ARGOX iX4 Series Printer User Manual
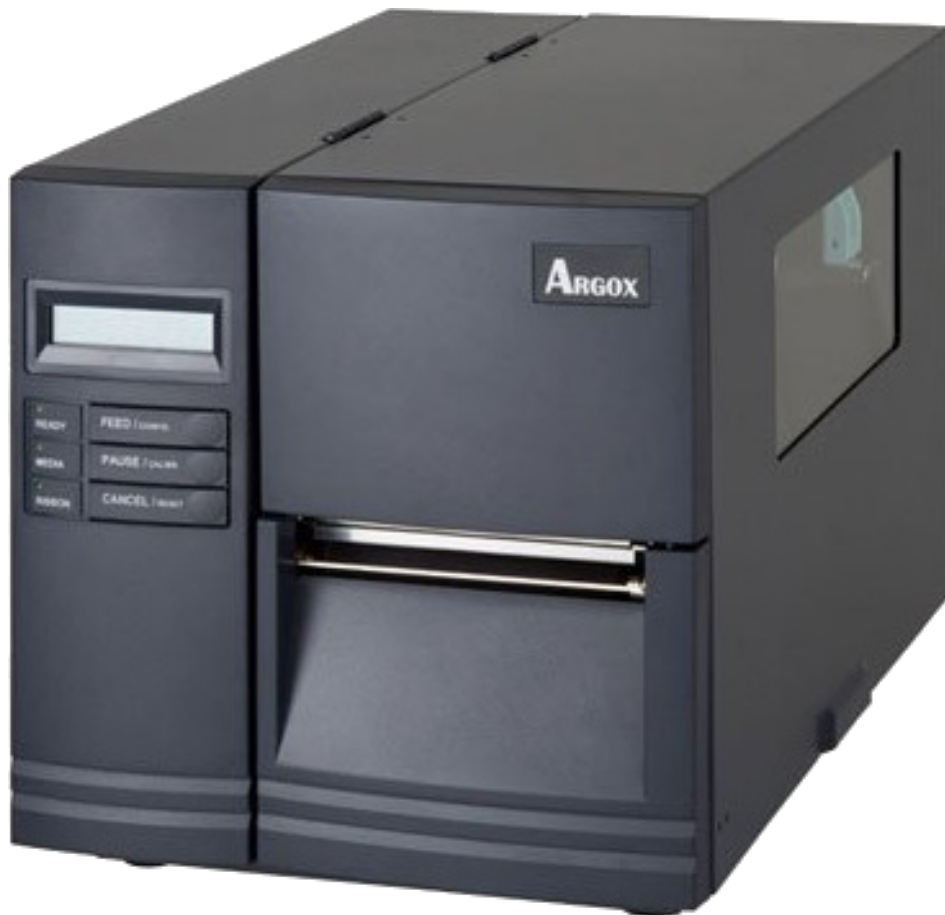
Contents

ARGOX iX4 Series Printer

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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 in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and the receiver.
Connect the equipment into a different outlet on a different circuit. Consult the dealer or an experience Radio/TV technician for help.
This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to insure compliance. The user is cautioned that any changes or modifications not expressly approved by Argox Information Co., Ltd. could void the user's authority to operate the equipment.
This is a Grade A product. In living environment, the product may cause interference to radio communications. In this case, the user is encouraged to try to correct the interference by effective measures.

Caution
Ensure to connect the power cord of power adapter to a socket-outlet with earth connection.
Caution
There will be a risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions. After performing any installation or servicing, make sure the enclosure is correct in position before turning on the power.
Caution
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Introduction

This manual provides information about how to set up and operate your printer, load media, ribbon and solve common problems. Illustrations are provided to help you quickly become familiar with the printer.

Features

- **Fast Print Speed**

  Max. 8 IPS, fastest print speed in its class.

- **Communication**

  Standard: Ethernet, dual USB hosts, USB device, and RS-232.

  Option: Wi-Fi, GPIO, Parallel, and Buzzer

- **Online management**

  Web management and SNMP v2 support

- **Duel USB host function**

  Stand-alone mode of scanner/ keyboard multiple data entry devices

- **New media calibration**

  Intelli mode & Auto-feed mode & Smart mode

Unpacking

Make sure all of the following items are included in your package.
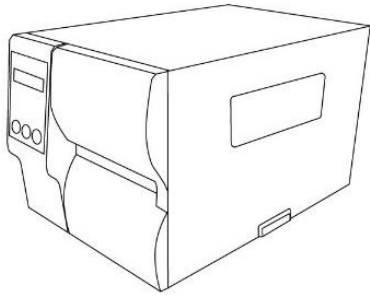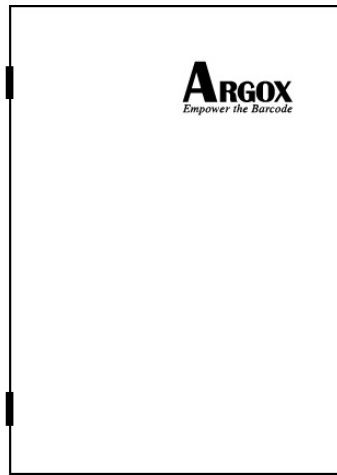
Printer	Quick Installation Guide	DVD
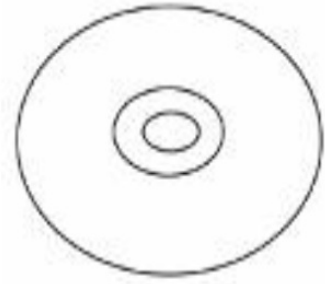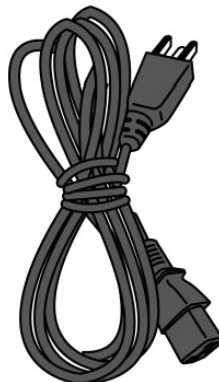
USB Cable	AC Power Cord	1" ID Core for Ribbon
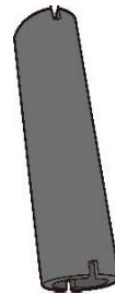
When you receive the printer, open the package immediately and inspect for shipping damage. If you discover any damage, contact the shipping company and file a claim. Argox is not responsible for any damage incurred during shipping. Save all package materials for the shipping company to inspect.

Understand Your Printer

Perspective View

- iX4-250, iX4-350

iX4-250, iX4-350

LCD Display
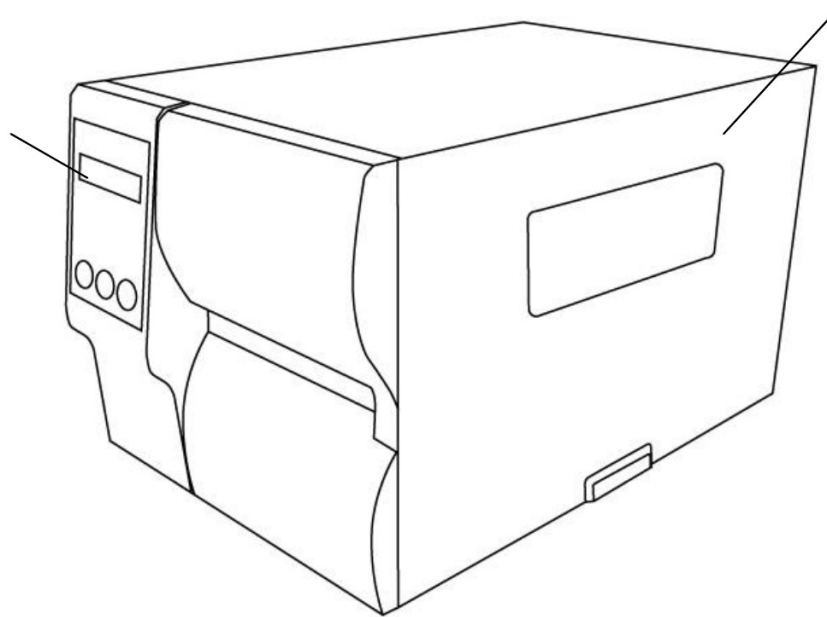
Top Access Door

- iX4-240, iX4-200

iX4-240, iX4-200

Control panel

Top Access Door
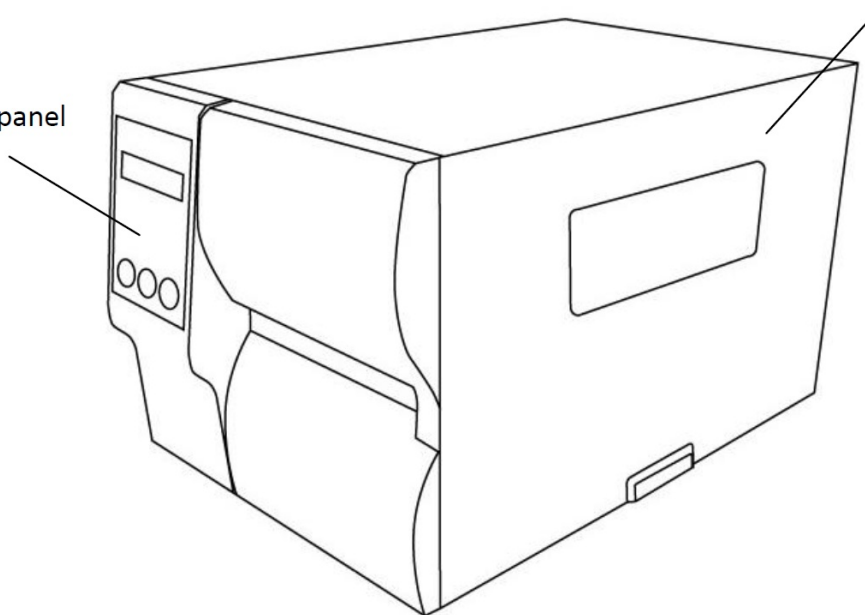
Back View

- iX4-240, iX4-250, iX4-350 Standard

Ethernet

USB Type A

USB Type B

RS232 Serial

Power switch

AC power connector
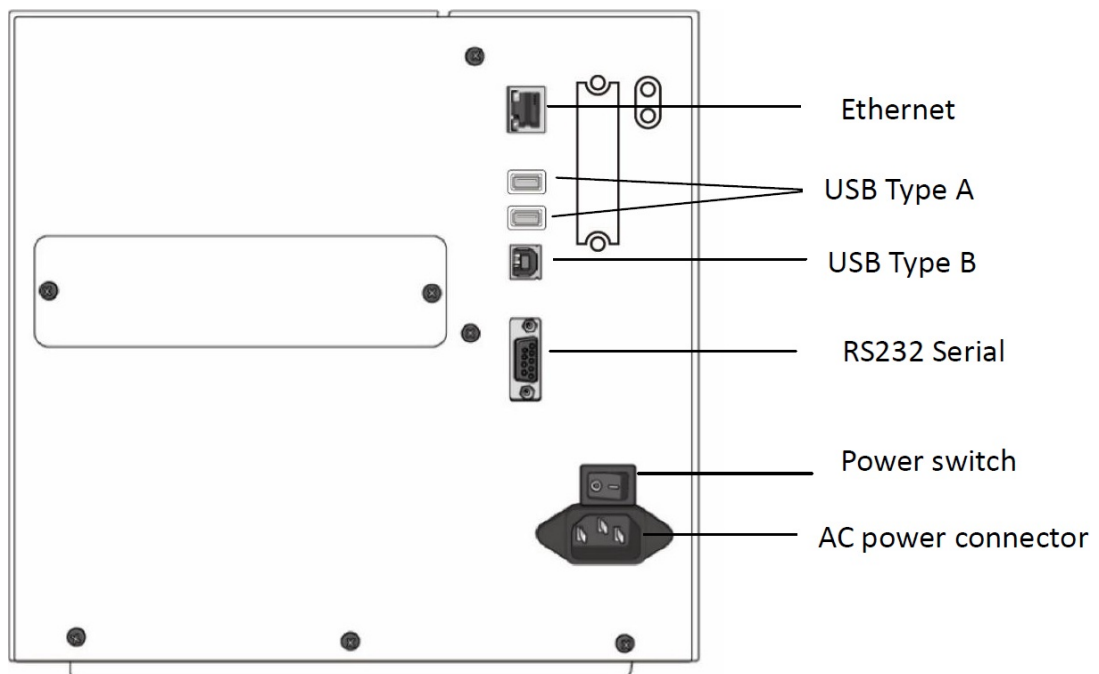
- iX4-240, iX4-250, iX4-350 Optional

WIFI

Parallel port

GPIO

- iX4-200 Standard

USB Type B

RS232 Serial

Power switch

AC power connector
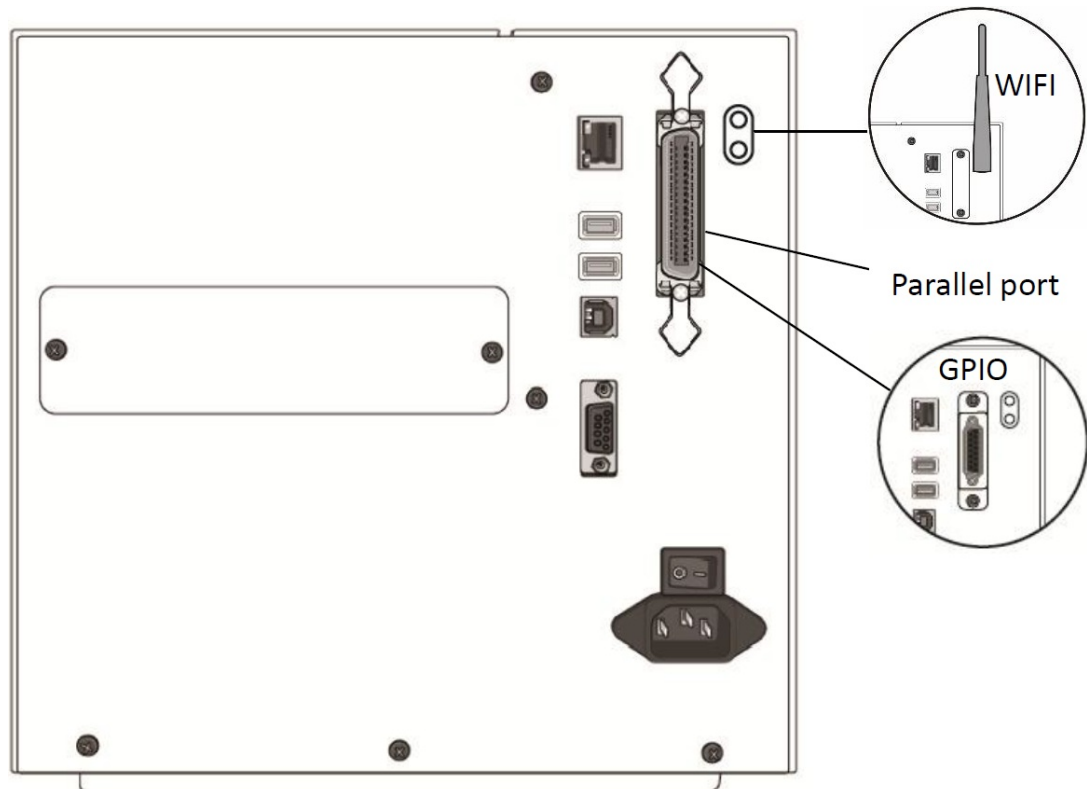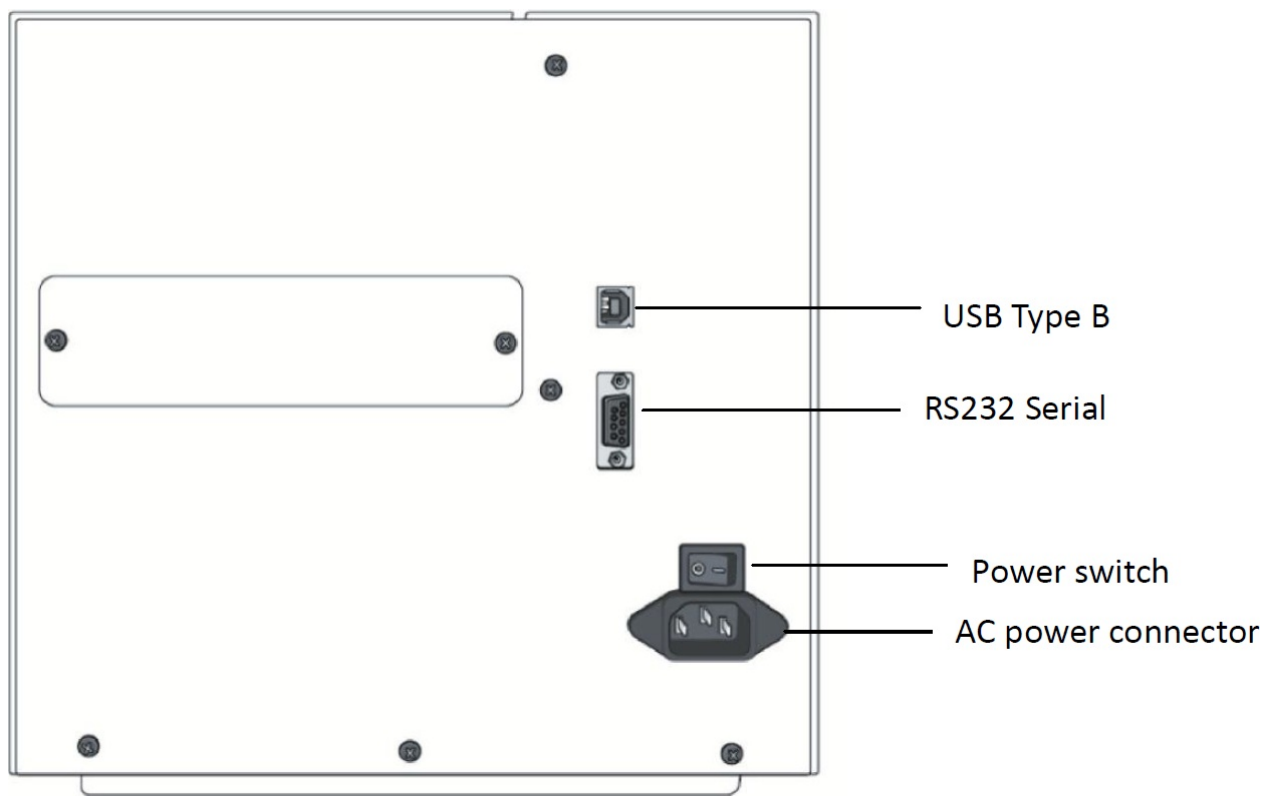
Interior View

- Internal Parts and Features

Ribbon Supply Spindle

Ribbon Pick-up Spindle

Media Supply Spindle

Feed Slot

- Rotate Head Latch

Thermal Print Head

Head latch

Paper Roller

Paper sensor

Outside Media Guide
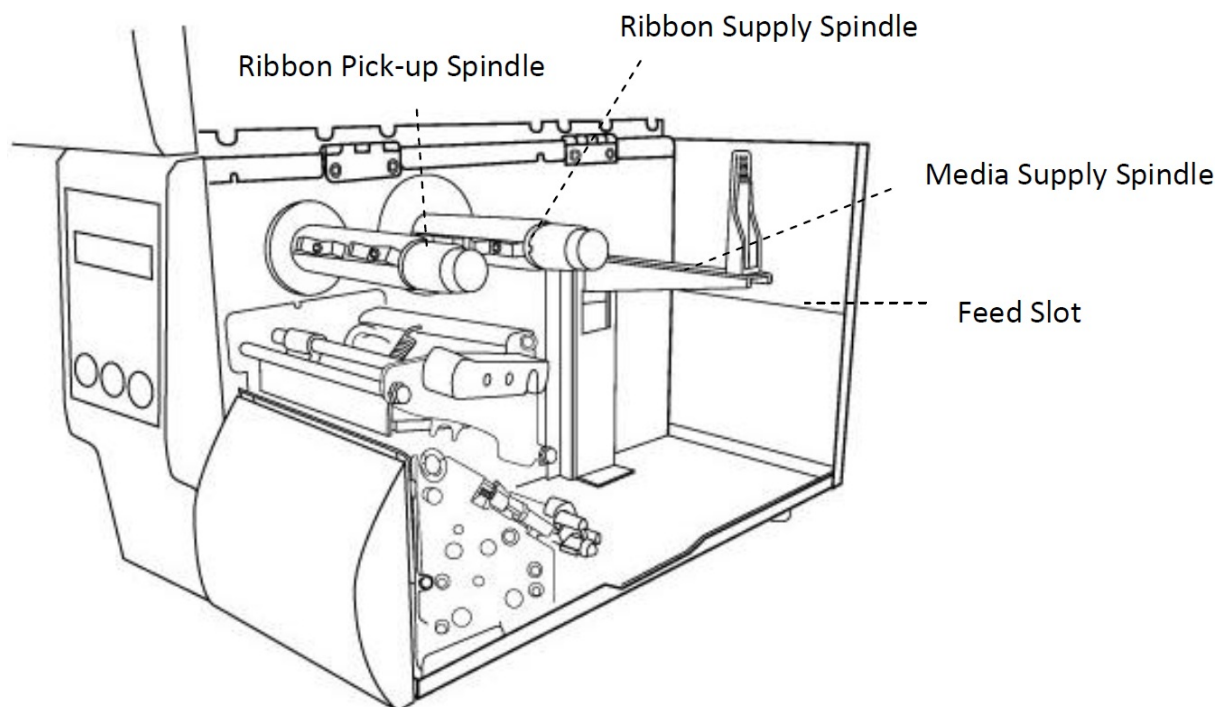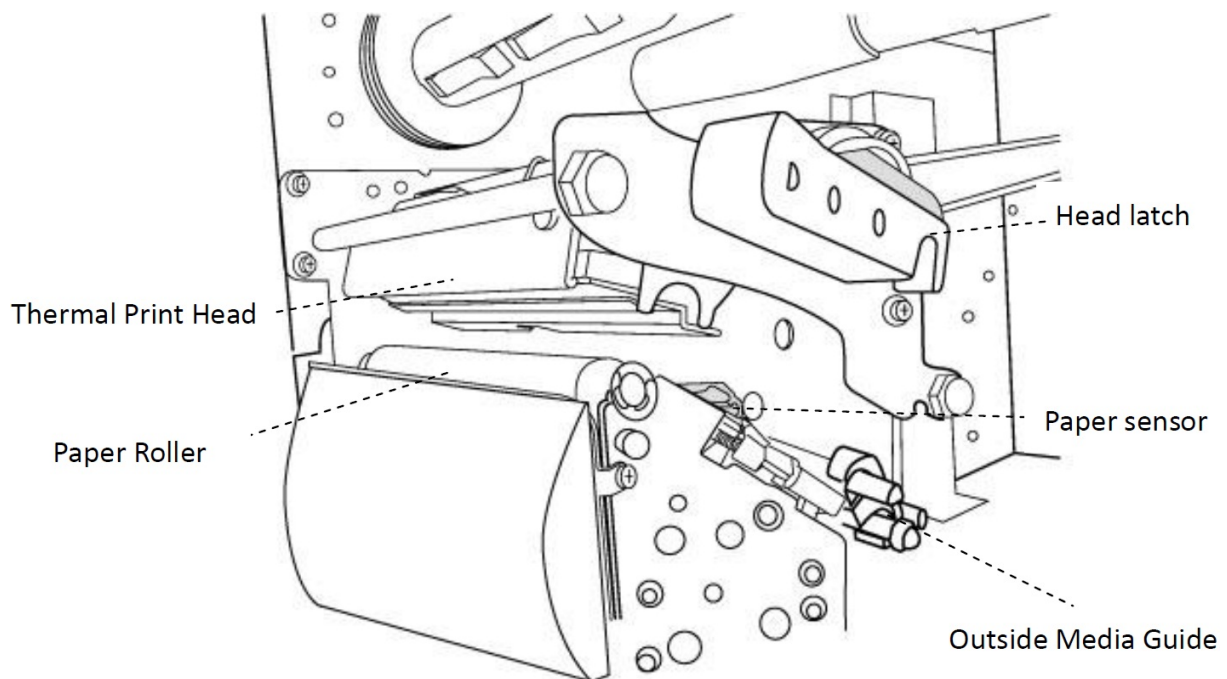
Printer Control Panel

There are three lights on the front panel – READY, MEDIA and RIBBON. These indicators display operation status of the printer. Three Buttons – FEED, PAUSE, CANCEL can control printer simple function.

Status Lights
Status lights help you check printer's condition. The following tables show the status lights and the conditions they indicate.

LCD Display	READY	MEDIA	RIBBON	Description
READY	ON	ON	ON	In the ready mode
PRINT HEAD HEAT	ON	Blinking	ON	Print head needs to cool down.
COMMAND ERROR	ON	Blinking	Blinking	A command error was found while checking the command sequence.
EEPROM ERROR	ON	Blinking	Blinking	An EEPROM for back-up cannot be read/written properly.

MEMORY ERROR	**ON**	**Blinking**	**Blinking**	• An error has occurred in writing • data into USB memory or flash memory. • An erase error has occurred in • formatting USB memory or flash memory. • Saving failed because of the • insufficient capacity of USB memory or flash memory. • Firmware update has error.
CANCEL …	**Blinking**	**ON**	**ON**	Press CANCEL KEY to interrupt and delete a print task
CLEAR FLASH	**Blinking**	**ON**	**ON**	Clear flash memory.
CUTTER FAILED	**Blinking**	**ON**	**ON**	Cutter has failed, or there is paper jam inside the cutter.
MEMORY FULL	**Blinking**	**ON**	**ON**	Printer buffer is full caused by the loaded soft fonts, graphics or forms.
MEMORY INITIALIZED	**Blinking**	**ON**	**ON**	USB Memory is being initialized.
PAUSE	**Blinking**	**ON**	**ON**	Printer is in PAUSE status. Media sensor can not index label gaps
PRINTHEAD BROKEN	**Blinking**	**ON**	**ON**	Head broken error
PRINT HEAD OPEN	**Blinking**	**ON**	**ON**	Head latch is not closed.

RESET	**Blinking**	**ON**	**ON**	Press CANCEL KEY + POWER ON to reset NVR table.
SERIAL IO ERROR	**Blinking**	**ON**	**ON**	The format or baud rate of the RS232 communication is inconsistent between the printer and host.
SELF TEST …	**Blinking**	**ON**	**ON**	Press FEED KEY + POWER ON to print the self-test label.
UPGRADING FW.	**Blinking**	**ON**	**ON**	Printer is receiving data
RIBBON OUT	**Blinking**	**ON**	**Blinking**	Ribbon is not installed or end-of-ribbon occurred.
CALIBRATION	**Blinking**	**Blinking**	**ON**	Press PAUSE KEY + POWER ON to calibrate media.
MEDIA OUT	**Blinking**	**Blinking**	**ON**	Media is not installed or used up. Printer fails to detect the media gap. The media sensor is out of range during calibration. The label has run out. The last label has been issued normally and the label has run out.
PAPER JAM	**Blinking**	**Blinking**	**ON**	A paper jam occurred during paper feed.

Buttons
There are three buttons, each with two basic functions.

Button	Function 1	Function 2
FEED	Feed a label	
PAUSE	Pause printing	Press again to resume printing
CANCEL	Interrupt and delete a print task	Force printer to continue after an error is solved.

Get Started

This chapter describes how to set up your printer.

Attach the Power Cord

1. Make sure the power switch is set to the OFF position.
2. Place the printer within cable distance of the host and printer (USB or Serial cable.)
3. Isolate the power cord from other electrical cables.
4. Plug the other end of the AC power cord into the wall socket.
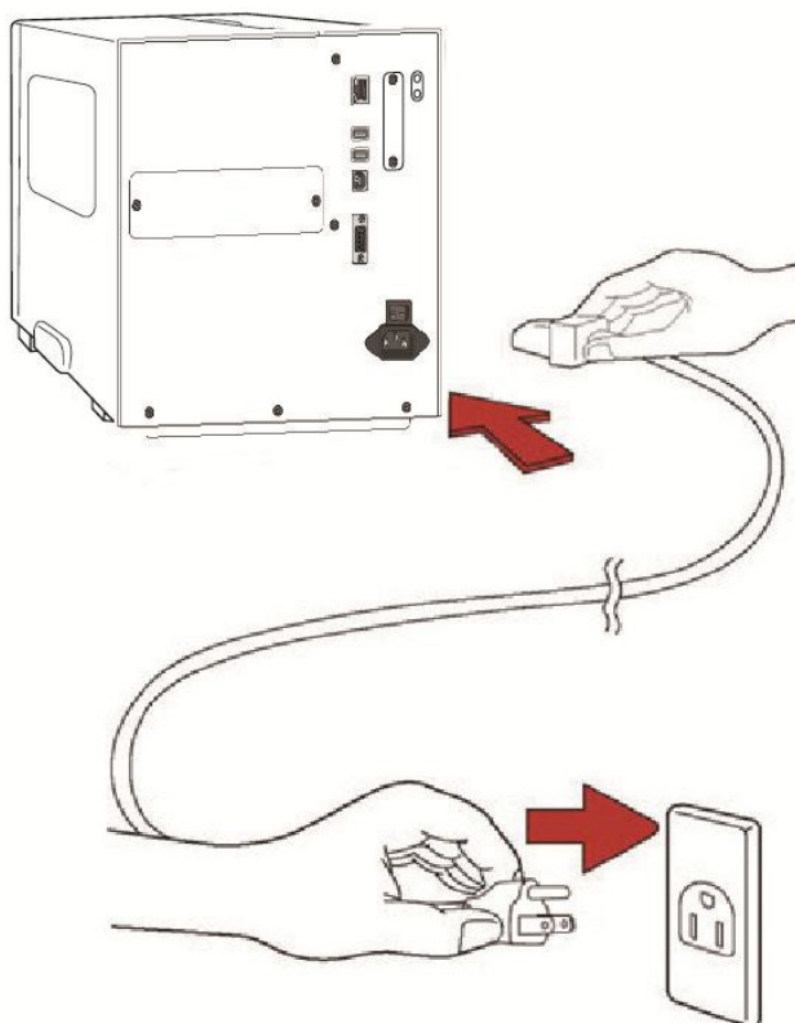
Warning: Do not plug the AC power cord with wet hands, or operate the printer and the power supply in an area where they may get wet. Serious injury may result from these actions!

Turn on/off Your Printer

When your printer is connected to a host (a computer), it is good to turn on the printer before turning on the host, and turn off the host before turning off the printer.

Turn On Your Printer

1. To turn on your printer, turn on the Power Switch as below. The "I" is the **ON** position.
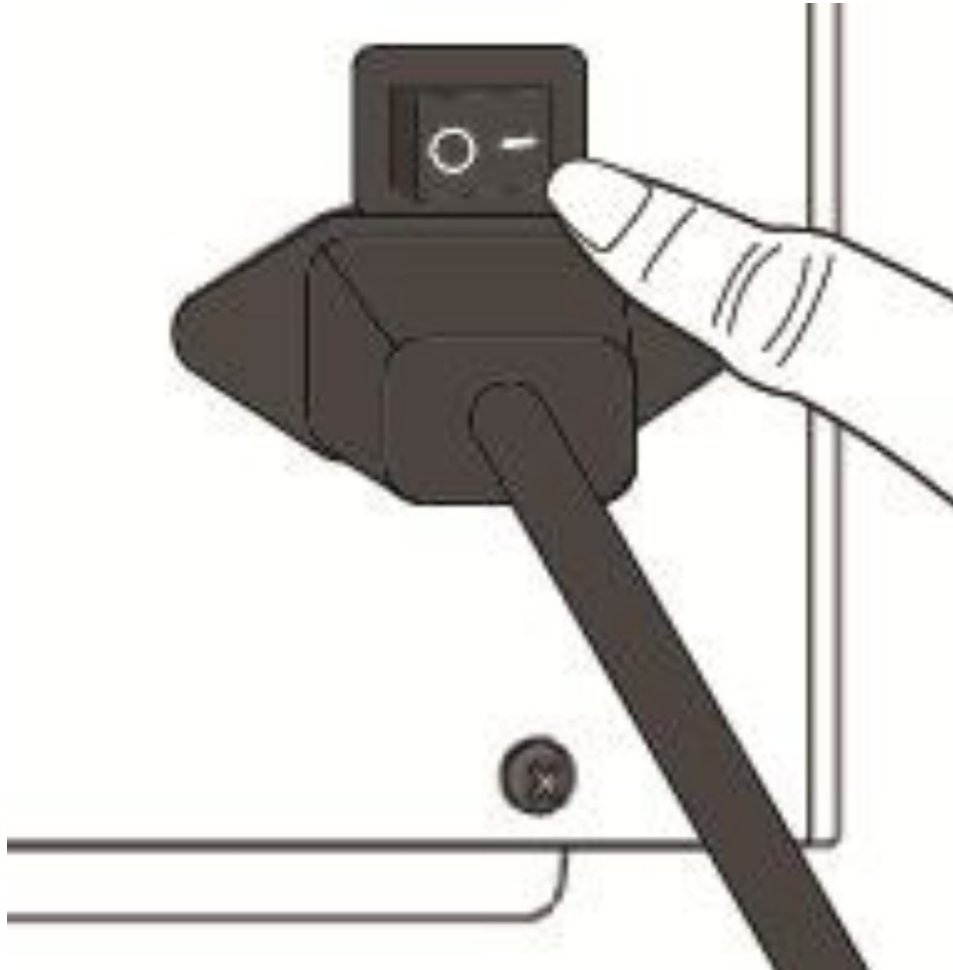
2. READY, MEDIA and RIBBON LED are solid blue. Then READY LED turn off few second while LCD screen shows firmware version. LCD screen will show Ready to print and READY LED will back to solid blue.

Turn Off Your Printer

1. Make sure READY, MEDIA, RIBBON are solid blue before turning off the printer.
2. To turn off your printer, turn off the Power Switch as below. The "O" is the OFF position.

Caution: Do not turn off your printer during data transmission.

Load Media

The iX4 Series printers offer three different loading modes: standard, peel-off, or with a cutter.

- Standard mode allows you to collect each label freely.
- Peel-off mode peels backing material away from the label as it prints. After the label is removed, the next label prints.
- Cutter mode automatically cuts the label after it prints. There are rotate cutter and guillotine cutter types to cut media.

Important: The first time to use peel-off mode and cutter mode. Make sure to enable the PEELER INSTALLED or CUTTER INSTALLED setting in front panel.

Thermal Transfer Media Loading Instructions

Outside woundmedia
Inside woundmedia
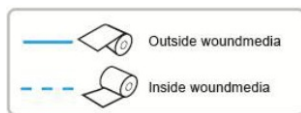
Label must face up.
① Media is under the sensor
② Media through two rings before lock outside guide
③ Media must under media guide

Outside Ribbon
Inside Ribbon

(!) Ribbon is above the sensor
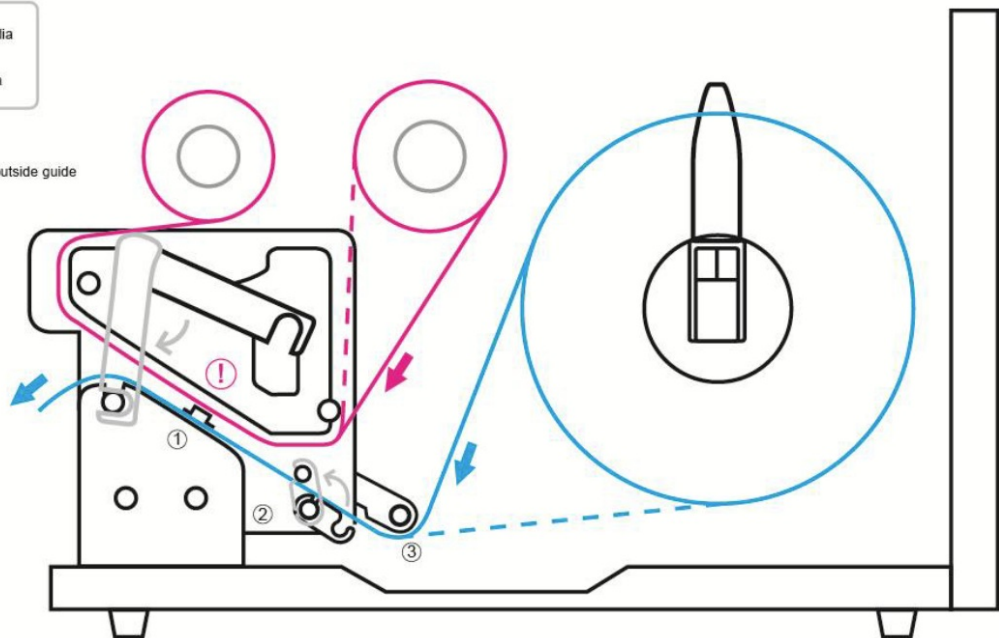
Prepare Media

The inside wound and outside wound media roll can be loaded into the printer the same way. In case the media roll is dirty during shipping, handling or storage, remove the outside length of the media. It helps avoid dragging adhesive and dirty media between the printhead and platen roller.

Inside Wound   **Outside Wound**
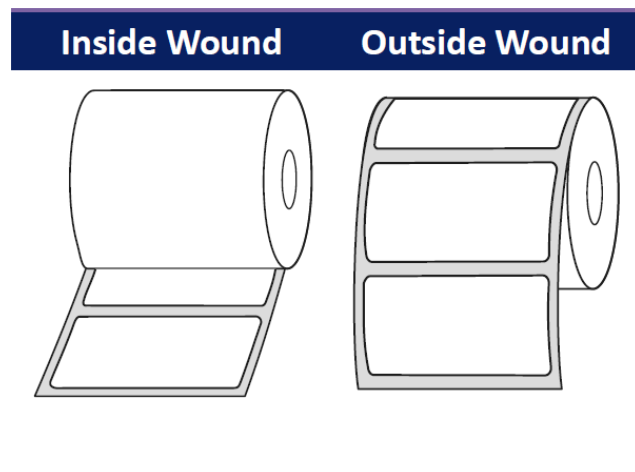
Placing Media Roll

Load Media In Standard Mode

1. Lift the top cover to expose the media compartment.
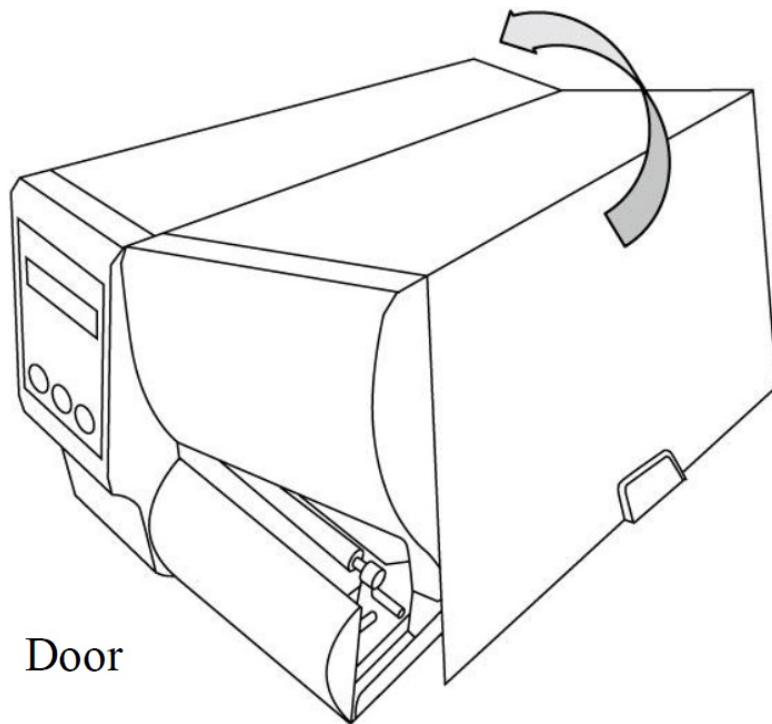
Door

2. Insert the media roll into the media supply spindle and move the media guide to the inside.

Media Guide

Media Supply Spindle
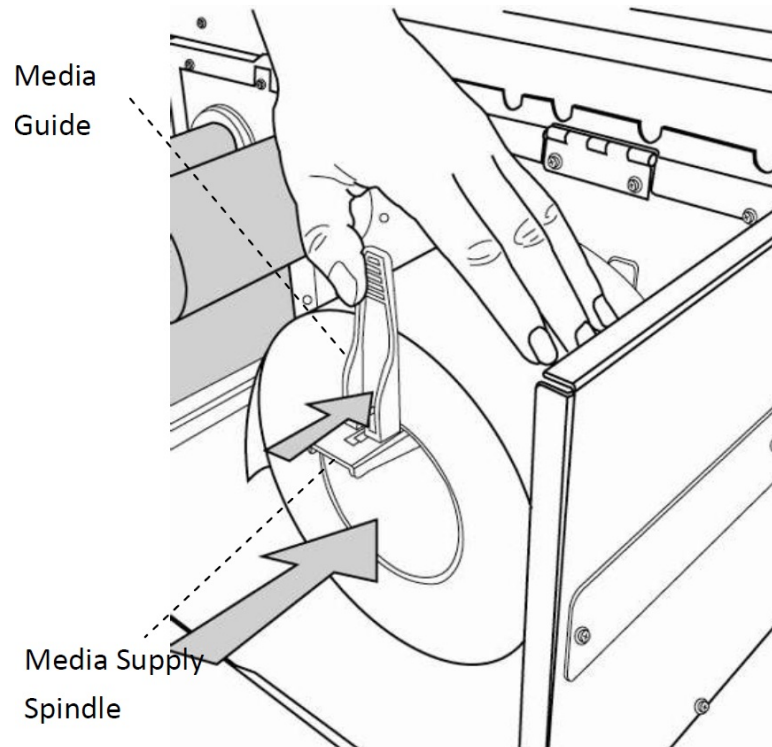
3. Turn the head latch counter-clockwise and open the outside media guide counter-clockwise for media insert.

Head Latch

Outside Media Guide
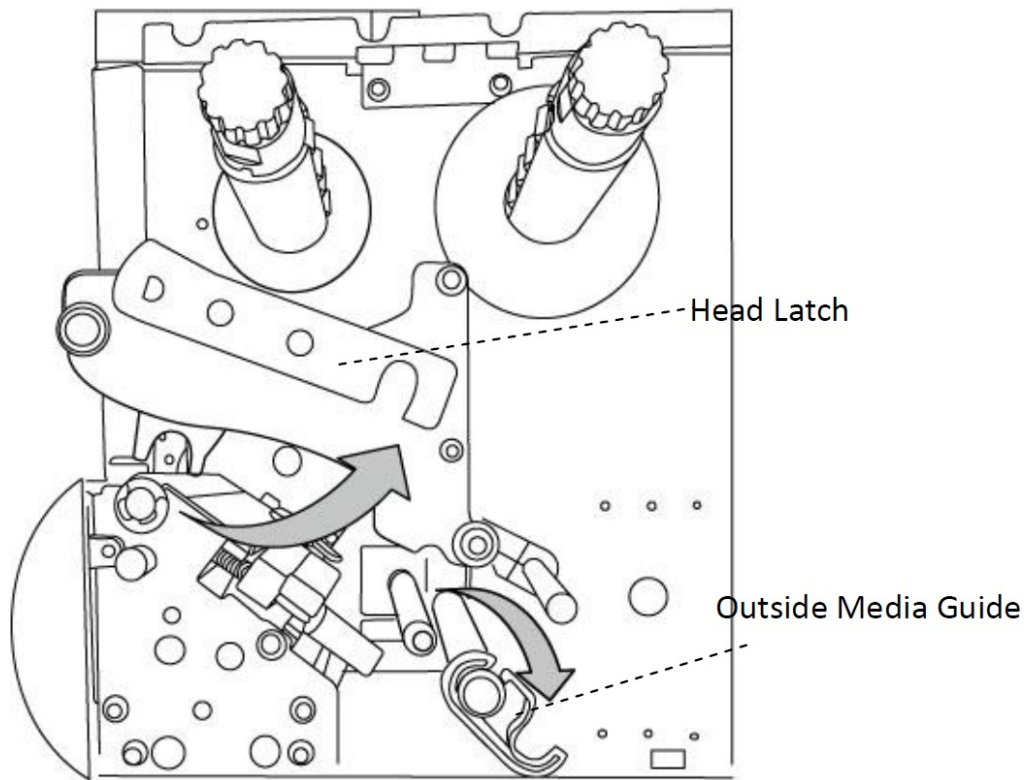
4. Label must face up when lead the media through the print head module. Media is under "media guide" and through two rings before lock "Outside Media Guide". Then, under the paper sensor guide module and over the roller.

Print Head Module

Paper Sensor Guide Module

Media Guide

Roller

Two Ring

5. Return the outside media guide and hook the head latch.

Head Latch

Outside Media Guide

6. Close the top cover.
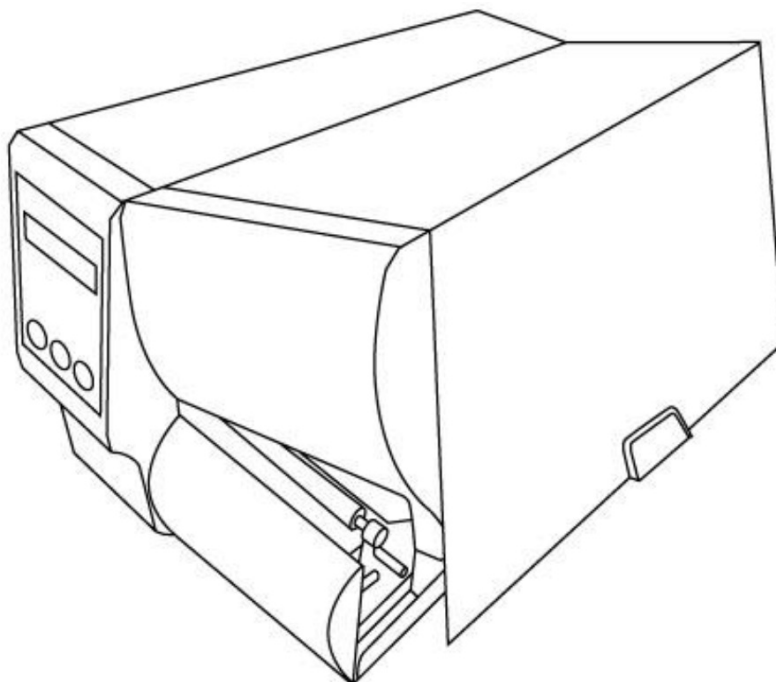
7. Press the FEED button if the printer is already on.
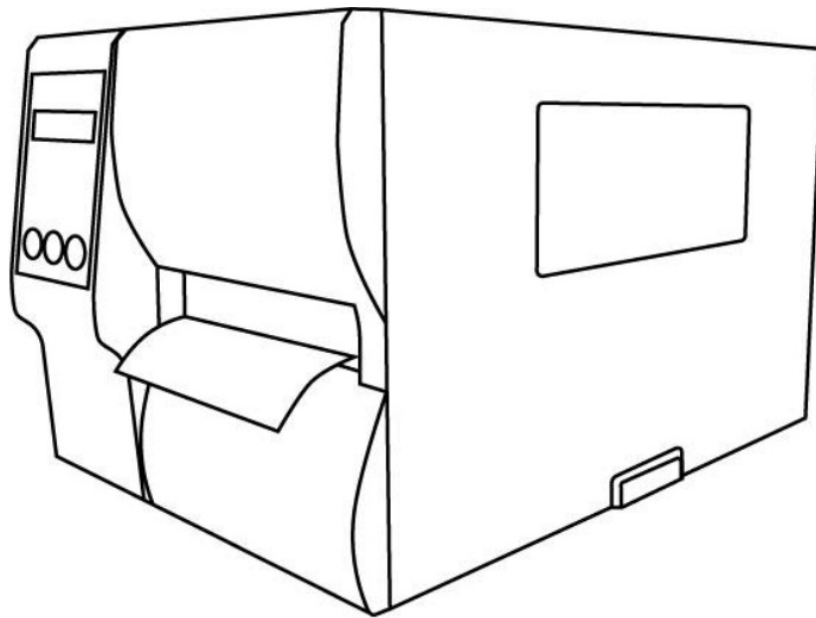
Important
After the media is loaded, please perform media calibration to calibrate the label sensor before printing.

Load Media In Peel Off Mode
Steps 1 to 3 are the similar with "Standard Mode".

1. Lift the top cover to expose the media compartment.
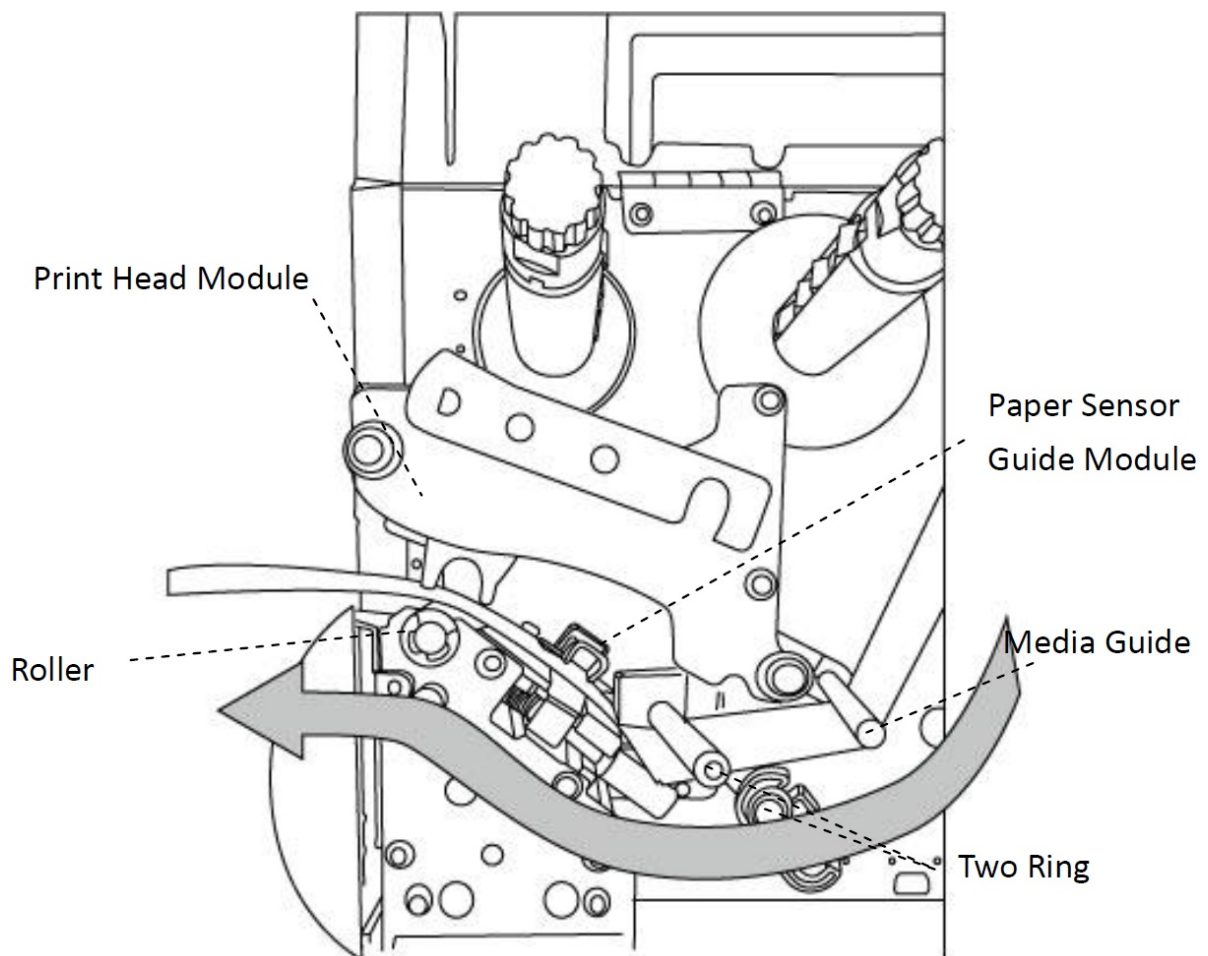2. Insert the media roll into the media supply spindle and move the media guide to the inside.
3. Turn the head latch counter-clockwise and open the outside media guide for media insert.
4. From the leading end of the media roll remove enough labels to expose 6-inches of backing paper.

5. Lead the media backing paper under the print head module. For more specific leading media refer to standard mode step 4.

Print Head
Module

Media

6. Push down the peel-off mechanism release lever and lead the media backing paper behind the peeler module.

Media

Peel Lever

7. Close the peeler module using the peel-off mechanism release lever. Return the outside media guide and hook the head latch.

Peeler lever

Outside media guide
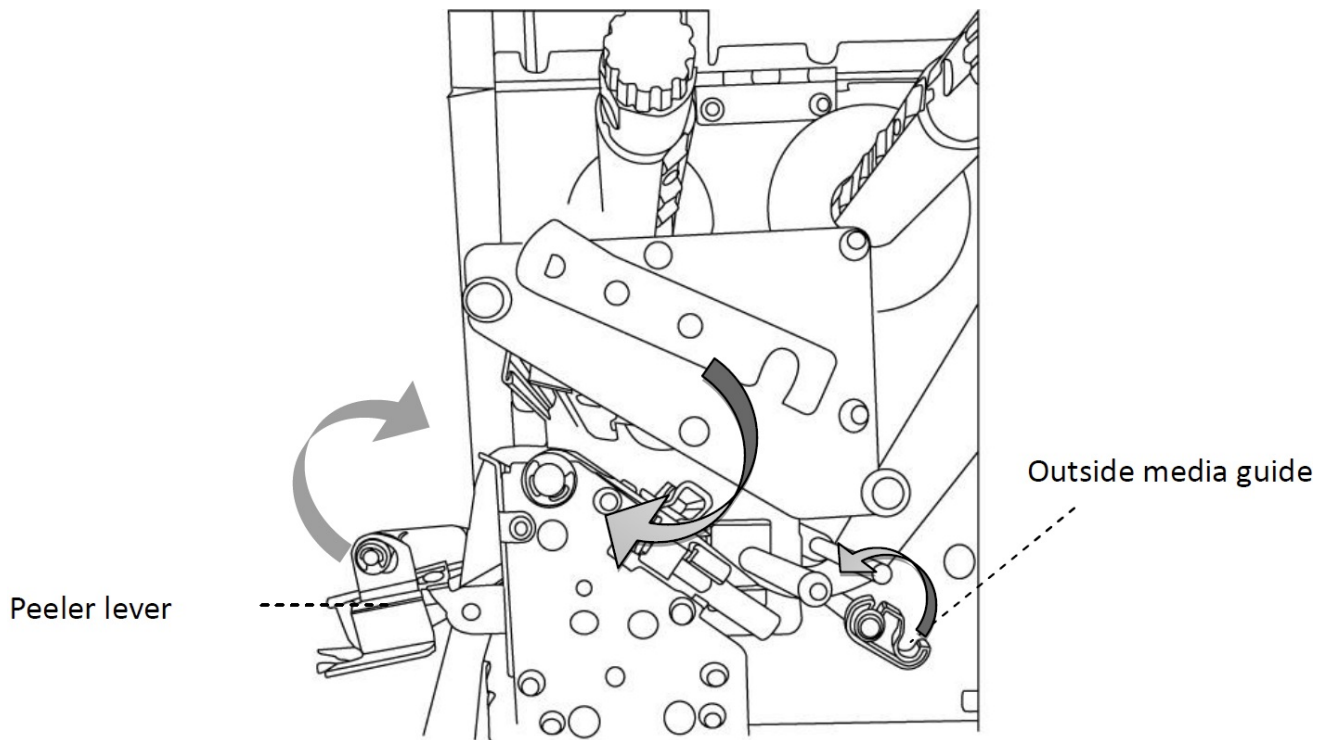
8. Close the top cover and turn on the printer or press the FEED button if the printer is already on.
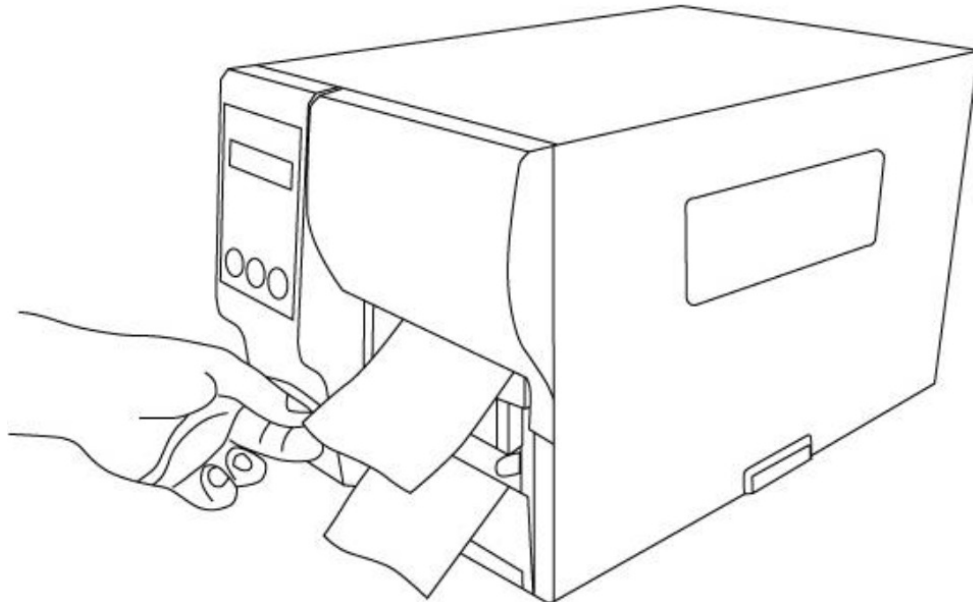
Important
After the media is loaded, please perform media calibration to calibrate the label sensor before printing.

Load Media In Rotary Cutter Mode
Steps 1 to 3 are the similar with "Standard Mode".

1. Lift the top cover to expose the media compartment.

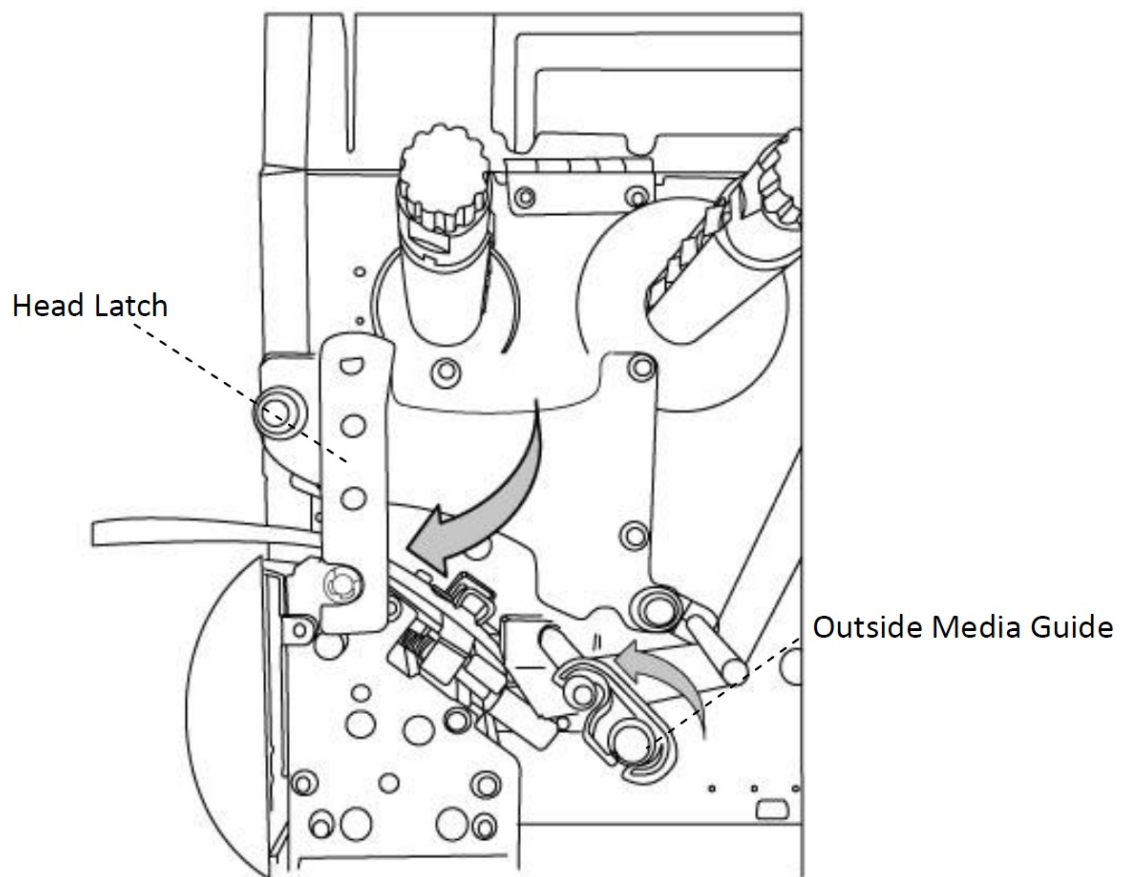2. Insert the media roll into the media supply spindle and move the media guide to the inside.

3. Turn the head latch counter-clockwise and turn on the outside media guide.

4. Insert the media under the print head module and under the paper sensor guide over the roller. For more specific leading media refer to standard mode step 4.

Print head module

Roller

5. Return the outside media guide and hook the head latch.

Head Latch

Outside Media Guide
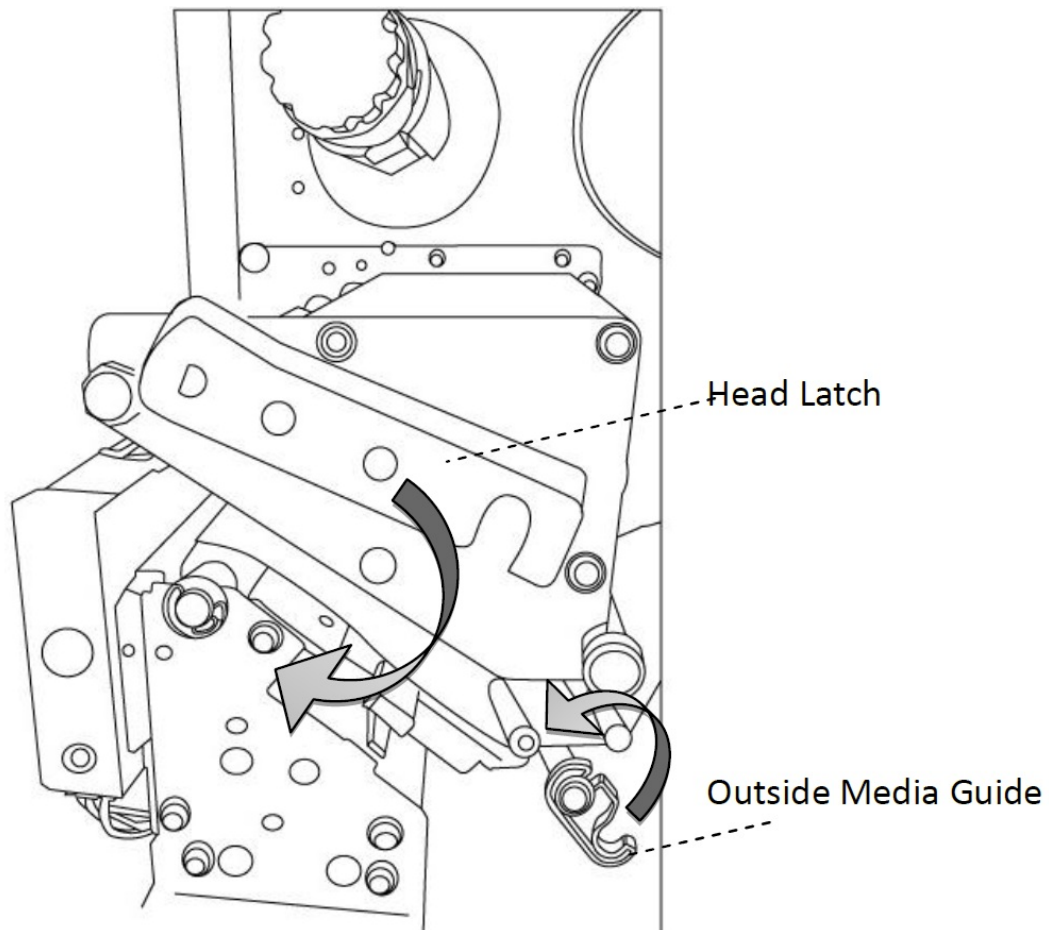
6. Close the top cover and turn on the printer or press the FEED button if the printer is already on. The printer will then feed the labels through the cutter automatically.
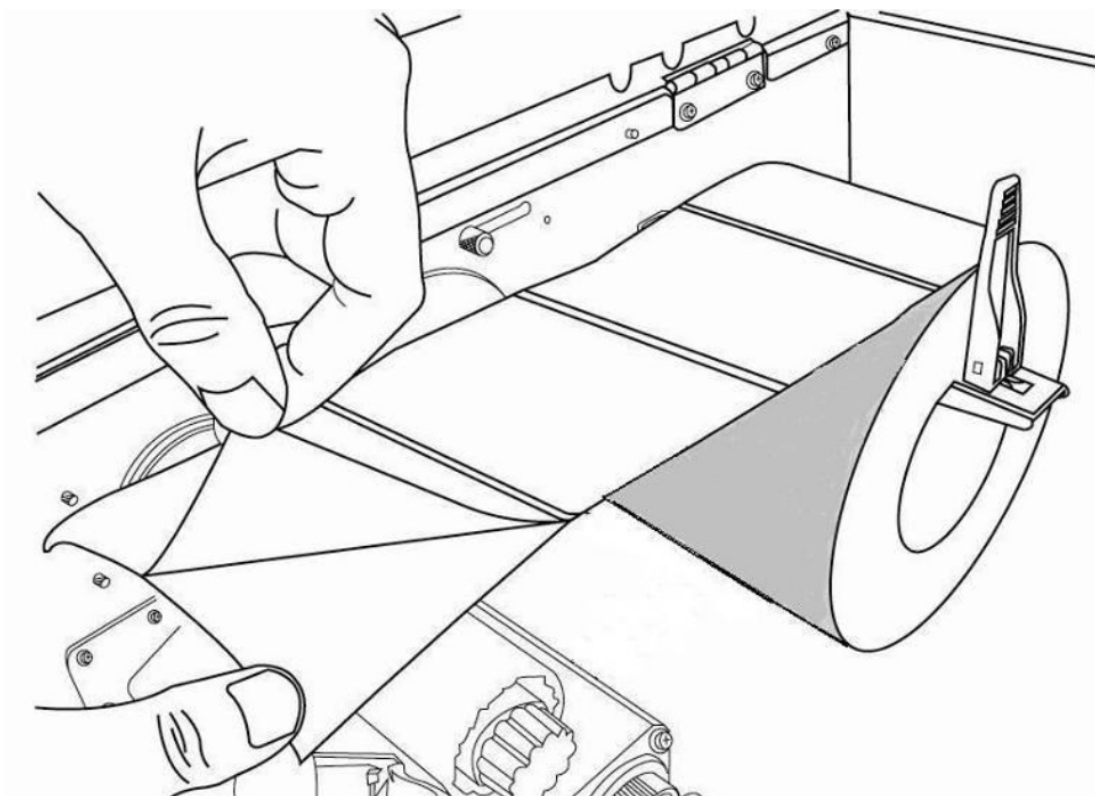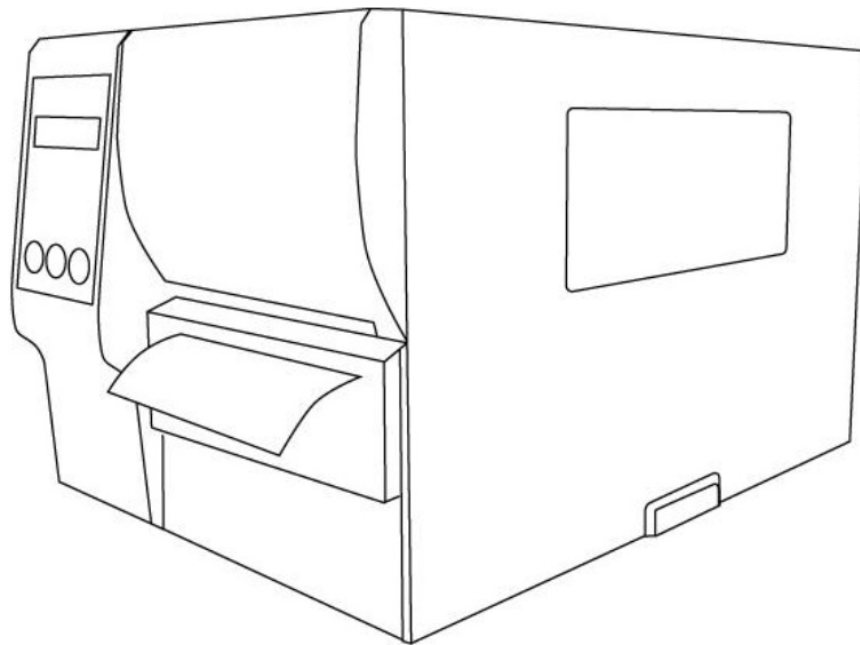
Important
After the media is loaded, please perform media calibration to calibrate the label sensor before printing.

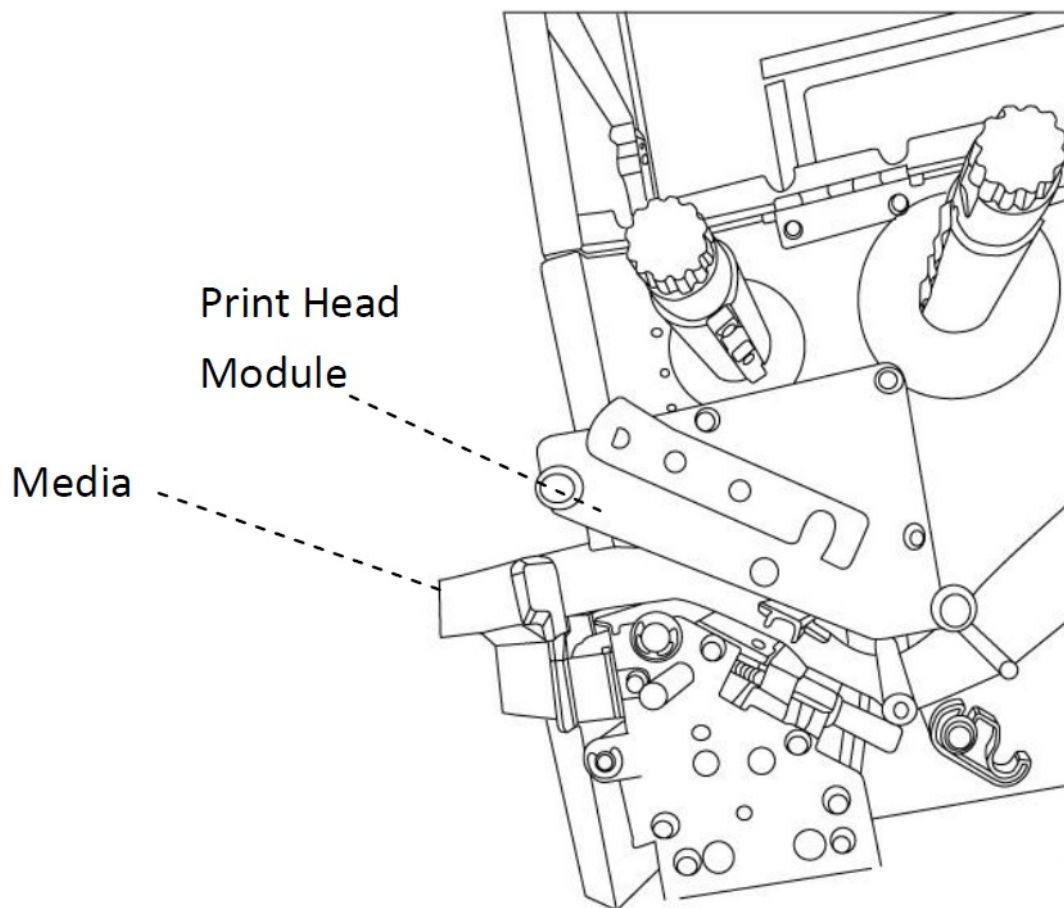**Load Media In Guillotine Cutter Mode**
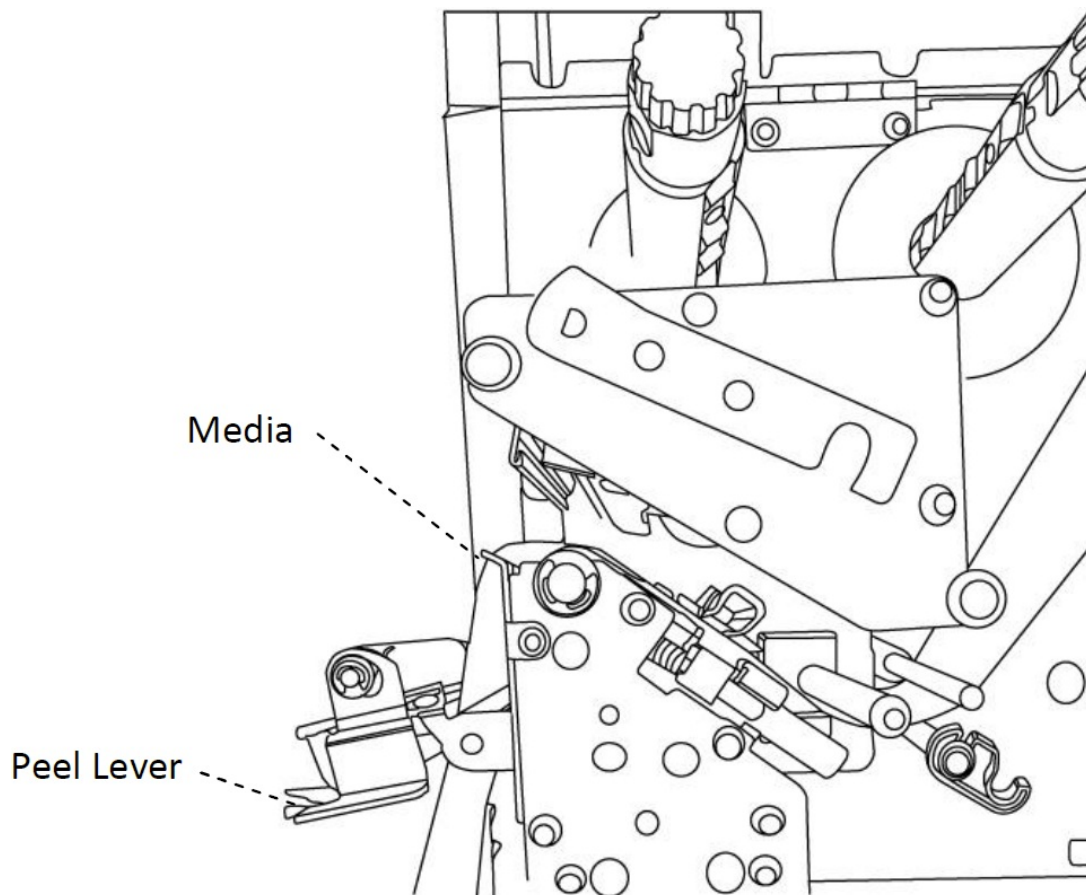Steps 1 to 3 are the similar with "Standard Mode".

1. Lift the top cover to expose the media compartment.
2. Insert the media roll into the media supply spindle and move the media guide to the inside.
3. Turn the head latch counter-clockwise and turn on the outside media guide.
4. Insert the media into the print head module and under the paper sensor guide. For more specific leading media refer to standard mode step 4. Unhook the cutter module and pull down mechanism release lever from Guillotine Cutter and lead media through Guillotine Cutter.

Print Head Module

Paper Sensor Guide

Release Lever

hook

5. Push back Guillotine Cutter and return the outside media guide and hook the head latch.
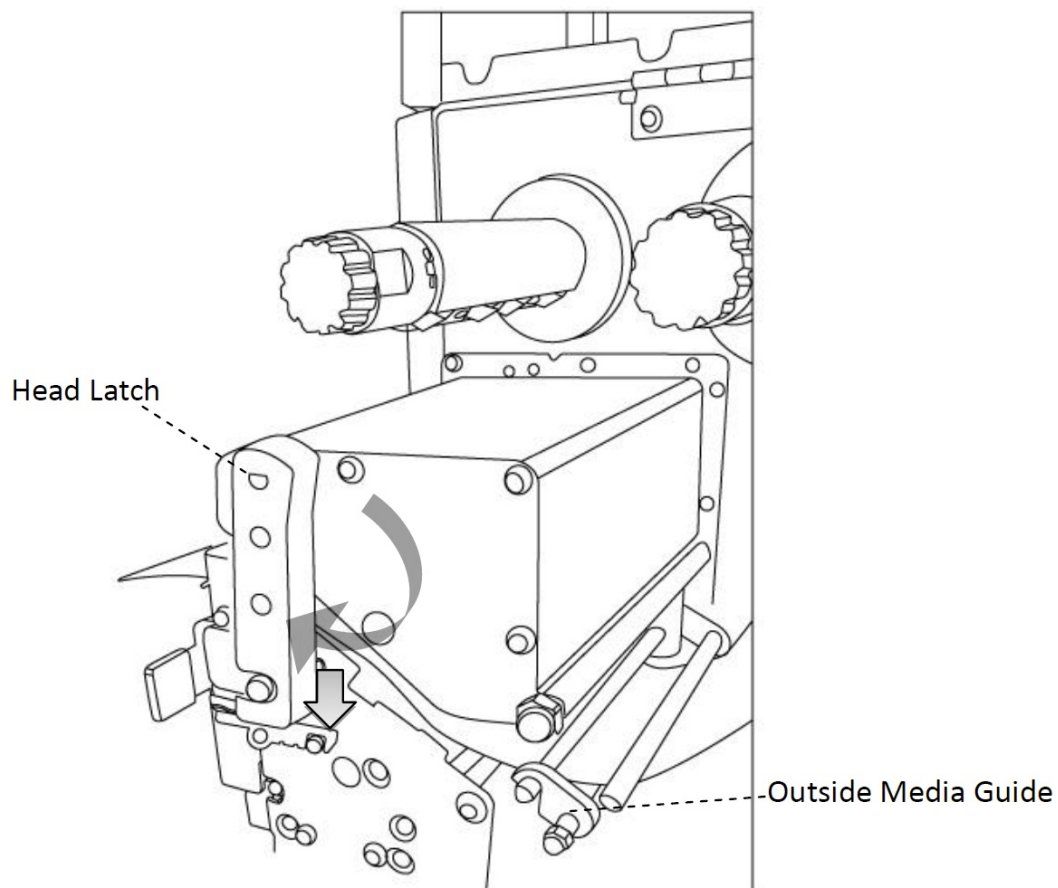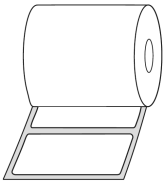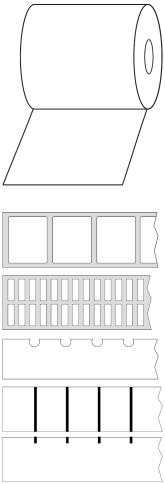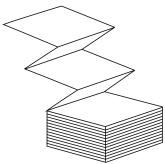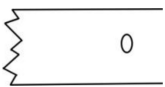
Head Latch

Outside Media Guide

6. Close the top cover and turn on the printer or press the FEED button if the printer is already on. The printer will then feed the labels through the cutter automatically.
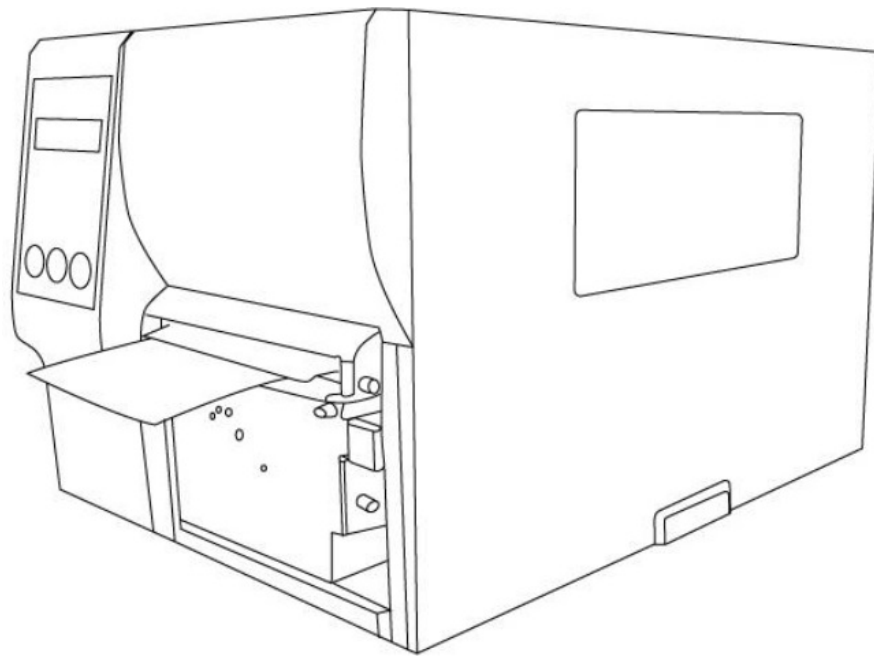
Important
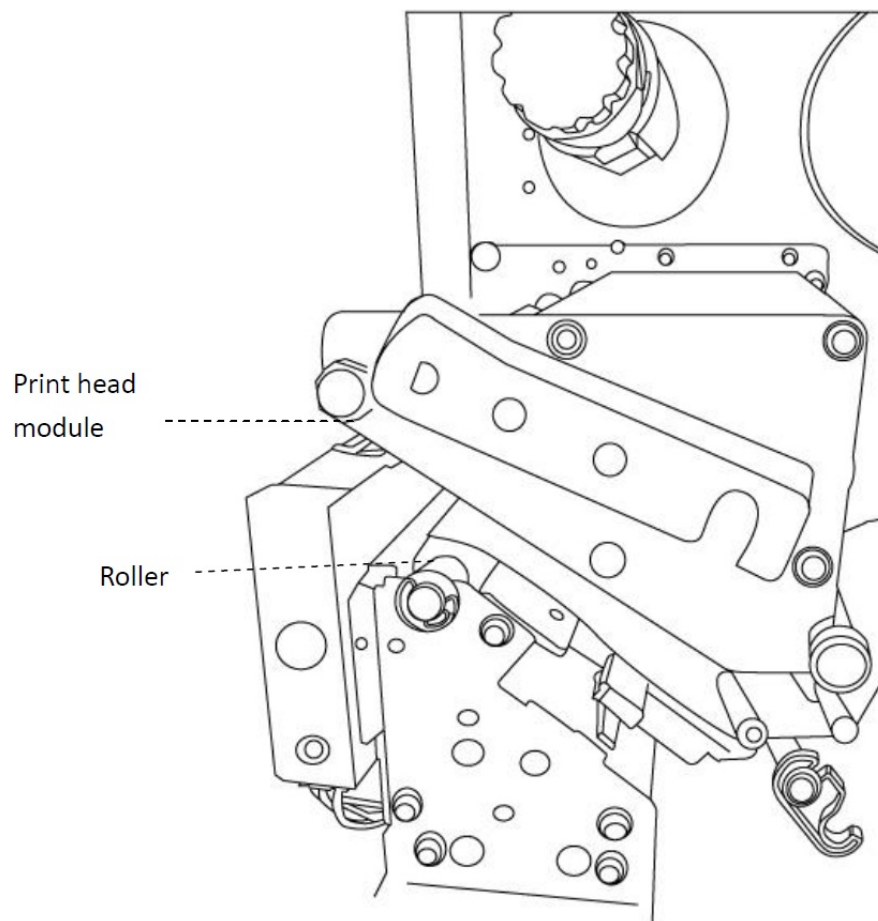After the media is loaded, please perform media calibration to calibrate the label sensor before printing.

Media Types
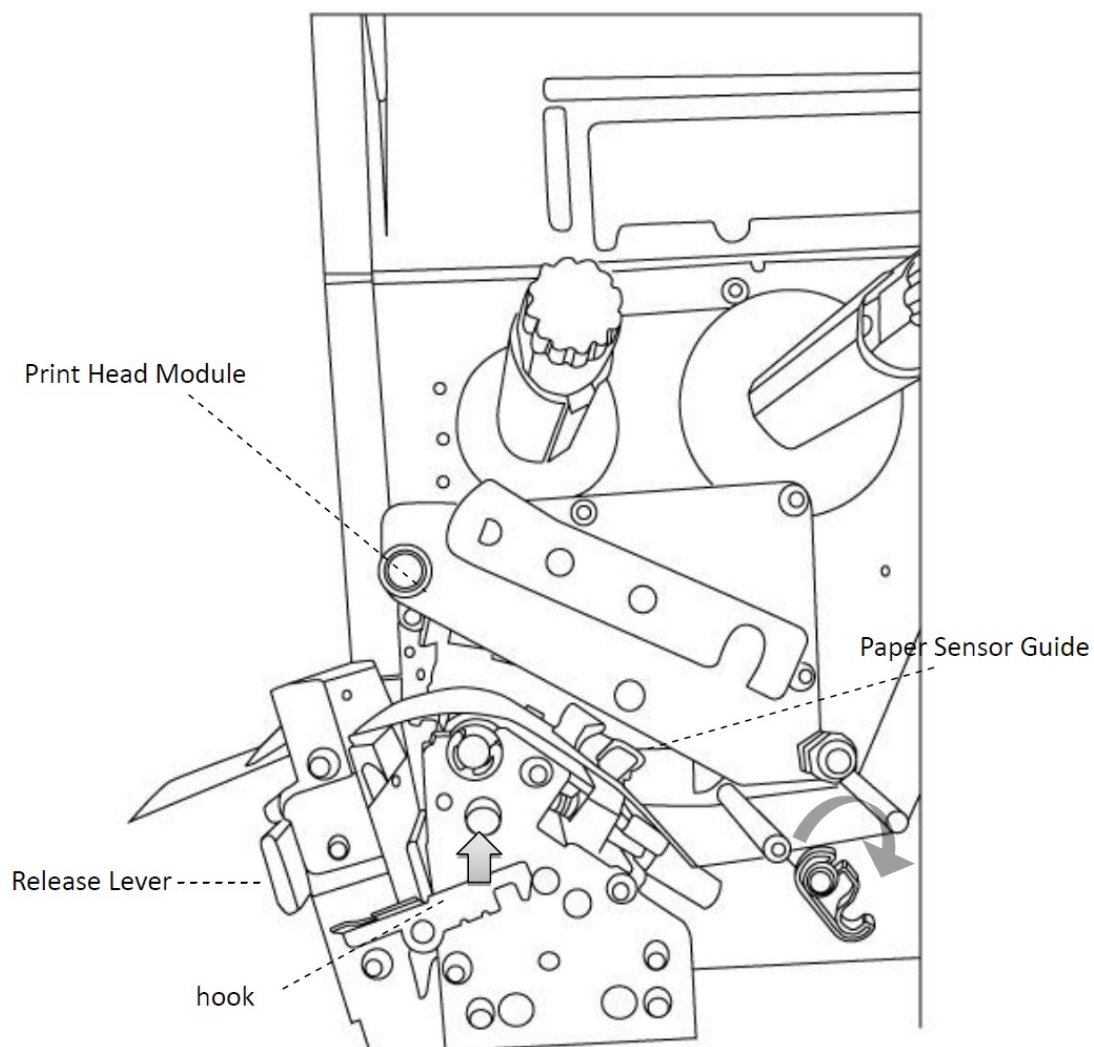Your printer supports various media types, including non-continuous media, continuous media, and fanfold media. The following table provides details about them.

Media Type	Looks Like	Description
Non-Continuous Media		Non-continuous media is the typical media for bar code printing. Labels and tags are made of various materials, such as paper, fabric or cardstock, and are separated by gaps, holes, notches or black marks. Many labels are self-adhesive with liners, while some are linerless.
Continuous Media		Continuous media does not have gaps, holes, notches or black marks. It allows you to print data anywhere on the media. A cutter may be used for splitting labels. Mostly it is used for direct thermal printing.
Fanfold Media		Fanfold media is in continuous form, but it can be used as non-continuous media, because its labels are separated by folds. Some fanfold media also has black marks or liners.
Tag Media		Tag media is usually made from a heavy paper, with center hole to index. It does not have adhesive or a liner, and it is typically perforated between tags. The media may also have black marks or other separations.

Load Ribbon

The following steps only apply to thermal transfer printing mode. Direct thermal does not need ribbon to be installed.
iX4 Series printers apply to both Inside wound ribbon and Outside wound ribbon. Printers can switch automatically.

Note:

- Media and ribbon types should be matched to provide with optimal print results.
- Always use ribbon that is wider than the media to protect the print head from wear.

Placing Ribbon Roll

1. Lift the top cover to expose the media compartment.
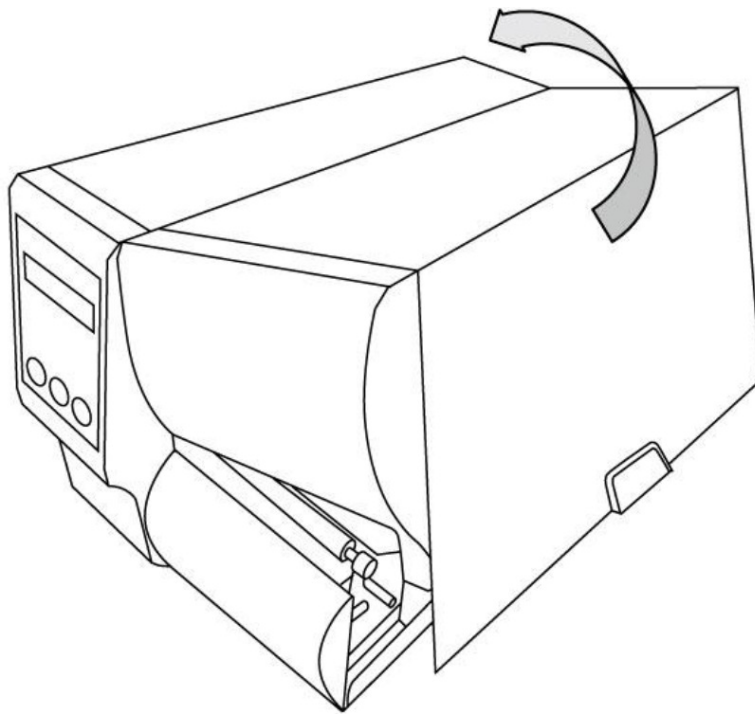
2. Turn the head latch counter-clockwise.

Head latch
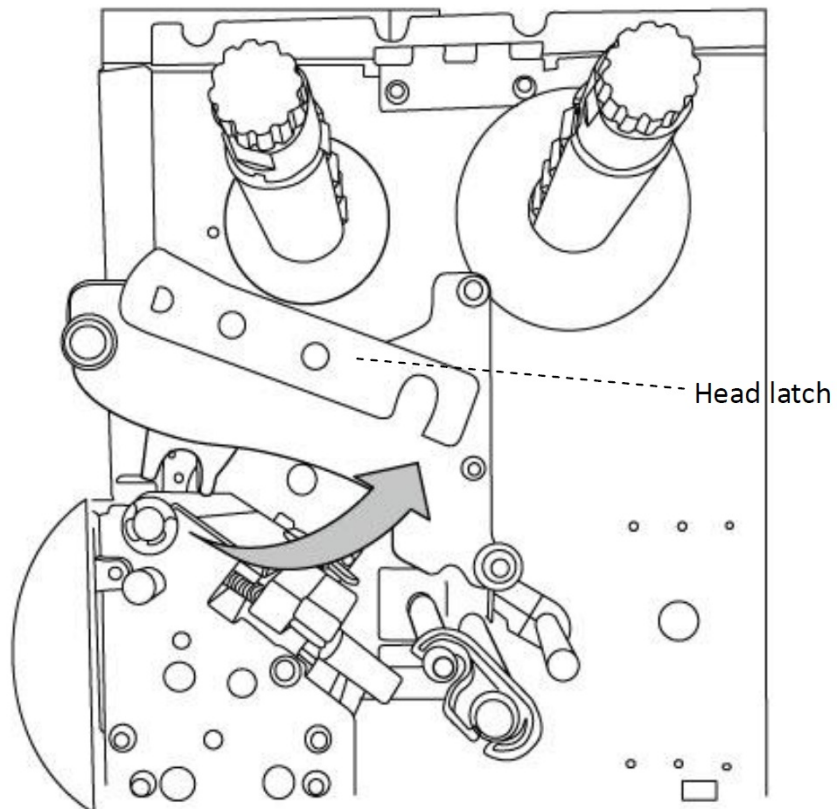
3. Unwrap the ribbon and separate the ribbon roll from the bare core. Insert the ribbon roll onto the ribbon supply spindle.

Ribbon Supply Spindle
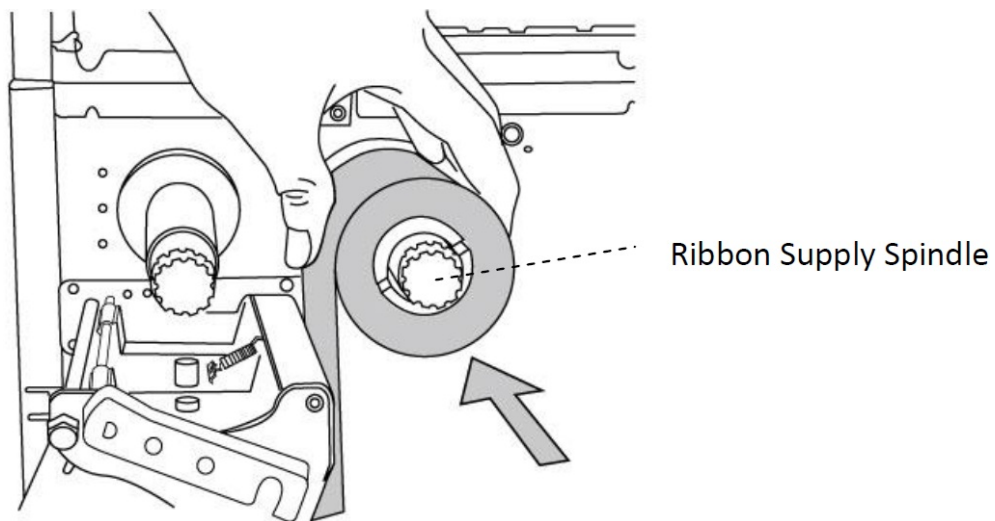
4. Lead the ribbon through the print head module. Attach the edge of the ribbon onto the bare core and wind it a bit onto the core. Make sure the coating side of the ribbon is face down.

Bare Core

Print Head Module
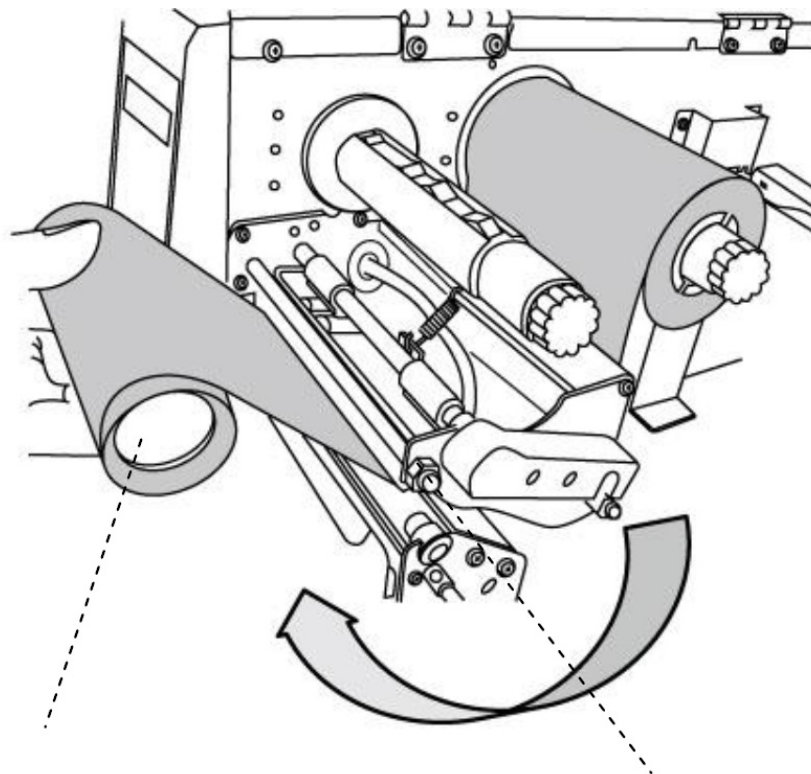
5. Insert the core onto the ribbon pick-up spindle. Turn the pick-up spindle to ensure the ribbon is tightly wound.

Ribbon Pick-up spindle - - - - - - - - - - - - - -
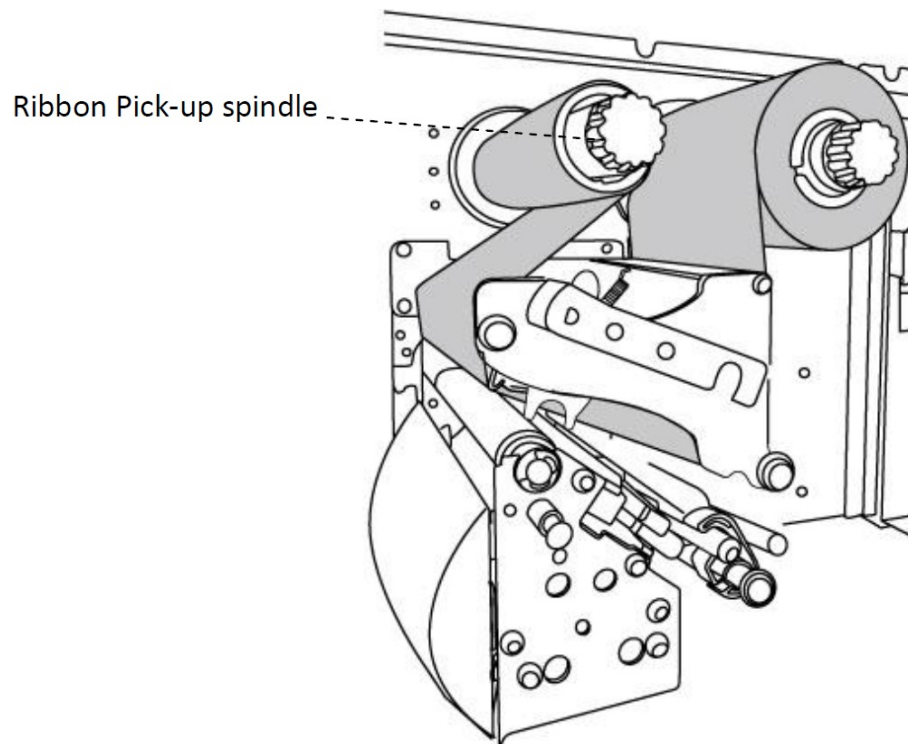
6. Close the top cover and turn on the printer.
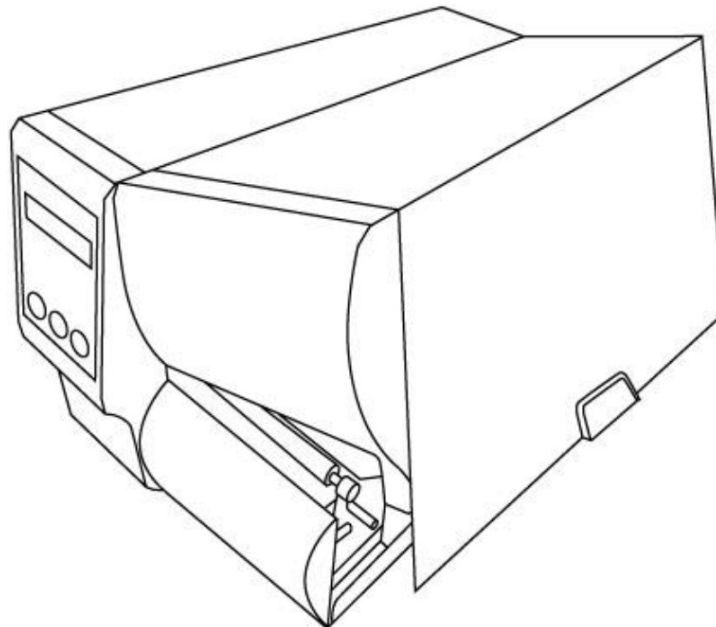
Printer Operation

This chapter provides more specific information about printer operation.

Front Panel

Change settings via buttons on panel:

Buttons	Function
PAUSE+CANCEL	Press to enter setting mode. Press again to exit setting mode and return to normal mode.
FEED	Press to show next parameter.
PAUSE	Press to show next setting item.
CANCEL	Selects and saves a parameter to permanent FLASH memory. Unless changed via panel or command the parameter is saved even if you restart the printer.

WARNING: Do not change settings during printing or sending printing data.

LCD Function Setting Procedure
The following procedure is an example of setting procedure to direct thermal printing mode:

READY (203, AUTO)

Press both **PAUSE + CANCEL** buttons.
Then release the buttons to enter settings.

PRINT MODE
THERM. TRANSFER*

Function which has "*"
sign is current setting.

Keep press **FEED** button until LCD
prompts the function setting needed.

PRINT MODE
DIRECT THERMAL

Press **CANCEL** button
to store the setting.

PRINT MODE
DIRECT THERMAL*

Press **PAUSE** button to
continue the other settings.

READY (203, AUTO)

Now printer is in
normal printing

Press PAUSE + CANCEL over 5 seconds to set different languages.

Item	Range	Factory Default
LANGUAGE	ENGLISH, FRENCH, GERMAN, ITALIAN, S PANISH, PORTUGUESE,	ENGLISH

Press PAUSE + CANCEL less then 1 second to set printer function.

NO.	Item	Range	Factory Default	Remarks
1	PRINT MODE	THERM. TRANSFER DIRECT THERMAL	THERM. TRANSFER	(Restart printer after change setting)
2	CALIBRATION MODE	INTELLI PRINT SMART PRINT	INTELLI PRINT	INTELLI PRINT: Just install labels, latch print module, press FEED button once, and then the printer will feed 1-2 labels to detect next gap / black mark before printing. SMART PRINT: Print from the first label immediately according to label length setting. Make sure to carefully align label bottom edge at the tear-off position before printing.(Restart printer after change setting)
3	CONTROL CODE SET	STANDARD ALTERNATIVE 1 ALTERNATIVE 2	STANDARD	Available only in PPLA printer language. (Restart printer after change setting)
4	CUT PEEL OFFSET	-015 ~ 015 mm	000 mm	To adjust cut and peel positions.
5	TPH VER OFFSET	-009~009 mm	000 mm	To adjust offset of vertical print position.

6	RECOVER PRINT	ENABLE, DISABLE	ENABLE	Will not reprint after recovering from media-out or ribbon-out errors.
7	CUTTER INSTALLED	NO YES	NO	(Restart printer after change setting)
8	PEELER INSTALLED	NO YES	NO	
9	STANDLONE FORM FONT	NO YES	NO	Available only in PPLB printer language (Restart printer after change setting)
10	WIN. CON. LEN.	0 ~ 254 mm	000 mm	Available only in Windows with bundled printer driver and for continuous media.
11	SPEED	2 ~ 8 IPS(iX4-250) 2 ~ 6 IPS(iX4-350)	6 IPS(iX4-250) 5 IPS(iX4-350)	
12	COUNTING	DOWN UP	DOWN	

13	MEDIASENSER TYPE	SEE-THROUGH REFLECTIVE	SEE- THROUGH	To select for different media types. After changing sensor setting, make sure to calibrate before printing.(Restart printer after change setting)
14	BACK FEED	DISABLE ENABLE	ENABLE	Available only in PPLA and PPLB printer languages. Once "ENABLE" is selected, printer enters BACK DISTANCE setting.
15	BACK DISTANCE	10~40 mm	22 mm	Available only when BACK FEED is enabled.
16	BASE DARKNESS	-28~28	0	
17	DARKNESS	0~30	16	To select darkness.
18	BAUD RATE	2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200	9600	Should be as same as setting of host. (Restart printer after change setting)
19	PARITY (RS232)	NONE ODD EVEN	NONE	Should be as same as setting of host. (Restart printer after change setting)

20	LENGTH (RS232)	8 DATA BITS 7 DATA BITS	8 DATA BITS	Should be as same as setting of host. (Restart printer after change setting)
21	CLEAR FLASH	NO YES	NO	When "YES" is selected, all the label forms, soft fonts, and graphics stored will be deleted (Restart printer after change setting)
22	SETTING PRIORITY	COMMAND/ LCD PANEL	COMMAND	Choosing priority of LCD settings. It decides which setting method – by command or by LCD panel, is prior.
23	EMULATION	AUTO PPLA PPLB PPLZ	AUTO	(Restart printer after change setting)
24	BUZZER	DISABLE ENABLE	ENABLE	
25	STANDBY	DISABLE 1 MINUTE 2 MINUTES 5 MINUTES 10 MINUTES 20 MINUTES 30 MINUTES	DISABLE	

| 26 | LOAD DEFAULTS | LAST SAVED FACTORY NETWORK | LAST SAVED | LAST SAVED: NO.1~15, NO.17, NO.22, NO.24~25 and language will be loaded. FACTORY: NO.1, NO6, NO9, NO11, NO14~15, NO17, NO.27~30 will be loaded. NETWORK: NO.27~30 will be loaded. (Restart printer after change setting) |

Ethernet Settings and Parameters

NO.	Item	Range	Factory Default	Remarks
27	DHCP	DISABLE ENABLE		If printer has been connected to a router, IP address will be assigned automatically by DHCP server after power on. If printer is not connected to a router, with DHCP disabled, settings of IP ADDRESS, SUBNET MASK, and DEFAULT GATEWAY settings will be available on LCD. Every time when DISABLE is changed to be ENABLE, LCD will prompt "ETHERNET CARD UPDATE FINISH…" Then please reboot the printer.

28	IP ADDRESS	xxx.xxx.xxx.xxx		xxx range:0~255
				When DHCP is disabled, default IP address is 192.168.1.100.
				If "_" sign appears, that means that **DHCP** setting is disabled. On the contrary, **DHCP** setting is enabled.
				
				1. *__FEED/CONFIG.__ :* change contents.
				   (ex. from 000.000.000.000 to 255.255.255.255)
				2. *__PAUSE/CALIBR.__*: shift "_"sign position.
				   (ex. from 2̲55.255.255.255 to 255.255.255.255̲)
				3. *__CANCEL/RESET.__*: Select next function setting. *("_" sign must at the third digit of each parameter, for example, xxx̲).*
				4. To change IP ADDRESS or SUBNET MASK, enter DEFAULT GATEWAY setting, press CANCEL button once; LCD will prompt "ETHERNET CARD UPDATE FINISH…"
				Then reboot the printer. To have more information on Ethernet settings, please refer to Ethernet User's Guide.

29	SUBNET MASK	xxx.xxx.xxx.xxx		
30	DEFAULT GATEWAY	xxx.xxx.xxx.xxx		
31	MAC ADDRESS	Read only		

Wi-Fi Module (Option)

Item	Range	Remarks
WIFI SSID	Read only	WIFI module is an option for iX4 Series. Connect printer to PC and use print tool to set WIFI module. To have more information, please refer to Print Tool user guide.
WIFI IP ADDRE SS	Read only	
WIFI SUBNET MASK	Read only	
WIFI GATEWA Y	Read only	
WIFI MAC ADD RESS	Read only	

Printing Media Calibration & Configuration

Before calibration, be sure media and ribbon (for thermal transfer printing) have been loaded correctly. The label sensor needs to locate properly to index labels' gaps/ notches/ holes. After the media is loaded, please perform media calibration to calibrate the label sensor in advance. For printer without LCD, please see indicators.

1. Turn off the printer
2. Press and hold the PAUSE button and turn on the power.
3. When "CALIBRATION …" is displayed on the LCD, and both READY and MEDIA indicators blink, release the PAUSE button.
4. The printer feeds 1 or 2 blank labels.
5. When "READY" is displayed, the READY and MEDIA indicators stop blinking but remain illuminated.

Printing a Configuration Report

To perform a self-test and print a configuration report, helping to check printer's print quality and internal settings. Steps as below:

1. Turn off the printer.
2. Load media and ribbon.
3. Press and hold the FEED button while turning on the power.
4. When "SELF-TEST…" is displayed on the LCD, release the FEED button.
5. The printer now prints out a configuration report. (as the sample in next page) All characters will be printed in 2 columns: the right shows characters received from your system, and the left are the corresponding hexadecimal values of the characters. It allows users or engineers to verify and debug the program.

For printer without LCD, please see indicators.

Sample of Configuration Report

```
      LABEL PRINTER WITH FIRMWARE
 1    iX4-250-V01.01 20170307 PPLB
 2    STANDARD RAM : 32M BYTES
 3    AVAILABLE RAM : 3676K BYTES
 4    FLASH TYPE : ON BOARD 16M BYTES
 5    AVAILABLE FLASH : 8448K BYTES
 6    NO. OF DL SOFT FONTS(FLASH) :  1
 7    NO. OF DL SOFT FONTS(RAM)   :  0
 8    NO. OF DL SOFT FONTS(HOST)  :  0
 9    H. POSITION ADJUST.: 0000
10    SEE-THRU SENSOR
11    REF: 0221 SEE: 0098
12    RTC TIME: 6/13/16(12:20:49)
13    MAX LABEL HEIGHT: 100 INCHES
14    PRINT WIDTH: 812 DOTS
15    LAB LEN(TOP TO TOP): 79mm
16    SPEED: 6 IPS
17    DARKNESS: 8
18    THERMAL TRANSFER
19    PRINT LENGTH: 12M
20    CUT COUNT:34
21    RS232: 9600, 8, N, 1P, XON/XOFF
22    CODE PAGE : English (437)
23    MEDIA : NON-CONTINUOUS
24    CALIBRATION MODE: INTELLI PRINT
25    BACKFEED DISABLED
26    CUTTER ENABLED
27    PEELER DISABLED
28    CUTTER/PEELER OFFSET: 0 <+-0.01mm>
29    IP ADDRESS: 0.0.0.0
30    SUBNET MASK: 0.0.0.0
31    GATEWAY: 0.0.0.0
32    MAC ADDRESS: 00-00-00-00-00-00
33    DHCP: ENABLED
34    DHCP CLIENT ID: FFFFFFFFFFFFFFFF
                      FFFFFFFFFFFFFFFF
35    DHCP HOST NAME:
36    SNMP: ENABLED
37    SOCKET COMM.: ENABLED
38    SOCKET PORT: 9100
39    IPV6 MODE: MANUAL
40    IPV6 TYPE: NONE
41    IPV6 ADDRESS: 0000:0000:0000:0000:
                    0000:0000:0000:0000
42    LINK LOCAL  : 0000:0000:0000:0000:
                    0000:0000:0000:0000
43    PRODUCT SN: 00000000001
44    USB SN: 000000000001
45    CG ENABLED
46    ot(0,0)<0.1dot,0.01mm>
47    rm(0,0)<1+ 0-,0.01mm>
48    sm(0,0)<1+ 0-,0.01mm>
49    rv(302,250,52)<0.01v><P>
50    sv(246,100,145)<0.01v><P>
54    bv(329,9,320)<0.01v><P>
52    rso(0)<0.01mm>
53    sso(0)<0.01mm>
54    This is internal font 1. 0123456789 ABCabcXyz
55    This is internal font 2. 0123456789 ABCabcXyz
56    This is internal font 3. 0123456789 ABCabcXyz
57    This is internal font 4. 0123456789 ABCXYZ
58    THIS IS INTERNAL FONT
```

1. Version Information

   The firmware version and its build date.

2. Standard RAM

   Total SDRAM size.

3. Available RAM

   RAM is able to be used.

4. Flash Type

The flash memory type and size.

5. Available Flash

   Flash is able to be used.

6. No of DL soft fonts (FLASH)

   The number of fonts is downloaded in Flash.

7. No of DL soft fonts (RAM)

   The number of fonts is downloaded in RAM.

8. No of DL soft fonts (HOST)

   The number of fonts is downloaded in USB HOST.

9. H. Position Adjust

   Move the print position horizontally.

10. Sensor Type

    The media sensor type such as reflective sensor.

11. Label-less Calibration Value

    Check if a label-less calibration has been performed on the printer. If not, the value is 0000.

12. RTC Time

    The date and time of the real-time clock (RTC). The default format is month/day/year (hour:minute:second). If your printer has a built-in RTC, the RTC time shows here.

13. Max Label Height

    The max label length you can print at a time. For 200 dpi models, it is 100 inches; for 300 dpi models, it is 50 inches.

14. Print Width

    The print width in dots.

15. Lab Len (Top to Top)

    For non-continues media, it is the length between the tops of two labels.

16. Speed

    The speed of printing. The unit is inch per second (ips).

17. Darkness

    The current darkness.

18. Print Method

    It is either thermal transfer (TT) or direct thermal (DT) printing. TT requires ribbons and DT doesn't.

19. Print Length

    The total print length.

20. Cut Count

    It counts the times the cutter cuts.

21. RS232 Protocol

    It lists RS-232C settings in the following order: baud rate, data length, parity check, stop bit and flow control.

22. Code page

    The character set table.

23. Media

    The media type in use.

24. Calibration mode

    There are intelli mode or smart mode.

Intelli mode: Just install labels, latch print module, press FEED button once, and then the printer will feed 1-2 labels to detect next gap / black mark before printing. The printer will feed 1-2 labels automatically before printing, if FEED button is not pressed.

Smart mode: Print from the first label immediately according to label length setting. Make sure to carefully align label bottom edge at the tear-off position before printing.

25. Backfeed Enabled/Disabled

   Enable or disable backfeed during the printing process. When it is enabled, the printer moves the paper forward in a predefined length 1 second after printing, and pulls the paper back in a predefined length once the printing begins again. When it is disabled, the printer won't move the paper at all.

26. Cutter Enabled/Disabled

   Enable or disable the cutter during the printing process.

27. Dispenser Enabled/Disabled

   Enable or disable the dispenser during the printing process.

28. Cutter/Dispenser Offset

   Move the cutting line or the peeling position forward or backward. The value in the angle brackets is the offset unit.

29. IP Address

   The static IP address of the printer. The default value is "192.168.1.1".

30. Subnet Mask

   The manually specified subnet mask of the printer. The default value is "255.255.255.0".

31. Gateway

   The manually specified gateway of the printer. The default value is "0.0.0.0."

32. MAC Address

   The unique address assigned to the printer that connects to the internet.

33. DHCP

   When DHCP is enabled, it assigns an IP address to the printer automatically.

34. DHCP Client ID

   It is an arbitrary value sent to the DHCP server to reserve an IP address for the printer.

35. DHCP Host Name

   The name of a DHCP client.

36. SNMP

   When it is enabled, the host gets or sets parameters registered as SNMP entities.

37. Socket Communication

   When it is enabled, the host communicates with the printer via the socket.

38. Socket Port

   The socket number of the printer.

39. IPv6 Mode

   It determines how you get the IPv6 address of your printer. There are three modes: MANUAL, DHCPv6 or AUTO.

40. IPv6 Type

   It is the IPv6 address type of your printer. There are four types: NONE, NORMAL, EUI and ANY.

41. IPv6 Address

   The static IPv6 address of your printer.

42. Link Local

The IPv6 address that used in a network segment. It is allocated automatically.

43. Product SN

   The serial number of product.

44. USB SN

   The Serial number of USB host.

45. CG Enable

   Printer is able to use True Type font.

46. TPH and Cutter Offset

   For developers to debug.

47. Reflective Sensor Gap Calibration

   For developers to debug.

48. See-Through Sensor Gap Calibration

   For developers to debug.

49. Reflective Sensor Profile

   For developers to debug.

50. See-Through Sensor Profile

   For developers to debug.

51. Ribbon Sensor Profile

   For developers to debug.

52. Reflective Sensor Offset

   For developers to debug.

53. See-Through Sensor Offset

   For developers to debug.

54. Font Image

   You can use them as the reference to check your label font.

55. TPH Test Pattern

   You can use them to check broken pins on the printhead.

If your printer has a Wi-Fi module, your PPLB configuration label will contain the following entries:

```
WLAN FW VERSION:  1.00 ─────────────────── 1
            DATE: 2015.05.26 ───────────── 2
WLAN IP ADDRESS: 0.0.0.0 ───────────────── 3
WLAN SUBNET MASK: 0.0.0.0 ──────────────── 4
WLAN GATEWAY: 0.0.0.0 ──────────────────── 5
WLAN MAC ADDRESS: 00-80-92-4F-77-35 ────── 6
WLAN DHCP: AUTO ────────────────────────── 7
WLAN DHCP HOSTNAME: 00-80-92-4F-77-3 ───── 8
              : 5
WLAN SOCKET PORT: 9100 ─────────────────── 9
WLAN SSID: WIRELESS PRINTER ───────────── 10
WLAN MODE: Infrastructure ─────────────── 11
WLAN COUNTRY CODE: USA ────────────────── 12
WLAN CHANNEL: AUTO ────────────────────── 13
WLAN NETWORK AUTHENTICATION: Open ─────── 14
WLAN WEP: OFF ─────────────────────────── 15
```

1. FW Version

WLAN board firmware version.

2. Date

    WLAN board firmware version date.

3. IP Address

    The IP address of your printer. When DHCP is enabled, it shows the automatically assigned IP address; when DHCP is disabled, it shows the manually specified IP address.

4. Subnet mask

    The netmask of your printer. When DHCP is enabled, it shows the automatically assigned netmask; when DHCP is disabled, it shows the manually specified netmask.

5. Gateway

    The gateway of your printer. When DHCP is enabled, it shows the automatically assigned gateway; when DHCP is disabled, it shows the manually specified gateway.

6. Mac address

    The unique address assigned to your printer that connects to the internet.

7. DHCP

    When DHCP is enabled, it assigns an IP address to your printer automatically.

8. DHCP Hostname

    The name of a DHCP client.

9. Socket Port

    The socket number of the printer.

10. SSID

    Short for service set identifier. It is the name of a wireless local area network.

11. Mode

    There are ad-hoc and infrastructure mode. Refer to Print Tool Network type description from Technical manual.

12. Country Code

    The country or region.
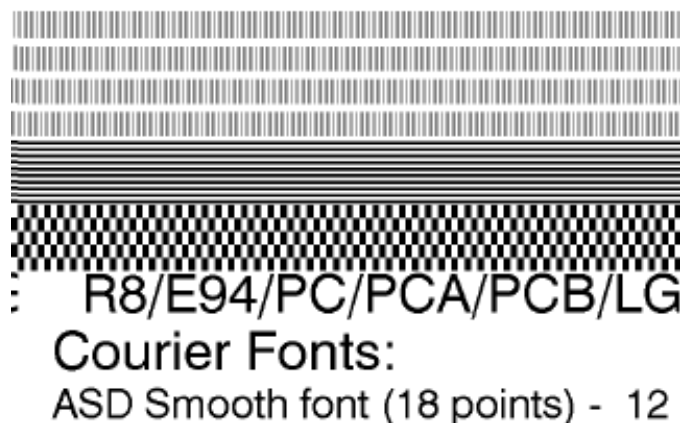
13. Channel

    The Wi-Fi channel.

14. Network Authentication

    There are six mode. Refer to Printer Tool Network authentication description from Technical manual.

15. WEP

    Refer to Printer Tool Wep description from Technical manual.

PPLA

R8/E94/PC/PCA/PCB/LG
Courier Fonts:
ASD Smooth font (18 points) - 12

ASD Smooth font (14 points) - 123456789
ASD Smooth font (12 points) - 123456789 ABCa
ASD Smooth font (1 points) - 123456789 ABCabcXyz
ASD Smooth font (8 points) - 123456789 ABCabcXyz
ASD Smooth font (6 points) - 123456789 ABCabcXyz
123456789
This is internal font 7. OCR-A ABCabc

THIS IS INTERNAL FONT

THIS IS INTERNAL FONT 5. 012345678
THIS IS INTERNAL FONT 4. 012345678
THIS IS INTERNAL FONT 3. 0123456789 ABCABC
This is internal font 2. 0123456789 ABCabcXyz
This is internal font 1. 0123456789 ABCabcXyz
This is internal font 0. 0123456789 ABCabcXyz

```
sso(0)<0.01mm>
rso(0)<0.01mm>
bv(329.9.320)<0.01u><P>
sv(246.100.145)<0.01u><P>
rv(302.250.52)<0.01u><P>
sm(0.0)<1+ 0-.0.01mm>
rm(0.0)<1+ 0-.0.01mm>
ot(0.0)<0.1dot.0.01mm>
CG ENABLED
USB SN: 000000000001
PRODUCT SN: 00000000001
                0000:0000:0000:0000
LINK LOCAL  : 0000:0000:0000:0000:
                0000:0000:0000:0000
IPV6 ADDRESS: 0000:0000:0000:0000:
IPV6 TYPE: NONE
IPV6 MODE: MANUAL
SOCKET PORT: 9100
SOCKET COMM.: ENABLED
SNMP: ENABLED
DHCP HOST NAME:
                FFFFFFFFFFFFFFFF
DHCP CLIENT ID: FFFFFFFFFFFFFFFF
DHCP: ENABLED
MAC ADDRESS: 00-00-00-00-00-00
GATEWAY: 0.0.0.0
SUBNET MASK: 0.0.0.0
IP ADDRESS: 0.0.0.0
CUTTER/PEELER OFFSET: 0 <+-0.01mm>
PEELER DISABLED
CUTTER ENABLED
BACKFEED DISABLED
CALIBRATION MODE: INTELLI PRINT
MEDIA : NON-CONTINUOUS
STD CTRL CODES
CODE PAGE : PC-850
RS232: 9600.8.N.1P.XON/XOFF(SOFTWARE)
CUT COUNT:34
PRINT LENGTH: 12M
THERMAL TRANSFER
DARKNESS: 10
SPEED: 6 IPS
LAB LEN(TOP TO TOP): 79mm
PRINT WIDTH: 801 DOTS
MAX LABEL HEIGHT: 100 INCHES
RTC TIME: 6/13/16(12:22:44)
REF: 0221 SEE: 0098
SEE-THRU SENSOR
H. POSITION ADJUST.: 0000
NO. OF DL SOFT FONTS(HOST)  : 0
NO. OF DL SOFT FONTS(RAM)   : 0
NO. OF DL SOFT FONTS(FLASH) : 0
AVAILABLE FLASH : 8448K BYTES
FLASH TYPE : ON BOARD 16M BYTES
AVAILABLE RAM : 3676K BYTES
STANDARD RAM : 32M BYTES
iX4-250-V01.01 20170307 PPLA
LABEL PRINTER WITH FIRMWARE
```

PPLZ

```
LABEL PRINTER WITH FIRMWARE
iX4-250-V01.01 20170307 PPLZ
STANDARD RAM : 32M BYTES
AVAILABLE RAM : 3676K BYTES
FLASH TYPE : ON BOARD 16M BYTES
AVAILABLE FLASH : 8448K BYTES
NO. OF DL SOFT FONTS(FLASH) :  0
NO. OF DL SOFT FONTS(RAM)   :  0
NO. OF DL SOFT FONTS(HOST)  :  0
H. POSITION ADJUST.: 0000
SEE-THRU SENSOR
REF: 0221 SEE: 0098
RTC TIME: 6/13/16(12:25:11)
MAX LABEL HEIGHT: 100 INCHES
PRINT WIDTH: 801 DOTS
LAB LEN(TOP TO TOP): 79mm
SPEED: 6 IPS
ABS. DARKNESS: 16
TRIM. DARKNESS: 0
THERMAL TRANSFER
PRINT LENGTH: 12M
CUT COUNT:34
RS232: 9600, 8, N, 1P, XON/XOFF
CARET CONTROL CHAR    : <^>    5EH
DELIMITER CONTROL CHAR : <,>   2CH
TILDE CONTROL CHAR    : <~>    7EH
CODE PAGE : USA1
MEDIA : NON-CONTINUOUS
CALIBRATION MODE: INTELLI PRINT
REPRINT AFTER ERROR : ENABLED
BACKFEED DISABLED
CUTTER ENABLED
PEELER DISABLED
CUTTER/PEELER OFFSET: 0 <+-0.01mm>
IP ADDRESS: 0.0.0.0
SUBNET MASK: 0.0.0.0
GATEWAY: 0.0.0.0
MAC ADDRESS: 00-00-00-00-00-00
DHCP: ENABLED
DHCP CLIENT ID: FFFFFFFFFFFFFFFF
               FFFFFFFFFFFFFFFF
DHCP HOST NAME:
SNMP: ENABLED
SOCKET COMM.: ENABLED
SOCKET PORT: 9100
IPV6 MODE: MANUAL
IPV6 TYPE: NONE
IPV6 ADDRESS: 0000:0000:0000:0000:
             0000:0000:0000:0000
LINK LOCAL  : 0000:0000:0000:0000:
             0000:0000:0000:0000
PRODUCT SN: 00000000001
USB SN: 000000000001
CG ENABLED
ot(0,0)<0.1dot,0.01mm>
rm(0,0)<1+ 0-,0.01mm>
sm(0,0)<1+ 0-,0.01mm>
rv(302,250,52)<0.01v><P>
sv(246,100,145)<0.01v><P>
bv(329,9,320)<0.01v><P>
rso(0)<0.01mm>
sso(0)<0.01mm>
THIS IS FONT A. 0123ABCABC
THIS IS FONT B. 0123ABCABC
THIS IS FONT C. 0123ABCabc
THIS IS FONT D. 0123ABCabc
THIS IS FONT E. 0123ABCabc
THIS IS FONT F. 0123ABCabc
THIS IS FONT G.
THIS IS FONT H. 0123ABC
This Is Font CG Triumv Bd Condensed.
```
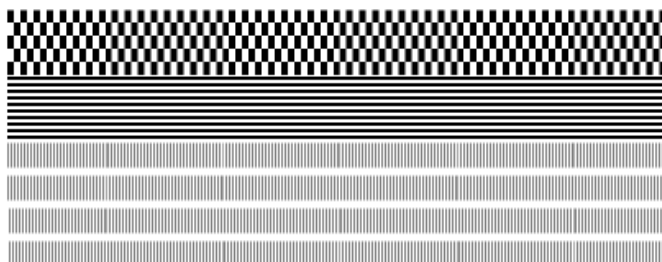
Resetting to Factory Default Settings

Be cautioned that this will reset all printer settings back to defaults; if possible, print the configuration label in advance before reset. All settings stored in FLASH memory are retained even after turning off the printer. Printer mode without LCD can see indicators.
To reset the printer to factory default settings:

1. Turn off the printer.

2. Press and hold the CANCEL button and turn on the printer.

3. When "RESET …" is displayed on the LCD and the READY indicator blinks, release the CANCEL button.

4. When "READY" is displayed on the LCD, the READY indicator stops blinking but remains illuminated.

5. The following information is now back to defaults:
   - Label parameters
   - Heat (Darkness)
   - Speed
   - Others for specific emulation

Media Sensing

Printer offer two types of media sensor: transmissive and reflective. They are used for detecting specific media types. Both sensor types are installed together as a movable module.
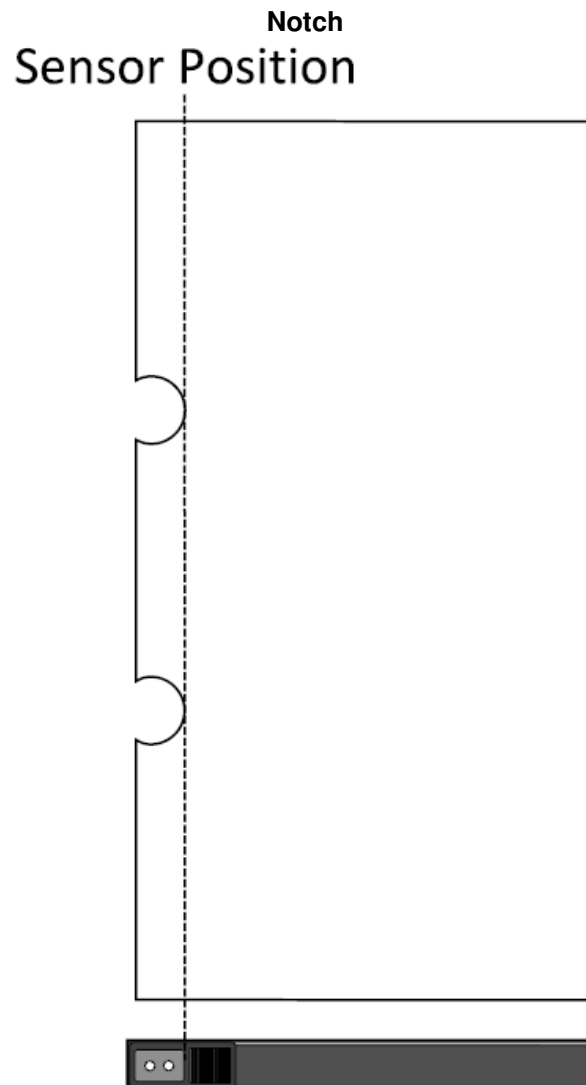
Transmissive Sensor
The transmissive sensor is used for detecting gaps across the entire width of the label.

Single Column
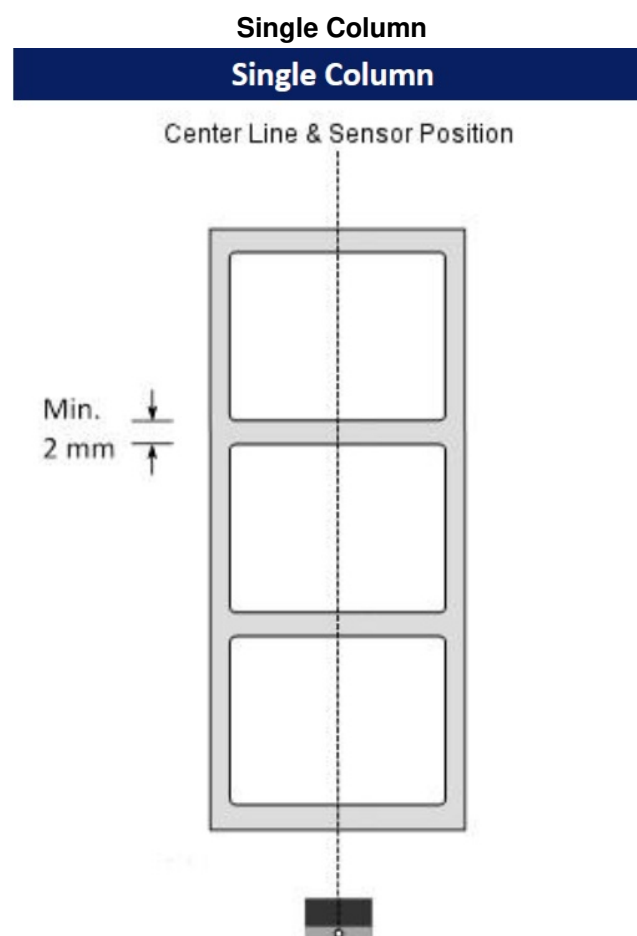
Reflective Sensor
The reflective sensor detects gaps, notches and black marks.

Multi Columns

Sensor Position

Min.

2 mm

Notch
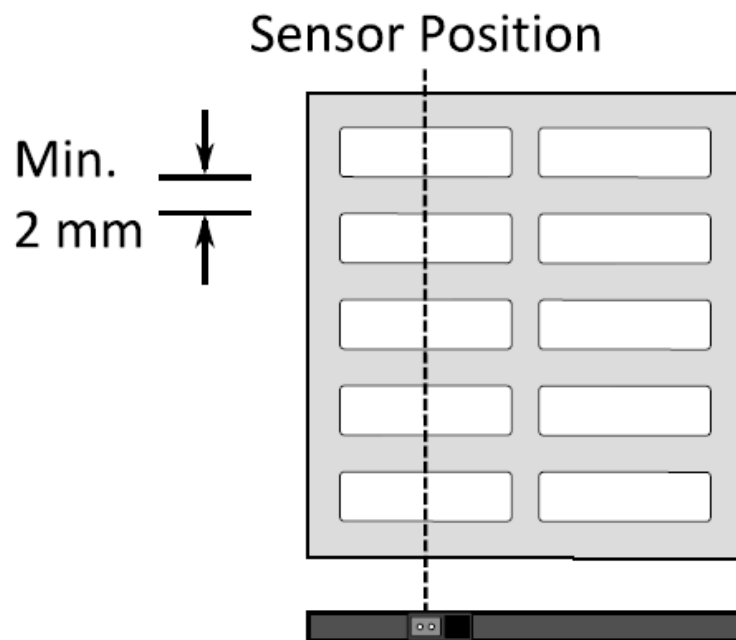
Sensor Position

Black Mark
Flip the media so the black-mark side is facing down to align with the sensor.

Min.
2 mm
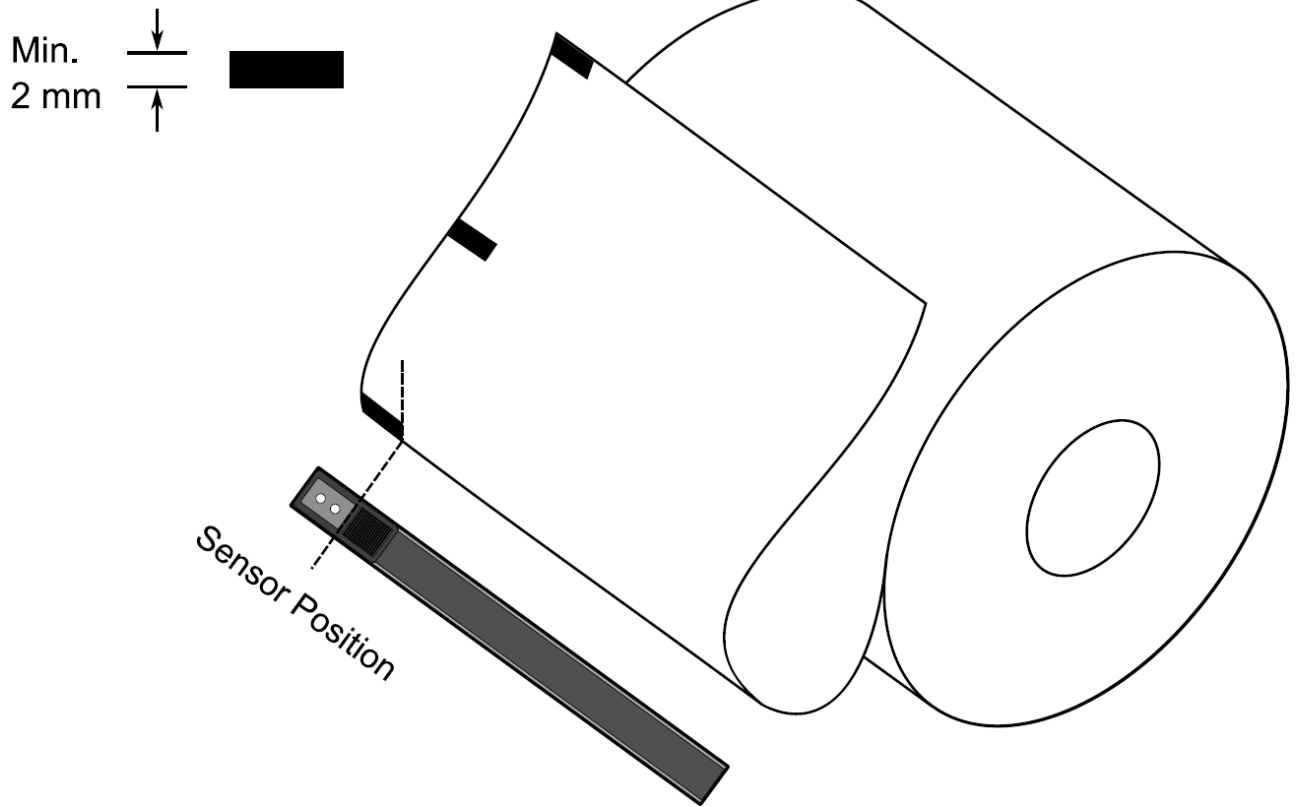
Sensor Position

Adjust Position of Label Sensor
Function of the label sensor is to detect the gap, notch, or holes of labels, to help the printer for accurate print positions and label length. For labels with gaps, label sensor can be positioned wherever media locates. If labels with notches or holes are in use, pull in or out Paper Sensor Position Lever, to horizontally adjust position of label sensor.
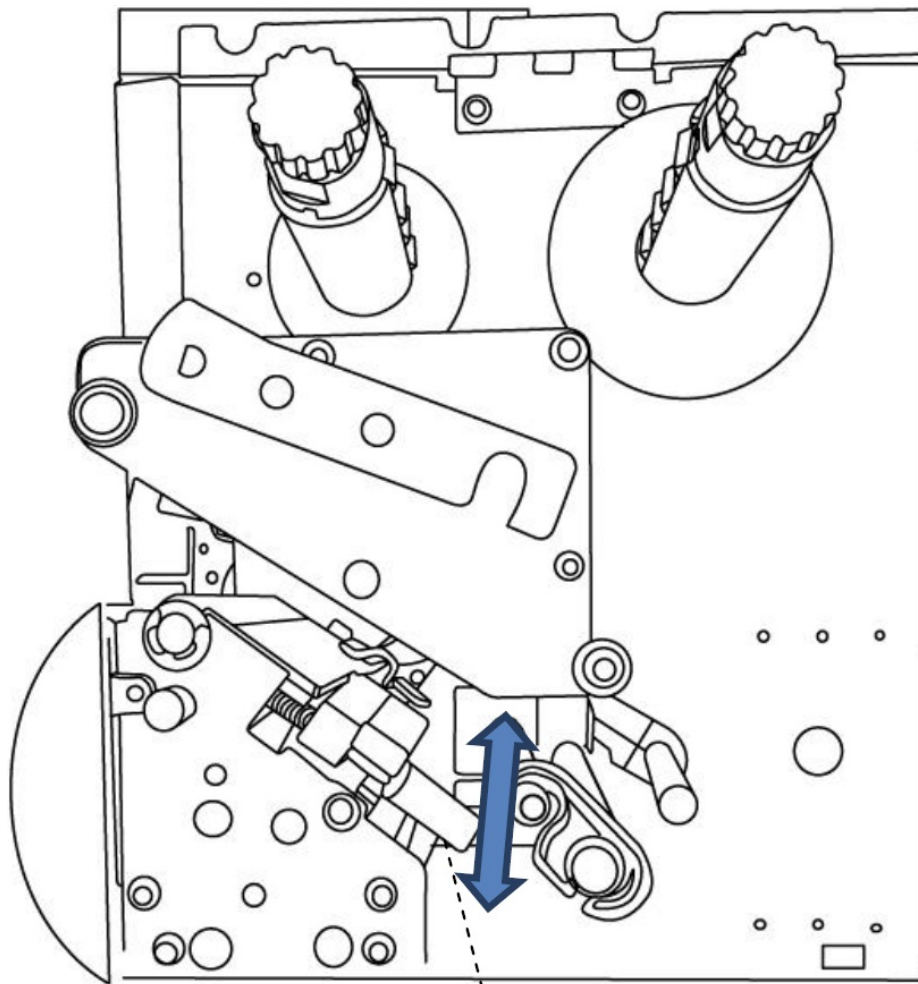
Paper Sensor Position Lever

- Make sure the Media sensor position mark locates right on notch or hole of labels. Check below

Media sensor holder

Media sensor position mark

(Front View)
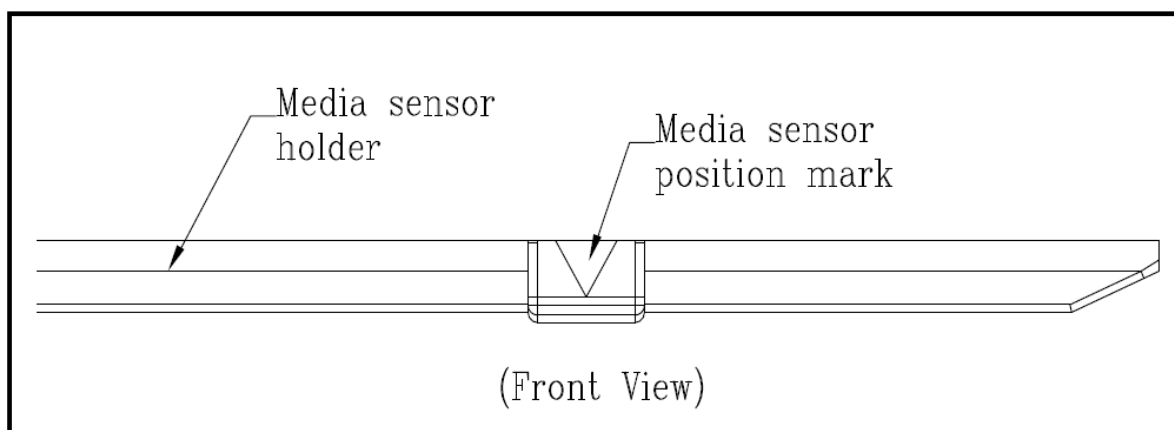
Communications

Interfaces and Requirements

This printer comes with USB type A and type B interface, a nine-pin Electronics Industries Association (EIA) RS-232 serial data interface, a standard Centronics parallel interface(Option), GPIO interface(Option), .

- **USB Interface Requirements**

  The Universal Serial Bus (USB) interface is compatible with your existing PC hardware. The USB's "plug and

play" design makes installation easy. Multiple printers can share a single USB port/hub. The different usage of type A and B as below.

USB type A	USB Flash drive, USB keyboard or USB Scanner.
USB type B	PC to set printer.

- **Serial (RS-232) Port**

  The required cable must have a nine-pin "D" type male connector on one end, which is plugged into serial port located on the back of the printer. The other end of the cable connects to a serial port on the host computer. For technical and pin-out information, please refer to RS-232C in this manual.

- **Centronics Parallel Port (Option)**

  You can connect the printer to the host computer's parallel port using any standard Centronics cable. The required cable must have a standard 36-pin parallel connector on one end, which is plugged into the parallel port located on the back of the printer. The other end of the parallel interface cable connects to the printer connector at the host computer. For pin-out information, please refer to Centronics in this manual.

- **General-purpose input/output (GPIO)**

  Pins depend on usage and the signal is user selectable. The function is diversity. For general-purpose, I/O signals programmed as inputs can cause CPU interrupted. For more information, contact local dealer.

- **Ethernet Module Status Indicators**

  The indicators with two different colors help users understand the status of Ethernet:

LED Status	Description	
Both Off	No Ethernet link detected.	
Blinking	The printer waits for printer ready. It will take about few seconds to be ready.	
Orange (Yellow)	Duplex/COL LED	On: Full duplex Off: Half duplex Blinking: Collision occurs
Green	Link/Activity LED	On: link up Off: link down Blinking: activity

Driver Installation

The bundled printer driver can be applied to all applications under Windows XP/ Vista/ Windows 7/ Windows 8/ Windows 10, supporting 32-bit/ 64-bit operation systems. With this driver you can operate any popular Windows software applications including Argox Bartender UL label editing software or MS Word, etc., to print to this printer. Drivers can be downloaded from Argox website
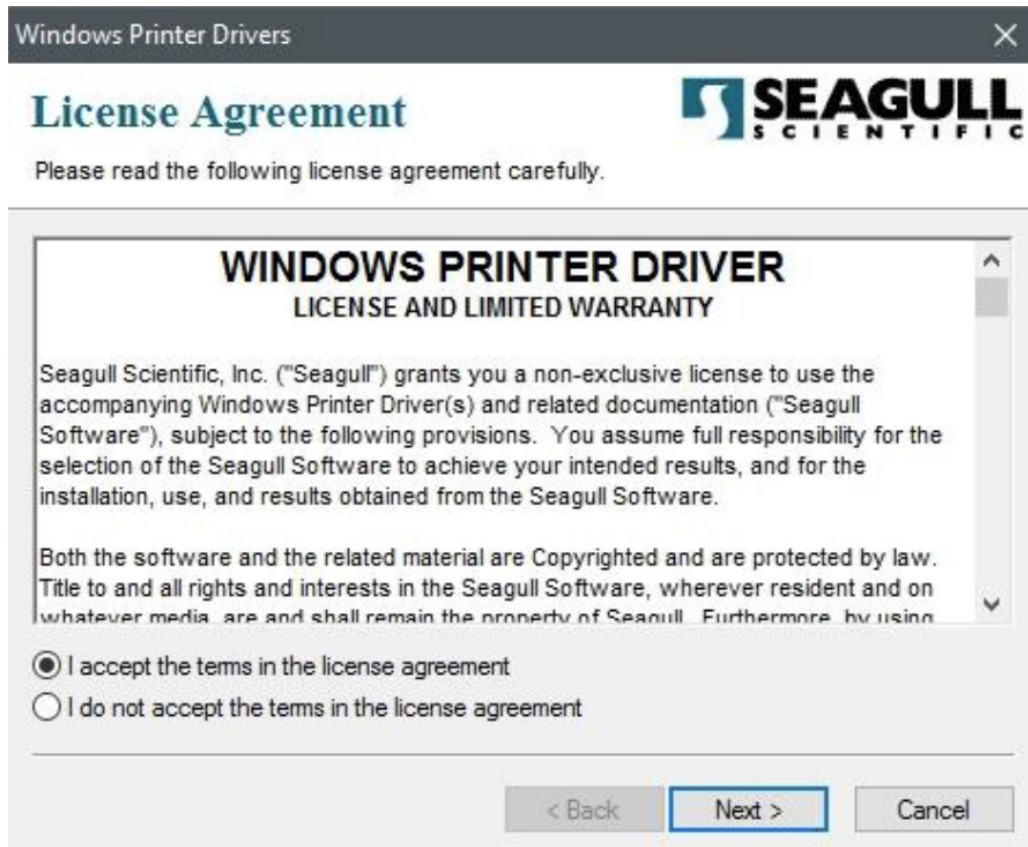
Installing a Plug and Play Printer Driver (For USB Only)

Note:

We strongly recommend that you use the Seagull Driver Wizard instead of the Microsoft Windows Add Printer Wizard when installing and updating your Drivers by Seagull.
(Even though the "Add Printer Wizard" is from Microsoft, it too easily performs a number of tasks incorrectly when updating existing drivers. It also badly handles the situation where a printer driver is already in use by a Windows application.)

1. Turn off the printer. Plug the power cable into the power socket on the wall, and then connect the other end of the cable to printer's power socket. Connect the USB cable to the USB port on the printer and on the PC.

2. Turn on the printer. If the printer supports Plug-and-Play, and you have successfully connected it using a USB cable, then the Windows Add Hardware Wizard will automatically detect the printer and display a dialog that allows you to install a driver. Click Cancel and do not install the driver using this wizard.

3. Run the driver from Argox website. On the prompt, Windows Printer Driver, select "I accept..." and click "Next".

4. Assign the directory to keep Seagull driver, (for example: C:\Seagull) and click "Next".
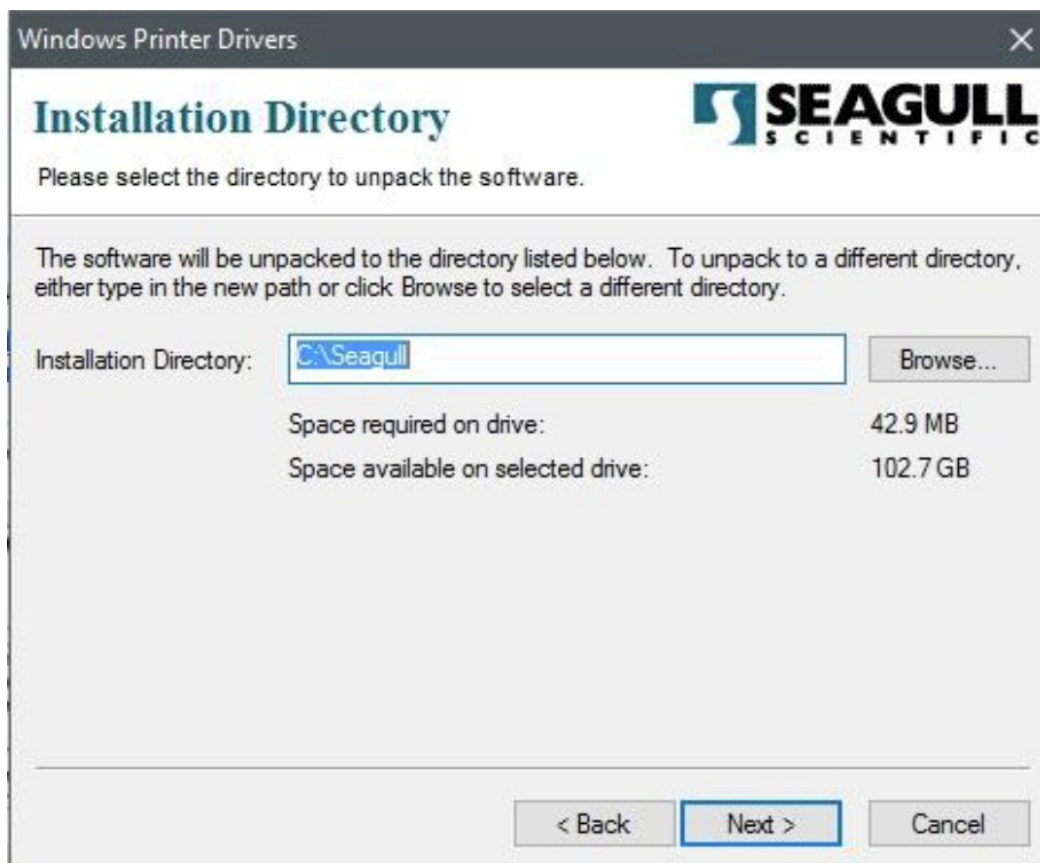
5. Click "Finish".
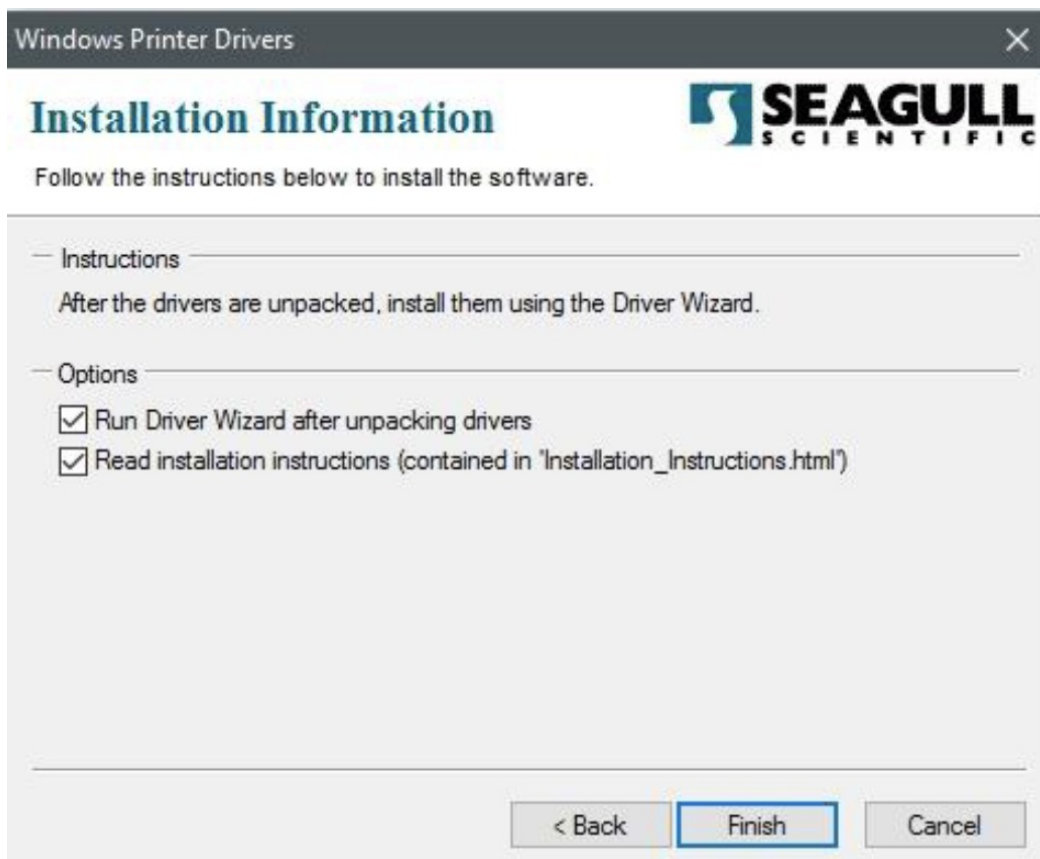
6. Select Install printer drivers and Click "Next"

7. On the Seagull Driver Wizard prompt, select the first radio button to "Install a driver for a Plug and Play printer"
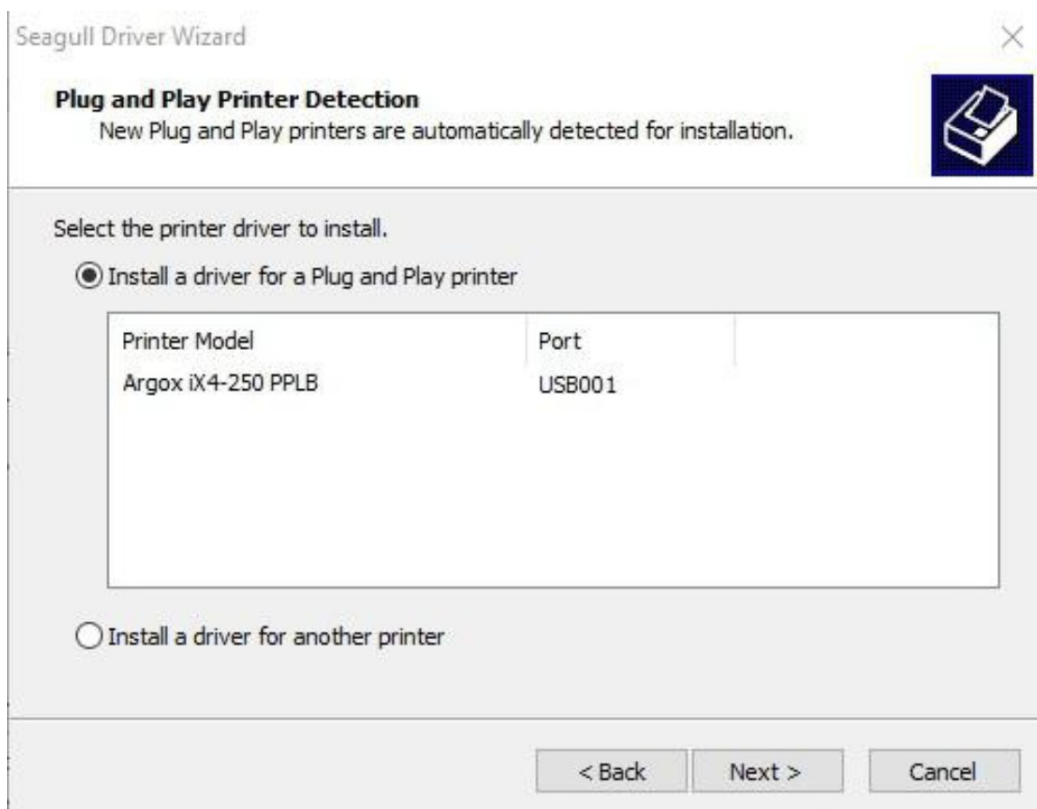   Then click "Next."

8. Enter Printer name (i.e. Argox iX4-250 PPLB) and select "do not share this printer", and click "Next".

Seagull Driver Wizard ✕

Specify Printer Name
Names are used to identify the printer on this computer and on the network.

Enter a name for this printer.

Printer name: `Argox iX4-250 PPLB`

☑ Use this printer as the default printer

Specify whether or not you want to share this printer with other network users. When sharing, you must provide a share name.

◉ Do not share this printer

○ Share name: `Argox_iX4-250_PPLB`

< Back | Next > | Cancel

9. Check all the data on the showing screen, if it is correct, click "Finish".

Seagull Driver Wizard ✕

Completing the Seagull Driver Wizard

A new printer will be installed using the following settings:

Name:	Argox iX4-250 PPLB
Share name:	<Not Shared>
Port:	USB001
Default:	Yes
Manufacturer:	Argox
Model:	Argox iX4-250 PPLB
Version:	7.4.2 M-4 (12/16/2016)

To begin the driver installation process, click Finish.

< Back | Finish | Cancel

10. After the related files have been copied to your system, click "Finish".
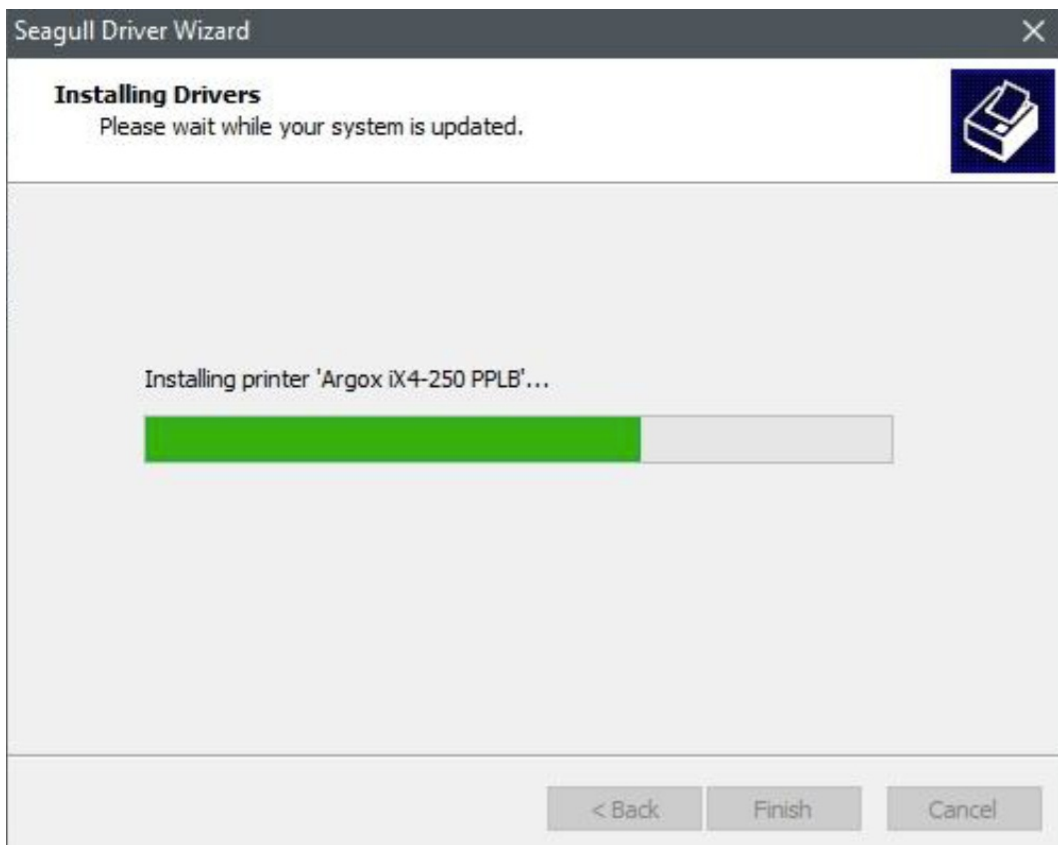
11. After driver installation is complete, click "Close". The driver should now be installed.
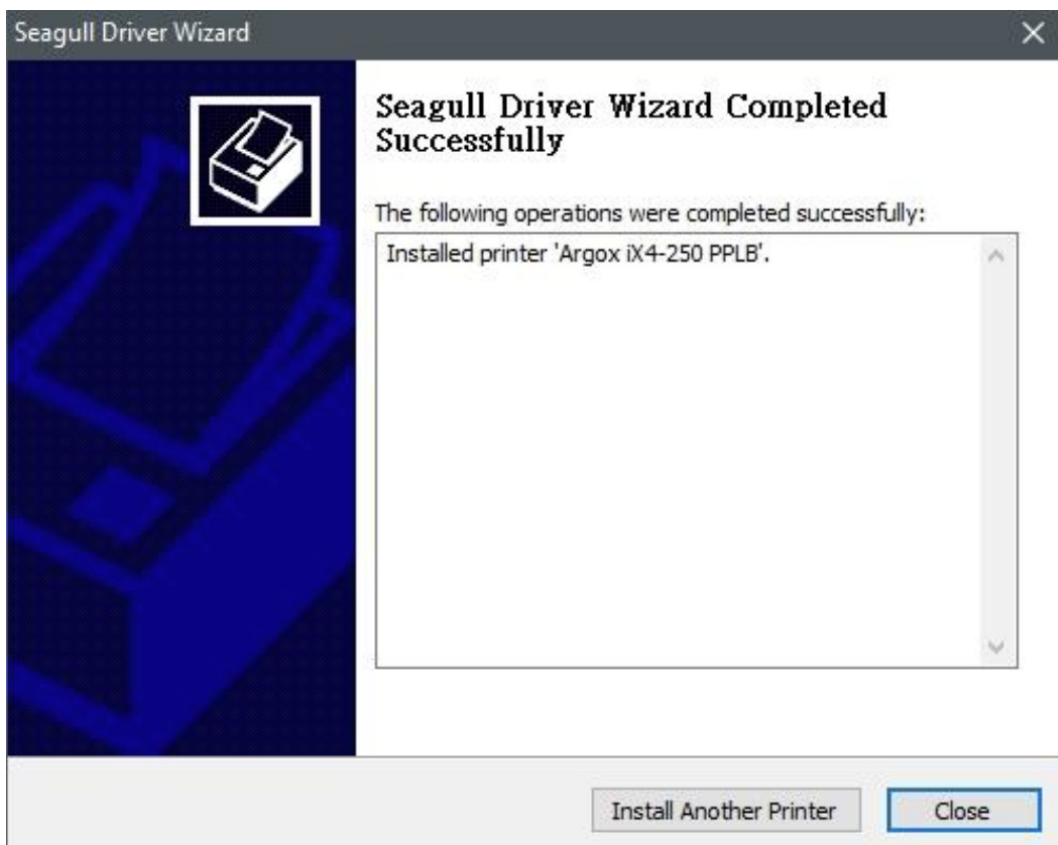
Installing a Printer Driver (For Other Interfaces Except USB)

1. Turn off the printer. Plug the power cable into the power socket on the wall, and then connect the other end of the cable to printer's power socket. Connect the Parallel cable, Serial cable, or Ethernet cable to the proper port on the printer and on your computer.

2. Run the driver from Argox website. On the prompt, Windows Printer Driver, select "I accept…" and click "Next".

License Agreement

SEAGULL
S C I E N T I F I C

Please read the following license agreement carefully.

WINDOWS PRINTER DRIVER
LICENSE AND LIMITED WARRANTY

Seagull Scientific, Inc. ("Seagull") grants you a non-exclusive license to use the accompanying Windows Printer Driver(s) and related documentation ("Seagull Software"), subject to the following provisions. You assume full responsibility for the selection of the Seagull Software to achieve your intended results, and for the installation, use, and results obtained from the Seagull Software.

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◉ I accept the terms in the license agreement
○ I do not accept the terms in the license agreement

< Back   Next >   Cancel

3. Assign the directory to keep Seagull driver, (for example: C:\Seagull) and click "Next".

Installation Directory

SEAGULL
S C I E N T I F I C

Please select the directory to unpack the software.

The software will be unpacked to the directory listed below. To unpack to a different directory, either type in the new path or click Browse to select a different directory.

Installation Directory: C:\Seagull   Browse...

Space required on drive: 42.9 MB
Space available on selected drive: 110.3 GB

< Back   Next >   Cancel

4. Click "Finish".

Windows Printer Drivers   ✕

Installation Information   **SEAGULL**
                                                     S C I E N T I F I C

Follow the instructions below to install the software.

Instructions
───

After the drivers are unpacked, install them using the Driver Wizard.

Options
───

☑ Run Driver Wizard after unpacking drivers
☑ Read installation instructions (contained in 'Installation_Instructions.html')

                                    [< Back] [Finish]   [Cancel]

5. Select Install printer drivers and Click "Next".

Seagull Driver Wizard   ✕

Welcome to the Seagull Driver Wizard

This wizard helps you install and remove printer drivers.

What would you like to do?

◉ Install printer drivers
○ Remove printer drivers

Please save all work and close all applications before proceeding. This process may require Windows to be restarted.

                                    [< Back] [Next >]   [Cancel]

6. Make sure printer is connected to PC, select "Other" and click "Next":

Seagull Driver Wizard ✕

Connect Printer
The printer should be connected before continuing installation.

How is this printer going to be attached?

○ USB
○ Network (Ethernet or WiFi)
○ Bluetooth
◉ Other (such as Parallel or Serial)

Instructions:
1. Connect your printer to the PC.
2. Turn the printer on.
3. Press Next to continue.

< Back   Next >   Cancel

7. Select model & emulation – the following examples are based on model iX4-250 PPLB:

Seagull Driver Wizard ✕

Specify Printer Model
The manufacturer and model determine which printer driver to use.

Specify the model of your printer.

Manufacturer	Printer Model
AMT Datasouth	Argox I4-350 PPLZ
Argox	Argox iX4-250 PPLA
SATO	Argox iX4-250 PPLB
	Argox iX4-250 PPLZ
	Argox MP-2140 PPLA
	Argox MP-2140 PPLB
	Argox MP-2140 PPLZ

Source: C:\Seagull
Version: 7.4.2 M-4 (12/16/2016)

Browse...

< Back   Next >   Cancel

8. Select the port of the printer and click "Next".

9. Enter Printer name (i.e. Argox iX4-250 PPLB) and select "do not share this printer", and click "Next".

10. Check all the data on the showing screen, if it is correct, click "Finish".

11. After the related files have been copied to your system, click "Finish".

12. After driver installation is complete, click "Close". The driver should now be installed.

Configuration on Web Setting Tool

Before doing settings for your printer, be sure that you have a LAN cable. The cable is connected to the LAN connector of your printer. The LAN c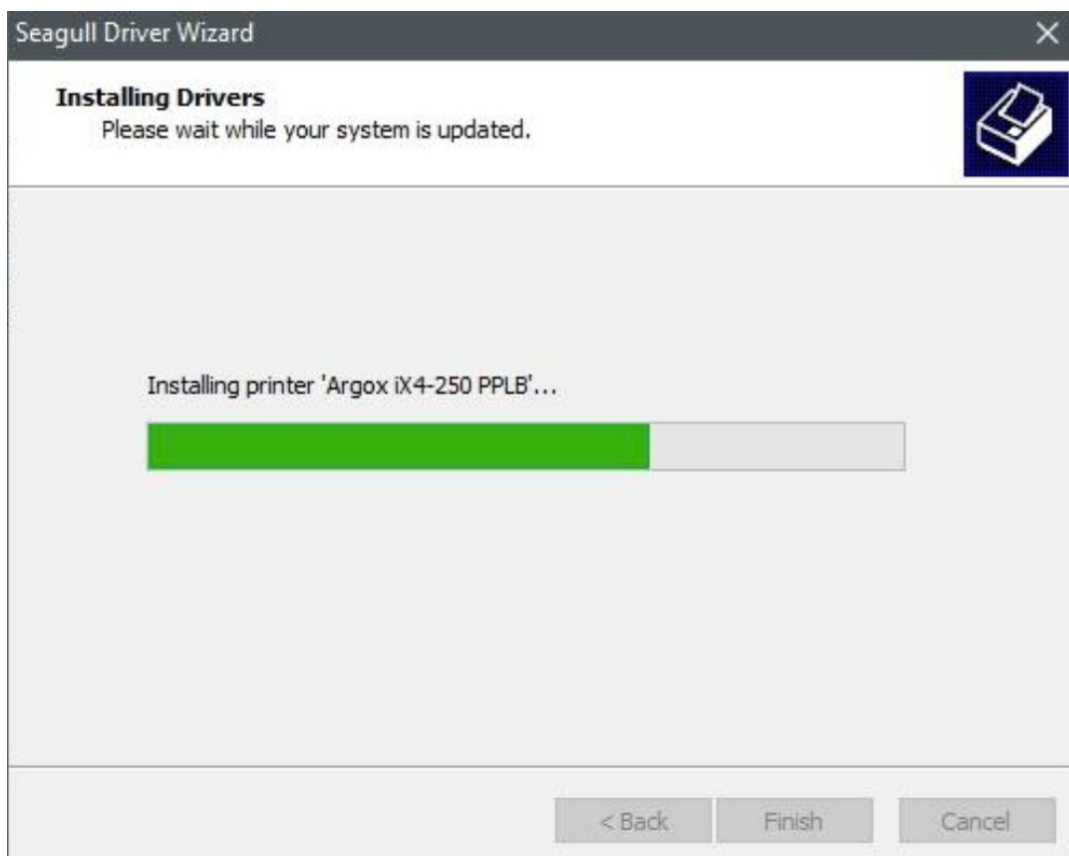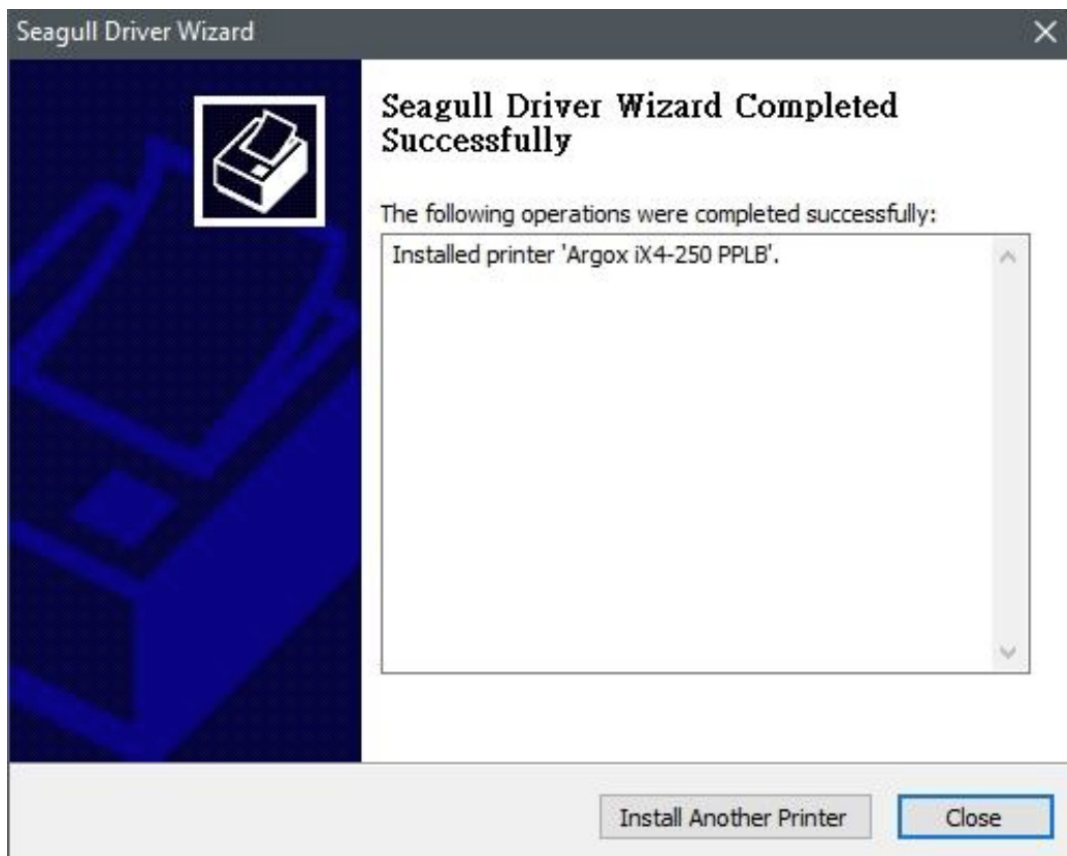onnector is an 8-PIN RJ45 type modular connector. Please use the LAN cable of CAT 5 of a proper length to connect the LAN connector on the printer to a LAN hub as appropriate.
The default static IP address of the printer is 0.0.0.0 and the default listen port is 9100. For the first time, to configure your printer through the web setting tool, you must still follow the step-by-step instructions below.

Attaching the Power Cord

1. Make sure the printer power switch is set to the OFF position.
2. Insert the power supply's connector into the printer power jack.
3. Insert the AC power cord into the power supply.

    Important: Use only the power supply listed in the user instructions.
4. Plug the other end of the AC power cord into the wall socket.

    Do not plug the AC power cord with wet hands or operate the printer and the power supply in an area where they may get wet. Serious injury may result from these actions!

Connecting the Printer to a LAN Hub

Use a LAN cable of CAT 5 of a proper length to connect the LAN connector on the printer to a LAN hub to which your desktop or laptop PC as a host terminal is also connected.

**Getting the IP Address of the Printer**

You can have the printer run a self test to print a configuration label, which helps you get the IP address of your printer connected to the LAN hub.

1. Turn off the printer.

2. Press and hold the FEED button, and turn on the printer.

3. Both status lights glow solid amber for a few seconds. Next, they turn to green shortly, and then turn to other colors. When LED 2 turns to green and LED 1 turns to amber, release the FEED button.

4. Press the FEED button to print a configuration label.

5. Get the IP address of the printer from the printed configuration label.

Logging in to The Web Setting Tool

The Web Setting Tool is a build-in setting tool in firmware for ARGOX serial printers. User can connect to the supported ARGOX serial printers with browsers to get or set the printer settings, update firmware, download font, etc.

After obtaining the IP address of the LAN printer from the printed configuration label, you can connect to the printer with the supported browsers by input the IP address of the printer, for example, 192.168.6.185, in the URL field and connect to it.
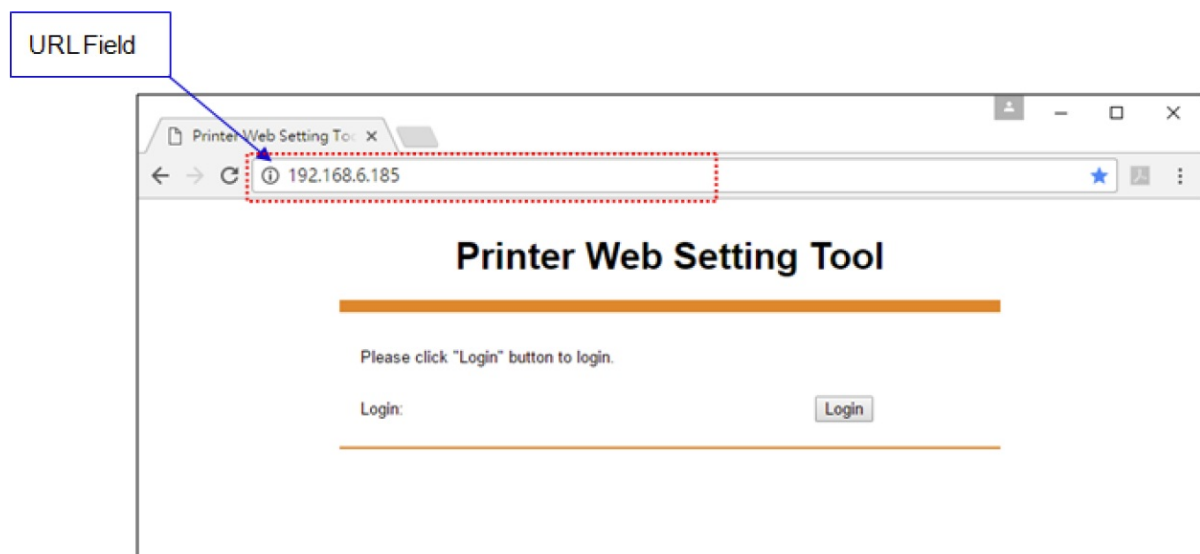
When the connection is successful, the Login page will be displayed. Input the user name and password to log in to the web setting tool. The default user name and the default password are given below:

Default user name: admin

Default password: admin
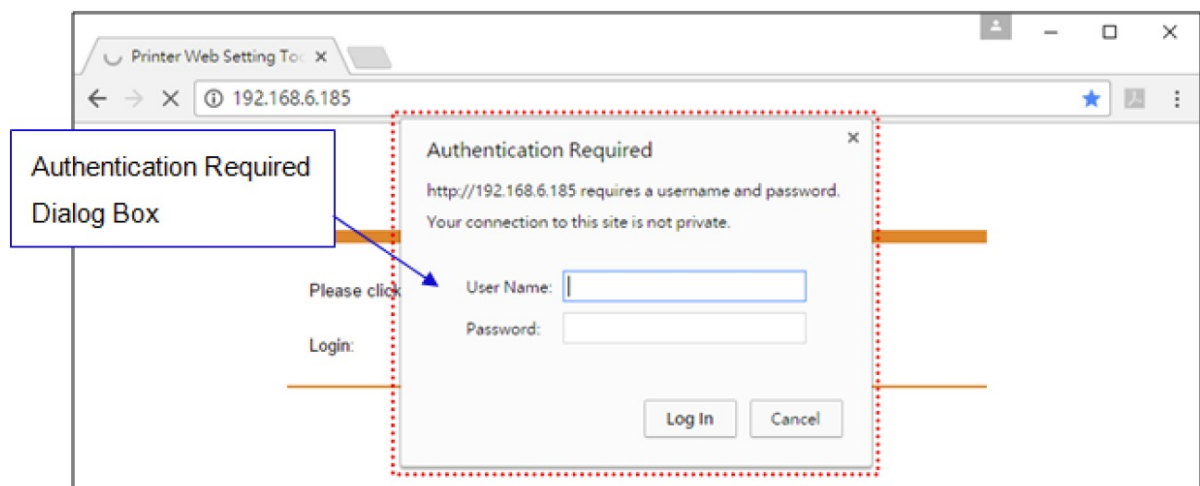
The default password can be changed in the "Device Setting \ Change Login Password" webpage.

This web setting tool can be used to manage multiple label printers in the same local area network segment under

the Windows operating system as long as there is no conflicting IP address in the network. You can also check each of the MAC addresses listed in this tool against the MAC address label you can find on each of the printers. The label printer that is connected through TCP/IP in the way like a directly connected local printer can be used with a random PC connected in the same local area network segment. So, through the tool, all commands applicable to the LAN mode can work on the printer in the same way, as the printer must be configured upon the TCP/IP communication protocol with the IP address of the printer.

When doing settings through a tablet PC or Smart Phone for the printer working in infra mode, please set the same network segment of the host terminal to that of the printer, for example, 192.168.6.XXX (1~254). The Wi-Fi mode for the printer is infra mode that can be searched by the wireless device manager of the host terminal.

Maintenance

Vertical streaks in the printout usually indicate a dirty or faulty print head. (Refer to the following examples.) Clean the print head. If the problem persists, replace the print head.
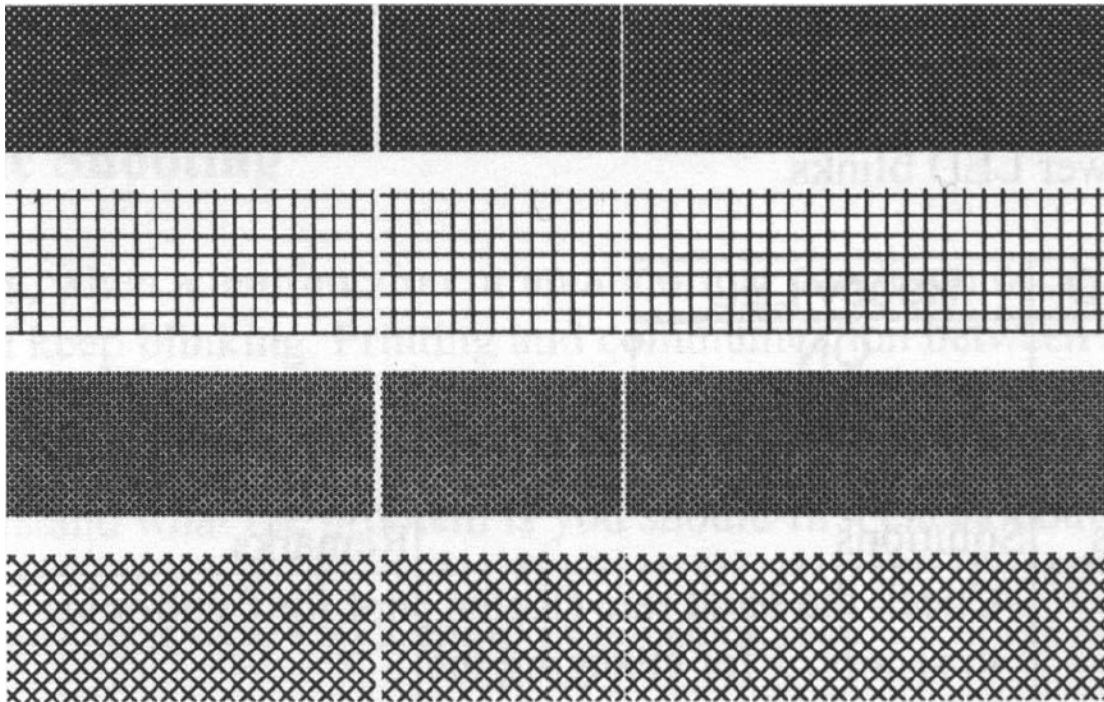
For unstable ribbon roll rotation, check the label path and make sure the head latch is securely closed.

Poor printout quality:

- The ribbon may not match the media in use.
- Adjust the Darkness (heat temperature).
- Slow down the print speed.
- Refer to the following and clean the related spare parts.

Cleaning

To maintain print quality and prolong the printer's life, you need to perform some routine maintenance. Daily maintenance should be done for high volume printing, and weekly for low volume printing.

Printhead

It is essential to keep printhead clean if you want the best print quality. We strongly recommend that you clean the printhead when you load a new media roll. If the printer is operated in critical environment, or the print quality declines, you need to clean the printhead more frequently.

Keep in mind these things before you clean:

- Keep the water away in case of corrosion on heating elements.
- If you just finish printing, wait until the printhead cools down.
- Do not touch the printhead with bare hands or hard objects.

Cleaning Steps:

1. Moisten a soft cloth or a cotton swab with ethyl alcohol.
2. Gently wipe the printhead in one direction. That is, wipe it only from left to right or vice versa. Do not wipe back-and-forth, in case dust or dirt attaches to the printhead again.

Platen Roller
The platen roller is also important for print quality. Dirty platen roller may damage the printhead. Clean the platen roller right away if the adhesive, dirt or dust accumulates on it.

1. Moisten a soft cloth with absolute ethyl alcohol.
2. Gently wipe the platen roller to remove the dust and adhesive.

Printer Adjustments

Printer Head Pressure Adjustment
Printing quality can be fine adjusted based on which area on the label the printing quality discrepancy is located. There are two ways to enhancement pressure. Spring pressure pad have two level can quickly adjust pressure numerous. Star screws can adjust pressure slightly.

Spring pressure pad
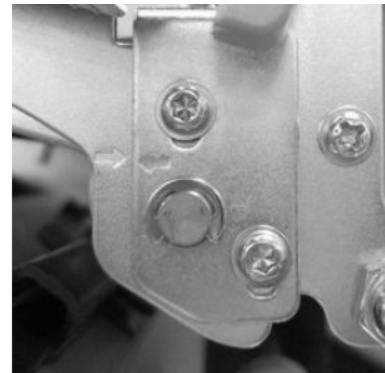
Star screws

Adjust Spring Pressure Pad

- **Step 1:** Choose right or left pad and loosen the screw below with tool.

- **Step 2:** Move the pad horizontally. Position 1 is thicker than position 2. If you want more pressure, move pad to position 1.

Screw in position 2 (- pressure)
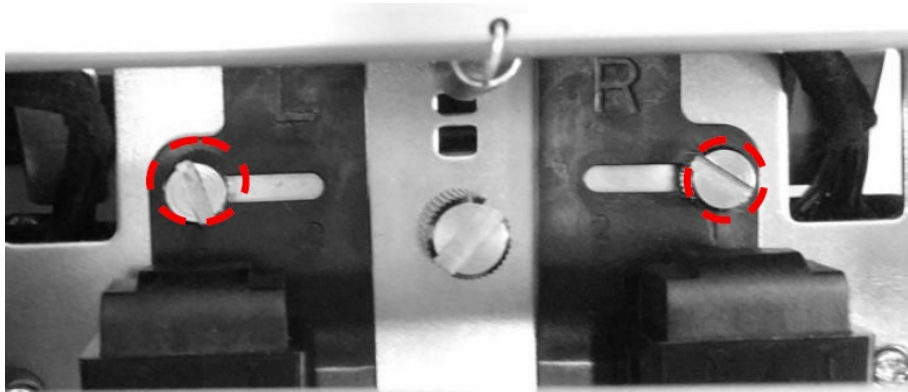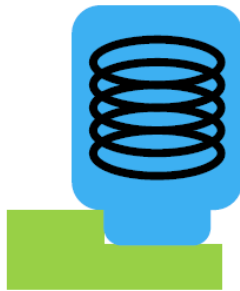
Screws in position 1(+ pressure)

Ribbon Tension Adjustment

Both ribbon supply spindle and ribbon pickup spindle are equipped with control knobs to adjust ribbon tension. The control knobs can rotate to both directions.

If the ribbon is wrinkled at ribbon supply, rotate clockwise control knob of ribbon supply, to increase ribbon tension at ribbon supply and further improve ribbon wrinkle.

- Rotate control knob clockwise to increase ribbon tension.
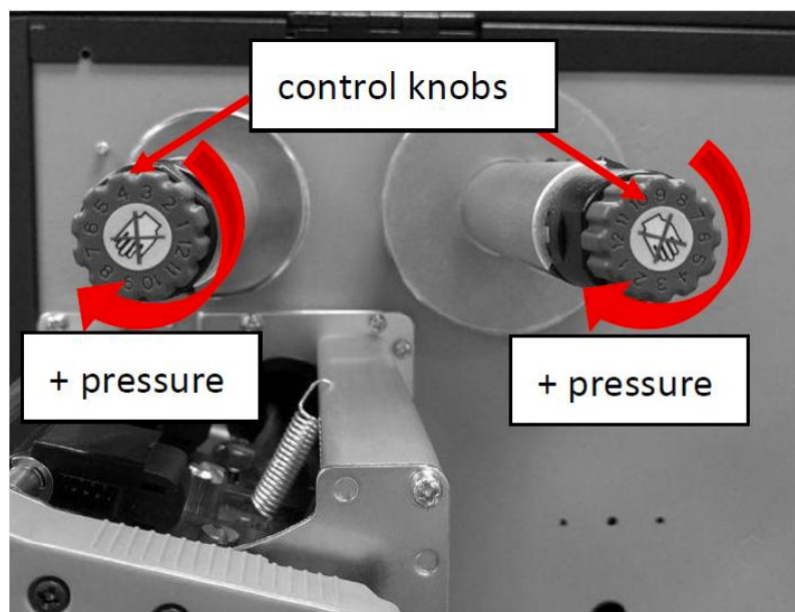
Too much tension at ribbon supply may result in ribbon not moving smoothly. Once it happens, rotate counter-clockwise control knob of ribbon supply, to reduce ribbon tension to balance the tension.

- Rotate control knob counter-clockwise to reduce ribbon tension.

[Remark]:
The ribbon shaft has its user-friendly feature to allow users to adjust the tension of ribbon shaft by rotating the knob. User can reset to factory default tension by adjusting the ribbon shaft while the black line was aligned to the marked arrows. The default setting when shipped from Argox factory is shown as Figure 2 – the two arrows are in line with the black line.
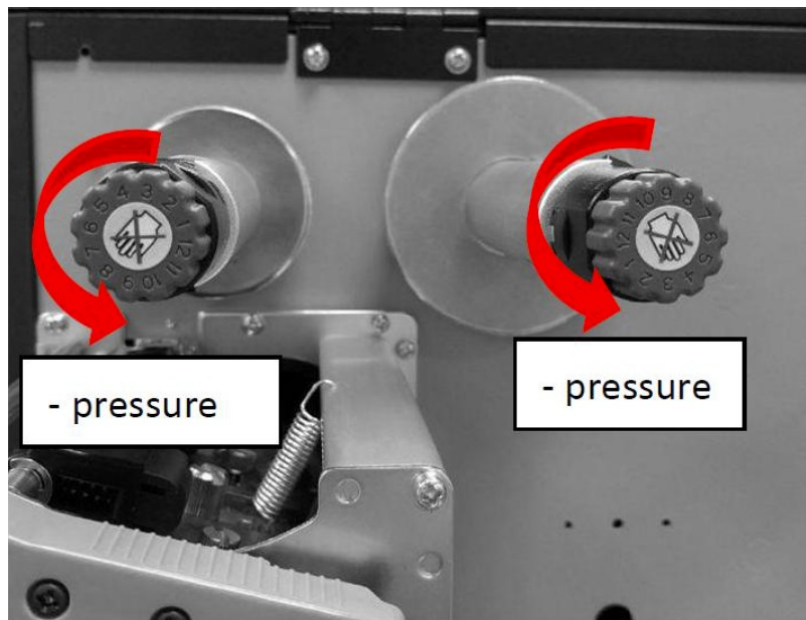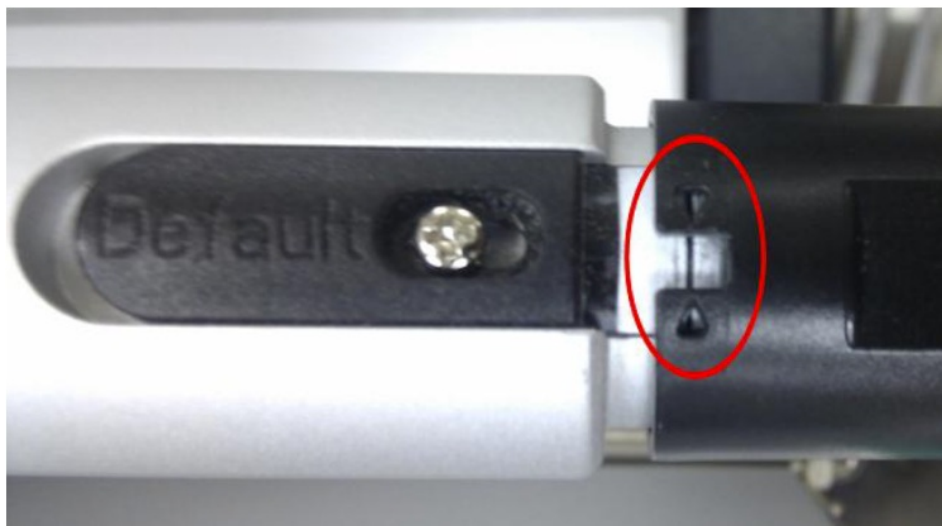

Note: If the ribbon is wrinkled at ribbon pickup, rotate counter-clockwise control knob of ribbon pickup, to decrease ribbon tension at ribbon pickup and further improve ribbon wrinkle. If the tension is too little at ribbon pickup, ribbon will not move smoothly, and needs control knob to rotate clockwise to increase tension.

Printing Wrinkle Adjustment
During printing, ribbon may wrinkle and cause abnormal printing quality. The following describes how to solve ribbon wrinkle accordingly.

Once the printouts as above appear, the possible cause may be the unequal positions of Ribbon Bracket, which needs to be adjusted properly to make its heights equally the same at both sides. Steps to adjust are as below:

1. Loose the screws at both sides and rotate counter-clockwise:
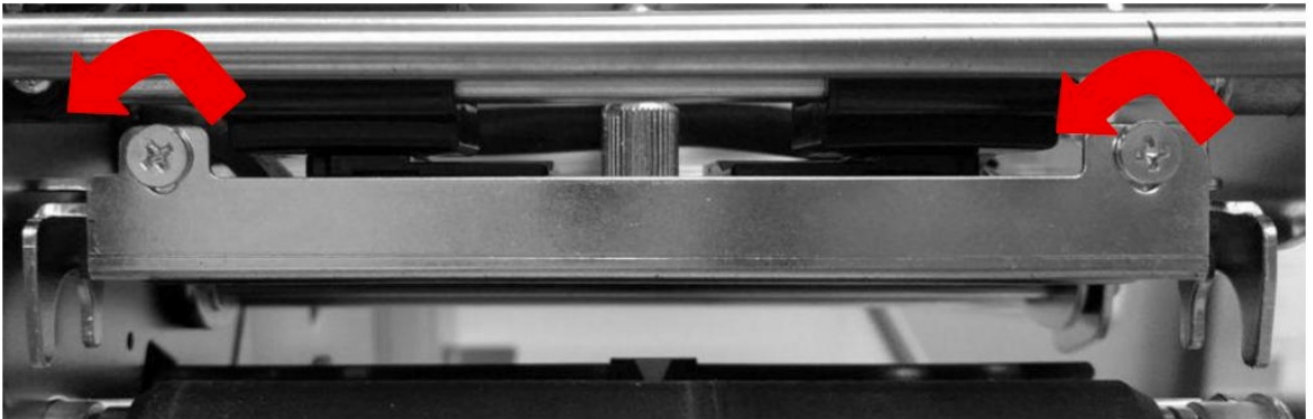
2. Make sure the Ribbon Bracket is at its lowest position first; then tight up the screws by rotating clockwise.
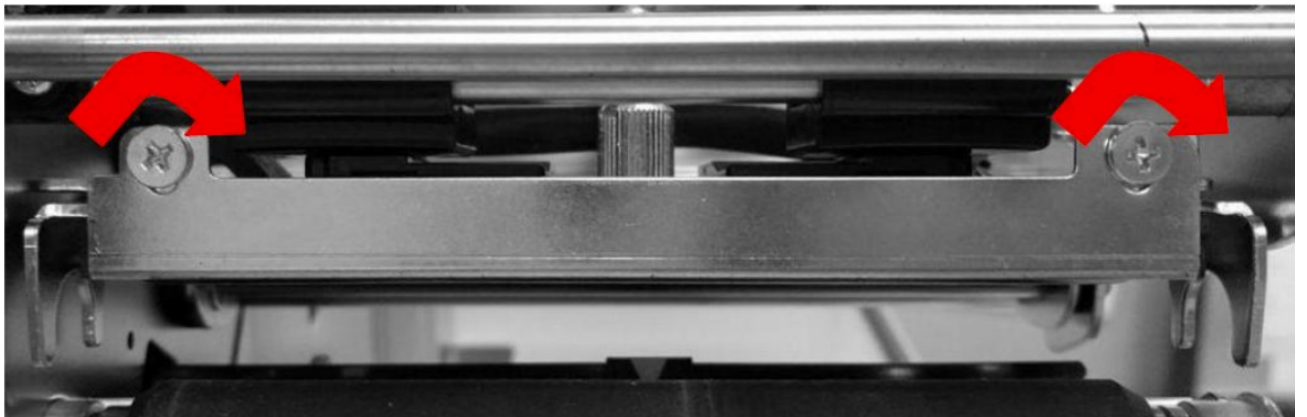
3. Print a test page to check print quality. If the quality is improved, stop the adjustment; if not, continue with next step.

4. If the test print appears as below, remain the screw at the right of Ribbon Bracket fixed, then loose the screw at the left, and gradually fine-tune upward, until the print quality gets improved.

123456789

5. If the test print appears as Figure B, remain the screw at the left of Ribbon Bracket fixed, and then loose the screw at the right, and gradually fine-tune upward, until the print quality gets improved.

123456789

RTC Battery Replacement

RTC stands for real-time clock. It is a battery powered clock that keep track of the current date and time. If your printer has a built-in RTC, you'll find the RTC battery on the main board. The RTC battery keeps the RTC running even if the printer is turned off. If the battery is low or out, you need to replace it with a new one.
To replace a RTC battery:

1. Open the left cover of printer. Turn off the printer.
2. Locate the battery on the main board.
3. Remove the old coin battery and install a new one.
4. Turn on the printer.
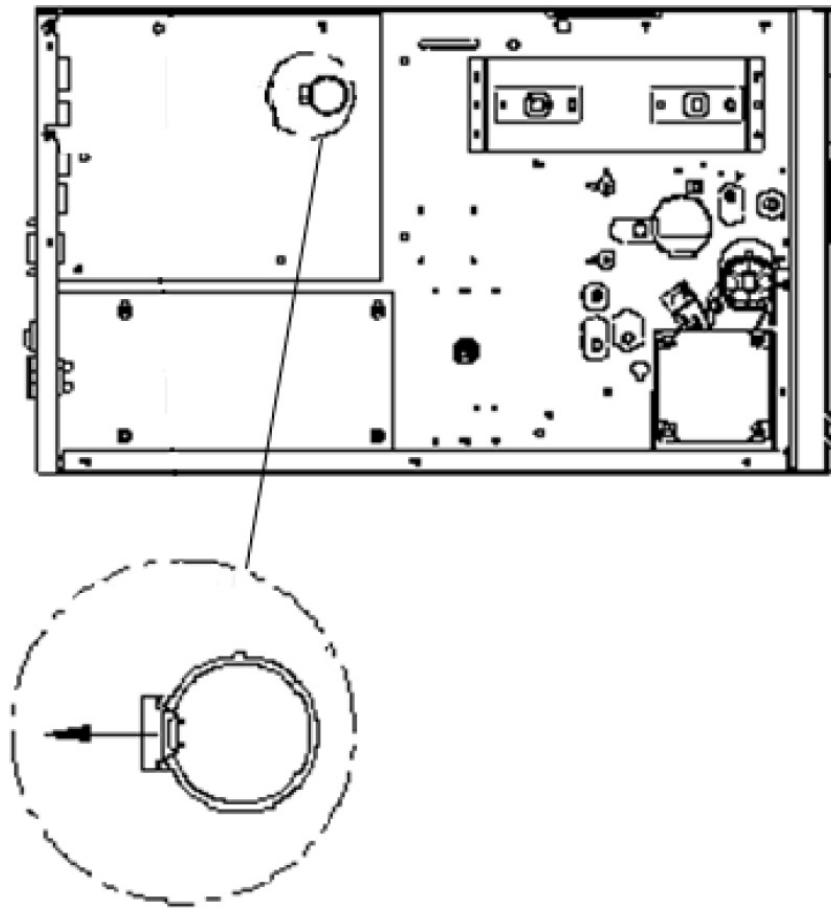
CAUTION:
Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Troubleshooting

This chapter provides the information about printer problems and solutions.

Printer Issues

The Printer Won't Turn On

- Did you attach the AC power cord?
- Check the power connection from the wall socket to the printer. Test the power cord and the socket with other electrical devices.
- Disconnect the printer from the wall socket, and connect it again.

The Printer Turns Itself Off

- Turn on the printer again.
- If the printer keeps turning itself off, check the socket and make sure it has enough power for the printer.

The Printer Does Not Feed the Media Out

- The media is not loaded correctly. See Section 2.3, "Loading Media" to reload the media.

- If there is a paper jam, clear it.

Media Issues

The Media is Out

- Load a new media roll.

The Paper is Jammed

- Open the printer and clear the jammed paper.
- Make sure the paper is held properly by the Media Guides.

The Printing Position is Not Correct

- Did you use the correct media type for printing?
- The media is not loaded correctly. See Section 2.3, "Loading Media" to reload the media.
- The media sensor needs to be calibrated. See Section 3.2, "Printing Media Calibration & Configuration" to calibrate the sensor.
- The media sensor is dirty. Clean the media sensor.

Nothing is Printed

- The media is not loaded correctly. See Section 2.3, "Loading Media" to reload the media.
- The print data might not be sent successfully. Make sure the interface is set correctly in the printer driver, and send the print data again.
- Make sure the media and ribbon are both matched.

The Print Quality is Poor

- The printhead is dirty. Clean the printhead.
- The platen roller is dirty. Clean the platen roller.
- Adjust the print darkness, or lower the print speed.
- The media is incompatible for the printer. Use appropriate media roll instead.

Ribbon Issues

The Ribbon is Out

- Load a new ribbon roll.

The Ribbon is Broken

- Check the print darkness and adjust it if it is too high, and take the following steps to fix the broken ribbon:
    1. Unload the ribbon supply roll and take-up roll from the printer.

2. Pull the ribbon from the supply roll so it overlaps the broken end of the take-up roll.
3. Tape the overlapped parts together.
4. Reload both rolls into the printer.

The Ribbon is "Printed Out" with the Media

- The ribbon is not loaded correctly. See Section "Loading Ribbon" to reload the ribbon.
- The printhead temperature is too high. Reload the ribbon and print a configuration label to check the settings (See "Printing Media Calibration & Configuration"). If the print darkness is very high, adjust it in printer preference, or reset your printer (see Section "Resetting to Factory Default Setting").

The Ribbon is Wrinkled

1. Make sure the ribbon is loaded correctly.
   Rotate Thumb Wheel of Ribbon spindles to straighten the ribbon.

Other Issues

There are broken lines in the printed label

- The printhead is dirty. Clean the printhead.

The printhead temperature is extremely high

- The printhead temperature is controlled by the printer. If it is extremely high, the printer will stop printing automatically, until the printhead is cool down. After that, the printer will resume printing automatically, if there is any unfinished print job.

The printhead is broken

- Contact your local dealer for assistance.

Specifications

This chapter provides specifications for the printer.

Media & Ribbon

Properties	Description
Media Size	Max. width: 4.4″ (112mm). Min. width: 1″ (25.4 mm). Thickness: 0.0025″~0.01″ (0.0635mm~0.254mm) 8.26″ (210mm) OD on a 3″ (76mm) ID core. 7″ (177.8mm) OD on a 1.5″ (38mm) ID core. Min. width 2.3″ (58mm) for partial cutter options. Min. length 1″ (25.4mm) for cutter options.
Media Type	Roll-feed, die-cut, continuous, fan-fold, tags, ticket or plain paper or label.
Ribbon Size	Width:1″~4″ (25.4 mm~101.6 mm) Length: max 450m Wax, 450m Semi-Resin. Max OD 3.2″ (81.3 mm). Core size ID 1″ (25.4 mm).
Ribbon Type	Wax, Wax/Resin, Resin (Ribbon wound ink-side out or ink-side in)

Electrical and Operating Environment

Properties	Description
Power Supply	Voltage: AC 100 V ~ 240 V ± 10 % (full range) Frequency: 50 Hz – 60 Hz ± 5 %
Temperature	Operating: 40°F~104°F (4°C~40°C) Storage: -4°F~122°F (-20°C~50°C)
Humidity	Operating: 25 %RH ~ 85 %RH (non-condensing) Storage: 10 %RH ~ 90 %RH (non-condensing)

Physical Dimension

Dimension	Size and Weight
Size	W 250mm x H 263mm x D 418 mm
Weight	11 kg(24lbs)

Note: The specifications may be changed at any time without prior notice. For more information about the new specifications, visit Argox website or contact your dealer.

Fonts, Barcodes, and Graphics Specification

The specifications of fonts, bar codes and graphics depends on the printer emulation. The emulations PPLA, PPLB, and PPLZ are printer programming languages, through which the host can communicate with your printer.

Interfaces

This section provides information about IO port specifications for the printer.

USB

There are two common USB connectors. Typically, type A is found on hosts and hubs; type B is found on devices. The figure below shows their pinouts.

Type A

Type B
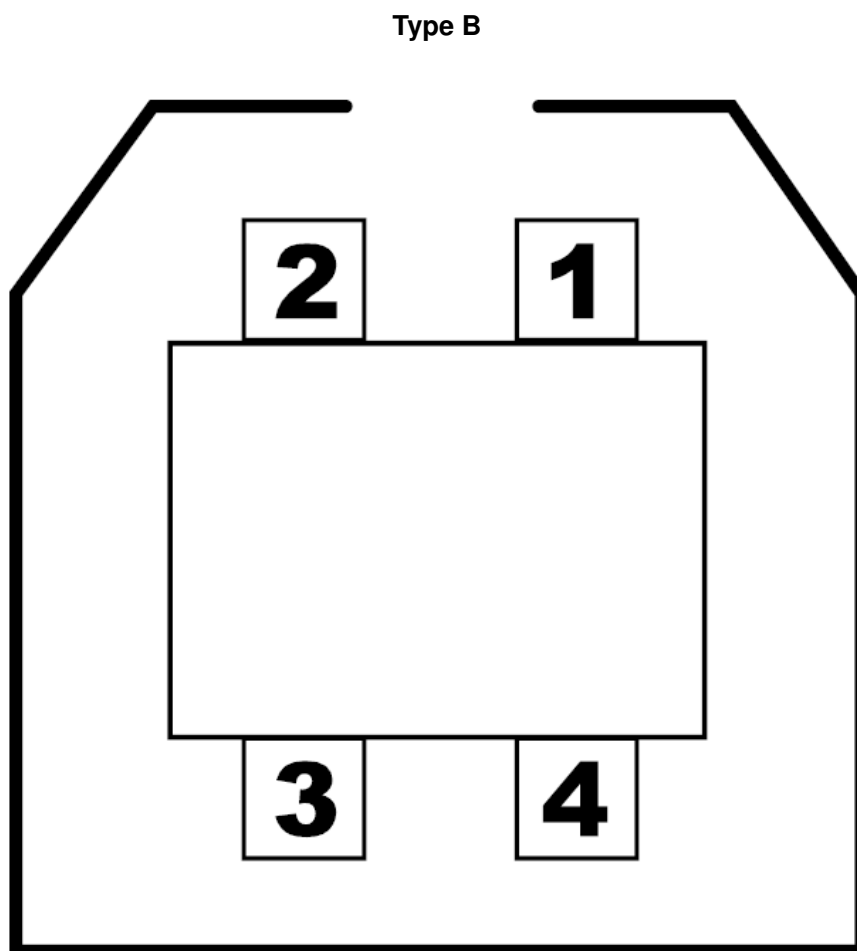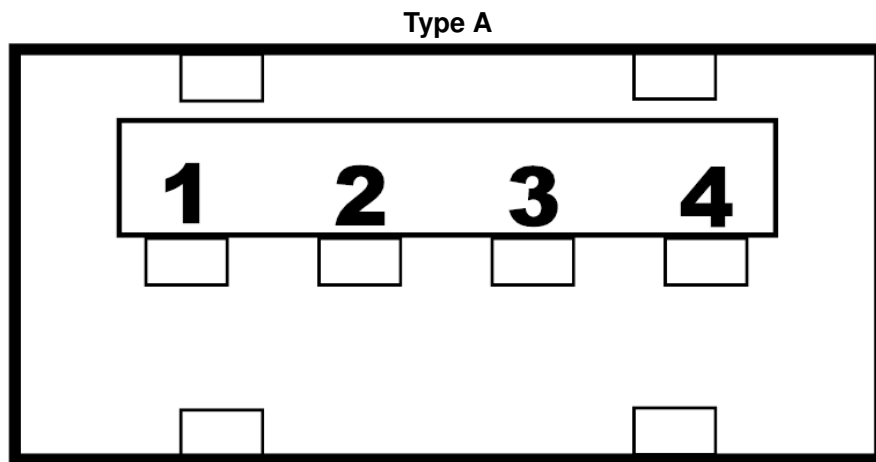
Pin	Signal	Description
1	VBUS	+5V
2	D-	Differential data signaling pair –
3	D+	Differential data signaling pair +
4	Ground	Ground

RS-232C

The RS-232C on the printer is DB9 female. It transmits data bit by bit in asynchronous start-stop mode. The figure below shows its pinout.
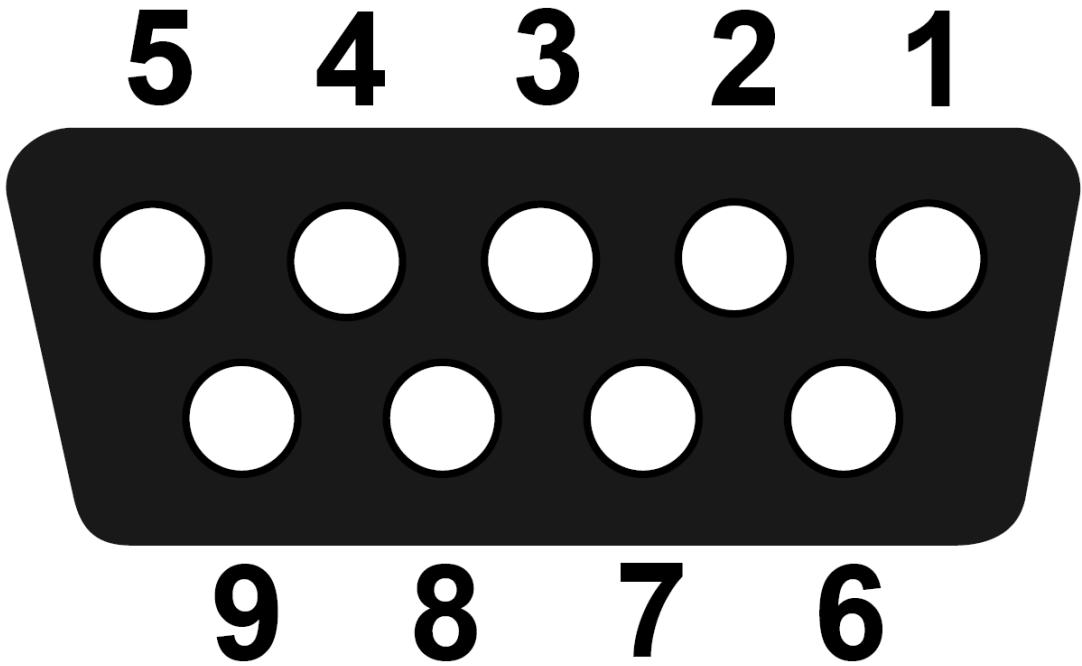
Pin	Signal	Description
1	NA	No Function
2	TxD	Transmit
3	RxD	Receive
4	NA	No Function
5	GND	Ground
6	NA	No Function
7	CTS	Clear to Send
8	RTS	Request to Send
9	NC	No Connection

Host (DB9)			Printer (DB9)	
Signal	**Description**	**Pin**	**Description**	**Signal**
CD	Carrier Detect	1>1	No Function	NC
RxD	Receive	2>2	Transmit	RxD
TxD	Transmit	3>3	Receive	TxD
DTR	Data Terminal Ready	4>4	No Function	NC
GND	Ground	5>5	Ground	GND
DSR	Data Set Ready	6>6	No Function	NC
RTS	Request to Send	7>7	Clear to Send	RTS
CTS	Clear to Send	8>8	Request to Send	CTS
CI		9>9	No Function	NC

Centronics

The 36-pin Centronics on the printer uses parallel communication, and complies with IEEE 1284 compatibility mode (also called SPP, Standard Parallel Port). The figure below shows its pinout.
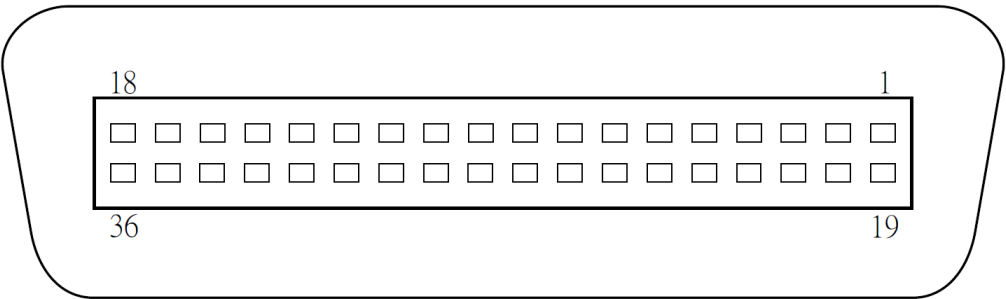
Pin	Signal Direction	Signal	Pin	Signal Direction	Signal
1	To Printer	/STROBE	**19**	S-GND	Signal-GND

2	To Printer	Data 1	**20**	S-GND	Signal-GND
3	To Printer	Data 2	**21**	S-GND	Signal-GND
4	To Printer	Data 3	**22**	S-GND	Signal-GND
5	To Printer	Data 4	**23**	S-GND	Signal-GND
6	To Printer	Data 5	**24**	S-GND	Signal-GND
7	To Printer	Data 6	**25**	S-GND	Signal-GND
8	To Printer	Data 7	**26**	S-GND	Signal-GND
9	To Printer	Data 8	**27**	S-GND	Signal-GND
10	From Printer	/ACK	**28**	S-GND	Signal-GND
11	From Printer	BUSY	**29**	S-GND	Signal-GND
12	From Printer	PE	**30**	S-GND	Signal-GND
13	From Printer	SELECT	**31**	To-Printer	LPTINIT
14	To Printer	AUTO	**32**	From Printer	/FAULT
15	NC		**33**	NC	
16	S-GND	Signal-GND	**34**	NC	
17	P-GND	Power-GND	**35**	NC	
18	Power	5V	**36**	To Printer	SELIN

GPIO
The input and output definition is below.

DB15 Pin No.	Direction (Power/In/Out)	Name	Port No.
1	P	GND	X
2	P	5V	X
3	Input	Start Print	CS4 bit0
4	Input	Feed	CS4 bit1
5	Input	Pause	CS4 bit2
6	Input	Reprint	CS4 bit3
7	P	24V	X
8	P	GND	X
9	NC	NC	X
10	Output	Serv_Req	PC18
11	Output	End_Print	PB21
12	Output	Meida Out	PC17
13	Output	Ribbon Out	PC18
14	Output	Data Ready	PC16
15	Output	OPT_Fault	PA25

Initialize:

1. During initialize process, please set all of output port to high for status clear, it mean all of outputs are active low.
2. The active level maybe customize needed to modify.
3. The input normal state (idle) is high level, so the all of inputs are also active low.

Ethernet

The Ethernet uses RJ-45 cable, which is 8P8C (8-Position 8-Contact). The figure below shows its pinout.
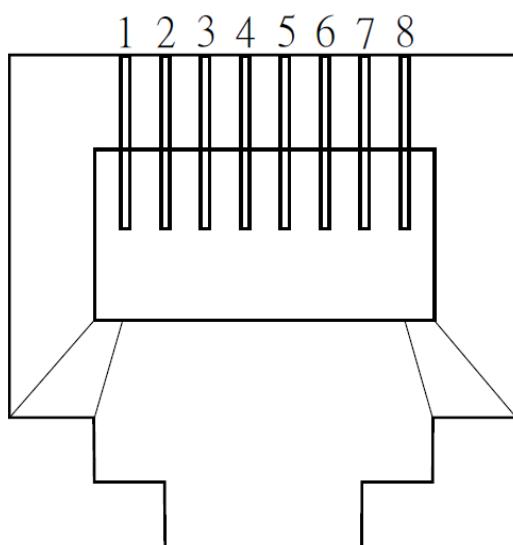
Pin	Signal
1	Transmit+
2	Transmit-
3	Receive+
4	Reserved
5	Reserved
6	Receive-
7	Reserved
8	Reserved

Documents / Resources

ARGOX iX4 Series Printer [pdf] User Manual
iX4 Series Printer, iX4, Series Printer

ARGOX iX4-Series Printer [pdf] Installation Guide
iX4-Series Printer, iX4-Series, Printer

References

- **A** **Argox | a Sato Company**