ESPO Installation Manual

List of included parts

- Main unit (with single mode cap)

- Adapter

- Power cable

- Ribbon cassette

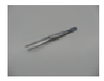
- Spool holder

- Magazine (option)

- 20-sheet stacker

- Manual feeding tray

- Tweezers



- Ink ribbon

- Paper tube

- Fall-prevention stay

- Cleaning kit

- Driver CD

- CAUTION stickers

* For the model on which wireless LAN is mounted, an antenna is included.

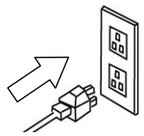
1. Preparation before using the product

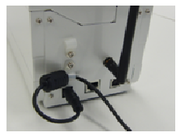
- Remove the fixation brackets on the main unit, which is used at transportation.

There are two fixation brackets. (Two points of each bracket are secured with screws)

Fix and store the removed fixation brackets and screws on the main unit.

- Connect the AC adapter to ESPO and an outlet.





- Connect the interface cable to be used.

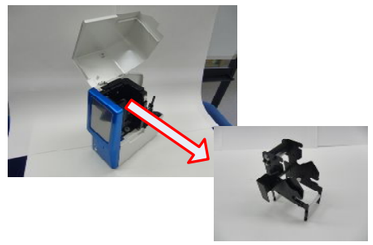
USB

Wired LAN

Install the driver before connection. (Refer to the install manual)

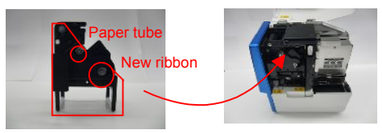
2. Setting of ink ribbon

- Open the upper cover and remove the ribbon cassette.



- Set the ribbon in the spool holder. (The ink surface should face the external side)

- Set it in the ribbon cassette and set it in the main unit.



3. Setting of slide glass

* The disposable magazine can be set in the main unit directly.

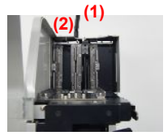
- Press the button (1) and pull up the cover (2).

- Prepare a glass to be set.

* Align the frost surface at the bottom.

- Set the glass (be sure to remove the film). Restore the cover the way it was.

- Set the magazine in the main unit.



- Close the upper cover.

4. Turn ON the power supply.

- Turn ON the power supply and use the product.

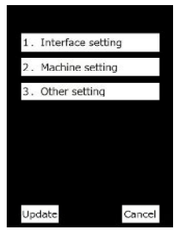
5. Operation panel

	Various settings can be implemented.
Reprint ON	The printing in the past one minute can be implemented again (not available in continuous mode).
Copy ON	The copy mode can be switched (effective when the setting is made).
Print	The printing is implemented in the copy mode by pressing “Print” button.

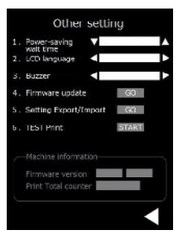
	The residual quantity of ink ribbon is displayed.
	The magazine you set is displayed.
	The selected magazine is displayed.
	The status of scanner is displayed.
	The interface is displayed.
Print Position X: 0.00 Y:-0.50	The print position can be corrected. The print position is saved by pressing OK button. (Other screen will be displayed)
Eject MODE Single	The eject mode can be specified. (Single mode, continuous mode, front loading 1, front loading 2)
Stand By	The status of printer is displayed.
Print Count 12	The received print count is displayed.
Update	If the setting is changed, it is necessary to update the setting and turn OFF the power supply once.

6. Change of setting

Enter the setting mode.



- Carry out the setting. Save the changed setting by pressing “Update” button. After the update, turn OFF the power supply once.

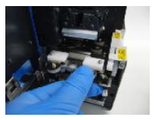


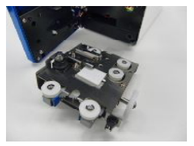
- You can carry out the setting of interface etc.

7. If the glass is clogged

- Turn OFF the power supply before the work.
- Open upper cover and front cover.

- Check the point clogged with glass.
- In case of transfer unit, disconnect the unit and remove the glass.





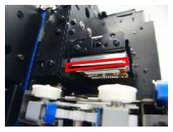
Disconnect the connector and pull out the unit, and then remove the glass.

- If the glass is clogged at the magazine, disconnect the magazine and remove the glass.

Open the guide and slide the magazine backward to pull it out.

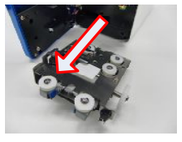
8. Daily maintenance

- Turn OFF the power supply before the work. Wipe off the taint with a waste cloth impregnated with dehydrated ethanol.
- Cleaning of thermal head
  Open upper cover and front cover, and then remove the ribbon cassette.
  Clean up the edge part of thermal head.



- Cleaning of platen roller
  Disconnect the connector of transfer unit.

Pull out the transfer unit.



Clean up the roller (use the air blow).

- Cleaning of synchronized roller
  Remove the ink ribbon and clean up the synchronized roller.

- Cleaning of dust tray
  The dust tray is push latch type. Push it once and pull it forward, and then remove the glass powder in the tray.

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ESPO
PATH SLIDE PRINTER
Instruction Manual

FCC compliance Statement

FCC WARNING:

Change or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

INFORMATION TO THE DIGITAL DEVICE USER REQUIRED BY THE FCC:

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.

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■□■ Safety precautions ■□■

♦ Meaning of icons

This section describes various cautions for using the product safely using icons.
Each meaning is shown below.

WARNING	Describes the content that may cause death or heavy injury of user if the product is handled wrongly ignoring this indication.
CAUTION	Describes the content that may cause physical loss such as disability of user if the product is handled wrongly ignoring this indication.

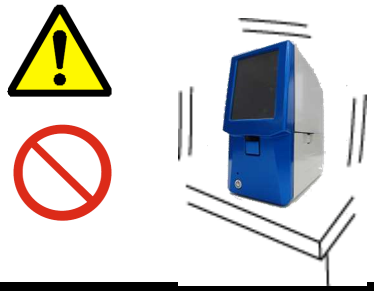
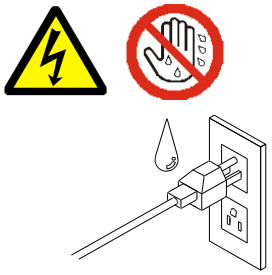
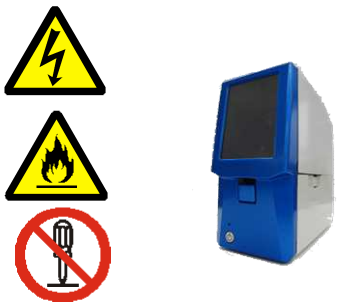
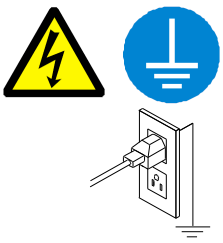
Example of icons

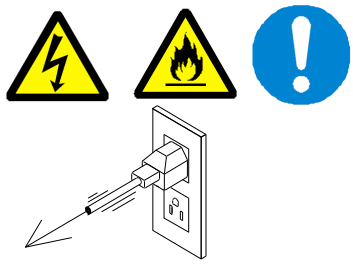
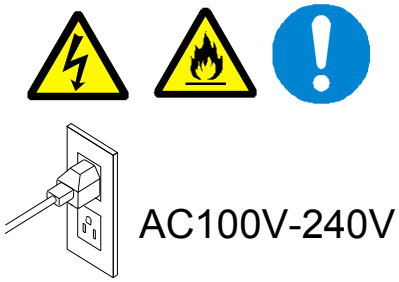
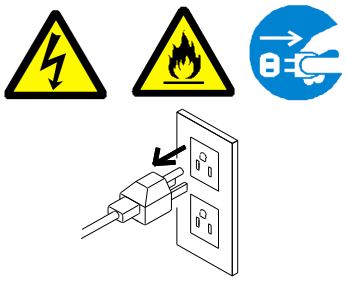
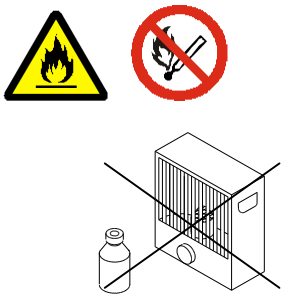
	The symbol means **red-flag item**. The concrete content of caution is shown in the diagram. Example Caution, electricity
	The symbol means **prohibited item**. The concrete content of caution is shown in the diagram Example Disassembly prohibited
	The symbol means **specified item**. The concrete content of caution is shown in the diagram. Example Disconnect the plug

■□■ Cautions on safe use of this product ■□■

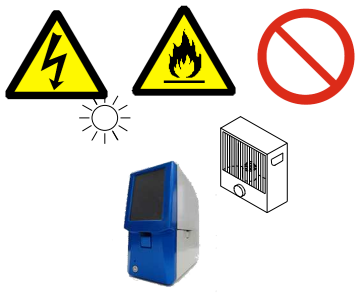
* Be sure to follow the content shown below to use this product safely.
Do not carry out any item that is not shown in this section.

WARNING

● Do not install the device at an unstable place or place where there is vibration. Otherwise, the device may drop or cause a fall and you may get injured.	
● Do not connect or disconnect the power cord by a wet hand. Otherwise, electric shock may be caused.	
● Do not disassemble or modify the device. There is are high-voltage points in the device and fire or electric shock may be caused. For inspection and repair, please contact the delivery agent you purchased the product or our company's customer service.	
● If a defect such as smoking and strange odor is generated and the device is continuously used, fire or electric shock may be caused. Turn OFF the power switch immediately and pull out the plug of power cord from the outlet, and then contact our company's customer service.	
● Be sure to connect a grounding wire when you use the product. If a grounding wire is not connected to the grounding terminal, electric shock may be caused.	

● When you pull out the power cord, be sure to hold the plug. If you pull the cord, the power cord may be damaged and fire or electric shock may be caused.	
● Do not use this product at the power supply voltage other than AC100 – 240V. Fire or electric shock may be caused. Power supply voltage: AC100-240V Power supply frequency: 50/60Hz	
● Before cleaning, be sure to turn OFF the power supply and pull out the insertion plug of power cord from the outlet. Otherwise, short-circuit or electric shock may be caused.	
● The cleaning agent is combustible solvent. Do not heat it up or put it near fire. Otherwise, fire may be caused.	
● Do not put the cleaning liquid at a place within reach of a child. Drinking it by mistake is very dangerous. If a child drink it by mistake, please talk to your nearest doctor.	

CAUTION

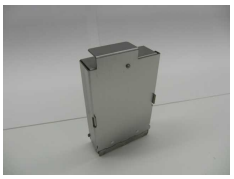
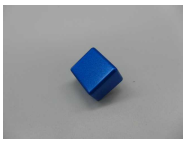
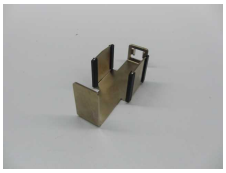
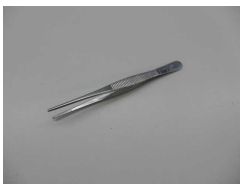
● Do not install the device at a place where there is much humidity or dust, place where is exposed to direct sunlight, highly humid place, or place near fire. Otherwise, fire or electric shock may be caused. Ambient temperature is 5 to 35°C, humidity is 35 to 80% (no dew condensation) Use the product within the specification range shown above. ● Do not use the product at a place where the elevation is 2000m or more.	
● Open and close the cover of main unit carefully not to get your hand or finger caught in it. Otherwise, you may get injured.	
● While the device is operated, do not move your hand or any object close to the inside of device. Otherwise, personal injury or failure may be caused.	
● Rated time and down time of this product are shown below. Please use the product keeping the rated time. Otherwise, fire or failure may be caused. Rated time 10 minutes (down time 30 minutes)	

● This product uses the electric wave of 2.4GHz band frequency. The license of wireless station is not required for using this product, however, pay attention to the following points. ○ Do not use the product near the following. - Industrial / medical devices such as pacemaker - Wireless station that requires license, which is used at production line etc. of plant - Specific power-saving wireless station (wireless station that does not require license) - Operate the product at a place 20cm away from the antenna. - Please do not use antennas other than the accessories. If this product is used near the items shown above, interference of electric wave may be generated.	
● Do not use cellular phone, PHS, TV, or radio near this product wherever possible. These items use the frequency different from that of wireless LAN, however, if they are used near this product, noise may be generated in sound or video due to the effects of electric waves emitted from this product.	
● If there is reinforcing bar, metal, or concrete in the space, the communication is disabled. The electric wave cannot pass through reinforcing bar, metal, or concrete. If these items are used for the wall of room, the communication is disabled.	

■□■ Confirmation at unpacking ■□■

* Open the package and check if there are following accessories.

<CAUTION> The packing box and the interior material are required for transportation. Be sure to keep them.

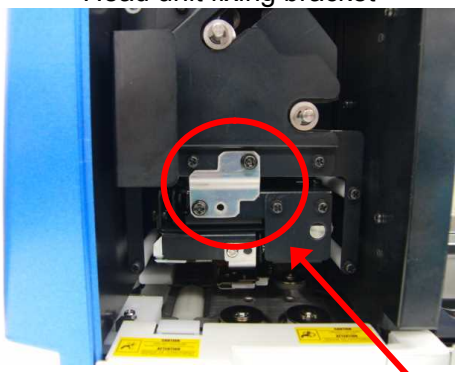
<table>
<tr><td colspan="3">Main unit</td></tr>
<tr><td colspan="3"> </td></tr>
<tr><td>AC adapter</td><td>Power cable</td><td>Magazine (option)</td></tr>
<tr><td> </td><td> </td><td>  </td></tr>
<tr><td>Ribbon cassette</td><td>Spool holder × 2</td><td>Front cover cap</td></tr>
<tr><td>
Set on the main unit</td><td>
Set in the ribbon cassette</td><td> 
Set on the main unit</td></tr>
<tr><td>20-sheet stacker</td><td>Manual feeding tray</td><td>Ink ribbon</td></tr>
<tr><td>  </td><td> </td><td> </td></tr>
<tr><td>Paper pipe</td><td>Tweezers</td><td>Cleaning kit</td></tr>
<tr><td> </td><td>  </td><td> </td></tr>
</table>

Fall-prevention stay (with screw)	Simplified installation manual	Driver CD
Antenna for wireless LAN	Japanese CAUTION stickers	

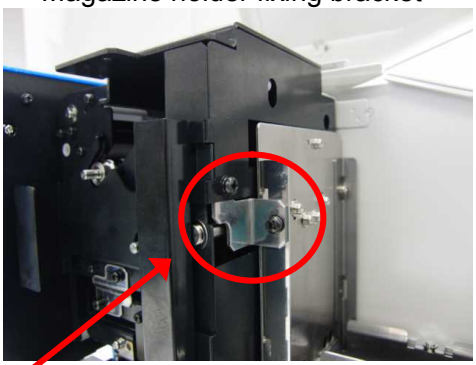
Removal of fixing bracket for transportation

Head unit and magazine holder are fixed with fixing bracket as a measure against failure at transportation.
Remove them before using the product.

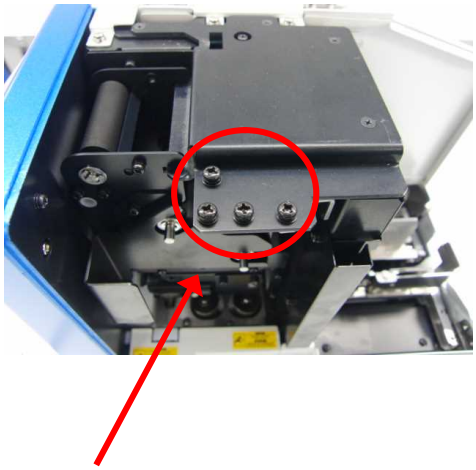
Head unit fixing bracket

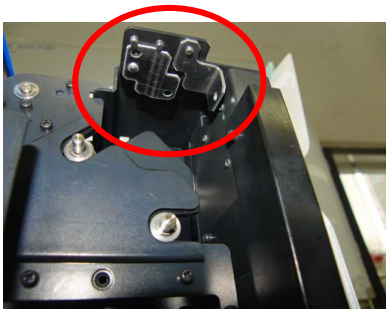


Magazine holder fixing bracket



Unscrew two screws at each point.



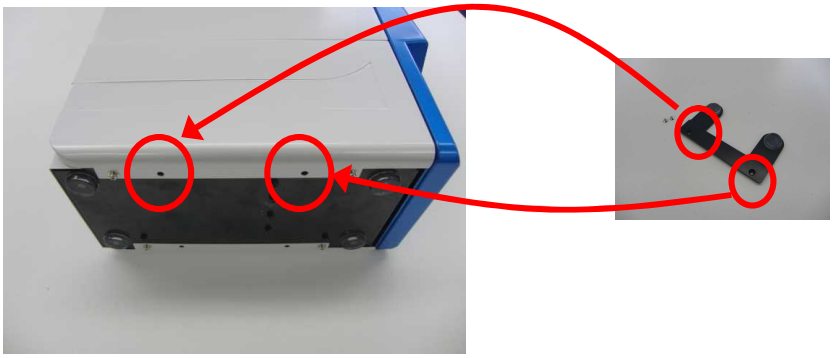


How to attach the fixing bracket

Keep the removed screws and brackets not to lose.
They are required for transportation.

Attachment of fall-prevention stay

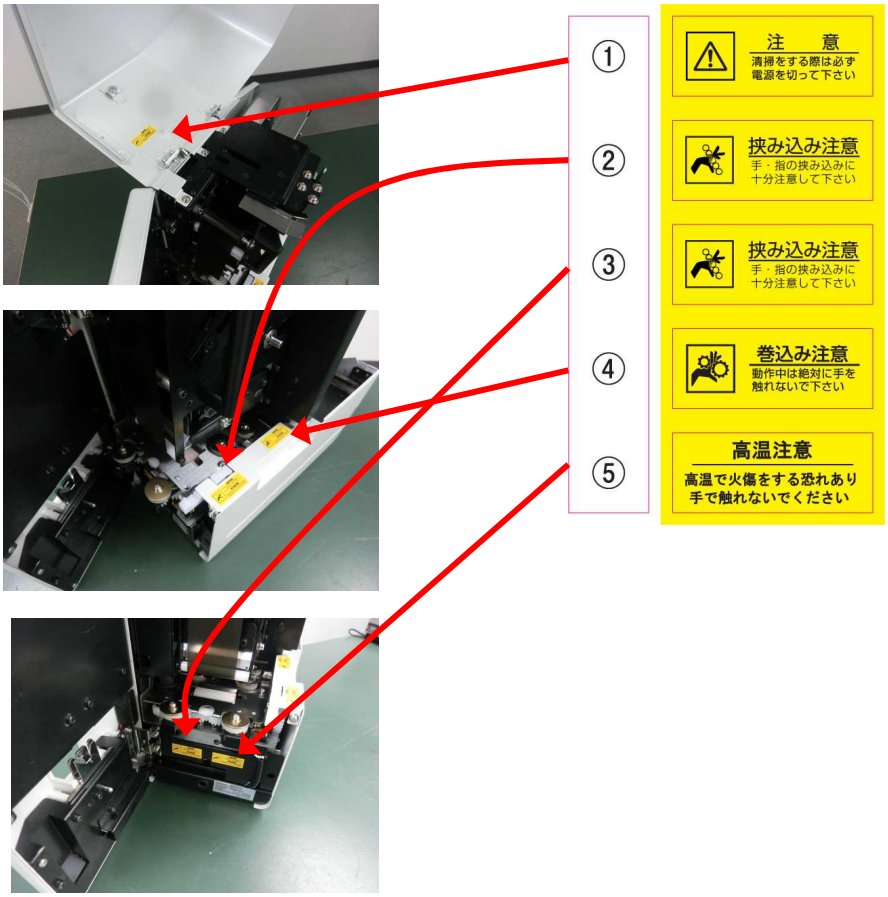
Attach the fall-prevention stay preventing this product from falling during the use.



Unscrew two binding screws (M3) that have been secured.
Fix the stay with two countersunk screws (M3) included with the product.
Fix it so that the BUMPON's attached to the stay face the lower side.

Replacement of CAUTION sticker

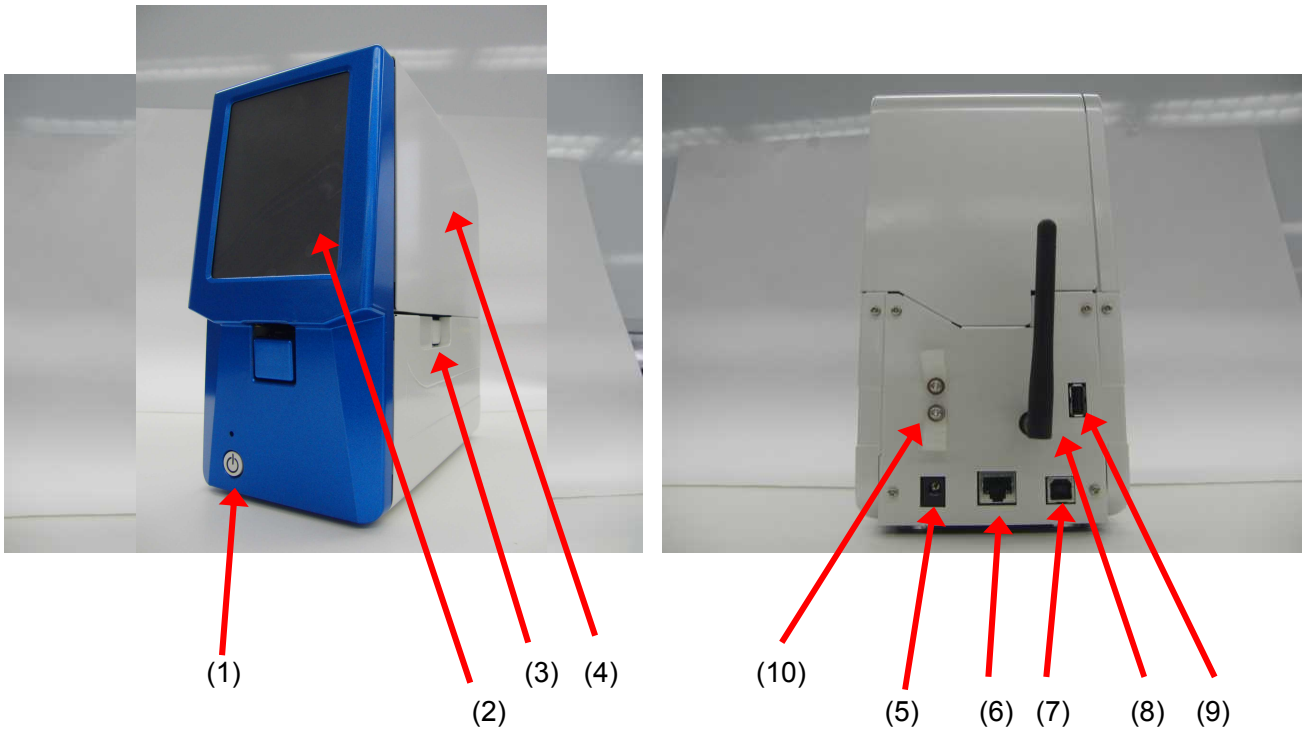
If the place where the product is used is Japan, please change the attached CAUTION sticker to Japanese version.



Change of language display on touch panel liquid crystal display

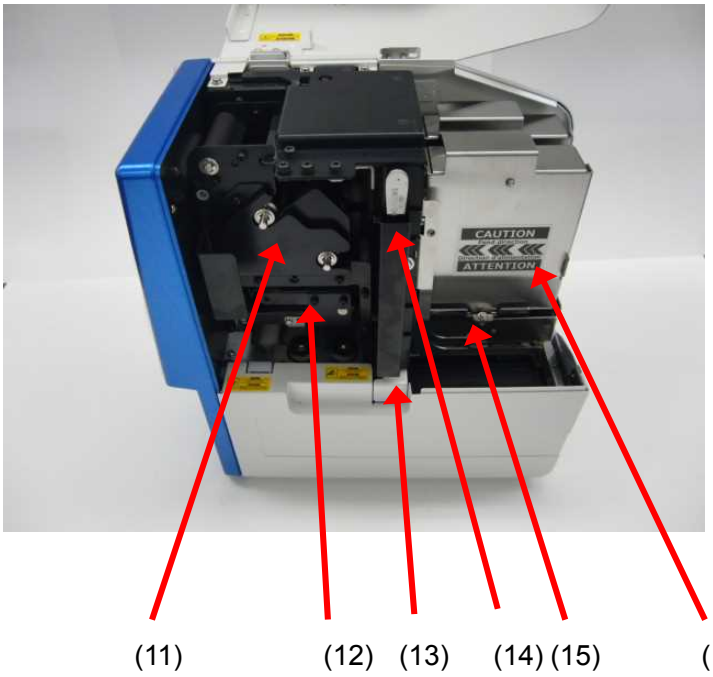
When the product is shipped, the language display is set to English. To change it to Japanese, change the language display to Japanese referencing “■□■ Method of change to Japanese display ■□■”.

■□■ Names and functions ■□■



No	Name	Function
(1)	Power switch	Power switch of main unit
(2)	Liquid crystal display / operation section	Status display and change of setting can be implemented from touch panel liquid crystal display
(3)	Dust tray	Removable tray for collecting the dust removed from frost surface
(4)	Upper cover	Cover to be opened when accessing the inside of device. Ink ribbon and slide glass are set from here.
(5)	Power connector	Insert the jack from AC adapter.
(6)	LAN connector	Connector of wireless LAN
(7)	USB connector	USB connector
(8)	Wireless LAN antenna	Antenna for wireless LAN
(9)	USB A connector	Connect the USB memory at the connection of optional barcode scanner or download of firmware
(10)	Cable clamp	Clamp that prevents disconnection of power supply and I/F cable

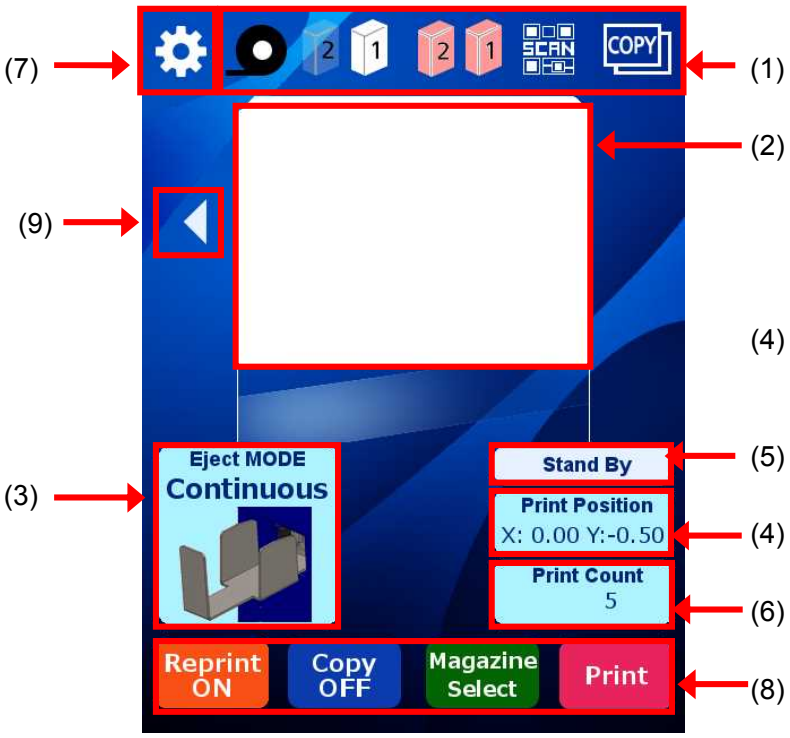
When the open cover is opened



No	Name	Function
(11)	Ribbon cassette	Cassette in which ink ribbon is set
(12)	Head unit	Transcribes the ink ribbon to the frost section by heat
(13)	Dust tray	Tray for collecting the removed glass powder
(14)	Tweezers holder	Holder for storing the tweezers
(15)	Magazine holder	Holder in which magazine containing the slide glasses is set
(16)	Magazine	Magazine containing the slide glasses. There are two types of magazines; one-time disposable magazine and metallic magazine that can be repeatedly used.

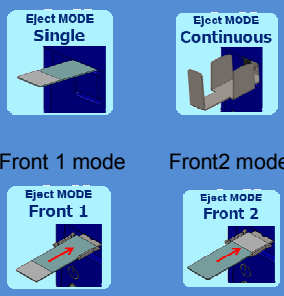
■□■ Description of operation panel ■□■

Copy mode standby screen



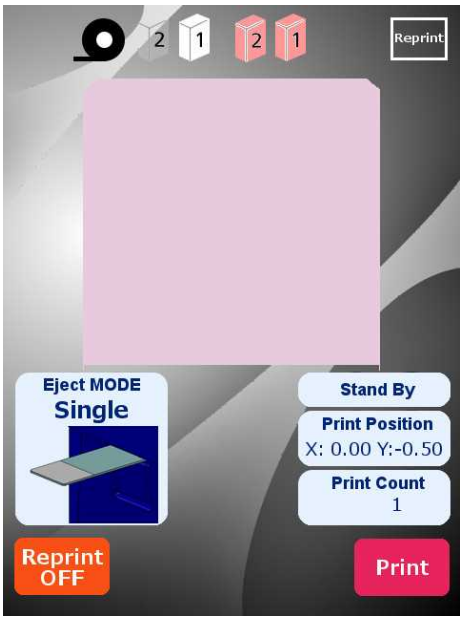
(This is the display when the language is set to ENGLISH)

Item	Function	Display	Description
(1)	Ribbon level display		Displays the residual quantity of ink ribbon. The residual quantity is displayed in three levels.
	Magazine set display		Displays whether a magazine is set or not. If a magazine is not set, the display is clear.
	Magazine selection display		Displays the selected magazine.
	Scanner status display		Displays whether the reading is available when the scanner is connected (option).
	Interface display	USB Wireless LAN Wireless LAN Copy mode	Displays the selected interface.

(2)	Preview display		Displays the print data to be printed.
(3)	Switching of discharge mode	Single mode Continuous mode  Front 1 mode Front2 mode	Displays the setting mode of discharge operation. * When the front loading is used, the frost direction varies between front 1 and front 2.
(4)	Print position correction	Print Position	The print position can be corrected.
(5)	Status display	Stand By Printing	Displays the status of printer.
(6)	Print count display	Print Count	Displays the received print count or the print count.
(7)	Setting mode		Various settings can be implemented.
	Reprint mode	Reprint ON	It is possible to reprint a sheet of data in the past. * This function is not usable in the continuous mode.
	Switching of copy mode	Copy OFF	Switches I/F connection mode and copy mode.
(8)	Selection of magazine	Magazine Select	Switches the magazine you want to use.
	Print button	Print	Starts the printing in the copy mode.
	Switching of frost display		Changes the frost length of preview display in the copy mode. In case of 25mm frost, ◁ is displayed In case of 20mm frost, ▷ is displayed

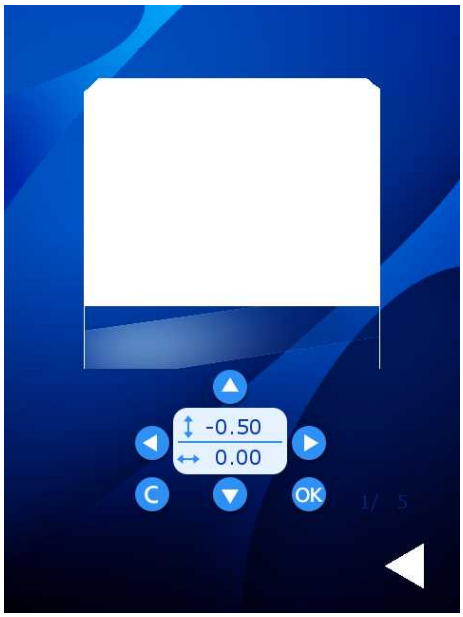
Reprint mode screen

Switching of reprint mode		Switches to usual mode
Selection of magazine		Switches the magazine
Print		Executes reprint

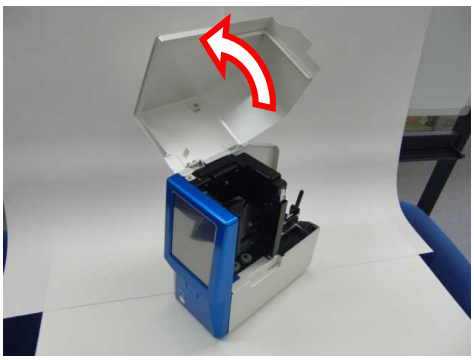


Print position correction mode screen

Position correction		Press the arrows to correct the print position. The print position is registered by pressing OK. The print position returns to the previous registration status by pressing C.
Return		The screen returns to the standby screen.

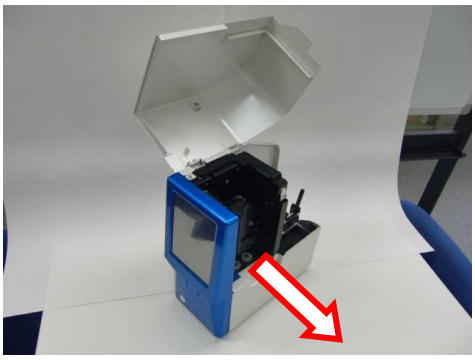


[1] Open the upper cover.



[2] Pull out the ribbon cassette.

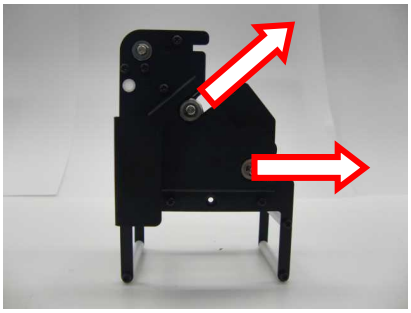
Hold the handle and pull it out in a transverse direction.



Ribbon cassette

[3] Pull out the spool holder from the ribbon cassette.

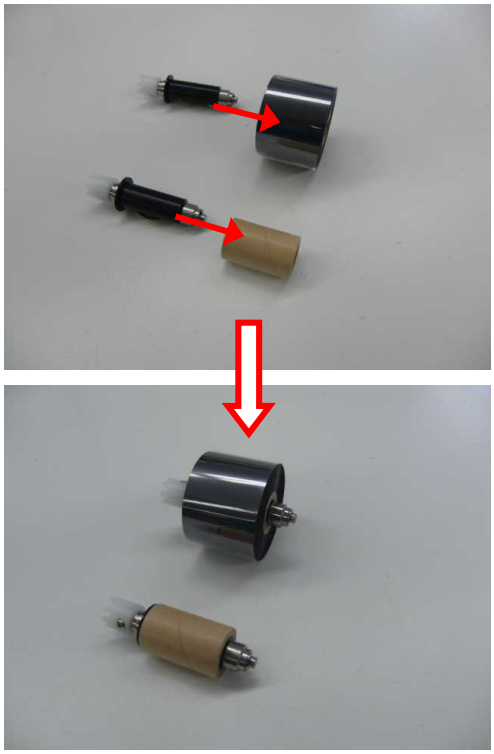
Pull it out straightly along the groove.



Spool holder

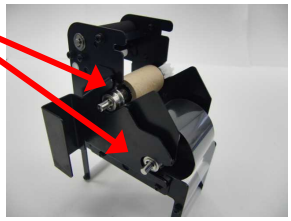
[4] Set an ink ribbon in the spool holder.

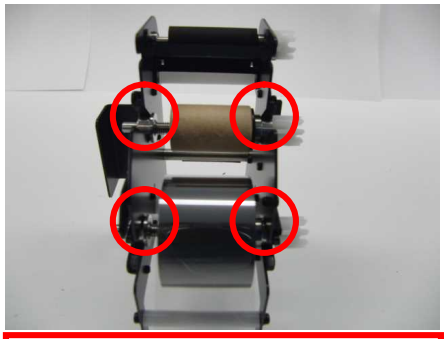
The ink surface is outside.
Set the ink ribbon in the spool holder so that the ink surface faces outside.



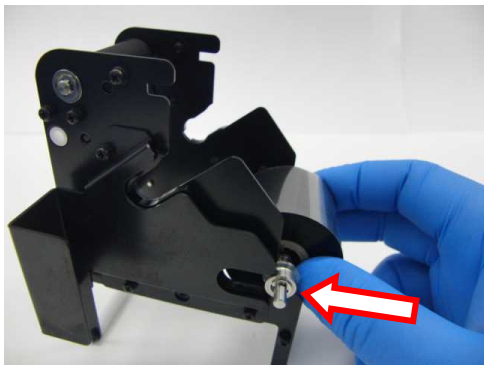
[5] Set the ink ribbon in the ribbon cassette.

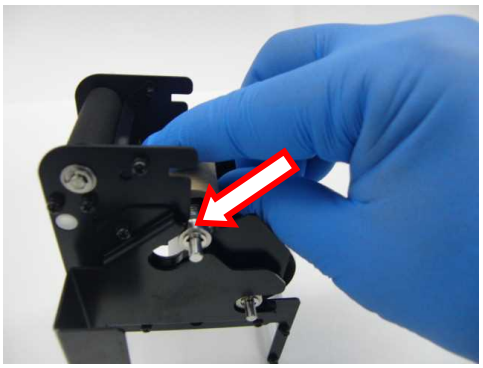
Spool catch



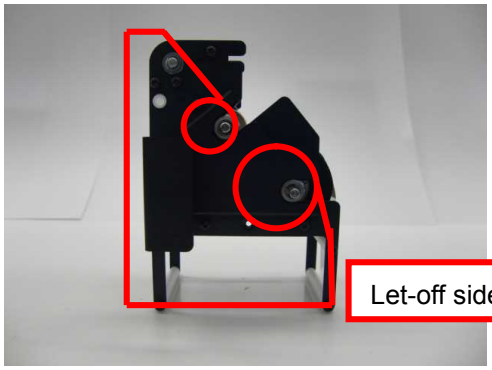


Insert the spool holder in the spool catch surely.



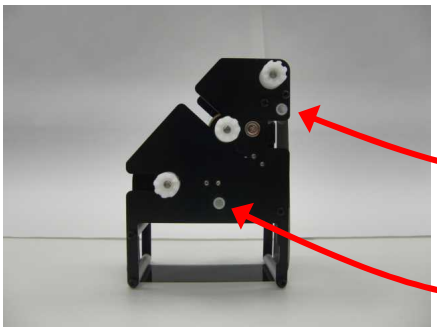


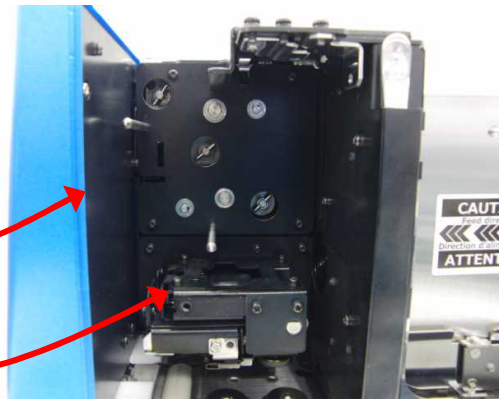
Wind-up side



Let-off side

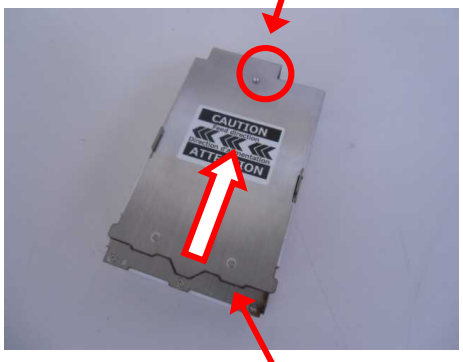
[6] Set the ribbon cassette in the main unit.





[7] Set a slide glass in the metallic magazine.

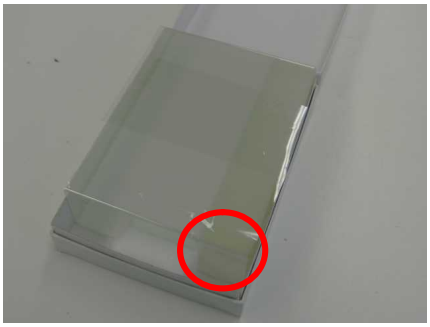
(1) Press the button



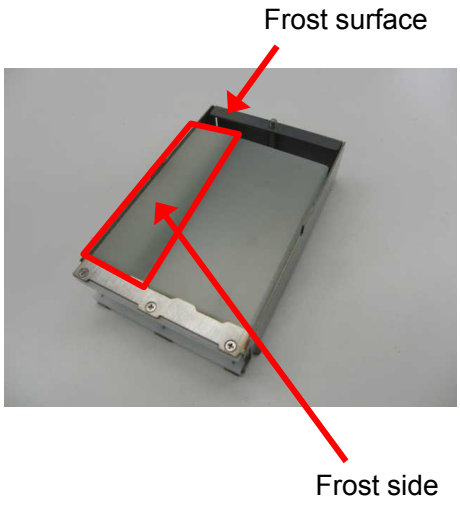
(2) Raise the cover

* The disposable magazine can be set directly.

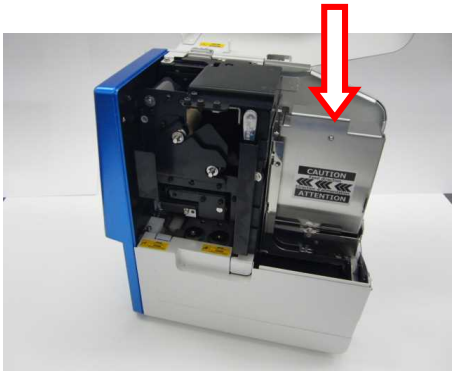
Set a slide glass in the magazine.

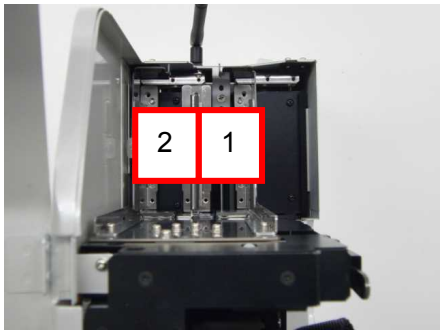


For the slide glass at the bottom, the frost surface is reversely set. When you set it in the magazine, change the direction.



Two magazines can be set.
The magazine on the right side seen from the front surface of device is magazine 1 and the left side is the magazine 2.



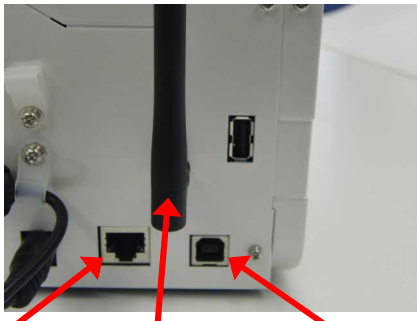


[8] Set the power supply (DC jack).

DC input part

Lace it in the retainer clip

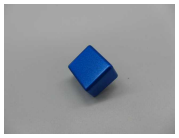
[9] Set the interface cable.



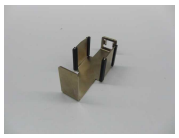
Wireless LAN Wireless LAN antenna USB

Lace it in the retainer clip

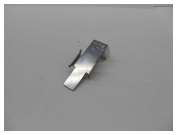
[10] Select and attach cap, stacker, and tray.



Front cover cap



20-sheet stacker



Manual feeding tray

Select a part to be attached to this section.

In the single sheet mode, set the front cover cap (attached when the product is shipped).

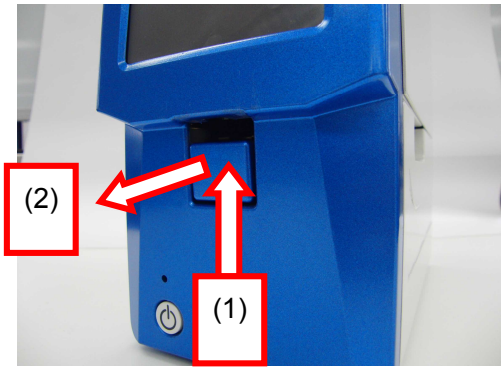
To use the product in the continuous mode, set the 20-sheet stacker.

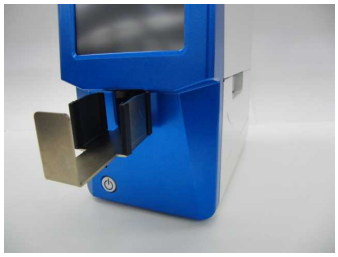
To use the product for front loading, set the manual feeding tray.

In any usage, attach cap, stacker, or tray by hitching it to the groove on main unit side.

[11] Turn ON the power supply.

How to remove the front cover cap

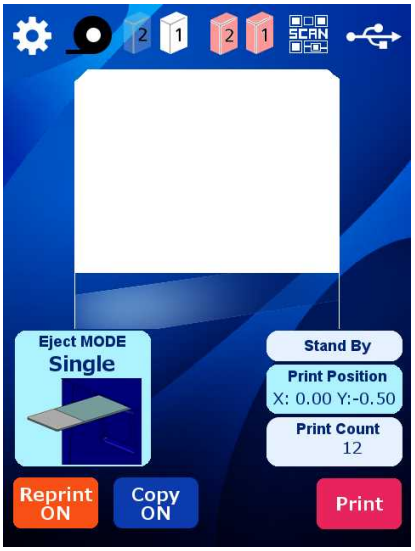




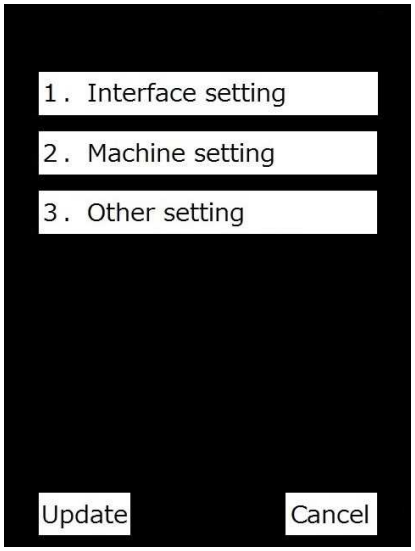
■□■ Method of change to Japanese display ■□■

Here shows the method for changing the language display to Japanese.

The mode shifts to setting mode.



3. Select “Other setting”.



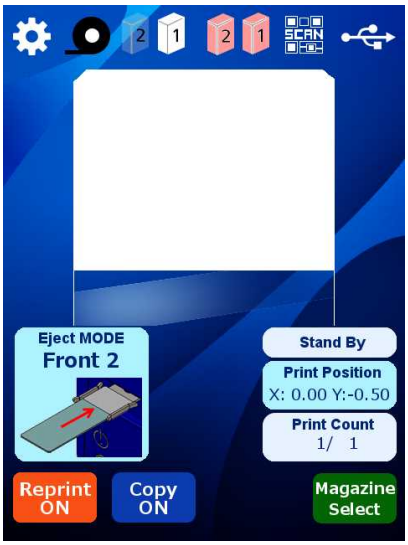
2. Change the LCD language from ENGLISH to JAPANESE and press △ button to return to the setting main screen.

Press “Update” to change the setting.
Turn OFF the power supply once, and then use the product.

■□■ Method for changing the setting mode ■□■

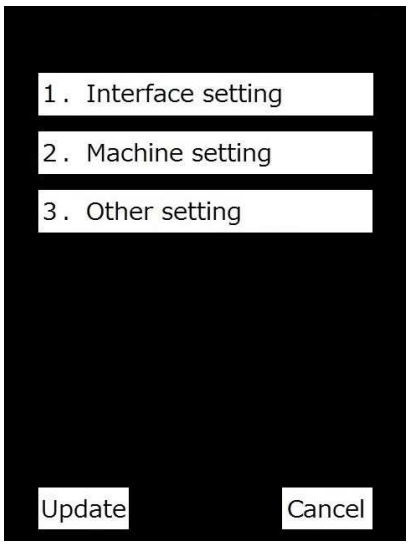
Here shows the method for changing the setting of printer.

The mode shifts to setting mode.



The following settings are available.

1. Interface setting
2. Machine setting
3. Other setting

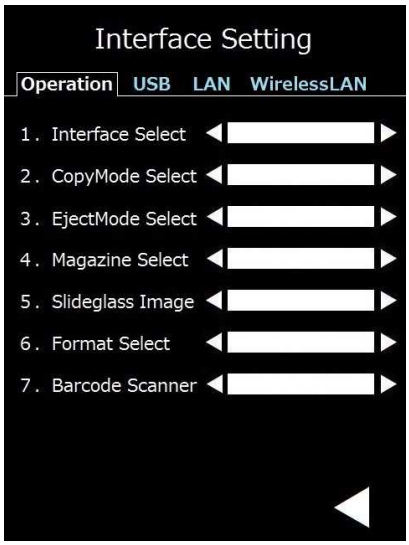


1. Interface setting

Change of operation mode

1.Interface select
Set the interface when the product is used by connecting it to PC.

2. Copy Mode select
Set ON/OFF of copy mode. This setting is used for temporarily switching the mode to the copy mode even if the product is connected to PC.



3. Eject Mode select
   Set the default (when the power supply is turned ON) discharge mode.
   Continuous → Printing is executed continuously.
   Single → Each sheet stops at the discharge section.
   Front loading 1 → Manual feeding mode 1
   Front loading 2 → Manual feeding mode 2
   The direction of frost varies between 1 and 2.

4. Magazine select
   Set the magazine to be enabled.

5. Slide glass image
   Not set currently

6. Format select
   Set the 2D code to be printed in the copy mode.

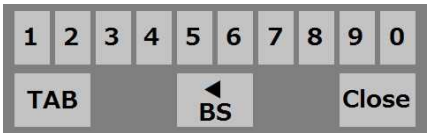
7. Barcode Scanner
   Specify whether the optional barcode scanner is connected or not.

Change of USB mode

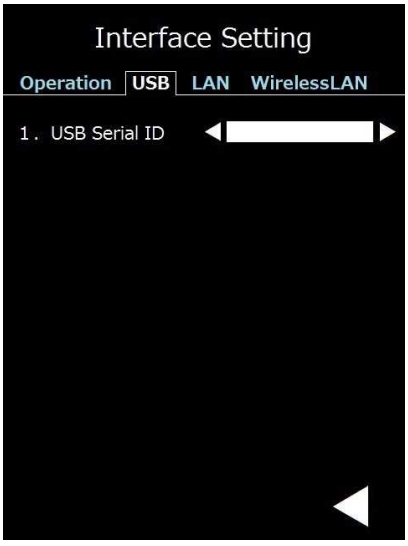
1. USB serial ID
   Set the ID of USB.

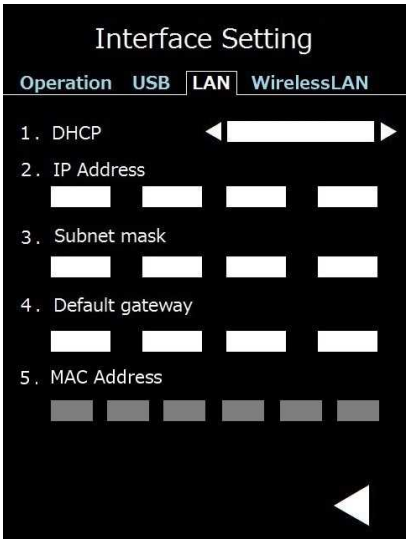
Change of LAN mode

1. DHCP
2. IP address
3. Subnet mask
4. Default gateway
   Carry out each setting.
5. Show MAC address.



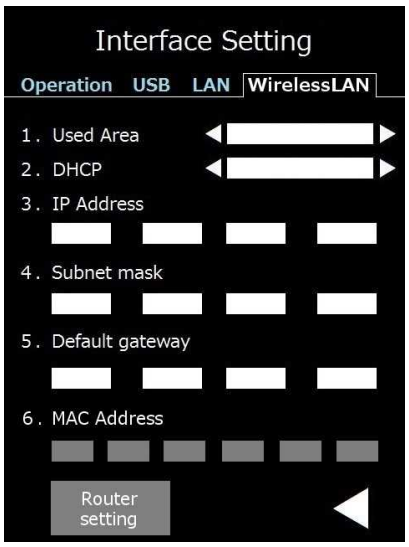
Items 2, 3, and 4 are input from keys.





Change of wireless LAN mode

1. Used area
2. DHCP
3. IP address
4. Subnet mask
5. Default gateway router setting
   Carry out each setting.
6. Show MAC address.



2. Machine setting

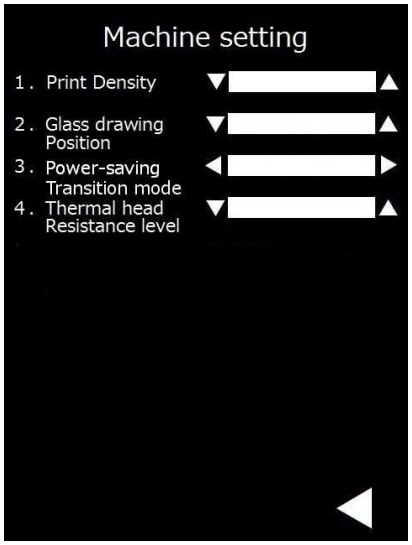
Various settings of printer can be implemented.

1.Print density
The print density can be corrected.

2. Glass drawing position
It is possible to set the glass discharge amount in the single discharge mode.

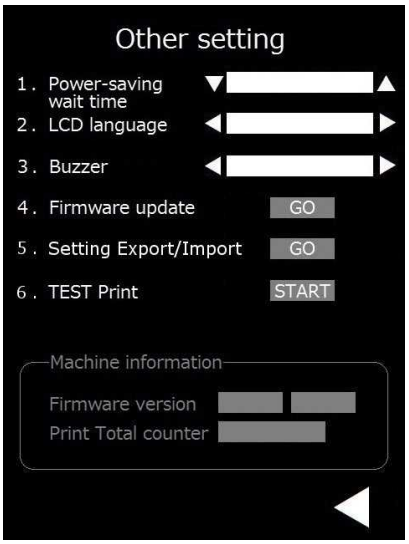
3. Power-saving Transition mode
If the system enters energy-saving standby status,
the Ribbon rewind mode (rewind) will be selected.

4. Thermal head Resistance level
Set the correction of head resistance value.



3. Other setting

It is possible to set or implement power saving standby switching time, language display switching, firmware update.



1.Power saving wait time
Set the power saving standby time.

2. LCD language
Switch the language to be displayed on LCD (English, Japanese).

3. Buzzer
It is possible to enable / disable the buzzer in case of alarm, error, and operation.

4. Firmware update
It is possible to update the firmware.

5. Setting Export / Import
The setting information is written in the USB memory.

6. Test print
It is possible to implement the test print.

■□■ Setting of interface ■□■

[1] USB ID

The initial value of USB ID is set to “1”.

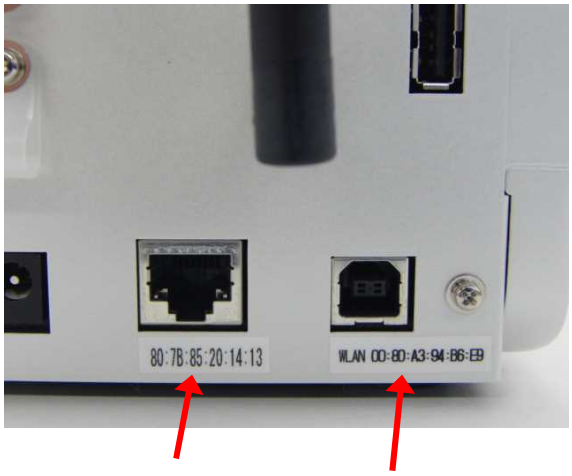
[2] Port No. of network

Interface	Printer driver	Command (bidirectional mode)	Command (simplex mode)
LAN	Protocol RAW Port TCP9100	Port TCP 51000	Port TCP 51000
Wireless LAN	Protocol RAW Port TCP9100	Port TCP 51000	Port TCP 51000

[3] MAC address

You can check the MAC address on the Interface Setting screen.

※ Some old firmware is displayed on the back panel interface connector section.



LAN Wireless LAN

■□■ Connection of barcode scanner ■□■

To use the product by connecting a barcode scanner to ESPO, it is necessary to carry out the setting as shown below.

Setting of prefix and suffix
Prefix: STX (Ctrl + B), Suffix: ETX (Ctrl + C)

Setting of interface
USB　HID

For the barcode to be read, the digit number is restricted.

When the product is used in copy mode: 13 digits
When PC is connected by transmitting status: 30 digits

■□■ Troubleshooting ■□■

[1] Description of error or alarm and coping process

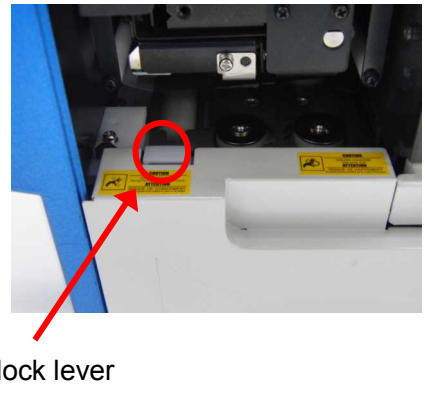
Indication	Description	Coping process
Ribbon end	The ribbon runs short.	Change the ribbon.
Glass empty	The magazine runs short of slide glass.	Replace the magazine to the magazine in which slide glasses are set.
Head break	The thermal head is damaged.	Change the thermal head.
Jam error	The slide glasses are not transferred normally.	Remove the clogging of slide glass.
Head position error	Up/down movement of head is abnormal.	It is necessary to carry out adjustment or replacement etc. Contact the maintainer.
Cover open	Upper cover or front cover is opened.	Close upper cover or front cover.
Magazine holder switching error	The magazine holder cannot be switched.	It is necessary to carry out adjustment or replacement etc. Contact the maintainer.

[2] Coping process when a slide glass is clogged in the printer

If a slide glass is clogged during transfer, turn OFF the power supply and remove the glass.

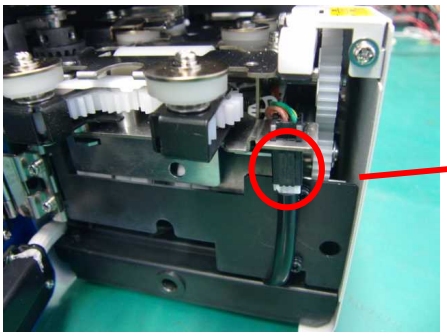
Open the upper cover and check the point where the glass is clogged.

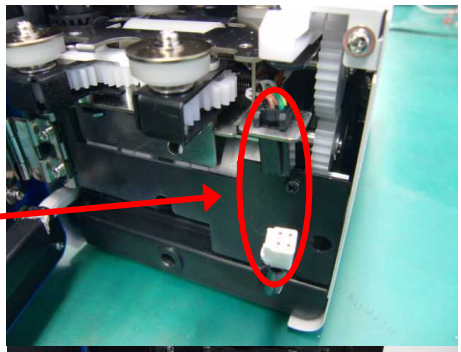
The front cover can be opened by pressing the front cover unlock lever.



The transfer unit can be pulled out forward.

The transfer unit can be pulled out by disconnecting the connector.



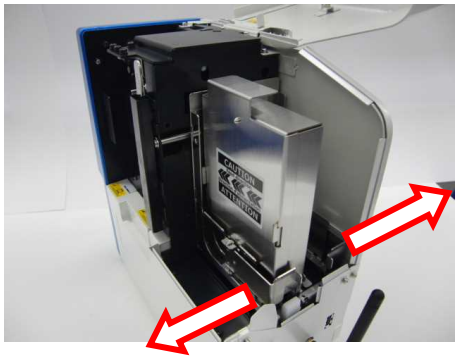


Remove the glass and restore the unit the way it was. Be sure to restore the connector too.

If a glass is clogged in the lower part of magazine, the glass can be pulled out by removing the magazine.

* If you try to pull out the magazine upward while a glass is clogged, the glass will get broken. Do not pull out the magazine in such a case.

Pull out the magazine backward, and then remove the glass.



A part of magazine holder can be opened.

The magazine 2 can be pulled out backward in a same way.

■□■ Daily maintenance ■□■

This printer requires daily maintenance to use it safely.

[Caution on cleaning]

Before cleaning, be sure to turn OFF the power supply of the printer.

At the cleaning, wipe off each part using a soft cloth such as waste cloth impregnated with dehydrated ethanol.

Frequent cleaning can ensure the good printing operation and the operation without failure or loss time.

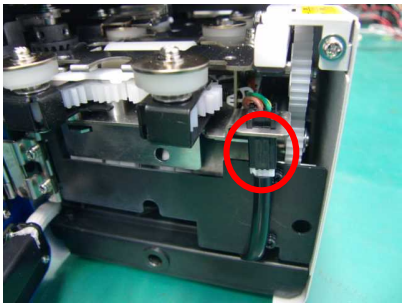
Cleaning of thermal head (indication of cleaning: at the replacement of ribbon, at the breaking of ribbon)

Open upper cover and front cover.

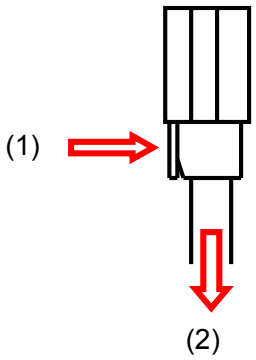
Clean up the heating element of head with a waste cloth impregnated with dehydrated ethanol.

The heating element is at the tip.

Open upper cover and front cover.



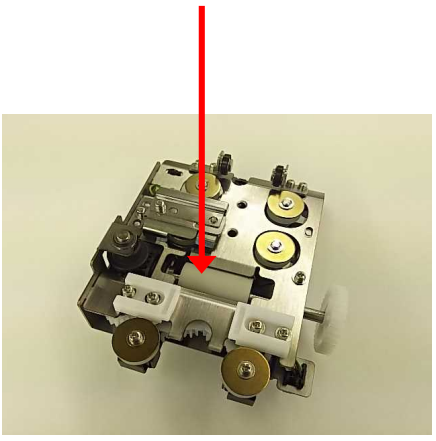
Disconnect the connector and pull out the transfer unit.



While the lock nail is pushed toward (1), pull out the connector downward (2).

Remove the taint attached to the platen roller using an air blow etc.

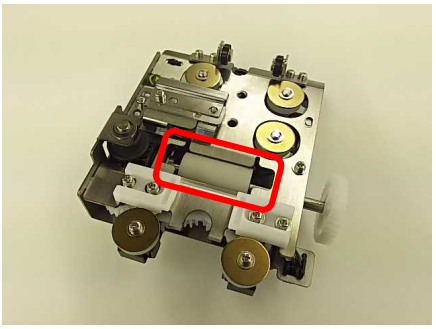
Platen roller



Clean up the whole circumference of platen roller while rotating it.

Air blow

Clean up the platen roller using a waste cloth impregnated with dehydrated ethanol.



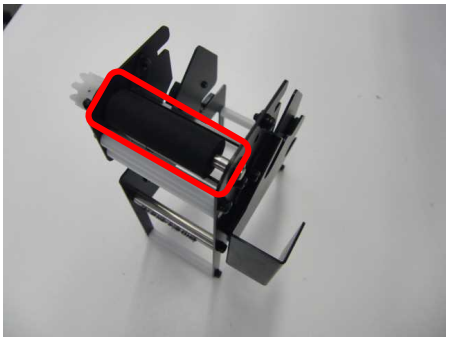
Clean up the whole circumference of platen roller while rotating it.

Cleaning of synchronized roller (indication of cleaning: at the replacement of ribbon)

Open upper cover and front cover.

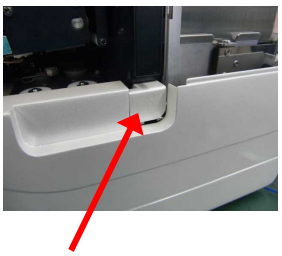
Remove the ribbon cassette, and then remove the ink ribbon from the cassette.

Clean up the platen roller using a waste cloth impregnated with dehydrated ethanol.



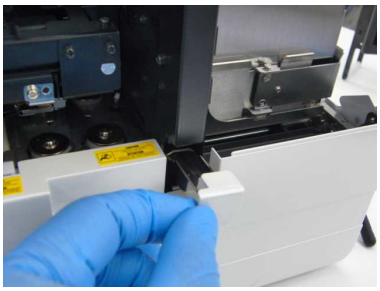
Cleaning of dust tray (indication of cleaning: at the replacement of ribbon)

Remove the glass powder accumulated in the dust tray.



Dust tray

Discard the accumulated glass powder.



As the dust tray is push latch type, push it, and then pull it out.

■□■ Cautions on use of printer driver ■□■

1.This driver is GDI printer driver.

In case of output from WPF application or output of XPS file, the print quality may get deteriorated.

2. If barcode / 2D code image created on the application software is magnified at the printing, deterioration such as strain and thickening / thinning of image will be generated to cause reading failure.
Do not magnify the barcode / 2D code you create once at the printing.

Title	Revision history

Revision history

Rev. No.	Page	Date of establishment / revision	Content of revision	Review / approval	Creation
1	All pages	March 23, 2017	Newly established		
2	All pages	June 1, 2017	Full review		
3	P. 27 P. 28 All pages	July 6, 2017	Setting of interface is added Setting at barcode connection and restriction of digit number are added English and Japanese descriptions are changed fully		
4	All pages	August 5, 2017	Inserted photos are replaced		
5	P23～P26	August 22, 2017	Modification of “Method for changing the setting mode”		
6	P33	September 28, 2017	Photo change of transfer unit		
7	P8 P18,19 P24,25 P27	December 4, 2017	Change of attached item Photo change of magazine LAN,WLAN setting screen change Change of MAC address confirmation method		
8	P25	December 14, 2017	Change machine setting screen Change item name on machine setting screen		
9	P2 P7 P24 ～ P26	January 9, 2018	Added FCC Compliance Statement Added to“Cautions on safe use of this product" Type mistake correction		