Should this occur, group together print data with the same page lengths and print that data collectively.

CHECKPOINT
- **When using the Head 3 or Head 2 setting, and the page length is usually 65 mm, it is possible to place the printing inconsistency for all 3 heads in the margin at the front or back of the page.**
- **When shipped from the factory, the device is set to Head 3.**

Example of When Head 3 Inconsistency is Conspicuous: changing from the OFF setting to Head 3 (refer to the figure below)
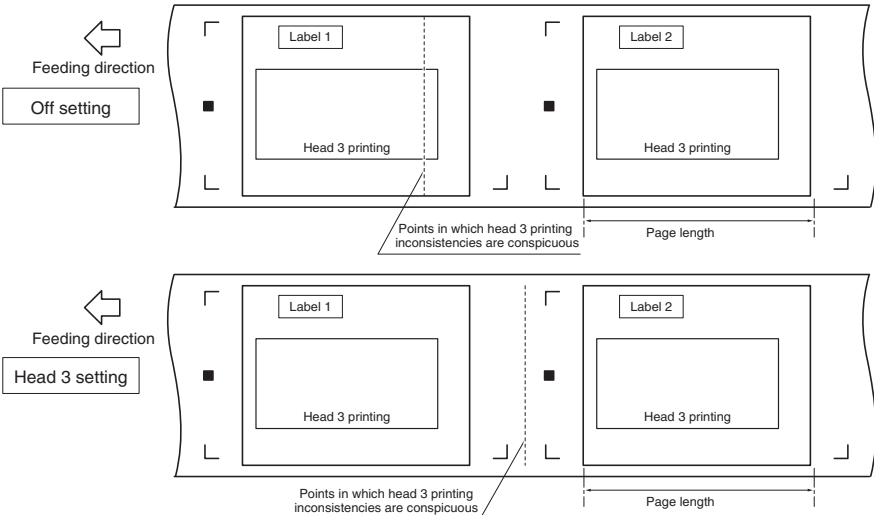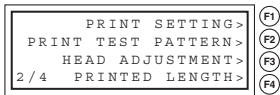
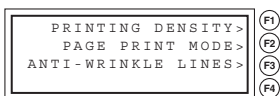(1)   Press the LOCAL key from the READY status and the following is displayed.
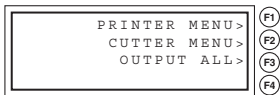
```
      PRINTER MENU>   F1
       CUTTER MENU>   F2
        OUTPUT ALL>   F3
                      F4
```

(2)   Press the F1 key (PRINTER MENU) and the following is displayed.

```
             COPY>   F1
       DATA CLEAR>   F2
        CONDITION>   F3
1/4                   F4
```

(3)   Press the NEXT key until the following is displayed.

```
       PRINT SETTING>   F1
  PRINT TEST PATTERN>   F2
     HEAD ADJUSTMENT>   F3
2/4   PRINTED LENGTH>   F4
```

(4)   Press the F1 key (PRINT SETTING) and the following is displayed.

```
   PRINTING DENSITY>   F1
     PAGE PRINT MODE>   F2
 ANTI-WRINKLE LINES>   F3
                       F4
```

(5)   Press the F2 key (PAGE PRINT MODE) and the following is displayed.

```
PAGE PRINT MODE         F1
              <HEAD2>   F2
SELECT:↑↓               F3
YES:ENTER     NO:ESC    F4
```
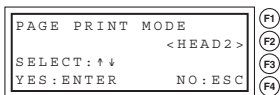
(6)   With the POSITION keys (▲▼), change to "HEAD 2", "HEAD 3" or "OFF", and set the PAGE PRINT MODE.
       Press ENTER to confirm and return to the previous screen.

       Press the ESC key to return to the previous screen.

       Press the LOCAL key to return to READY status.

4.11 ANTI-WRINKLE LINES

Set whether to print the anti-wrinkle lines or not.

When set to ON, a line about 1.3 mm wide is printed outside the printing area in the direction of the width of the media printing data, and wrinkling is prevented.

Typically, use this device with the lines printed (ON).

When shipped from the factory, the device is set to ON.

- When the balance of the print data position is poor, wrinkles occur on the ribbon during printing, and there are cases where this has an effect on the printing result. In a case such as this, set to ON.

- We cannot guarantee that there will not be wrinkles in the printing results under all printing conditions. With respect to other wrinkles, refer to Chapter 7 Troubleshooting.

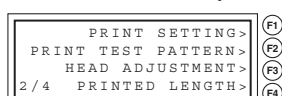- When not necessary, please use with the device set to not print the lines (OFF).
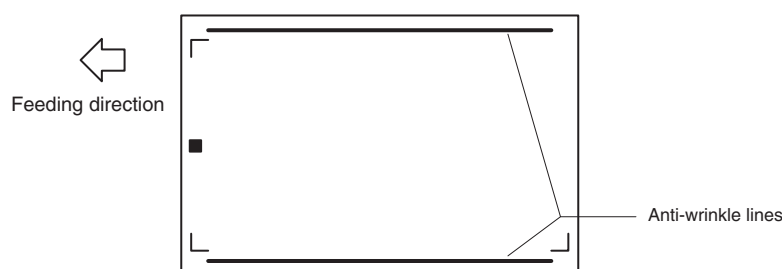
Feeding direction

Anti-wrinkle lines

(1) Press the LOCAL key from the READY status and the following is displayed.

```
               PRINTER MENU>   (F1)
                CUTTER MENU>   (F2)
                 OUTPUT ALL>   (F3)
                               (F4)
```

(2) Press the F1 key (PRINTER MENU) and the following is displayed.

```
                       COPY>   (F1)
                 DATA CLEAR>   (F2)
                  CONDITION>   (F3)
     1/4                       (F4)
```

(3) Press the NEXT key until the following is displayed.

```
              PRINT SETTING>   (F1)
         PRINT TEST PATTERN>   (F2)
             HEAD ADJUSTMENT>  (F3)
     2/4   PRINTED LENGTH>     (F4)
```

(4) Press the F1 key (PRINT SETTING) and the following is displayed.

```
           PRINTING DENSITY>   (F1)
             PAGE PRINT MODE>  (F2)
         ANTI-WRINKLE LINES>   (F3)
                               (F4)
```

(5) Press the F3 key (ANTI-WRINKLE LINES) and the following is displayed.

```
     ANTI-WRINKLE LINES        (F1)
                      <ON>     (F2)
     SELECT:↑↓                 (F3)
     YES:ENTER      NO:ESC     (F4)
```
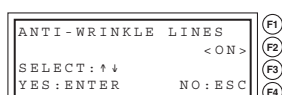
(6) Change to ON (use) or OFF (do not use) with the POSITION keys (▲▼), and set the ANTI-WRINKLE LINES. Press ENTER to confirm and return to the previous screen.

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.
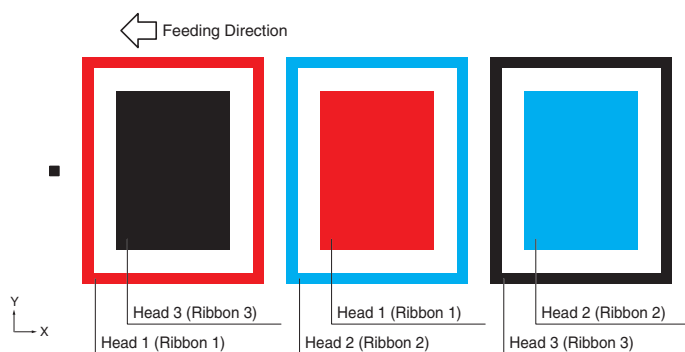
4.12 PRINT TEST PATTERN

The fill printing state of each head can be confirmed by printing a test pattern.

Label material (media) with a width of 130 mm width is required.

CHECKPOINT
- **Set three types of ink ribbon and set the ribbon bar. If 3-type ink ribbons are not set, the Print Test Pattern cannot be run.**
- **Print after winding-up until the transparent film section of the ink ribbon cannot be seen.**
- **There are cases where printing is faint and not uniform immediately after setting the ink ribbon. In that case, run another test pattern.**
- **Before running the test pattern, set the PRINTING DENSITY. (Refer to "4.9 PRINTING DENSITY".)**
- **The head position shift is adjusted under HEAD POSITION ADJUSTMENT (Refer to "4.15 HEAD POSITION ADJUSTMENT".)**

Test Pattern Instructions

Feeding Direction

Head 3 (Ribbon 3)
Head 1 (Ribbon 1)

Head 1 (Ribbon 1)
Head 2 (Ribbon 2)

Head 2 (Ribbon 2)
Head 3 (Ribbon 3)

Print Test Pattern

(1) Press the LOCAL key from the READY status and the following is displayed.

```
PRINTER MENU>    F1
 CUTTER MENU>    F2
 OUTPUT ALL>    F3
                F4
```

(2) Press the F1 key (PRINTER MENU) and the following is displayed.

```
         COPY>    F1
   DATA CLEAR>    F2
    CONDITION>    F3
1/4               F4
```

(3) Press the NEXT key until the following is displayed.

```
   PRINT SETTING>    F1
PRINT TEST PATTERN>  F2
  HEAD ADJUSTMENT>   F3
2/4  PRINTED LENGTH> F4
```

(4) Press the F2 key (PRINT TEST PATTERN) and the following is displayed.

```
PRINT TEST PATTERN>  F1
ADJUST P&C POSITION> F2
                     F3
                     F4
```
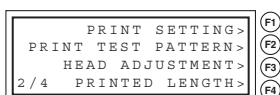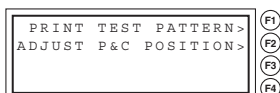
(5) Press the F1 key (PRINT TEST PATTERN) and the following is displayed.

```
PRINT TEST PATTERN?  F1
                     F2
                     F3
YES:ENTER    NO:ESC  F4
```
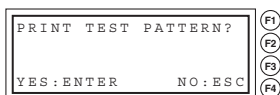
(6) The test pattern is printed with the ENTER key.
   Press the ESC key to return to the previous screen.

4.13   PRINT AND CUT POSITION ADJUSTMENT

When there is a shift in the cut position and the cutter section registration mark reading sensor, it is possible to compensate by entering a correction value.

In printing with Head 3 (ribbon 3), the registration mark reading sensor and the tool holder position are adjusted.

First print the adjustment pattern, then cut with the cutter attached in the tool holder as the registration mark standard.

⚠ **CAUTION**   **When handling the cutter blades, take full care not to cut your hands.**

CHECKPOINT ✏ • **Set the cutter pen in the tool holder.**

• **Always set a black ribbon for Head 3 (ribbon 3).**

• **Refer to "2.14 Adjusting the Blade Length" with regards to blade length adjustment methods.**

Print and Cut Adjustment Pattern Instructions
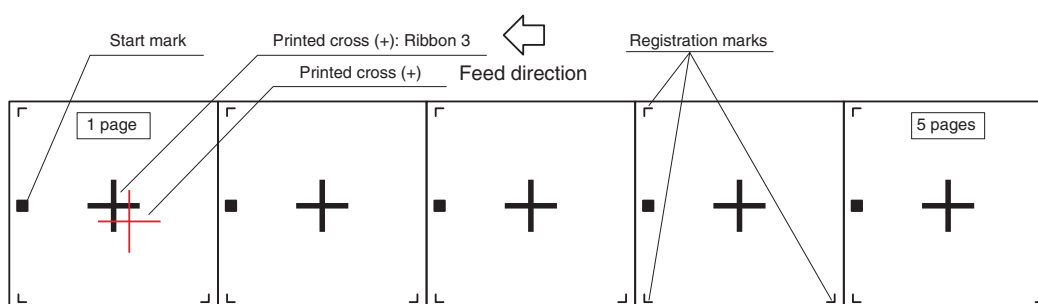
The registration mark is printed as 3 points.

Print and Cut Adjustment Pattern

(1)   Press the LOCAL key from the READY status and the following is displayed.

```
              PRINTER MENU>   (F1)
               CUTTER MENU>   (F2)
                OUTPUT ALL>   (F3)
                              (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the following is displayed.

```
                    COPY>     (F1)
              DATA CLEAR>     (F2)
               CONDITION>     (F3)
 1/4                          (F4)
```

(3)   Press the NEXT key until the following is displayed.

```
            PRINT SETTING>    (F1)
      PRINT TEST PATTERN>     (F2)
          HEAD ADJUSTMENT>    (F3)
 2/4   PRINTED LENGTH>        (F4)
```

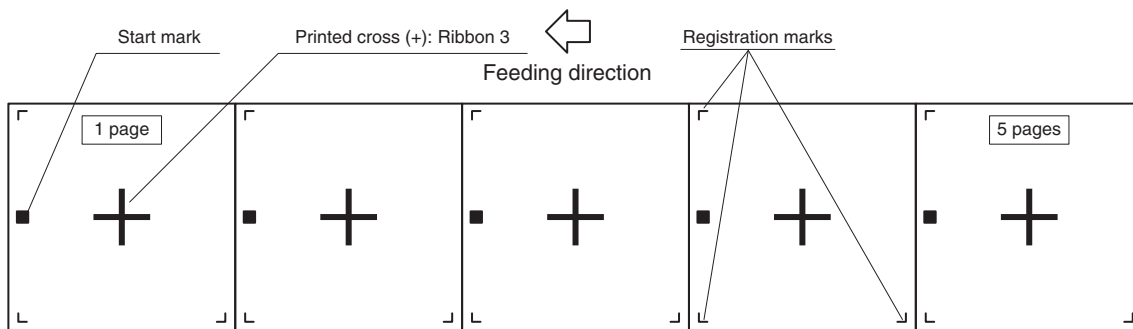(4)   Press the F2 key (PRINT TEST PATTERN) and the following is displayed.

```
     PRINT TEST PATTERN>      (F1)
 ADJUST P&C POSITION>         (F2)
                              (F3)
                              (F4)
```
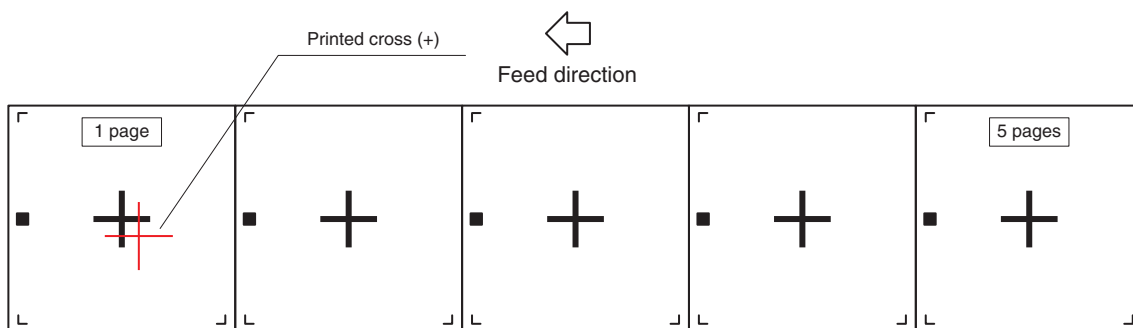
(5)   Press the F2 key (ADJUST P&C POSITION) and the following is displayed.

```
 PRINT ADJUSTMENT             (F1)
 PATTERN?                     (F2)
                              (F3)
 YES:ENTER      NO:ESC        (F4)
```
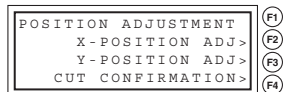
(6)   Press the ENTER key, and 5 pages of crosses (+) for the adjustment reading are printed.

(7)   Read the "Start Mark" and "Registration Mark", then cut the adjustment cross (+) on the first age with the cutter pen set in the tool carriage.

(8)   After the cut, the following is displayed.

```
POSITION ADJUSTMENT      (F1)
       X-POSITION ADJ>   (F2)
       Y-POSITION ADJ>   (F3)
       CUT CONFIRMATION> (F4)
```

(9)   Based on the crosses (+) for the correction reading that was read, measure how far you must slide the correction crosses (+) cut for comparison so that they overlap (cut the center of the printed crosses (+)), and record the value.
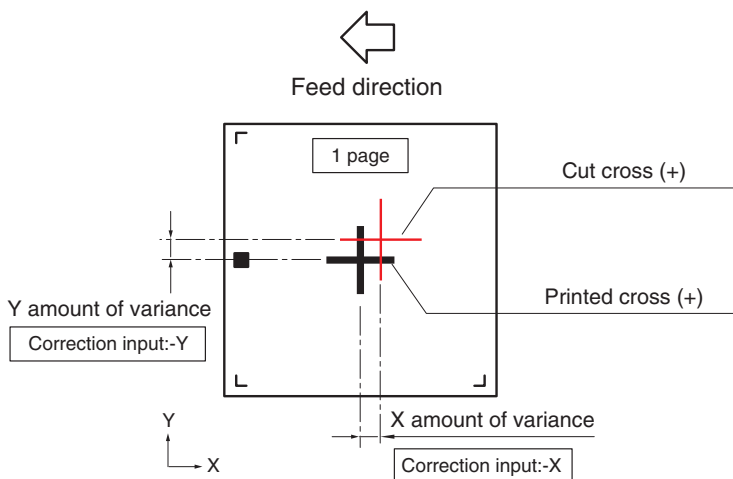
For example in the above illustration, direction x and direction y are both misaligned in direction plus (+). As such, it is necessary to correct to direction minus (−).

Each correction value will become a negative value.

(10) Press the F2 key (X-POSITION ADJ) and enter the correction value for direction x.
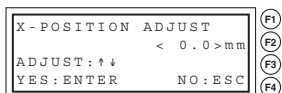
```
X-POSITION ADJUST        (F1)
             <0.0>mm     (F2)
ADJUST:↑↓                (F3)
YES:ENTER      NO:ESC    (F4)
```

Change the numerical value (-1.5 to +1.5) with the POSITION keys (▲▼) and program the correction value .
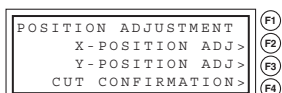
Press ENTER to confirm and return to the previous screen.

```
POSITION ADJUSTMENT      (F1)
      X-POSITION ADJ>     (F2)
      Y-POSITION ADJ>     (F3)
      CUT CONFIRMATION>   (F4)
```
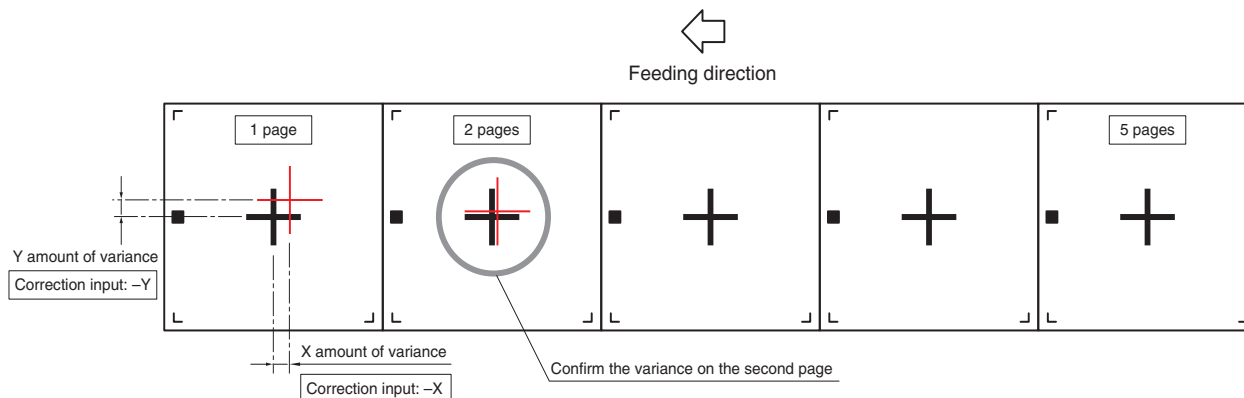
(11) Press the F3 key (Y-POSITION ADJ) and enter the correction value for direction y.

```
Y-POSITION ADJUST        (F1)
             <0.0>mm     (F2)
ADJUST:↑↓                (F3)
YES:ENTER      NO:ESC    (F4)
```
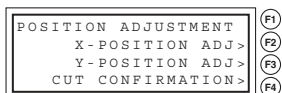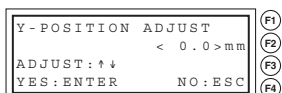
Change the numerical value with the POSITION keys (▲▼) and program the correction value.

Press ENTER to confirm and return to the previous screen.

```
POSITION ADJUSTMENT      (F1)
      X-POSITION ADJ>     (F2)
      Y-POSITION ADJ>     (F3)
      CUT CONFIRMATION>   (F4)
```
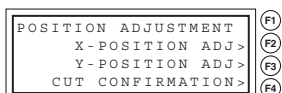
Verify Results After Correction -1

(1) Enter the correction values for both the X direction and the Y direction, and confirm the results.

```
POSITION ADJUSTMENT      (F1)
      X-POSITION ADJ>     (F2)
      Y-POSITION ADJ>     (F3)
      CUT CONFIRMATION>   (F4)
```
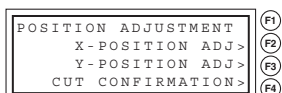
(2) On the above display, press the F4 key (CUT CONFIRMATION), and the following is displayed.

```
CONFIRM ADJUSTMENT?      (F1)
                         (F2)
                         (F3)
YES:ENTER      NO:ESC    (F4)
```
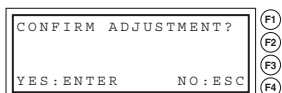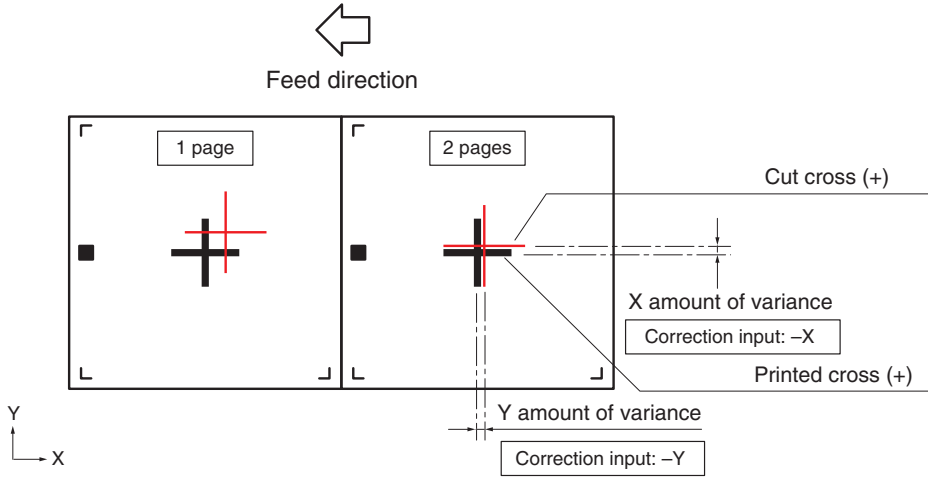
(3) Press the ENTER key, and the adjustment confirmation cut is cut on the 2nd page by the cutter pin set on the tool carriage. Feed direction.

Feeding direction

1 page | 2 pages | 5 pages

Y amount of variance
Correction input: –Y

X amount of variance
Correction input: –X

Confirm the variance on the second page

(4) After the cut, the following is displayed.

```
POSITION ADJUSTMENT      (F1)
      X-POSITION ADJ>     (F2)
      Y-POSITION ADJ>     (F3)
      CUT CONFIRMATION>   (F4)
```

(5) Based on the crosses (+) for the correction reading that was read, measure how far you must slide the correction crosses (+) cut for comparison so that they overlap (cut the center of the printed crosses (+)), and record the value.

Feed direction

For example in the above illustration, direction x and direction y are both misaligned in direction plus (+). As such, it is necessary to correct to direction minus (–).

Each correction value will become a negative value.

(6) Press the F2 key (X-POSITION ADJ) and enter the correction value for direction x.

```
X-POSITION ADJUST       (F1)
            < 0.0>mm    (F2)
ADJUST:↑↓               (F3)
YES:ENTER      NO:ESC   (F4)
```

Change the numerical value (-1.5 to +1.5) with the POSITION keys (▲▼) and program the correction value.

Press ENTER to confirm and return to the previous screen.

```
POSITION ADJUSTMENT     (F1)
      X-POSITION ADJ>   (F2)
      Y-POSITION ADJ>   (F3)
      CUT CONFIRMATION> (F4)
```

(7) Press the F3 key (Y-POSITION ADJ) and enter the correction value for direction y.

```
Y-POSITION ADJUST       (F1)
            < 0.0>mm    (F2)
ADJUST:↑↓               (F3)
YES:ENTER      NO:ESC   (F4)
```

Change the numerical value (-1.5 to +1.5) with the POSITION keys (▲▼) and program the correction value.

Press ENTER to confirm and return to the previous screen.

```
POSITION ADJUSTMENT     (F1)
      X-POSITION ADJ>   (F2)
      Y-POSITION ADJ>   (F3)
      CUT CONFIRMATION> (F4)
```

## Verify Results After Correction -2

(1) Enter the correction values for both the X direction and the Y direction, and confirm the results.

```
POSITION ADJUSTMENT     (F1)
      X-POSITION ADJ>   (F2)
      Y-POSITION ADJ>   (F3)
      CUT CONFIRMATION> (F4)
```

(2) On the above display, press the F4 key (CUT CONFIRMATION), and the following is displayed.

```
CONFIRM ADJUSTMENT?     (F1)
                        (F2)
                        (F3)
YES:ENTER      NO:ESC   (F4)
```

(3) Press the ENTER key, and the adjustment confirmation cut is cut on the 3rd page by the cutter pin set on the tool carriage.
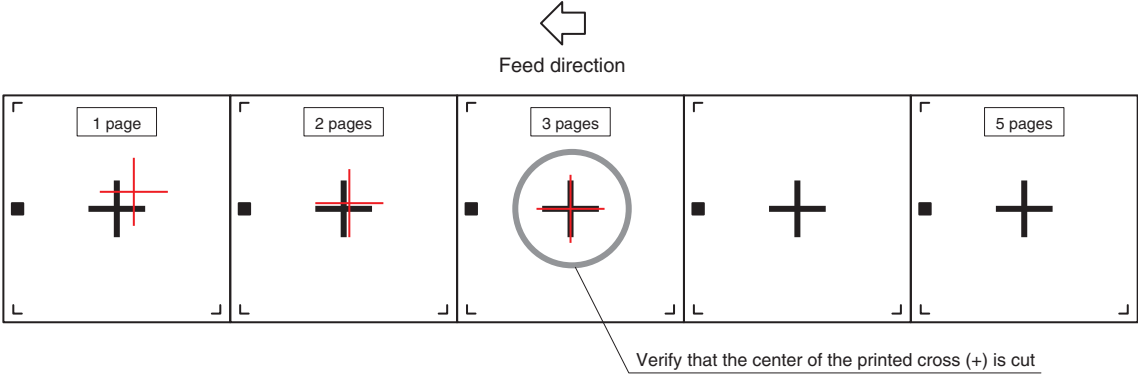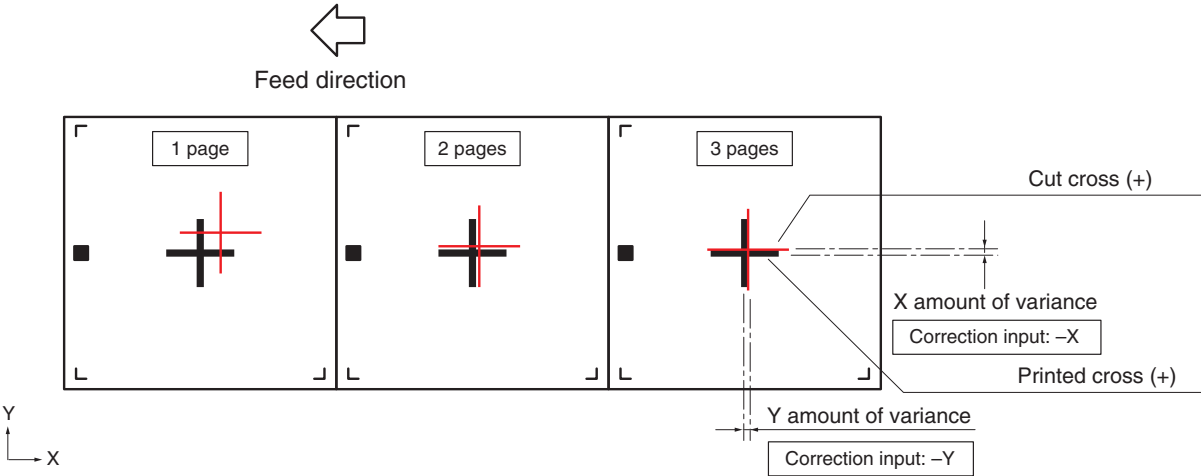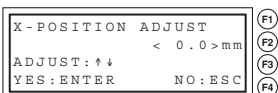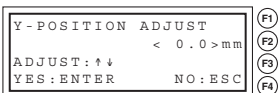
Feed direction

1 page	2 pages	3 pages		5 pages

Verify that the center of the printed cross (+) is cut

(4) After the cut, the following is displayed.

```
POSITION ADJUSTMENT      (F1)
      X-POSITION ADJ>     (F2)
      Y-POSITION ADJ>     (F3)
   CUT CONFIRMATION>      (F4)
```

Verify that the print is overlapped with the cut (cut the center of the printed crosses (+)), then press the LOCAL key, and finish.

Also, when they do not overlap as shown below, perform the adjustment again.
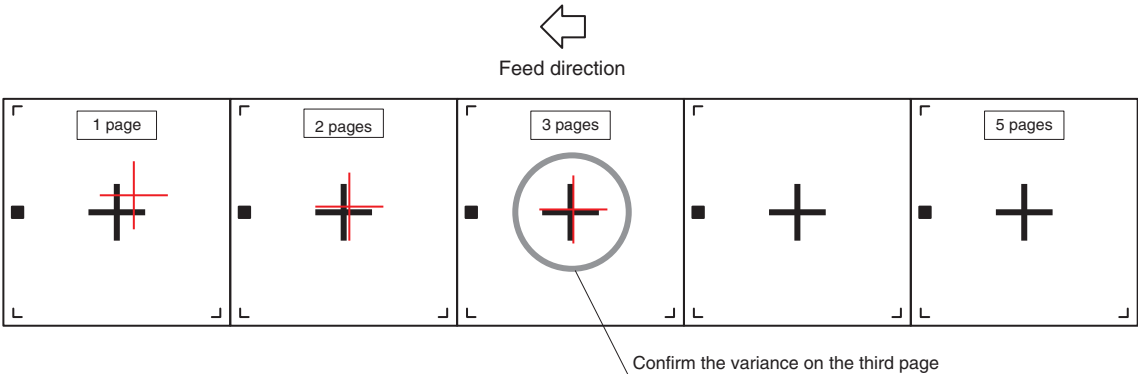
Feed direction

1 page	2 pages	3 pages		5 pages

Confirm the variance on the third page

(5) Based on the crosses (+) for the correction reading that was read, measure how far you must slide the correction crosses (+) cut for comparison so that they overlap, and record the value.

Feed direction

1 page	2 pages	3 pages

Cut cross (+)

X amount of variance

Correction input: –X

Printed cross (+)

Y amount of variance

Correction input: –Y

Y
X

For example in the above illustration, direction x and direction y are both misaligned in direction plus (+). As such, it is necessary to correct to direction minus (–).

Each correction value will become a negative value.

(6)   Press the F2 key (X-POSITION ADJ) and enter the correction value for direction x.

```
X-POSITION ADJUST        F1
              < 0.0>mm   F2
ADJUST:↑↓                F3
YES:ENTER      NO:ESC    F4
```

Change the numerical value (-1.5 to +1.5) with the POSITION keys (▲▼) and program the correction value.

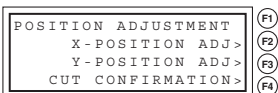Press ENTER to confirm and return to the previous screen.

```
POSITION ADJUSTMENT      F1
      X-POSITION ADJ>    F2
      Y-POSITION ADJ>    F3
   CUT CONFIRMATION>     F4
```

(7)   Press the F3 key (Y-POSITION ADJ) and enter the correction value for direction y.

```
Y-POSITION ADJUST        F1
              < 0.0>mm   F2
ADJUST:↑↓                F3
YES:ENTER      NO:ESC    F4
```

Change the numerical value (-1.5 to +1.5) with the POSITION keys (▲▼) and program the correction value.

Press ENTER to confirm and return to the previous screen.

```
POSITION ADJUSTMENT      F1
      X-POSITION ADJ>    F2
      Y-POSITION ADJ>    F3
   CUT CONFIRMATION>     F4
```

Carry out the CUT CONFIRMATION. When there is still a shift in the print and cut, repeat the correction operation.

Verify that the print is overlapped with the cut, then press the LOCAL key, and finish.

4.14   DISTANCE ADJ. (Distance Adjustment)

The distance adjustment compensates for the length of the plot line generated according to the thickness and type of the media used. As for the distance adjustment value, the length of the line is measured and entered.

The adjustment pattern is printed, and the correction value is entered as the distance adjustment.

Measure the distance between crosses printed with Head 3 (ribbon 3), and enter the correction value as Correction Value = Measured Value - 190 mm.

The adjustment pattern outputs two layers. Measure the printing results, and enter the correction value.

Also, printing the distance removed data in the direction of the media feed, when setting the distance adjustment value, refer to the User Pattern Correction printed below.

CHECKPOINT
- **When a reliable printing length is required because the adjustment value differs due to the label material, laminate material type, presence or absence of laminate, ribbon type or printing resolution (dpi), it will be necessary to adjust for every replacement and change.**
- **The material may expand or shrink to varying degrees based on the usage environment (temperature, humidity).**
- **Set up 3 types of ink ribbons. When three types of ink ribbons have not been set, go to the User Pattern Correction printed below.**
- **"Distance Adjustment" and "Head Position Adjustment" are possible with the pattern output in the "adjustment pattern print".**
- **The distance adjustment value setting is stored even when the power is turned off.**
- **130 mm width is necessary in the label material (media).**

Adjustment Pattern Instructions

First page

Feeding direction

Printed with Head 3

Printed with Head 1

[Example]
Head 1 (Ribbon 1): Red
Head 2 (Ribbon 2): Blue
Head 3 (Ribbon 3): Black

Wrinkle prevention lines

Y
X

Measure the length

Second page

Feeding direction

Printed with Head 3

Printed with Head 2

[Example]
Head 1 (Ribbon 1): Red
Head 2 (Ribbon 2): Blue
Head 3 (Ribbon 3): Black

Wrinkle prevention lines

Y
X

Measure the length

Print 4 cross sections with Head 3. Print the connecting line segment with Head 1 in the first layer, and Head 2 in the second layer.

Printing Adjustment Pattern

(1) Press the LOCAL key from the READY status and the following is displayed.

```
          PRINTER MENU>   F1
           CUTTER MENU>   F2
            OUTPUT ALL>   F3
                          F4
```

(2) Press the F1 key (PRINTER MENU) and the following is displayed.

```
                  COPY>   F1
            DATA CLEAR>   F2
             CONDITION>   F3
1/4                       F4
```

(3)   Press the NEXT key until the following is displayed.

```
         PRINT SETTING>   F1
    PRINT TEST PATTERN>   F2
        HEAD ADJUSTMENT>  F3
2/4   PRINTED LENGTH>     F4
```

(4) Press the F3 key (HEAD ADJUSTMENT) and the below message will display.

```
ADJ. PATTERN PRINT>       F1
        DISTANCE ADJ.>    F2
      HEAD1 POS. ADJ.>    F3
      HEAD2 POS. ADJ.>    F4
```

(5) Press the F1 key (ADJ. PATTERN PRINT), and the below screen will appear.

```
PRINT ADJ. PATTERN?       F1
                          F2
                          F3
YES:ENTER        NO:ESC   F4
```

(6) Press the ENTER key (YES) and print the adjustment pattern.
      After printing, return to the READY status.

      Press the ESC key to return to the previous screen.

Distance Adjustment Correction Input

(1) Press the LOCAL key from the READY status and the following is displayed.

```
          PRINTER MENU>   F1
           CUTTER MENU>   F2
            OUTPUT ALL>   F3
                          F4
```

(2) Press the F1 key (PRINTER MENU) and the following is displayed.

```
                  COPY>   F1
            DATA CLEAR>   F2
             CONDITION>   F3
1/4                       F4
```

(3) Press the NEXT key until the following is displayed.

```
         PRINT SETTING>   F1
    PRINT TEST PATTERN>   F2
        HEAD ADJUSTMENT>  F3
2/4   PRINTED LENGTH>     F4
```

(4) Press the F3 key (HEAD ADJUSTMENT) and the below message will display.

```
ADJ. PATTERN PRINT>       F1
        DISTANCE ADJ.>    F2
      HEAD1 POS. ADJ.>    F3
      HEAD2 POS. ADJ.>    F4
```
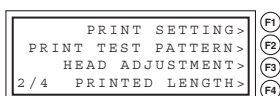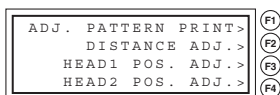
(5)   Press the F2 key (DISTANCE ADJ.) and the below message will display.

```
DISTANCE ADJ.       (F1)
190.0mm     < 0.0>mm (F2)
ADJUST:↑↓           (F3)
YES:ENTER    NO:ESC  (F4)
```

Printing was done with previous adjustment pattern print, results are estimated.
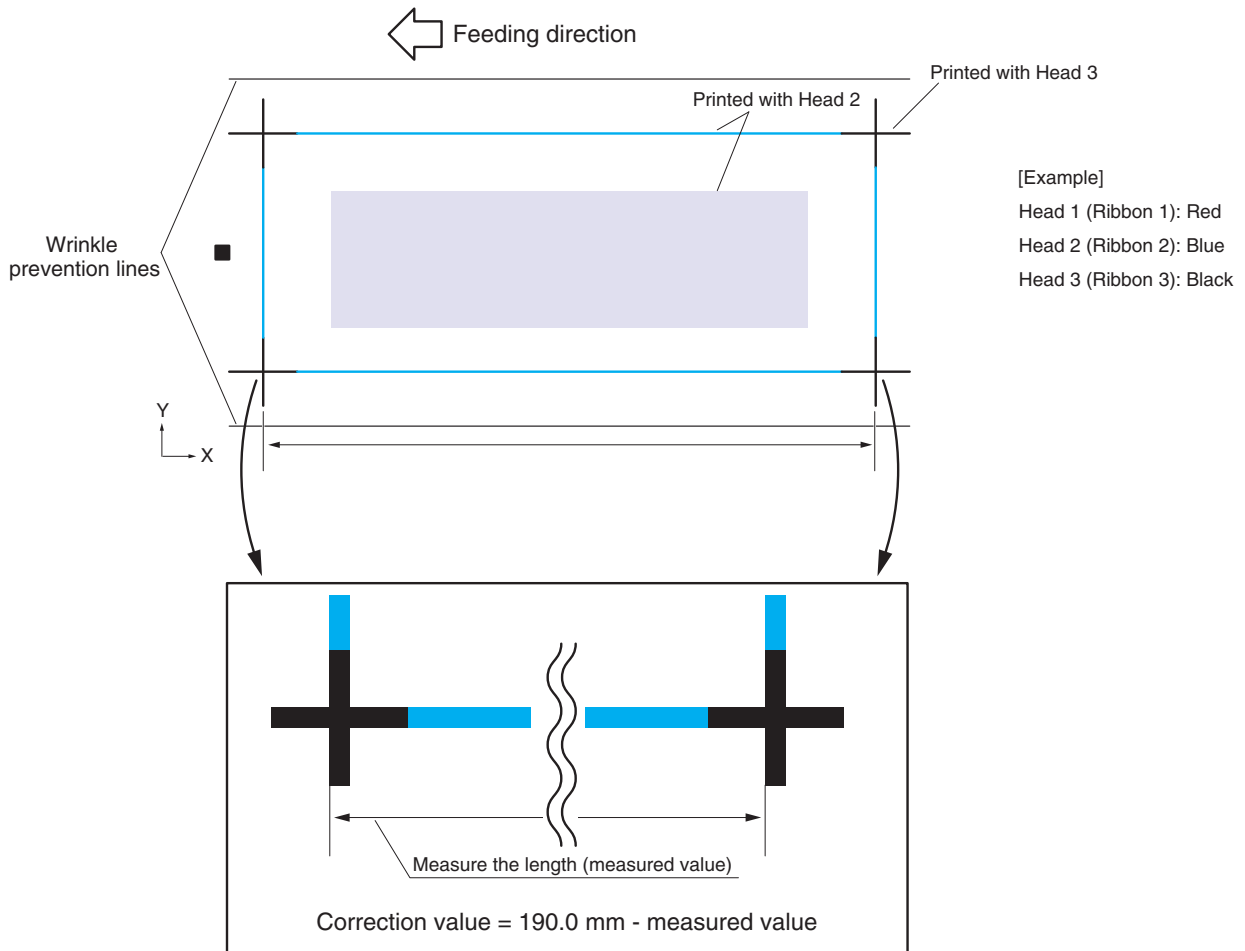
For example in the above illustration, the correction value becomes negative when "correction value = 190.0 mm - measured value" and the measured value was made 190.5 mm. (Correction Value: Input as -0.5 mm)

(6)   Change the numerical value (-1.5 to +1.5) with the POSITION keys (▲▼) and program the correction value. Press ENTER to confirm and return to the previous screen.

Press the ESC key to return to the previous screen.

Correcting with User Patterns

Perform the following below when printing data that solves the media sending directional distance (not the adjustment pattern print) and programming the distance adjustment value.

(1)   Print the data that solves the correct media sending directional distance. (Temporarily assumes length is L0.)

(2)   Measures printing results of (1). (Temporarily assumes length was L1.)

(3)   Converts to the 190 mm-based setting value with the below corresponding conversion formula.
Setting value (n:mm) = 190 - (190 x (L1/L0))

(4)   Program the requested n value in the "DISTANCE ADJ." menu.

4.15   HEAD POSITION ADJUSTMENT

Head position adjustment occurs depending on the type and thickness of the utilized media, and the head (ribbon) position misalignment is corrected. The head position adjustment value is entered as a measurement of the line segment misalignment.

The adjustment pattern is printed, and the correction value is entered in the head position adjustment.

The adjustment pattern outputs two layers. Measure the first layer and input the correction value for Head 1 Position Adjustment. Measure the second layer and input the correction value for Head 2 Position Adjustment.

Adjust after running distance adjustment. Refer to "4.14 DISTANCE ADJ. (Distance Adjustment)".

CHECKPOINT
- **Adjustment for every replacement and change is necessary as adjustment values will differ based label materials, laminate materials, the presence/absence of laminate, ribbon type, and printing resolution.**
- **The material may expand or shrink to varying degrees based on the usage environment (temperature, humidity).**
- **Set up 3 types of ink ribbons. If 3-type ink ribbons are not set, "Head Position Adjustment" cannot be run. After outputting with a user pattern, it is possible to directly input the misalignment and make adjustments.**
- **"Distance Adjustment" and "Head Position Adjustment" are possible with the pattern output in the "adjustment pattern print".**
- **The head position adjustment value setting is stored even when the power is turned off.**
- **130 mm width is necessary in the label material (media).**

Adjustment Pattern Instructions

Print 4 cross sections with Head 3. Print the connecting line segment with Head 1 in the first layer, and Head 2 in the second layer.

Printing Adjustment Pattern

(1)   Press the LOCAL key from the READY status and the below message will display.

```
        PRINTER MENU>   (F1)
         CUTTER MENU>   (F2)
          OUTPUT ALL>   (F3)
                        (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the below screen will display.

```
               COPY>   (F1)
         DATA CLEAR>    (F2)
          CONDITION>    (F3)
1/4                     (F4)
```

(3)   Press the NEXT key until the below screen appears.

```
      PRINT SETTING>    (F1)
 PRINT TEST PATTERN>    (F2)
     HEAD ADJUSTMENT>   (F3)
2/4  PRINTED LENGTH>    (F4)
```

(4)   Press the F3 key (HEAD ADJUSTMENT) and the below message will display.

```
ADJ. PATTERN PRINT>     (F1)
       DISTANCE ADJ.>   (F2)
     HEAD1 POS. ADJ.>   (F3)
     HEAD2 POS. ADJ.>   (F4)
```

(5)   Press the F1 key (ADJ. PATTERN PRINT), and the below screen will appear.

```
PRINT ADJ. PATTERN?     (F1)
                        (F2)
                        (F3)
YES:ENTER      NO:ESC   (F4)
```

(6)   Press the ENTER key (YES) and print the adjustment pattern.

After printing, return to the READY status.

Press the ESC key to return to the previous screen.

Inputting adjustment value for adjustment pattern -1 (Head 1)

(1)   Press the LOCAL key from the READY status and the below message will display.
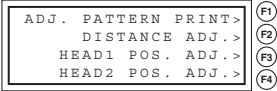
```
        PRINTER MENU>   (F1)
         CUTTER MENU>   (F2)
          OUTPUT ALL>   (F3)
                        (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the below screen will display.

```
               COPY>   (F1)
         DATA CLEAR>    (F2)
          CONDITION>    (F3)
1/4                     (F4)
```

(3)   Press the NEXT key until the below screen appears.

```
      PRINT SETTING>    (F1)
 PRINT TEST PATTERN>    (F2)
     HEAD ADJUSTMENT>   (F3)
2/4  PRINTED LENGTH>    (F4)
```

(4)   Press the F3 key (HEAD ADJUSTMENT) and the below message will display.

```
ADJ. PATTERN PRINT>     (F1)
       DISTANCE ADJ.>   (F2)
     HEAD1 POS. ADJ.>   (F3)
     HEAD2 POS. ADJ.>   (F4)
```

(5)   Press the F3 key (HEAD1 POS. ADJ.) and the below message will display.

```
HEAD1 POSITION ADJ.     (F1)
                        (F2)
            HEAD1-X>    (F3)
            HEAD1-Y>    (F4)
```

First page

Feeding direction

Pritned with Head 1   Pritned with Head 3

Measure the internal variance

[Example]
Head 1 (Ribbon 1): Red
Head 2 (Ribbon 2): Blue
Head 3 (Ribbon 3): Black

Amount of variance

Correction input:-X

Amount of variance

Correction input:-Y

Using Head 3 (cross) as the standard, take a survey of how far Head 1 (line segment) can be displaced before it overlaps.

For example in the above illustration, direction x and direction y are both misaligned in direction plus (+). As such, it is necessary to adjust to direction minus (–).

Each correction value will become a negative value.

(6)   Press the F3 key (HEAD1-X) and enter the correction value for direction x.

```
HEAD1-X
             < 0.0>mm
ADJUST:↑↓
YES:ENTER     NO:ESC
```

Change the numerical value (-1.5 to +1.5) with the POSITION keys (▲▼) and program the correction value.

Press ENTER to confirm and return to the previous screen.

```
HEAD1 POSITION ADJ.

          HEAD1-X>
          HEAD1-Y>
```

(7)   Press the F4 key (HEAD1-Y) and enter the correction value for direction x.

```
HEAD1-Y
             < 0.0>mm
ADJUST:↑↓
YES:ENTER     NO:ESC
```

Change the numerical value (-1.5 to +1.5) with the POSITION keys (▲▼) and program the correction value.

Press ENTER to confirm and return to the previous screen.

```
HEAD1 POSITION ADJ.

          HEAD1-X>
          HEAD1-Y>
```

Press the ESC key to return to the previous screen.

Inputting adjustment value for adjustment pattern -2 (Head 2)

(1)　Press the LOCAL key from the READY status and the below message will display.

```
PRINTER MENU>    (F1)
CUTTER MENU>    (F2)
 OUTPUT ALL>    (F3)
                (F4)
```

(2)　Press the F1 key (PRINTER MENU) and the below screen will display.

```
            COPY>    (F1)
      DATA CLEAR>    (F2)
       CONDITION>    (F3)
1/4                  (F4)
```

(3)　Press the NEXT key until the below screen appears.

```
       PRINT SETTING>    (F1)
  PRINT TEST PATTERN>    (F2)
      HEAD ADJUSTMENT>    (F3)
2/4   PRINTED LENGTH>    (F4)
```

(4)　Press the F3 key (HEAD ADJUSTMENT) and the below message will display.

```
ADJ. PATTERN PRINT>    (F1)
       DISTANCE ADJ.>   (F2)
     HEAD1 POS. ADJ.>   (F3)
     HEAD2 POS. ADJ.>   (F4)
```
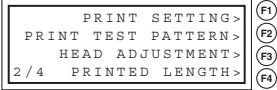
(5)　Press the F4 key (HEAD 2 POS. ADJ.) and the below message will display.

```
HEAD2 POSITION ADJ.    (F1)
                       (F2)
           HEAD2-X>    (F3)
           HEAD2-Y>    (F4)
```
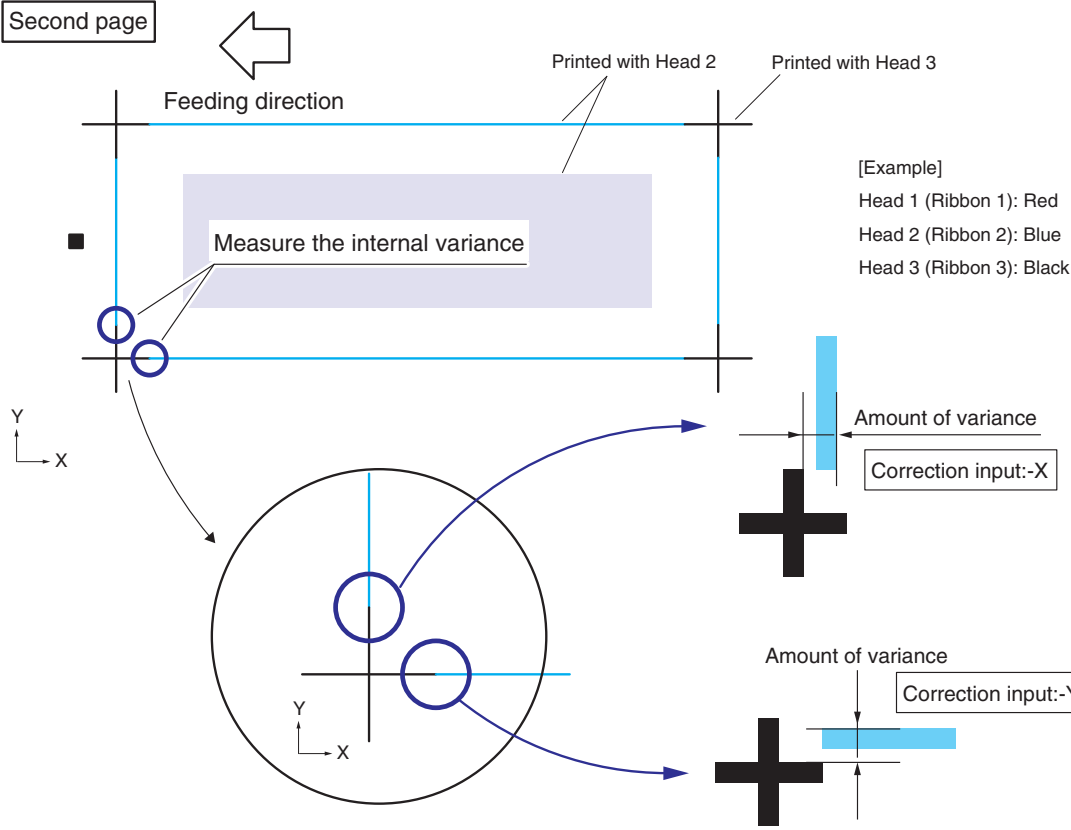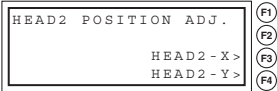

Using Head 3 (cross) as the standard, take a survey of how far Head 2 (line segment) can be displaced before it overlaps.

For example in the above illustration, direction x and direction y are both misaligned in direction plus (+). As such, it is

necessary to correct to direction minus (–).

Each correction value will become a negative value.

(6)   Press the F3 key (HEAD 2-X) and enter the correction value for direction x.
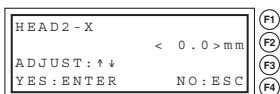
```
HEAD2-X                    (F1)
              < 0.0>mm      (F2)
ADJUST:↑↓                   (F3)
YES:ENTER      NO:ESC       (F4)
```

Change the numerical value (-1.5 to +1.5) with the POSITION keys (▲▼) and program the correction value.

Press ENTER to confirm and return to the previous screen.

```
HEAD2 POSITION ADJ.        (F1)
                           (F2)
              HEAD2-X>      (F3)
              HEAD2-Y>      (F4)
```
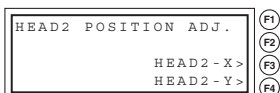
(7)   Press the F3 key (HEAD 2-Y) and enter the correction value for direction x.
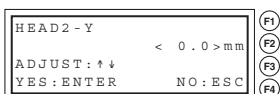
```
HEAD2-Y                    (F1)
              < 0.0>mm      (F2)
ADJUST:↑↓                   (F3)
YES:ENTER      NO:ESC       (F4)
```

Change the numerical value (-1.5 to +1.5) with the POSITION keys (▲▼) and program the correction value.

Press ENTER to confirm and return to the previous screen.

```
HEAD2 POSITION ADJ.        (F1)
                           (F2)
              HEAD2-X>      (F3)
              HEAD2-Y>      (F4)
```
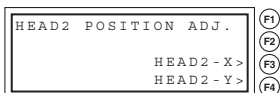
Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

In order to confirm the printing results following adjustment, print the adjustment pattern one more time.

4.16   PRINTED LENGTH

The total printed length of the main body will be displayed.

The printed length will be displayed in 10 m units.

(1)   Press the LOCAL key from the READY status and the below message will display.

```
                PRINTER MENU>    (F1)
                 CUTTER MENU>    (F2)
                  OUTPUT ALL>    (F3)
                                 (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the below screen will display.

```
                       COPY>     (F1)
                 DATA CLEAR>     (F2)
                  CONDITION>     (F3)
 1/4                             (F4)
```

(3)   Press the NEXT key until the below screen appears.

```
              PRINT SETTING>     (F1)
        PRINT TEST PATTERN>     (F2)
           HEAD ADJUSTMENT>     (F3)
 2/4   PRINTED LENGTH>          (F4)
```
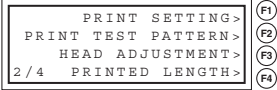
(4)   Press the F4 key (PRINTED LENGTH) and the below screen will display.
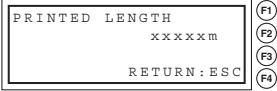
```
 PRINTED LENGTH                  (F1)
            xxxxxm                (F2)
                                 (F3)
                RETURN:ESC       (F4)
```

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

4.17   REGISTRATION MARK

Read the programmed registration mark in the cutter section and run cutting to match the registration mark.

Select axis adjustment from "1POINT" and "3POINT".

Use axis adjustment (tilt adjustment) and distance adjustment in the following manner.

1POINT ....Adjusts from data starting point (origin) position for 1POINT adjustments.

3POINT ....Adjusts in 3 aspects of the registration mark for 3POINT adjustments: origin/x-axis direction/
y-axis direction.

CHECKPOINT **The work time shortens when the registration mark setting is set to 1POINT, but the position adjustment accuracy is inferior compared to 3POINT.Select 3POINT when an accurate position adjustment is necessary.**
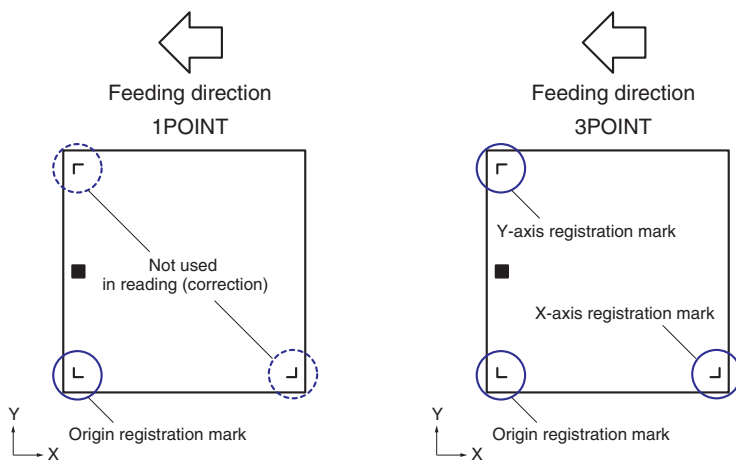
(1)   Press the LOCAL key from the READY status and the below message will display.

```
PRINTER MENU>   F1
 CUTTER MENU>   F2
 OUTPUT ALL>   F3
                F4
```

(2)   Press the F1 key (PRINTER MENU) and the below screen will display.

```
        COPY>   F1
  DATA CLEAR>   F2
   CONDITION>   F3
1/4             F4
```

(3)   Press the NEXT key until the below screen appears.

```
REGISTRAION MARK>   F1
     UNIT LENGTH>   F2
FUNCTION SETTING>   F3
3/4                 F4
```
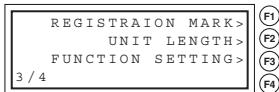
(4)   Press the F1 key (REGISTRATION MARK) and the below screen will display.

```
REGISTRAION MARK      F1
        TYPE<3POINT>  F2
SELECT:↑↓             F3
YES:ENTER    NO:ESC   F4
```
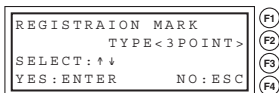
(5)   Change "1POINT" and "3POINT" with the POSITION (▲▼) keys, and program the utilized registration mark when adjusting.

Press ENTER to confirm and return to the previous screen.

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

4.18   UNIT LENGTH

Switch the display unit of the coordinate value shown on the display to millimeters (mm) or inches (inch).

Length unit switching is reflected in the following items. Other lengths are fixed in millimeters (mm).

• Media size value

• Distance adjustment input value (input is mm unit and standard inch is shown vertically)

• Head adjustment input value

• Position adjustment input value

• m display during printed length value (mm) selection; ft (feet) display during inch selection.

(1)   Press the LOCAL key from the READY status and the below message will display.

```
         PRINTER MENU>   (F1)
          CUTTER MENU>   (F2)
           OUTPUT ALL>   (F3)
                         (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the below screen will display.

```
                COPY>    (F1)
          DATA CLEAR>    (F2)
           CONDITION>    (F3)
1/4                      (F4)
```

(3)   Press the NEXT key until the below screen appears.

```
     REGISTRAION MARK>   (F1)
          UNIT LENGTH>   (F2)
      FUNCTION SETTING>  (F3)
3/4                      (F4)
```
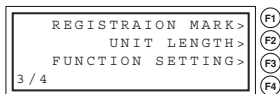
(4)   Press the F2 key (UNIT LENGTH) and the below message will display.

```
UNIT LENGTH              (F1)
              <   mm>    (F2)
SELECT:↑↓                (F3)
YES:ENTER      NO:ESC    (F4)
```
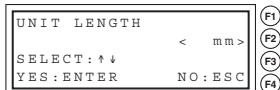
(5)   Change "mm" (millimeter) and "inch" (inch) with the POSITION keys (▲▼) and program the unit length.
Press ENTER to confirm and return to the previous screen.

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

4.19   LAMINATE

Program whether or not to use laminate.

When programming to use laminate, apply the laminate materials to the media surface after printing.

CHECKPOINT • **When this menu setting and the set-up condition of this main unit are not in agreement, an error will occur and it will not be possible to print.**

• **When programming to not use laminate, always remove the laminate materials from the stocker. If they are left set, an error will occur and it will not be possible to print.**

• **When programming to use laminate, always set the laminate materials. If they are not set, an error will occur and it will not be possible to print.**

• **Refer to "2.11 Using the Laminate" regarding setting laminate.**

---

(1)   Press the LOCAL key from the READY status and the below message will display.

```
        PRINTER MENU>  (F1)
         CUTTER MENU>  (F2)
          OUTPUT ALL>  (F3)
                       (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the below screen will display.

```
               COPY>   (F1)
         DATA CLEAR>   (F2)
          CONDITION>   (F3)
 1/4                   (F4)
```

(3)   Press the NEXT key until the below screen appears.

```
   REGISTRAION MARK>   (F1)
        UNIT LENGTH>   (F2)
   FUNCTION SETTING>   (F3)
 3/4                   (F4)
```

(4)   Press the F3 key (FUNCTION SETTING) and the below message will display.

```
           LAMINATE>   (F1)
          SEPARATOR>   (F2)
          CROSS CUT>   (F3)
          FRAME CUT>   (F4)
```
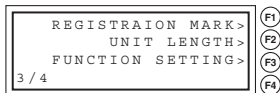
(5)   Press the F1 key (LAMINATE) and the below message will display.

```
 LAMINATE SETTING      (F1)
               <ON>    (F2)
 SELECT:↑↓             (F3)
 YES:ENTER    NO:ESC   (F4)
```
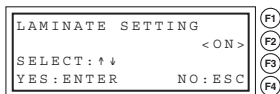
(6)   Change to "ON" (use laminate) or "OFF" (do not use laminate) with the POSITION (▲▼) keys and program laminate. Press ENTER to confirm and return to the previous screen.

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

4.20   SEPARATOR

Program to use or not use the separator.

When programming to use the separator, roll up the unnecessary media parts after printing/cutting.

CHECKPOINT
- **When this menu setting and the set-up condition of this main unit are not in agreement, an error will occur and it will not be possible to print.**
- **When programming to not use the separator, always remove the separator from the stocker. If they are left set, an error will occur and it will not be possible to print.**
- **When programming to not use the separator, always set the separator. If they are not set, an error will occur and it will not be possible to print.**
- **Refer to "2.10 Using the Separator" regarding setting the separator.**

(1)   Press the LOCAL key from the READY status and the below message will display.

```
        PRINTER MENU>   (F1)
         CUTTER MENU>   (F2)
          OUTPUT ALL>   (F3)
                        (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the below screen will display.

```
               COPY>    (F1)
         DATA CLEAR>    (F2)
          CONDITION>    (F3)
1/4                     (F4)
```

(3)   Press the NEXT key until the below screen appears.

```
   REGISTRAION MARK>    (F1)
        UNIT LENGTH>    (F2)
   FUNCTION SETTING>    (F3)
3/4                     (F4)
```

(4)   Press the F3 key (FUNCTION SETTING) and the below message will display.

```
           LAMINATE>    (F1)
          SEPARATOR>    (F2)
          CROSS CUT>    (F3)
          FRAME CUT>    (F4)
```

(5)   Press the F2 key (SEPARATOR) and the below message will display.

```
SEPARATOR SETTING       (F1)
              <ON>      (F2)
SELECT:↑↓               (F3)
YES:ENTER      NO:ESC   (F4)
```

(6)   Change to "ON" (use separator) or "OFF" (do not use separator) with the POSITION (▲▼) keys and program the separator.

Press ENTER to confirm and return to the previous screen.

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

4.21   CROSS CUT

Program to use or not use crosscut (horizontal cutting).

When programming to use crosscut, run horizontal cutting in the drawing rear after printing/cutting.

⚠ **CAUTION**
- **The cross cutting operation occurs close to the outlet. Take full care not to injure your fingers from the blade.**
- **Cross cut is for cutting the backing sheet of label materials following the separator. There may be uncut materials if you try to cut label materials by backing sheet or with attached laminate materials. Also, the crosscut section might be damaged if the label material glue attaches to the blade. Do not cut anything other than the backing sheet.**

CHECKPOINT
- **The lifespan of a crosscut cutter blade is approximately 10,000 times.**
- **When cross cut is conducted after the device been left unattended for a long time with label materials set in place, the cross cut function of the printer may be impaired. Be sure to remove label materials if the device is going to be left unattended for a long time.**

(1)   Press the LOCAL key from the READY status and the below message will display.

```
        PRINTER MENU>   (F1)
         CUTTER MENU>   (F2)
          OUTPUT ALL>   (F3)
                        (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the below screen will display.

```
                COPY>   (F1)
          DATA CLEAR>   (F2)
           CONDITION>   (F3)
 1/4                    (F4)
```

(3)   Press the NEXT key until the below screen appears.

```
   REGISTRAION MARK>    (F1)
        UNIT LENGTH>    (F2)
    FUNCTION SETTING>   (F3)
 3/4                    (F4)
```

(4)   Press the F3 key (FUNCTION SETTING) and the below message will display.

```
           LAMINATE>    (F1)
          SEPARATOR>    (F2)
          CROSS CUT>    (F3)
          FRAME CUT>    (F4)
```

(5)   Press the F3 key (CROSS CUT) and the below message will display.

```
 CROSS CUT SETTING      (F1)
                <ON>    (F2)
 SELECT:↑↓              (F3)
 YES:ENTER    NO:ESC    (F4)
```

(6)   Change to "ON" (use crosscut) or "OFF" (do not use crosscut) with the POSITION (▲▼) keys and program crosscut.

Press ENTER to confirm and return to the previous screen.

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

4.22   FRAME CUT

Program to use or not use frame cut (outline cutting).

When programming to use frame cut, cut the outline conforming to the indicated plotting area in the printer driver when printing/cutting.

Frame Cut

Residue removal may become difficult in the separator unit depending on the configuration of the labels being produced or label material type (25 µm materials or paper-type materials).In such cases you will have to peel with your hands, but insert a cutting line in the outline of the sheet and remove excess residue in the separator unit. Horizontal cutting afterward will become smooth as a result.
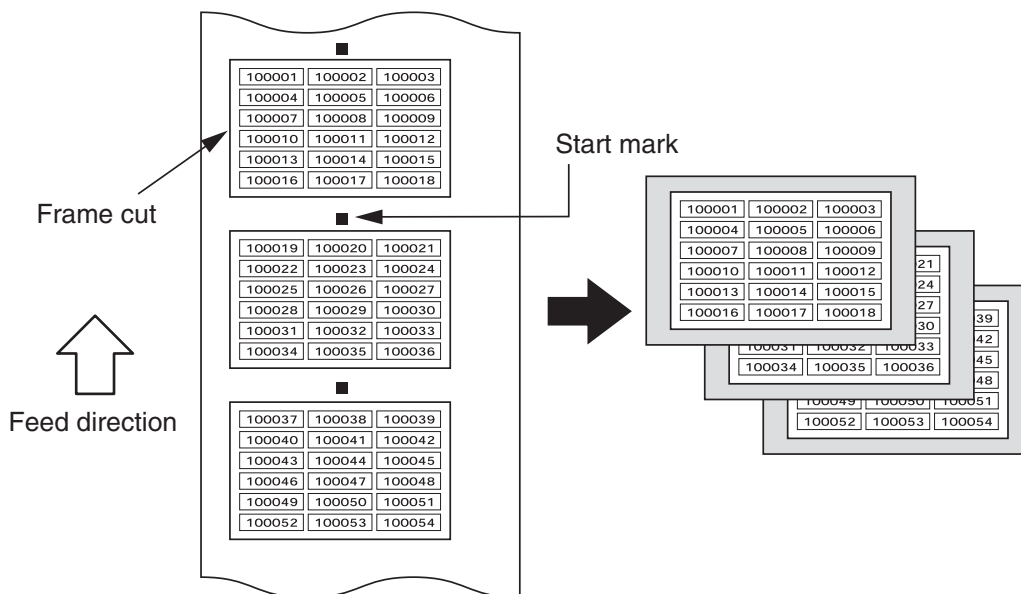
In sequence number creation application software, etc., there is a function that lays out sequence numbers or bar codes in the sheet by designing single layer labels. However, they are conversely not able to indicate a cutting line for outline cutting. As such, the LCX603 will match the paper size and cut the outline.

CHECKPOINT **When using thin materials below 25 µm (Keshi-N25) or weak paper-type materials, please use this frame cut mode in free-configuration labels such as star shapes, or in small-shape labels.**

(1)   Press the LOCAL key from the READY status and the below message will display.

```
PRINTER MENU>   (F1)
CUTTER MENU>    (F2)
OUTPUT ALL>     (F3)
                (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the below screen will display.

```
        COPY>   (F1)
  DATA CLEAR>   (F2)
   CONDITION>   (F3)
1/4             (F4)
```

(3)   Press the NEXT key until the below screen appears.

```
REGISTRAION MARK>   (F1)
    UNIT LENGTH>    (F2)
FUNCTION SETTING>   (F3)
3/4                 (F4)
```
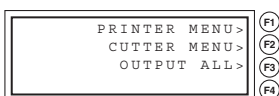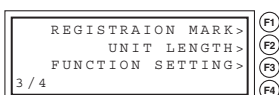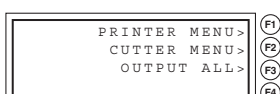
(4)   Press the F3 key (FUNCTION SETTING) and the below message will display.

```
              LAMINATE>   F1
             SEPARATOR>   F2
             CROSS CUT>   F3
             FRAME CUT>   F4
```

(5)   Press the F4 key (FRAME CUT) and the below message will display.

```
FRAME CUT SETTING       F1
                <OFF>   F2
SELECT:↑↓                F3
YES:ENTER      NO:ESC   F4
```

(6)   Change to "ON" (use frame cut) or "OFF" (do not use frame cut) with the POSITION keys (▲▼) and program crosscut.
       Press ENTER to confirm and return to the previous screen.

       Press the ESC key to return to the previous screen.

       Press the LOCAL key to return to READY status.

4.23   SETTING INTERFACE

This section will explain how to program the interface. There is a USB/network (LAN) interface in this device, and each switch will run automatically.

The interface setting is only needed when connecting with a network (LAN) cable.

It is not needed when connecting with a USB cable.

CHECKPOINT   **If the network settings are changed, it will be necessary to turn off the power once, wait at least 10 seconds, and then turn it back on. After turning the power back on again, the settings will become active.**

When using this device, it will be necessary to install the driver software in your computer. Refer to "Chapter 3 Printer Driver" regarding installing the driver software.

USB Interface

When using the USB interface, make sure the driver software is installed in your computer.

⚠ **CAUTION**   **Operation cannot be guaranteed in the following cases:**

- **When connection has been made to a USB hub or an add-on USB board**
- **When you are using a custom-built computer or one that you have modified**
- **When a driver other than the one provided was used**

Be sure to observe the following:

- **Do not connect or disconnect the USB cable while you are installing the USB driver**
- **Do not connect or disconnect the USB cable while starting up the computer or the printer. Do not disconnect the USB cable within a 5-second period of connecting it.**
- **Do not connect or disconnect the USB cable while data is being transferred. Do not connect our multiple products to a single computer.**

Network (LAN) Interface

When using the network (LAN) interface, complete the machine settings such as your computer and network hub. It will be necessary for the computer to be connected to the network. In addition, change the settings to temporarily turn off the firewall. When turning off the firewall function, disconnect the network from the internet.

⚠ **CAUTION**   - **A network (LAN) cable or network hub is needed in order to connect to the Landmarked separate preparations.**
- **Network device configurations and the availability of router functions will vary depending on the environment you are using. Refer to your device's manual, or contact the manufacturer or network administrator for details.**
- **Ethernet conforms to 10BASE-T/100BASE-TX. Confirm the network environment you are using.**

Connecting with a Network (LAN) Cable

When connecting with a network (LAN), program the following items:

CHECKPOINT **If the network settings are changed, it will be necessary to turn off the power once, wait at least 10 seconds, and then turn it back on. After turning the power back on again, the settings will become active.**

- DHCP settings
- IP address input
- Subnet mask input
- Gateway input
- MAC address display

DHCP Settings

DHCP settings vary according to the network device configuration or your environment. Refer to your device's manual, or contact your network administrator for details.
DHCP is turned off in the default settings.

(1) Press the LOCAL key from the READY status and the below message will display.

```
        PRINTER MENU>   F1
         CUTTER MENU>   F2
          OUTPUT ALL>   F3
                        F4
```

(2) Press the F1 key (PRINTER MENU) and the below screen will display.

```
               COPY>    F1
         DATA CLEAR>    F2
          CONDITION>    F3
1/4                     F4
```

(3) Press the NEXT key until the below screen appears.

```
        LAN SETTING>    F1
        MAC ADDRESS>    F2
                        F3
4/4                     F4
```

(4) Press the F1 key (LAN SETTING) and the below message will display.

```
               DHCP>    F1
         IP ADDRESS>    F2
        SUBNET MASK>    F3
            GATEWAY>    F4
```
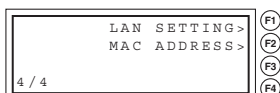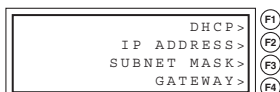
(5) Press the F1 key (DHCP) and the below message will display.

```
DHCP SETTING            F1
              <OFF>     F2
SELECT:↑↓               F3
YES:ENTER    NO:ESC     F4
```
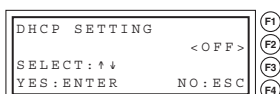
(6) Change to "ON" (use DHCP) or "OFF" (do not use DHCP) with the POSITION keys (▲▼) and program DHCP.
(Resetting will take time when DHCP is programmed on.)

Press ENTER to confirm and return to the previous screen.

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

The below screen will appear when turning the setting from "ON" to "OFF" or from "OFF" to "ON".

```
PRINTER IS RESET       F1
                       F2
                       F3
YES:ENTER    NO:ESC    F4
```
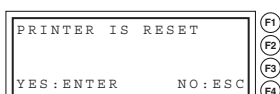
Press the ENTER key to reset. (Resetting will take time when DHCP is programmed on.)

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

IP address input / display

Program when "OFF" is selected in the DHCP settings.

The IP address obtained from the DHCP server will display when "ON" is selected in the DHCP settings.

(1)　Press the LOCAL key from the READY status and the below message will display.

```
        PRINTER MENU>   (F1)
         CUTTER MENU>   (F2)
          OUTPUT ALL>   (F3)
                        (F4)
```

(2)　Press the F1 key (PRINTER MENU) and the below screen will display.

```
                COPY>   (F1)
          DATA CLEAR>   (F2)
           CONDITION>   (F3)
  1 / 4                 (F4)
```

(3)　Press the NEXT key until the below screen appears.

```
         LAN SETTING>   (F1)
         MAC ADDRESS>   (F2)
                        (F3)
  4 / 4                 (F4)
```

(4)　Press the F1 key (LAN SETTING) and the below message will display.

```
                DHCP>   (F1)
          IP ADDRESS>   (F2)
         SUBNET MASK>   (F3)
             GATEWAY>   (F4)
```
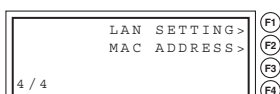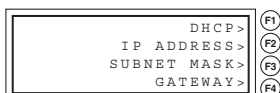
(5)　Press the F2 key (IP ADDRESS) and the below message will display.
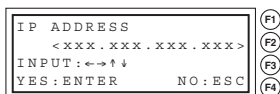
```
  IP ADDRESS           (F1)
     <xxx.xxx.xxx.xxx> (F2)
  INPUT:←→↑↓           (F3)
  YES:ENTER    NO:ESC  (F4)
```

　　　*The below message will display when DHCP is on. After confirming, press the escape key to return to full screen.

```
  IP ADDRESS           (F1)
     <xxx.xxx.xxx.xxx> (F2)
                       (F3)
  RETURN:ESC           (F4)
```
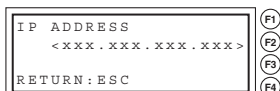
(6)　Select the digits you wish to input with the POSITION keys (◄►), change the numerical value (0 to 9) with the POSITION keys (▲▼), and program the IP address.
Press ENTER to confirm and return to the previous screen.

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

Subnet mask input / display

Program when "OFF" is selected in the DHCP settings.

The subnet mask obtained from the DHCP server will display when "ON" is selected in the DHCP settings.

(1)　Press the LOCAL key from the READY status and the below message will display.

```
        PRINTER MENU>   (F1)
         CUTTER MENU>   (F2)
          OUTPUT ALL>   (F3)
                        (F4)
```

(2)　Press the F1 key (PRINTER MENU) and the below screen will display.

```
                COPY>   (F1)
          DATA CLEAR>   (F2)
           CONDITION>   (F3)
  1 / 4                 (F4)
```

(3)   Press the NEXT key until the below screen appears.

```
          LAN SETTING>   (F1)
          MAC ADDRESS>   (F2)
                         (F3)
4 / 4                    (F4)
```

(4)   Press the F1 key (LAN SETTING) and the below message will display.

```
                 DHCP>   (F1)
           IP ADDRESS>   (F2)
          SUBNET MASK>   (F3)
              GATEWAY>   (F4)
```
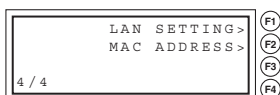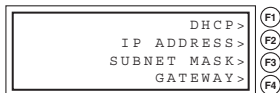
(5)   Press the F3 key (SUBNET MASK) and the below message will display.
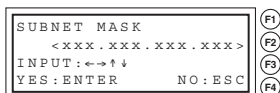
```
SUBNET MASK              (F1)
   <XXX.XXX.XXX.XXX>     (F2)
INPUT:←→↑↓               (F3)
YES:ENTER      NO:ESC    (F4)
```

        *The below message will display when DHCP is on. After confirming, press the escape key to return to full screen.

```
SUBNET MASK              (F1)
   <XXX.XXX.XXX.XXX>     (F2)
                         (F3)
RETURN:ESC               (F4)
```
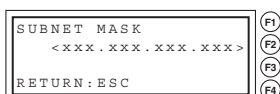
(6)   Select the digits you wish to input with the POSITION keys (◄►), change the numerical value (0 to 9) with the POSITION keys (▲▼), and program the subnet mask.
        Press ENTER to confirm and return to the previous screen.

        Press the ESC key to return to the previous screen.

        Press the LOCAL key to return to READY status.

Gateway input / display

Program when "OFF" is selected in the DHCP settings.

The gateway IP address obtained from the DHCP server will display when "ON" is selected in the DHCP settings.

(1)   Press the LOCAL key from the READY status and the below message will display.

```
         PRINTER MENU>   (F1)
          CUTTER MENU>   (F2)
           OUTPUT ALL>   (F3)
                         (F4)
```

(2)   Press the F1 key (PRINTER MENU) and the below screen will display.

```
                 COPY>   (F1)
           DATA CLEAR>   (F2)
            CONDITION>   (F3)
1 / 4                    (F4)
```

(3)   Press the NEXT key until the below screen appears.

```
          LAN SETTING>   (F1)
          MAC ADDRESS>   (F2)
                         (F3)
4 / 4                    (F4)
```

(4)   Press the F1 key (LAN SETTING) and the below message will display.

```
                 DHCP>   (F1)
           IP ADDRESS>   (F2)
          SUBNET MASK>   (F3)
              GATEWAY>   (F4)
```
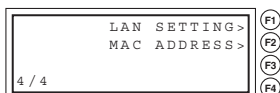
(5)   Press the F4 key (GATEWAY) and the below message will display.
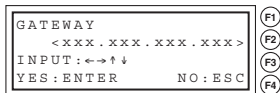
```
GATEWAY                  (F1)
   <XXX.XXX.XXX.XXX>     (F2)
INPUT:←→↑↓               (F3)
YES:ENTER      NO:ESC    (F4)
```

*The below message will display when DHCP is on. After confirming, press the escape key to return to full screen.

```
GATEWAY
    <xxx.xxx.xxx.xxx>

RETURN:ESC
```
F1
F2
F3
F4

(6)   Select the digits you wish to input with the POSITION keys (◄►), change the numerical value (0 to 9) with the
        POSITION keys (▲▼), and set the Gateway.
        Press ENTER to confirm the gateway and return to the previous screen.

        Press the ESC key to return to the previous screen.

        Press the LOCAL key to return to READY status.

MAC address display

Confirm the MAC address.

(1)   Press the LOCAL key from the READY status and the below message will display.
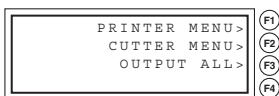
```
        PRINTER MENU>
         CUTTER MENU>
          OUTPUT ALL>
```
F1
F2
F3
F4

(2)   Press the F1 key (PRINTER MENU) and the below screen will display.

```
                COPY>
           DATA CLEAR>
           CONDITION>
1/4
```
F1
F2
F3
F4

(3)   Press the NEXT key until the below screen appears.

```
         LAN SETTING>
         MAC ADDRESS>

4/4
```
F1
F2
F3
F4
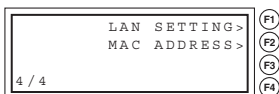
(4)   Press the F2 key (MAC ADDRESS) and the below screen will display.

```
MAC ADDRESS
  <00:03:76:08:xx:xx>

RETURN:ESC
```
F1
F2
F3
F4
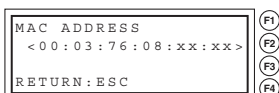
        A unique address will be displayed.

        Press the ESC key to return to the previous screen.

        Press the LOCAL key to return to READY status.

4.24   CUTTER CONSUMPTION

It is possible to accumulate the cutter's cutting length and know the criterion for exchanging cutter blades. Use this as a criterion as cutter blade consumption varies according to the materials being cut and condition settings (cutting force, etc.).

Confirming the Consumption Level

The consumption level is displayed from the cutter pen's cumulative travel distance.

(1)   Press the LOCAL key from the READY status and the below message will display.

```
PRINTER MENU>   (F1)
CUTTER MENU>   (F2)
 OUTPUT ALL>   (F3)
               (F4)
```

(2)   Press the F2 key (CUTTER MENU) and the below screen will display.

```
BLADE CONSUMPTION>   (F1)
    TOOL UP/DOWN>   (F2)
    OFFSET FORCE>   (F3)
                    (F4)
```

(3)   Press the F1 key (BLADE CONSUMPTION), and the below message will display.

```
BLADE CONSUMPTION        (F1)
                         (F2)
           DISPLAY>      (F3)
             CLEAR>      (F4)
```

(4)   Press the F3 key (DISPLAY) and the below screen will display.

```
BLADE CONSUMPTION        (F1)
            000%         (F2)
                         (F3)
RETURN:ESC               (F4)
```

   Confirm the level of consumption. The consumption level is displayed from the cutter pen's cumulative travel distance.

   Press the ESC key to return to the previous screen.

Clearing the Cumulative Distance (Consumption Level)

When replacing the cutter blade, always clear (return to 0) the cumulative distance display. A new cumulative distance calculation will begin.

(1)   Press the LOCAL key from the READY status and the below message will display.

```
PRINTER MENU>   (F1)
CUTTER MENU>   (F2)
 OUTPUT ALL>   (F3)
               (F4)
```

(2)   Press the F2 key (CUTTER MENU) and the below screen will display.

```
BLADE CONSUMPTION>   (F1)
    TOOL UP/DOWN>   (F2)
    OFFSET FORCE>   (F3)
                    (F4)
```

(3)   Press the F1 key (BLADE CONSUMPTION), and the below message will display.

```
BLADE CONSUMPTION        (F1)
                         (F2)
           DISPLAY>      (F3)
             CLEAR>      (F4)
```
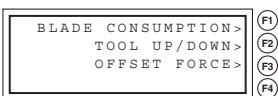
(4)   Press the F4 key (CLEAR) and the below screen will display.

```
CLEAR CONSUMPTION
COUNTER?

YES:ENTER     NO:ESC
```
(F1)
(F2)
(F3)
(F4)
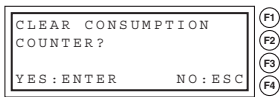
Press the ENTER key to clear the consumption level and return to the previous screen.

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

4.25   TOOL UP / DOWN

A tool to raise and lower tools.

⚠ CAUTION   **When handling the cutter blades, take full care not to cut your hands.**

---

(1)   Press the LOCAL key from the READY status and the below message will display.

```
PRINTER MENU>   (F1)
CUTTER MENU>   (F2)
 OUTPUT ALL>   (F3)
               (F4)
```

(2)   Press the F2 key (CUTTER MENU) and the below screen will display.

```
BLADE CONSUMPTION>   (F1)
     TOOL UP/DOWN>   (F2)
     OFFSET FORCE>   (F3)
                     (F4)
```

(3)   Press the F2 key (TOOL UP / DOWN) and the below screen will display.

```
TOOL UP/DOWN      (F1)
                  (F2)
UP/DOWN:↑↓        (F3)
RETURN:ESC        (F4)
```

Press the POSITION keys (▲▼) (TOOL UP / DOWN) to raise or lower tools.

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

4.26   OFFSET FORCE

Run offset force to confirm the direction of the blade tip during initial operations, and program the cutting force of the blade tip default control.

In addition, program default value "4" and cutting pressure will increase to a large value.

In order to correctly position the blade tip in the cutting direction, run the cutting operation for a short while before engaging in a full cutting operation. A high cutting force is unneeded at this time, and so a cutting force lower than usual is programmed as the offset force.

(1)   Press the LOCAL key from the READY status and the below message will display.

```
PRINTER MENU>    (F1)
 CUTTER MENU>    (F2)
 OUTPUT ALL>    (F3)
                (F4)
```

(2)   Press the F2 key (CUTTER MENU) and the below screen will display.

```
BLADE CONSUMPTION>   (F1)
    TOOL UP/DOWN>    (F2)
     OFFSET FORCE>   (F3)
                     (F4)
```

(3)   Press the F3 key (OFFSET FORCE) and the below message will display.

```
OFFSET FORCE          (F1)
              <04>    (F2)
INPUT:↑↓               (F3)
YES:ENTER    NO:ESC    (F4)
```

Change the numerical value (1 to 31) with the POSITION keys (▲▼) and program the offset force.

Press ENTER to confirm the gateway and return to the previous screen.

Press the ESC key to return to the previous screen.

Press the LOCAL key to return to READY status.

Chapter 5 Replacing Consumable Items

This chapter explains replacing consumable items.

Product Summary

5.1   Replacing Laminate Materials

This section explains replacing laminate materials.

CHECKPOINT 📝
- **When the laminate materials have been replaced with a different type, it is necessary to change the settings/adjustment. Refer to "5.5 Setting/Adjustment During Replacement" for details.**
- **Always set the laminate material and backing sheet roll-up form tube for use. The roll-up form tubes are designed to roll up one new laminate material. If replenishing in the middle of a roll-up, the diameter of the roll-up might become too large which would cause printing to no longer be possible.**
- **When replacing ink ribbons or label materials, use a cleaning stick to clean the heads. If the heads are not cleaned, stripes or white spots might develop. Always turn off the power before cleaning the heads.**
- **When replacing laminate materials in the middle of an operation, it is recommended that all remaining data be output before replacing (refer to "4.5 OUTPUT ALL".)**
- **Labels of various widths can be used. Use laminate material with a width that is 20 mm narrower than the width of the label material. Also, the maximum width of a settable laminate is 110 mm.**
- **Refer to "2.11 Using the Laminate" for details on how to set the laminate materials.**
- **When the laminate materials must be changed, the" Confirm Combination!" screen is displayed. Refer to "Confirm Combination! Screen in 2.3 Using the Control Panel" for details.**

```
Confirm Combination!     (F1)
H3=Semi-R H2=Semi-R      (F2)
H1=Semi-R FNSmat N50     (F3)
YES:ENTER       NO:ESC   (F4)
```
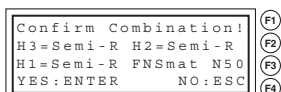
Replacing

(1)   Cut the laminate materials and remove from the label materials. Cut the laminate material backing sheet.

⚠ **CAUTION**   **When cutting the laminate material, be careful not to damage the press roller and feed roller.**
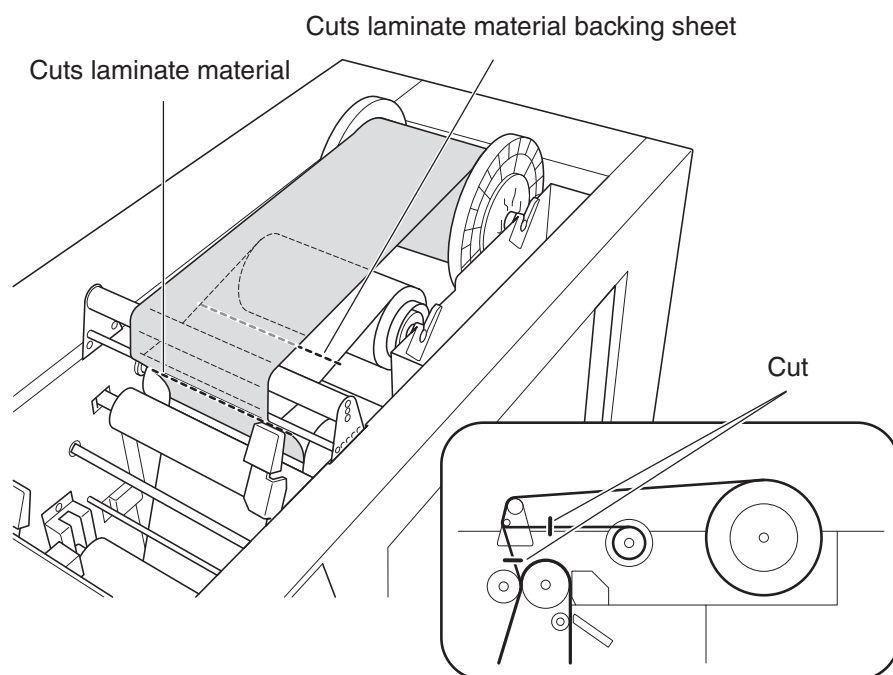
Cuts laminate material backing sheet

Cuts laminate material

Cut

(2)   Remove the laminate stocker and laminate winder bobbin.

CHECKPOINT ✎ **Pull out the laminate winder bobbin, making sure that the left and right sides are pulled out evenly**

Laminate Stocker

Laminate Winder Bobbin
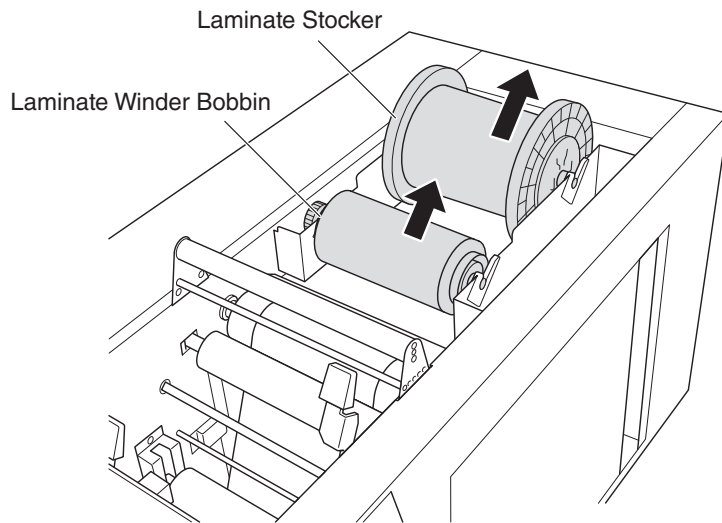
(3)   Remove the laminate stocker flange and then remove the laminate material or form tube.

(4)   In order to adjust to fit the laminate material width, release the lock from the flange and shift the shaft.

Step 3

Step 1:
Press the "PUSH" section.

Step 2

(5)   Determine the position of the flange to match the laminate material width.

> **CHECKPOINT** **The width of the settable laminate materials are 50, 60, 70, 80, 90, 100, 110 mm.**

Laminate material width (mm)

110 ·· 90 ········ 50
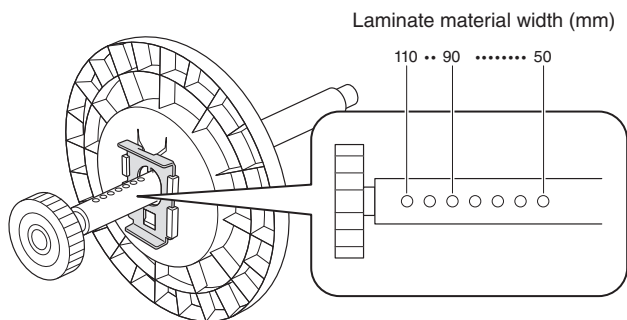
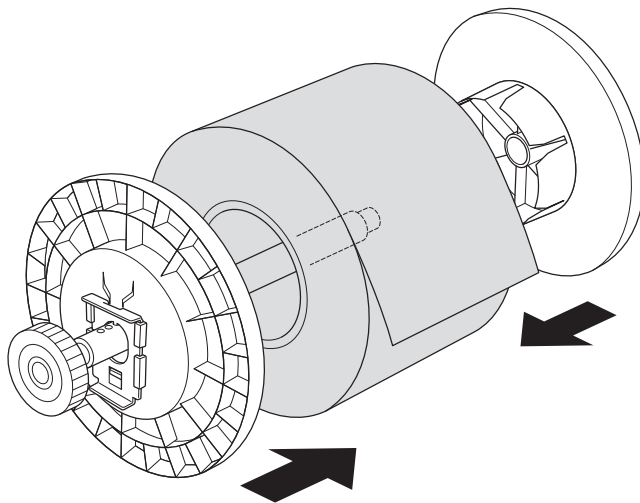(6)   Lock in the shaft groove and set the flange.

Step 1

Step 2
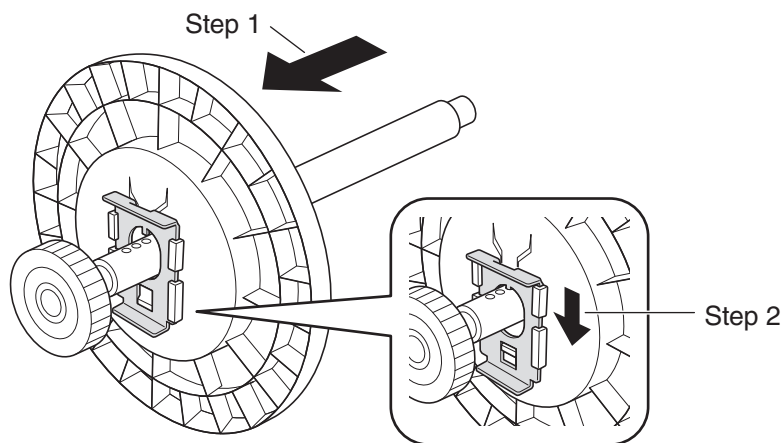
(7)   Set the laminate materials and install the flange.

Set it so that the laminate materials are the revolute.

Push so that there is no opening in between the form tube and flange.

> **CHECKPOINT**
> • **During set-up, be careful not to confuse the revolute with the involution.**
> • **Make sure the set laminate materials do not slack.**
> • **There is the possibility of inclining to one side if media glue attaches to the inside of the flange. Please clean regularly. (Refer to "6.12 Cleaning Media Stocker & Media Stocker Flange".)**

(8)   Remove the laminate winder bobbin flange, and then remove the laminate winder section or form tube. (The flange on the gear-side is fastened.)
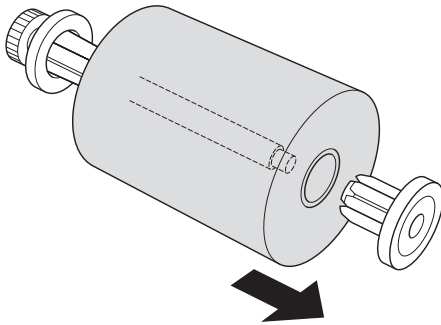
(9)   Install the flange into the form tube of the laminate winder bobbin. Push so that there is no opening in between the form tube and flange.
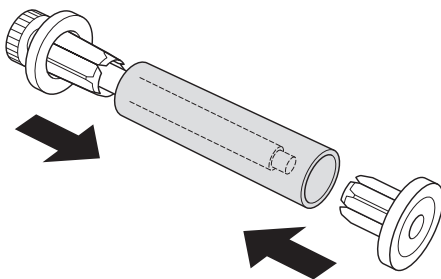
(10)   Install the laminate stocker and laminate winder bobbin. Push until there is a clicking sound.

(11) Pull out the laminate material.

Cut the adhesive area of the laminate materials approximately 150 mm from the forefront.

Cut and peel the adhesive section of the laminate tip.

CHECKPOINT   **Set-up is easier when the adhesive section of the label material is cut first.**

Step 2
Only cut
the adhesive section.

Approx. 150 mm

Step 1

Step 3
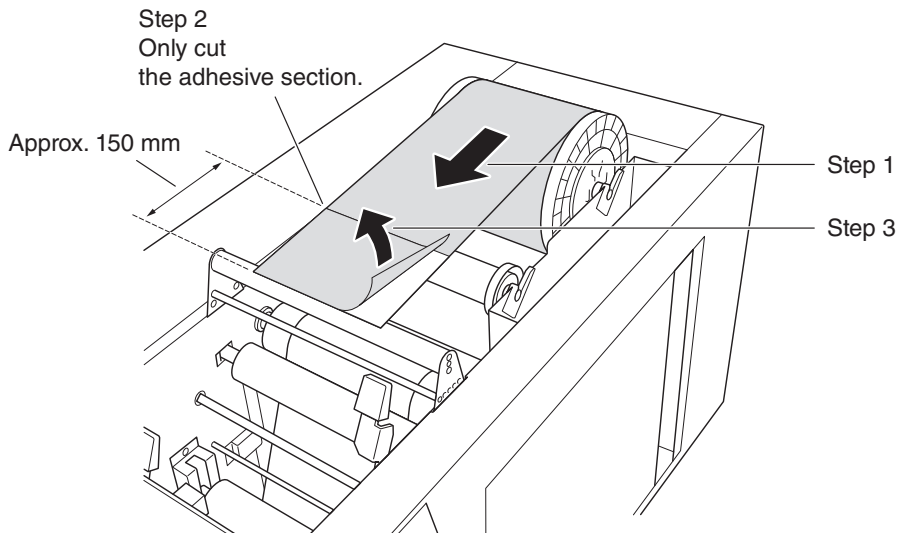
(12) Apply the laminate (adhesive section) straight over the laminate bar and laminate tension bar to the label material.

the dance roller exactly straight along the scale seal.

Fold back the backing sheet side from the laminate tension bar and attach to the laminate winder bobbin with tape.

If the laminate material backing sheet is overly sagging, twist the laminate winder bobbin to wind it up.

CHECKPOINT   **Set the dance roller exactly straight along the scale seal.**

Laminate bar

Laminate tension bar

Step 1
Apply to the label material
to the adhesive section.

Step 2
Attach the backing sheet section
to the laminate winding flange
usng tape.

Adhesive section

Backing sheet section

CHECKPOINT 🖊️ **If the laminate material backing sheet is overly sagging, twist the laminate winder bobbin to wind it up. Since there is a rotational direction in the laminate winder bobbin, refer to the below illustration when winding.**

Press the FEED key, and always make sure there are no wrinkles when feeding the label material and that the backing sheet is wound in the winder bobbin when the laminate material is fed.

When the below message is displayed, release the ribbon lever set-up.

```
W04:Loading check
Ribbon lever is set.
Can not feed.
YES:ENTER
```
(F1) (F2) (F3) (F4)

5.2   *Replacing Label Materials (media)*

This section explains replacing laminate materials.

CHECKPOINT
- **When replacing ink ribbons or label materials, use a cleaning stick to clean the heads. If the heads are not cleaned, stripes or white spots might develop. Always turn off the power before cleaning the heads.**
- **When the laminate materials have been replaced with a different type, it is necessary to change the settings/adjustment. Refer to "5.5 Setting/Adjustment During Replacement" for details.**
- **When replacing label materials, it is necessary clear away any remaining label materials in the feeding section of the main body. When clearing away label materials, remove dancer rollers 1 & 2 from the main body first.**
- **When replacing label materials in the middle of an operation, it is recommended that all remaining data be output before replacing (refer to "4.5 OUTPUT ALL".)**
- **When removing label materials from the printer, make sure to cut the laminate materials first. If the laminate materials are left as is, they may become entangled in the feed roller.**
- **Do not feed when the tape that stops the label material winding end is still attached. If the tape is left attached when changing the label materials, it might become entangled in the feed roller and cause damage.**
- **The width range of label materials that can be set are selectable between 70 and 130 mm. Refer to the below diagram for the relationship between the label and laminate material and the printing range.**

  <Printing Range>
  • Label materials (media) Width: 40 mm - 100 mm (depending on utilized media)
  • Label materials (media)-sending direction: 65 mm - 200 mm

Label material width = W

| 15 | | 15 |

Material clip area   Material clip area

Printing range (Cut width)
= W - 30 ≤ 100

10   Laminator material width = W - 20 ≤ 110   10

*Unit: mm

Feeding direction
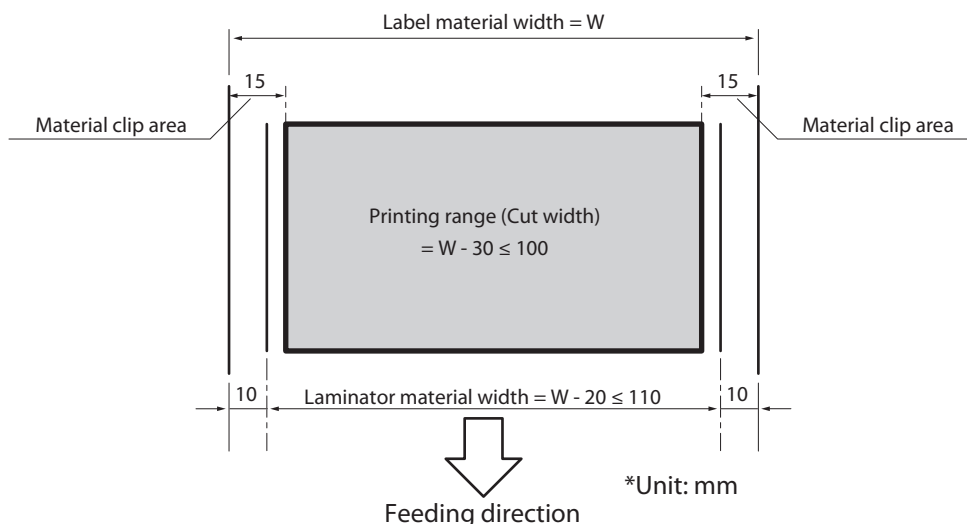
- **Refer to "2.5 Setting Label Materials (media)" and "2.6 Loading Label Materials (media)" for details on how to set label materials.**
- **Although there is an involution and revolute in the label materials, use the revolute in this model.**
- **When the label materials must be changed, the " Confirm Combination!" screen is displayed. Refer to "Confirm Combination! Screen in 2.3 Using the Control Panel" for details.**

```
Confirm Combination!      F1
H3=Semi-R H2=Semi-R       F2
H1=Semi-R FNSmat N50      F3
YES:ENTER      NO:ESC     F4
```
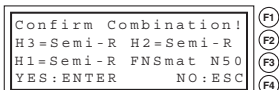
Replacing Label Materials (media)

When replacing label materials that have run out, there are also cases when you have to replace the label material in the middle of an operation.

When replacing in case the label material has finished

Clear away the remaining label materials in the main body and replace the label material.

When replacing the label material in the middle of an operation

Make sure to remove the media stocker, cut the label materials, and clear away remaining label materials in the main body before replacing the label materials.

Replacing

⚠ **CAUTION** **Do not wind back the media in the main body. Winding back forcibly could result in a malfunction. Sever the remaining media in the main body with scissors.**

CHECKPOINT 📝
- **Be careful of dropping the media stocker as it is heavy.**
- **When taking out the flange, take hold with both hands.**
- **The flange cannot be taken out when the media stocker is attached to the main body.**
- **Clear away the remaining label materials in the main body and replace the label material.**
  If the laminate materials are set, cut and remove them from the label materials.

Cut
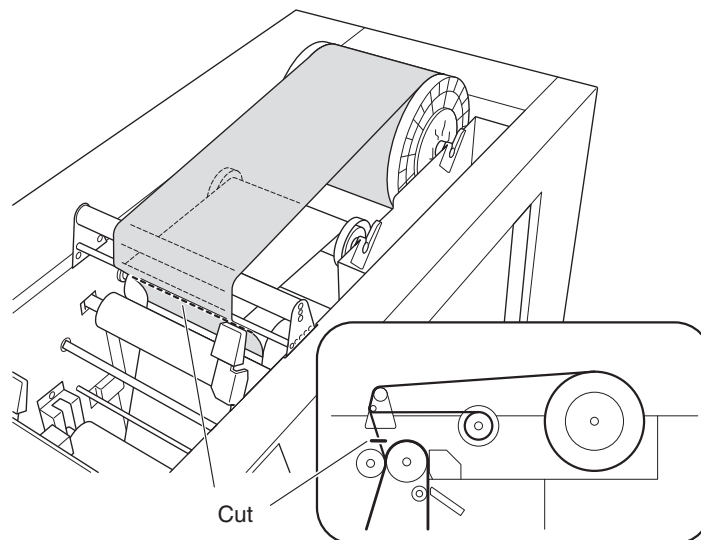
- **If the separator is set, remove dancer roller 2, open the separator, and then cut and remove from the separator winding bobbin.**

Separator Step 2 Step 3 Cut Step 1 Dancer roller 2
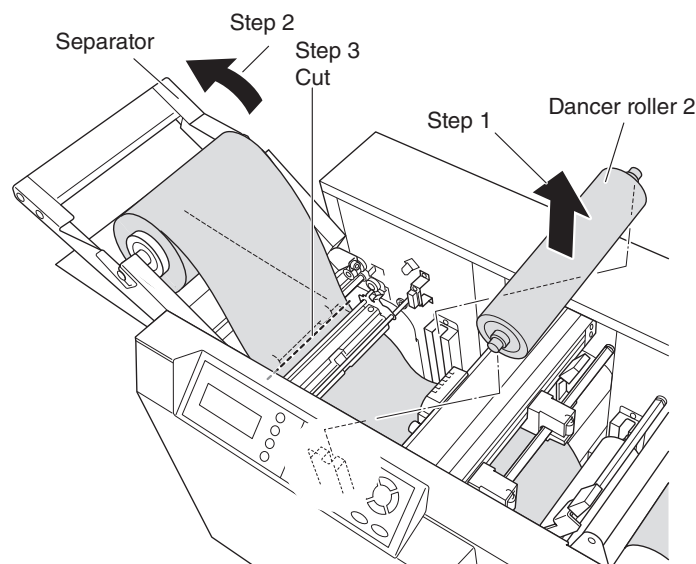
(1)   Remove the media stocker from the printer body.

If replacing label materials during an operation, cut the label materials as shown in right-side diagram and take it out.
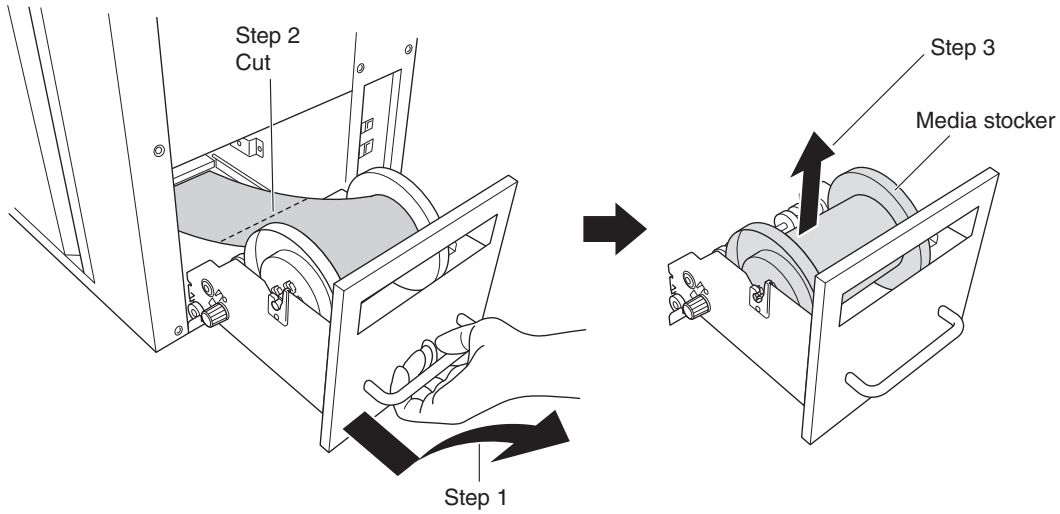
(2)   Clear away remaining label materials in the main body. Open the main unit front cover first, and then remove the ribbon lever set.
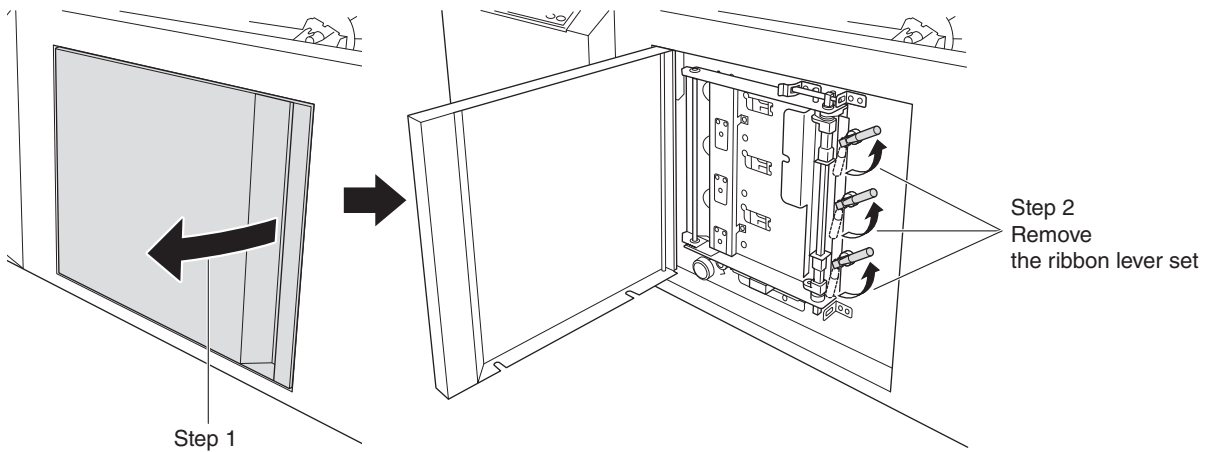
⚠ **CAUTION** • **When setting the label materials (media) and feeding the source, always do so when media assistance is installed. Refer to "Setting Media Assistance" in "2.6 Loading Label Materials (media)" regarding setting media assistance.**
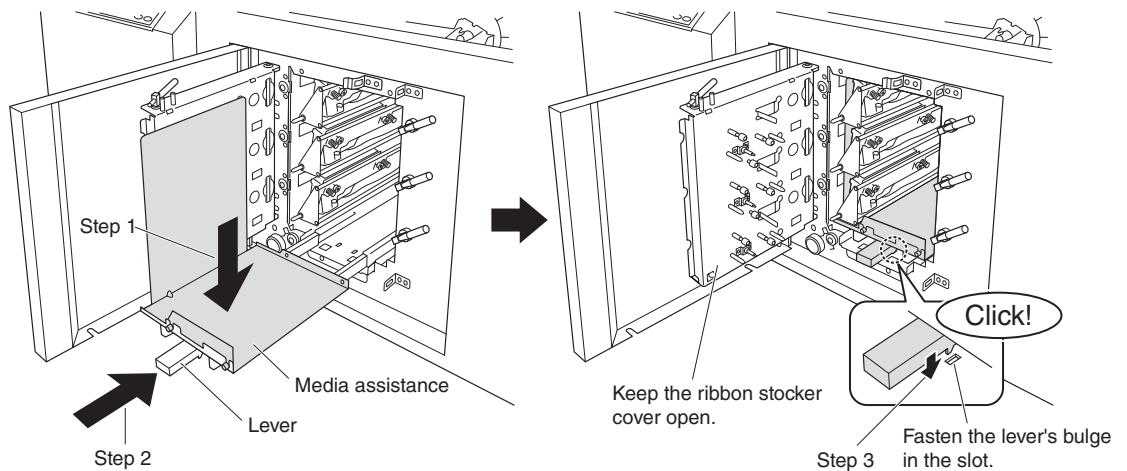
• **Make sure the ribbon stocker cover is open when feeding.**

(3)   Remove dancer roller 1.
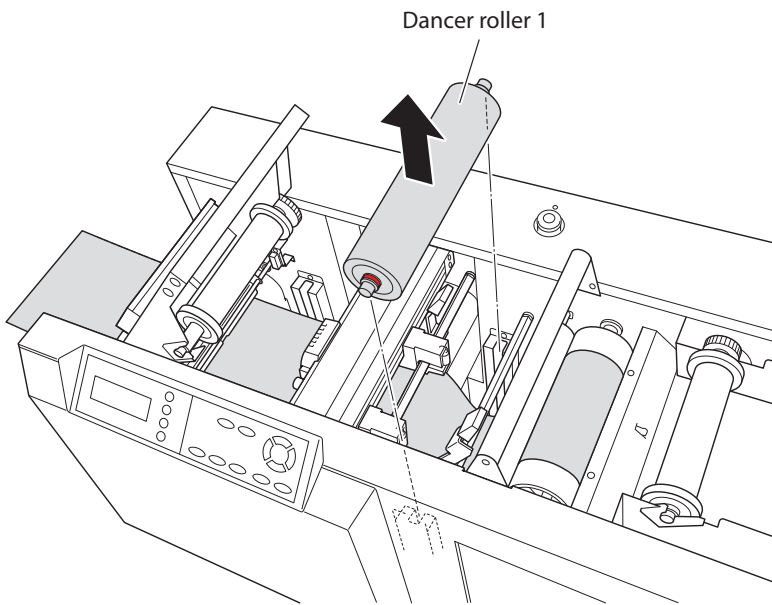
Dancer roller 1

(4)   Remove dancer roller 2 from the separator side and open the separator section. (Steps 1 & 2)
       Keep the press lever, cam lever, and separator suppression unit open. (Steps 3, 4, & 5)

CHECKPOINT   **Always remove the dancer roller before opening the separator.**

Separator suppression unit

Separator   Dancer roller 2

Step 2   Step 1   Step 4

Cam lever

Step 5

Step 3

Press lever
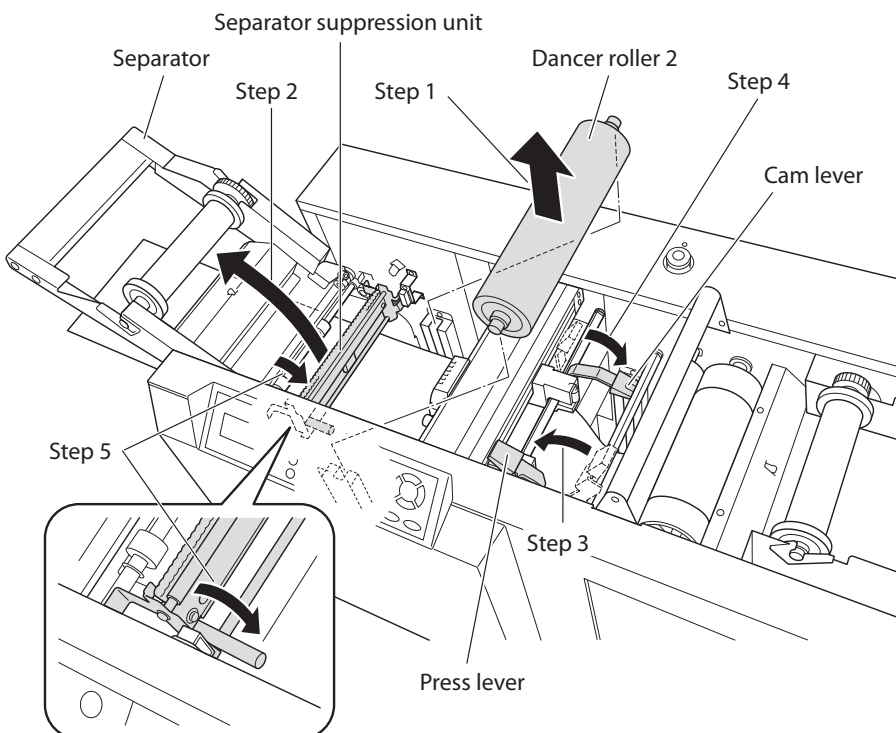
(5)   Cut label materials around the press roller.

⚠️ **CAUTION**   **When cutting label materials, be careful not to damage the press roller and feed roller.**
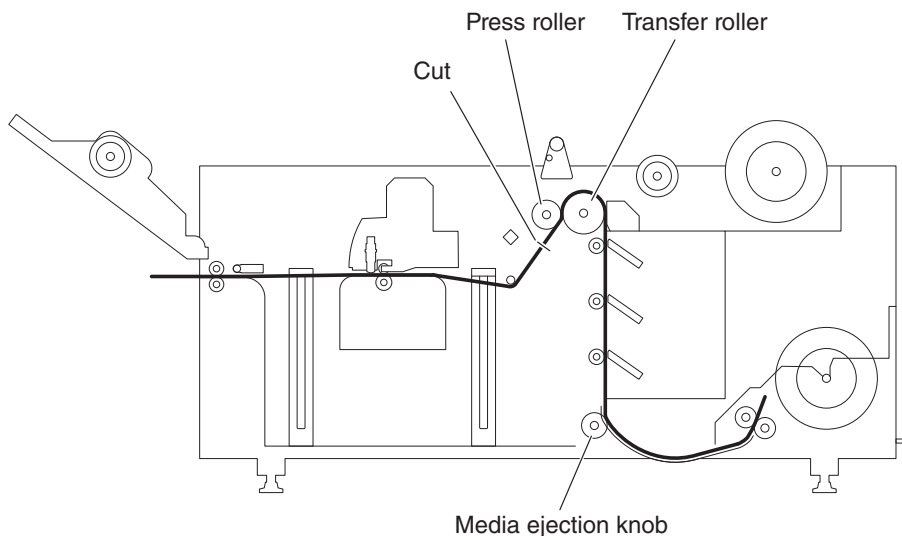
(6)   Pull out the cut label materials slowly.

⚠️ **CAUTION**   **Forcibly pulling out the label materials may result in damage.**

CHECKPOINT
- **When replacing label materials, do not pull them out from the media stocker side.**
- **Pull out when the ribbon lever has been removed.**
- **Pull out while twisting the media ejection knob.**
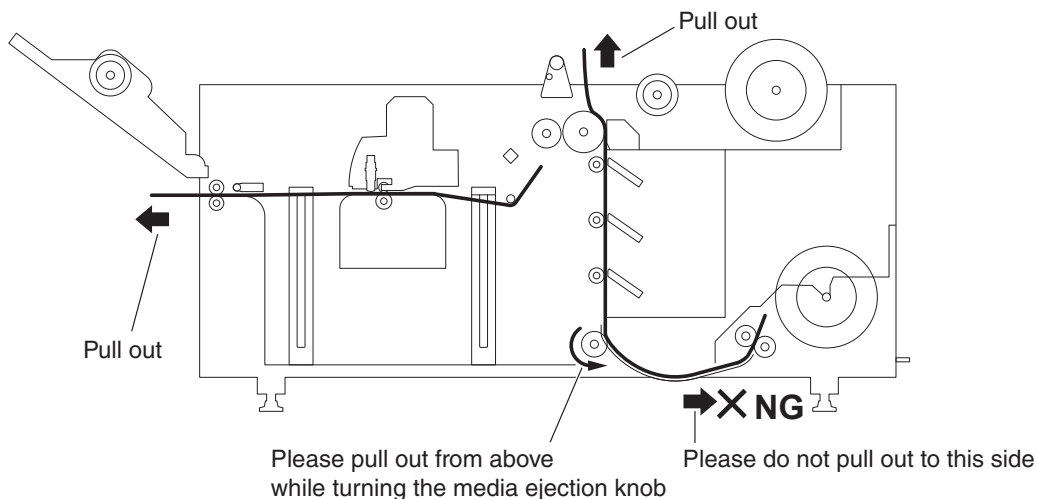
(7)   Remove the media stocker flange and remove the label material or form tube.

(8)   In order to adjust to fit the label material width, release the lock from the flange and shift the shaft.

Step 3

Step 1
Press the "PUSH" section.

Step 2

(9)   Determine the position of the flange to match the label material width.

CHECKPOINT   **The width of the settable label materials are 70, 80, 90, 100, 110, 120, 130 mm.**

Media material width (mm)

130 •• 110 •••••••• 70
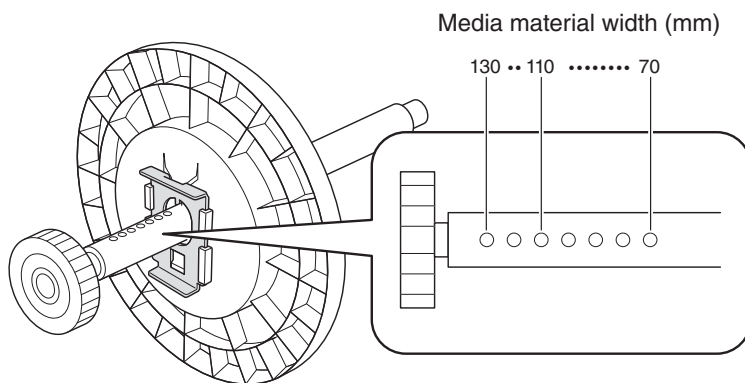
(10)   Lock in the shaft groove and set the flange.

Step 1

Step 2
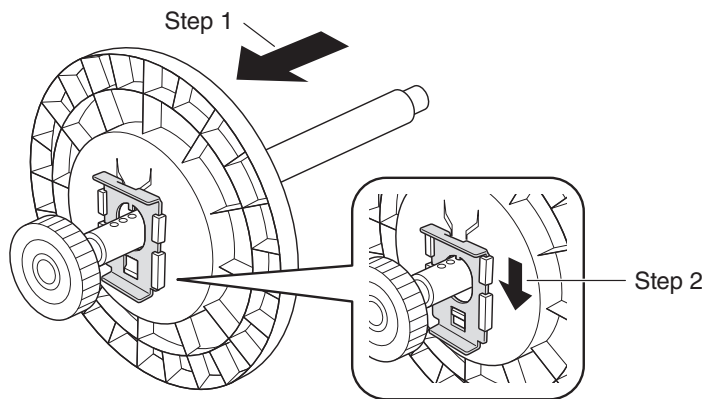
(11)   Set the label materials and install the flange.

Set it so that the label materials are the revolute.

Push so that there is no opening in between the form tube and flange.

CHECKPOINT

- **During set-up, be careful not to confuse the revolute with the involution.**
- **Make sure the set label materials do not slack.**
- **There is the possibility of inclining to one side if media glue attaches to the inside of the flange. Please clean regularly. (Refer to "6.12 Cleaning Media Stocker & Media Stocker Flange".)**

(12) Set the media stocker. Withdraw the label material tip up to the stocker tip and set it exactly straight along the scale of the media width.

However, be sure not to go over the tip of the label material.

CHECKPOINT
- **When setting the flange, do so with both hands.**
- **Set the label material exactly straight along the scale seal.**

| | | | | | | | | | ▲ | | | | | | | | |

- **Slightly draw out the label material, insert it below the roller, and withdraw twisting the knob.**
- **Do not bend or rip the tip of the label materials.**
- **Set so that the tip of the label materials are in the position shown in the below diagram. An error will occur if it isn't set correctly.**

Step 1

Gear

Step 2

Scale seal

Step 3
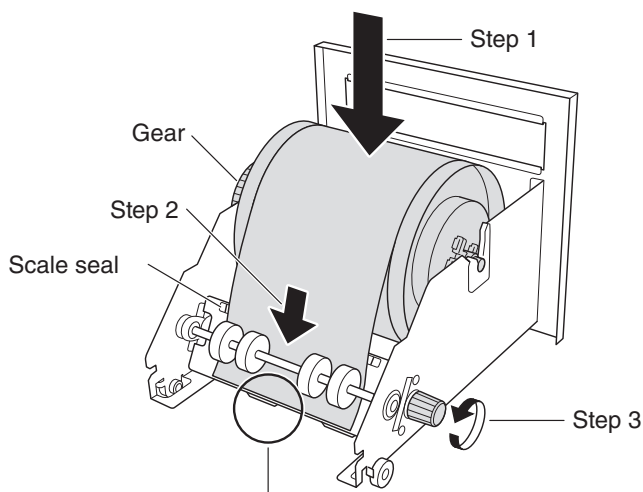
Set the label material tip to be at this position.

(13) Set the media stocker in the printer body.

CHECKPOINT
- **Close the media stocker while slightly lifting it.**
- **Be careful of dropping the media stocker as it is heavy.**

---
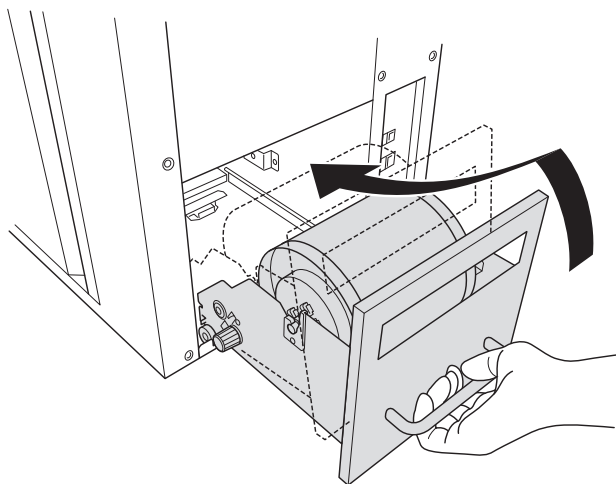
(14) Feed the label materials. Refer to "2.6 Loading Label Materials (media)".

CHECKPOINT
When setting the label materials (media) and feeding the source, always do so when media assistance is installed. Refer to "Setting Media Assistance" in "2.6 Loading Label Materials (media)" regarding setting media assistance.

5.3   Replacing the Ink Ribbon

This section explains how to replace the ink ribbon.

CHECKPOINT

- **When replacing ink ribbons or label materials, use a cleaning stick to clean the heads. If the heads are not cleaned, stripes or white spots might develop. Always turn off the power before cleaning the heads.**
- **When the laminate materials have been replaced with a different type, it is necessary to change the settings/adjustment. Refer to "5.5 Setting/Adjustment During Replacement" for details.**
- **When replacing ribbon it is recommended that all remaining data be output before replacing (refer to "4.5 OUTPUT ALL".)**
- **Do not make a mistake with the pull-out and wind-up directions. If the pull-out and wind-up directions are reversed, this may lead to ink sticking in the print head which disables printing.**
- **If there are wrinkles in the ink ribbon, this could lead to malfunctions including print omissions. If there are wrinkles in the ink ribbon , wind the ink ribbon flange on the taking-up side in order to remove the wrinkles, and roll up the ribbon.**
- **When exchanging the ink ribbon during usage such as when changing the color, place the ribbon in the bag it was packaged in without getting any dust on it, and store it in a box.**
- **Always set ribbon stocker 3 with black. If black is not used, this may lead the cut mark read sensor to malfunction, or the cutting function to stop working correctly.**
- **In initialization of printing after setting a Resin-type ink ribbon, it is possible that white stripes affected by approximately 2 m of dust and aberrant transcriptions may occur.**
- **Color (RESIN) + Black (RESIN) printing is not possible with overlap printing. Use with color (RESIN or Semi-RESIN) + Black (Semi-RESIN). Overlap printing is not possible with two Resin-type ink ribbons.**
- **Refer to "2.8 Setting the Ink Ribbon" for details on how to set the ink ribbon.**
- **Roll and set the transparent section of the ink ribbon as explained in this section.**
- **After setting the ink ribbon, a clicking noise may occur when printing begins. This is the sound of the ink ribbon shaft and ribbon cassette connecting, which is a normal occurrence.**
- **When printing, use the ribbon lever when it is set. For example, if the utilized ribbon cassette is not set, an error will occur during printing and other printer parts will fail.**
- **Since Semi-RESIN (Wax-type) has a low level of concealment compared to the Resin-type, the ground work may become transparent and appear like stains if fill printing is carried out. In addition, if a wide area is painted over such as with fill printing, ink ribbon stains may become visually apparent.**
- **Depending on the type of ink ribbon, switch the position of the head pressure adjustment plate. If the position does not match, this may negatively affect the printing quality.**
- **When the ink ribbon must be changed, the "Confirm Combination!" screen is displayed. Refer to "Confirm Combination! Screen in 2.3 Using the Control Panel" for details.**

```
Confirm Combination!   (F1)
H3=Semi-R H2=Semi-R    (F2)
H1=Semi-R FNSmat N50   (F3)
YES:ENTER      NO:ESC  (F4)
```

Switching Between RESIN and Semi-RESIN Ink Ribbons

There are two types of ink ribbons: RESIN and Semi-RESIN.

• RESIN (Resin-type)......................RP120-***

• Semi-RESIN (Wax-type) WD120-***

Refer to "Types and Characteristics of Ink Ribbons" in "2.8 Setting the Ink Ribbon" regarding ribbon types.

There are switchable head pressure adjustment plates depending on the type of utilized ink ribbon when setting the ribbon cassette.

There are switchable head pressure adjustment plates depending on the type of utilized ink ribbon when setting the ribbon cassette.

> ⚠ **CAUTION** **Should the position of the head pressure adjustment plate and the ink ribbon type be inconsistent, printing quality may be adversely affected.**
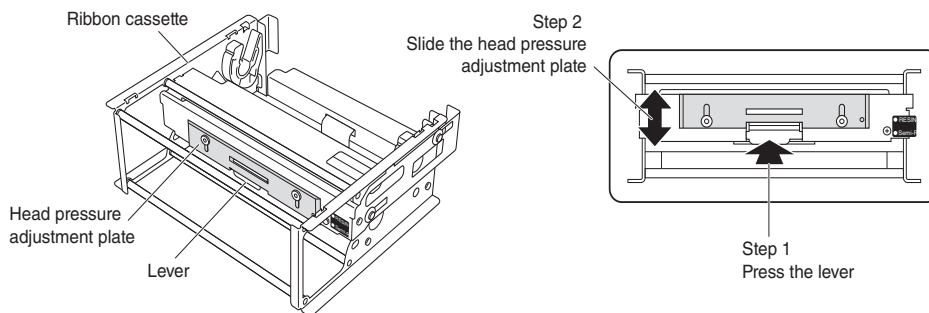
How to Switch the Head Pressure Adjustment Plate

• When using a RESIN ribbon, set the head pressure adjustment plate to the upper side.

• When using a Semi-RESIN ribbon, set the heat pressure plate to the lower side.

> **CHECKPOINT** **When switched to the proper position, the head pressure adjustment plate makes an audible click.**

—
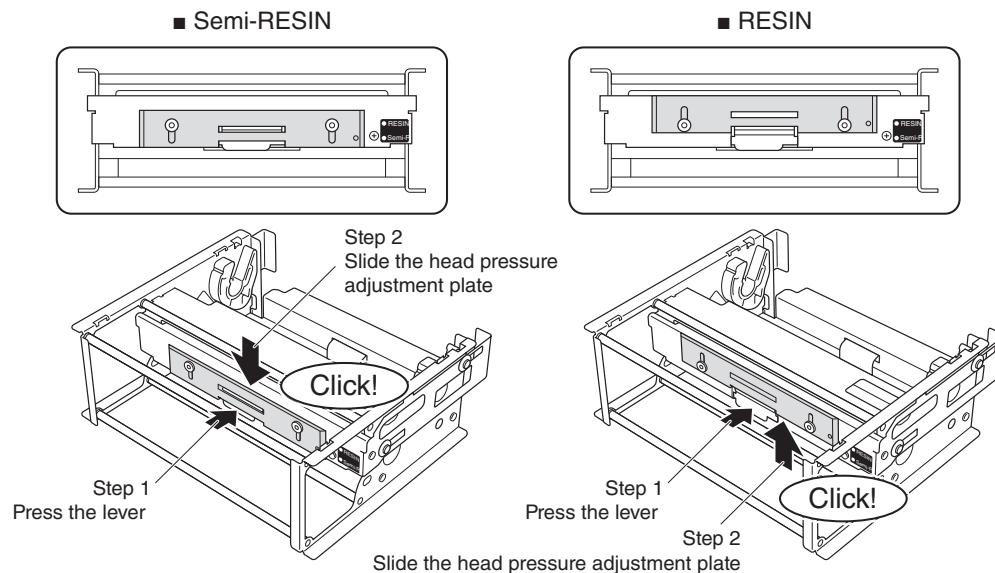
Replacing

⚠ CAUTION	• When treating the ink ribbon, be careful not to let dust attach to the ribbon front and posterior. The significant presence of dust can lead to a thermal head malfunction. • When setting the ink ribbon, take full care not to get your fingers caught.

(1)   Open the main body front cover.
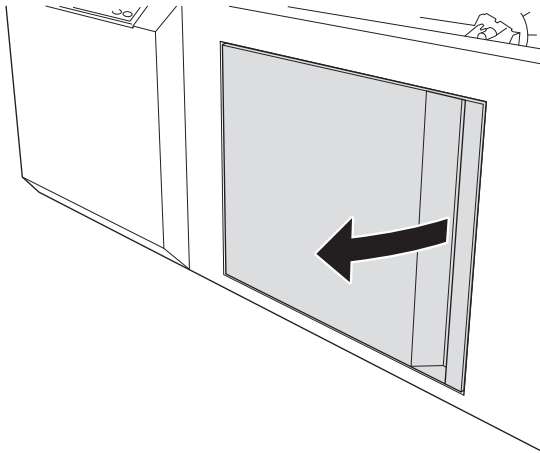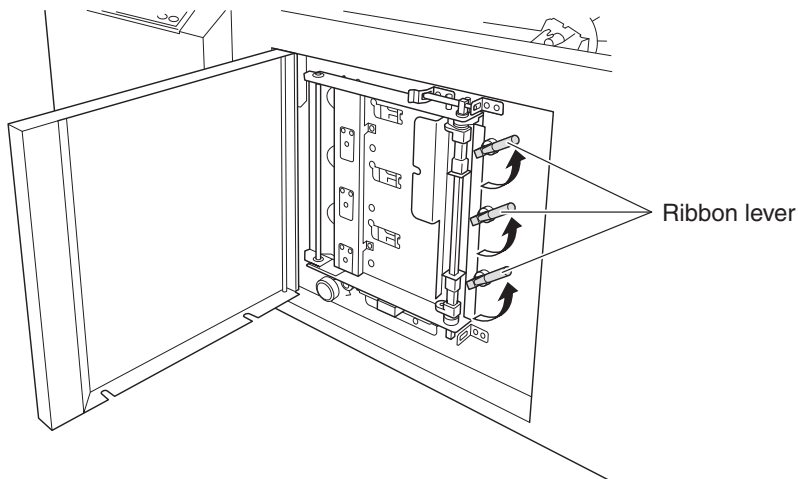
(2)   Release the ribbon stocker section ribbon lever.

Ribbon lever

(3)   Release the lock on top of the ribbon stocker section and open the ribbon stocker cover.

Lock lever

Step 1

Ribbon stocker cover

Step 2

(4)   Pull up the lever (below diagram) which secures the ribbon stocker and pull it out.

Step 1

Step 2
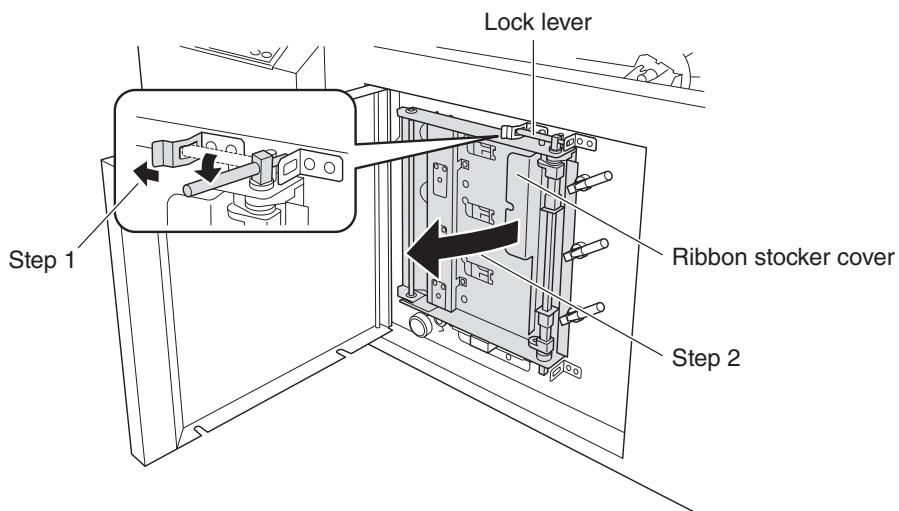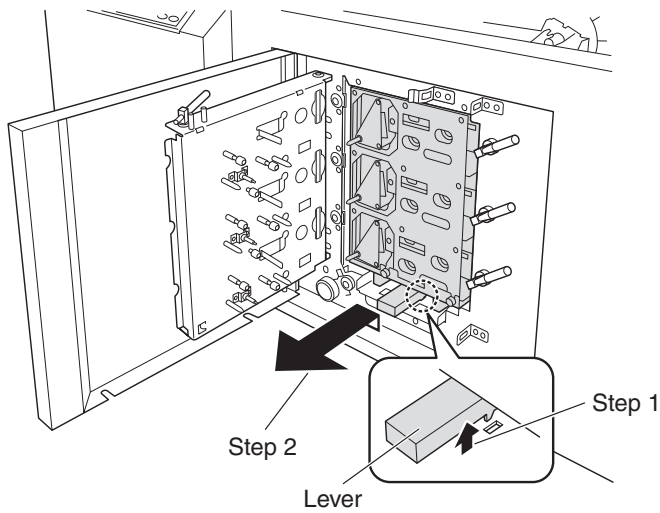
Lever

(5)   Slowly pinch and pull out the posterior central stocker lever, and then **slowly and quietly** pull out the ribbon cassette.

Step 2

Step 1
Pull the stoker lever
on the back slightly
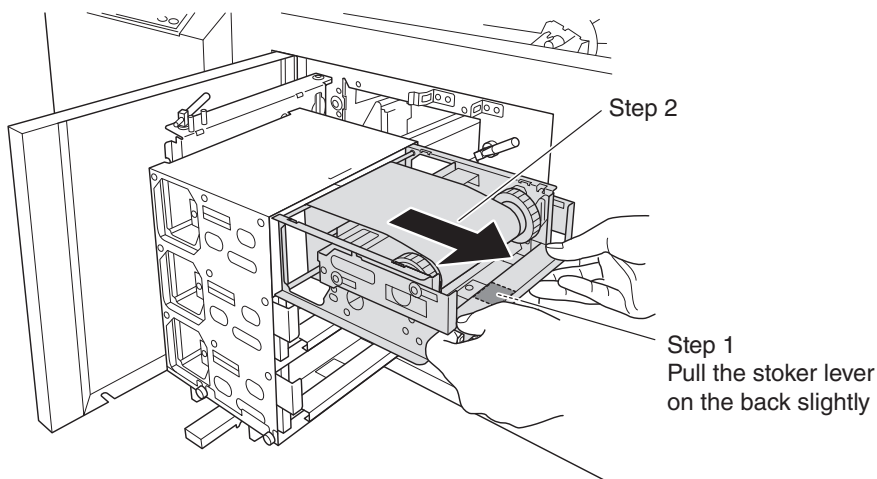
(6)   Remove the ink ribbon from the ribbon cassette.
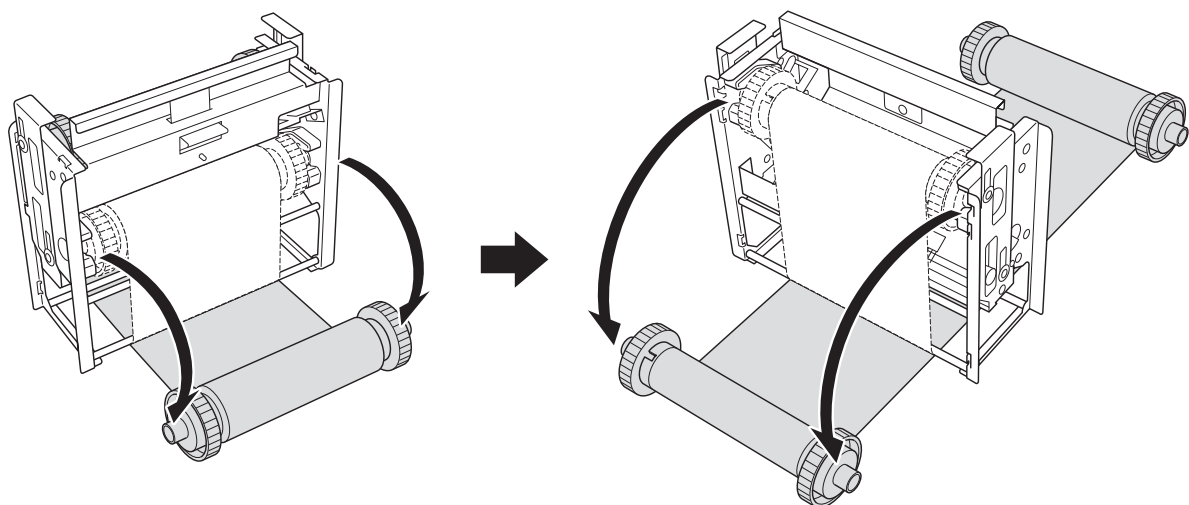
(7)   Remove the ink ribbon and ink ribbon flange.
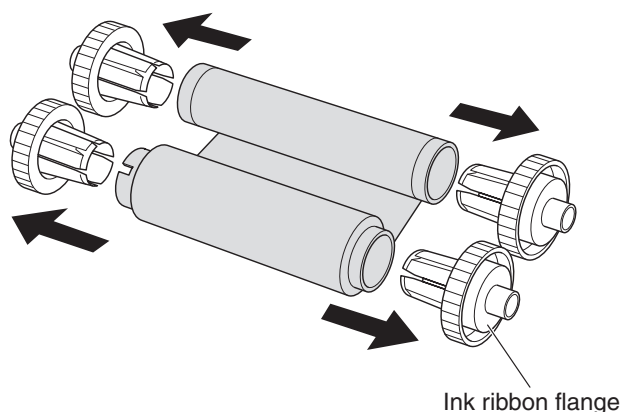
Ink ribbon flange

(8)   Set the ink ribbon flange in the ink ribbon.
      When peeling the tape, be careful not to peel the film section of the ribbon.

CHECKPOINT • **Push so that there is no opening in between the paper tube and ink ribbon flange.**
              • **The ink ribbon can be set on either side of the ink ribbon flange.**
              • **When exchanging the ink ribbon in between, set the cutout in the mark**
              • **Roll and set the transparent section of the ink ribbon preliminarily.**

Cutout section
A

Not yet printed side

Printed side

Printed side   Not yet printed side

(9)   Expand the ink ribbon.

Not yet printed side

Printed side
(The side, which rolls the transparent part
when the ribbon is new)
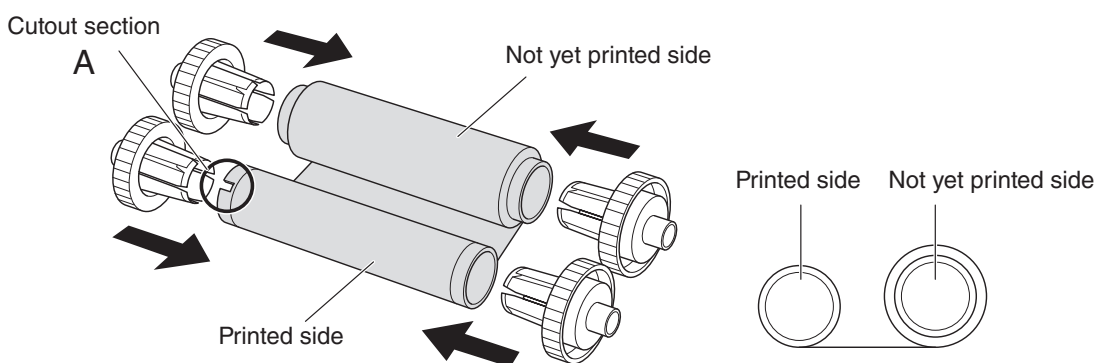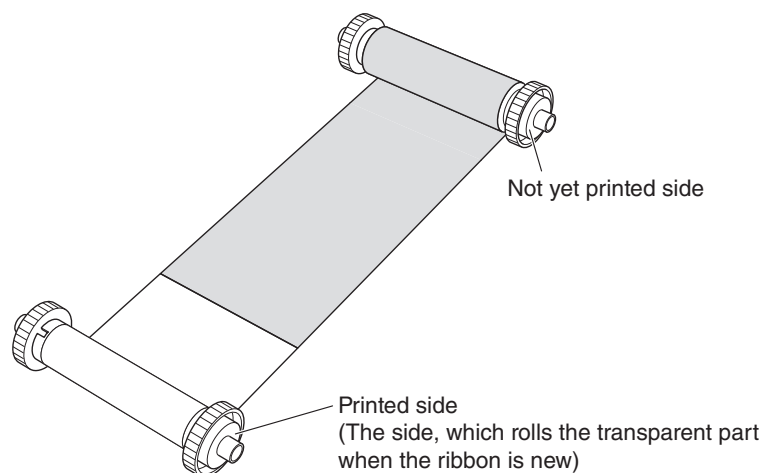
(10) Prior to setting the ink ribbon in the ribbon cassette side, switch to the head pressure adjustment plate for the
      ribbon cassette.
      Refer to the previous section, "Switching the RESIN and Semi-RESIN Ink Ribbons", switch to the utilized ink ribbon,
      and set it in the ribbon cassette.

(11) Set the ink ribbon in the ribbon cassette.

Set the ink ribbon and hold the flange section when setting it. Push until there is a clicking sound.

Set the cutout section of the ink ribbon paper core into the position shown in the below diagram.

> ⚠ **CAUTION**
> - **During set-up, be careful not to confuse the sending side with the wind-up side. (When set in the ribbon stocker, make the area coming toward the upper side the wind-up side.)**
> - **When exchanging the ink ribbon in between, set the cutout in the mark.**
> - **Take care not to let dust into the cassette bar or ribbon. The significant presence of dust can lead to a thermal head malfunction. If dust has settled on the cassette bar or ribbon, slightly wind the wind-up side.**

Set the cutout section (A) in this position.

Click!

Click!

Not yet printed side

Printed side

(12) Hold the flange section in the reverse side also and set it into the ribbon cassette. Push until there is a clicking sound.

> **CHECKPOINT**
> - **Make sure the ink ribbon is not slack. Roll up the ribbon if it is slack.**
> - **Make sure there are no wrinkles in the ink ribbon Missing text occurs when there are wrinkles.**

Click!

Click!

Set the cutout section (A) in this position.

Printed side
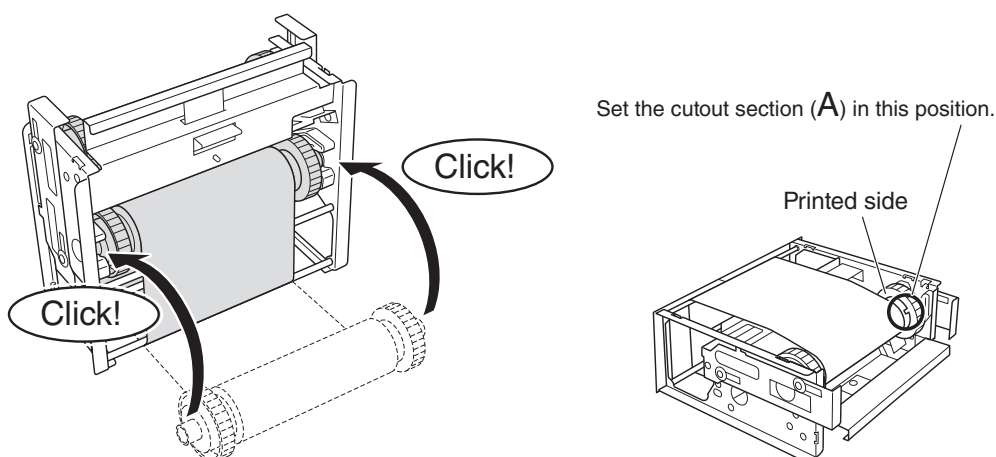
(13)   Set the ribbon cassette in the ribbon stocker.

CHECKPOINT • **Insert the ribbon cassette deep into the ribbon stocker.**

• **Carefully set the up/down direction.**

• **Make sure the ink ribbon is not slack. Roll up the ribbon if it is slack.**

• **Make sure there are no wrinkles in the ink ribbon Missing text occurs when there are wrinkles**

• **Always set a black ribbon for ribbon 3 (Head 3).**

• **Set non-black ribbons in ribbon 1 (Head 1) and ribbon 2 (Head 2)**

---

(14)   Push the lever and slowly and quietly return the ribbon stocker to the main body. Push until there is a clicking sound.

Push and fasten the lever so that it is secured in the slot, and close the ribbon stocker cover. Insert the ribbon stocker deep into the main body.

CHECKPOINT • **Insert the ribbon stoker deep into the main body.**

• **Make sure the lever's bulge is fastened in the slot.**

Step 3

Click!

Step 1

Lever

Step 2
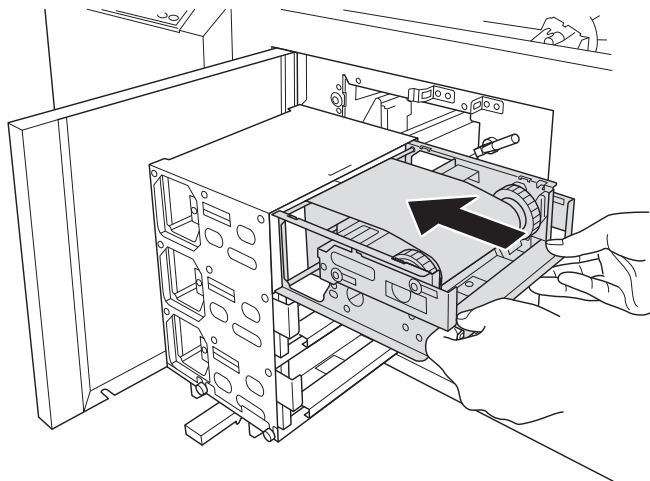
Fasten the lever's bulge in the slot.

(15)   Set the above lock and close the main body front cover.

CHECKPOINT 🖊️   **When feeding, make sure the ribbon lever is released (opened).**

Lock lever

Step 1

Step 2
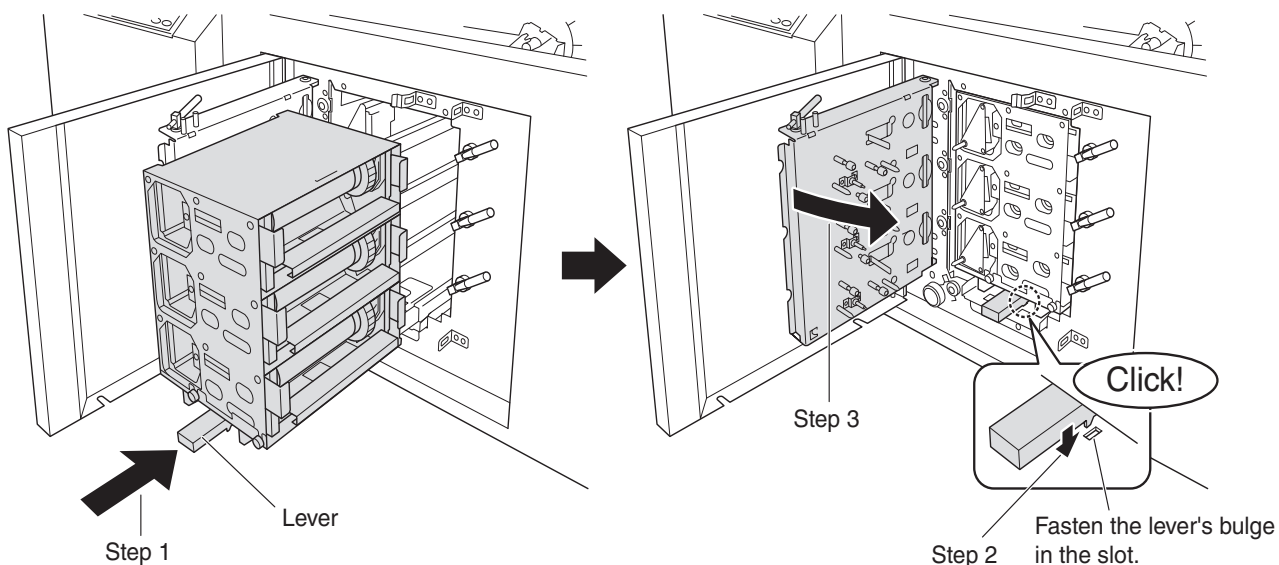
Setting the ink ribbon is now complete.
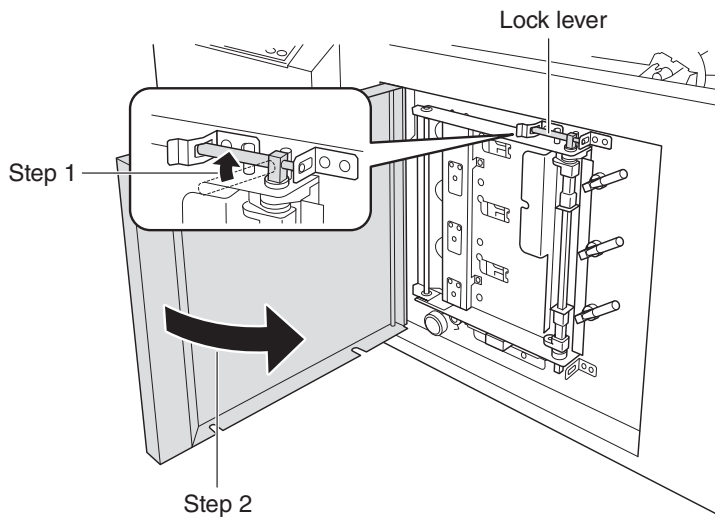
After finishing setting the ink ribbon, refer to "4.9 PRINTING DENSITY" and adjust the density to match the set ink ribbon.

CHECKPOINT 🖊️   • **When printing, use the ribbon lever when it is set.**

Set the ribbon lever when printing.
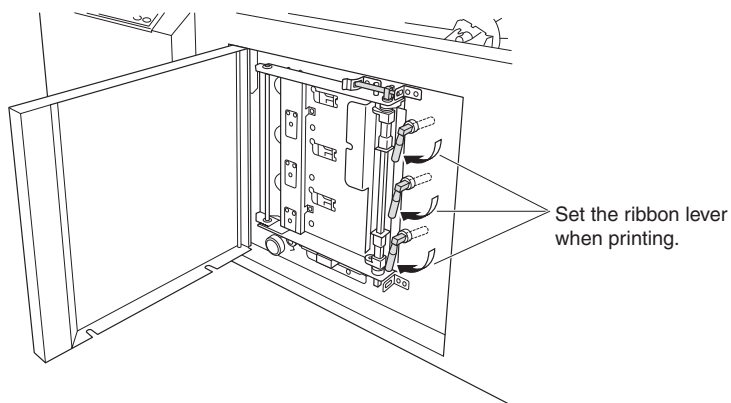
5.4   Replacing the Separator Winder Bobbin

This section explains how to replace the separator winder bobbin.

CHECKPOINT
- **Set the separator when the label materials have been set.**
- **Refer to "2.6 Loading Label Materials (media)" regarding setting label materials.**
- **Prior to using the separator function, refer to "2.9 Adjusting the Function Setting", and then turn the "separator" on.**
- **When using the separator, it is possible to use it smoothly if the separator winder bobbin is set in the separator prior to setting the label materials.**
- **When the set label materials are nearly new (many rolls remaining), the separator winder bobbin becomes full before using up all the label materials. The extent to which it becomes full depends on the cutting pattern and surrounding environment. When operated for a long period of time, set a new paper tube in the separator winder bobbin.**
- **The rewindable outer diameter varies according to the cutting pattern.**
- **Refer to "2.10 Using the Separator" regarding setting the separator.**
- **Always replace if "Winder Full!" is displayed. If left as is when the power is turned off. the media may jam and cause damage the next time the power is turned on.**

Replacing

(1)   Remove dancer roller 2 from the separator side and open the separator section. (Steps 1 & 2)
        Cut the residue section that is wound in the separator winder bobbin side. (Step 3)

CHECKPOINT   **Always remove the dancer roller before opening the separator.**

---

(2)   Remove the separator winder bobbin.
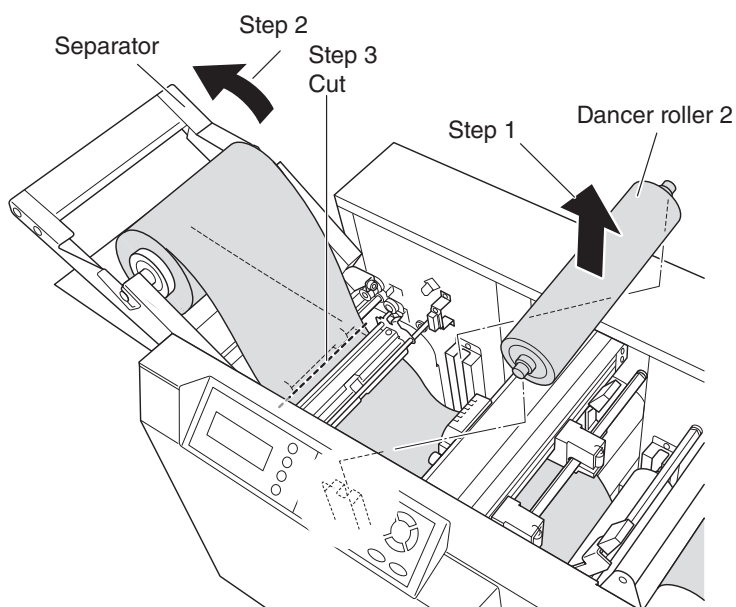
Separator winder bobbin
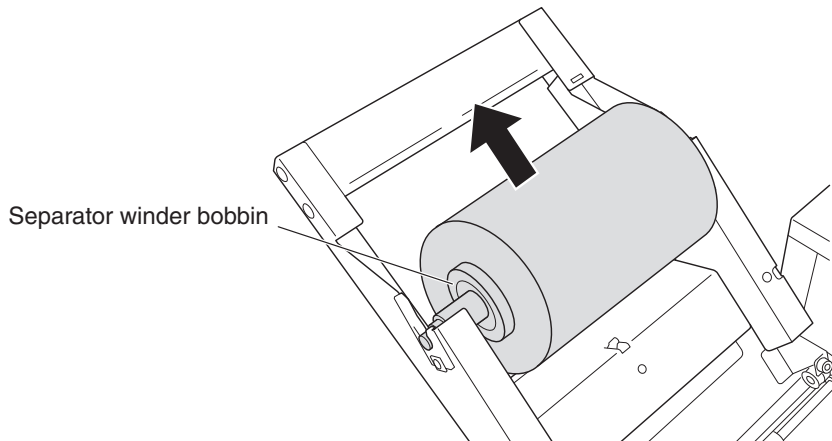
(3)   Loosen and remove the flange suppression, remove the separator winder bobbin flange, and then remove any
       wound up unneeded parts or form tubes. (The flange on the gear-side is fastened.)

CHECKPOINT   **Be careful that the separator flange collar desn't drop.**

Separator flange collar

(4)   Install the flange into the form tube of the separator winder bobbin. Fasten so that there is no opening in between
       the form tube and flange.

CHECKPOINT   • **Use either an auxiliary form tube or the form tube of a used ink ribbon.**
                      • **Fasten the separator flange collar all the way in when installing.**

Separator flange collar

(5)   Install the separator winder bobbin. Push until there is a clicking sound.

(6)   Open the separator suppression unit and pull out the label materials from the separator unit.

Cut the adhesive area of the label materials approximately 100 mm from the posterior end.

Peel the adhesive section of the label materials.

Pull out the adhesive section from deep in the separator suppression unit.

CHECKPOINT
- **Set-up becomes easy when the label materials are drawn out from the separator section, the adhesive sections are peeled, and the remaining backing sheet section is passed through the separator section once more.**
- **When setting label materials for use with the separator, set-up becomes easier when the separator section is also set at the same time.**

(7)   Pull out the backing sheet from the outlet. Feed the label materials by pressing the FEED key when the length is too short.
Apply the adhesive section of the peeled label materials to the separator winder bobbin section.

Step 2
Apply the adhesive section
of the label material.

Step 1
Pull out the
backing sheet.

(8)   Pull the backing sheet section from the outlet and close the separator suppression unit.

Separator suppression unit

Step 1
Pull out
the backing sheet.

Step 2

CHECKPOINT   • If the label material is overly sagging, slowly twist the separator winder bobbin and wind up the label material. Since there is a rotational direction in the separator winder bobbin, refer to the below illustration when winding.

• When twisting to roll up the separator winder bobbin, push while slowly twisting. If the separator winder bobbin might drop if it is twisted too quickly. Exercise caution.

(9)   Pull the backing sheet from the outlet side, and straighten it as the label materials are being pulled.

Close the separator and set dancer roller 2.

CHECKPOINT   **Set the dance roller exactly straight along the scale seal.**

Step 2   Step 3

Separator   Dance roller 2

Step 1
Pull out
the backing sheet.

Press the FEED key, and always make sure the label material loads and is rolled up in the separator winder bobbin.

When the below message is displayed, release the ribbon lever set-up.

```
W04:Loading check
Ribbon lever is set.
Can not feed.
YES:ENTER
```
F1 F2 F3 F4

5.5   Setting/Adjustment During Replacement

5-29

Replacing Label Materials and Laminate Materials

If the label and laminate materials are changed to a different type, the below setting changes and adjustment are necessary:

Items to be carried out always

• Cutter blade length adjustment ...."2.14. Adjusting the Blade Length"
• Test Cut.."2.15. Cutting Test"

Items to be carried out when necessary

• Printing and cutting position adjustment ......"4.15 HEAD POSITION ADJUSTMENT"
• Distance adjustment ...."4.14 DISTANCE ADJ. (Distance Adjustment)"
• Printing Test Pattern ...."4.12. PRINT TEST PATTERN"
• Tool condition selection ...."2.13 Selecting Tool Conditions"
• Print head cleaning ...."6.3. Cleaning the Thermal Head"
• Paper size change. ...."3.3 Printer Driver Operation" (Paper Size)

CHECKPOINT **Run a test print once when replacing the materials or ribbons. Make fully sure the positioning and printing characteristics match the materials or ribbons When changing to a different type of ink ribbon.**

When the ink ribbon has been replaced

When the ink ribbon has been replaced with a different type, the following setting changes are necessary:

• Switching the head pressure adjustment plate ..... "2.8 Setting the Ink Ribbon" (Switching the RESIN and Semi-RESIN ink ribbon)
• Setting printing density ...."4.9 PRINTING DENSITY"

CHECKPOINT **Run a test print once when replacing the materials or ribbons. Make fully sure the positioning and printing characteristics match the materials or ribbons**

Chapter 6 Maintenance

This chapter explains operations and information pertaining to maintenance.

6.1　Daily Maintenance and Storage

Daily Maintenance and Storage

Perform with caution the following for daily maintenance and storage:

(1)　Do not lubricate the plotter mechanisms.

(2)　To clean the plotter's metal parts, either wipe the soiled areas with a dry cloth or with a cloth that has been dampened with a neutral detergent diluted with water.

> ⚠ **CAUTION**　**Do not use volatile solvents such as thinner, benzene, or alcohol to clean the printer as they will cause damage to the main body surface.**

(3)　Wipe with a cloth applied with alcohol or a neutral detergent. Dust or residue that settles in the sensor section that detects media may lead to a malfunction.

(4)　After using the unit, cover the cloth over it in order to prevent the dust.

Storaging

Perform the following with caution for storaging when not in use.

(1)　Remove the tool from the tool holder for storage.

(2)　Remove the ink ribbon from the ribbon cassette and store the ribbon in order for the dust not to be attached to it.

(3)　Cover the main body with a fabric to protect from dust.

(4)　Store the printer in a location which is not subject to either direct sunlight or high humidity.

6.2   Removing/Mounting the Ribbon Stocker

Remove the ribbon stocker section when cleaning the thermal heads or ribbon roller.

Return the ribbon stocker section after cleaning.

(1)   Open the main body front cover.
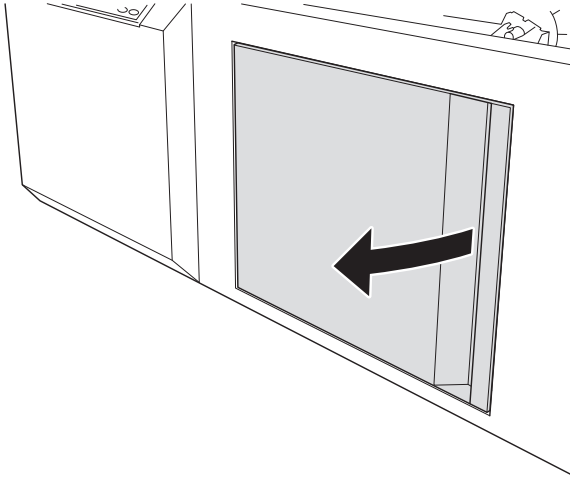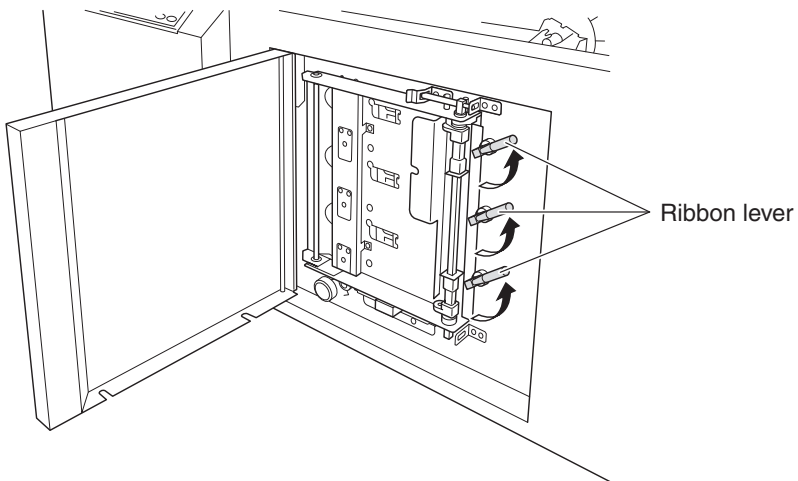
(2)   Release the ribbon stocker section ribbon lever.

Ribbon lever

(3)   Release the lock on top of the ribbon stocker section and open the ribbon stocker cover.

Lock lever

Step 1

Ribbon stocker cover

Step 2

(4) Pull up the lever (below diagram) which secures the ribbon stocker and pull it out.

Step 1

Step 2
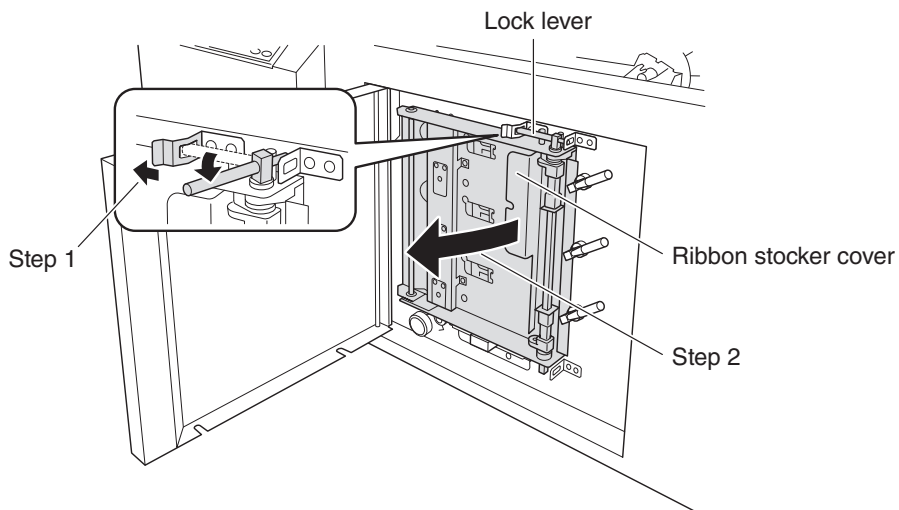
Lever
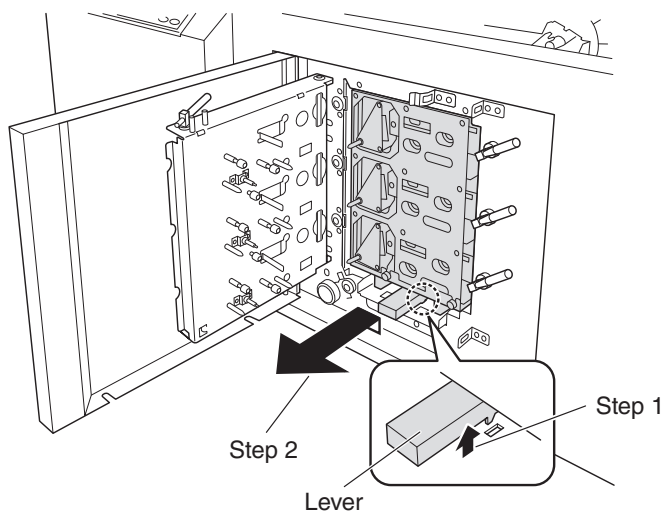
(5) Scoop up the ribbon stocker when removing it.

Ribbon stocker

Pin
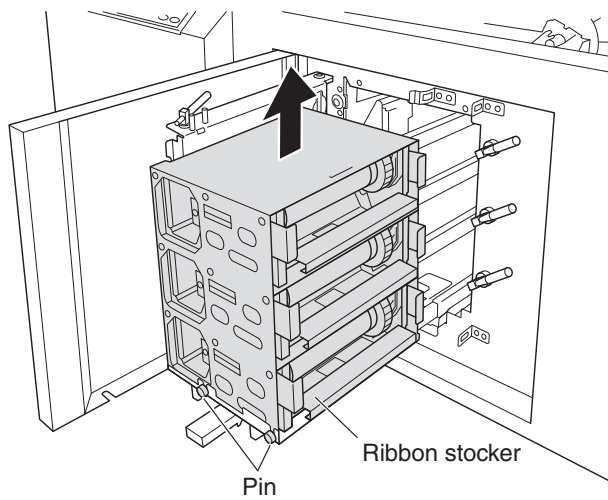
(6) Make sure the ribbon stocker has been removed when cleaning the thermal heads and ribbon roller. Refer to "6.3 Cleaning the Thermal Head" and "6.4 Cleaning the Ribbon Roller".

(7)   Return the ribbon stocker.
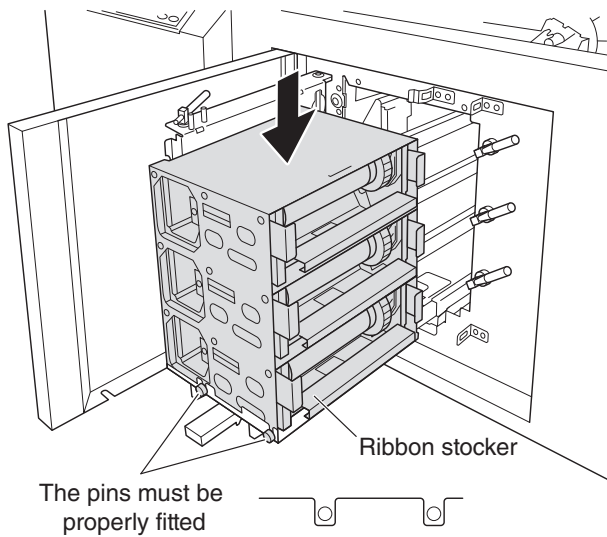
CHECKPOINT   **Please confirm that the screw pins are properly fitted.**

Ribbon stocker

The pins must be
properly fitted

(8)   Push the lever and slowly and quietly return the ribbon stocker to the main body. Push until there is a clicking sound.

Push and fasten the lever so that it is secured in the slot, and close the ribbon stocker cover. Insert the ribbon stocker deep into the main body.

CHECKPOINT   • **Insert the ribbon stoker deep into the main body.**
                  • **Make sure the lever's bulge is fastened in the slot.**

Step 3

Ribbon stoker cover

Click!

Lever

Step 1

Step 2

Fasten the lever's bulge
in the slot.

(9)   Set the above lock and close the main body front cover.

CHECKPOINT 🖋   **When feeding, make sure the ribbon lever is released (opened).**

Lock lever

Step 1

Step 2
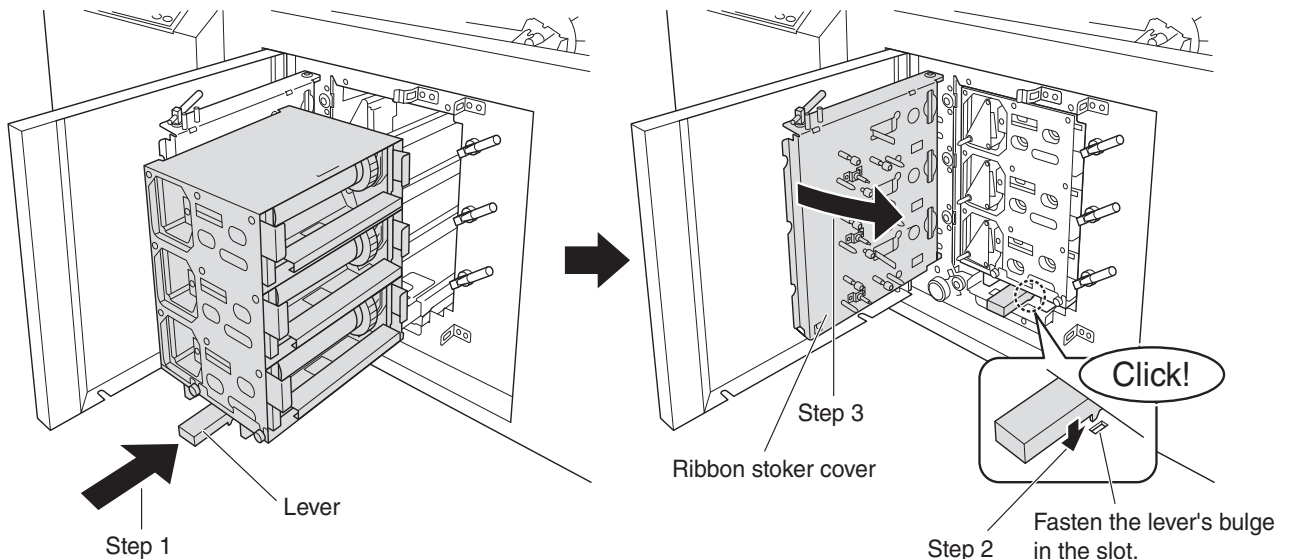
CHECKPOINT 🖋   • **When printing, use the ribbon lever when it is set.**
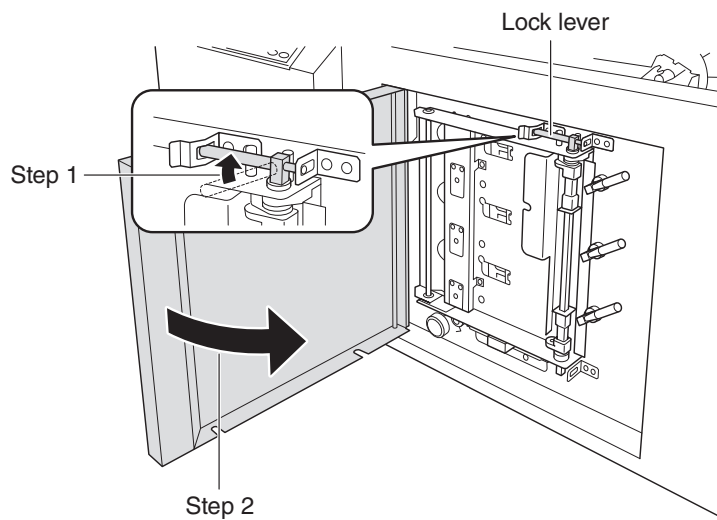
Set the ribbon lever
when printing.
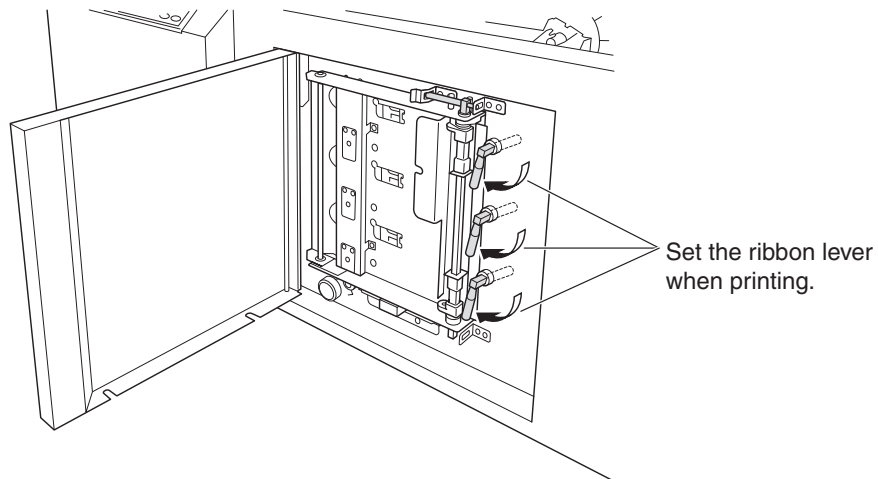
6.3   Cleaning the Thermal Head

When the thermal head becomes dirty or has refuse attached, it is not possible to make a clean print, and white lines will appear in the printing.

Clean the thermal head regularly, and take care so that the print quality does not deteriorate. There are 3 thermal heads, and are arranged as Head 3, Head 2 and Head 1 from the top as shown in the illustration.
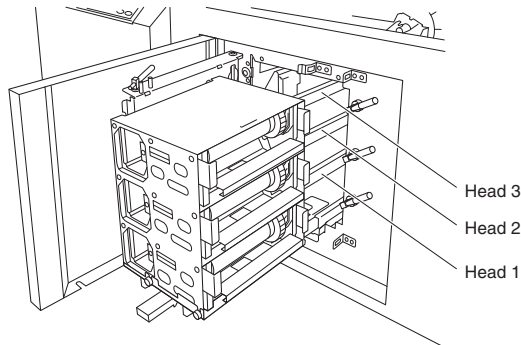
Clean without mechanical impact to the thermal head heating element.

⚠ **CAUTION**
- **Upon performing maintenance, in order to prevent the likes of electrostatic disruption and corrosion, please do not directly touch the thermal heads with your hands. Ensure not to do the same for the media surface that the thermal heads come into contact with.**
- **Upon cleaning the thermal heads, please use the attached cleaning stick. (Please absolutely refrain from the use of cotton swabs, etc., which may cause fibers to stick to the thermal heads and result in product failure.)**
- **Before use, be sure to read the Thermal Head Cleaner (THC-1) handling instructions.**

Cleaning

Referring to "6.2 Removing/Mounting the Ribbon Stocker", remove the ribbon stocker section and clean the thermal head.

As for the cleaning method, open the thermal head section, and gently wipe the heating element section at the tip of the head with the attached cleaning stick as shown.
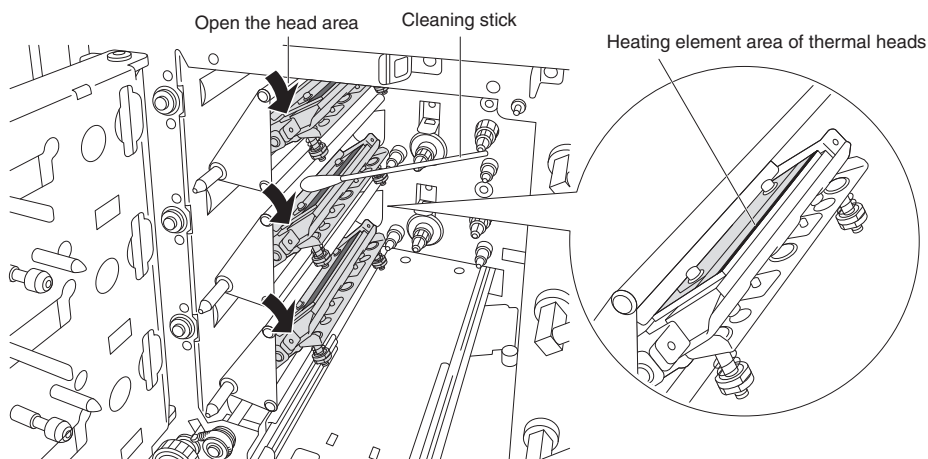
Since there is the possibility of damaging the head if you rub it forcefully or wipe it with a cloth that has not been specified, wipe it only with a cleaning stick.

When heavily soiled, put a small amount of Thermal Head Cleaner THC-1 on the tip of the cleaning stick and clean the thermal head. Then, wipe off the cleaning fluid with a dry cleaning stick. If the cleaning fluid remains on it, printing quality may be adversely affected.

Never use the THC-1 to clean other products.
So as to not damage it, never strike or scratch it with a sharp or hard object.
Upon performing maintenance, in order to prevent the likes of electrostatic disruption and corrosion, please do not directly touch the thermal heads with your hands. Ensure not to do the same for the media surface that the thermal heads come into contact with.

6.4 Cleaning the Ribbon Roller

When the ribbon roller becomes dirty or has refuse attached, it is not possible to make a clean print, and white lines will appear in the printing.

Clean the ribbon roller regularly, and take care so that the print quality does not deteriorate. There are 3 ribbon rollers, and they are placed inside the opened thermal head section.

Clean without severe mechanical impact to the thermal head heating element.

⚠ **CAUTION** • **Upon performing maintenance, in order to prevent the likes of electrostatic disruption and corrosion, please do not directly touch the thermal heads with your hands. Ensure not to do the same for the media surface that the thermal heads come into contact with.**
• **Please absolutely refrain from the use of the attached cleaner.**

Referring to "6.2 Removing/Mounting the Ribbon Stocker", remove the ribbon stocker section and clean the ribbon roller.

As for the cleaning method, open the thermal head section, and gently wipe the roller section at the tip of the head with the cleaning stick as shown.

Ribbon roller
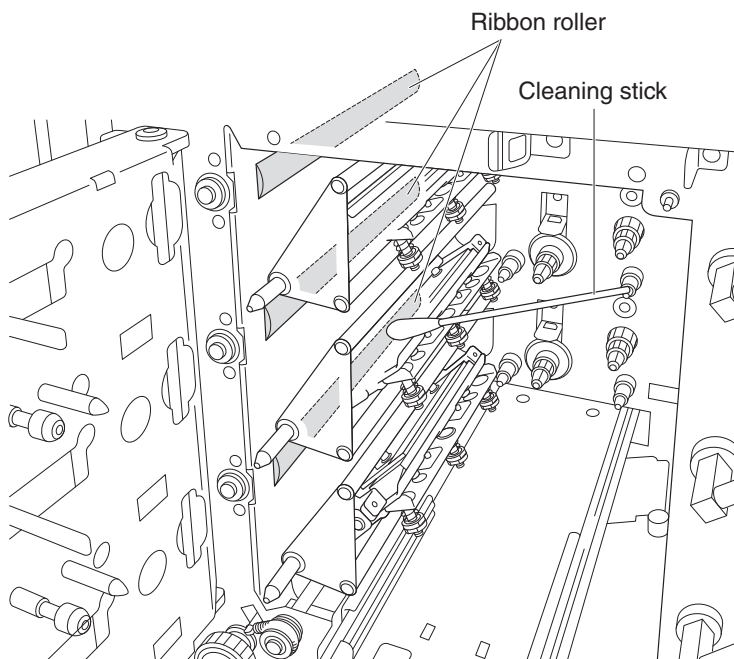
Cleaning stick

Since there is the possibility of damaging the ribbon roller if you rub it forcefully or wipe it with a cloth that has not been specified, wipe it only with a cleaning stick.

When particularly dirty, apply a little ethanol or IPA (Isopropyl Alcohol) and rub it gently.

6.5   Cleaning the Printer's Feed Roller/Press Roller

Use the printer's feed/press roller after wiping lightly with cleaning paper or non-tissue paper (dust-free) and removing refuse and dust.

If you use the printer with refuse stuck to the feed/press roller, the refuse will stick to the head, the head will become damaged, there will be gaps in the printing, and it will become lodged in the laminate.

Press lever

Press roller

Transfer roller
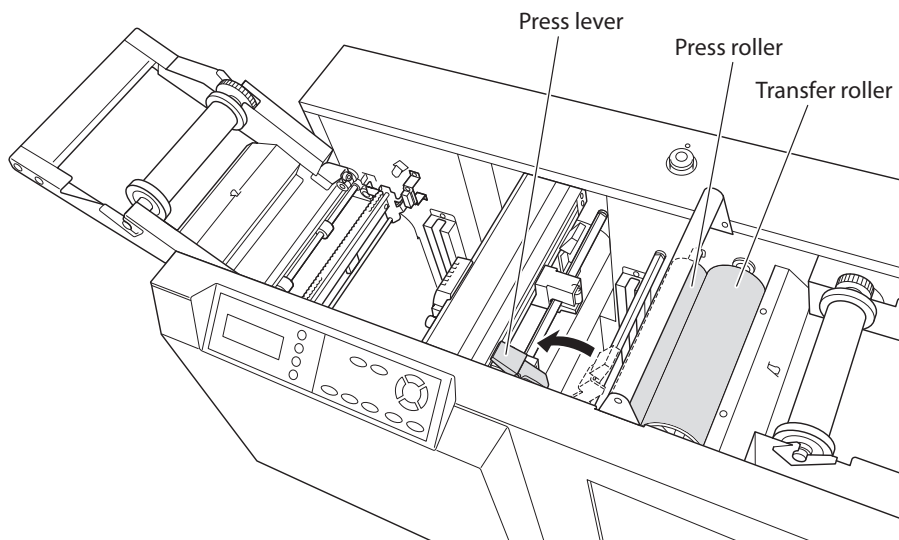
6.6   Replacing the Cutter Blades

When the cutter blade is worn, it is not possible to make a clean label border cut. In this case, the cutter blade can be replaced, but even if the media glue or the media refuse sticks to the cutter blade or is jammed between the cutter blade and the plunger, the border cut is degraded, and the quality of the roundness of the label corners is degraded through the degradation of the turning of the cutter blade.

Periodically remove glue and refuse with a brush etc.

⚠ **CAUTION**   **When handling the cutter blades, take full care not to cut your hands.**

CHECKPOINT ✎   **With regard to the cutter pen, refer to "2.1 Preparing the Cutter Pen".**

Cutter Pen Nomenclature

Ø0.9mm Cutter pen

Blade length adjustiment knob (Blue)
Plunger
Ø0.9mm Cutter blade
Spring
Plunger cap
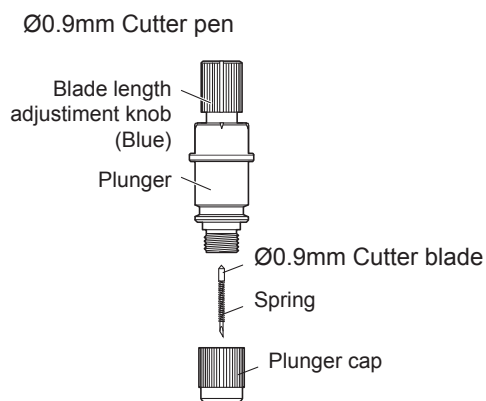
Replacing

(1)   Turn the blade length adjustment knob in the B direction to retract the cutter blade inside the plunger.

On the scale, the cutter blade protrudes about 0.1 mm

B   A
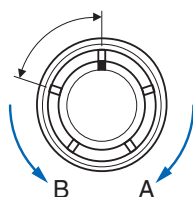
(2)   Remove the plunger by turning the plunger cap in the counterclockwise direction.

(3)   Remove the cutter blade from the plunger.

(4)   Insert the replacement cutter blade with its spring attached inside the hole in the plunger cap.

(5)   Attach the plunger to the plunger cap with the cutter blade inserted into it by lowering the plunger onto the plunger cap.

6.7   Cleaning of Cutter Pen

When paper dust, media cutting scraps and the like reamain stuck to the tip of the cutter blade, the rotation of the blade becomes poor, causing the quality of cutting to degrade.
Please regulary clean the cutter pen to keep it free of paper dust, media cutting scraps, etc.

⚠ CAUTION   **To avoid bodily injury, handle cutter blades with care.**

Cleaning

Please clean off any paper dust, regular dust, etc. stuck on the tip of the cutter pen. Return the cutter pen to its original state after you have finished cleaning.

Clean around the cutter blade insertion hole on the plunger cap by turning the cap and removing it.

Plunger-cap

Clean

Cutter blade
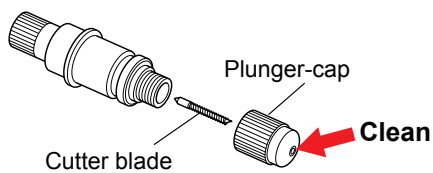
Attach the plunger cap.

6.8   *Cleaning Grit Roller*

When label material such as refuse gathers on the grit roller, there are cases where the label material shifts.

In that case, clean the grit roller.
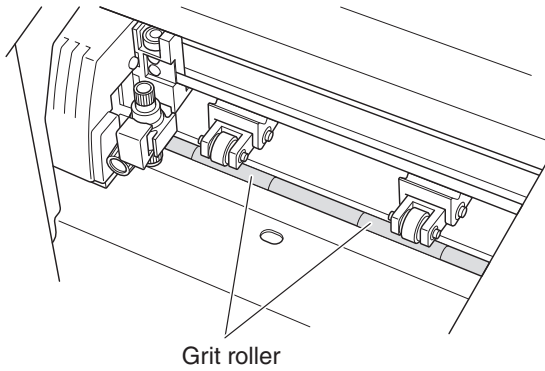
Grit roller

Cleaning

(1)   Confirm that the power is in the "off".

(2)   With your hand, lightly face the grit roller toward to the back so that it is visible.

(3)   Raise the push roller bar, and free the push roller.

(4)   Move the two push rollers, and clean the rough grid roller section below.

(5)   Once the cleaning is finished, return the push roller to its original position.

6.9   Cleaning Push Roller

When label material such as refuse gathers on the push roller, there are cases where the label material shifts.

In that case, clean the push roller.

6-13

CHECKPOINT • **Move the position of the push roller when the cam lever is opened (lowered).**

• **If the push roller is mounted on end of the label materials, the label material glue will adhere to the push roller and may affect the degree of accuracy.**

• **Clean the push roller regularly (per one label material roll).**
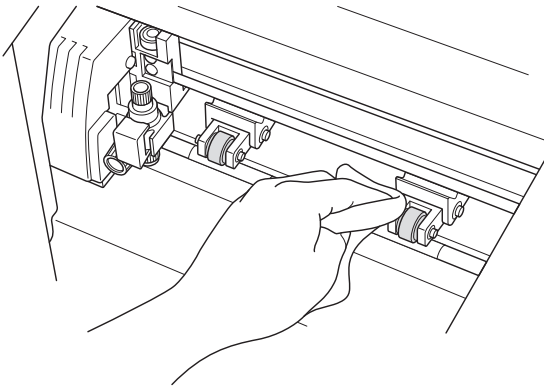
Cleaning

(1)   Confirm that the power is in the "off".

(2)   With your hand, lightly face the push roller toward to the back so that it is visible.

(3)   Raise the push roller bar, and free the push roller.

(4)   Clean the two push rollers with a cloth.

(5)   Once the cleaning is finished, return the push roller to its original position.

6.10 Cleaning Media Guide

When the label material (media) cannot be set (it does not come up to the feed roller), and the label material bows etc., the media guide section becomes dirty, or foreign matter may get jammed in it.

In that case, remove the media stocker and clean the media guide.

Cleaning

(1)   Confirm that the power is in the "off".

(2)   Remove the media stocker, and remove the label material.

(3)   Remove the media guide installation screws, and slowly pull the media guide forward.

Remove screws
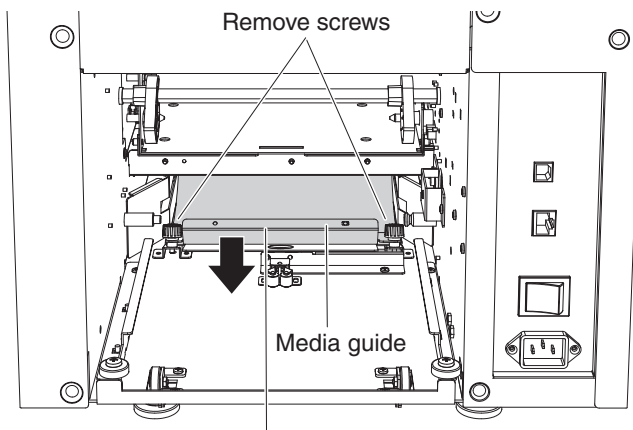
Media guide

Slowly pull forward after removing the screws

(4)   Clean the media guide with a cloth.

Remove dirt

Remove dirt
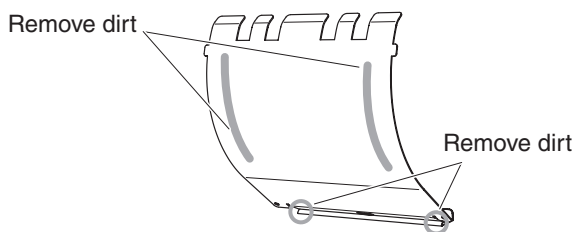
(5)   Once cleaning is finished, return the media guide while matching the guide, then tighten the screws.

Match the guide   Match the guide

Tighten the screws
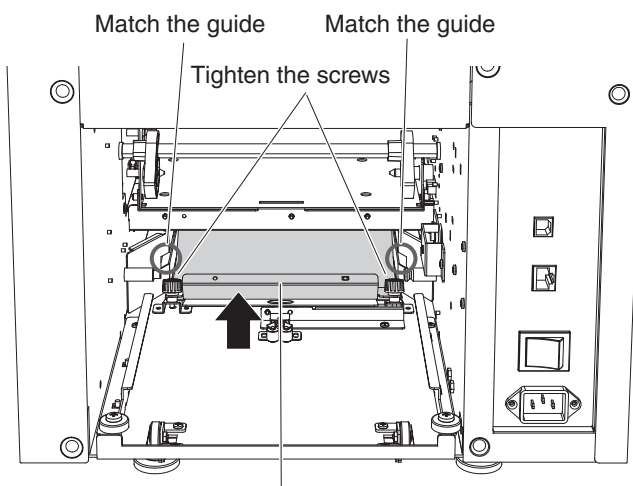
Slowly set while matching the guide

(6)   Set the media guide.

6.11   *Cleaning Separator Suppression Unit*

6-15

When media glue or refuse collects on the brush section of the separator suppression unit and separation (refuse collection) takes place, there is the possibility of it not becoming unstuck.

"Close cut mark read errors" will frequently occur.

In the case described above, clean the brush section of the separator suppression unit.

Cleaning

(1)   Remove dancer roller 2 from the separator side and open the separator section. (Steps 1 & 2)
Keep the separator suppression unit open. (Step 3)

CHECKPOINT   **Always remove the dancer roller before opening the separator.**
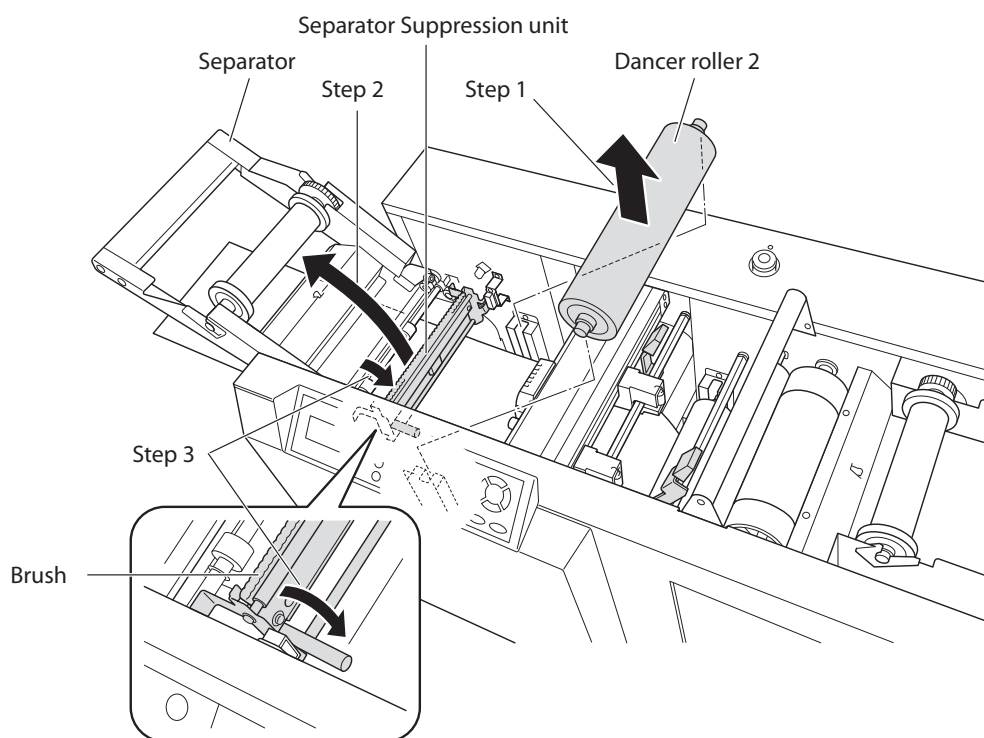
(2)   With the separator suppression unit open, remove the refuse or debris attached to the top of the brush section.

(3)   After cleaning, return it to its original state.

6.12   *Cleaning Media Stocker & Media Stocker Flange*

When the inside of the media stocker flange or the laminate stocker flange become dirty, there is the possibility of the media material or the laminate material becoming dirty. Also, since it can be the cause of bowing, periodically clean the inside of the flange

Cleaning

(1)   Remove the flange.
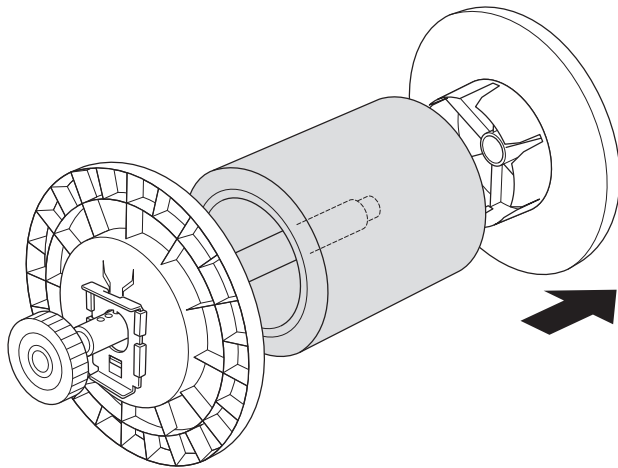
(2)   Lightly wipe the inside of the flange section (which contacts the material surface) with cleaning paper.

Clean the interior

Clean the interior
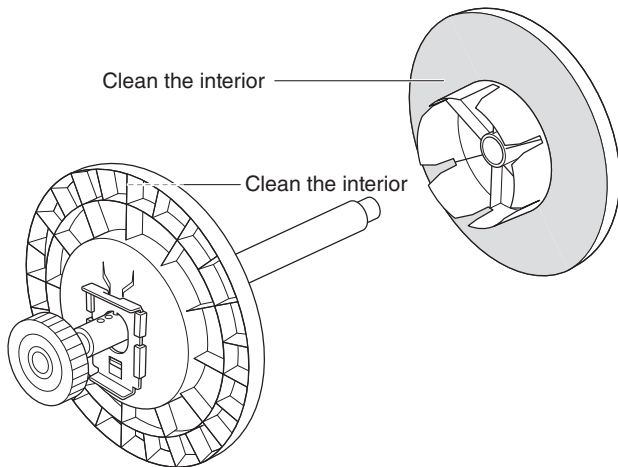
(3)   After cleaning, return it to its original position.

6.13   *Cleaning Ribbon Cassette*

When the A portion (see the illustration below) of the ribbon cassette becomes dirty and the ribbon lever is closed, it is difficult to move it.

In that case, clean the A portion (see the illustration below) of the ribbon cassette.

CHECKPOINT **Remove the ribbon cassette from the ribbon stocker to clean it.**

This portion (A)

Ribbon stocker
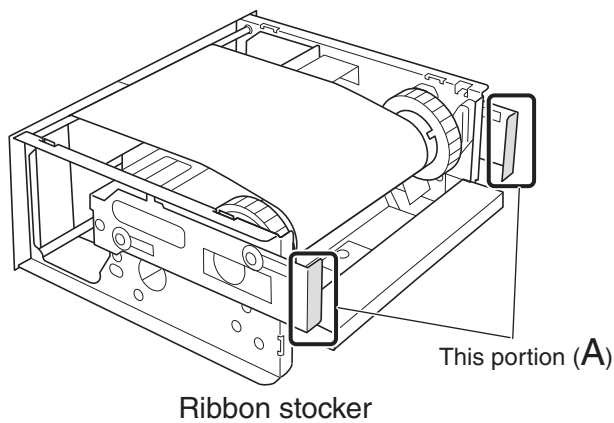
Cleaning

(1)   Confirm that the power is in the "off".

(2)   Remove the ribbon cassette. Refer to "2.8. Setting the Ink Ribbon".

(3)   Clean both sides of the A section with a cloth.

(4)   Once cleaning is finished, return it to its original position.

6.14   Storing When Not Used for a Long Time

Perform the following with caution for storing when not in use.

(1)   Remove the cutter section tool from the tool holder for storage.

(2)   Remove the ink ribbon from the ribbon cassette and store the ribbon in order for the dust not to be attached to it.

(3)   Cover the main body with a fabric to protect from dust.

(4)   Store the printer in a location which is not subject to either direct sunlight, temperature, or high humidity.

(5)   Remove the ribbon lever set.

(6)   Open the press bar.

(7)   Open the cam lever.

(8)   Remove the label materials.

Chapter 7 Troubleshooting

Refer to this chapter when you feel that the printer is operating strangely, or if you are not sure what to do.

Product Summary

7.1   Troubleshooting Related to Printing

Characters in the Filled Area are Shifted During 2-Color Printing

*When using software that can set the color mode, set to RGB color.

Symptom

When creating a seal as shown below, there are cases where a print shift occurs in the filled in perimeter.

Graphtec
LCX603

Shifted

Graphtec
LCX603
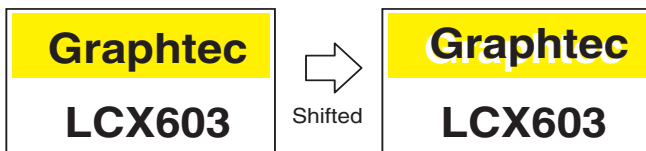
Cause

In the extracted section, a minute shift has occurred because the black characters overlap. Fine compensation placements such as trapping or overprint are generally performed in software applications such as Illustrator, but in the LCX603, this overprint can be performed with a driver setting.

Refer to the following for a concrete example.

Solution

(1)   In this example, the cut line uses red. A cut line is drawn with the thinnest line in the application (thickness 0, 1 dot line, etc.). Create closed figures.

CHECKPOINT ✍   **When thin lines with the same colors as those set for the cutlines are present on the data, depending on the application being used, said lines may be perceived as being cutlines and cut as a result. In such instances, either widen the width of the lines that were excessively cut, or change the data-based color of the lines set for the cutlines, followed by changing the color under " Select Cutline" in the driver to match the actual cutlines.**

Graphtec
LCX603

The thinnest red line
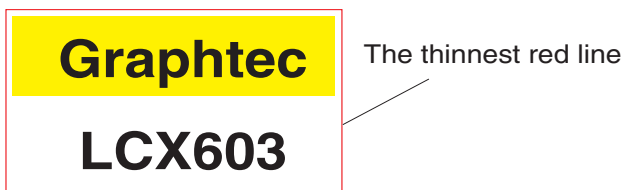
(2)   A label draft could be created on screen. However, when output as-is to the LCX603, it becomes as shown below.

| Head 3: Black | Head 2: Yellow | Cut Line: Red |

Head 3 print data   Head 2 print data

Graphtec
LCX603
Black

Graphtec
Yellow

Graphtec
LCX603
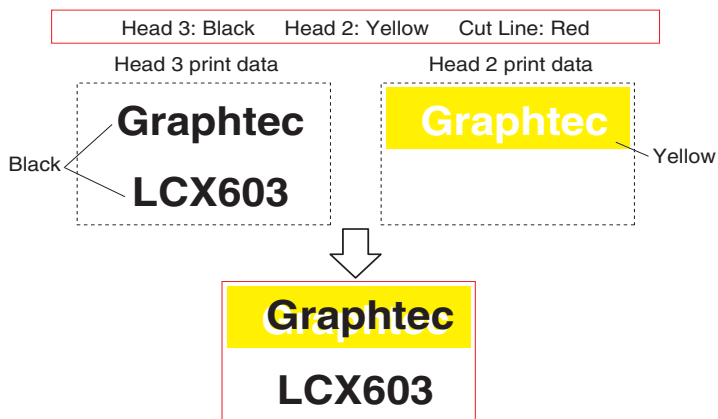
(3)   In order to avoid this, create it as follows in the application.
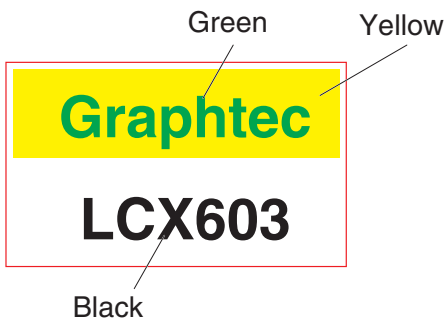
(4)   It is set as follows in the driver print color setting.

    • Head 3: Black, Green, Head 2: Yellow, Green, Cut Line: Red
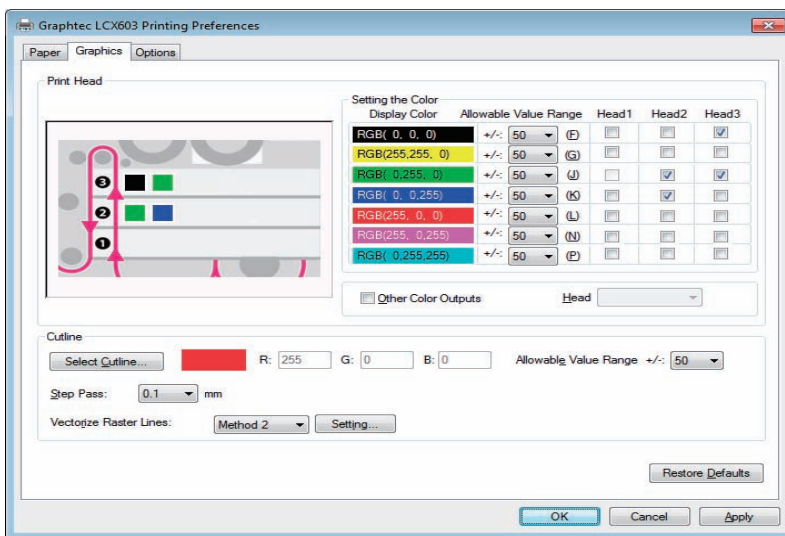
(5)   By setting it this way, the printed data becomes as follows.
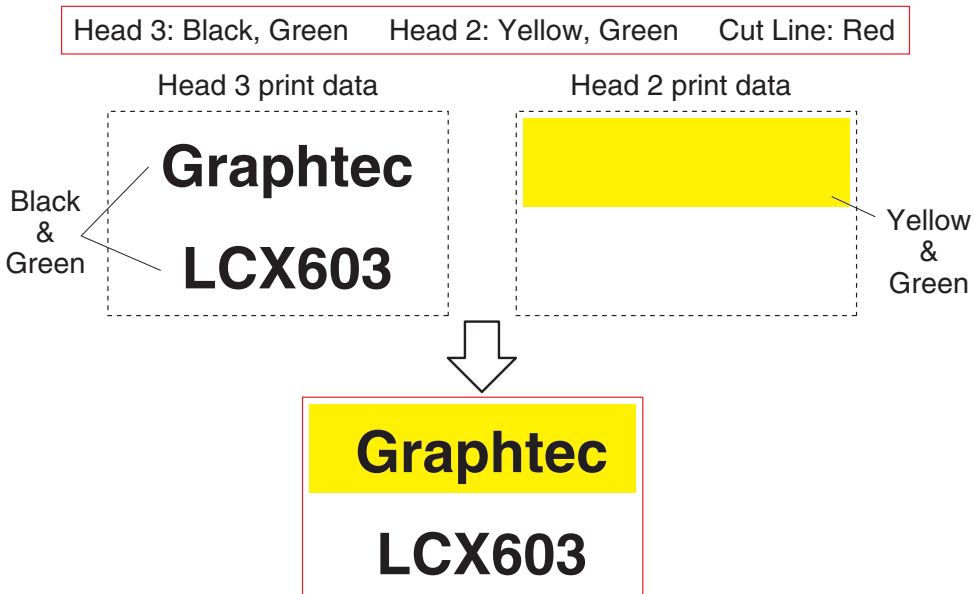
When layering colors to perform two color printing, perform this kind of operation.

When Print Results are Poor

Symptom	Cause	Solution
Density Settings in the Resin-type ink ribbon, even if the value is raised, print results are cracked.	The head pressure adjustment plate is not properly set.	When using the Resin-type ink ribbon, set by matching on top of the head pressure adjustment plate (the ○ to the "•RESIN").
With Semi-RESIN ink ribbons, wrinkles and print inconsistencies occur.	The head pressure adjustment plate is not properly set.	When using Semi-RESIN ink ribbons, set by matching below the head pressure late (the ○ to the "•Semi-RESIN").
Printing cracks.	Density Settings do not match.	Change the settings to the media used and the recommended media density.
The beginning is cracked.	Density Settings do not match.	Change the settings to the media used and the recommended media density.
There are white lines in the media feed direction.	Refuse is stuck to the thermal head.	Clean the thermal head with the cleaning stick.
	The thermal head dots are out of order.	The thermal head must be replaced. Please contact the distributor where you purchased the unit or your nearest Graphtec vender.
The ink ribbon is broken.	Settings do not match. Density Settings do not match.	Change the settings to the media used and the recommended media density.
Printing stretches out in the direction of the media feed.	Settings do not match. Density Settings do not match.	Change the settings to the media used and the recommended media density.
The ink ribbon sticks to the media.	Settings do not match. Density Settings do not match.	Change the settings to the media used and the recommended media density.
The ink ribbon jams.	Settings do not match. Density Settings do not match.	Change the settings to the media used and the recommended media density.
Head allocation is not performed as set in the driver.	The application software color modes CMYK color.	Set the color mode to RGB color.

7.2   Troubleshooting Related to Cutting

The printer does not work when the power is on

Symptom	Cause	Solution
The control panel's READY lamp does not light. Nothing appears on the LCD panel.	The printer is not being supplied with power. The printer is defective.	Verify that the power cable is properly plugged into the printer. Verify that the power switch is ON.
The control panel's DATA lamp does not light or flash.	Data is not being properly transmitted.	Verify that the interface cable is properly plugged into the printer.
	Data remains in the PC's printer driver.	After deleting the data that remains in the printer driver properties, resend the data.
The control panel's READY lamp lights up, but the printer does not operate. "E90: Cutter Unit Communication error" is displayed on the LCD panel.	The printer is defective.	Please contact the distributor where you purchased the unit or your nearest Graphtec vender.

When an Error Message is Displayed

Symptom	Cause	Solution
On the LCD panel "E04: Position Error" is displayed.	The load is large, and the current to the monitor exceeds specifications.	Remove whatever is interfering with the operation, and reconnect the power.
	There is something wrong with the cut materials condition setting.	Reduce the cut speed. Reduce the cut pressure.
	Something is contacting the tool carriage.	Remove whatever is interfering with the operation, and reconnect the power.
	An external force is added to the tool carriage during the cut.	Remove whatever is interfering with the operation, and reconnect the power.
	The material scraps have entered the moving parts and degraded performance.	Remove whatever is interfering with the operation, and reconnect the power.
	When this occurs frequently, please contact the distributor where you purchased the unit or your nearest Graphtec vender.	

When Operation is Strange

Symptom	Cause	Solution
The DATA lamp does not blink even when data is transmitted.	Data is not being properly transmitted.	Verify that the interface cable is properly plugged in.
Media is bowed.	The media is set at a slant.	Correct the setting of the media.
The media has been set, but even when the set lever is raise, "Please set the media" is displayed.	There is a possibility that something wrong has occurred in the operation of the set lever sensor.	Please contact the distributor where you purchased the unit or your nearest Graphtec vender.
"RMS Sensor Error" comes up.	Registration marks are not printed in black.	Make ribbon 3 black.
	Registration marks are cracked.	Verify the Density Settings.
"Print Data Error" is displayed.	Data that cannot be verified has been received.	Verify the data.
The separator does not operate.	The separator setting is OFF.	Please turn ON the separator setting in the function settings.
The laminator does not operate.	The laminator setting is OFF.	Please turn ON the laminator setting in the function settings.
Cross cut cannot be done.	The cross cut setting is OFF.	Please turn ON the cross cut setting in the function settings.
	The separator is not separating.	When the separator does not separate, cross cut does not perform well. Perform the separator operation.
Do not perform the cutting operation.	Cutting data is contained within the data.	Verify the data.
	The cut line width is too thick.	Make the cut line the thinnest line.
	The cut line color selection is different.	Verify the driver software setting.
Paper setting cannot be done well, and a "Printer Jamming" is displayed.	A jam has occurred because the end of the media has not been lined up.	Cut the end of the media neatly.
	Set the ribbon cassette.	The ribbon cassette has not been set, and the delivery of media does not go well.
A "Printer Jamming" comes up.	The dancer roller has not been set.	Set the dancer roller.
	Dancer roller failure.	Please contact the distributor where you purchased the unit or your nearest Graphtec vender.

When Cut Results Are Poor

Symptom	Cause	Solution
The cut corners are rounded or too pointed.	The OFFSET is incompatible with the cutter blade being used.	Adjust the OFFSET value of TOOL CONDITIONS. Match the setting to the blade being used. → If it is too low, the corners become rounded. → If it is too high, the corners are too pointed.
	There is abrasion of the blade.	Replace the cut blade.
The cut line starts out crooked.	The cutter blade does not rotate smoothly.	Remove any foreign matter inside the holder.
	The Offset Cut Pressure is too low.	Raise the Offset Cut Pressure setting. (The Offset Cut Pressure is separate from the cutting FORCE)
	The spring of CB09UA cutter blade has fallen out.	Replace the cutter blade with a new one fitted with a spring.
The blade skips and does not completely cut lines that should be solid. Solid lines are not cut at a constant depth. (Slight skipping of the blade)	The cutter blade is extended too far.	Adjust the blade length.
	The cutting SPEED is too high.	Lower the SPEED setting.
Coarse resolution of curved lines.	The output data resolution is too low.	Increase the output data resolution.
The cutting medium curls up at the corners. The cutting medium peels away from the backing sheet when cutting small characters.	The cutter blade is extended too far.	Adjust the blade length.
	The OFFSET is incompatible with the cutter blade being used.	Adjust the OFFSET value.
	The cutting SPEED is too high.	Lower the SPEED setting of TOOL CONDITIONS.
	The blade is dull.	Replace the cutter blade.
The cutter blade is cutting into the backing sheet.	The cutter blade is extended too far.	Adjust the blade length.
	The cutting FORCE is too high.	Lower the FORCE setting.
The cutter blade falls out of the cutter plunger.	The cutter blade is the incorrect diameter for the plunger.	Use a cutter blade that matches the plunger's diameter.
	The spring of CB09UA cutter blade has fallen out.	Replace the cutter blade with a new one fitted with a spring.
The medium can be cut but is hard to weed afterward.	The medium gets entangled during cutting.	Reduce the blade length.
		Lower the cutting FORCE.
Abnormal noise generated by the cutter pen during cutting. The medium is discolored where the cutter blade has passed.	The medium is stuck in the tip of the plunger.	Adjust the blade length and the cutting FORCE setting.
The currently selected cutting conditions cannot be stored or changed.	The [ENTER] key was not pressed after a setting was changed.	Make sure you are setting the conditions correctly.
Media is bowed.	The media is set at a slant.	Correct the setting of the media.
	The media guide is dirty.	Clean the media guide.
The specified length is not plotted or cut. (slight distance error)	The distance adjustment value is not appropriate.	Specify the appropriate distance adjustment value.
The starting and end points do not match.	The data is not connected.	Verify the data in the application.
	Media mount is too soft.	Change to media with a hard mount.
	Cutter blade rotation is not smooth.	Verify that refuse, etc. is not stuck on the blade.
	The life of the cutter plunger.	Replace the cutter plunger.

7.3   Error Messages

*When the following error messages occur, turn off the power, and turn the power on after the error has been solved.

LCD Display	Cause	Solution
E01:Printer jamming. Check the media stocker and the press roller.	Ribbon Wind-up Jammed paper	Reset the media (or the ribbon).
E02:Printer jamming. Check the dancer roller 1 and then turn off the power.	Paper transfer abnormality Dancer roller setting is lost Jammed paper	Reset the media Verify dancer roller 1.
E03:Printer jamming. Check the dancer roller 2 and then turn off the power.	Paper transfer abnormality Dancer roller setting is lost Jammed paper	Reset the media. Verify dancer roller 2.
E04:Position error The slider movement was blocked. Turn off the power. *	Abnormal shuttle stop Cutter bade stops in progress Jammed paper	Reset the media, turn on the power once again. Verify the motor operating state.
E05:RMS sensor error Check the printing condition for the starting mark. *	Start marks are not read.	Start marks are not read. Verify the start mark printing state. Verify the ink ribbon and the media.
E06:RMS sensor error Check the printing condition for RMS. Turn off the power. *	Registrations are not read.	Registration marks are not read. Verify the registration mark printing state. Verify the ink ribbon and the media.
E07:Cross cutter jamming. Check the cross cutter. Turn off the power. *	Abnormal cross cut operation. (Media cannot be cut.) Seal case paper jam	Clean the cross cutter. Verify the operating state of cross cut sensors F and R. Reset the media.
	Tried to cut only the media and backing sheet (or apply lamination)	Cut the backing sheet only.
E08:Cross cut mark Can not read the cross cut mark. *	Cross cut marks are not read. Print problem, bowing, conveyance slip.	Reset the media. Verify the operating state of cross cut mark sensors.
E09:Print data error The unknown data was received. Check the data.	Data stops in progress Unrecognizable data is received	Verify the DATA.
E10:Head temperature Low temperature or error measure. Turn off the power.	Print head error	Turn off the power. If there are multiple occurrences, please contact the distributor where you purchased the unit or your nearest Graphtec vender.
E90:Cutter unit communication error. Turn off the power. *	Communication error	Turn off the power. If there are multiple occurrences, please contact the distributor where you purchased the unit or your nearest Graphtec vender.

* When this error message occurs while performing copying, pressing the "NEXT" key will display the target number of copies currently being printed. (This display will continue for as long as "NEXT" is being pressed, and will disappear once the button is released.)

7.4   *Warning Messages*

LCD Display	Cause	Solution

W01:No media
    Load the media.
 	
    (FEED-key)
(F1)(F2)(F3)(F4)
	Media has not been set.
	Media has finished.
		There is no media. Please set media.

W02:No ribbon Confirm ribbon for head 1. (F1)(F2)(F3)(F4)	Media has not been set. Media has finished. Ribbon has broken. Ribbon has jammed.	There is no ribbon for Head 1, or the ribbon has broken. Replace the ribbon for Head 1.
W02:No ribbon Confirm ribbon for head 2. (F1)(F2)(F3)(F4)	Media has not been set. Media has finished. Ribbon has broken. Ribbon has jammed.	There is no ribbon for Head 2, or the ribbon has broken. Replace the ribbon for Head 2.
W02:No ribbon Confirm ribbon for head 3. (F1)(F2)(F3)(F4)	Media has not been set. Media has finished. Ribbon has broken. Ribbon has jammed.	There is no ribbon for Head 3, or the ribbon has broken. Replace the ribbon for Head 3.
W03:Confirm! Ribbon lever 3 is not set. Set ribbon lever 3! (F1)(F2)(F3)(F4)	Ribbon lever 3 is open. Lever has opened during printing.	Ribbon lever 3 has released. Set ribbon lever 3 that is printing.
W04:Loading check Ribbon lever is set. Can not feed. YES:ENTER (F1)(F2)(F3)(F4)	Ribbon lever has not been released.	Paper cannot be fed because the ribbon lever has not been released Press the ENTER key. (When feeding, release the ribbon lever.)
W05:Check ribbon lever and print data Lever is not set. Set ribbon lever (F1)(F2)(F3)(F4)	There is no ribbon that corresponds to the data (It is open).	There is no ribbon that corresponds to the data (It is open). Close the corresponding ribbon.
W06:Head temperature Head temperature is high. Wait to cool down the head. (F1)(F2)(F3)(F4)	The head temperature is high (shutdown to protect head)	Wait until the head temperature goes down.
W07:Press roller set Press roller lever is not set. Set the press roller lever! (F1)(F2)(F3)(F4)	The press roller lever has not been set.	The press roller lever has not been set. Set the press roller.
W08:Loading check Press roller lever is setting. Release press roller lever! (F1)(F2)(F3)(F4)	The press lever has been set.	When media is supplied, the press lever is not open. Open the press lever.
W09:No laminate Load laminate! Then press ENTER. Or press F4 to continue (F1)(F2)(F3)(F4) ★	Unit menu = Laminate: ON Laminate has not been set. Laminate has finished.	There is no laminate. Set the laminate. (Or, turn the unit off with the F4 key.
W10:Laminate is ins- talled. Remove it! Then press ENTER. Or press F4 to continue (F1)(F2)(F3)(F4)	Unit menu = Laminate: OFF Laminate has been set.	The setting in the functional settings and the laminate set state do not agree. Remove the laminate or turn laminate ON in the functional settings.
W11:Laminate winder Winder full! Replace the bobbin. (F1)(F2)(F3)(F4) ★	The take-up quantity is full.	The laminate take-up is over capacity. Replace the laminate winder bobbin.
W12:Cutter media No Media! Load the media to cutter unit. (F1)(F2)(F3)(F4)	The media has not been set.	The media has not been set in the cutter section. Set the media.

LCD Display		Cause	Solution

```W13:Print size check```
```Confirm C-unit push```
```roller position or```
```the print data.```   (F1)(F2)(F3)(F4)
		The size set in the driver and the media size set in the printer differ.	The size set in the driver and the media size set in the printer differ.
			Set the media size to be the setting in the driver.
			Send DATA that corresponds to the set media size.

```W14:Media load check```
```The cam lever is```
```not set.```
```Set the cam lever!```   (F1)(F2)(F3)(F4)
		The cam lever has not been set.	The cam lever has not been set.
			Set the cam lever.

```W15:Media load check```
```The cam lever is```
```setting. Release the```
```cam lever!```   (F1)(F2)(F3)(F4)
		The cam lever has been set.	When the media is supplied, the cam lever is set.
			Release the cam lever.

```W16:Push roller```
```Confirm the push```
```roller position.```   (F1)(F2)(F3)(F4)
		The push roller has been set out of the specification scope.	The push roller has been set out of the specification scope.
			Reset and confirm the push roller position.

```W17:The waste media```
```winder full!```
```Replace the bobbin.```
```YES:ENTER```   (F1)(F2)(F3)(F4)
	★	The take-up is at capacity.	The separator take-up is over capacity.
			Replace the separator take-up bobbin.

```W18:Media winder```
```Set winder bobbin```
```and press ENTER. Or```
```press F4 to continue```   (F1)(F2)(F3)(F4)
		Unit Menu = Separator: ON
		The take-up bobbin has not been set.
			The take-up bobbin has not been set. Set the take-up bobbin, or turn the functional setting separator OFF.

```W19:Media winder```
```Remove winder bobbin```
```and press ENTER. Or```
```press F4 to continue```   (F1)(F2)(F3)(F4)
		Unit Menu = Separator: OFF
		The take-up bobbin has been set.
			The functional setting and the take-up bobbin setting do not agree. Remove the take-up bobbin, or turn the functional setting separator ON.

```W20:Ending of Media.```
```Remove the remaining```
```media.```
```And set new media.```   (F1)(F2)(F3)(F4)
	★	Media is over.	Remove the remaining media and re-set the media.

* When this error message occurs while performing copying, pressing the "NEXT" key will display the target number of copies currently being printed. (This display will continue for as long as "NEXT" is being pressed, and will disappear once the button is released.)

When Operation is Strange

Symptom	Cause	Solution
Media is meandering.	The push roller has not been properly set over the grit roller.	Confirm the push roller position.
Remove the push roller from whichever side of the media.	Whether on the front side of the media or the back side of the media, it is not being cut straight.	Cut the edge of the media straight.
The tool carriage is contacting the left edge of the surface, and a "Position Error" is displayed. Or, the tool carriage is contacting the right edge of the surface, and a "Position Error" is displayed.	When it is contacting the left side of the surface, there is the possibility that an error has occurred in the push roller sensor. When it is contacting the right side of the surface, there is the possibility that an error has occurred in the home sensor.	Please contact the distributor where you purchased the unit or your nearest Graphtec vender.
During the startup or plotting, a "Position Error" is displayed and the printer stops.	The media condition settings are not appropriate.	Reduce the tool condition speed or reduce the cut FORCE.
	Something is contacting the tool carriage and it cannot move.	Remove whatever is interfering with the operation, and reconnect the power.
	An external force is added to the tool carriage during the cut.	Remove whatever is interfering with the operation, and reconnect the power.
	Media scraps have entered the operating parts and degraded performance.	Remove whatever is interfering with the operation, and reconnect the power.
	Plotter malfunction.	Please contact the distributor where you purchased the unit or your nearest Graphtec vender.
Media is bowed.	The media is set at a slant.	Correct the setting of the media.
The specified length is not plotted or cut. (slight distance error)	The media has slipped.	Reduce the tool condition speed.
	The distance adjustment value is not appropriate.	Specify the appropriate distance adjustment value.
Even if you set the media and raise the set bar, "Please set the media" is displayed.	The media is nearly transparent and the media sensor cannot recognize it. (This can occur depending on the media.)	Media through which light passes cannot be detected. This kind of media cannot be used. Use the recommended media.
	If a bright light is reflected from the media, the media sensor cannot recognize it.	Change the position of the light source. Place the light source so that it does not directly strike the media.
	There is the possibility that it will cause a problem in the set sensor operation.	Please contact the distributor where you purchased the unit or your nearest Graphtec vender.

7.5   Troubleshooting Related to Materials

When the material has been taken-up, always work with it with the power OFF.

Also, do not force the media out. This can cause damage to the unit.

When supplying label material, it does not come up to the feed roller position

Symptom/Cause

- The end of the label material has been cut at an angle.
- The label material and the backing have separated.
- Please use the MEDIA ASSIST.
- The media guide is dirty.

Solution

- When the label material is not taken up, remove the media stocker, and pull out the media after cutting the label material.
- Feed end of the label material straight in and reset it.
- Pull the end of the label material out all the way to the stocker.
- When supplying paper, use the MEDIA ASSIST.
- Refer to "2.5 Setting Label Materials (media)" regarding setting label materials.
- If the above steps do not improve performance, please refer to "6.10 Cleaning Media Guide" and clean any dirt from the media guide.

Scale seal
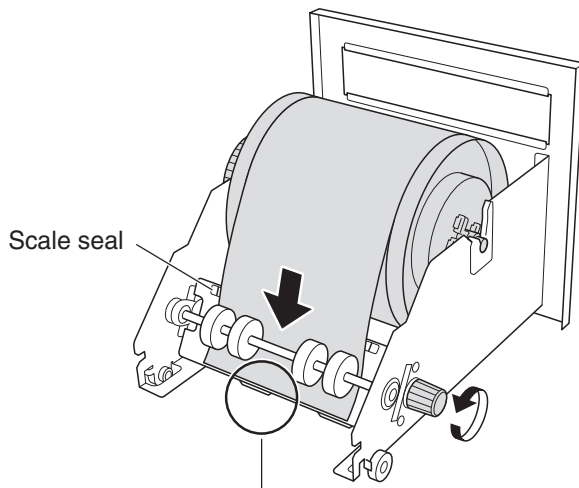
• Feed end of the label material straight in.
• Set the label material tip to be at this position.

The ink ribbon wrinkles

Symptom/Cause

- The ink ribbon is slack.
- It was wrinkled when the media was set.
- The head pressure adjustment plate is not properly set.

Solution

- When there is a wrinkle in the ribbon, feed it for a while.
- If the wrinkle can still not be removed, remove the ribbon stocker, remove the ink ribbon, and reset it.
- Switch the position of the head pressure adjustment plate depending on the utilized ink ribbon.
- Refer to "2.8 Setting the Ink Ribbon" for details on how to set the ink ribbon.

Flange (Printed side)

While gently pressing the flange on the unprinted side, remove the stack by turning the flange section.

Flange (Unprinted side)

Ribbon cassette
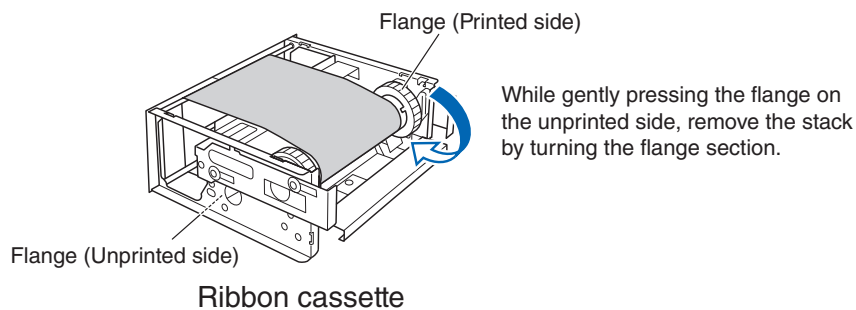
The ink ribbon is wound up

Symptom/Cause

- The ink ribbon is pulled by the label material, or it is wound up.

Solution

- The ink ribbon Density Settings does not match. Referring to "4.9 PRINTING DENSITY", make the optimal Density Settings.
- Remove the media stocker, and remove the label material.

Step 2
Cut

Step 3

Media stocker

Step 1
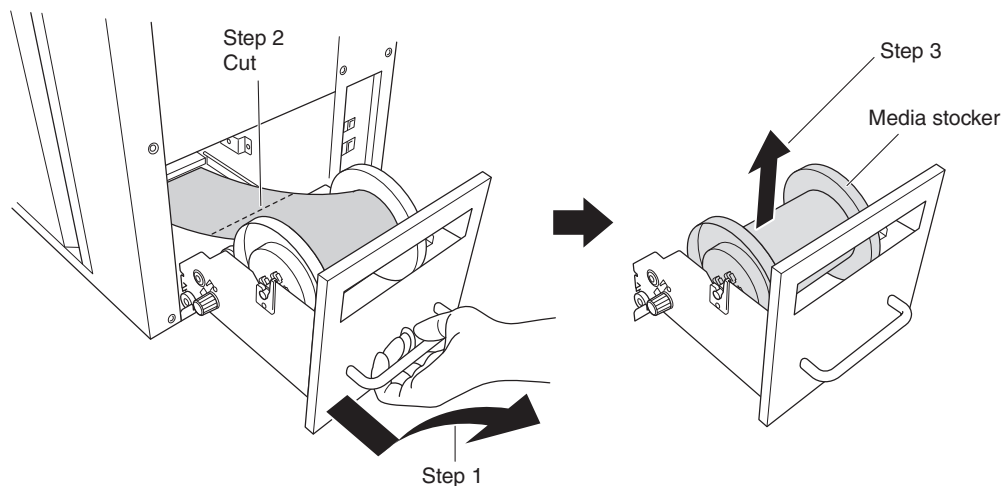
- Pull out the ribbon stocker, pull out the ink ribbon, and cut it.

The Label Material Floats and the Print is Offset

Symptom/Cause

- The label material floats and a print offset occurs.
- When the label material is reset, when the printer is stopped for a long time following a set, or when the wrapped edge of the label material is not even, the label material film separates from the backing and a floating phenomenon can occur.

Solution

- When the seal section floats near the feed roller, take out the MEDIA ASSIST, cut the label material, pull it out, and reset it.
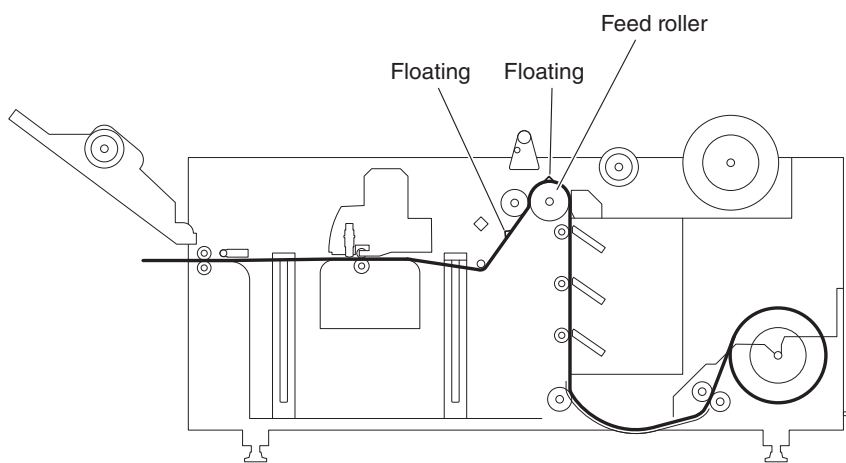
Floating Media is Jammed Near the Outlet

Symptom/Cause

- When it is not removed by the separator, the media jams near the outlet cross cutter.
- When it is removed by the separator, the media is completely peeled off, and the media jams near the outlet cross cutter.

Solution

- Remove the two screws at the top of the cross cutter and remove the cover. Open the separator, open the separator suppression unit, and slowly pull out the jammed media.
- Enable the Frame Cut (on); after cutting the border, wind it with the separator. (Refer to "4.22 FRAME CUT".)
- Set the tool condition setting and the blade adjustment to their optimal values. (Refer to "2.13 Selectiing Tool Conditions" and "2.14 Adjusting the Blade Length".)

⚠ **CAUTION**   • **Take full care so that the cross cutter is not damaged by the blade.**
   • **Do not touch the cutter mechanism inside the wiring cover.**
   • **Cross cut is for cutting the backing sheet of label materials following the separator. There may be uncut materials if you try to cut label materials by backing sheet or with attached laminate materials. Also, the crosscut section might be damaged if the label material glue attaches to the blade. Do not cut anything other than the backing sheet.**
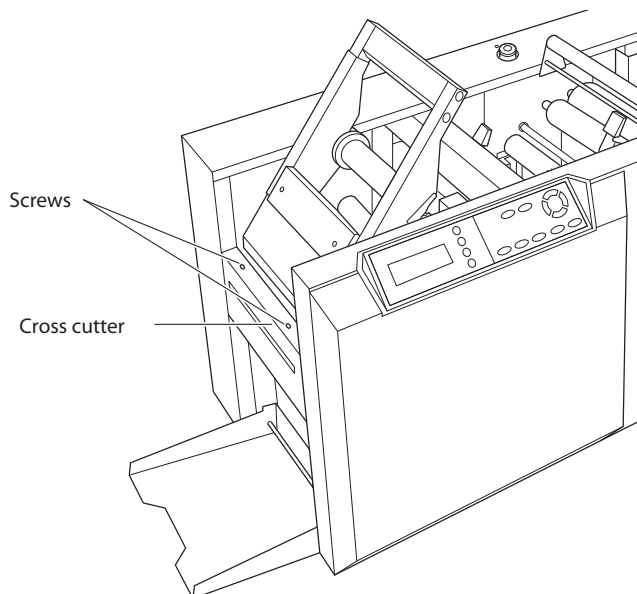
- After removing the jammed media, do not forget to replace the cover.

When the Ink Ribbon or Label Material is Wrapped up in the Ribbon Roller

Ribbon roller
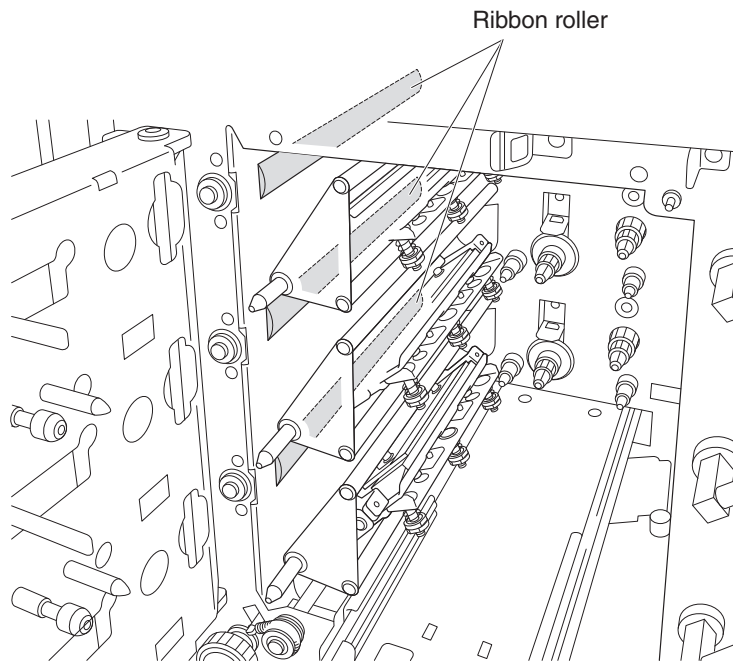
Symptom/Cause

- When setting the ink ribbon, it can get wrapped up when the ink ribbon is slack.

Solution

- Wile slowly pulling the ribbon stocker, pull out the wrapped up portion.

- When setting the ink ribbon, make sure there is no slack. (Refer to "2.8 Setting the Ink Ribbon".)

(1)   Open the main unit front cover, then remove the ribbon lever.

Step 1

Step 2
Remove
the ribbon lever set
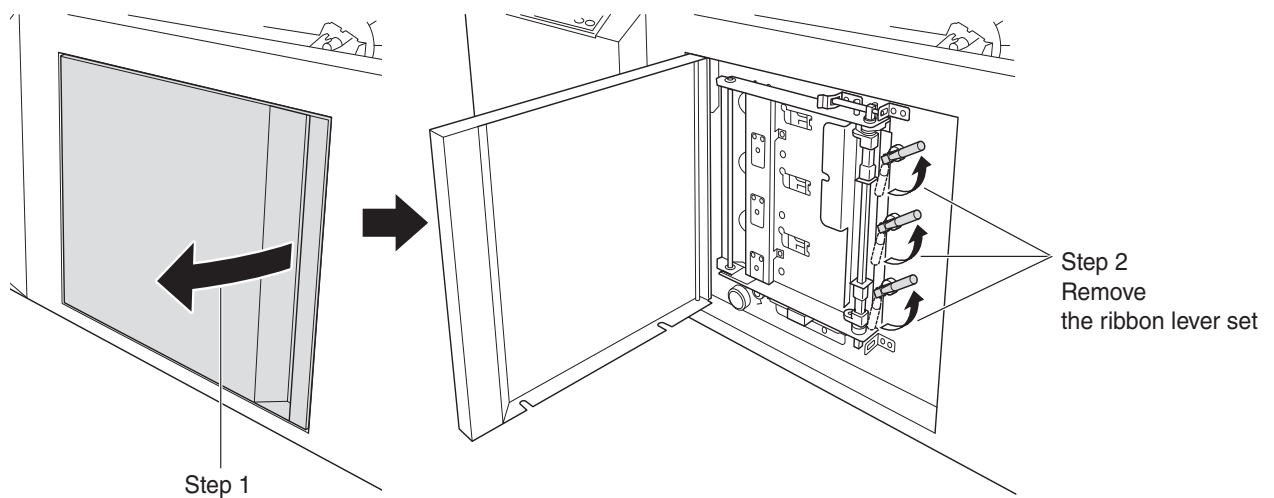
(2)   Release the lock on top of the ribbon stocker section and open the ribbon stocker cover.
Raise the lever, then **slowly pull out the ribbon stocker**.

Lock lever   Ribbon stoker bar

Step 1

Step 2

Step 4   Step 3
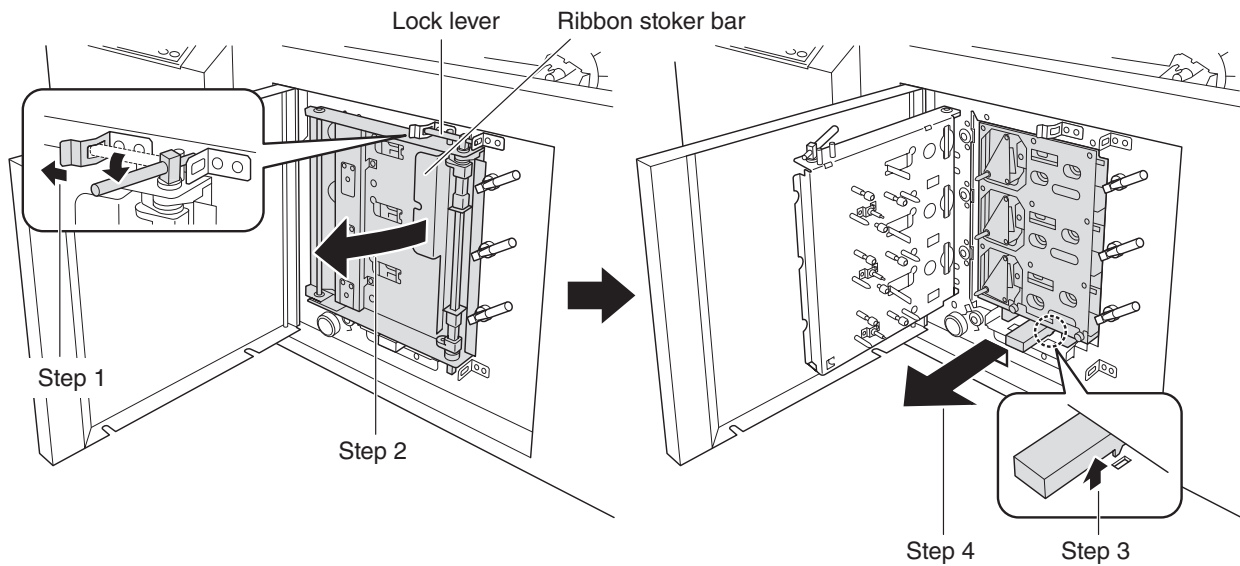
(3)   Having slowly pulled out the ribbon stocker, slowly pull out the wrapped ink ribbon and label material.
When they cannot be pulled out, cut them, and pull them out.

⚠ **CAUTION**   **Forcibly pulling out the label materials may result in damage. When the ink ribbon or the label material cannot be pulled out, please contact the distributor where you purchased the unit or your nearest Graphtec vender.**

(4)   Return the ribbon stocker section.(Refer to "2.8 Setting the Ink Ribbon".)

When Laminate Material Is Wrapped Up in the Press Roller

Symptom/Cause

- When the laminate material is set, when there is slack in the take up of the laminate material or its backing, it can get wrapped up.

Solution

- Open the press lever.
- Slowly pull up the wrapped up backing so as not to cut the laminate material.
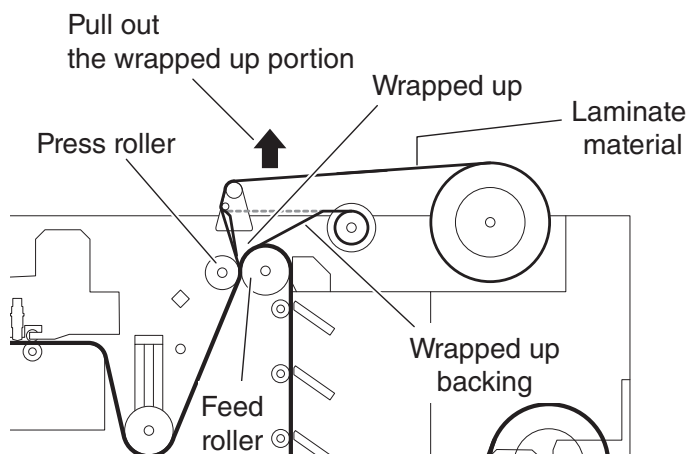
- After pulling it out, do the following. After pulling it out, close the press lever.
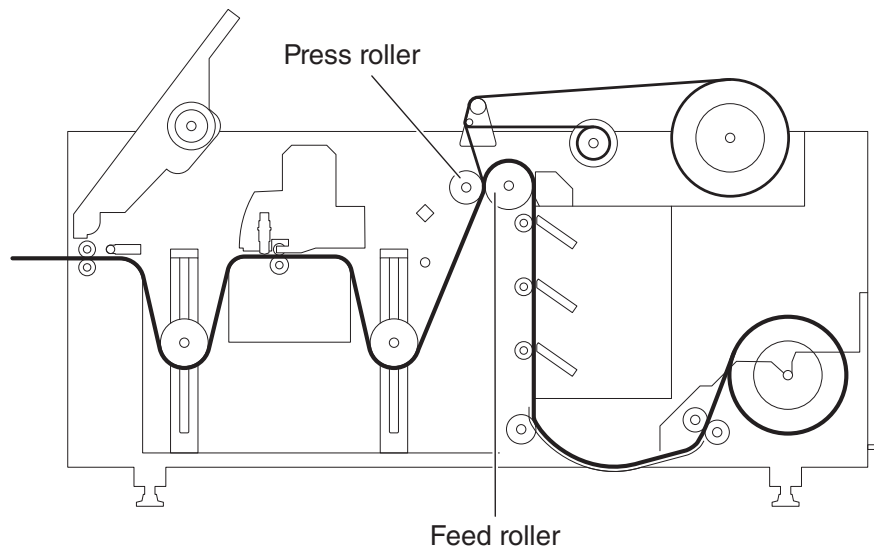
Unable to peel properly with separator (weed)

Symptom/Cause

When the gap between two labels is too narrow, the separator (weed) section becomes too thin and they are not sufficiently separated.

When performing continuous printing or unmanned operation, be sure to verify that the separator (weed) is performing properly; when the weed does not occur, increase the label gap, adjust the blade length or cutting force, etc.; if that is not effective, change the materials set method so that the weed is not performed.

The label weed is performed after the cut, but due to the label material, label shape, size, or arrangement of two labels, there are cases where the weed does not occur, or the label material itself is cut.

Solution

Enable the Frame Cut (on); after cutting the border, wind it with the separator. (Refer to "4.22 FRAME CUT.")

• **The shape makes weeding difficult**

Change the type or combination of label material or laminate material.

(1)   Inside of the donut shape (shaded section)

Feeding direction
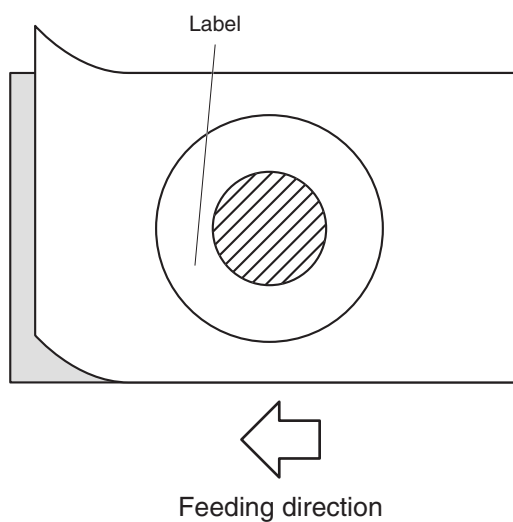
(2)   Latter half of polygon (shaded section)

Feeding direction
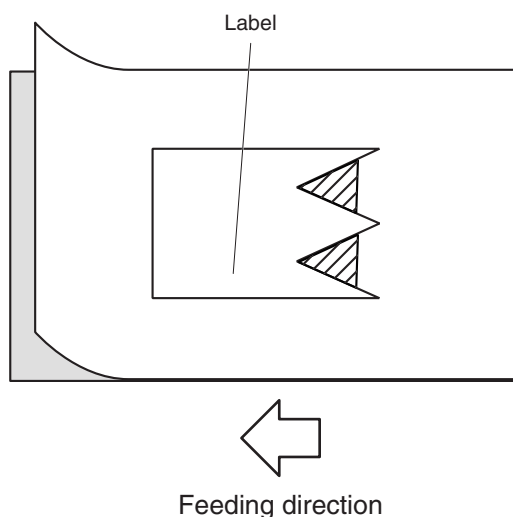
(3)   Multi-shape cut-out letters, etc. (shaded section)

Feeding direction
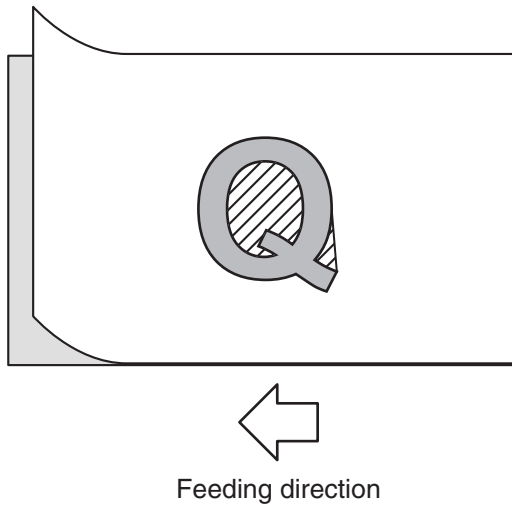
(4)   Objects where the weed start side is narrow
        (a) The top of triangles, etc.

Width is narrow

Feeding direction

(b) Circles with a small diameter
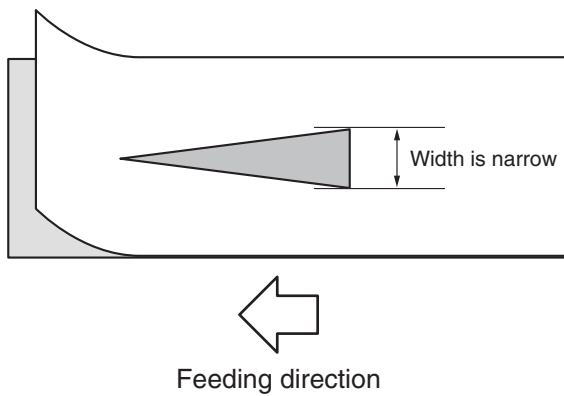
Circles with a small diameter

(c) Rectangles with a narrow width

Rectangles with a narrow width

Feed direction
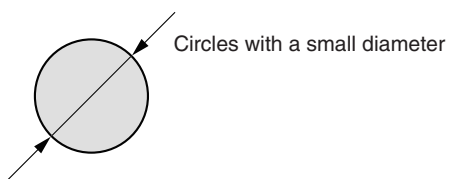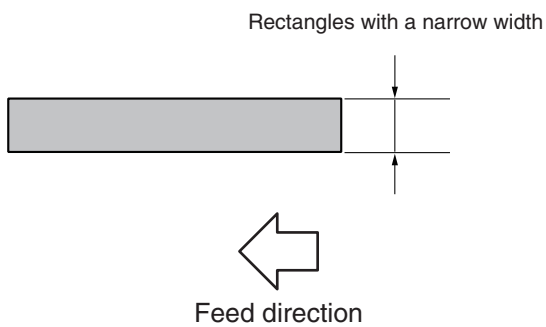
Chapter 8 Specifications

This chapter describes the specifications of the unit.

Product Summary

8.1   General Specifications

8.2   Optional Accessories, Supplies

8.3   External Dimensions

8.4   Menu Tree

8.1   General Specifications

Items	LCX603
Printer section	
Printing system	Thermal Ink-Transfer System
Resolution	600 × 1200 dpi, 600 × 600 dpi
Maximum number of printing colors	3 colors (black + 2 colors)
Printing speed	Maximum 35 mm/s
Maximum printing area	100 × 200 mm Label materials (media) Width: 40 - 100 mm (depending on the media used) Label materials (media) Feed direction: 65 - 200 mm
3 Color printing position precision	±0.3 mm or less (after adjusting on the Adjustments Menu)
2 Color printing position precision	Between 2 colors ±0.3 mm or less (after adjusting on the Adjustments Menu)
Minimum letter size	8 point*
Minimum line width	0.3 mm
Ink ribbon	Width : 120 mm Length : 100 m
Label material	Width : 70/80/90/100/110/120/130 mm Thickness : 25 μm, 50 μm, 80 μm, 85 μm Winding : can install up to 195 mm diameter
Laminate material	Width : 50/60/70/80/90/100/110 mm Winding : can install up to 140 mm diameter
	Winding-up form tube: core inside diameter 1 inch, width 140 mm (can use ink ribbon cardboard cylinders)
Cutting section	
Cutout system	Half cut using blade (Supersteel)
Type cutter	Supersteel
Maximum cut area	100 mm × 200 mm
Maximum cut speed	300 mm/s
Printer section and cut portion position Match precision	0.5 mm or less/50 mm (after adjusting on the Adjustments Menu)
Separator Section	
Winding	Automatic winding
Winding-up form tube	Core inside diameter 1 inch, width 140 mm (can use ink ribbon cardboard cylinders)
Cross Cut Section	
Cut	Cross Cut

Items	LCX603
Unit Specifications	
Interface	USB2.0 (Full Speed), Network (Ethernet 10BASE-T/100BASE-TX)
LCD display	20-character × 4 lines
Rated power supply	100 - 240 V AC, 50/60 Hz (Automatic changeover)
Power consumption	Less than 600 VA
Usage environment	10 - 35°C, 35 - 75% R.H. (non-condensing)
Conditions for guaranteed precision	16 - 32°C, 35 - 70% R.H. (non-condensing)
External dimension (approximate) [W×H×D]	1035 × 614 × 423 mm
Weight (approximate)	70 kg

*According to the label material and Density Settings indicated.

*The external appearance, ratings, specifications, etc., of the product are subject to change without notice for the sake of improvements, etc.

8.2   Optional Accessories, Supplies

Please visit our website (http://www.graphteccorp.com/) for optional accessories and supplies.

Supplies (Ink Ribbons)

Type	Model Name	Color	Specifications
RESIN (Resin-type)	RP120-B-R4A	Black	120 mm × 100 m: 4 rolls/set
	RP120-R-R4A	Red	120 mm × 100 m: 4 rolls/set
	RP120-BL-R4A	Blue	120 mm × 100 m: 4 rolls/set
	RP120-Y-R4A	Yellow	120 mm × 100 m: 4 rolls/set
	RP120-W-R4A	White	120 mm × 100 m: 4 rolls/set
Semi-RESIN (Wax-type)	WD120-B-R4A	Black	120 mm × 100 m: 4 rolls/set
	WD120-R-R4A	Red	120 mm × 100 m: 4 rolls/set
	WD120-BL-R4A	Blue	120 mm × 100 m: 4 rolls/set
	WD120-G-R4A	Green	120 mm × 100 m: 4 rolls/set

Supplies (Label Materials)

Type	Model Name	Specifications
FNS	FNS MAT N50-1310B-R4	130 mm × 100 m Thickness 50 µm: 4 rolls/set
	FNS MAT N25-1310B-R4	130 mm × 100 m Thickness 25 µm: 4 rolls/set
	FR1615-50-1310-R4A	130 mm × 100 m Thickness 50 µm: 4 rolls/set
	FNS MAT S50-1310B-R4	130 mm × 100 m Thickness 50 µm: 4 rolls/set
PET	PET25A-1310B-R4	130 mm × 100 m Thickness 25 µm: 4 rolls/set
	PET50A-1310B-R4	130 mm × 100 m Thickness 50 µm: 4 rolls/set
	FR1225-50-1310-R4A	130 mm × 100 m Thickness 50 µm: 4 rolls/set
	FR1015-50-1310-R4A	130 mm × 100 m Thickness 50 µm: 4 rolls/set
	PETWH50A-1310-R4A	130 mm × 100 m Thickness 50 µm: 4 rolls/set
	FR1415-50-1310-R4A	130 mm × 100 m Thickness 50 µm: 4 rolls/set
YUPO	FR5311-85-1310-R4A	130 mm × 100 m Thickness 85 µm: 4 rolls/set
	FR6311-80-1310-R4A	130 mm × 100 m Thickness 80 µm: 4 rolls/set
GROSS	GROSS PW-1310B-R4	130 mm × 100 m: 4 rolls/set
NPCOAT	NP COAT PW-1310B-R4	130 mm × 100 m: 4 rolls/set

Supplies (Laminate)

Type	Model Name	Specifications
Transparent PET	PET16-1110-R4A	110 mm × 100 m Thickness 16 µm: 4 rolls/set
	PET25-1110-R4A	110 mm × 100 m Thickness 25 µm: 4 rolls/set
	FR1225-16-1110-R4A	110 mm × 100 m Thickness 16 µm: 4 rolls/set
PET Mat (Semi-transparent	FR1125-25-1110-R4A	110 mm × 100 m Thickness 25 µm: 4 rolls/set
	PETS MAT25-1110-R4A	110 mm × 100 m Thickness 25 µm: 4 rolls/set
Transparent Polypropylene	PR20-1110-R4A	110 mm × 100 m Thickness 20 µm: 4 rolls/set

Supplies (Cutter)

Type	Model Name	Specifications
Cutter plunger	PHP32-CB09N-HS	For Ø 0.9 mm cutter blade (CB09UA-5)
Cutter blade	CB09UA-5	Ø 0.9 mm, carbide blade with spring, for general film (5-piece set)

Supplies (Consumable Items)

Type	Model Name	Specifications
Thermal Head Cleaner	THC-1	Cleaning stick 50 pcs. Cleaning fluid approx. 250 ml (Thermal Head use only)

8.3   External Dimensions

LCX603

8.4   Menu Tree

READY

```
READY                    F1
                         F2
   CONDITION-01          F3
                         F4
```

[LOCAL]

```
                         F1
   PRINTER MENU>         F2
   CUTTER MENU>          F3
   OUTPUT ALL>           F4
```

```
                         F1
        COPY>            F2
        DATA CLEAR>      F3
        CONDITION>       F4
1/4
```

[NEXT]

```
COPY?              <001>   F1
                           F2
NO. OF COPIES:←→↑↓         F3
YES:ENTER        NO:ESC    F4
```

```
CLEAR THE DATA?            F1
                           F2
                           F3
YES:ENTER        NO:ESC    F4
```

```
CONDITION                 F1
                           F2
     LOAD CONDITION>       F3
     SAVE CONDITION>       F4
```

```
        PRINT SETTING>        F1
     PRINT TEST PATTERN>      F2
        HEAD ADJUSTMENT>      F3
2/4    PRINTED LENGTH>        F4
```

[NEXT]

```
     PRINTING DENSITY>     F1
     PAGE PRINT MODE>      F2
        ANTI-WRINKLE>      F3
                           F4
```

```
     PRINT TEST PATTERN>   F1
     ADJUST P&C POSITION>  F2
                           F3
                           F4
```

```
ADJ. PATTERN PRINT>       F1
     DISTANCE ADJ.>       F2
     HEAD1 POS. ADJ.>     F3
     HEAD2 POS. ADJ.>     F4
```

```
PRINTED LENGTH            F1
         xxxxxm           F2
                          F3
            RETURN:ESC    F4
```

```
     REGISTRATION MARK>    F1
        UNIT LENGTH>       F2
     FUNCTION SETTING>     F3
3/4                        F4
```

[NEXT]

```
REGISTRATION MARK          F1
       TYPE<3POINT>        F2
SELECT:↑↓                  F3
YES:ENTER        NO:ESC    F4
```

```
UNIT LENGTH                F1
               <   mm>     F2
SELECT:↑↓                  F3
YES:ENTER        NO:ESC    F4
```

```
        LAMINATE>          F1
        SEPARATOR>         F2
        CROSS CUT>         F3
        FRAME CUT>         F4
```

```
        LAN SETTING>       F1
        MAC ADDRESS>       F2
                           F3
4/4                        F4
```

[NEXT]

```
            DHCP>          F1
       IP ADDRESS>         F2
      SUBNET MASK>         F3
         GATEWAY>          F4
```

```
MAC ADDRESS                F1
 <00:03:76:08:**:**>       F2
                           F3
RETURN:ESC                 F4
```

```
BLADE CONSUMPTION>         F1
        TOOL UP/DOWN>      F2
        OFFSET FORCE>      F3
                           F4
```

```
BLADE CONSUMPTION          F1
                           F2
            DISPLAY>       F3
              CLEAR>       F4
```

```
TOOL UP/DOWN               F1
                           F2
UP/DOWN:↑↓                 F3
RETURN:ESC                 F4
```

```
OFFSET FORCE               F1
               <04>        F2
INPUT:↑↓                   F3
YES:ENTER        NO:ESC    F4
```

```
OUTPUT ALL?                F1
                           F2
                           F3
YES:ENTER        NO:ESC    F4
```

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GRAPHTEC