ARGOX
a SATO company

OS-214D Direct Thermal Printer

User Manual

Version: 1.1

http://www.argox.com

FCC ID

In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC Warning

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 instructions in this manual, it 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.

FCC Statement for Optional RF module

This device complies with RF radiation exposure limits set forth for an uncontrolled environment.

The antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all people and must not be collocated or operating in conjunction with any other antenna or transmitter.

WARNING

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

(for USA only)

Liability Disclaimer

ARGOX Corporation takes steps to assure that the company's published engineering specifications and manuals are correct; however, errors do occur. ARGOX reserves the right to correct any such errors and disclaims any resulting liability. In no event shall ARGOX or anyone else involved in the creation, production, or delivery of the accompanying product (including hardware and software) be liable for any damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of the use of or the results of use of or inability to use such product, even if ARGOX has been advised of the possibility of such damages.

Caution

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

To ensure this printer can fulfill user's demand, when using narrow media for continuous printing, the printer will optimize appropriately to support continuous, high quality print-out. If you have any questions, please consult Argox technical service personnel.

Contents

1 Introduction

Thank you for purchasing the ARGOX OS-214D printer. This manual provides information about how to set up and operate your printer, load the media and solve common problems.

1.1 Features

- **Various Connectivity Options**　USB Device, USB Host, RS-232 and Ethernet
- **Easy Operation**　One-button design for easy control
- **Fast Print Speed**　Max 6 inches/sec for the OS-214D model
- **Wireless LAN Connection**　Build a Wireless LAN printing environment with Ethernet
- **External Memory**　The extra USB port allows you to use a USB flash drive for storage

1.2 Unpacking

Make sure all of the following items are included in your package.
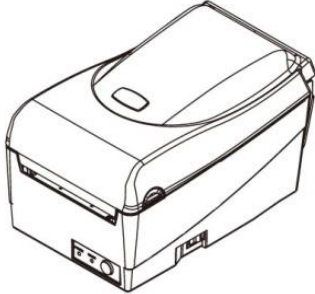
OS-214D

Label Printer

Quick Installation Guide
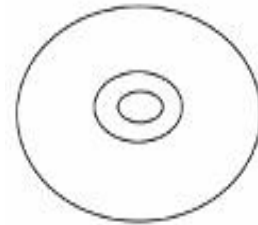
DVD
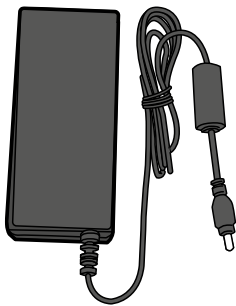
Power Supply
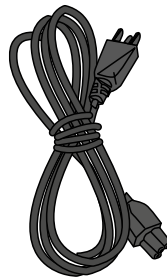
AC Power Cord
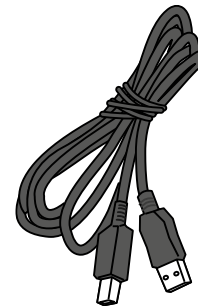
USB Cable

Media Hanger /

Media Shields

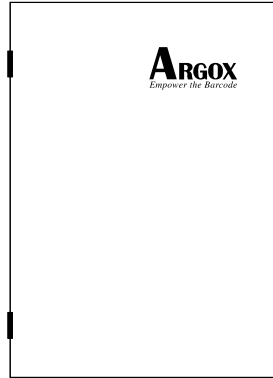When you receive the printer, open the package immediately and inspect for shipping damage. If you discover any damage, contact the shipping company and file a claim. ARGOX is not responsible for any damage incurred during shipping. Save all package materials for the shipping company to inspect.

Note   If any item is missing, please contact your local dealer.

1.3 Understand your printer

1.3.1 Front view

Top Cover

Power LED Indicator

Ready LED Indicator

Feed Button

Power Switch
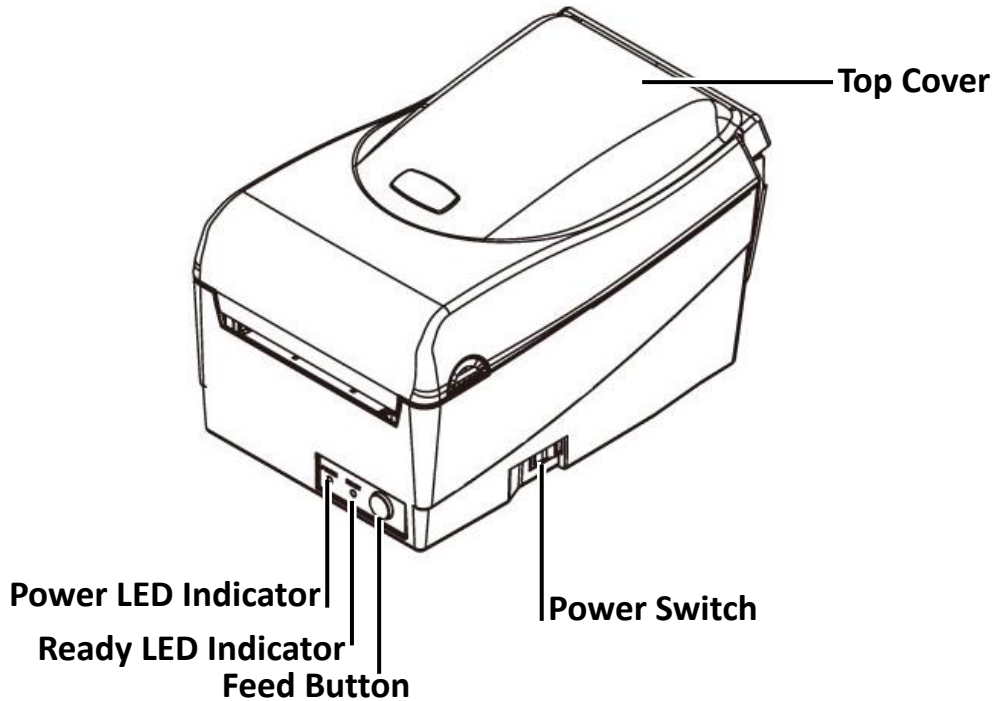
1.3.2 Back view

For OS-214D with USB (Host/Client), Ethernet, and RS-232

USB (Client)

Power Jack

LAN

RS-232

USB (Host)
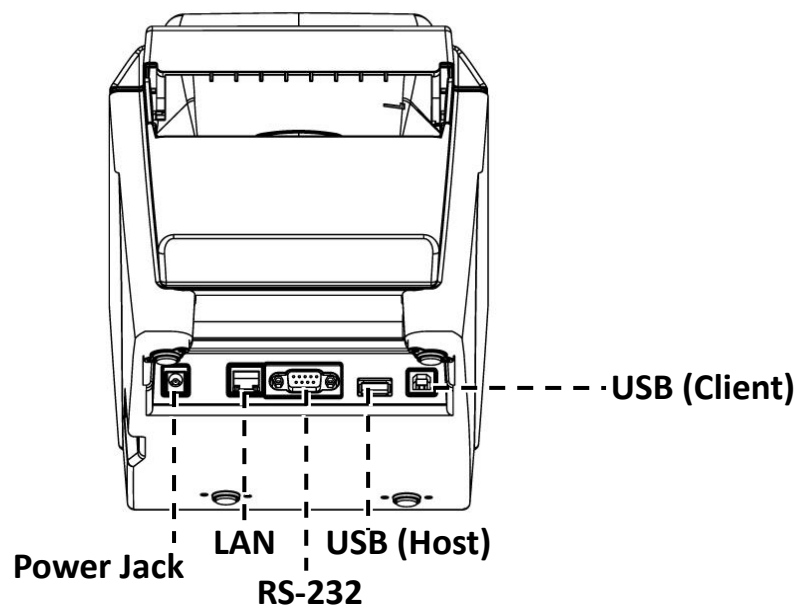
Caution To avoid injury, be careful not to trap your fingers in the Paper Slot while opening or closing the Top Cover.

1.3.3 Interior view I

Media Pick-up Holder

Media Hanger

Release Lever

1.3.4 Interior view II

Media Supply Holder

Thermal Print Head

Platen Roller

Power Switch
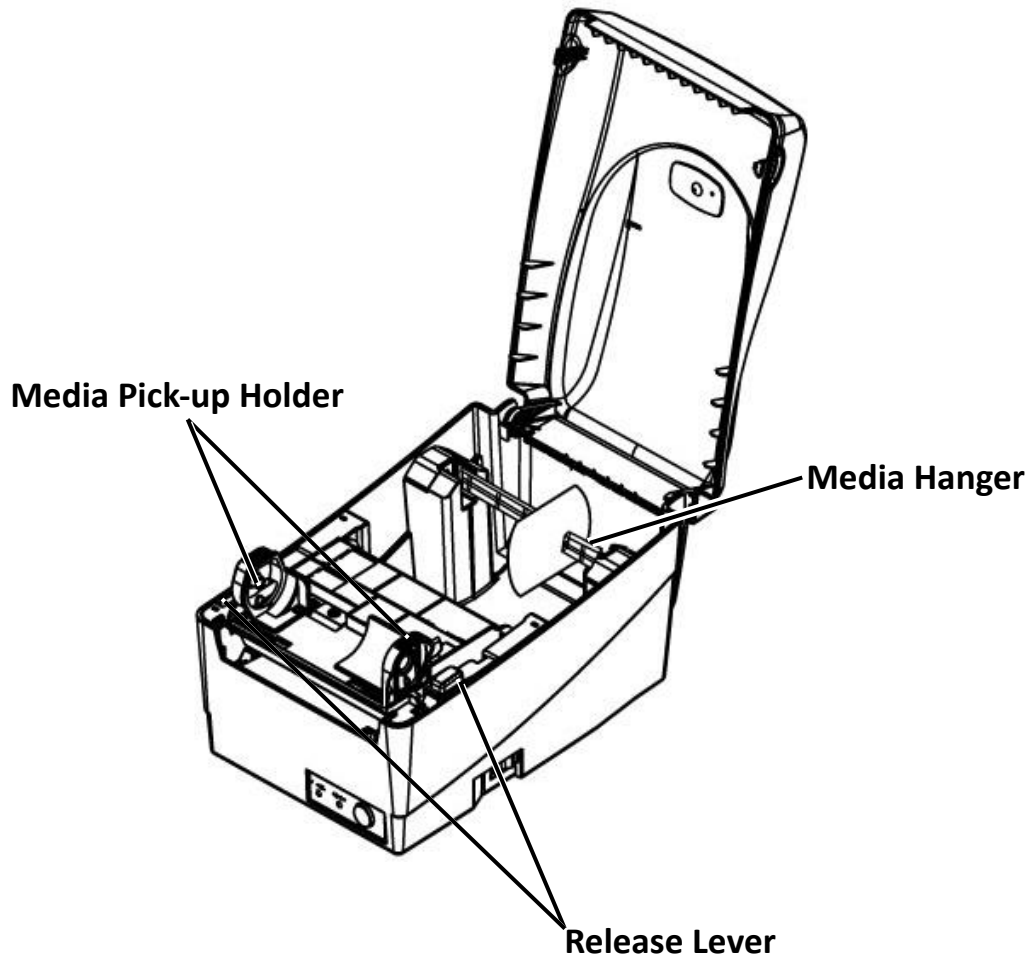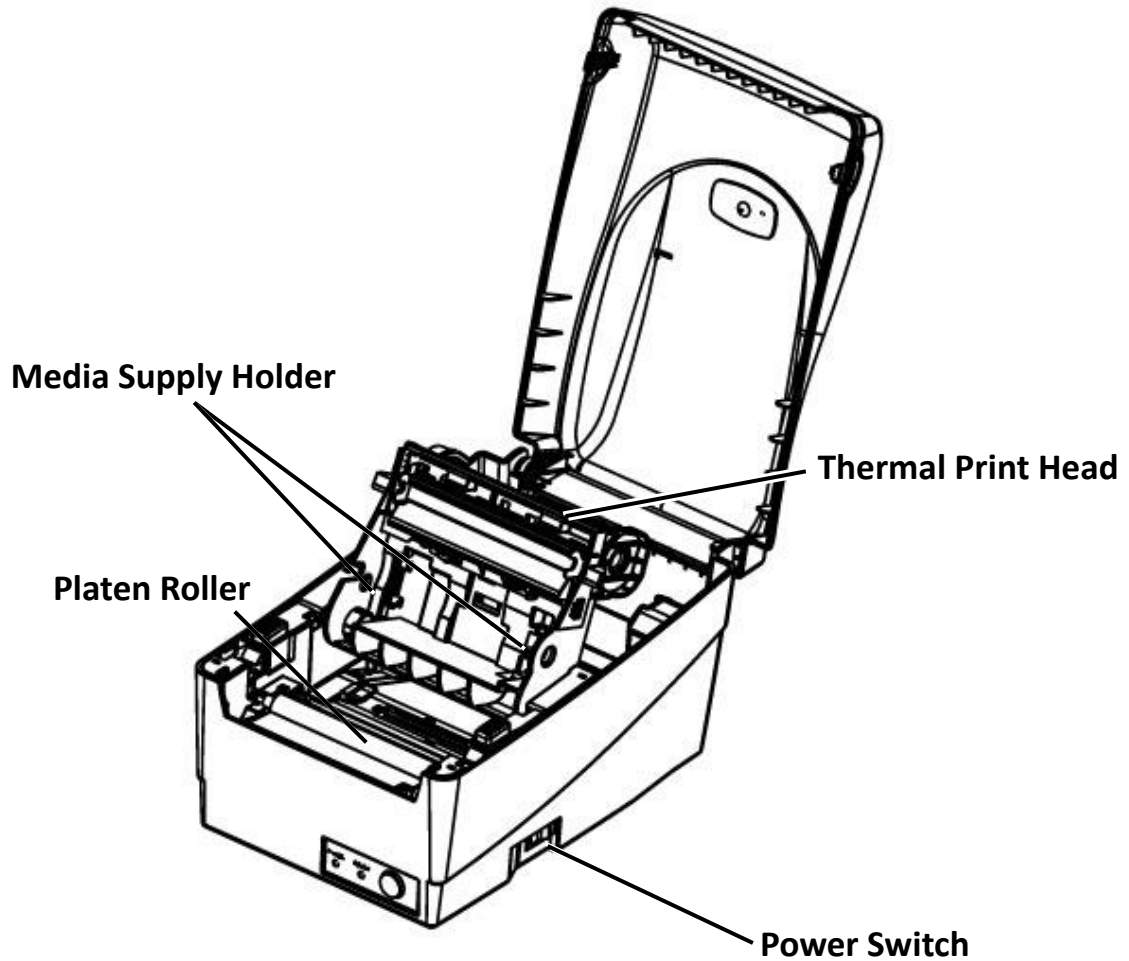
⚠	**Warning** The thermal print head becomes very hot during printing. Do not touch the print head or touch around it directly after printing. By doing so you may get burnt.

1.4 Controls and Indicators

The following table explains control and indicator functions.

Control / Indicator	Function
Power Switch	• On: turns on normal operation • Off: turns off power ***Note:*** *Turn power off before connecting or disconnecting cables*
Power Indicator	• Green light shows the power-on • Light off shows the power-off • Blinking light indicates error has occurred
Ready Indicator	• Green shows printer is ready to operate • Blinking light indicates printer is paused or data transferring • Seagull driver status monitor
Feed Button	• Press to advance labels to the first printing position • Press to take the printer out of "pause" • Press and hold while turning on the power to print out a configuration profile

2 Get started

2.1 Load media

There are various types and sizes for the media roll. Load the applicable media to satisfy your need.

2.1.1 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.
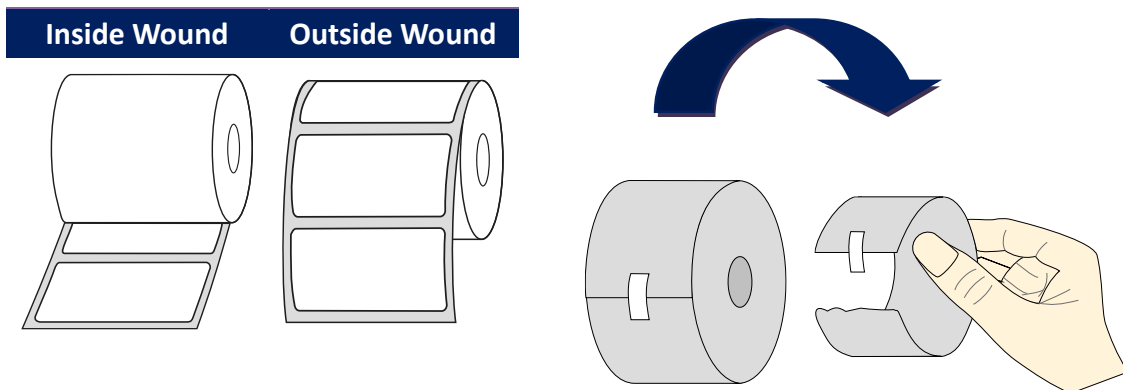
2.1.2 Loading media

1. Lift the top cover to expose the media compartment.
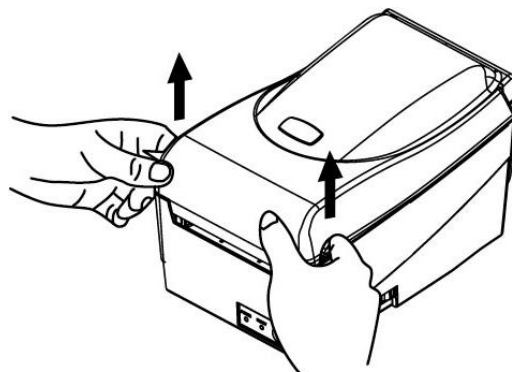
2. Remove the media hanger.

Media Compartment
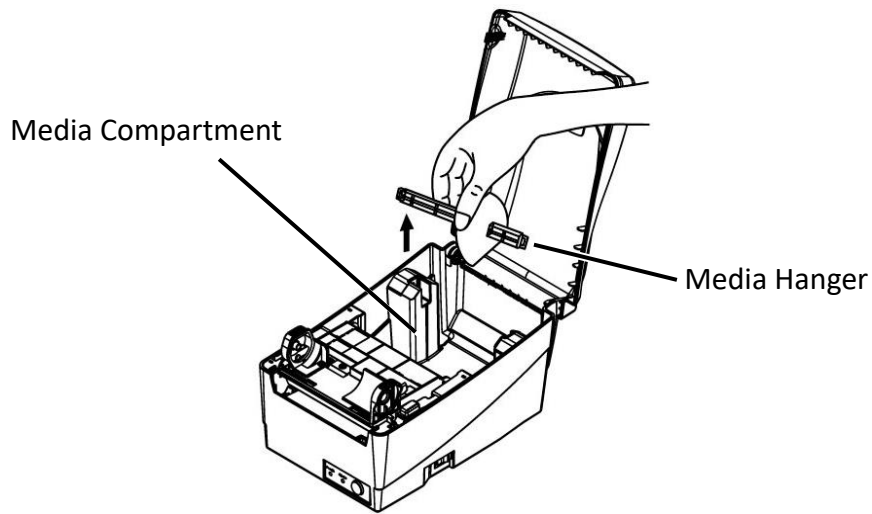
Media Hanger

3. Insert the hanger into the hollow portion of cylinder of the media roll from right to left.

Media Roll
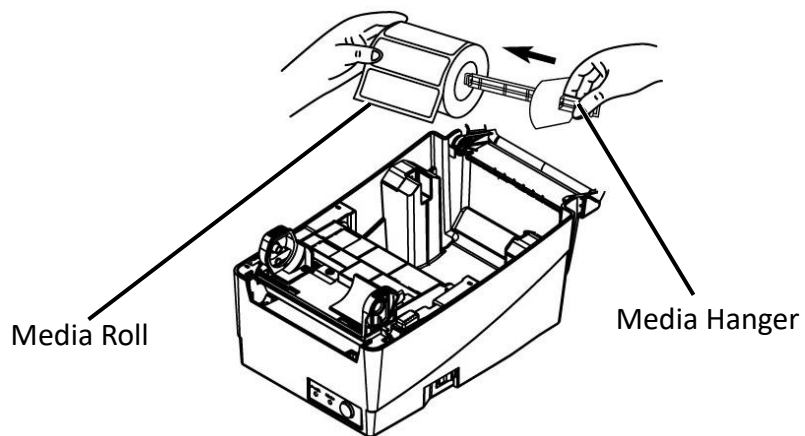
Media Hanger

4. Click the media hanger back into the media compartment.

Media Compartment
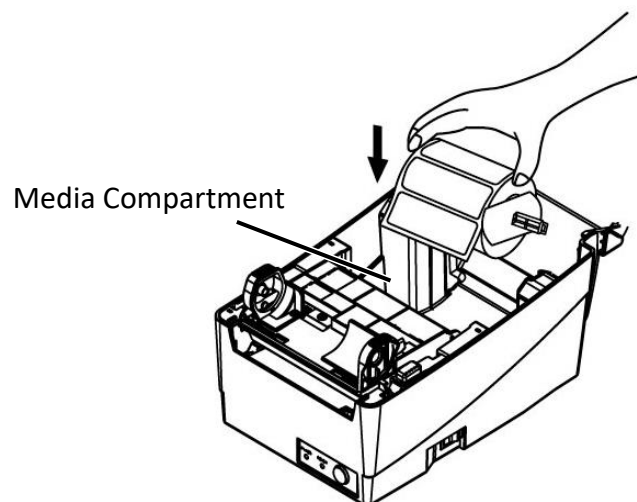
5. Align the media roll to the left end. Move the shield from right to left until it leans against the media.
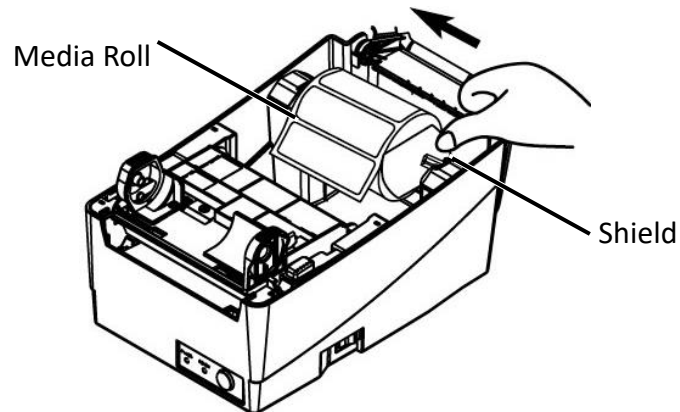
6. Unlatch the print head module.

7. Hold the print head module upright with one hand to allow the media to pass under it. Lead the media through the media guides with the other hand.

8. Lead the media over the platen roller.
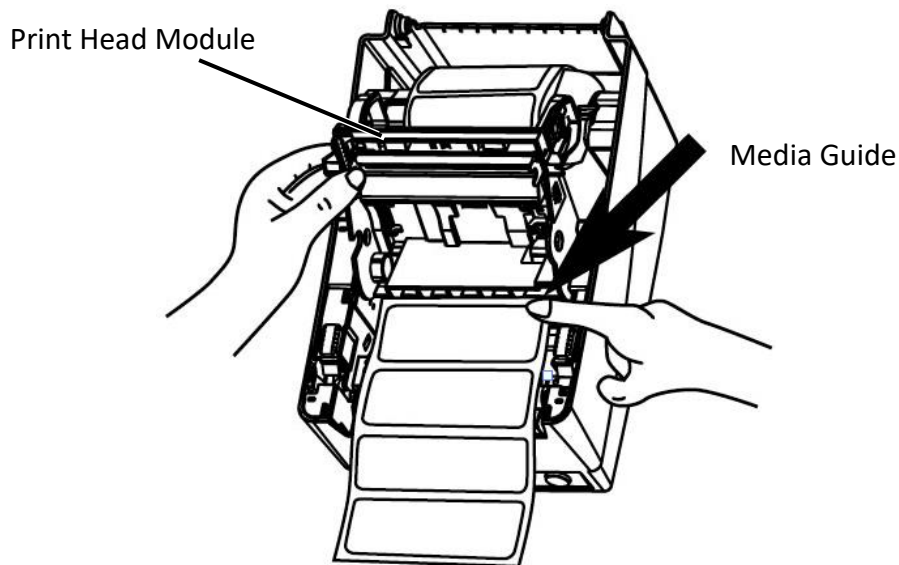
9. Press down the print head module firmly until you hear a snap. In order to confirm the complete and rigid fixing, ***please visually check whether the black tenon is fully inserted into the white print head module switch, that is, the white print head module switch should be fixed onto the black tenon.***
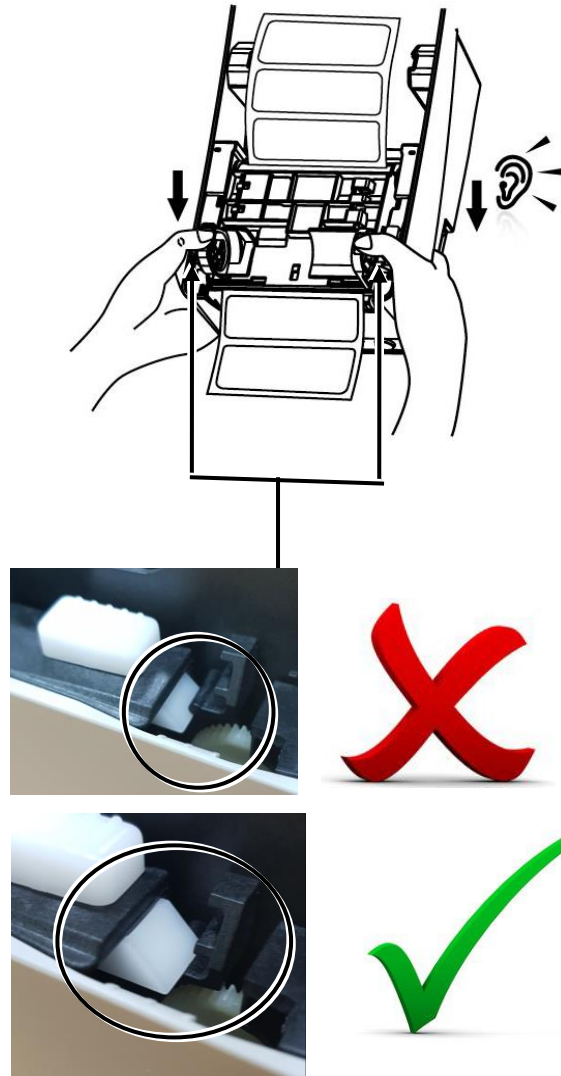
10. Close the top cover and turn on the printer or press the "FEED" button if the printer is already on.
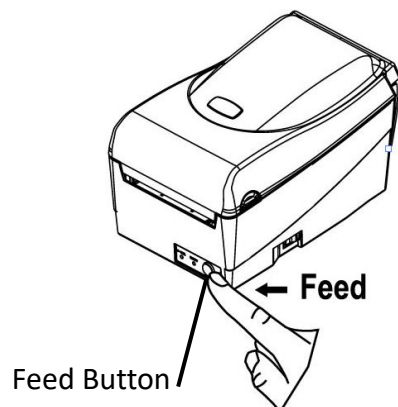
2.2 Attach the power cord

This chapter describes how to set up your printer.

⚠️ **Caution**   Do not use your printer in areas exposed to splashing water or any other liquid.

⚠️ **Caution**   Do not drop your printer, or place it in an area subject to humidity, vibration or shock.

1. Make sure the 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.
4. Plug the other end of the AC power cord into the wall socket.

Important   Use only power supplies listed in the user instructions.
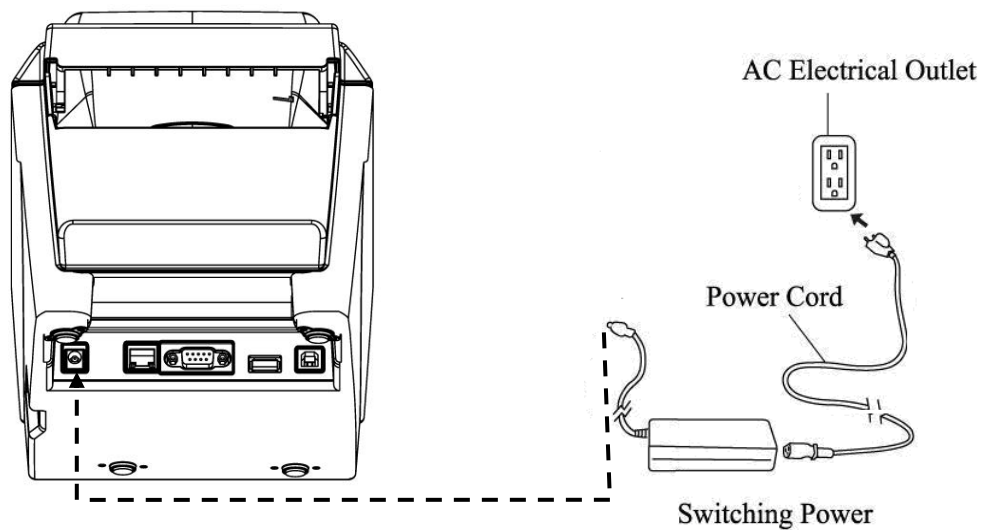
⚠️ **Warning**   Do not plug the AC power cord with wet hands, or operate the printer and the power supply in an area where they may get wet. Serious injury may result from these actions!

2.3 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.

2.3.1 Turn on your printer

1. To turn on your printer, turn on the **Power Switch** as below. The "I" is the **ON** position.
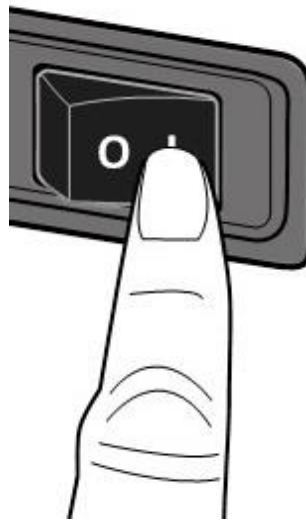
2. Both status lights glow solid amber for a few seconds, and then LED 2 goes out, while LED 1 turns to solid green.

Note   If you connect the printer to the internet or insert a USB drive before turning on the printer, it will take longer for the printer to enter the online mode (LED 1 glows solid green) after you turn it on.

2.3.2 Turn off your printer

1. Make sure LED 2 is off and LED 1 is solid green before turning off the printer.

2. To turn off your printer, turn off the **Power Switch** as below. The "O" is the **OFF** position.
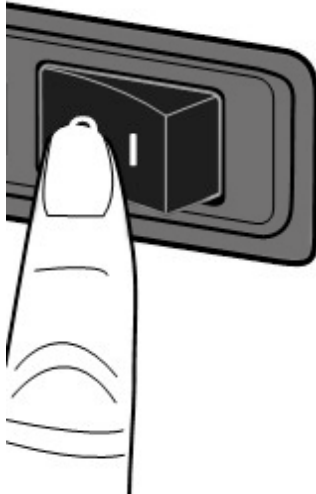
⚠	**Caution**　　Do not turn off your printer during data transmission.

2.3.3 Test media feed

1. Power on the printer, and press the **FEED** button to feed a label.

Feed Button
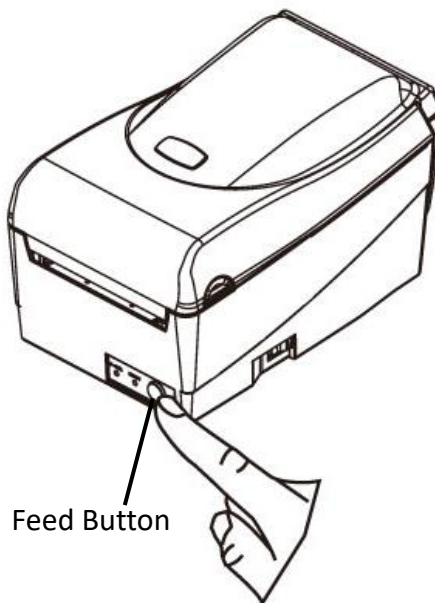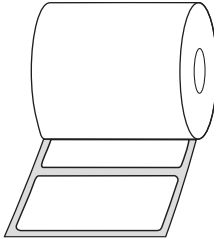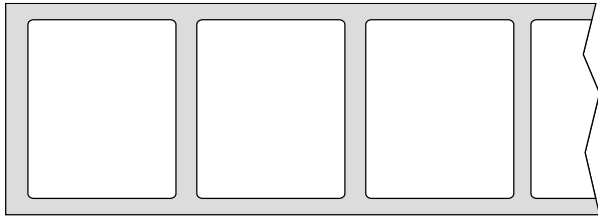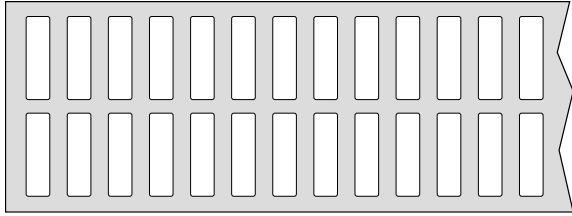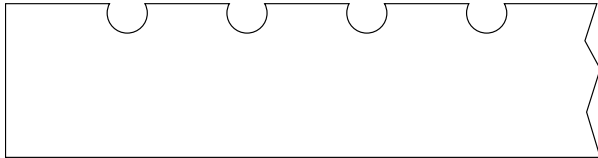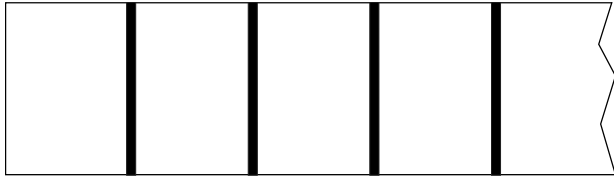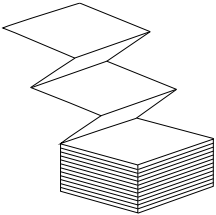
2. Flip the media and tear it along the edge of the top cover.

2.4 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.

Media Type	Looks Like	Description
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.

2.5 Media sensing

OS-214D printers offer one type of media sensor: reflective. It is used for detecting specific media types.

2.5.1 Reflective sensor

The reflective Sensor is positioned at 7mm from the left edge of media. The black mark minimum width (horizontal) should be 14mm on the left edge of media. The detection area, as illustrated below. The gap type label is same as black mark label.

Multi Columns	Notch
Sensor Position Min. 2 mm	Sensor Position
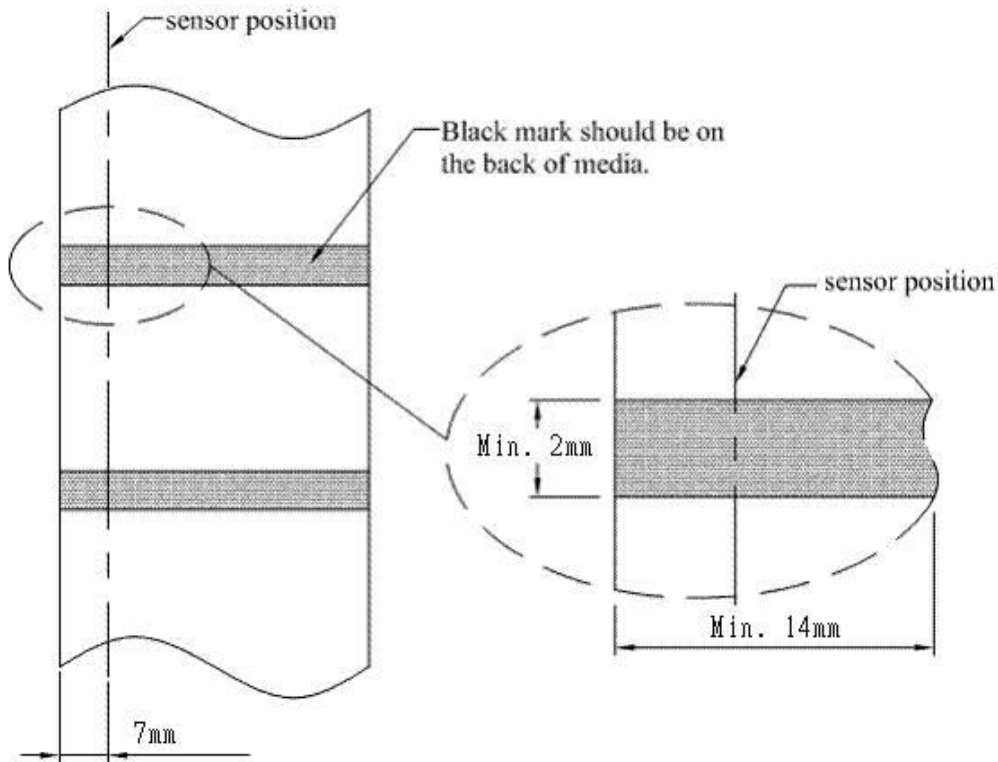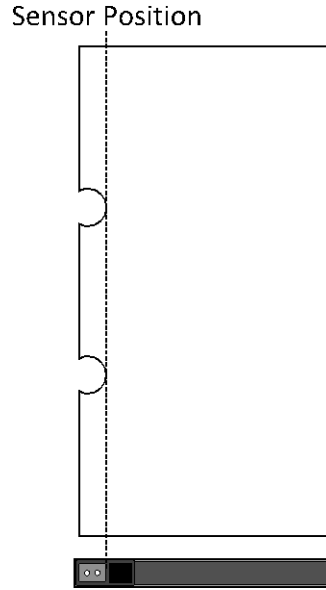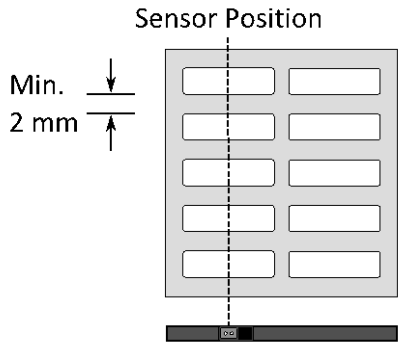
Black Mark

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

Min.
2 mm

Sensor Position
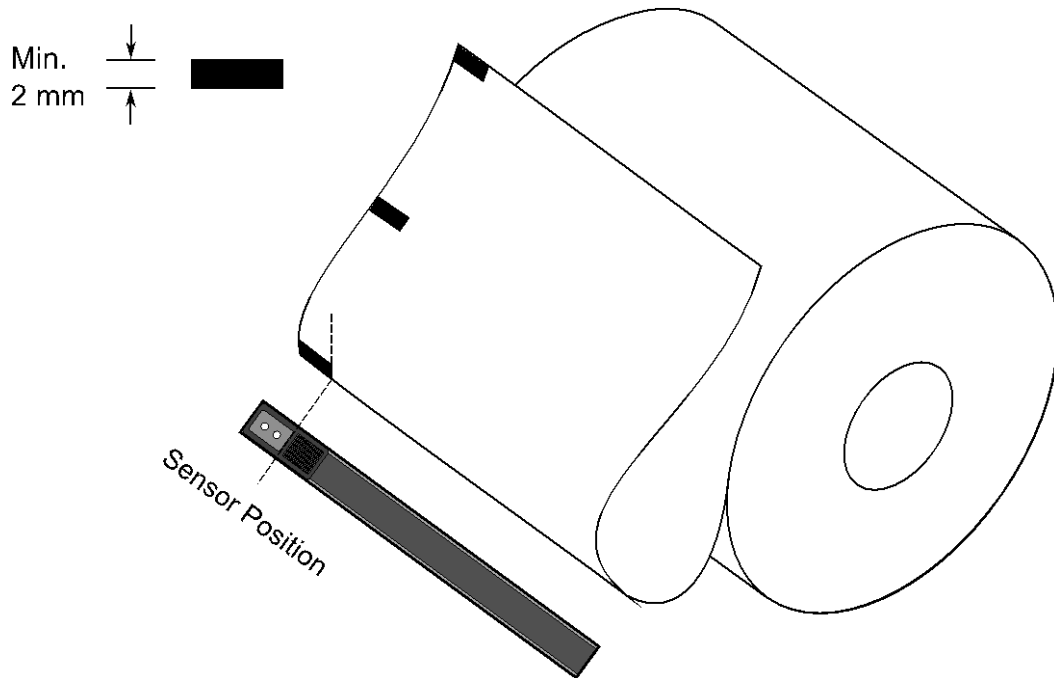
3 Printer operation

This chapter provides information about printer operation.

3.1 Printing Media Calibration & Configuration

You will want the printer to work properly before starting your print jobs. To do this, you need to calibrate the media sensor. Printers provide reflective sensor calibration. Take the following steps to use them.

1. Make sure the media is properly loaded and the top cover of the printer is closed.
2. Turn off the printer power.
3. Press and hold the feed button while turning on the power, until the printing motor is activated.
4. Media calibration is performed while the printer automatically feeds the label stock for a certain length, the printing motor suspends for one second and then prints out a configuration profile. Release the feed button as soon as printer starts to print.
   (The profile includes firmware version, ROM checksum, RS-232, direct thermal settings, hardware configuration, and font types.)

Note:
  At PPLB emulation, the printer enters character dump mode. To exit from dump mode, press the feed button again. (If you accidentally print the label without exiting from dump mode in advance, you need to turn on the printer or press feed button again to print normally.)

Important!   *You must always carry out calibration when changing media. Failure to do so will result in improper detection by the label sensor.*
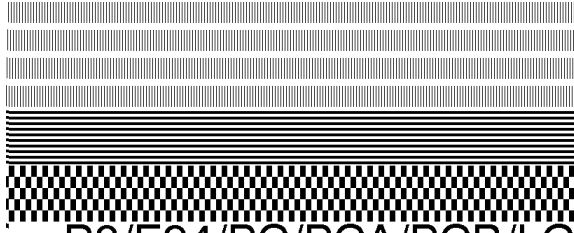
R8/E94/PC/PCA/PCB/LG Courier Fonts:

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

```
    1 2 3  4  5  6
sw: - - 0 - - -
ragc(178)<0.01υ><P> lυ(5)
TPL: 0
rso(0)<0.01mm>
bυ(188,110,77)<0.01υ><P>
rυ(221,175,46)<0.01υ><P>
rm(0,0)<1+ 0-,0.01mm>
ot(0,0)<0.1dot,0.01mm>
USB SN: 81221EB00044
            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: 78-5F-4C-00-A8-18
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 DISABLED
BACKFEED DISABLED
CALIBRATION MODE: MANUAL PRINT
MEDIA : NON-CONTINUOUS
STD CTRL CODES
CODE PAGE : PC-850
RS232: 9600,8,N,1P,XON/XOFF(SOFTWARE)
CUT COUNT:0
PRINT LENGTH: 0M
THERMAL TRANSFER
DARKNESS: 10
SPEED: 5 IPS
LAB LEN(TOP TO TOP): 80mm
PRINT WIDTH: 812 DOTS
MAX LABEL HEIGHT: 100 INCHES
REF: 018A SEE2: 0465
REFLECTIVE 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 : 8540K BYTES
FLASH TYPE : ON BOARD 16M BYTES
AVAILABLE RAM : 3686K BYTES
STANDARD RAM : 32M BYTES
OS-214EX-V01.00 20181219 PPLA
LABEL PRINTER WITH FIRMWARE
```

OS-214D-V01.00 20181219 PPLA

The firmware version and its build date

Standard RAM

Display SDRAM size

Available RAM

RAM is able to be used

Flash Type

The flash memory type and size

Available Flash

Flash is able to be used

No of DL soft fonts (FLASH)

The number of fonts is downloaded in Flash

No of DL soft fonts (RAM)

The number of fonts is downloaded in RAM

No of DL soft fonts (HOST)

The number of fonts is downloaded in USB HOST

H. Position Adjust

Move the print position horizontally

Reflective Sensor

Media sensor type, reflective sensor or see-through sensor

REF : 018A SEE2

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

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.

Print Width

Display the print width in dots.

Lab Len (Top to Top)

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

Speed

Printing speed unit is inch per second (ips).

Darkness

Display the current darkness.

Print Length

Display total print length.

Cut Count

It counts the times the cutter cuts.

RS232 Protocol

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

Code page

The character set table.

STD CTRL Codes

Standard control codes as settings for PPLA model

	Control codes	Hexadecimal value
Standard (default)	CR	0DH
	ESC	1BH
	STX	02H

Media

The media type in use.

Calibration Mode

Only manual print calibration mode provided for the printer

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.

Cutter Enabled/Disabled

Enable or disable the cutter during the printing process.

Peeler Enabled/Disabled

Enable or disable the dispenser during the printing process.

Cutter/Peeler Offset

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

IP Address

Display printer current IP address in. The default value is "192.168.1.1".

Subnet Mask

Display printer subnet mask. The default value is "255.255.255.0."

Gateway

Display printer gateway. The default value is "0.0.0.0."

MAC Address

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

DHCP

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

DHCP Client ID

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

DHCP Host Name

It is the name of a DHCP client. The host name allows up to 32 alphanumeric characters.

SNMP

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

Socket Communication

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

Socket Port

Display printer port number.

IPv6 Mode

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

IPv6 Type

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

IPv6 Address

Display printer current IPv6 address.

Link Local

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

USB SN

Display printer USB host serial number.

ot (0,0)<0.1dot,0.01mm>

TPH and cutter offset. This is for developers to debug.

rm(0,0)<1+ 0-,0.01mm>

Reflective sensor gap calibration. This is for developers to debug.

rv(221,175,46)<0.01v><P>

Reflective sensor profile. This is for developers to debug.

bv(188,110,77)<0.01v><P>

Reflective sensor offset. This is for developers to debug.

rso(0)<0.01mm>

See-through sensor offset. This is for developers to debug.

Font Image

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

TPH Test Pattern

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

3.2 Restore your printer

By resetting your printer, you can return your printer to the state it was in when you receive it. This can help you solve some problems caused by settings changed during the printing.

Do the following to reset your printer:

1. Turn on the printer and wait till both "Ready" indicator and "Power" indicator stay solid green.

2. Press the "Feed" button for 5 seconds, and the "Ready" indicator and "Power" indicator will go off in order.

   (at this step, if the "FEED" button is pressed for 10 seconds, printer will reset first >> feed blank labels as media calibration >> and then print configuration/ self-test labels.)

3. Once "Power" indicator becomes lit again, release the FEED button.

4. "Ready" indicator will then become lit, too. At this moment, the printer has resumed its factory default settings

Note: Revise the factory default settings that stored in flash, even if turn off the power source cannot be eliminated.

3.3 Communications

3.3.1 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 and Ethernet interface.

■ 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.

■ Ethernet Module Status Indicators

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

LED Status	Description	
Both Off	No Ethernet link detected.	
Green	Speed LED	On: 100 Mbps link Off: 10 Mbps link
Amber	Link/Activity LED	On: link up Off: link down Blinking: activity

3.4 Driver installation

The bundled printer driver can be applied to all applications under Windows 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

3.4.1 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".
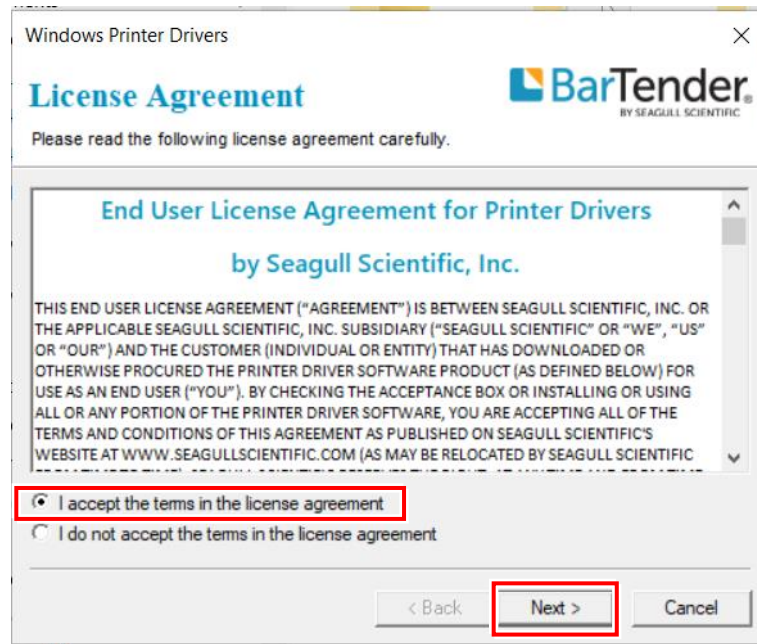
4. Assign the directory to keep Seagull driver and click "Next".
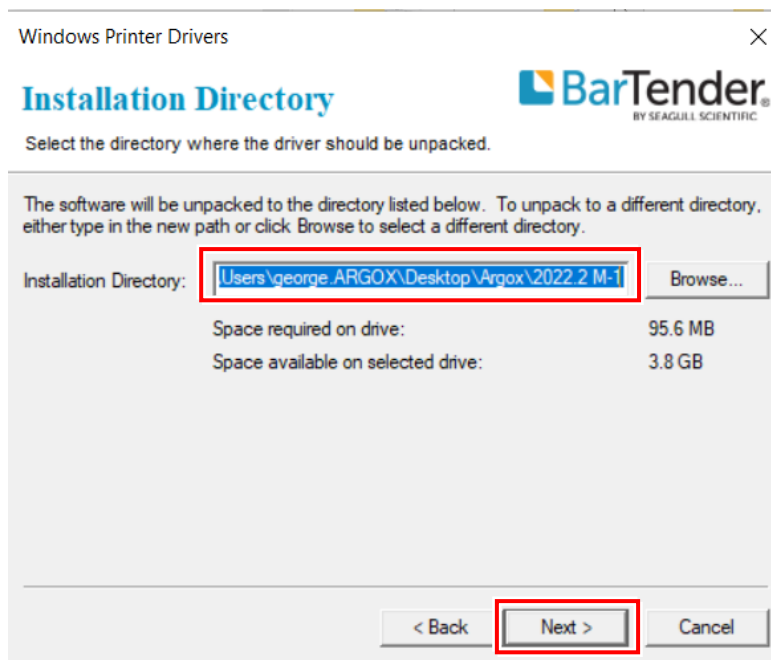
5. Click "Finish".
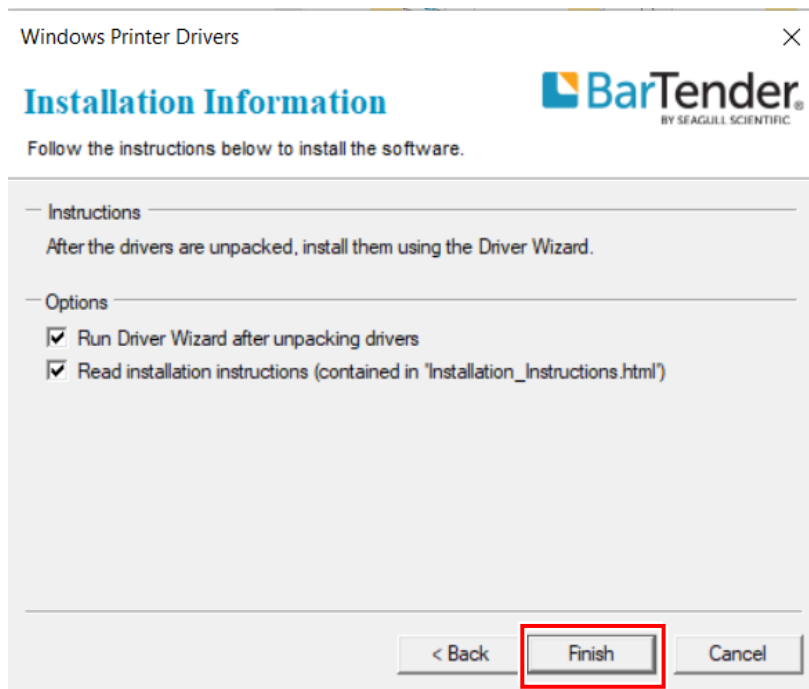
6. Click "Yes" to allow this app to make changes to your device.

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

8. On the Seagull Driver Wizard prompt, select the first radio button to "Install a driver for a Plug and Play printer" Then click "Next."
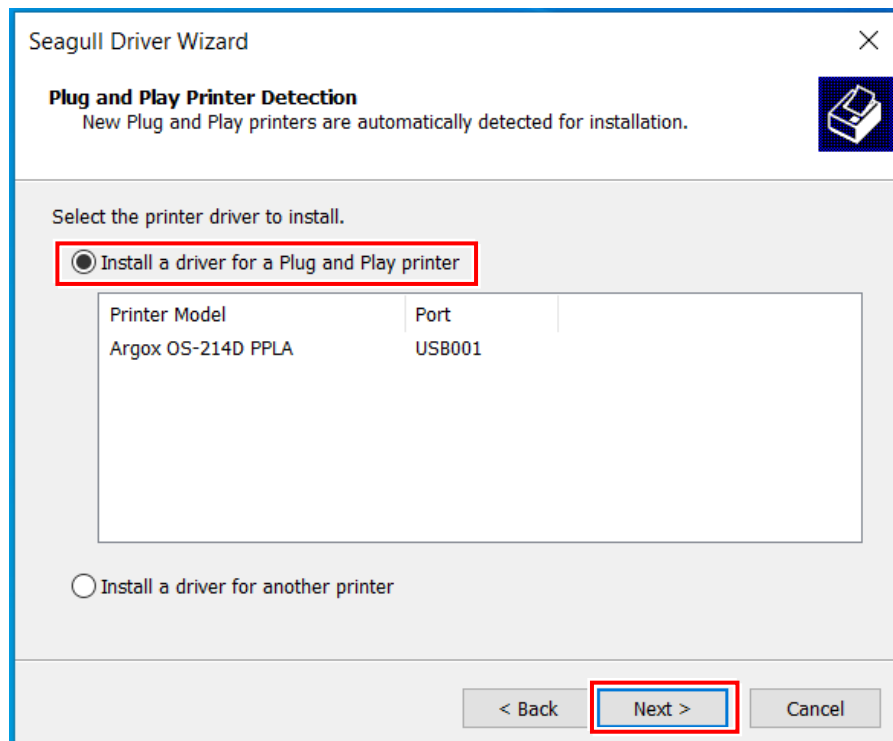
9. Specify a name for the printer. Then, go to the next step.
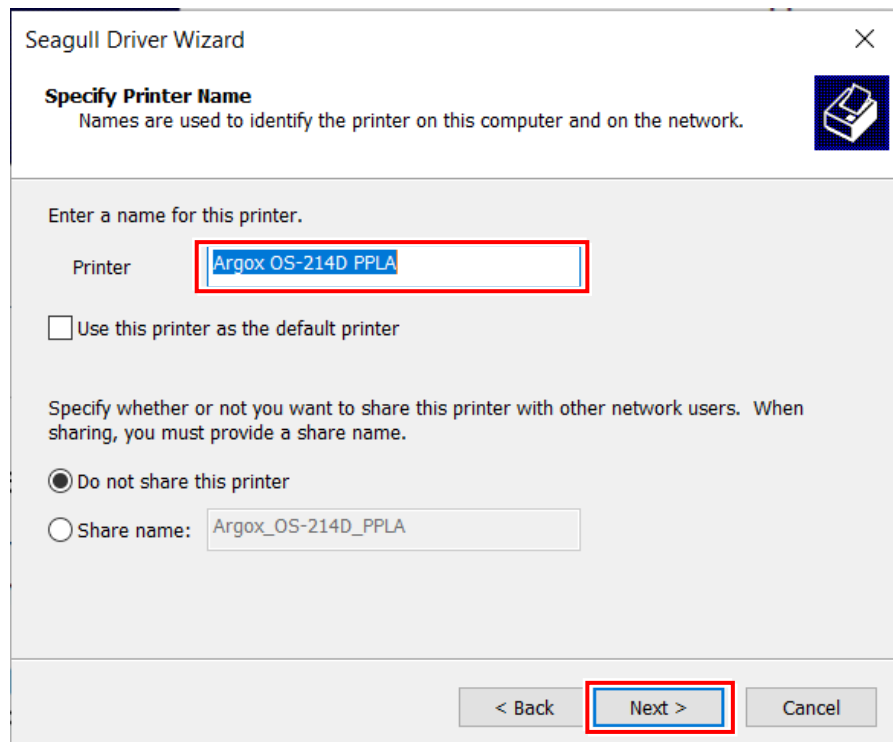
10. Click **Finish** to begin the driver installation process.
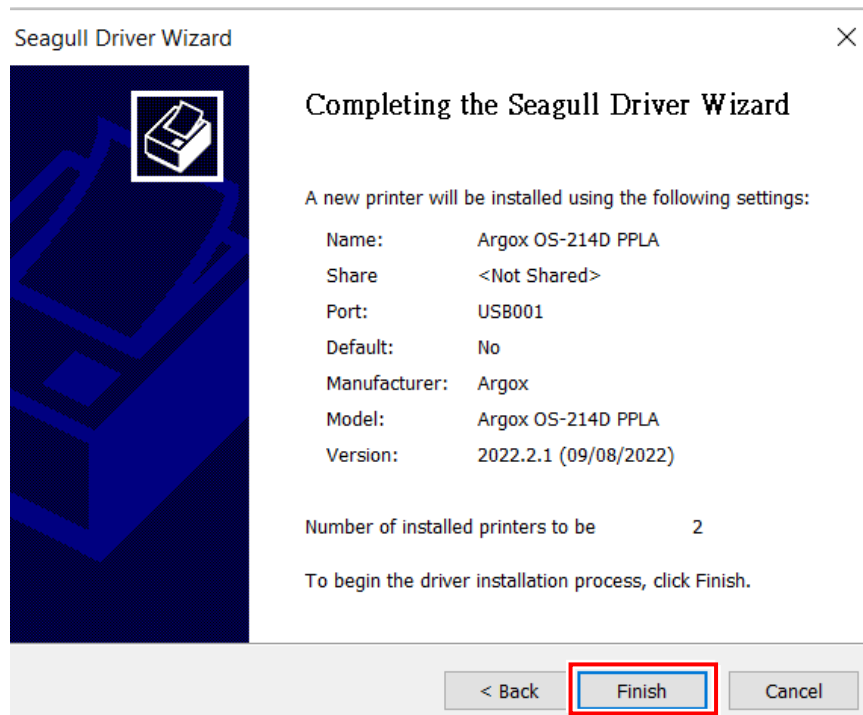
11. This driver is being installed. Wait while your system is uploaded.

Seagull Driver Wizard   ✕

Installing Drivers
Please wait while your system is updated.

Installing printer 'Argox OS-214D PPLA'...

< Back   Finish   Cancel
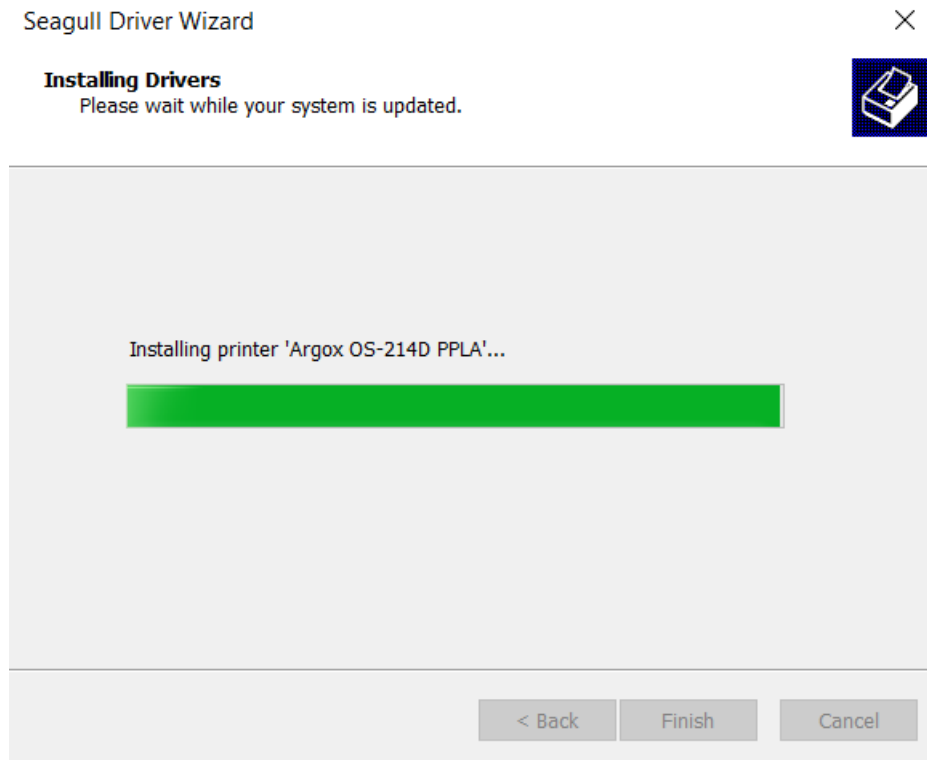
12. After driver installation is complete, click "Restart" to restart your computer

system.

Seagull Driver Wizard   ✕

Restart System
The system must be restarted for the process to continue.

⚠ Some driver components are currently in use. You must restart
the system to complete the process.

Restart   Cancel
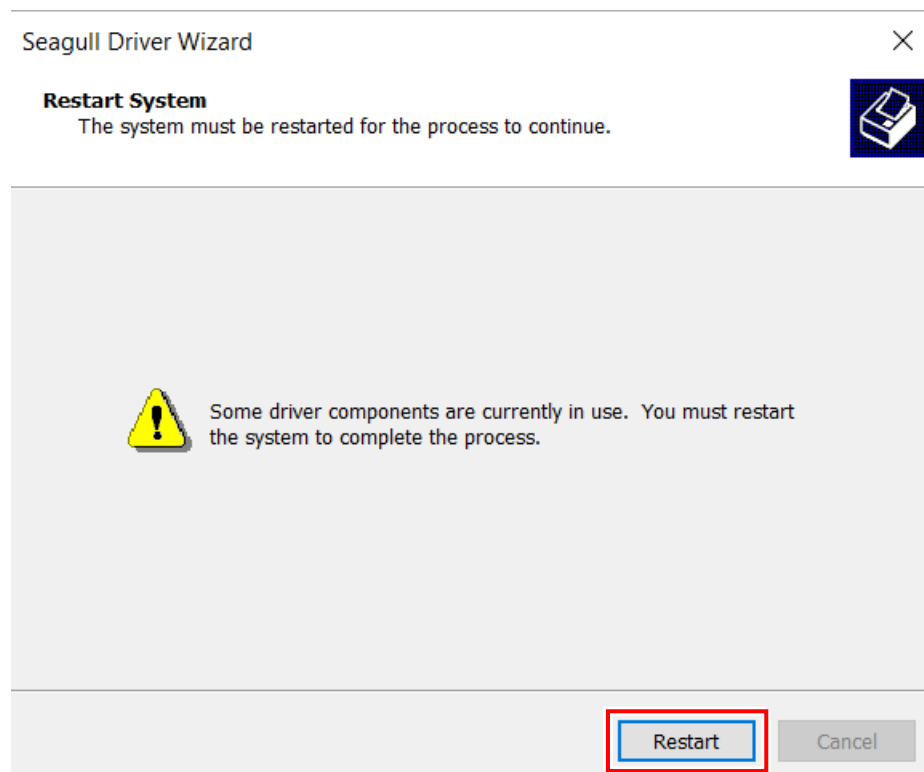
3.4.2 Installing a Printer Driver

(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".
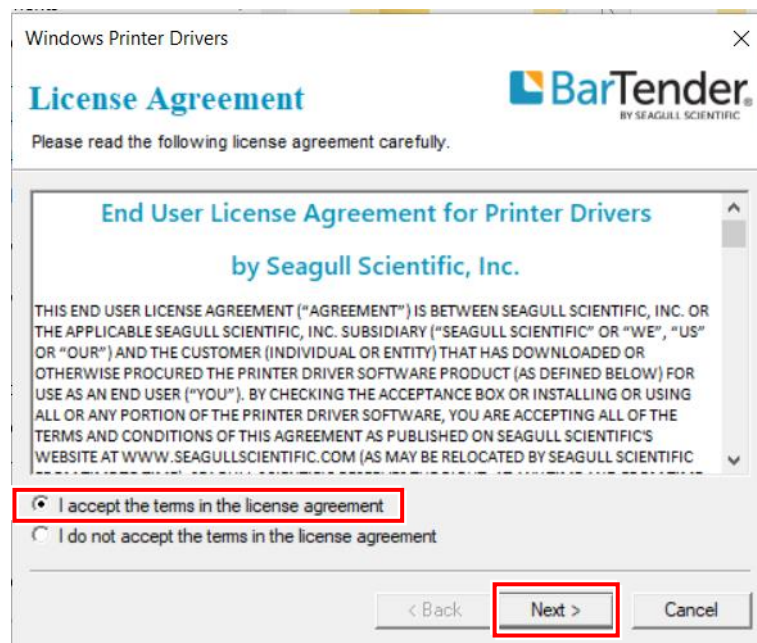
3. Assign the directory to keep Seagull driver and click "Next".
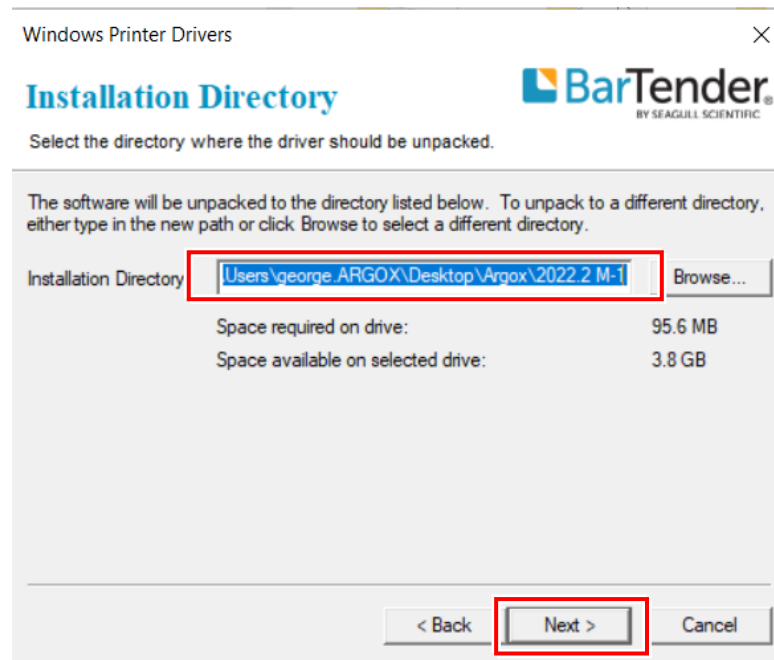
4. Click "Finish".
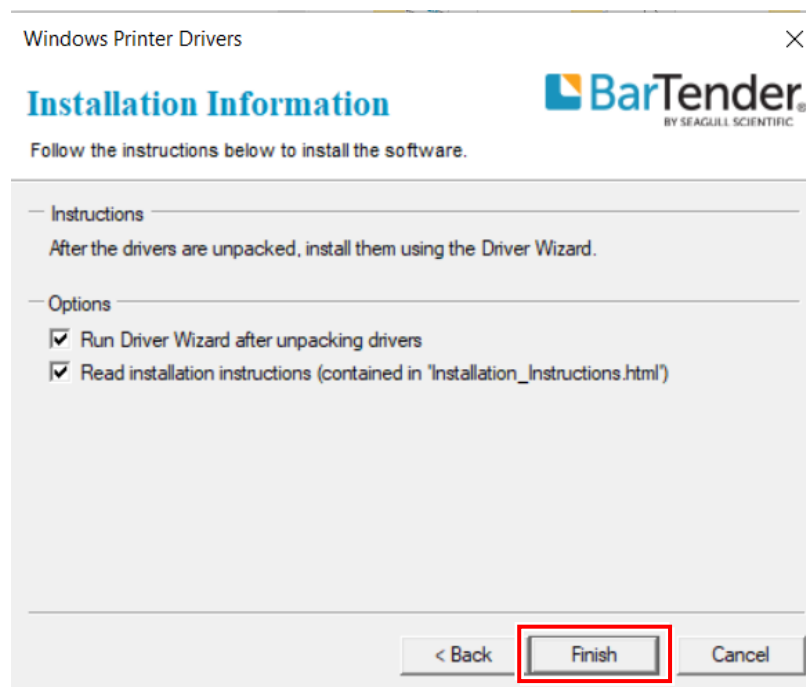
5. Click "Yes" to allow this app to make changes to your device.
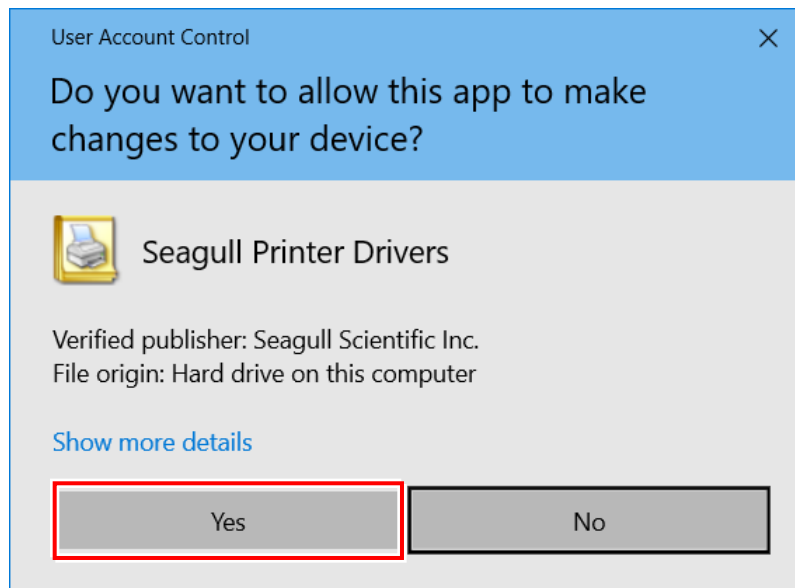
6. Select "Install printer drivers" and Click "Next"

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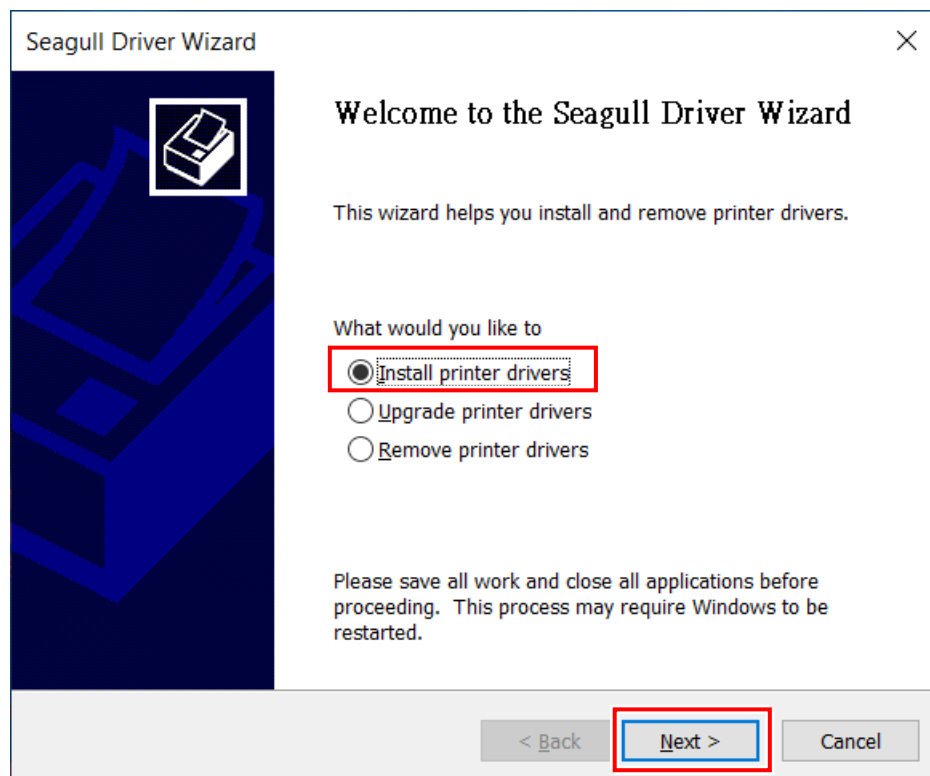
7. Make sure printer is connected to PC, select "Other" and click "Next":
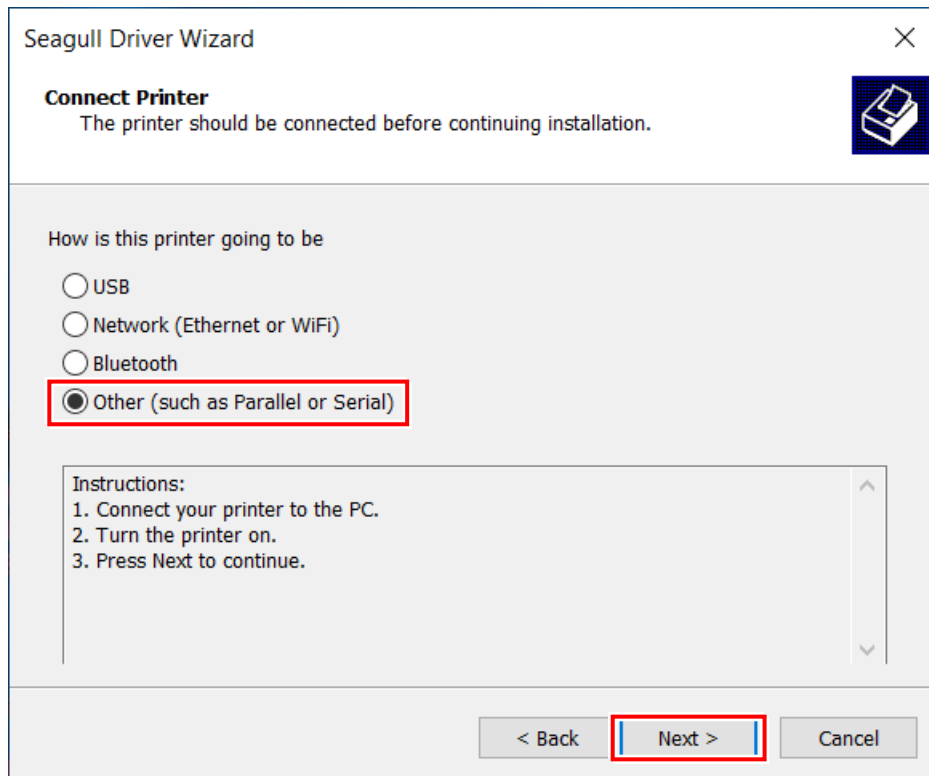
8. Select model & emulation - the following examples are based on model OS-214D

    PPLB, and click "Next".
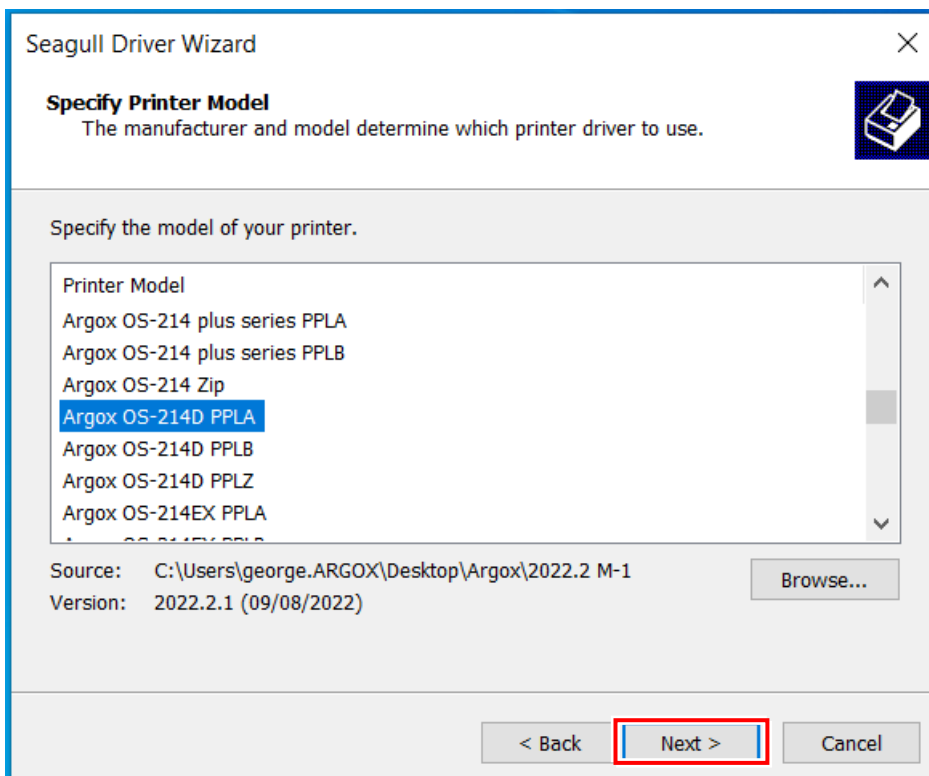
9. Select the port of the printer and click ""Next".

Seagull Driver Wizard   ✕

Specify Port
    A port is used to connect a printer to the computer.

Specify the port that you are using. If you are connecting using TCP/IP or another port type
not listed below, create a new port.

Port	Type
LPT1:	Parallel Port
COM1:	Serial Port (9600:8N1)
COM2:	Serial Port (115200:8N1)
FILE:	Local Port
USB001	USB 的虛擬印表機連接埠
C:\Program Files\PDF Architect 4\print\c...	Local Port
IR	Local Port

Create Port...   Configure Port...

< Back   Next >   Cancel

10. Enter Printer name (i.e. Argox OS-214D PPLB) and select "do not share this printer",
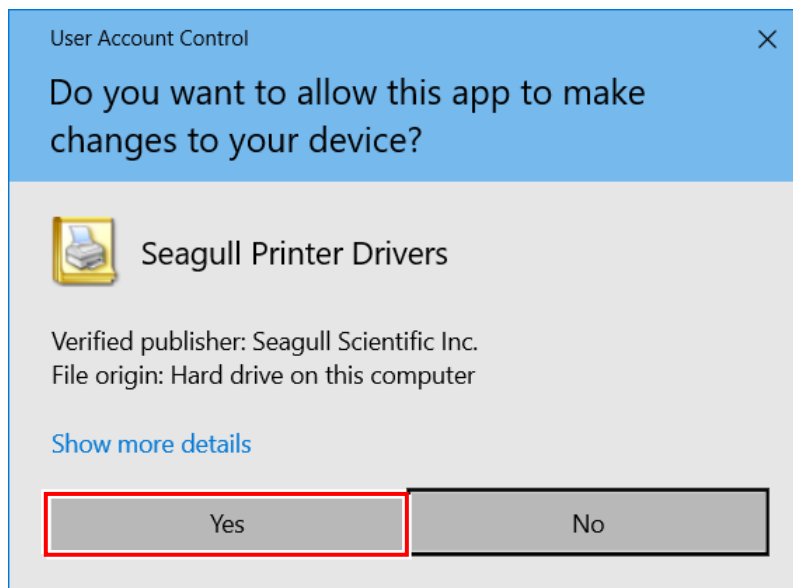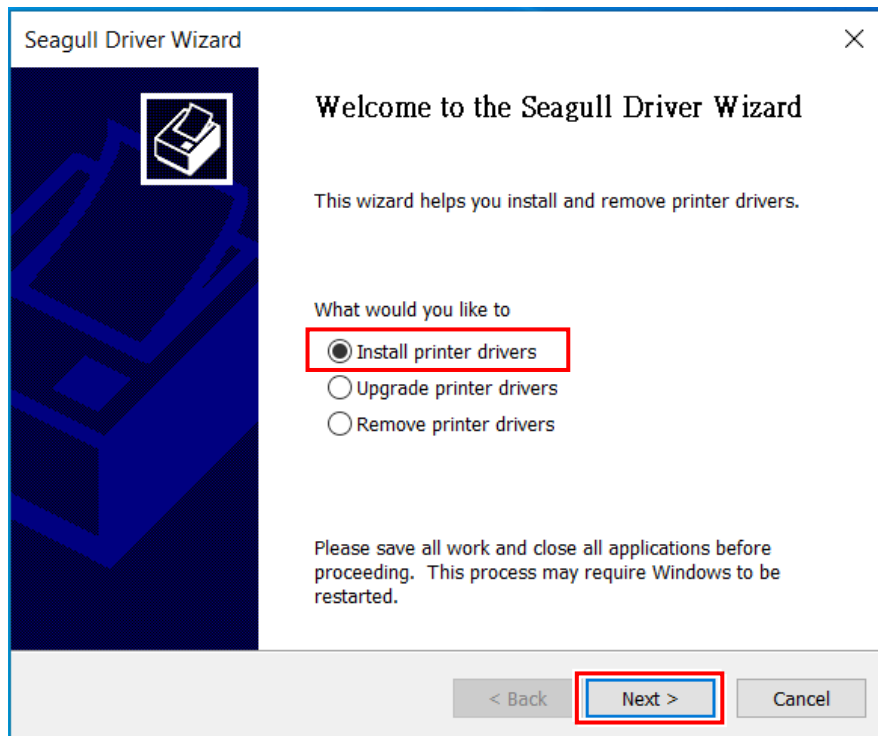
and click "Next".

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   Argox OS-214D PPLA

☐ 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_OS-214D_PPLA

< Back   Next >   Cancel

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11. Check all the data on the showing screen, if it is correct, click "Finish".
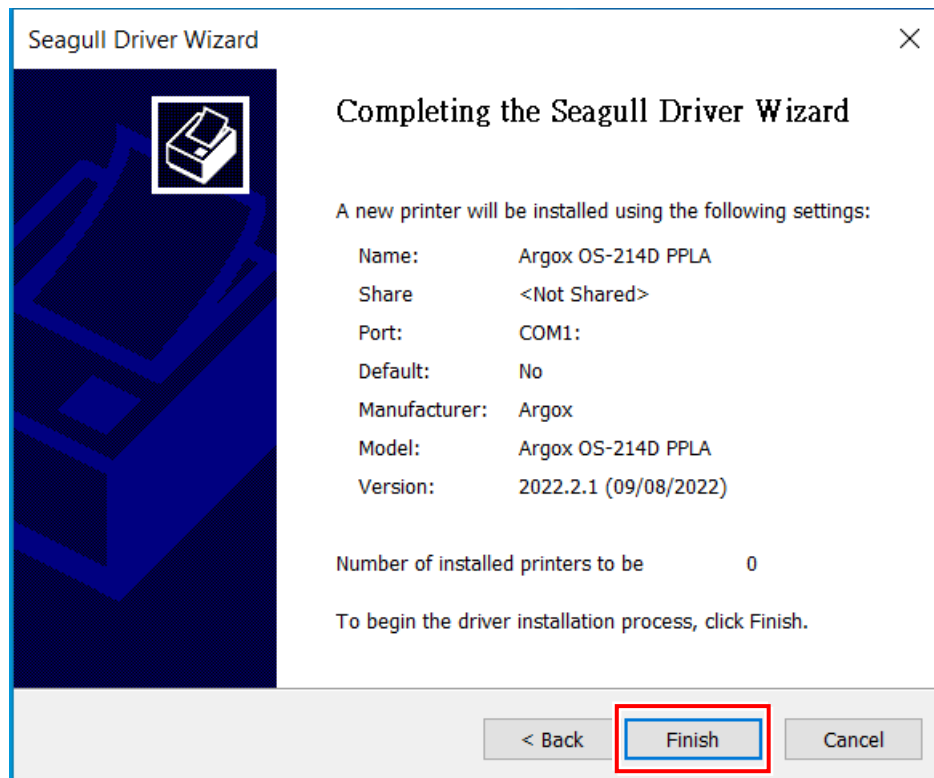
12. After the related files have been copied to your system, click "Finish".
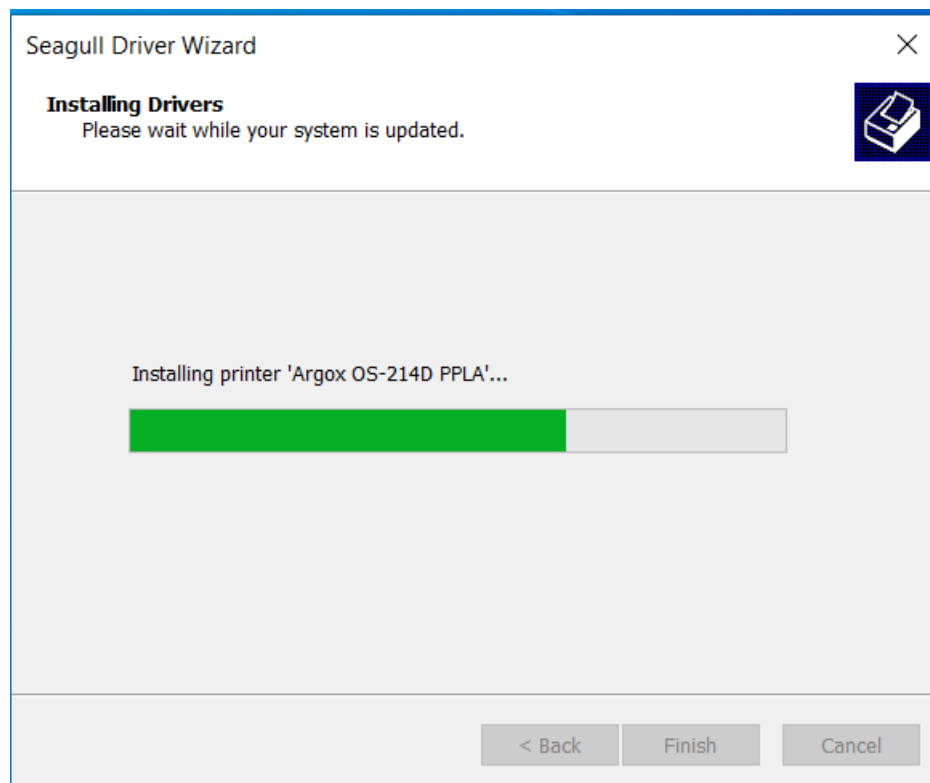
13. After driver installation is complete, click "Close". The driver should now be

installed.
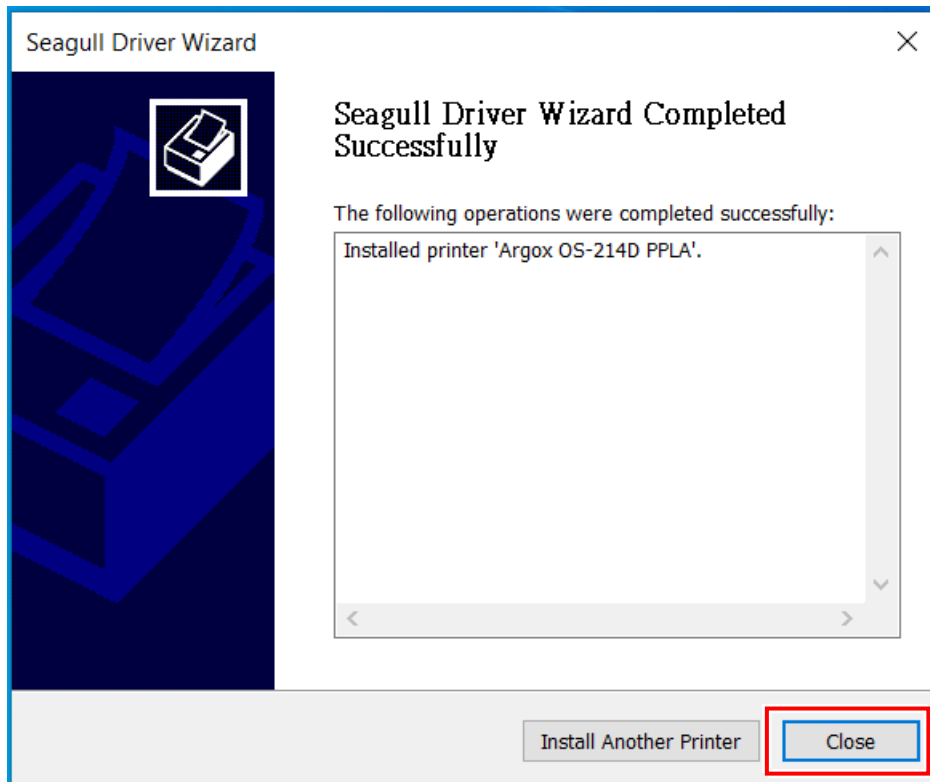
4 Configuring Your LAN Printer

by 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 connector 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.

4.1 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!

4.2 Connecting your LAN 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.

4.3 Getting the IP address of your LAN 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.

4.4 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.
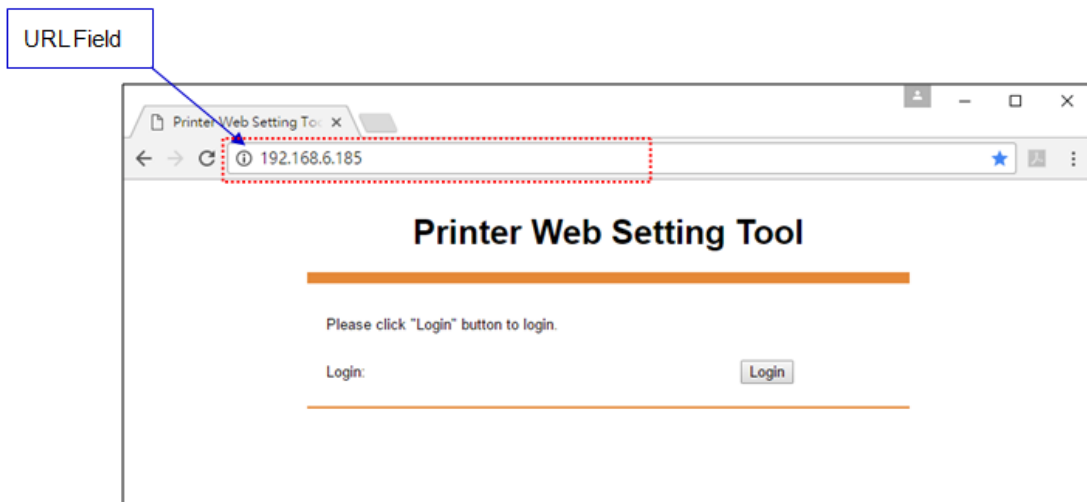
When the connection is successful, the Login page will be displayed. Input the user name and password to log in to the web setting tool. The default user name and the default password are given below:

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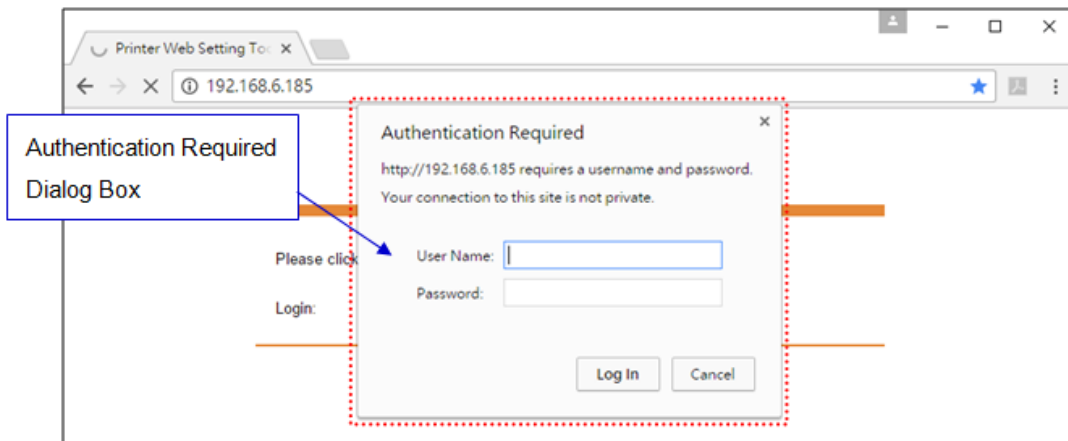
The default password can be changed in the "Device Setting \ Change Login Password" webpage.

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.

5 Maintenance

This chapter describes routine cleaning procedure.

5.1 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.

> ⚠️ **Caution** Always turn off the printer before cleaning.

5.1.1 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.
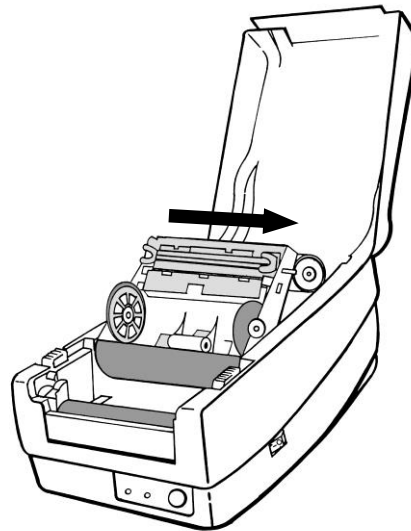
> **Note** Printhead warranty becomes void if printhead's serial number is removed, altered, defected, or made illegible, under every circumstance.

5.1.2 Media housing

Use a soft cloth to clean the dust, dirt or debris built up on the **Media Roll Holders**, **Media Guides** and media path.

1. Moisten a soft cloth with ethyl alcohol.

2. Wipe the **Media Roll Holders** to clean dust.

3. Wipe the **Media Guides** to clean dust and dirt.

4. Wipe the media path to clean paper debris.

5.1.3 Sensor

Media sensors may not be able to detect the media correctly if it becomes dirty.

1. Moisten a soft cloth or a cotton swab with absolute ethyl alcohol.
2. Gently brush sensors to remove the dust away.
3. Use a dry cloth to clean the residue.

5.1.4 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.

6 Troubleshooting

This chapter provides the information about printer problems and solutions. Normally, when the printer is in not working properly, the "Power" LED blinks continuously; while printing and communication between the host and printer stops.

6.1 LED Diagnosis

Power and Ready LEDs blinking continuously indicates printer errors. To understand the problem, please observe the Power and Ready LEDs and refer to the following solutions:

LED Indicators: Power and Ready LEDs blink at the same tempo

Power LED	Ready LED
ON	ON
OFF	OFF

Possible Problems	Solutions	Remarks
Miss-detect gap	Check the label path Check the label sensor	If you use a continuous label roll and run under Windows, select continuous media.
Label stock out	Supply the label roll	
Label stock not installed	Install the label roll	
Label jam	Recover the jam	

LED Indicators: Only the Power LED blinks

Power LED	Ready LED
ON	OFF
OFF	OFF

Possible Problems	Solutions	Remarks
Serial IO error	Check the baud rate	Serial interface only
Memory full	Add the extension RAM (flash memory card)	

LED Indicators: Only the Power LED blinks

Power LED	Ready LED
ON	ON
OFF	ON

Possible Problems	Solutions	Remarks
Cutter failed, or jam at cutter	Check the cutter Recover the jam	Occurs only when installing or setting the cutter
Hardware error	Call for service	

LED Indicators: Only the Ready LED blinks

Power LED	Ready LED
ON	ON
ON	OFF

Possible Problems	Solutions	Remarks
Print head too hot	Printing will stop until the print head cools to an acceptable printing temperature. When it does, the printer will automatically resume operation.	

6.2 Printer issues

The printer is not turned on

- Did you attach the AC power cord?

- Make sure the power supply's connector is inserted into the printer power jack.

- 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 does not feed the media out

- The media is not loaded correctly. See the "Loading Media" section to reload the media.

- If there is a paper jam, clear it.

I accidentally press the feed button while the printer module is opened

- Close the printer module and press the **FEED** button.

6.3 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 the "Loading Media" section to reload the media.

- The media sensor needs to be calibrated. See the "Media Sensor Calibration" section to calibrate the sensor.

- The media sensor is dirty. Clean the media sensor.

Nothing is printed

- The media is not loaded correctly. See the "Load Media" section 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.

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.

6.4 Other issues

There are broken lines in the printed label

- The printhead is dirty. Clean the printhead.

An error occurred when writing data to the USB memory

- Did you insert the USB drive?

- Make sure the USB drive is plugged tightly into the port.

- The USB drive might be broken. Replace it with another one.

The printer is unable to save files due to insufficient USB memory

- Delete the files on your USB drive to free some space, or replace your USB drive

  with an empty one.

The cutter is experiencing issues

- If there is a paper jam, clear it.

- The cutter has become loose. Fix the cutter in position and tighten it.

- The cutter blade is not sharp anymore. Replace your cutter with a new one.

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.

7 Specifications

This chapter provides specifications for the printer. Specifications are subject to change without notice.

Argox reserves the right to enhance and modify the specification without prior notice. Please check Argox sales representative for most updated specifications.

7.1 Printer

Model	OS-214D
CPU	32-bit RISC microprocessor
Print method	Direct Thermal
Resolution	203 dpi (8 dots/mm)
Media Alignment	Left
Operation Mode	Standard: Continuous mode, Tear-off mode Optional: Cutter mode
Sensor	Media Sensor: Reflective
Print Speed	6 inches/sec (Max.)
Print Length	Max 100"(2540mm)
Print Width	Max 4.25"(108mm)
Print Darkness	Darkness level: PPLA DT SD 0~20 Default: PPLA DT SD 10
Max Printable Area	Max. 100"
Print Ratio	Average print ratio within 15 % or less (whole print layout area) Full width with 1mm pitch is required
Communication Interface	USB (Host/Client), Ethernet, RS-232
Programming Language	PPLA+PPLB+PPLZ
Optional Accessories	Cutter, Stacker
On-Board Memory	Standard Memory (Flash ROM): 16 MB Standard Memory (SDRAM): 32 MB
External Memory	USB: Max 16 GB

Panel	2 LED, 1 Button (Feed)
LED	1st LED: Power (Green) 2nd LED: Ready (Green)
Software -- Label editing	Windows Driver (Vista/Win 7/ Win 8/ Win 10), BarTender® from Seagull Scientific
Software -- Printer Setting	Printer Tool
Agency Listing	CE, FCC, cULus, CCC, BIS, BSMI, RoHS, KC

7.2 Media

Properties	Description
Media Size	Max Width:4.3"(110mm) Min Width:0.8"(20mm) Thickness:0.0025"~0.01"(0.0635~0.254mm) Max roll capacity(OD): 5"(127mm) Core size: 0.5"(12.7mm) Max roll capacity(OD): 5"(109mm) 1"(25.4mm) Max roll capacity(OD): 5"(96.5mm) 1.5"(38.1mm)
Media Type	Roll-feed, die-cut, continuous, fan-fold, black mark, tags, ticket in thermal paper or plain paper

7.3 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.

Printer Programming Language PPLA

Programming Language	PPLA
Internal fonts	5 alpha-numeric fonts from 0.049"H ~ 0.23" H (1.25mm ~ 6.0mm) Internal fonts are expandable up to 24x24 4 direction 0 ~ 270 rotation
Symbol sets (Code pages)	Courier font symbol set: Roman-8, ECMA-94, PC, PC-A, PC-B, Legal, and PC437 (Greek), Russian.
Soft fonts	Downloadable soft fonts by Printer Tool Ability to print any Windows True Type font easily Support scalable font
Font size	1x1 to 24x24 times
Character rotation	0, 90, 180, 270 degree, 4 direction rotation
Graphics	PCX, BMP, IMG, HEX,GDI
1D Barcodes	Code 39, Code 93,Code 128/subset A/B/C, Codabar, Interleaved 2 of 5, UPC A/E/2/5 add-on, EAN-13/8, UCC/EAN 128, Postnet, Plessey, Interleaved 2 of 5, Interleaved 2 of 5 with a modulo 10 checksum, Interleaved 2 of 5 with a modulo 10 checksum and shipping bearer bars , Code 128, UCC/EAN Code 128 Random Weight, HBIC, Telepen , FIM
2D Barcodes	PPLA: PDF-417, MaxiCode, Data Matrix (ECC200 only) ,QR Code, Composite codes PPLB: MaxiCode, PDF-417, QR Code, Composite codes PPLZ: MaxiCode, PDF417, Data Matrix (ECC 200 only), QR code, Composite codes

Printer Programming Language PPLB

Programming Language	PPLB
Internal fonts	5 fonts with different point size
Symbol sets (Code pages)	8 bits code page : 437, 850, 852, 860, 863, 865, 857, 861, 862, 855, 866, 737, 851, 869, 1252, 1250, 1251, 1253, 1254, 1255 7 bits code page: USA, BRITISH, GERMAN, FRENCH, DANISH, ITALIAN, SPANISH, SWEDISH, and SWISS
Soft fonts	Downloadable soft fonts by Printer Tool
Font size	1x1 to 24x24 times
Character rotation	0, 90, 180, 270 degree, 4 direction rotation
Graphics	PCX, BMP, Binary raster, GDI
1D Barcodes	Code 39, Code 93, Code 128/ subset A,B,C, Codabar, Interleaved 2 of 5, Interleaved 2 of 5 with check sum digit, Interleaved 2 of 5 with human readable check digit, Matrix 2 of 5, UPC A/E 2 and 5 add-on, EAN-8/13, Code 128UCC, UCC/EAN, Postnet
2D Barcodes	MaxiCode, PDF-417, QR Code, Composite codes

Printer Programming Language PPLZ

Programming Language	PPLZ
Internal fonts	8 (A~H) fonts with different point size. 8 AGFA fonts: 7 (P~V) fonts with fixed different point size (not scalable). 1 (0) font with scaling point size.
Symbol sets (Code pages)	Code39, UPC-A, UPC-E, Postnet, Code128 subset A/B/C, Interleave 2 of 5 Interleaved 2 of 5 with check sum, Interleaved 2 of 5 with human readable check digit Code 93, Code 39 with check sum digit, MSI, EAN-8, Codabar, Code 11, EAN-13,Plessey GS1 Data bar (RSS), Industrial 2 of 5, Standard 2 of 5, Logmars
Soft fonts	Downloadable soft fonts by Printer Tool
Font size	1x1 to 10x10
Character rotation	0, 90, 180, 270 degree, 4 direction rotation
Graphics	GRF, Hex, GDI
1D Barcodes	Code39, UPC-A, UPC-E, Postnet, Code128 subset A/B/C, Interleave 2 of 5, Interleaved 2 of 5 with check sum, Interleaved 2 of 5 with human readable check digit, Code 93, Code 39 with check sum digit, MSI, EAN-8, Codabar, Code 11, EAN-13, Plessey, GS1 Data bar (RSS), Industrial 2 of 5, Standard 2 of 5, Logmars
2D Barcodes	MaxiCode, PDF417, Data Matrix (ECC 200 only), QR code, Composite codes

Ethernet

Properties	Description
Port	RJ-45
Speed	10Base-T/100Base-T (Auto Detecting)
Protocol	ARP, IP, ICMP, UDP, TCP, HTTP, DHCP, Socket, LPR, IPv4, SNMPv2
Mode	TCP Server/Client, UDP Client
Technology	HP Auto-MDIX, Auto-Negotiation

7.4 Electrical and operating environment

| Properties	Range
Power Supply	Universal Switching Power Supply Input: 100V~240V±10%, 1.8A, 50~60Hz, Output: 24VDC, 2.4A
Power Consumption	60W
Temperature	Operation Temperature: 40°F~100°F (4°C~38°C) Storage Temperature: -4°F~122°F (-20°C~50°C)
Humidity	Operating: 25 %RH ~ 85 %RH (non-condensing) Storage: 10 %RH ~ 90 %RH (non-condensing)

7.5 Physical dimension

Dimension	Size and Weight
Size	W 182.5mm x H 173.5mm x L 282mm
Weight	1.54kgs

7.6 Interfaces

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

7.6.1 USB

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

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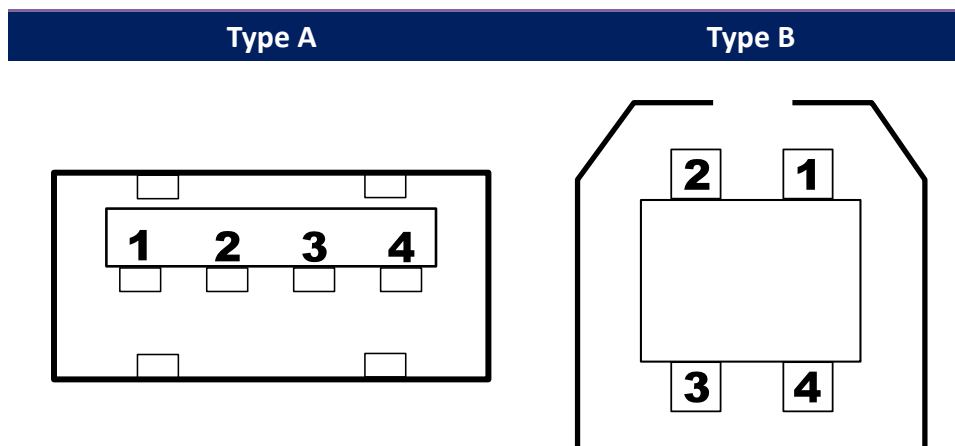
Pin	Signal	Description
1	VBUS	+5V
2	D-	Differential data signaling pair -
3	D+	Differential data signaling pair +
4	Ground	Ground

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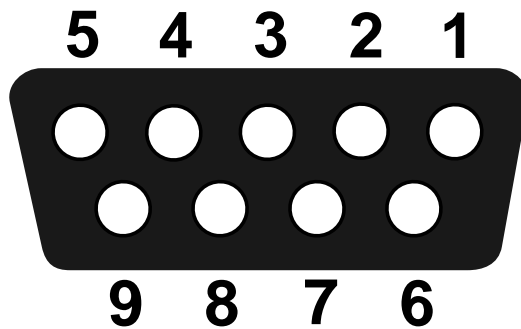
The Ethernet uses RJ-45 cable, which is 8P8C (8-Position 8-Contact). The figure below shows its pinout.
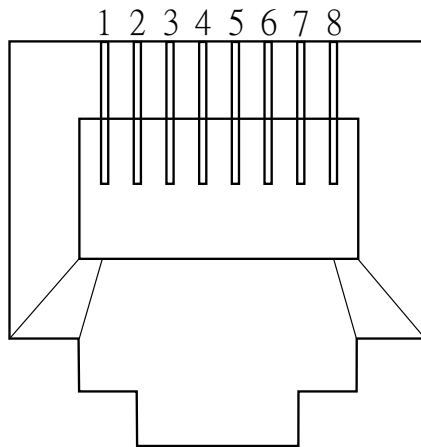
Pin	Signal
1	Transmit+
2	Transmit-
3	Receive+
4	Reserved
5	Reserved
6	Receive-
7	Reserved
8	Reserved

7.6.3 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	Pin	Description	Signal
CD	Carrier Detect	1	1	No Function	NC
RxD	Receive	2	2	Transmit	TxD
TxD	Transmit	3	3	Receive	RxD
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	CTS
CTS	Clear to Send	8	8	Request to Send	RTS
CI		9	9	No Function	NC