



MP Series User's Manual

MP-2140 / MP-2140Z



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1. Introduction

Proprietary Statement

This manual contains proprietary information of Argox Information Co., Ltd. It is intended solely for the information and use of parties operating and maintaining the equipment described herein. Such proprietary information may not be used, reproduced, or disclosed to any other parties for any other purpose without the expressed written permission of Argox Information Co., Ltd.

Product Improvements

Continuous improvement of products is a policy of Argox Information Co., Ltd. All specifications and signs are subject to change without notice.

FCC Compliance Statement

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 experienced 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.

Liability Disclaimer

Argox Information Co., Ltd. takes steps to assure that the company's published engineering specifications and manuals are correct; however, errors do occur. Argox Information Co., Ltd. reserves the right to correct any such errors and disclaims any resulting liability. In no event shall Argox Information Co., Ltd. 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 Information

Co., Ltd. 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.

Document Icons

The following icons indicate useful and important information as described:



Note: gives additional and important information. A note also provides information that may only be applicable to some situations.



Caution: Advises of possible failure to take or avoid a specific action under certain circumstances.



Caution - Electricity: Warns of a potential electric shock situation or static electricity to prevent.



Caution - Hot: Warns of a situation where excessive heat could cause a burn to avoid.



Caution - Sharp: Warns of a situation where fingers may be hurt by sharp edges of cutter blade.

2. Getting Started

Thank you for choosing MP Series printer, which is ideally designed to easily bring more efficiency for your business. This manual will help you get to know your new printer and provide sufficient information needed.

Unpacking Printer

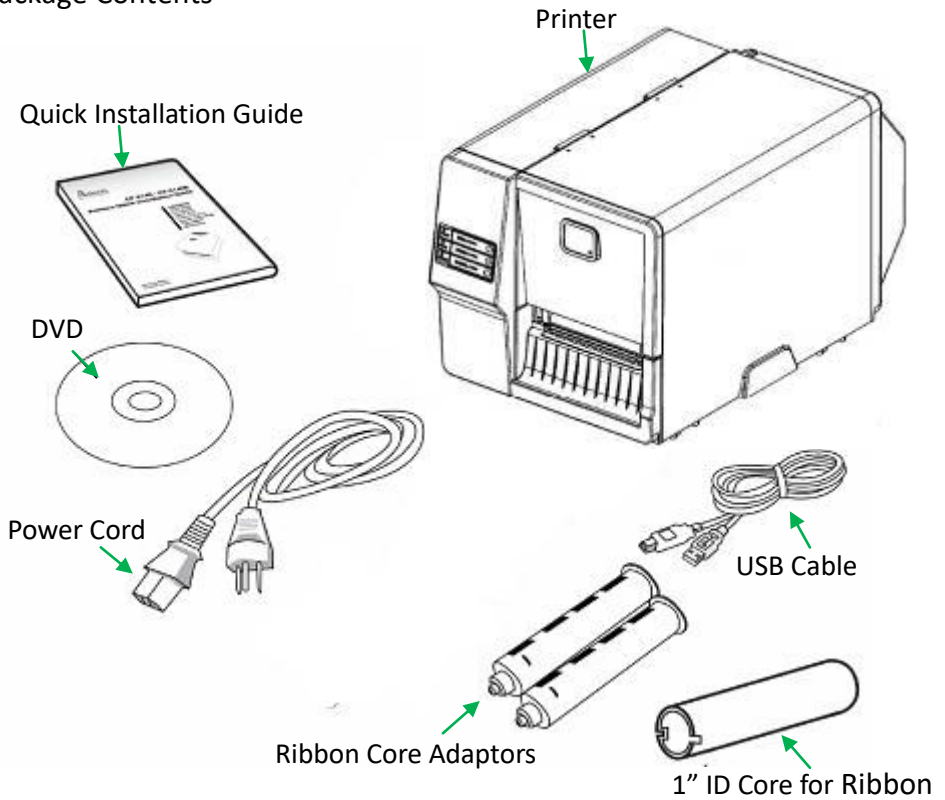
After receiving your printer, please unpack and check first before use:

1. Inspect the outside of both the box and the printer to see if there is any damage caused by transportation.
2. Open package of the printer, then open top cover of printer, and then check inside to see if all assemblies are in order.
3. Check whether you have received the following accessories together with the printer.



Note: If shipping damage has been discovered, or any item is missing, please directly contact the local dealer whom you've bought this printer from.

Package Contents



- Quick Installation Guide
- DVD (Documentation & Software)
- Power Cord
- Printer
- USB cable
- Ribbon Core Adaptors
- 1" ID Core for Ribbon

Printer Overview

Front View:



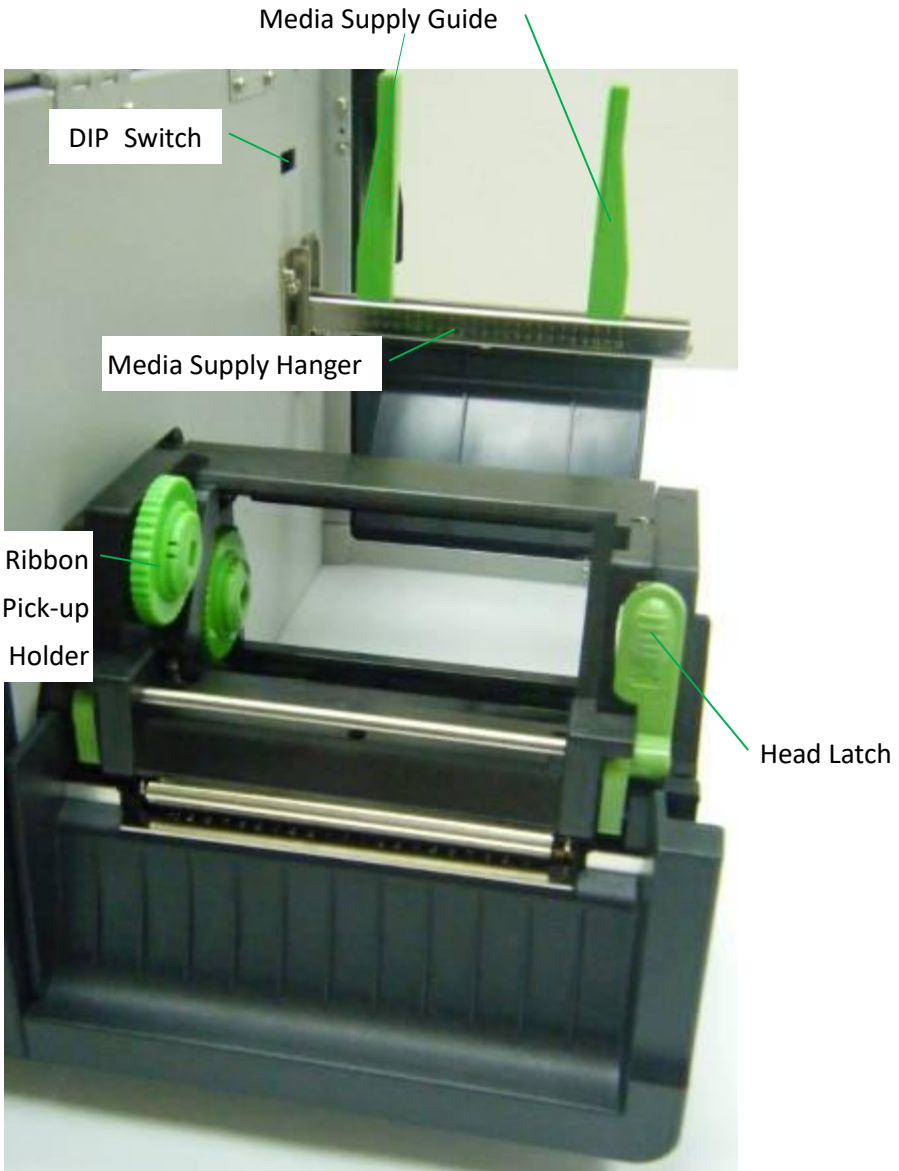
Printer's front panel includes:

- 3 LED indicators (READY, MEDIA and RIBBON)
- 3 buttons (FEED, PAUSE and CANCEL)

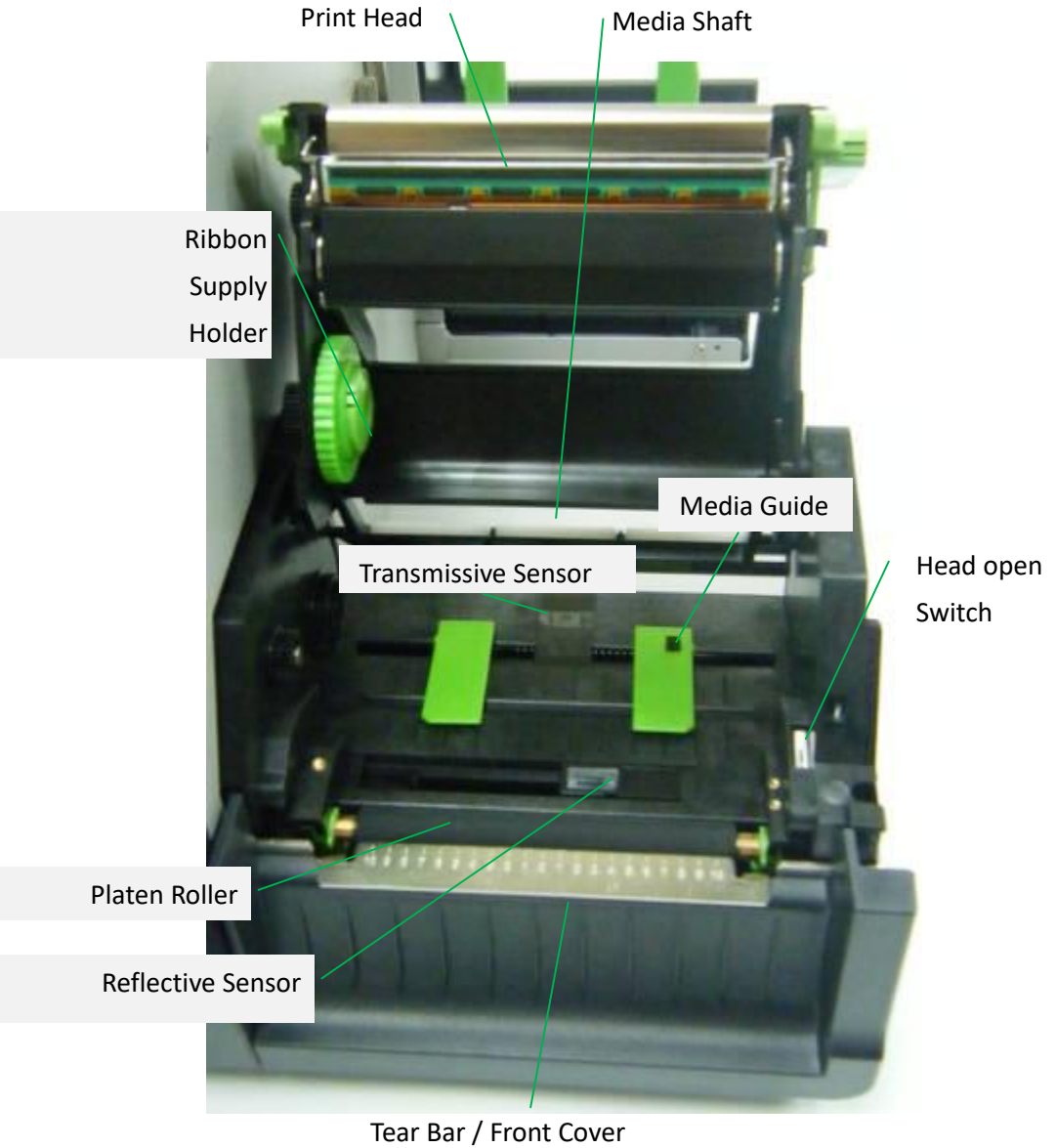
Rear View:



Interior View I



Interior View II



Connecting Power Cord



Caution:

Do not operate in an area where the printer might get wet.

Refer to the steps below:

1. First turn Power switch to the “O” position. Make sure to turn off printer’s power first, every time before connecting or disconnecting Power cord from printer.
2. Connect AC power cord to AC Power connector of printer.
3. Plug the other end of the power cord into an appropriately grounded Power outlet.



Power switch

AC Power
connector

AC Power cord

Power outlet



Loading Media

Preparing Media



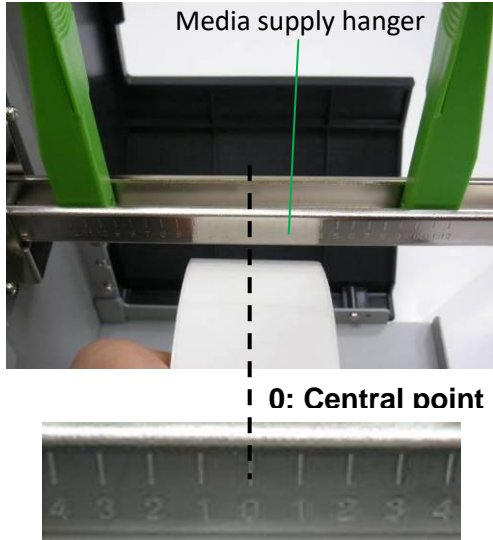
Note: The inside wound or outside wound media rolls can be loaded into the printer in the same way. In case media roll may become dirty or dusty during shipment, handling, or storage, firstly remove the outside length of media, which helps to avoid dragging adhesive or dirty media between the print head and platen roller.

Placing Media Roll

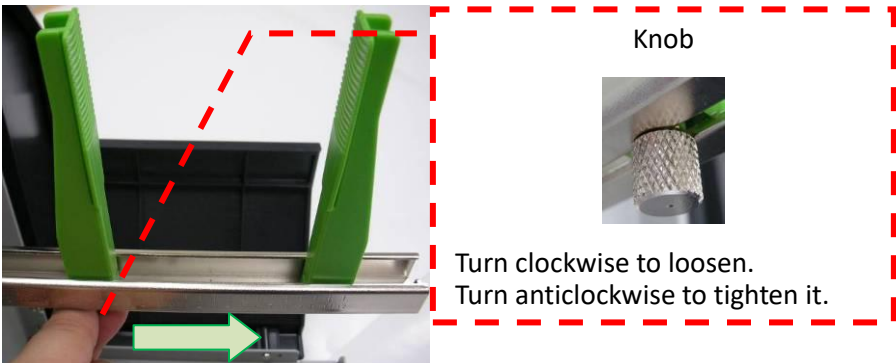
1. Open Top access door of the printer.



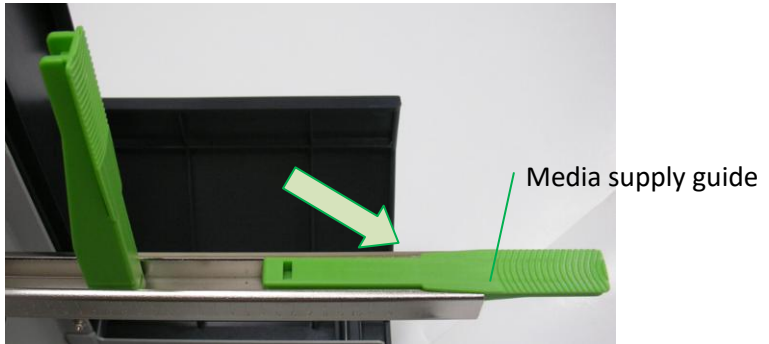
2. Find the Central point of Media supply hanger first, represented by scale "0". Centrally place media roll to align with central point of Media supply hanger, and then check the scale numbers located right upon both edges of media roll.



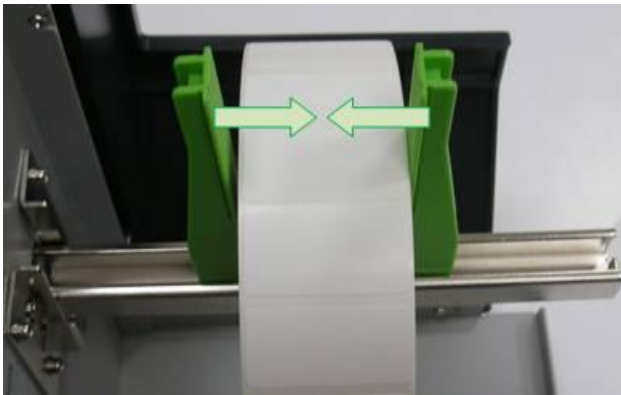
Then, find the Knob under Media supply guide at left, turn clockwise to loosen it, and move to the scale number found in previous step by media's left edge.



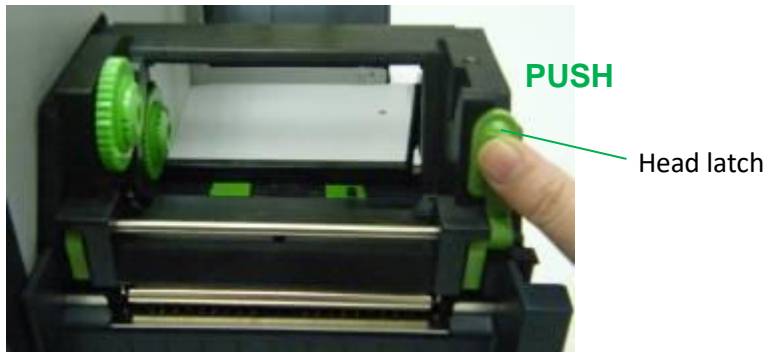
3. Flip down the Media supply guide at right.



Place and push the media roll to central point of the Media supply hanger. Check the scale number on Media Supply Hanger and make sure the roll is centrally aligned. Turn the Knob under Media supply guide at left anti-clockwise to tighten it and fix media roll's position. Flip up the Media supply guide at right and slide in until it touches the edge of media roll.

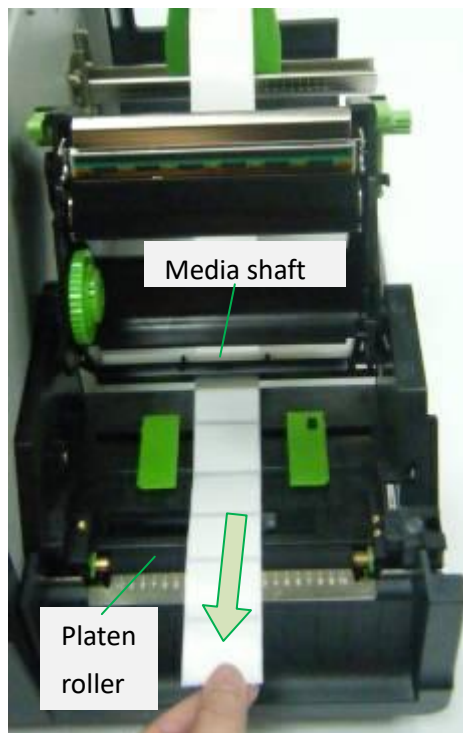


4. Push the Head latch to open the printer module.

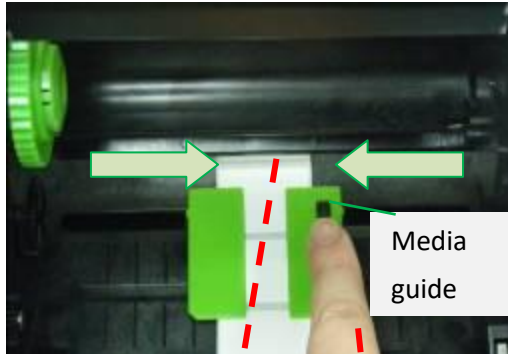


Pull a short length of media till it reaches the Platen roll of printer.

Locate the media under Media shaft.



5. Press the lock of Media guide at right to adjust media guides' positions to fit media's both edges. Make sure gap or black-mark of media can pass over to be detected by Media sensor.



Transmissive sensor



Reflective sensor



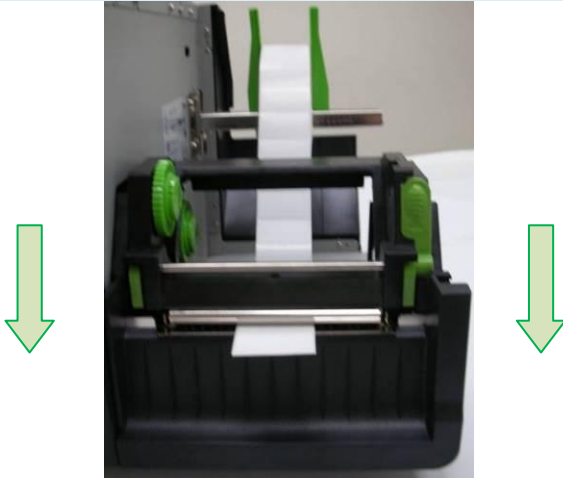
Note: Select the appropriate sensor type which is applicable to the media in use. Refer to “[DIP Switch](#)” section to know more details about setting methods.

Sensor type	Media type	sample
Reflective (movable)	Multi-column labels or labels with gaps: make sure to locate sensor under media within range to detect correctly.	
	Labels with black-marks: if black-mark is narrower than media width, adjust sensor's positions to locate directly under black-marks.	
Transmissive (centrally fixed)	Labels with holes at central positions, e.g. tags.	

6. Close the printer module and then press firmly at the both sides to properly latch until you hear a click.



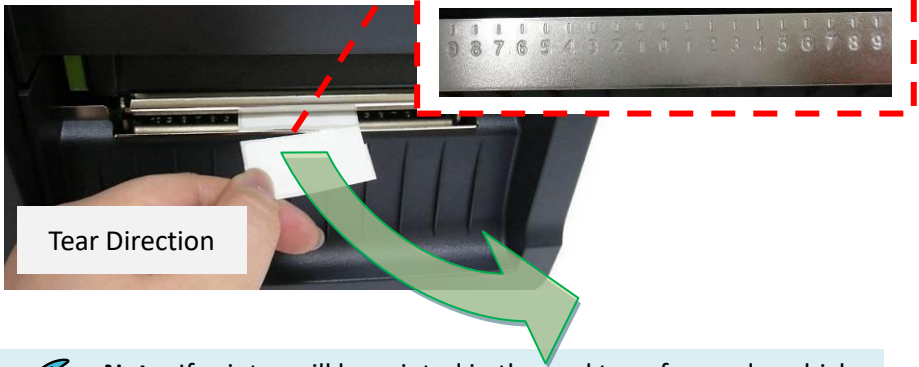
Note: For thermal transfer printing mode, ribbon is required to be installed. Refer the steps in section: "[Loading Ribbon](#)"



Press the FEED button to feed labels out of the printer.



7. To tear media, pull the media edge against the Tear-off bar as in the direction below:



Note: If printer will be printed in thermal transfer mode, which requires ribbon to be installed, continue the next section, "[Loading Ribbon](#)".

Loading Ribbon

The following steps only apply to thermal transfer printing mode only.

Direct thermal does not need ribbon to be installed.

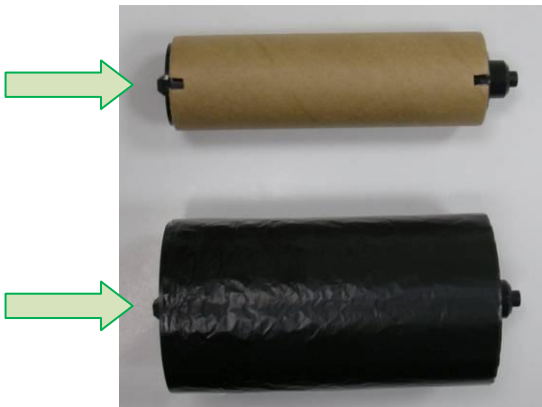


Note:

1. Media and ribbon types should be matched to provide with optimal print results.
2. Always use ribbon that is wider than the media to protect the print head from wear.
3. For direct thermal printing, do not load ribbon in the printer.

Preparing Ribbon

Find the two Ribbon Core Adaptors in printer package and fix them into the empty core for ribbon and new ribbon supply roll, from the left to the right.

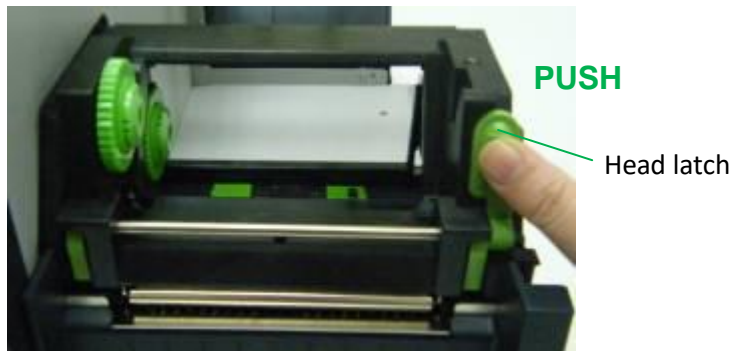


Placing Ribbon Rolls

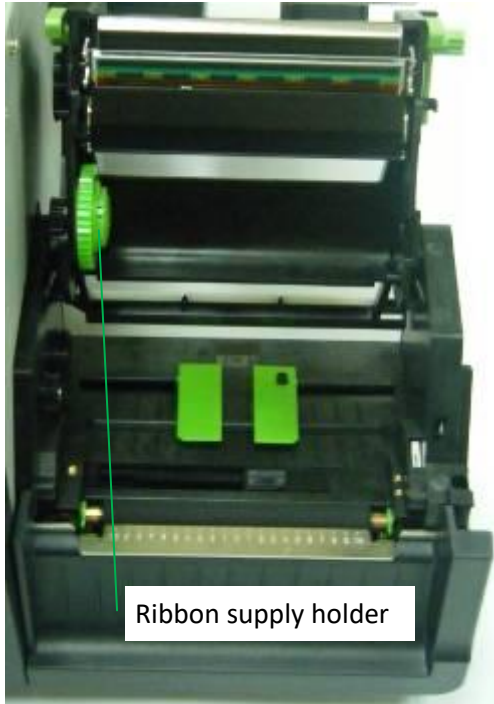
1. Open Top access door of the printer.



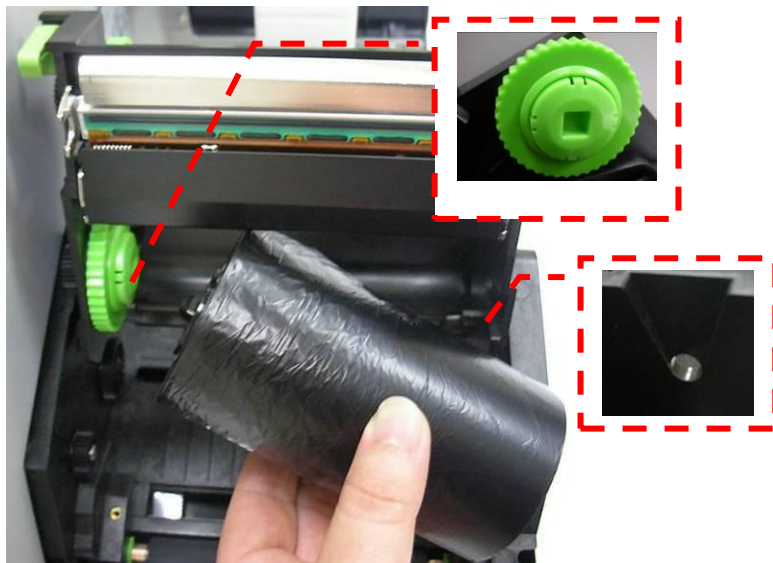
2. Push the Head latch to open the printer module.



3. Lift up the printer module to check the Ribbon supply holder.



4. Install one ribbon roll and rotate it until the notches align and lock into the left side of Ribbon supply holder, and then into the right.



Note: The Ribbon Supply Holder accepts the coated side of ribbon to be wound ink-side IN or wound ink-side OUT.

5. Install the other ribbon roll and rotate it until the notches align and lock into the left side of Ribbon pick-up holder, and then the right.



Pull a short length of ribbon from Ribbon supply holder. Move upward and attach to Core for ribbon on Ribbon pick-up holder.

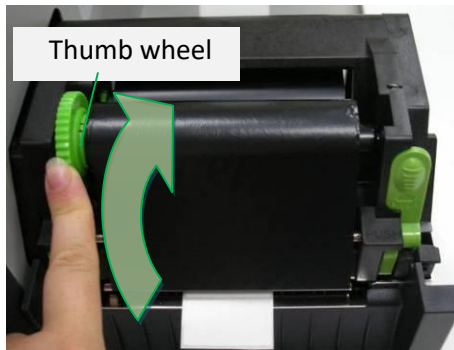


Note: Ribbon pick-up holder accepts the coated side of ribbon to be wound ink-side OUT only.

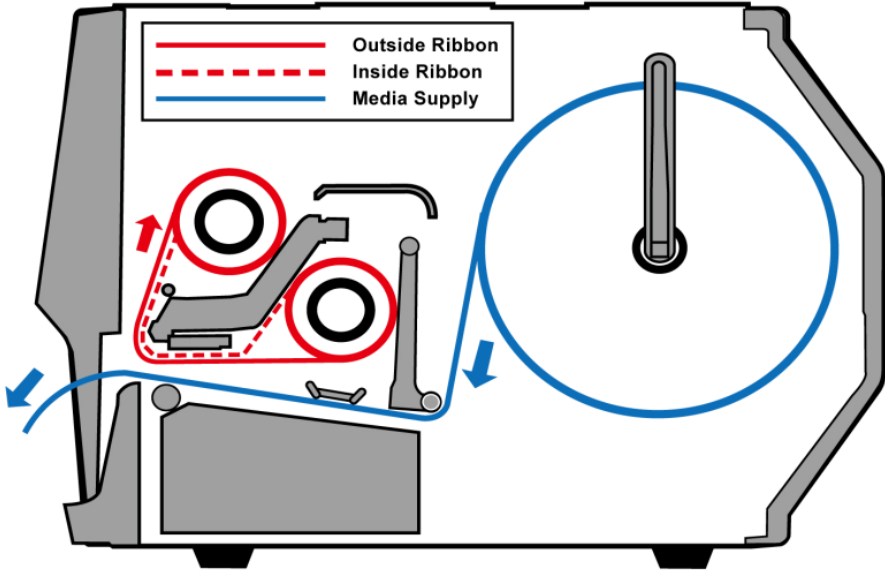
6. Close the printer module, and then press firmly at both sides to properly latch it until you hear a click.



Rotate Thumb wheel of Ribbon pick-up holder to remove slack and ribbon wrinkle, and to align ribbon on the spindles.



7. Double-check the installation path of media and ribbon:



3. Printer Operations

LED Indicators



There are three LED indicators on printer's front panel - READY, MEDIA and RIBBON. These indicators display operation status of the printer to help users' comprehension for further actions to take.

- | | |
|---------------|--|
| READY | On – Normal operation.
Blinking – Error conditions including ribbon out, media out, print tasks cancelled, printing errors, printer paused, printer receiving data from host. |
| MEDIA | On – Normal operation.
Blinking – Media is used out; install new media.
Print head overheated (printer will resume printing automatically later.) |
| RIBBON | On – thermal transfer mode; install ribbon.
Off – direct thermal mode; no need to install ribbon.
Blinking – Ribbon is used out; install new ribbon. |



Note: Mode selection between thermal transfer and direct thermal can be set via labeling software, windows driver, printer commands, or [DIP Switch](#).

Buttons



There are three buttons. Each button carries with two basic functions.

Button	Function 1 (Press the button)	Function 2 (Press the button and power on printer at the same time)
FEED / CONFIG.	<ul style="list-style-type: none">• Feed a label.	Perform self test & print a configuration report.
PAUSE / CALIBR.	<ul style="list-style-type: none">• Pause printing.• Press again to resume printing.	Perform a media calibration.
CANCEL / RESET	<ul style="list-style-type: none">• Interrupt and delete a print task.• Force printer to continue after an error is solved.	Reset to factory default settings.

Media Calibration



Note:

1. After the media is loaded, please perform media calibration to calibrate the label sensor before printing. Also perform media calibration every time after changing media types.
2. Before calibration, be sure media and ribbon (for thermal transfer printing) have been loaded correctly.
3. The label sensor needs to locate properly to index labels' gaps/ notches/ holes. For more details, refer to the section, "[Sensor type](#)".

Steps:

1. Turn off the printer
2. Press and hold the PAUSE/CALIBR. Button first, and then turn on the printer.
3. Once both READY and MEDIA indicators blink, release the PAUSE/CALIBR. button.
Printer will feeds a short length of blank labels.
4. When the READY and MEDIA indicators stop blinking and remain illuminated, media calibration is complete!

Printing a Configuration Report

Perform a self-test and print a configuration report, to check printer's print quality and internal settings.

Steps:

1. Turn off the printer. Load media and ribbon.
2. Press and hold the FEED/CONFIG. button while turning on the printer.
3. When READY indicator starts to blink, release the FEED/CONFIG. button. Printer now will print out a configuration report.
4. Printer will enter Dump mode after printing configuration, if it's with Argox PPLB emulation. To return to normal operation mode from Dump mode, press the CANCEL/RESET button. Another way is to turn off printer power, and then restart printer.

When the READY indicator stops blinking and remain illuminated, printer is back in normal operation mode.



Note: In Dump mode, all characters will be printed in 2 columns: the right shows characters received from your system, and the left shows corresponding hexadecimal values of the characters. It allows users or engineers to verify and debug the program.

Sample of Configuration Report – based on MP-2140:

Label Printer with Firmware
 MP2140-B01.00 051713 00
 STANDARD RAM: 8M BYTES
 AVAILABLE RAM: 5554K BYTES
 FLASH TYPE: ON BOARD 8M BYTES
 AVAILABLE FLASH: 6143K BYTES
 8 bit data: Code Page 437
 THERMAL TRANSFER
 REFLECTIVE SENSOR(NORMAL)
 REF:35B3 TRANSMISSIVE2:3E18
 NO. OF DL SOFT FONTS : 0
 Int.fonts:NO DOWNLOADED FONTS
 CUT COUNT: 0
 PRINT LENGTH METER: 20 M
 MOTOR TYPE: 5 ohm
 RS232 : 9600, 8, N, 1P
 CHECKSUM : 00000000
 SPEED: 3IPS DARKNESS: 8
 MEDIA_TYPE: GAP
 PRINT WIDTH: 800
 LABEL LENGTH: 80
 BACKFEED DISABLE
 CUTTER DISABLE
 PEELER DISABLE
 CUTTER/PEELER OFFSET: 0
 R(X,Y) =R(0,0)
 H. POSITION ADJUST : 0000
 CALIBRATION TYPE: MODE 1
 M(0,0,0,0)
 s(0 , 0)
 U0,3,0,0,39040,51392,13
 5,5,2,2,5,5,5,5,2,

ON				
OFF	o	o	o	o
SW2	1	2	3	4

This is internal font 1. 0123456789 ABCabcXyz

This is internal font 2. 0123456789 ABCabcXyz

This is internal font 3. 0123456789 ABCabcXyz

This is internal font 4. 0123456789 ABCXYZ

THIS IS INTERNAL FONT

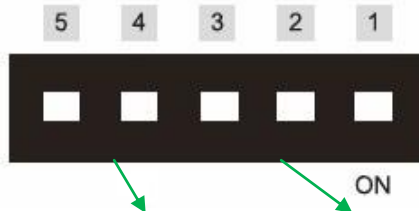


DIP Switch

DIP Switch settings indicated on printer's configuration report are set practically by DIP Switch on main board, located near Media supply hanger. As described below, some of the DIP switches can be adjusted upward or downward, representing different functions.



Note: Turn off the printer before setting DIP Switch.



Switch & Function	4 Media Sensor Switch	2 Print Mode Switch
Position is: Up (Off)	Printer's firmware defaults to reflective sensor. As long as switch is at Up position, labeling software, windows driver, or printer commands can change sensor's settings. (default) Once the switch is set from Down to Up, printer will be set to Transmissive sensor.	Thermal transfer (default)
Position is: Down (On)	Printer is forced and fixed to Reflective sensor setting. Labeling software, windows driver, or printer commands cannot change sensor setting.	Direct thermal

Resetting to Factory Default Settings

To reset the printer to factory default settings:

1. Turn off the printer.
2. Press and hold the CANCEL/RESET button and turn on the printer.
3. When RIBBON indicator start to blink, release the CANCEL/RESET button.
4. When the READY indicator stops blinking but remains illuminated, the following information is now back to defaults:
 - Label parameters
 - Heat (Darkness)
 - Speed
 - Symbol set (language)
 - Others for specific emulation



Note:

1. Be cautioned that this will reset all printer settings back to defaults; if possible, print the configuration label in advance before reset.
2. All settings stored in FLASH memory are retained even after turning off the printer.
3. The print length meter cannot be reset to 0.
4. After resetting the printer and before printing, please perform media calibration again.

4. Communications

Interfaces and Requirements

Argox MP printer series come with a nine-pin Electronics Industries Association (EIA) RS-232 serial data interface, a USB interface, and Centronics Parallel. A variety of interface options are suitable for versatile applications:



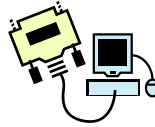
Note:

1. Please be sure to plug the power cord into the power connector on the back of printer before connecting communication cables.
2. Printer complies with FCC Rules and Regulations, Part 15, for Class A Equipment, for use with fully shielded six-foot data cables. Use of longer cables or unshielded cables may increase radiated emissions above Class A limits.
3. For interface pin-out information, please refer to the section, "[Interface Specifications](#)".

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.



Serial (RS-232) Interface Requirements

The required cable must have a nine-pin "D" type male connector on one end, which is plugged into the mating serial port located on the back of the printer. The other end of the signal interface cable connects to a serial port on the host computer.



Parallel Interface Requirements

The required cable (IEEE 1284-compliant is recommended) 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.

Serial and Parallel Cabling Requirements

Data cables must be of fully shielded construction and fitted with metal or metalized connector shells. Shielded cables and connectors are required to prevent radiation and reception of electrical noise.

To minimize electrical noise pickup in the cable:

1. Keep data cables as short as possible.
(6 ft or 1.83m recommended)
2. Do not tightly bundle the data cables with power cords.
3. Do not tie the data cables to power wire conduits.

Communicating with Printer

Seagull driver Argox provides with printer can be applied to all applications under Windows XP/ Vista/ Windows 7/ Windows 8, 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.

The following installation steps are based on MP-2140 as an example. The screens included for these steps are taken from Windows XP; steps in other versions of operation systems are similar. Drivers can be installed via the DVD included in printer package.

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.

Steps:

1. Turn off the printer. Plug the power cord into the power outlet, and then connect the other end of the cord to printer's power connector. Connect a USB cable to the USB port on printer and also on your computer.
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. Prepare the documentation and software DVD from printer package and then install to DVD drive of your computer. The DVD will bring out the following prompt. Click "Go":

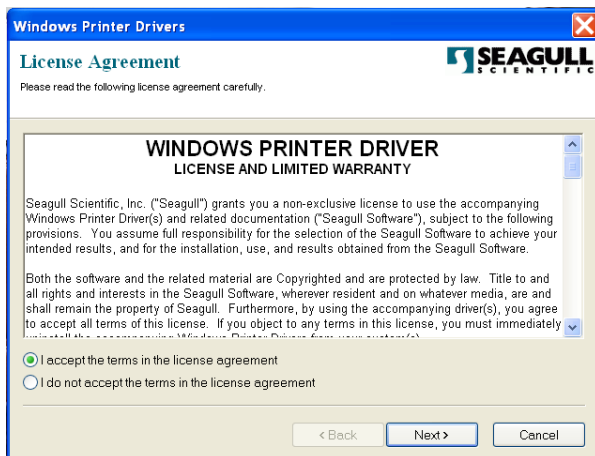


4. Under MP series product selection prompt, choose Seagull Driver version and then start installation:

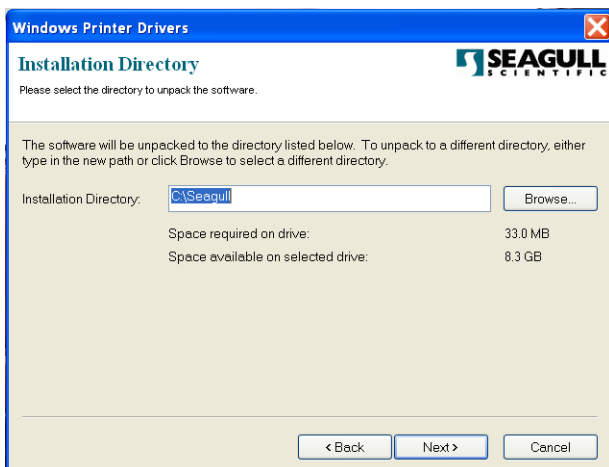


Instead of the flash prompt above, another way to install Seagull driver is to run the DriverWizard utility from the Installation Directory where the Seagull driver files are located.

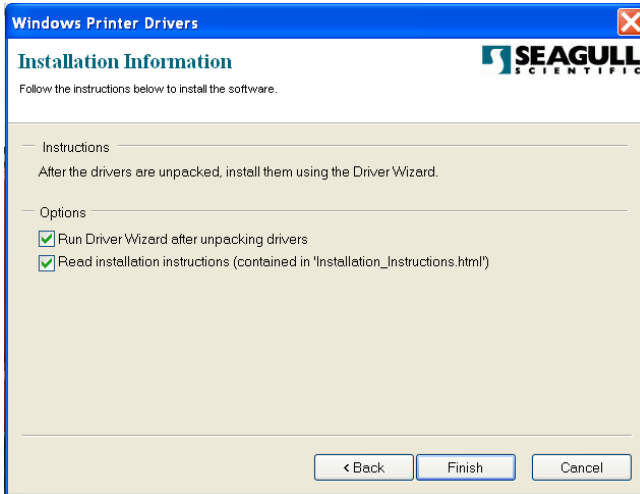
5. On the prompt, Windows Printer Driver, select "I accept..." and click "Next":



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



6. Make sure the first option "Run Driver Wizard..." is checked, and click "Finish"



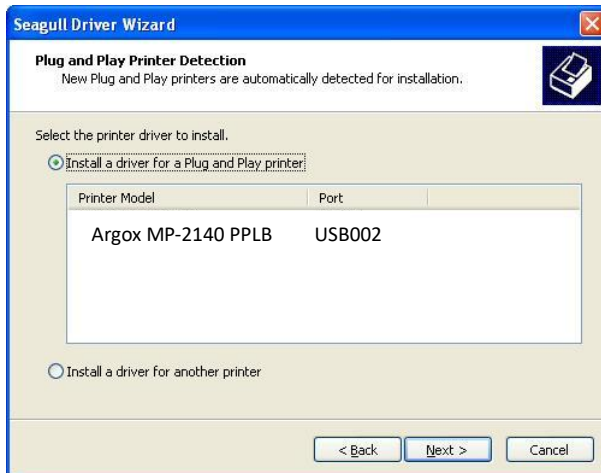
Select "Install printer drivers" and click "Next":



7. This Seagull Driver Wizard prompt will pop up, if printer is off:

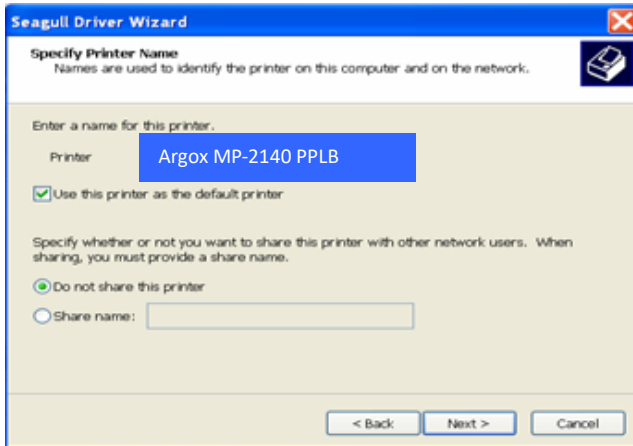


If USB cable is well-connected to PC and to printer, and printer is powered on, this Seagull Driver Wizard prompt will pop up. Select the first radio button to “Install a driver for a Plug and Play printer”:

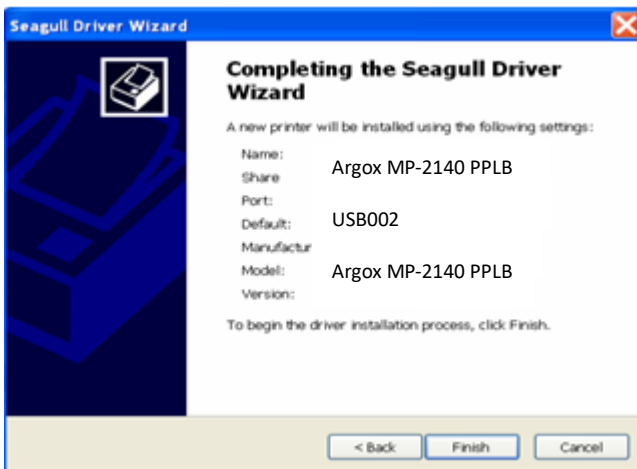


Then click “Next”.

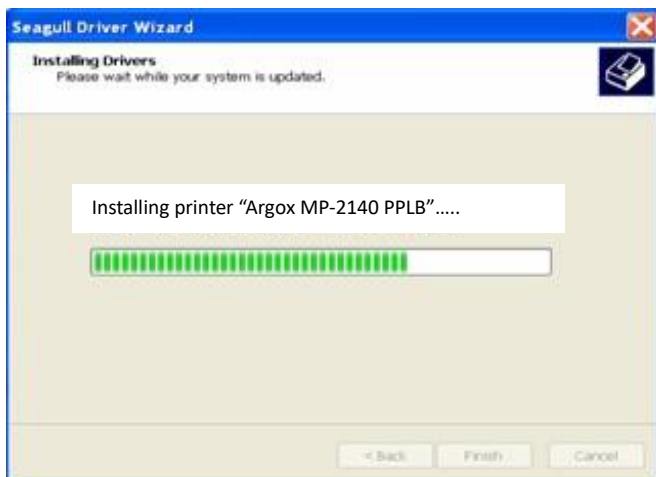
8. Enter Printer name (i.e. Argox MP-2140 PPLB) and select "do not share this printer", and click "Next"



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



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



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



Installing a Printer Driver (for other interfaces except USB)

Steps:

1. Turn off the printer. Plug the power cord into the power outlet, and then connect the other end of the cord to printer's power connector. Connect the Parallel cable or Serial cable to the proper port on the printer and also on your computer.
2. Prepare the documentation and software DVD from printer package and then install to DVD drive of your computer. The DVD will bring out the following prompt. Click "Go":

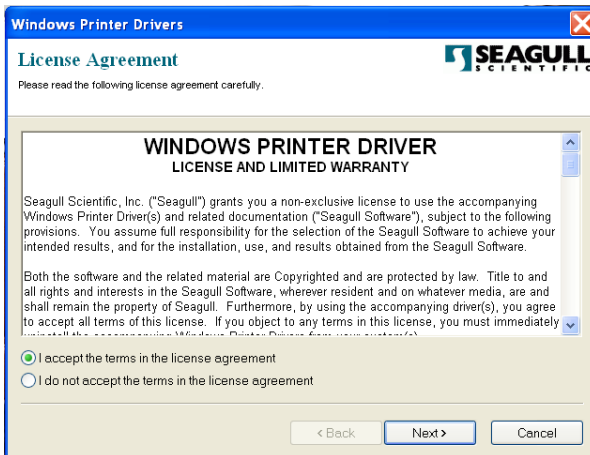


3. Under MP series product selection prompt, choose Seagull Driver version and then start installation:

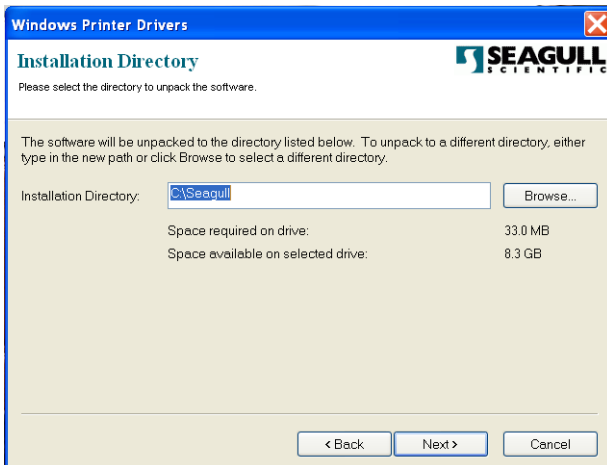


Instead of the flash prompt above, another way to install Seagull driver is to run the DriverWizard utility from the Installation Directory where the Seagull driver files are located.

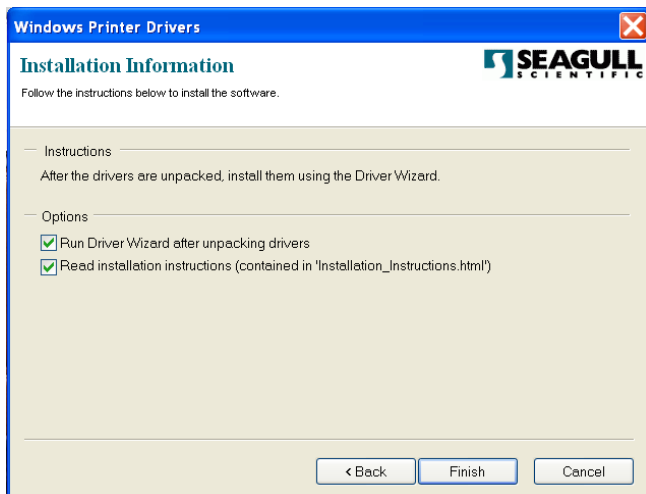
4. On the prompt, Windows Printer Driver, select "I accept..." and click "Next".



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



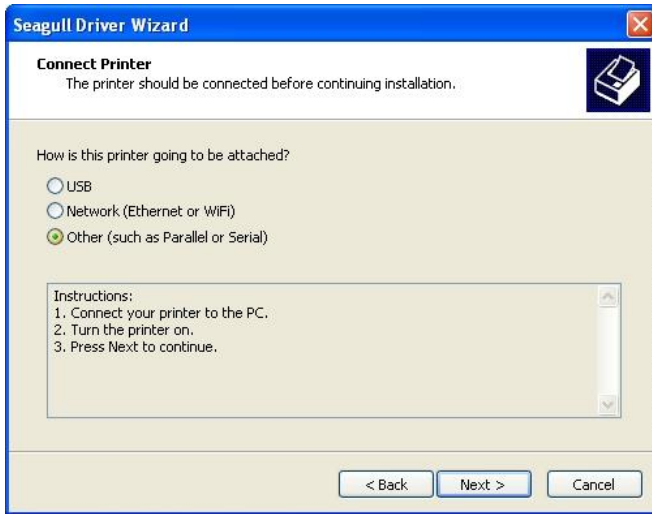
5. Click "Finish".



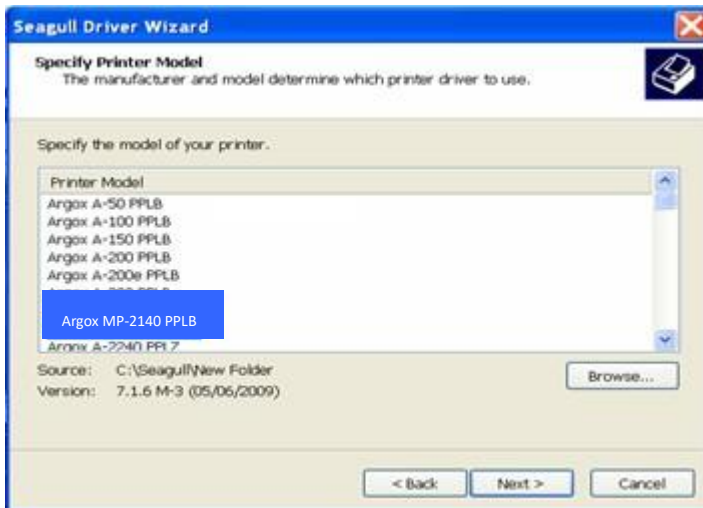
Select Install printer drivers and Click "Next"



6. This Seagull Driver Wizard prompt will pop up:



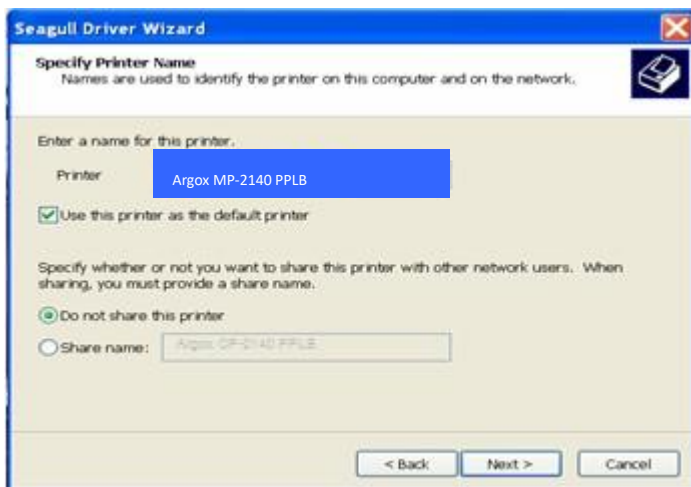
7. Select model & emulation - the following examples are based on model MP-2140 PPLB:



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



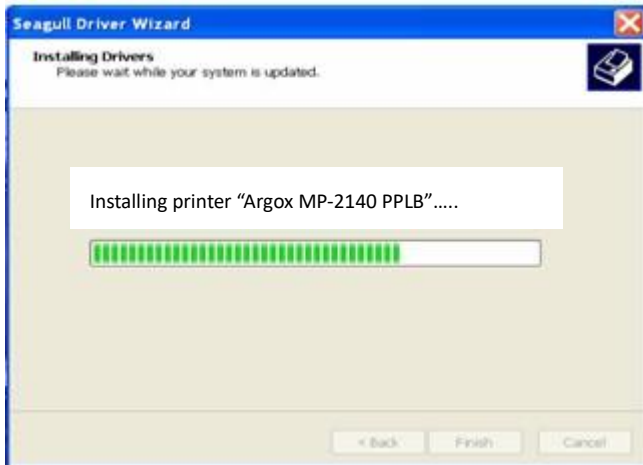
9. Enter Printer name (i.e. Argox MP-2140 PPLB) and select "do not share this printer", and click "Next".



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



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.



5. Troubleshooting

LED Diagnosis

Normally, if the printer is not working properly, the "READY" LED blinks continuously, and printing and communication between the host and printer stops. Meanwhile, blinking LEDs indicate a problem. Check the LEDs and refer to the following solutions suggested below.

Media Problems

LED	Indication
READY and MEDIA LEDs	Blinking

Possible Problems	Solutions	Remarks
Miss-detected gap	Check the media path. Check the position of the label sensor.	For continuous media, check application and driver, and select continuous media.
Media out	Supply the media roll.	
Media not installed	Install the media roll.	
Media jam	Recover the jam.	



Note: If problem continues, perform [media calibration](#).

Ribbon Problems

LED	Indication
READY and RIBBON LEDs	Blinking

Possible Problems	Solutions	Remarks
Ribbon out	Supply the ribbon roll	Not applicable to direct thermal.
Ribbon jam	Recover the jam	
Ribbon sensor error	Replace ribbon sensor	



Note: If you use direct thermal, set by labeling software, windows driver, printer commands, or [DIP Switch](#).

Other Problems

LED	Indication
READY LED	Blinking

Problems	Solutions	Remarks
Serial IO error	Check the baud rate, format or protocol between host and printer.	Not for Centronics.

Cutter failed	<ul style="list-style-type: none"> • Check the media. • Check the connection between cutter and main board. • Call for service. 	
Memory full	Check graphics and soft fonts from host. Delete by application software for those no longer in use.	Need to reboot the system.



Note: After a problem is solved, press CANCEL to continue printing.

Printer Status

Printer Status	Blinking LED	Description
PAUSE	READY	Printer is paused. Press PAUSE or CANCEL to return to normal.
MEDIA OUT	MEDIA READY	Media is uninstalled or used up. Load new media to the printer.
RIBBON OUT	RIBBON READY	Ribbon is uninstalled or end-of-ribbon occurred. Load new ribbon to the printer.
SERIAL IO ERROR	READY	Format or baud rate of RS232 communication is inconsistent between printer and host.
CUTTER FAILED	READY	Cutter cannot cut off the media, check media and cutter.
MEMORY FULL	READY	Printer buffer full due to loaded soft fonts, graphics or forms. Check data format. Call for service.
SENSOR O.R.	READY	Media calibration is out of range for sensor detection. Make sure media is loaded and media sensor locates under media.
PRINT HEAD HEAT	MEDIA	Printing job will start until the temperature of TPH goes down.
HEAD OPEN	READY	Print head latch is not closed. To print label the head latch must be closed.

Transmission Problems

If the host shows "Printer Time out"

1. Check if the communication cable (parallel or serial) is connected securely to your parallel or serial port on the PC and to the connector on the printer at the other end.
2. Check if the printer power is turned on.

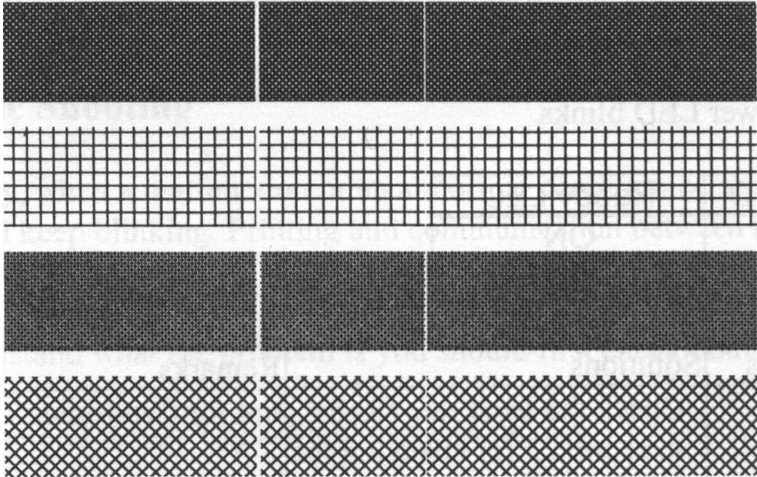
If the data has been sent, but there is no output from the printer. Check the active printer driver, and see if Seagull Driver for your Windows system and the label printer has been selected.

Recovery

After correcting problems, simply press the CANCEL button or restart the printer. Make sure the LEDs are not blinking and remember to resend your files.

Printer 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 be qualified, or not match with media.
- The media may not be qualified, or not match with ribbon.
- Adjust the Darkness (heat temperature).
- Slow down the print speed.
- Refer to the following and clean the related spare parts.

Cleaning Print Head

To keep print Head remain in its best conditions and efficiency and to extend duration for use, regular cleaning action is needed.



Caution: Warranty of print heads will be void if print head serial number is removed, altered, defected, or made illegible, under every circumstance. Please be careful during cleaning.



Caution: In case of long-time printing, surface of print head may be very hot. Please wait till print head cools down properly before maintenance. Do not touch print head directly.



Caution: Touch printer's metal frame to discharge static electricity, or use an antistatic wrist strap and mat.

Clean print head as following steps:

1. Turn off the printer.
2. Open the top cover to access the print head module
3. Remove the ribbon.
4. Rub the print head with a cotton bud moistened with “Ethanol” or “IPA”.
5. Check for any traces of black coloring or adhesive on the cotton after cleaning.
6. Repeat if necessary until the cotton is clean after it is passed over the head.

Cleaning Interval

It's strongly recommended to regularly clean print heads at least when changing every one label roll (in direct thermal printing mode) or every one ribbon roll (in thermal transfer printing mode). In addition, if printers are operated under critical applications and environments, or if it's found that print quality is degraded, please clean print heads more frequently.

Cleaning Material

Surface of print head's heating element is very fragile. To prevent from any possible damage, please use soft cloth/ cotton buds with "Ethanol" or "IPA" to clean print head surface.

It's strongly recommended to wear hand gloves during cleaning progress.

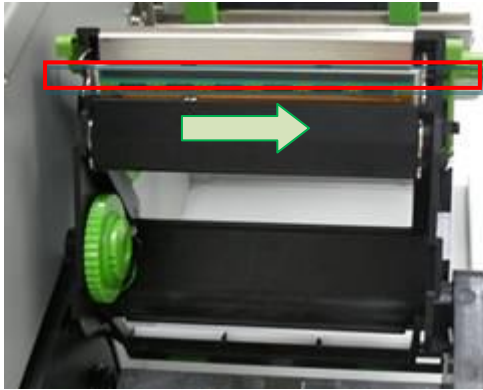
Do not touch print head surface by bare hands or with any hard equipment.

Water or spit should be kept away in case of corrosion on heating elements.

Cleaning Direction

When cleaning the print head, always wipe in One-Way Direction - from Left to Right only, or, from Right to Left only, to clean "Heating Line" of print head gently without excessive stress.

Do not wipe back and forth, to avoid dust or dirt on cleaning cotton would be attached onto print head again.



Cleaning Roller

Using a cotton bud moistened with alcohol, clean the roll and remove any attached glue.



Note: Clean the roller after it has been in contact with foreign materials such as dust or adhesives.

Cleaning Media Compartment

Clean the media compartment with a cotton bud that has been moistened with a mild detergent. Every time a media roll is printed, you should clean this compartment to reduce the incidence dust.

6. Product Specification

General Specification

Specifications	MP-2140 , MP-2140Z
Printing Method	Direct Thermal / Thermal Transfer
Printing Resolution	203 dpi (8 dots/mm)
Printing Speed	2~up to 4ips (50.8~101.6mm/s)
Printing Length	Max 100”(2540mm) Min 0.2”(5mm)
Printing Width	Max 4.1”(104mm)
Memory	8MB DRAM(5MB user available) 8MB Flash ROM(6MB user available)
CPU Type	32 bit RISC microprocessor
Sensors	Media gap & black line Reflective sensor x 1 (movable) & Media Transmissive sensor x 1 (Centrally fixed) / Head open switch / Ribbon end sensor
Operation Interface	LED indicator (Ready/Media/Ribbon) x 3 / Button (Feed(Config.)/Pause(Calibr.)/Cancel(Reset)) x 3
Communication Interface	Parallel, RS-232(Baud rate: 2400~115200 bps), USB
Emulation	MP-2140: PPLA, PPLB MP-2140Z: PPLZ
Software - Label editing	Windows Driver (Windows XP/Vista/7/8) BarTender® from Seagull Scientific
Software – Utility	Printer Utility, Font Utility
Media Type	Roll-feed, die-cut, continuous, fan-fold, tags, ticket in thermal paper or plain paper and fabric label**
Media	Max Width:4.33”(110mm) Min Width:1”(25.4mm) Thickness:0.0025”~0.01”(0.0635~0.254mm)** Max roll capacity(OD):8”(203mm) Core size:1”(25.4mm)/ 1.5”(38.1mm) / 3”(76.2mm)
Ribbon	Ribbon roll – max OD: 2.6”(67mm) Ribbon Length: max 300m Core size – ID: 1”(25.4mm) Ribbon Width: 1”~4.33”, Wax, Wax/Resin, Resin

	(Ribbon wound ink-side out or ink-side in)
Dimensions	W 282.7mm x H 285.4mm x L 466.6mm
Weight	9 kg
Power Source	Internal Universal Switching Power supply Input voltage: 100~240V, 50~60Hz
Operation Environment	Operation Temperature: 40°F~100°F (4°C~38°C), 10% ~ 90% non-condensing, Storage Temperature: -4°F~122°F (-20°C~50°C)
Optional Items	Cutter, Peeler, Stacker, RTC Card, ArgoKee
Agency Listing	    

**Special configuration

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	9 fonts with different point size 6 fonts with ASD smooth font. Courier font with different symbol sets.
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 Font Utility
Font size	1x1 to 24x24 times
Character rotation	0, 90, 180, 270 degree, 4 direction rotation
Graphics	PCX, BMP, IMG, GDI and HEX format files
1D Barcodes	Code 39、UPC-A、UPC-E、Code 128 subset A/B/C、EAN-13、EAN-8、HBIC、Codabar、Plessey、UPC2、UPC5、Code 93、Postnet、UCC/EAN-128、UCC/EAN-128 K-MART、UCC/EAN-128 Random weight、Telepen、FIM、Interleaved 2 of 5 (Standard/with modulo 10 checksum/ with human readable check digit/ with modulo 10 checksum & shipping bearer bars) 、GS1 Data bar (RSS)
2D Barcodes	MaxiCode、PDF417、Data Matrix (ECC 200 only) 、QR code、Composite Codes、Aztec Barcode、Micro PDF417

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 (300dpi printer models support Code page 437, 850, 852, 860, 863, 865, 1254 only)
Soft fonts	Downloadable soft fonts by Font Utility
Font size	1x1 to 24x24 times
Character rotation	0, 90, 180, 270 degree, 4 direction rotation
Graphics	PCX , Binary Raster, BMP and GDI (BMP files can be converted to PCX file by Printer Utility)
1D Barcodes	Code 39、UPC-A、UPC-E、Matrix 2 of 5、 UPC-Interleaved 2 of 5、 Code 39 with check sum digit 、Code 93、EAN-13、 EAN-8 (Standard, 2 /5digit add-on) 、Codabar、 Postnet、Code128 subset A/B/C、 Code 128 UCC (shipping container code) 、 Code 128 auto、UCC/EAN code 128 (GS1-128) 、 Interleave 2 of 5、Interleaved 2 of 5 with check sum、 Interleaved 2 of 5 with human readable check digit、 German Postcode、Matrix 2 of 5、 UPC Interleaved 2 of 5、EAN-13 2/5 digit add-on、 UPCA 2/5 digit add-on、UPCE 2/5 digit add-on、 GS1 Data bar (RSS)
2D Barcodes	MaxiCode、PDF417、Data Matrix (ECC 200 only) 、 QR code、Composite Codes、Aztec Barcode

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 (O) font with scaling point size.
Symbol sets (Code pages)	USA1, USA2, UK, HOLLAND, DENMARK, NORWAY, SWEDEN, FINLAND, GERMAN, FRANCE1, FRANCE2, ITALY, SPAIN, MISC, JAPAN, IBM850
Soft fonts	Downloadable soft fonts by Font Utility
Font size	1x1 to 10x10
Character rotation	0, 90, 180, 270 degree, 4 direction rotation
Graphics	GRF, Hex and GDI (BMP files can be converted to GRF file by Printer Utility)
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、Aztec Barcode、 Micro PDF417

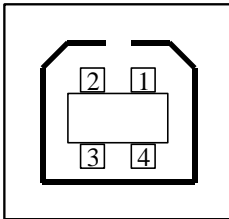
Interface Specification

This section presents the interface specifications of IO ports for the printer. These include pin assignments, protocols and detailed information about how to properly interface your printer with your host or terminal.

USB Interface

Connector Terminal Pin Assignment

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



USB series "B" Receptacle Interface

Serial Interface

The RS232 connector on the printer side is a female, DB-9.



Pin	Signal	Description
1	No function	Shorted to Pin - 6
2	Received Data, RxD	Input. Serial "Received Data"
3	Transmitted Data, TxD	Output. Serial "Transmitted Data".
4	No function	No connection
5	GND	Signal Ground
6	No function	Shorted to Pin - 1
7	Request to Send, RTS	Output. Used as the control signal for "H/W Flow Control "
8	Clear to Send, CTS	Input. Used as the control signal for "H/W Flow Control"
9	+5V	Output. Pin 9 is reserved for KDU (keyboard device unit)



Note: Pin 9 are reserved for KDU (keyboard device unit), therefore do not connect these pins if you are using a general host like a PC.

Parallel (Centronics) Interface

The parallel port is a standard 36-pin Centronics, which complies with IEEE 1284 standard (compatibility mode). Pin assignments are as follows:

Pin	Direction	Definition	Pin	Direction	Definition
1	In	n/STROBE	16	-	Ground
2~9	In	Data 1~8	17	-	Ground
10	Out	nACK	18	-	NC
11	Out	BUSY	19~30	-	Ground
12	Out	PE	31	In	NC
13	Out	5V	32	Out	nFAULT
14	In	NC	33~35	-	NC
15	-	NC.	36	In	NC

Auto Polling

Both the serial port and parallel port of this printer can be activated at the same time, i.e the printer can simultaneously communicate with two PCs via different ports. However as no port contention is made for this printer, if both PCs transmit data at the same time the data may become damaged in the receiving buffer.

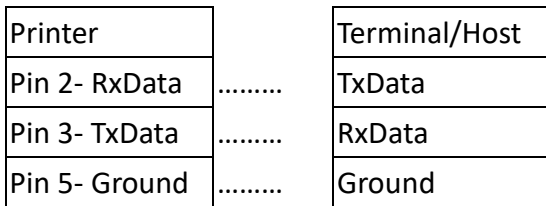
Connection with Host

Host 25S (PC or compatible)	Printer 9P	Host 9S (PC or compatible)	Printer 9P
DTR 20	..... 1 DSR	DTR 4	..... 1 DSR
DSR 6	..... 6 DTR	DSR 6	..... 6 DTR
TX 2	..... 2 RX	TX 3	..... 2 RX
RX 3	..... 3 TX	RX 2	..... 3 TX
CTS 5	..... 7 RTS	CTS 8	..... 7 RTS
RTS 4	..... 8 CTR	RTS 7	..... 8 CTS
GND 7	..... 5 GND	GND 5	..... 5 GND

Alternatively you can just connect the 3 wires in the following way.

Host 25S (PC or compatible)	Printer 9P	Host 9S (PC or compatible)	Printer 9P
TX 2	..... 2 RX	TX 3	..... 2 RX
RX 3	..... 3 TX	RX 2	..... 3 TX
GND 7	..... 5 GND	GND 5	..... 5 GND
pin 4	<input type="checkbox"/>	pin 4	<input type="checkbox"/>
pin 5	<input type="checkbox"/>	pin 6	<input type="checkbox"/>
pin 6	<input type="checkbox"/>	pin 7	<input type="checkbox"/>
pin 20	<input type="checkbox"/>	pin 8	<input type="checkbox"/>

The simplest way to connect to other hosts (not PC compatible) or terminals is:



In general, as long as the data quantity is not too large and you use Xon/Xoff as flow control, it will be problem free.

Baud rate: 2400, 4800, 9600(default), 19200, 38400, 57600, 115200 bauds.(programmable by command)

Data format: always 8 data bits, 1 start bit and 1 stop bit.

Parity: always non parity

Handshaking: XON/XOFF as well as CTS/RTS (hardware flow control).

If you run an application with the bundled printer driver under Windows and use the serial port, you should check the above parameters and set the flow control to "Xon/Xoff "or "hardware".

7. Index

Rotary Cutter and Guillotine Cutter Installation

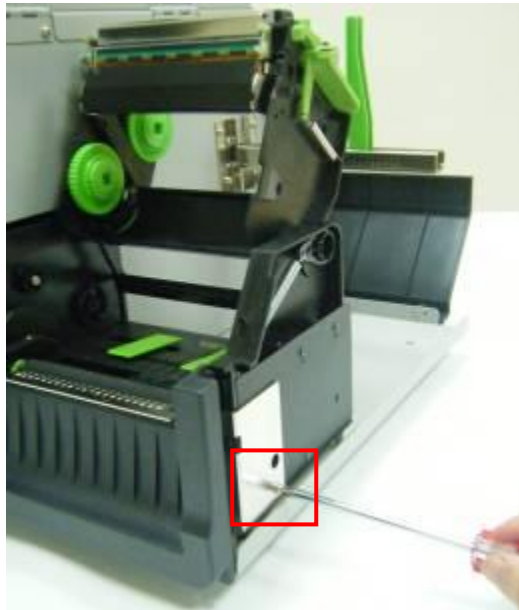


Caution:

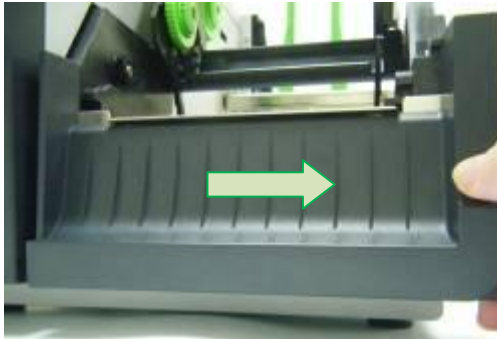
Blades inside cutters are quite sharp. To ensure your safety, never attempt to insert fingers or objects into rotary cutter or guillotine cutter. During all cutter operations including installation, adjustment, or recovery from paper jam, please power off printer first and unplug printer's power cord.

Refer to the following steps to install the cutter kit onto printer. Cutter kit sample shown below is Rotary Cutter, whose installation steps are same as for Guillotine Cutter:

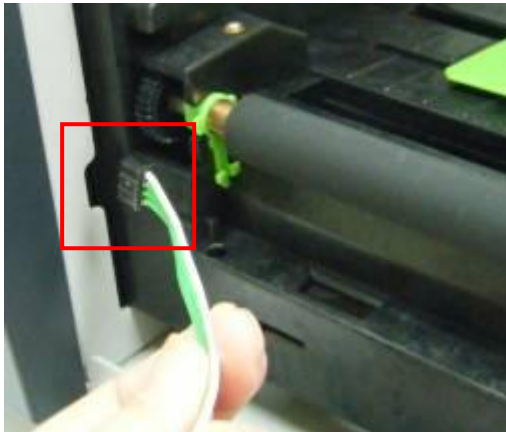
1. Power off printer first. Open Top Access Door and push Head latch to open printer module. Loose the screw which fixes plate of Front Cover.



2. Hold and pull Front Cover to the right, to remove it off from printer.



3. Thread Cutter Cable through the hole between print module and case.



4. Find screws in cutter's box. Install Cutter Module by fixing Cutter Bracket on Printer Chassis with screws at both sides.



5. Remove the left printer case by loosening screws. Connect Cutter Cable to connector (CUTTER) on printer main board.



6. Find Cutter Baby Board in cutter's box, and then install onto J16 socket on printer main board.

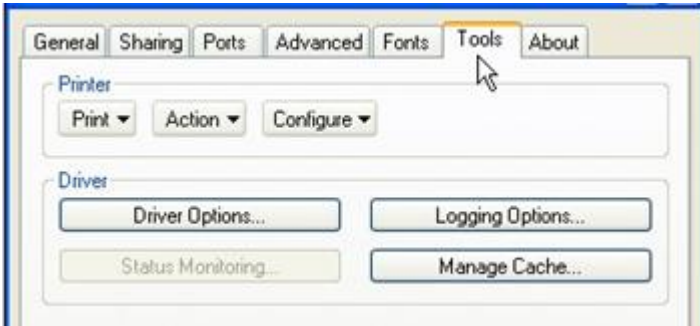


7. Assemble back the printer case.
Now cutter installation has been completed through the steps above.
To load media, please refer to the section – "[Loading Media](#)"

Rotary Cutter and Guillotine Cutter Settings

Before printing and cutting tasks, please make sure whether the cutter in use is Rotary Cutter, or Guillotine Cutter. Then select proper settings via Seagull Driver for printer. The following installation steps are based on MP-2140 as an example.

1. Check MP-2140 driver. Go to the prompt of Printer Properties, click on the tag, "Tools":



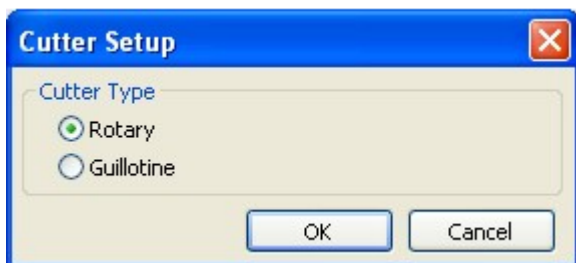
2. Click the "Configure" setting of driver, select "Cutter Setup":



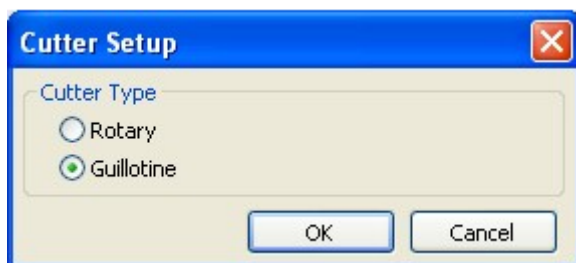
3. “Cutter Setup” prompts will be indicated as below.

Check on the radio button, “Rotary” if there’s Rotary Cutter installed.

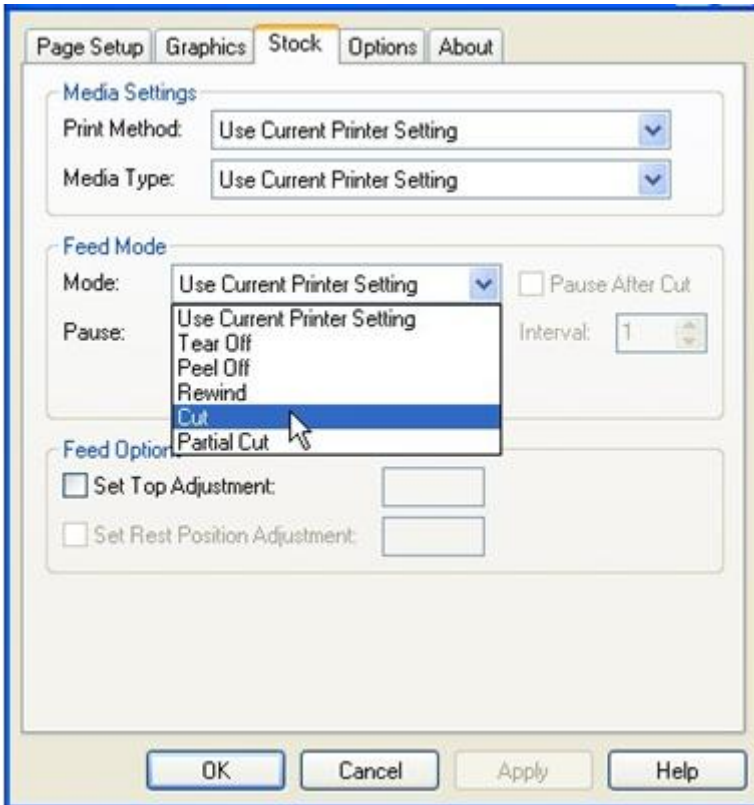
Then click “OK”:



Check on the radio button, “Guillotine” if there’s Guillotine Cutter installed. Then click “OK”:



4. Go to “Printing Preference” prompt of MP-2140 driver and then click on the “Stock” tag. Check “Mode” settings and select “Cut”.



- ※ If there's Guillotine Cutter installed and partial cut function is needed, select “Partial Cut” in “Mode” settings.

Rotary Cutter with Paper Jam

If there is paper jam inside rotary cutter, refer to Rotary Cutter Installation section to remove the rotary cutter. Check the Cam as marked in Figure 2; find a slotted screwdriver to turn counter-clockwise. During turning the Cam of cutter, release the blade from paper and then remove the paper from the cutter.

Figure 1.



Figure 2.



Guillotine Cutter with Paper Jam

If there is paper jam inside guillotine cutter, check in Figure 2 and find where the screw under guillotine cutter. It is to control cut actions of guillotine cutter. Find a Phillips screwdriver to lay down the blade by turning the screw as directions marked in the figures. Then paper can be removed from the cutter.

Figure 1.



Figure 2.

Guillotine Cutter with full cut function: Turn counter-clockwise.
Guillotine Cutter with partial cut function: Turn clockwise.

