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Shipping & Mailing
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AddressRight® 400

Address Printer

User Guide

US English Edition
SV63441 Rev. A
January 23, 2026

CE

ASTRO MACHINE CORP.
Progress Through Technology
www.astromachine.com

EC DECLARATION OF CONFORMITY

We, Astro Machine Corporation
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Elk Grove Village, Illinois 60007
USA

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declare under our sole responsibility that our production equipment:

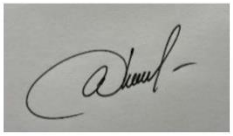
Inkjet Printers, Tabber/Labelers, Friction Feeder series, and Conveyor Stacker series in all their varieties: M1, M1C, M2, Mach5, Vortex850S, Mach8, RTS-5, U1C, U1C-L, W1C, W1C-L, Mach 7 FDR, AS970C, AS950, AS980, AS520C, IB-9000, ATS-12, ATS-8900, ATS-9900, ATS-9950, ATS-309, T350, T750, T650, T950, FF14, FF30, FF309, Mach 7, QL-1200S, ColorMax9, Mach 9, AJ-SP2, AJ-SP3, AJ-SP3Base, EasyFeed Lite, EasyFeed Lite II, ABF-15, ABF-50, CJ 18, AMC-2000 (series), XPS-Profeed, XPS-Promail Base, XPS-Promail 4.0, XPS-ProTab 4.0, CD-100, CDM-700E, TB-390, W761, CD-800, CS870, CD-860, TB-690, CD400HS, W986, WH51, WH52, WH53, AR100, AR200, AR300, AJ-160, AS-650

to which this declaration relates, are in conformity with the following EC Directive and standards including all amendments:

- **EMC Directive 2014/30/EU**
- **LV Directive 2014/35/EU**
- **EN 62368-1 : 2018**
- **EN 55032 : 2017**
- **EN 55035 : 2017/A11 : 2020**
- **EN 61000-3-2 : 2018**
- **EN 61000-3-3 : 2018**

A Technical File for this machinery is maintained at the above address.

The undersigned is the authorized individual appointed by the manufacturer.

Signed 

Date: February 17th, 2025

Name Arvydas Bagdonas
Quality Manager

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Safety Precautions, Warnings & Cautions

Safety Precautions

This equipment presents no problem when used properly. Observe safety rules when operating the AddressRight® 400 printer.

Before using the printer, read this manual carefully and follow recommended procedures, safety warnings, and instructions.

- Keep hands, hair, and clothing clear of rollers and other moving parts.
- Avoid touching moving parts or materials while the machine is in use. Before clearing a jam, be sure machine mechanisms come to a stop.
- Always turn the machine off before making adjustments, cleaning the machine, or performing any maintenance covered in this manual.
- The **Power Cord** and **Power Supply** are supplied with the machine. Plug it into a properly grounded, easily accessible wall outlet near the machine. Failure to properly ground the machine can result in severe personal injury and/or fire.
- Power cords and wall plugs are the primary means of disconnecting the machine from the power supply.
- **DO NOT** use an adapter plug on the line cord or wall outlet.
- **DO NOT** remove the ground pin from the line cord.
- **DO NOT** route the power cord over sharp edges or trap it between furniture.
- Avoid using wall outlets that are controlled by wall switches or shared with other equipment.
- Ensure that there is no strain on the power cord caused by jamming it between equipment, walls, and/or furniture.
- **DO NOT** remove covers. The machine's covers enclose hazardous parts that should only be accessed by a qualified service representative. Report any cover damage to your service representative.
- This machine requires periodic maintenance.
- Use this equipment for its intended purpose **ONLY.**

In addition to the guidelines above, be sure to follow any specific occupational safety and health standards for your workplace or area.

General

Warnings

- If you find a large ink leak, switch off the printer immediately, disconnect the power plug from the power source, and call for service. Continued use of the printer could cause fire or serious electrical shock.
- If the printer emits smoke, unusual odors, or makes odd noises, leaving it could cause a fire or serious electrical shock and/or damage to the unit. Switch the printer off immediately, disconnect the power cord from the power source, ensure the printer has stopped smoking and call for service. **DO NOT** attempt to repair the printer by yourself -- this intervention could cause fire or serious electrical shock.
- Use only a slightly damp cloth – thoroughly wrung out – to clean printer surfaces. Never use alcohol, thinner, or other flammable liquids. If such materials come into contact with electrical components inside the printer, it could cause fire or serious electrical shock.

Cautions

- There are high voltage points inside of the printer. To avoid fire or electrical shock, never attempt to disassemble or repair the printer.
- Never insert or drop any metal objects into the printer when it is open. This could cause a fire, serious electrical shock, and/or damage to the printer. If something falls in the printer accidentally, switch the printer off immediately, disconnect the power plug from the power source, and call for service. If you continue to use the printer, this could cause a fire or serious electrical shock.
- If the printer is dropped and damaged, switch the printer off immediately, disconnect the power plug from the power source, and call for service. If you continue to use the printer it could cause a fire or serious electrical shock.
- Never use flammable sprays around the printer.
- Never remove the covers from the printer. Doing so may cause serious electrical shock.
- Keep children from touching the power cord, internal parts of the printer when it is open, and moving parts inside the printer (gears, belts, rollers, and electrical components). This could cause personal injury and/or damage to the printer unit.

Location

Ensure that there is sufficient space around the printer (approximately 9 inches on each side).

Warnings

- Never place items on the printer. If such items were to fall on the printer, this could cause a fire, electrical shock or damage to the printer.
- To avoid causing a fire, never store flammable substances like alcohol, thinner, etc. near the printer.

Cautions

Avoid using the printer in the following locations:

- Locations in which the printer is exposed to open air or high humidity. This could cause a fire, serious electrical shock, or damage to the printer.
- Locations with sudden changes in temperature. Sudden changes in temperature (such as moving the printer to a warm room on a cold day) could cause condensation inside of the printer. If this happens, allow the printer to sit for at least an hour at room temperature to adapt to the ambient temperature and humidity.
- Slanted and/or unstable surfaces. If the printer is dropped or slides off, it could cause personal injury. Additionally, heavy objects should never be placed on top of the printer. If the object is dropped or falls, it could cause injury.
- Locations where the printer is exposed to open air or dust. Such environments could cause fire, serious electrical shock, and/or damage to the printer.
- Locations where the printer is exposed to water (such as near a faucet). Doing so could cause severe electrical shock.
- Locations where the printer is exposed to high humidity, large amounts of dust direct sunlight, high temperatures, or open flames. These conditions could cause fire, electrical shock, or damage to the printer. Use the printer in an environment where temperature and humidity are within the ranges of 59°F to 86°F (15°C to 30°C) and 20 to 80% RH (with no condensation).
- Locations near large office equipment or any other type of electrical device that emits a strong magnetic field. Doing so may disrupt normal printer operation and cause damage.

  Be sure to never block the ventilation ports on the printer. A blocked ventilation port could cause heat to build up inside of the printer and cause a fire.
  Also, place the printer in an area where you can disconnect the power cord immediately; keep the area around the power cord connection free of obstacles, allowing you to unplug the power cord quickly in the case of an emergency.

Power Supply and Power Cords

Warnings

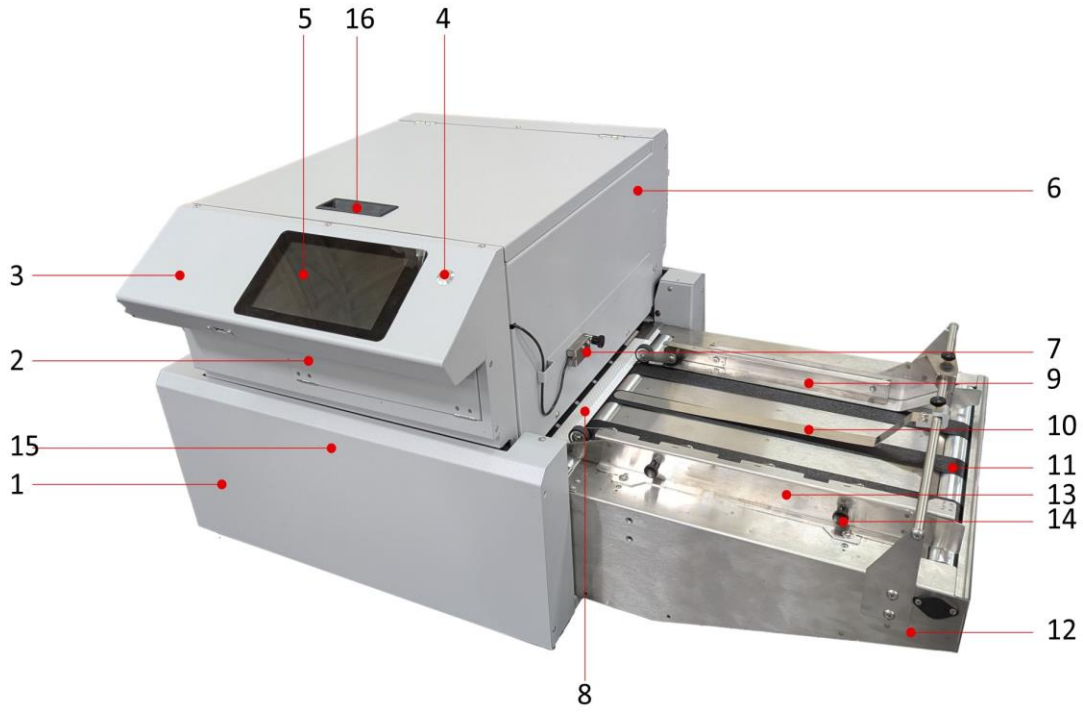
- To avoid causing a fire or serious electrical shock, always use the power cords provided with this printer. Do not use an extension cord.
- To avoid fire or electrical shock, connect the printer power cords to independent power sources that are not shared by other equipment or appliances,
- To avoid fire or electrical shock, ensure that power plugs are securely and completely inserted into their power sources.
- Do not cut or otherwise alter the power cords. To avoid the dangers of fire and electrical shock, never place heavy objects on the power cords, expose them to head, or pull on the cords to disconnect them. If a power cord is damaged in any way (condensation on exposed wires, broken wires, etc.) contact the dealer where you purchased the printer or the nearest service center for a replacement.
- To avoid personal injury from electrical shock, never handle the power cords or plugs when your hands are wet.
- To avoid fire or serious electrical shock, never knot the power cords or wrap them around themselves.
- Disconnect the printer power cords during severe electrical storms. Lightning could cause a fire or severe electrical shock or damage to the printer.
- To avoid a fire hazard, occasionally disconnect the power cords from the printer and the power supply and use a soft dry cloth to clean the cord connectors and connection points. Leaving the cords plugged in and not cleaned for a long period – especially in an area subject to dust, oil, and high humidity – could cause the insulation material to deteriorate.

Cautions

- Be sure to turn off the printer before removing the power plugs from the outlets.
- Check the power plugs and cords for any problems (such as abnormal head, rust, bends, cracks, scratches, etc.) at least once a month.
- If any problem with the power plugs or cords is found, replace them. Using these components without replacement may result in fire or electrical shock hazard.
- To avoid damaging the power plugs (which could cause a short circuit fire or electrical shock), never pull on the power cord to unplug the cord from the power supply. Always grip the plug to remove it from the power supply.
- If the printer will not be used for a long period, disconnect the power cords from their power sources.
- Always keep the area around the power plugs free of obstacles so you can unplug them easily. This allows you to unplug the power cords quickly in the case of an emergency.
- Never use any power sources other than the ones rated for the printer. This printer is designed to be used in the region where purchased. Also, ensure that the power sources can supply sufficient power to the printer. Failure to do so may cause serious electrical shock or damage to the printer.
- The printer must be connected to a socket outlet with a grounding connection by the provided power cords.

Chapter 1: Getting Acquainted

Front View (operator side)



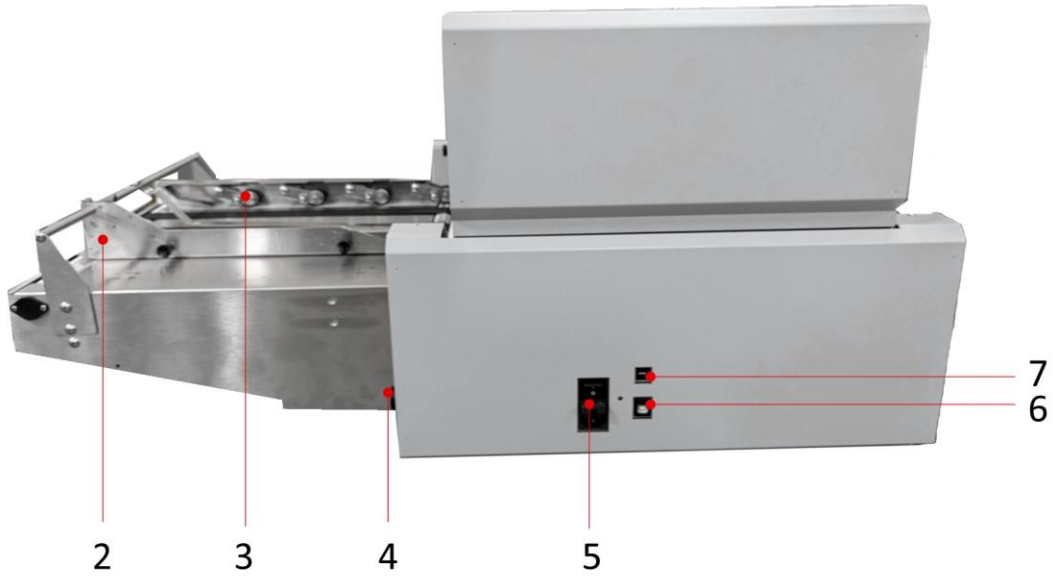
#	Name	Description
1.	Printer	The printer is an A3-width, full-color printing system with an integrated media path.
2.	Ink Door	The ink door provides access to the ink cartridges. When open, printing is disabled. Upon closing, there is a short delay while ink cartridges are checked for any changes.
3.	Clamshell / Print Engine Area (Printzone)	
4.	Soft-Power Button	Used to power-up or power-down the print engine. *To Power-Up* – Turn on the main power switch, then press and release the Soft Power Button. The button's LED will turn blue and the text "Starting up…" will display on the screen. It will take a few minutes for the system to fully initialize. *To Power-Down* – Press and release the Soft Power Button. The text "Shutting Down…" will display on the screen. If you plan to turn off the Main Power Switch, it is important to wait for the screen to go black and the soft-power

		button LED to turn off before turning off the Main Power Switch..
5.	Touchscreen / User Interface (UI)	Provides access to an extensive range of functionality.
6.	Sled Access Cover	Remove to access/remove/replace Shipping Clips, the Service Tray, and the Print Engine BnB
7.	Media / TOF Sensor	Moveable sensor for detecting the media entering the printzone from the registration table. *Important: Be sure to position the TOF Sensor directly over the media's path, avoiding cutouts / holes / windows.*.
8.	Media Sensor Reflector	Media (TOF) Sensor must be positioned over this area.
9.	Media Guide .	Use only when needed to guide media
10.	Media Hold-Down Strap	Used to hold down media as it enters under the Clamshell.
11.	Media Transport Belts	To adjust belt position, press "Run Path" then loosen the thumb screws located below this area. Move the belts to desired positions, then secure by tightening the thumb screws.
12.	Registration Table	Aligns and guides the media into the printzone.
13.	Media Registration Rail	Part of the Registration Assembly. Media is registered against this rail.
14.	Registration Holder Assembly Knobs	Used to adjust registration roller assembly pressure
15.	Service Access Hole	Set Media Thickness to 12.5 mm to align the screw with the hole. Use T20 Torx Driver to manually drive the Service Tray or BnB in/out of the system when replacement is needed.
16.	Service Access Handle	Used to open the Top Cover on the Clamshell. *Note: The cover is held closed by strong magnets.*

Exit View

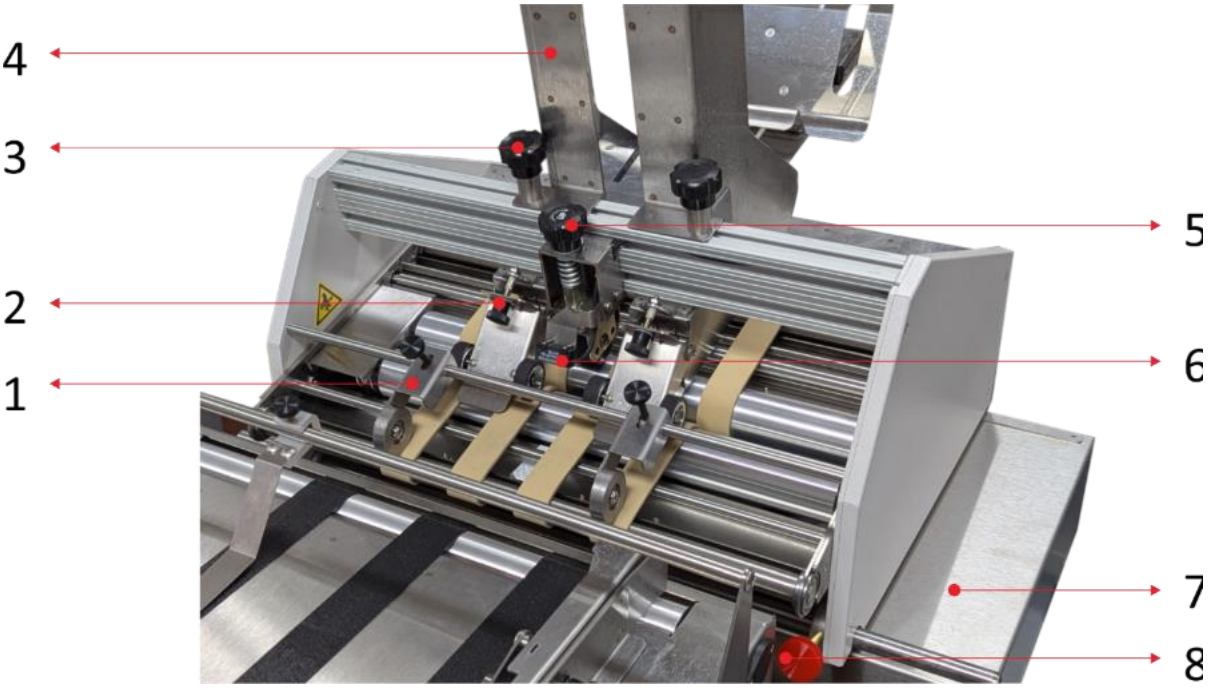
#	Name	Description
1.	**Clamshell Release Latches**	–Must set Media Thickness to 12.5 mm before opening Clamshell.
2.	**Service Tray (Sled)**–	Maintains the printhead. Contains a wiper cloth (web) for cleaning the printhead surface. Contains cap to keep printhead nozzles sealed and protected when not in use.
3.	**Ink Satellite Exhaust Fans**	Used to evacuate ink overspray that is created during printing / purging.
4.	**Print Platen and Drip Tray Assembly (Spittoon)**	Supports media during printing. Captures excess ink during bled printing and purging processes. Must be removed to inspect and clean periodically.
5.	**Exit Conveyor Assembly** –	Transports media out of the print zone.
6.	**Exit Sensor Position** .	The Exit Sensor is located here. The Exit Sensor is used to confirm proper media movement throughout the printer. If media is not passing over this sensor or there are dark colors / holes in the media passing over the sensor, select “Ignore Exit Sensor”/ ***Note**: Sensor function can be affected by ambient light. Be sure to shield sensor from external light*
7.	**Exit Pressure Rollers** –	Used to help drive the media out of the printzone. ***Note:** Your printer may have versions different than that shown here.* ***Important:** Please be sure that the Exit Pressure Roller assemblies are not positioned above the Exit Sensor*.

Rear View (non-operator side)



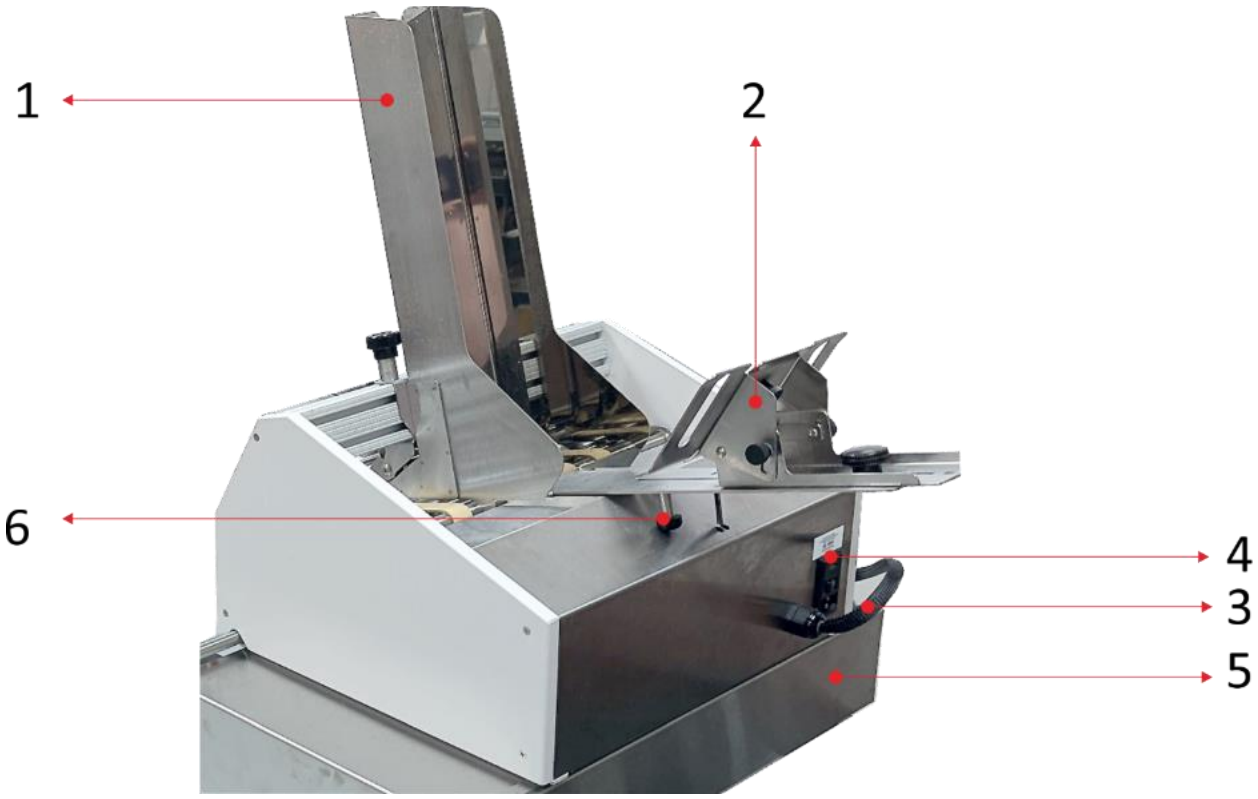
2	Media Guide	Used only when needed to help guide media.
3	Registration Roller Assembly	Used to drive media through the registration area and against the registration rail.
4	Feeder Interface Connection	Connect the Feeder Interface Cable here.
5	Power Inlet with Power On/Off Switch	Connect the power cord to the power inlet. The power inlet has an on/off switch as well as a drawer that contains two fuses (one in use and one spare).
6	USB 2.0 Port–	Used to connect the printer to a PC using a USB Cable.
7	Ethernet Port	Used to connect the printer to a network

Feeder – Exit View



1	Exit Roller Assemblies	Used to drive the media from the feeder into the registration area of the printer.
2	Pull-out Roller Pressure Adjustment Knobs	Used to set roller pressure and set the starting height for thicker media.
3	Side Guide Securing Knobs	Used to secure the position of the Side Guides.
4	Media Side Guides (Left and Right)	Used to guide and center media in the feeder.
5	Hopper stacked with media	Shown stacked with #10 Envelopes.
6	Sheet Separator Adjustment Knob	Use to raise / lower the sheet separator.
7	Feeder Sensor	Used to detect and measure media length. *Note: The Feeder Sensor gets its power from the printer. The Sensor LEDs being ON does NOT indicate that the feeder is powered ON.*
8	Glide Riser Stand	Supports the feeder. Allows for easy repositioning and alignment between the feeder and the printer.
9	Feeder Position Securing Knob	Used to secure the position of the feeder on the Glide Riser Stand

Feeder – Entrance View



#	Name	Description
1	Media Slide Guides	The media side guides hold the media in the correct position for feeding into the printer.
2	Rear Media Support	Supports the media stack
3	Feeder Interface Cable	Connect this cable from the back of the feeder to the back of the printer.
4	Power Inlet with Power On/Off Switch	Connect the power cord to the power inlet. The inlet has a fuse and on/off switch.
5	Glide Riser Stand	Supports the Feeder Assembly
6	Jogging Control	Turn OFF/ON Jogging control of the Rear Media Support

Ink Door View

The printer uses four ink cartridges: **cyan**, **magenta**, **yellow**, and **black** (CMYK) ink. Install these cartridges in the slots behind the ink door.

Control Panel / Touchscreen

The touchscreen on the printer is a control center for media set-up. It can also be used for monitoring printing as well as pausing and restarting jobs plus recovery for any printing errors. The touchscreen also provides the ability to store print jobs and allows the user to view and select print

jobs for printing.

Chapter 2: Installing Printer

Choose a Location

Select an installation location that meets the requirements described below. These requirements will help ensure safe operation and optimal printing results.

- The printer with the registration table and media feeder must be located on a table / bench that is at least **23 x 55 inches (59 x 140 cm)**.

  NOTE: *A larger table may be needed if you are using an optional conveyor stacker at the exit end of the printer.*
- Once set up, a minimum of **4 inches (10 cm)** of free space is required behind both the printer and the media feeder. During installation, sufficient room is required for setting up and making connections between the backs of the feeder and the printer.
- The installation surface must be sturdy and stable enough to support the weight of the printer, registration table, and feeder with a load of media.
- The power cables for the feeder and the printer must be able to connect to appropriate power outlets. These power outlets must be easily accessible.
- Avoid installing the printer near water sources such as faucets, water heaters, humidifiers, or refrigerators.
- The environmental temperature must be between **59°F and 89°F (15°C to 32°C)**.
- The environmental humidity must be within **30 to 80% RH** (non-condensing).
- The environment must be well-ventilated and free of dust.

Contents of Packaging

The printer is secured using cushioning materials to protect it from vibration and shock during transportation. Two cartons are used to ship printer sections.

- The **Feeder** ships in a separate, smaller carton. It includes the **Feed Mechanism**, and the table on which it sits. The **Power Cable, Media Slide Guides**, and **Rear Media Support** are included in an accessory box.
- The printer is shipped in a large carton, along with an accessory box for cables and ink cartridges.

Unpack and Set Up

Use the following instructions to unpack each box and inspect all printer sections. Keep the packaging for future transportation.

Media Feeder Carton and Components

1. Open the top of the smaller shipping carton that contains the media feeder and an accessory box.

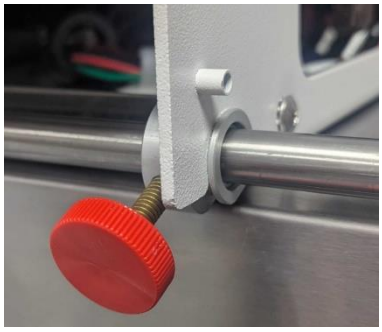
2. Remove the packing materials from the top of the carton.

3. Remove and open the accessory box.

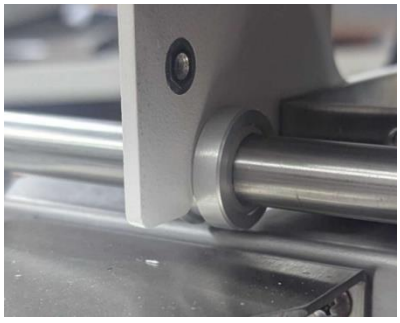
4. Open the accessory box and verify that the following parts are included:
    - **Two Media Side guides**, one for each side of the feeder.
    - The **Rear Media Support**
    - A **Power Cable**

5. Lift the **Feeder** and **Glide Riser Stand** together out of the shipping carton. Remove the packaging inserts from the Feeder and the Glide Riser Stand.

6. Place the Glide Riser Stand on the right end of a sturdy table.
7. Inspect the **Feeder**, **Glide Riser Stand**, and **Accessories**. Verify that no items were damaged during transit.
8. Confirm Feeder is mounted on Glide Riser Stand. Ensure that the **Feeder Frame Cutouts** are placed in the sliding collars as shown in the images below.



Operator Side



Non-Operator Side

Carton for the Printer and Registration Table

1. Open the top of the larger shipping carton that contains the printer with the registration table.

2. Remove the packing materials from the top of the box.

3. Remove the **Accessory Box**.
4. Open the accessory box and verify that the following parts are included:
   - Ethernet Cable
   - AC Power Cables (e.g., North American and European)

- USB-B to USB-A Cable and Network Cable
- Ink Cartridges (CMYK), one for each color: Yellow, Magenta, Cyan, and Black

5. Lift the printer out of the shipping carton.
6. Place the printer on a sturdy table.
7. Remove the packaging inserts from the printer.
8. Retain all shipping materials for further use.
9. Inspect the printer, registration table and accessories to verify that no items were damaged during transit

Remove Shipping Materials

Before shipping, supports gave been inserted inside the printer to prevent damaging movement. These need to be removed before the printer can be used.

1. Move the magnetic **Media (TOF) Sensor** out of the way.
2. Open and secure the Top cover to allow access to the back screws.
3. Remove the back clamshell cover with a Phillips Screwdriver to ensure access to shipping inserts.
4. Looking at the printer from the registration table side of the printer, remove the two orange tabs just inside the printer (one on the left, one on the right). Set these aside to save with all other packing materials.


5. Open the ink cartridge door in the front of the printer and remove the orange support, allowing access to the ink cartridges, Retain this support with all other packing materials.

6. Reinstall the back cover.
7. Place the Media (TOF) Sensor back in its position beneath the rail.

8. Power up the printer. The clamshell will automatically move up, allowing the foam pads to be removed easily.

   Note: *If the Exit Sensor is interrupted (in this case, by the foam pads) during power-up, the clamshell will automatically move and stay at the maximum height (12.5 mm). If this doesn't happen automatically, please refer to "Media Setup" to raise the clamshell to 12.5 mm.*

9. From the Output End of the printer (left side from the touchscreen), remove the foam pads on top of the printer rollers. Retain these for future shipping.

10. Position the printer towards the left side of the table, providing room for the Glide Riser Stand that will support the Feeder.

Assemble Feeder

Remove the shipping protections from the feeder and attach the media guides and supports, as found in the accessory box that shipped with the feeder.

1. Place the feeder's "Glide Riser Stand" on the table, to the right of the printer.
2. Remove the shipping inserts, labeled with "Remove Before Using Printer", from the feeder.

3. Take the **Media Side Guides** from the accessory box.

4. Remove the Media Side Guide Thumb Screws from the feeder. Install and secure the left and right Media Side Guides to the Feeder using the Thumb Screws.

5. Attach the Rear Media Support Wedge to the Rear Media Support plate as shown in the following images.

6. Unscrew the screw from the platform and assemble the back with the extended nut inside the slot on the lower plate.
7. Assemble the plates and fasten the screw through all plates to the extended nut, as shown below.

Connect Printer

Use the power cables from the accessory boxes to supply power to the printer and the feeder.

1. Connect the power cable to the printer’s power inlet on the back of the printer.
2. Connect the feeder’s power cable from the back of the feeder to a power outlet.
3. Connect the feeder to the printer by plugging in the woven covered pigtail cable from the back of the feeder to the back of the printer.
4. Plug the power cable into an AC power receptacle.

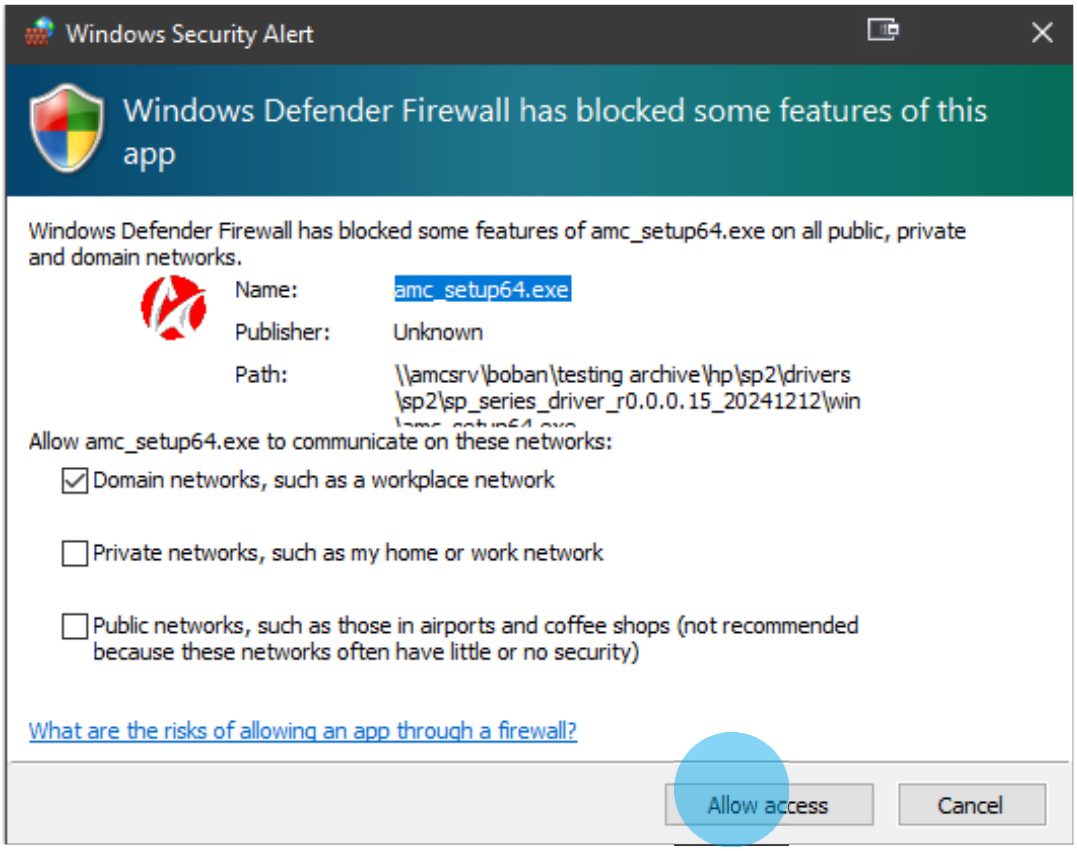
Install Printer Driver

The **SP2 Printer Driver Software** allows your computer to communicate with the printer. Use the following instructions to download and install the printer driver on your PC.

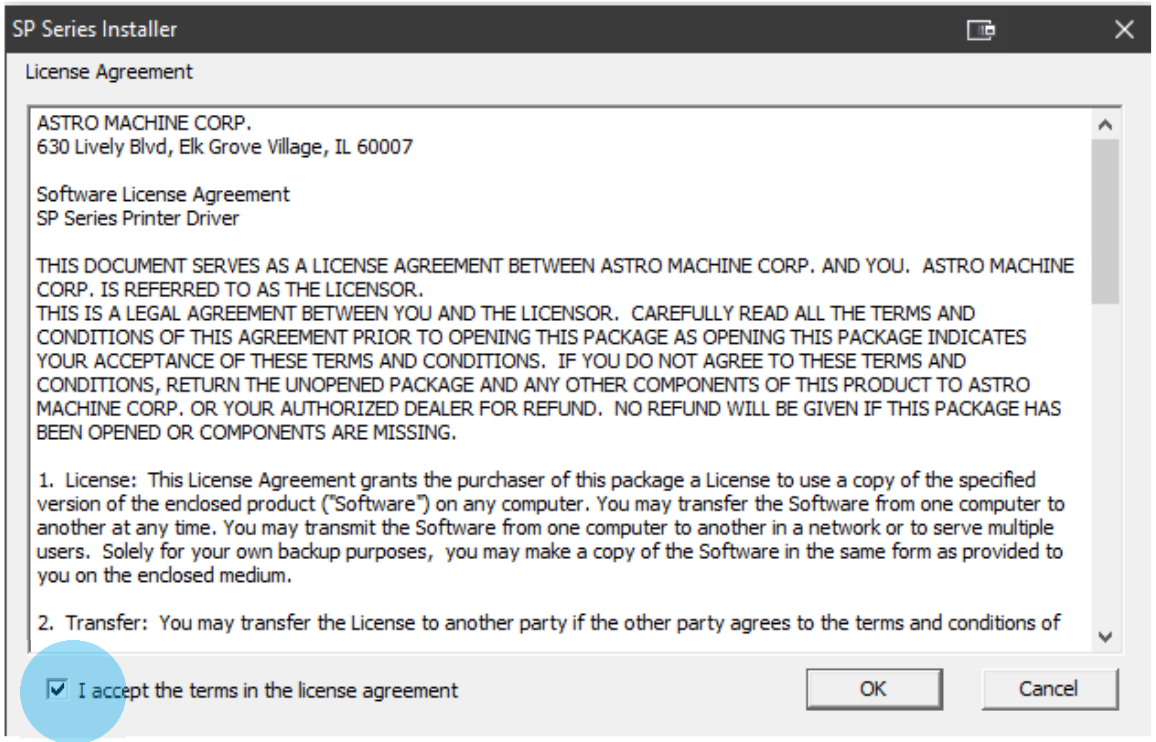
Install over USB Connection

1. Ensure that the printer is powered on.
2. Double-click **WinSetup.exe** in the driver package to launch the installer.
3. Allow WinSetup.exe to make changes to your device.

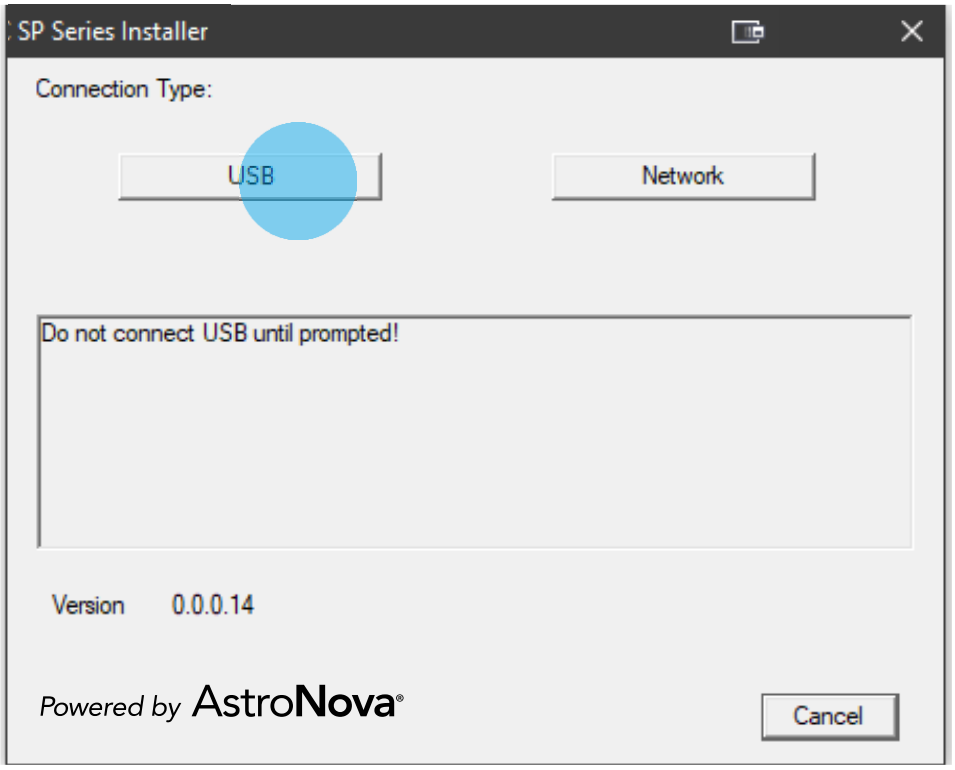
4. Allow amc_setup64.exe to have access to domain networks.



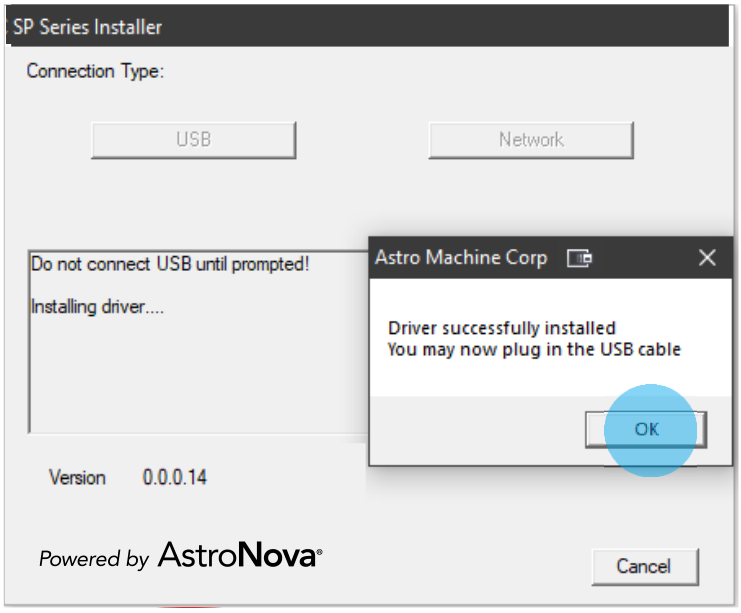
5. Read the license agreement and accept the terms and conditions.



6. Select the **USB Connection Type**. Driver Installation now begins.



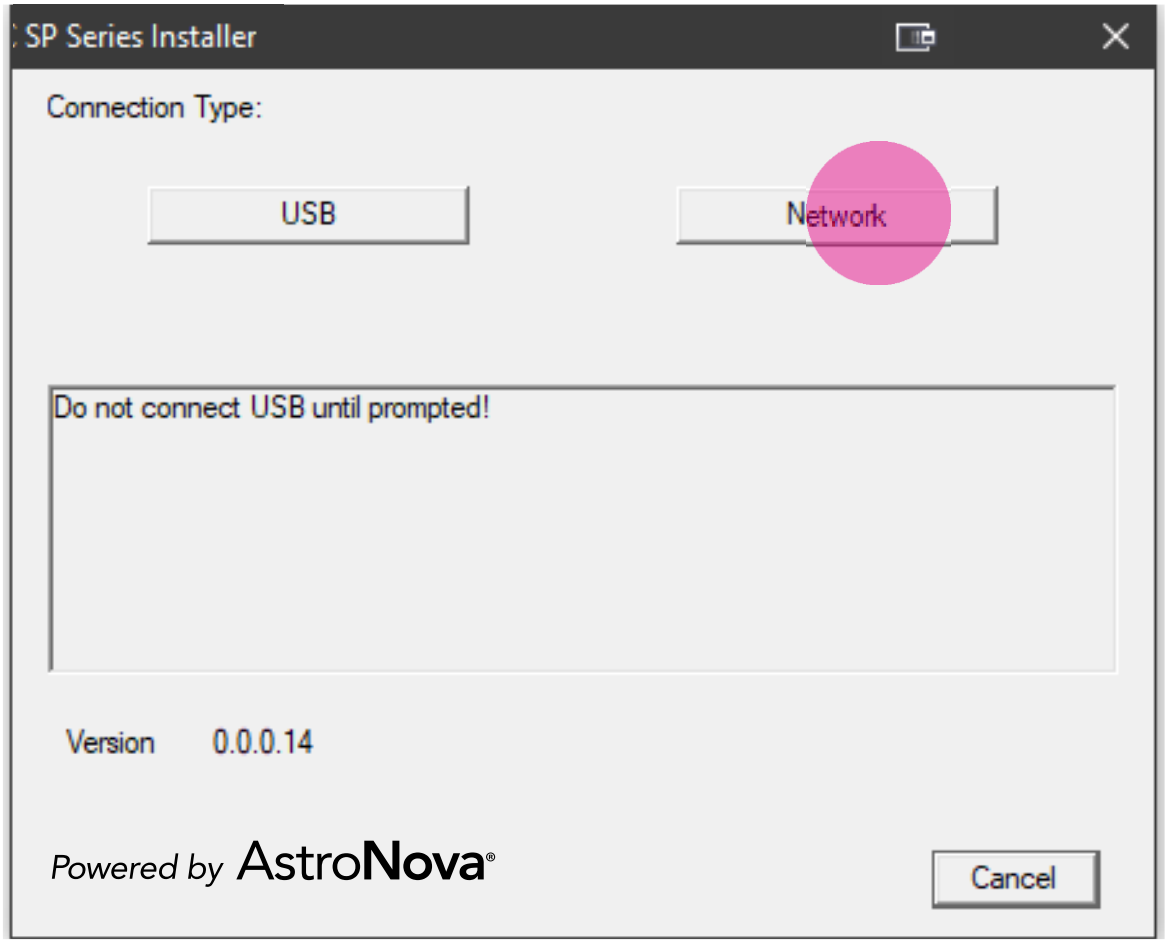
7. When the printer driver has been successfully installed on your PC, you will be prompted to plug the USB Cable into the printer.



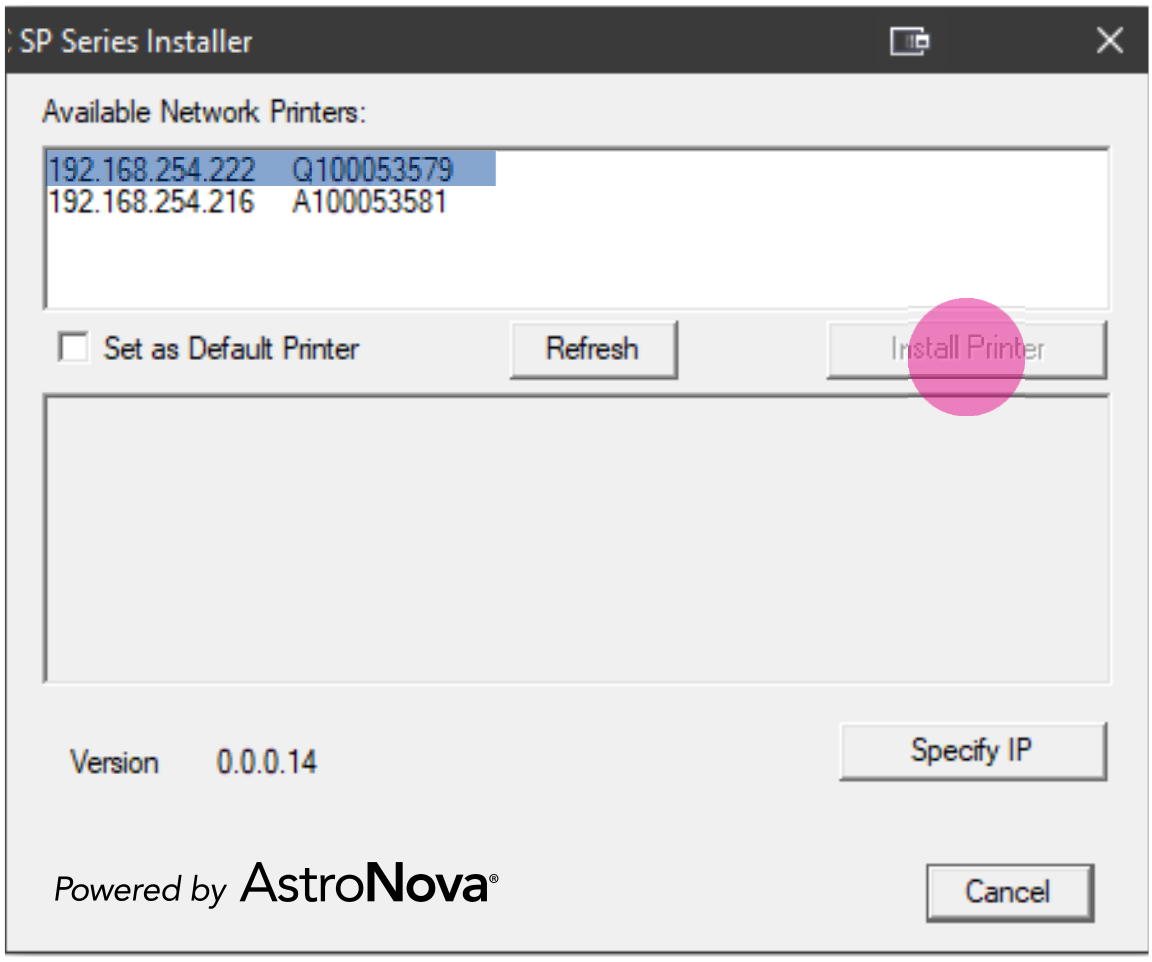
8. Select **Finish**. The installer software closes.
9. Use the supplied **Type B USB Cable** to connect the computer's connection to the available type B USB Port. The PC automatically detects the printer and installs a new printer instance.

Install over Network Connection

1. Ensure that the unit is powered on. Connect the network cabling before proceeding to the next step.
   Important *Do not connect the printer to your PC with the USB Cable at this time. The USB cable will be connected later in the procedure when prompted.*
2. Set an IP address for the unit. There are two options for this as the printer can either use DHCP (default) or have a static IP address assigned. This is configured via the touchscreen interface.
3. Double-click **WinSetup.exe** in the driver package to launch the installer. Note that this requires administrative rights in Windows.
4. Select **the Network Connection** type.

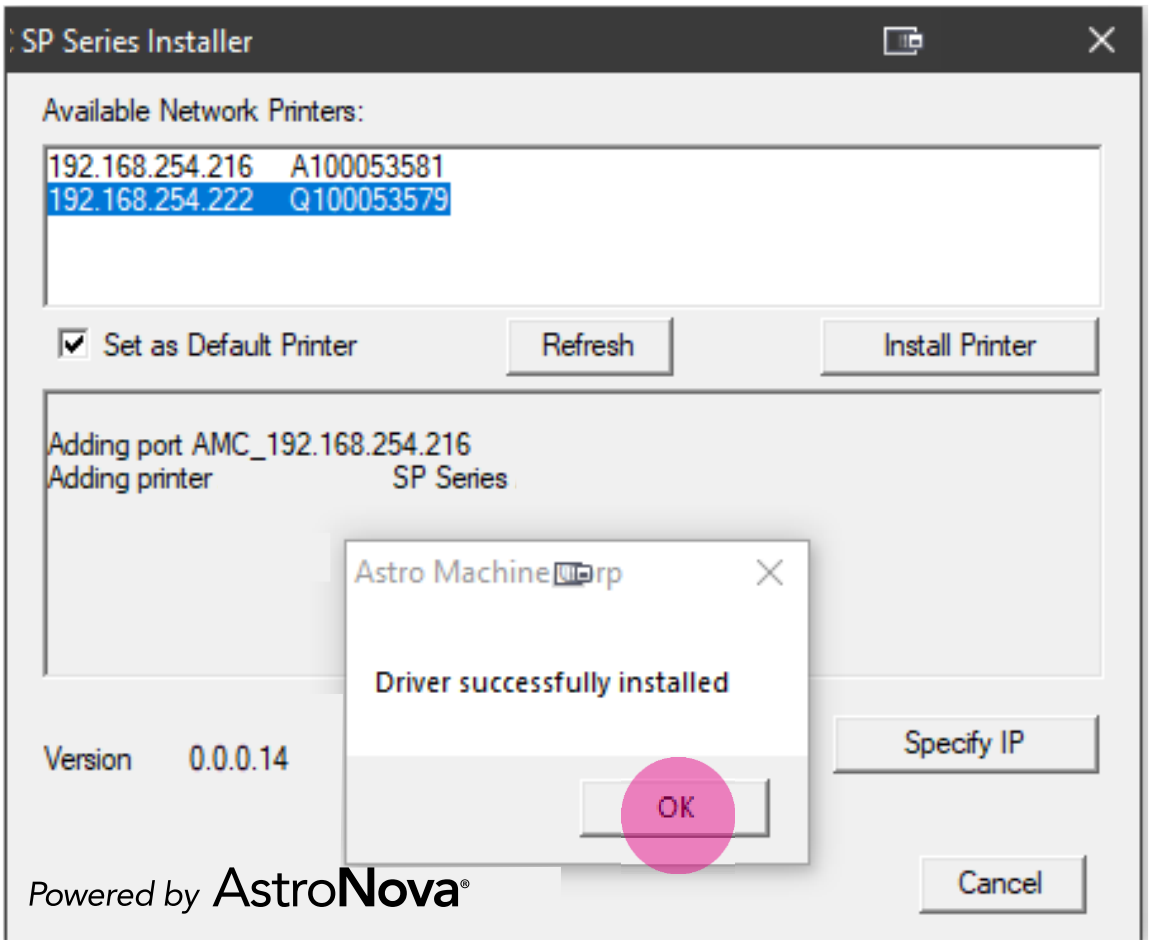


5. A list of printers available on the network is displayed. Select your printer from the list. Check **Set as Default Printer** as you please, then select **Install Printer**.



If your printer is not shown in the list, select refresh. If the printer you want to connect is still not displayed in the list, select **Specify IP** and enter the IP Address for the printer you require. Once it appears in this list on the screen, select it, then select **Install Printer**.

6. The driver will install on the PC and a notification of successful installation will be displayed when installation has completed.



Install Ink Tanks

The printer uses four ink cartridges one for each color: **Black (K), Cyan (C), Magenta (M), and Yellow (Y).** The printer is shipped without the cartridges installed.

Use the following instructions to install each ink cartridge. You will power on the printer after installing the ink cartridges.

Ink cartridges have special handling precautions. Follow these precautions when you work with ink cartridges.

1. Open the **ink cartridge door** (below the touchscreen on the printer clamshell).

2. Remove the new ink cartridge from its packaging. The end of the cartridge with the nozzles is inserted into the appropriate slot, as indicated by the color and name on the other end of the cartridge.

3. Slide each ink cartridge into the appropriate slot, pushing it to connect the nozzles into the print engine.
   ***Caution**: Do not touch the ink cartridge nozzles or copper contacts. Doing so will result in clogs, ink failure, and bad electrical connections. Do not remove the copper strips – they are required electrical contacts.*

4. Close the ink door.
5. Turn on the Main Power Switch, then press and release the Soft-Power Button. You will hear the printer initializing. This process will take approximately two minutes.
6. When the printer is fully powered on, the touchscreen will be ready for use. Check the wiper and the ink levels on the left side of the touchscreen to ensure that all have been installed correctly.

   ***Note:** If an ink level is not displayed, the ink cartridge might not be installed properly. If this happens reinstall the ink cartridge and be sure it is fully clipped into the cradle.*

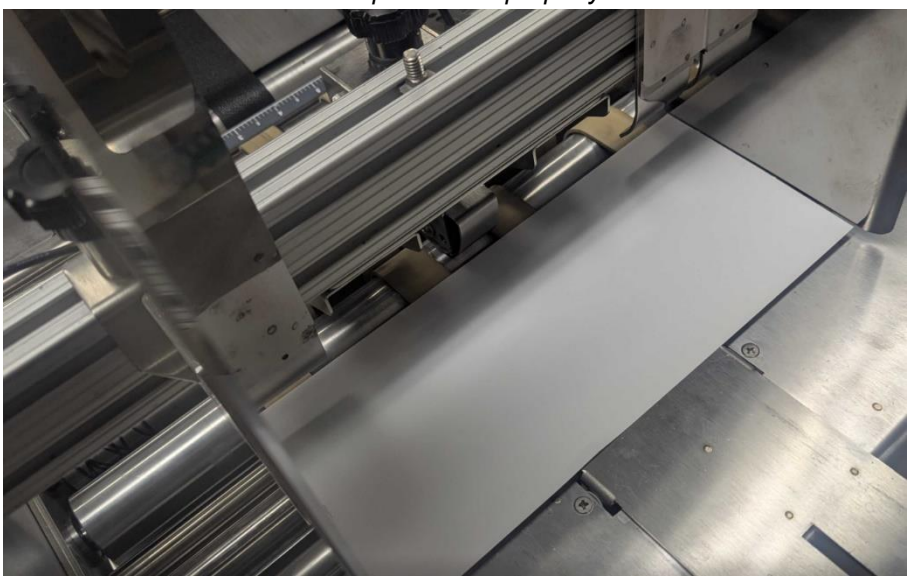
Set Up the Feed

Check the positioning of the feeder for the job, and align it with the registration table, adjusting rollers as required. Load the media into the feeder.

1. Lift the separator by turning the **separator knob** clockwise.

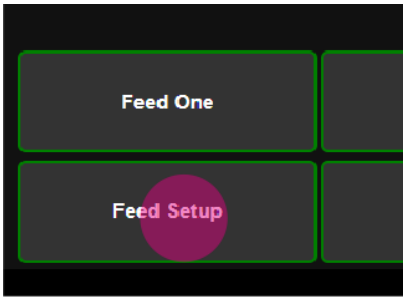
2. Insert one piece of media in the middle of the hopper. Make sure that the media is centered.
3. Bring the side guides to the edge of the media without interrupting media movement.

   Note: *Be sure to leave a small space between the media and side guides to allow the media stack to dop and feed properly.*

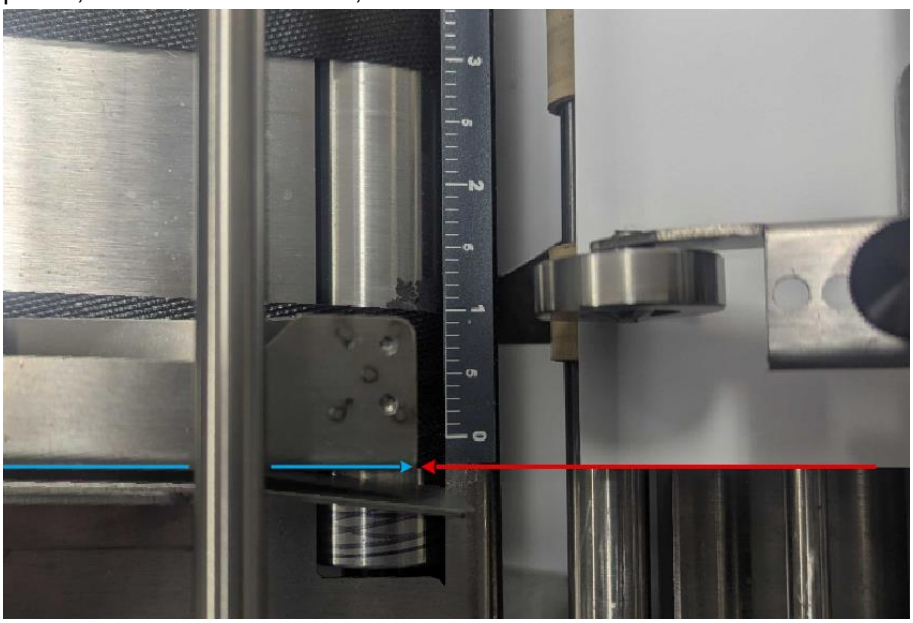


4. Secure side guides in position.

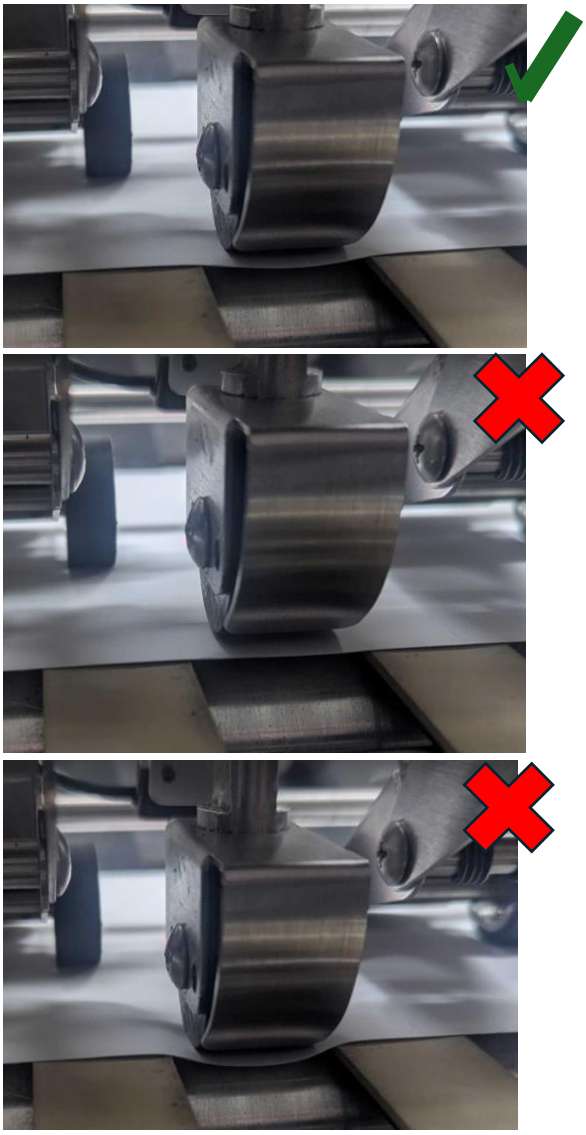
5. Press the **Feeder Setup** button from the printer UI. The media will move forward.



6. Loosen the red thumb screw on the Glide Riser Stand
7. Slide the Feeder to align the edge of the media with the Registration Rail in the printer, as shown below. Then, secure the red thumb screw.

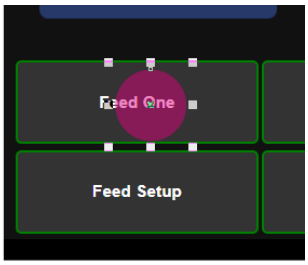


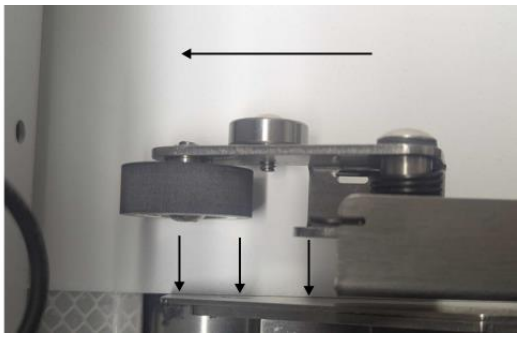
8. Adjust the separator by lowering it down until it makes contact with the media. Continue lowering the separator another half turn from this point.



9. Adjust the Media Thickness and Registration Roller Height. See “Adjust Media Thickness

   Press **Feed One** and watch the media as it exits the registration area and enters the print area.





Adjust Media Thickness

Based on the media thickness, check and adjust (if necessary, the media thickness setting in the touchscreen / toolbox on the Media Setup Page.

1. From the Touchscreen, select **Media Setup** from the dropdown menu.

2. Use the dial to adjust **Media Thickness** to your desired media.

Ignore Exit Sensor

In cases that one wishes to turn off the exit sensor, complete the following steps:

1. From the touchscreen, select **Media Setup** from the dropdown menu.

2. Select the **Exit Sensor Checkbox** to enable the Exit Sensor. Uncheck the Exit Sensor Checkbox to disable (ignore) the Exit Sensor

Chapter 3: Operating Printer

Printer Driver Properties

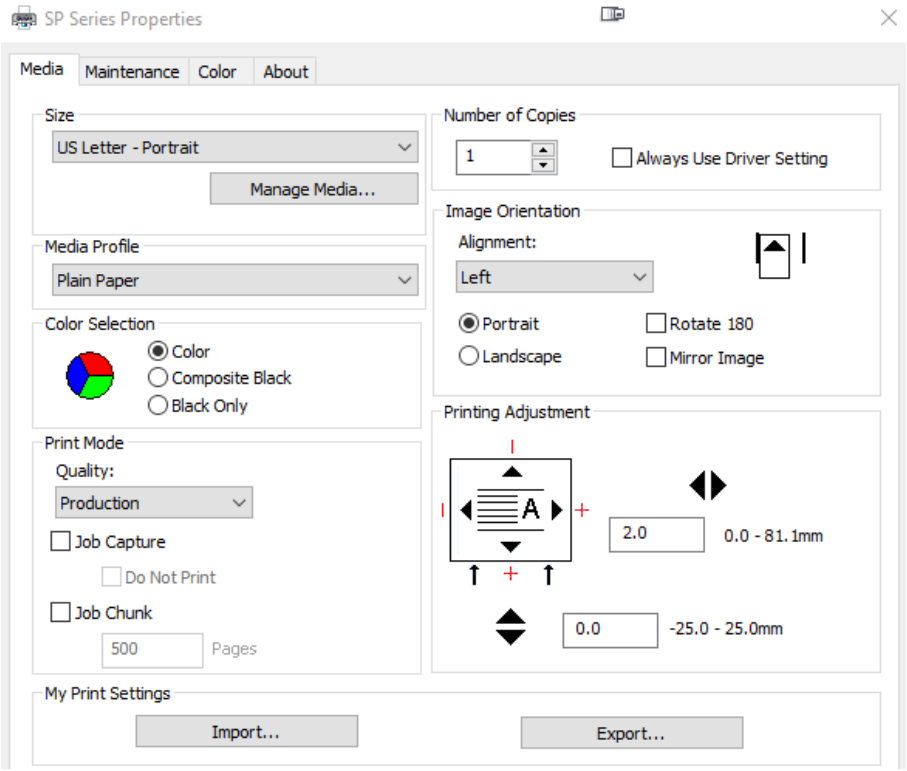
The following section outlines how to operate the printer via the Printer Driver on your PC.

Depending on the format of the print job, choose an appropriate application that can print via the standard Windows driver. For example, any PDF viewer will be able to print a PDF file using the provided printer driver. Within the application's print interface, ensure that the installed AddressRight® 400 printer is selected.

Once this is done, select Printer Preferences to set up the printer to match the required settings and loaded media. The available settings are arranged into three tabs: Media, Maintenance, and Color.

Media Tab

The following fields are available on the **Media** tab.

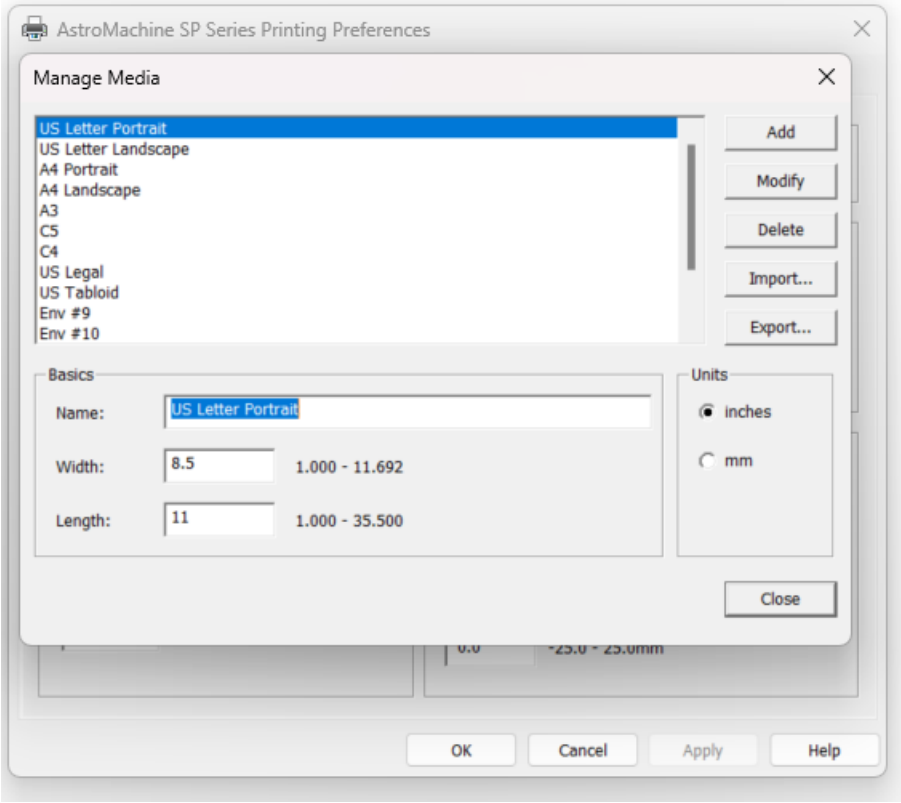


Size

Select the size of media from the dropdown list to match the physically loaded media. A predefined list of standard media is preloaded during driver installation.

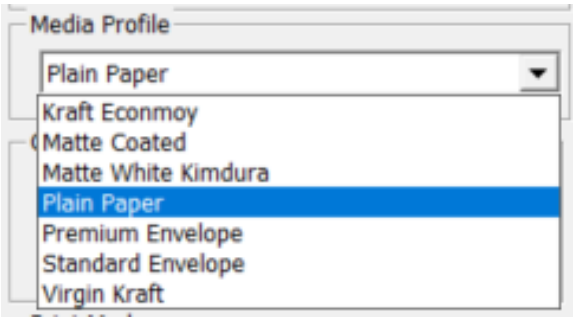
Note: *Most media can be physically loaded either lengthways / portrait or perpendicular / landscape to the direction of printing. This must be specified for the application so it understands how the data should be arranged on the page.*

The predefined list includes both options for media which can be loaded either way. When you change the orientation, you can see the icon in the **Image Orientation** section change to match the physical loading of the media. If the required media is not on the list, then the user can use the **Manage Media** button to define a custom media size.

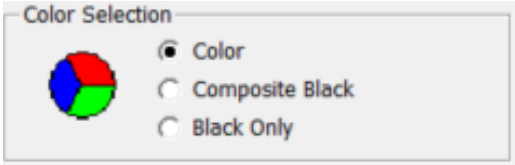


Media Profile

Select the type of media for the job from the dropdown list of available profiles. These include Plain Paper, Kraft Economy, Matte Coated, Coated Envelope, Premium Envelope, Standard Envelope, and Virgin Kraft



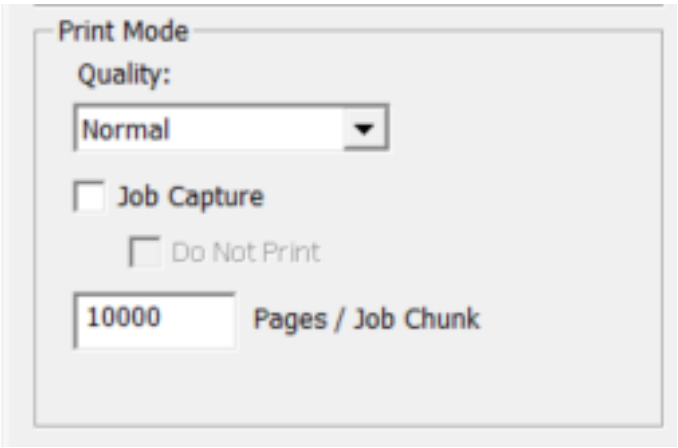
Color Selection



Select the desired color mode:

- **Color**: Uses all available CMYK
- **Composite Black**: Uses CMYK ink to print in grayscale black and white.
- **Black Only**: Uses only black (K) ink.

Print Mode



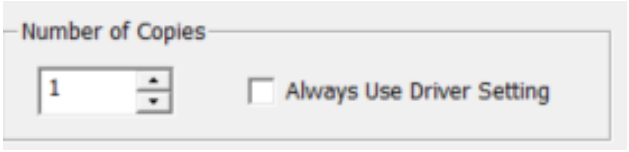
Quality: Select the required print job resolution which also determines the printing speed.

- **Normal**: Select **Normal** to input images of 300dpi that will print at a nominal 18 IPS.
- **Best:** Select **Best** to input images of 600dpi that will print at a nominal 9 IPS

Note: *All printing is at 1200dpi with the input resolution scaled up within the printer. Lowering the job resolution reduces the amount of data that needs to be processed, which allows for faster printing.*

- **Job Capture / Do Not Print**: For jobs that are likely to be printed again in the future, select **Job Capture** to save the file to the printer's library. Check the **Do Not Print** box if you wish to print the job later. Once captured, the jobs can be accessed via the touchscreen's **Stored Jobs** interface.
- **Job Chunk / Pages**: For large jobs, instead of waiting for the whole job to load, you can break down the job into chunks of fewer pages that will start printing immediately. Check this box and enter the number of pages to include in each chunk. The default is 500 pages.

Number of Copies



This option is provided for legacy applications that do not have the ability to define the number of copies. It can also be used to override the setting from applications that can provide this value.

If needed, enter the number of pages to be printed for this job. Select the **Always Use Driver Setting** checkbox if you need to override the copies provided by an application.

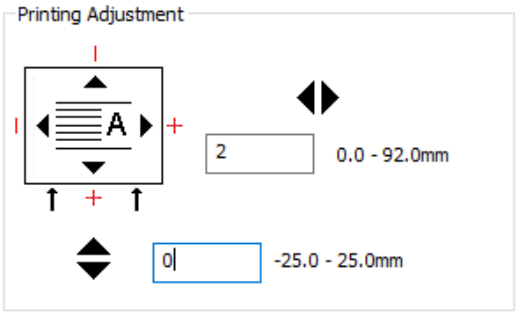
Image Orientation

- **Alignment**: This setting changes the alignment of the image across the print width. By default, it is set to **Left** to match the left alignment of the registration table**. Center** and **Right** alignment can also be used for specialized printer configurations.
- **Portrait / Landscape**: This setting is provided for legacy applications that rely on the printer to define how the image should be oriented on the page. Most modern applications will either ignore this setting or use it as initial guidance only.
- **Rotate 180**: This setting tells the driver to rotate the image 180 degrees for printing. Switches from top first to bottom first printing or vice versa.
- **Mirror Image**: This setting mirrors the image in the direction of printing.

Printing Adjustment

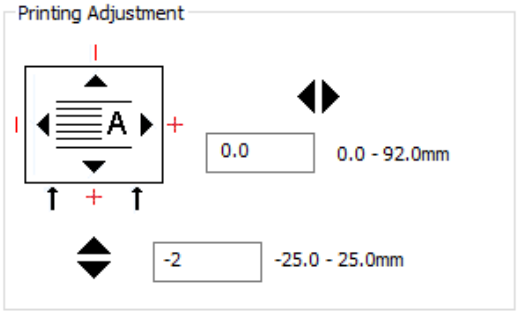
Use the **width and length alignment** setting to achieve fine adjustment of where the image starts printing in both the direction of printing and across the print width. The arrows indicate which axis is being changed with the icon showing the printing direction for reference.

The adjustment range across the print width is automatically set according to the selected alignment and media size. If not valid, the user will be prompted to correct when leaving the tab. The default width adjustment is 2.0mm to allow for full-bleed printing configuration.



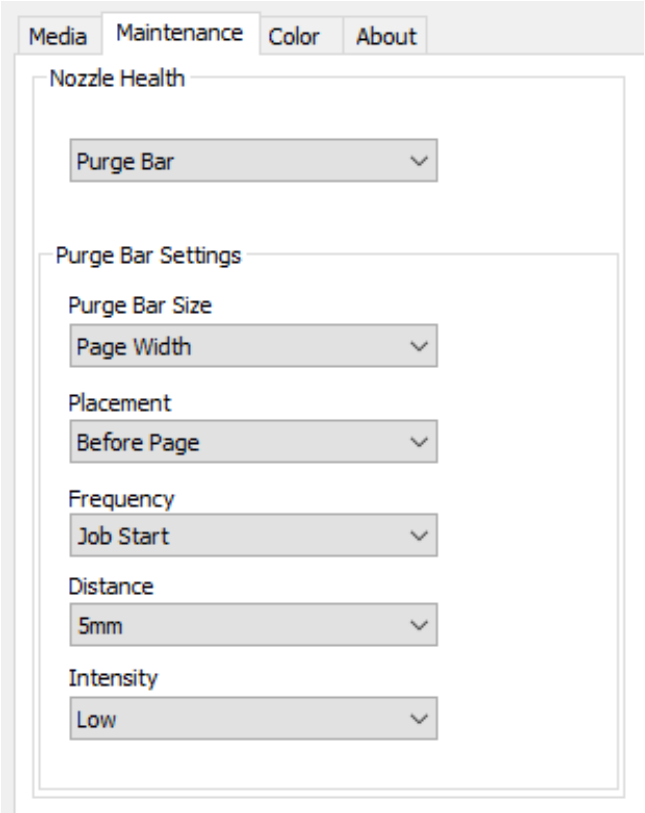
If the application is configured to select the media size and ignores the media size configured in the driver, then any invalid offset will be adjusted to ensure that the printing region is valid.

For full bleed, create a document that is larger than physical page you are printing on. Reposition image as shown below:



Maintenance Tab

The **Maintenance** Tab lets you define the printhead maintenance activities for the print job, as required by the graphics in the job.



Nozzle Health

This option allows the user to select between:

- **None:** No additional printhead maintenance will be performed during the job.
- **Purge Bar:** Nozzles are ejected in a line (bar) either before or after the page. See below for further details.
- **Keep Nozzles Alive:** Nozzles are kept healthy by printing a very light random pattern in the background of the image.

NOTE: Activation of any Nozzle health options may affect print rate.

Purge Bar Settings

The Purge Bar is defined by a number of parameters which define the intensity, frequency, and location of the purge. These are provided to allow the user to optimize the purge bar to the job, environment, and media being used.

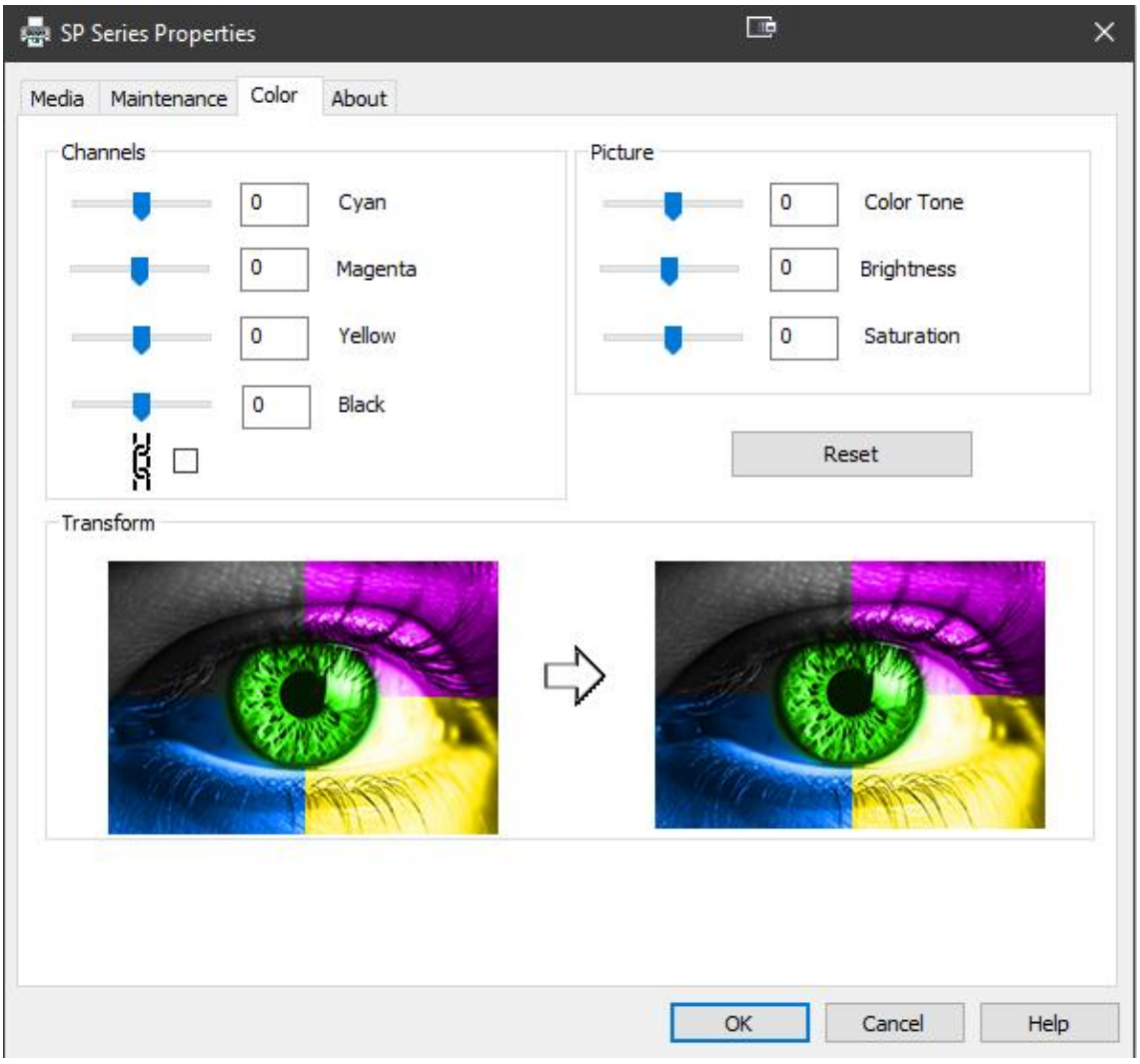
- **Purge Bar Size:** This parameter allows the user to define whether the purge bar should exercise all nozzles across the printhead, or just those being used by the current job print width. **Full Width** creates a full print width job resulting in longer processing times and potentially slower printing rates.
- **Placement:** The purge can occur before or after printing a page. In situations such as thick media, it may be advantageous to purge after the page to avoid any ink residue from the purge (aerosol) ending up on the media.
- **Frequency:** Frequency defines how often, in terms of page count, the purge bar should be printed. It may be required only on the first page of a job or periodically after a given page count.
- **Distance:** This parameter defines how far before or after the page the purge bar should be printed. In cases where aerosol may end up on the media, the distance may want to be greater. Note that adding the purge bar increases the page size, leading to an overall slower rate of printing.

My Print Settings

- **Export**: Select this button to save the current printer settings to a user-named file. This allows common settings to be saved so that they can be easily restored for other print jobs. It allows settings to be saved so that they can be retained after driver upgrades and transferred to other PCs.
- **Import**: Select this button to load a preset settings file saved using the Export functionality.

Color Tab

The **Color Tab** lets you modify the ink color channels and the picture values by using slider bars.



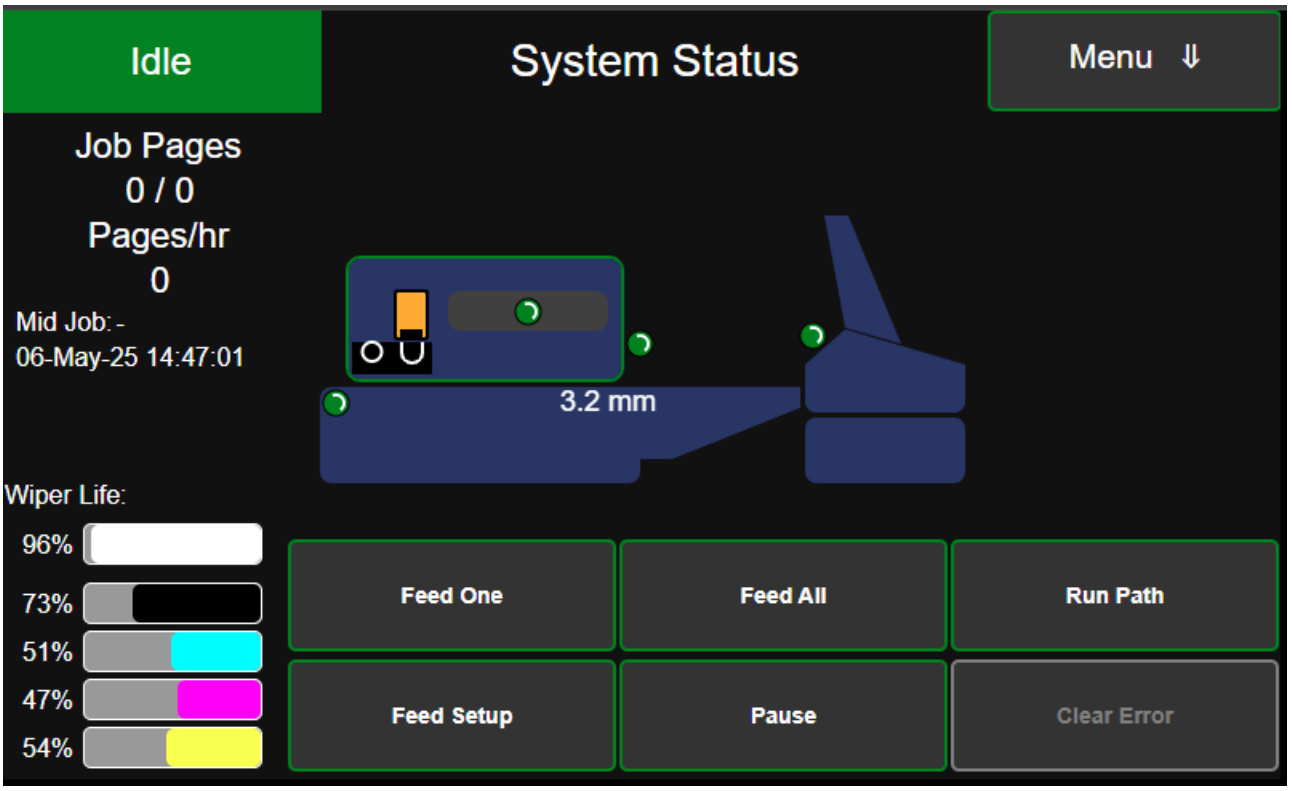
Values can be locked in place by checking the following icon:

A **reset** button sets the values back to 0.

The **Transform** section illustrates the before and after impact of changing the Channels and Picture values.

Using the Printer Touchscreen

After a printer has been set up and loaded to the printer, it can be controlled through the printer's touchscreen.



The printer's touchscreen displays system status information along with a list of menu options for setting up and adjusting the performance of a print job. The touchscreen shows the following:

- **Printer State**:
  - **Green** indicates an operable printer.
  - **Blue** indicates a paused job.
  - **Orange** indicates operational states such as system updates and feed testing.
  - **Red** indicates an issue that requires attention.
- **Job Details**: Shows job details such as the number of pages that have already been printed, the total pages in a print job, the number of pages printed per hour, and the date and time.
- **Printer Diagram**: Shows the state of the printer's sensors, the printhead's position relative to the wiper and print positions, the media space allowance, and the clamshell's position (closed or open).
  Note: *Sensors in green typically mean that the item is idle, clear, or in the correct state for printing. Sensors in red when the printer senses that something is on / open.*
- **Wiper Life and Ink**: Shows the percentage of available wiper life and ink. When these percentages get below the threshold or are missing, the printer status indicator in the upper left corner will change color and indicate that action is required.
- **PH Level 1, PH Level 2**: Select PH Level 1 to maintain the printhead, then PH Level 2, if required,

- **PH Reset**: Select this button to raise and reset the printhead after an error during a job to avoid having to restart the whole job.
- **Printhead Off**: Turn off the printhead when opening the printer to remove media jams. Then, close the printer clamshell and turn it back on after the jam is removed.
- **Advance Wiper**: Select to move the wiper roll on to a clean portion of the roll when the current portion has been used extensively, as seen from the media exit side of the printer.

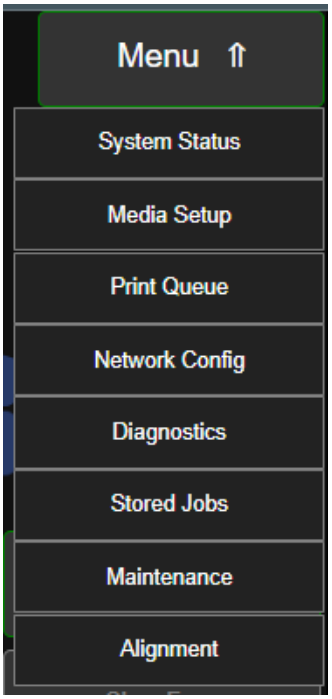
The **System Status** screen includes common commands used to set up the printer and run the job:

- Feed One
- Feed All
- Run Path
- Pause
- Feeder Setup

Buttons that are currently available and functioning are rimmed in **green**. Unavailable buttons (for example, no job is running so it cannot be cancelled) are greyed out. A button rimmed in **red** indicated an issue that needs attention, or a sensor that is currently in use.

Drop-down Menu Options

Options on the **Menu** drop-down in the upper right corner include those explained in the sections below:



System Status

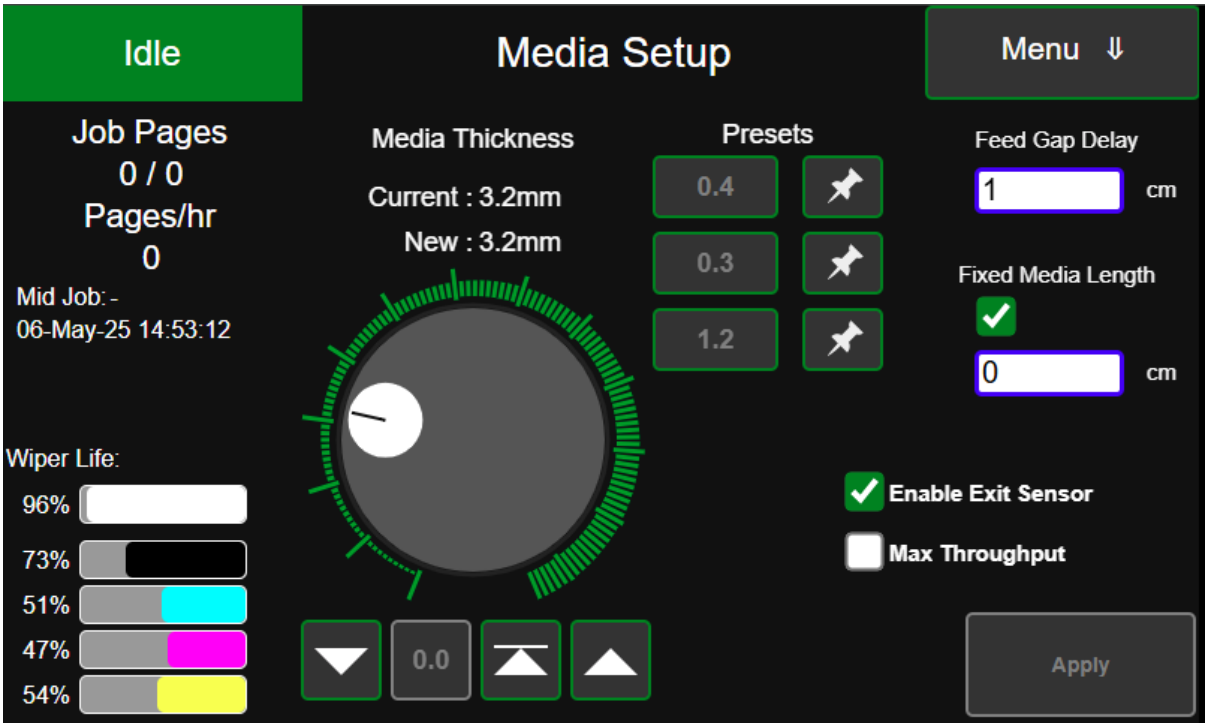
System Status is the default screen (as pictured on the touchscreen above), showing status and details of the current print job in the upper left corner.

Sensors show either **green** (operable) or **red** (error or active).

The four sensors and switches – the Feeder Sensor, Top of Form (TOF Sensor, Clamshell Switch, and Ink Door Switch – appear as **green** in the diagram if they are in idle mode. They turn red when they are interrupted/engaged.

Buttons that are operable for the current state of the printer are highlighted in the lower part of the screen. Others that are not currently operable are dimmed.

Media Setup



The **Media Setup** page on the touchscreen lets you:

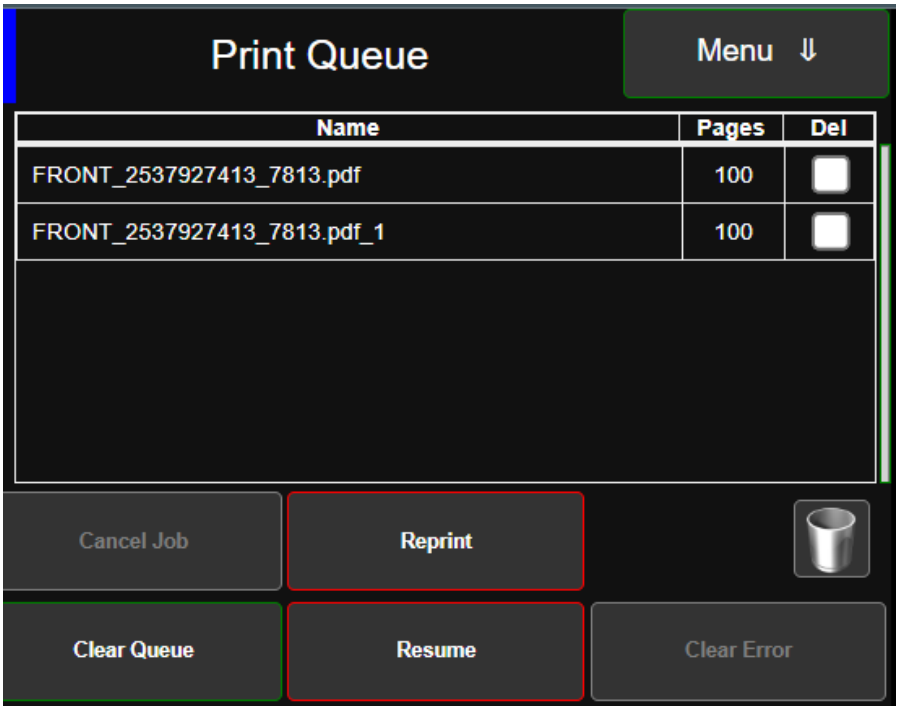
- Define **Media Thickness** by using the rotary dial (raw) and the arrow buttons (fine) to increase or decrease the thickness height of the printhead above the media.
- Set the printhead position to its max height. Use this tool before opening the clamshell.
- See the last printhead height value before the max height button is used.
- Save and access preset values. This allows you to recall your most common printhead height setups.
- Define a **Feed Gap Delay** to adjust the space (gap) between individual pieces of media in the paper path.

  ***Note**: A larger gap between pages may be needed to allow the printer enough time to get the next page ready to print and avoid a skipped page.*
- Define **Fixed Media Length.** Sensors will ignore all triggers within the length of the page. Use this when media is shaped irregularly or has cutouts. Note that the length entered must be exact or longer.

  Note that too large of a value will increase the gap between the pieces and reduce print rate. Too short of a value will reduce the gap and cause errors in the printing sequence.
- Select the **Exit Sensor** checkbox to enable the Exit Sensor. Unselect the checkbox to disable / ignore the Exit Sensor. Use this in cases where the underside of the media is dark in color or oddly shaped so that the entire length does not pass over the sensor.
- Select **Max Throughput** to increase the printing rate. The printer will use its smart algorithm to reduce the gap between pieces to a bare minimum. Note that this is not recommended for feeder-unfriendly media. Enabling Max Throughput will automatically disable the **Feed Gap** option.

Once you have made selections for the media for a print job, select the **Apply** button.

Print Queue

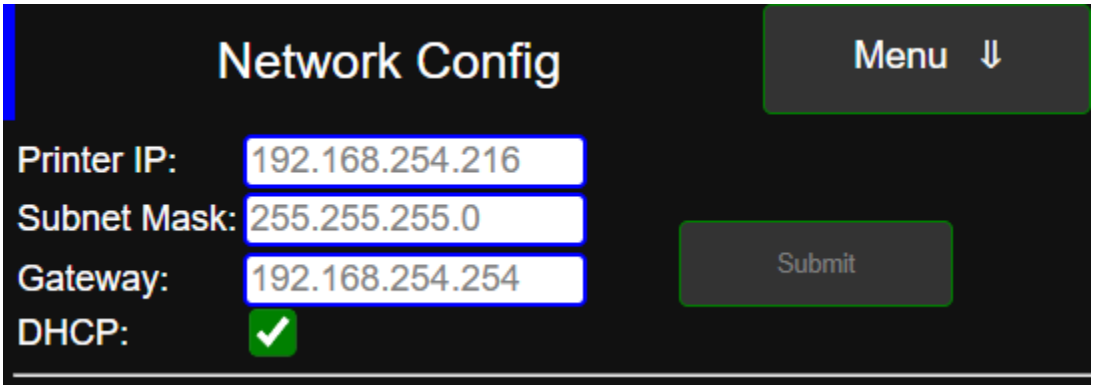


The Print Queue page lists the jobs that are currently in the queue for printing. Use the buttons to:

- Pause a job that is currently running, for example, to adjust media that has gotten out of line and caused an error.
- **Clear Error** when an error has occurred but now has been fixed.
  Tip: *Error conditions can also be cleared by pressing the* ***ERROR*** *status located at the upper left-hand corner of the screen. This is helpful when you are in a screen that does not have the* ***Clear Error*** *button*
- **Clear Queue** to remove any remaining jobs from the print queue.
- **Cancel Job** to stop a job from completing.
- **Reprint** to reprint one or more pages.

Individual jobs can be removed from the queue by checking the **Delete** Box next to the job's name and selecting the following icon:

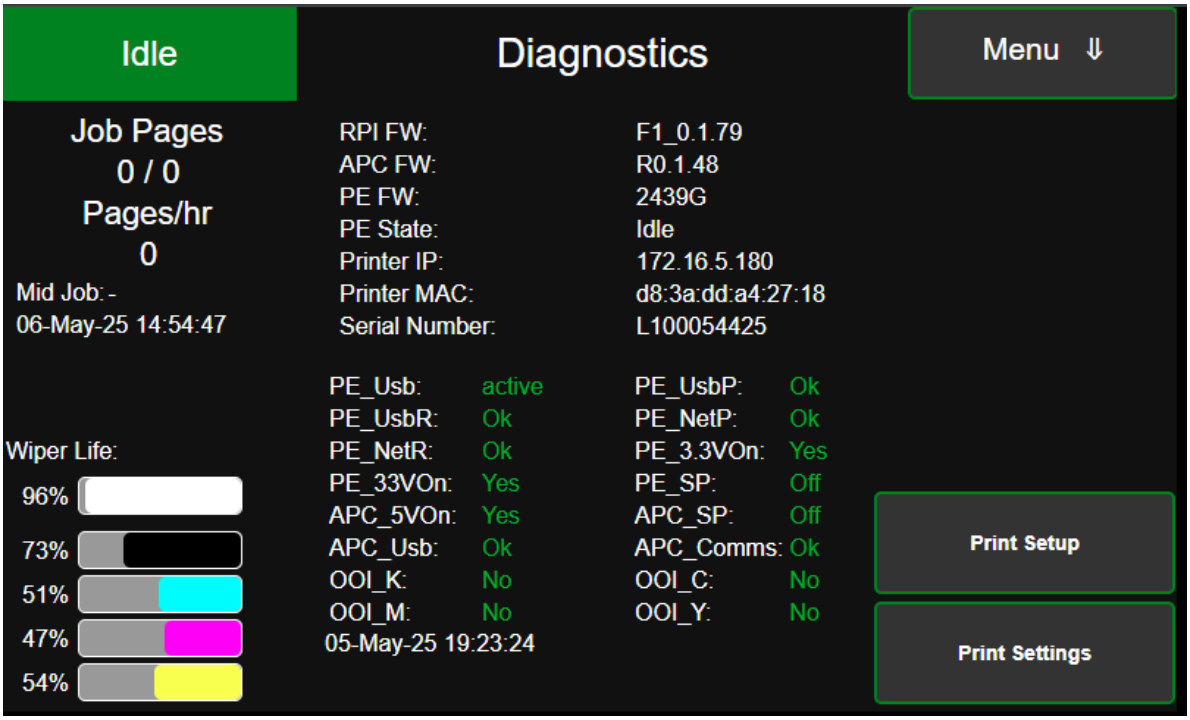
Network Configuration



The **Network Configuration** page shows the IP address of the printer and other details of the Network. This page is only used for reference, but it can be adjusted if the configuration changes.

Diagnostics

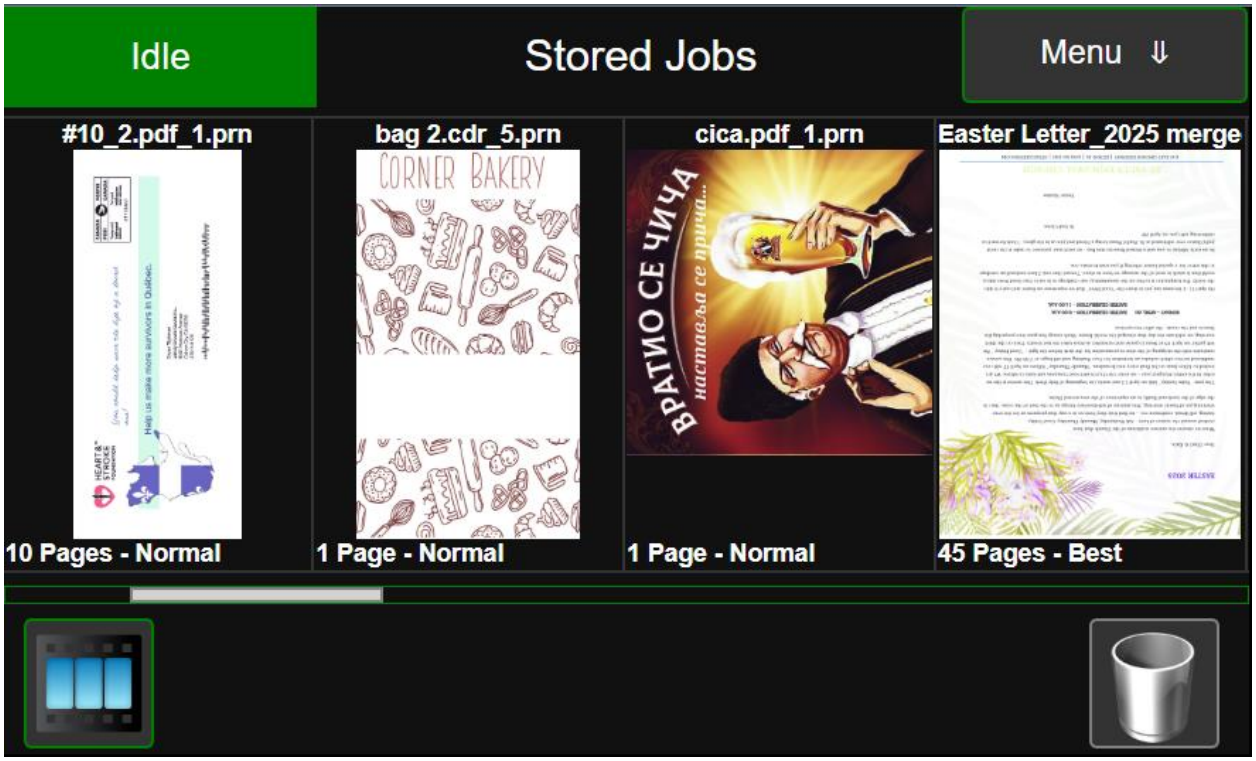
The diagnostics page shows the following:



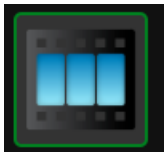
- The **Print Setup** option allows you to print an internal page. This page can be used to align image output and basic printing parameters.
- The **Print Settings** page will print configuration parameters (Toolbox -> View -> System Settings)

Stored Jobs

The **Stored Jobs** option allows you to view jobs you have previously stored on the printer.



The button on the bottom left allows you to view a list of stored jobs.

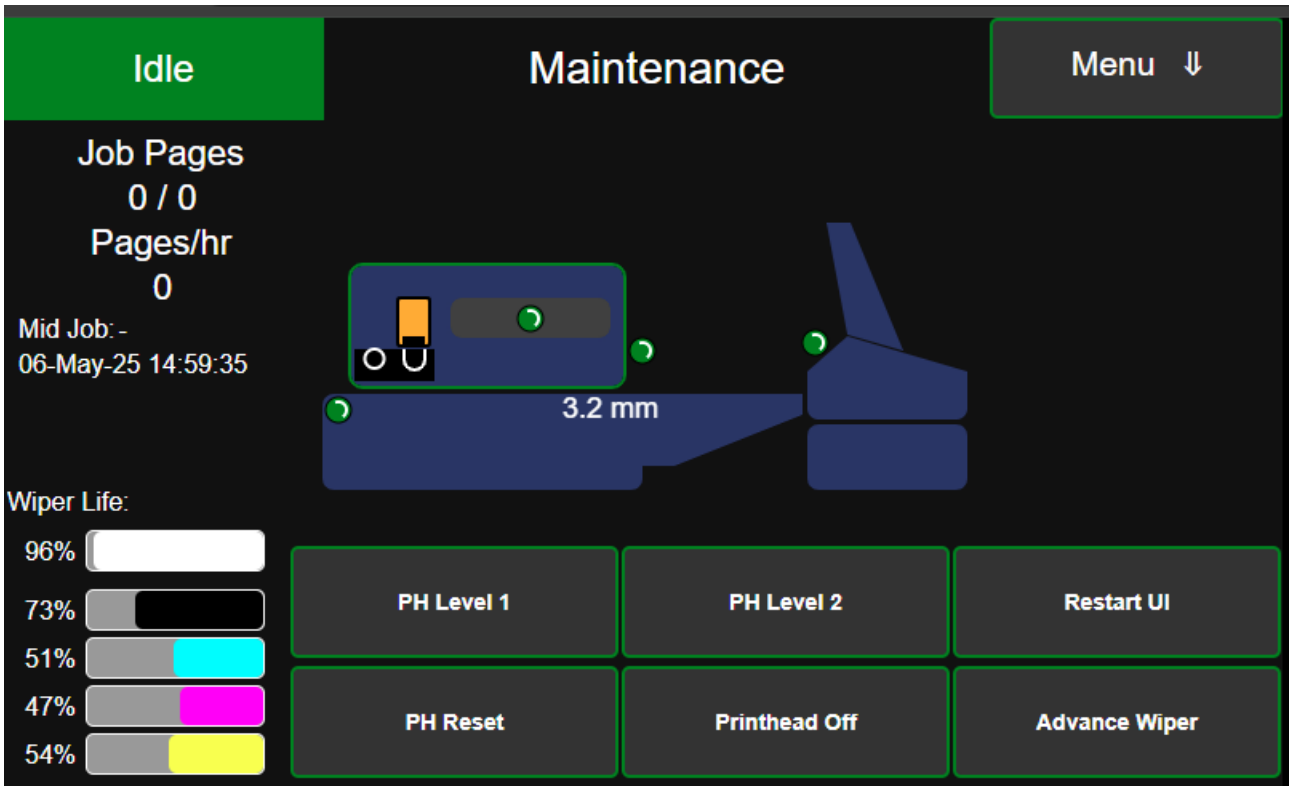


The button in the bottom right corner allows you to delete a selected job.

Selecting a job allows you to see information about a stored job, such as the example below. You may print or delete a stored job from this screen.

Note: *The page orientation in the preview screen shows how media should be loaded into the feeder.*

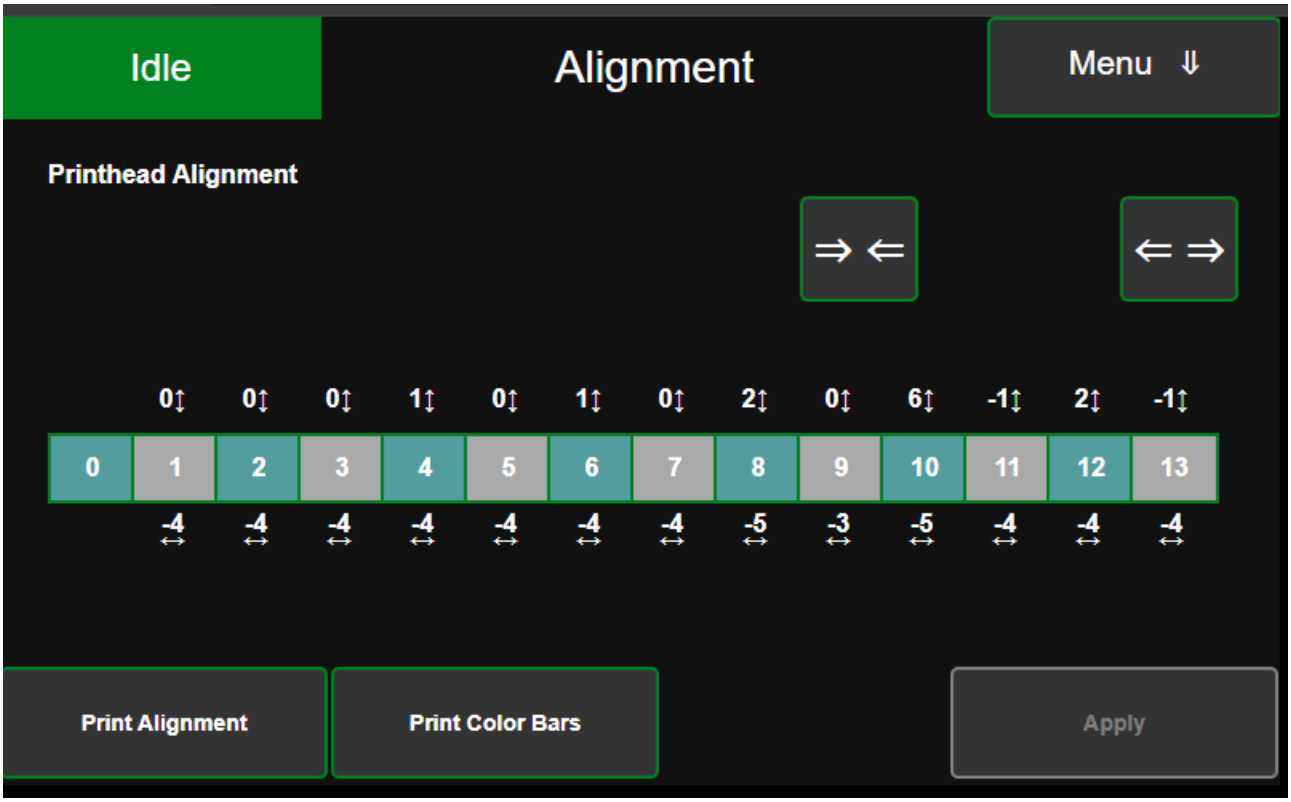
Maintenance



The **Maintenance** page provides selection buttons for maintaining the printhead and wiper.

- **PH Level 1**: The initial maintenance to try when the printer indicates that the printhead needs cleaning. This option provides a basic printhead clean and should be tried before any other maintenance is completed.
- **PH Level 2**: The secondary maintenance to use if PH Level 1 was unsuccessful. This option provides a more intense printhead cleaning.
- **PH Reset**: Rests the printhead after the printer has stopped from an error that has been fixed without having to restart the job.
- **Printhead Off**: Turns the printhead off and on.
- **Advance Wiper**: Moves the maintenance wiper forward 0.24” (6mm). It may require multiple advances to get the clean section of the wiper under the printhead.

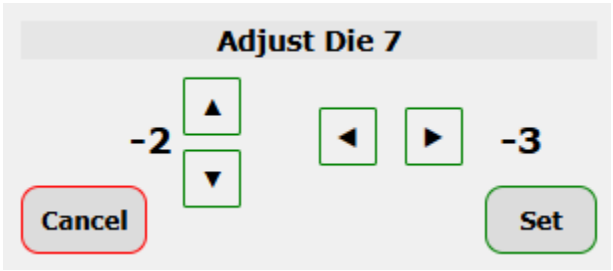
Alignment



The **Alignment** option is used to view and adjust the settings for printhead alignment.

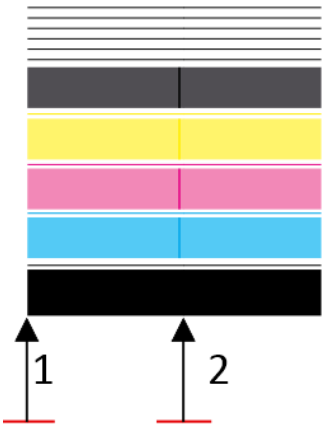
Print a preloaded alignment page to check your alignment. Use A4 or Letter paper in landscape format and ensure that your media thickness is adjusted accordingly.

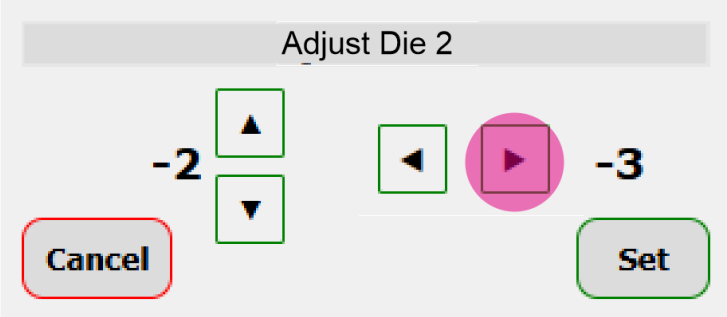
Select a die and use the arrows to adjust vertically and/or horizontally. Select **Set** from the **Adjust Die** screen to make the change to this die. Once all dies are set, select **Apply** to apply changes to the printer engine.



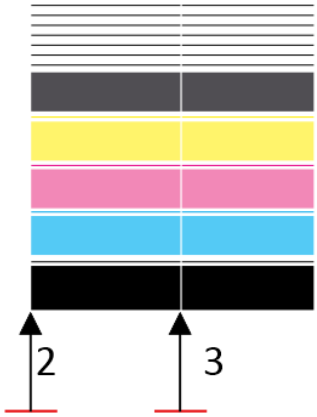
Note: *Always adjust the die that is to the right from the artifact that you are trying to fix. For example:*

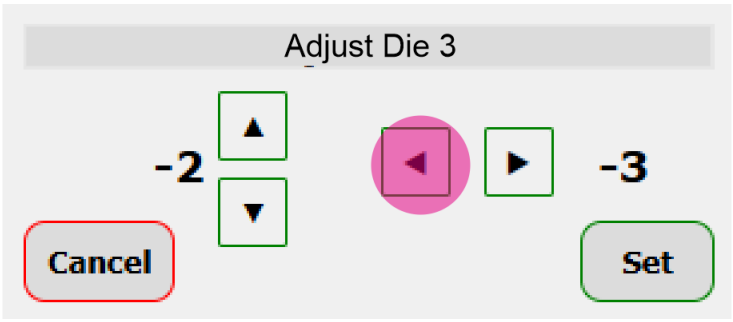
Overlap: Adjust Die #2 using the right arrow



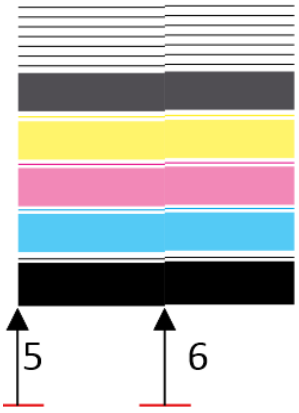


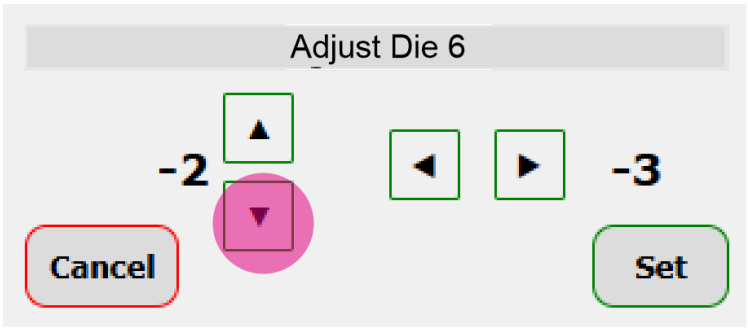
Gap: Adjust Die #3 using the Left Arrow.





Vertical Misalignment: Adjust die #6 using the down arrow

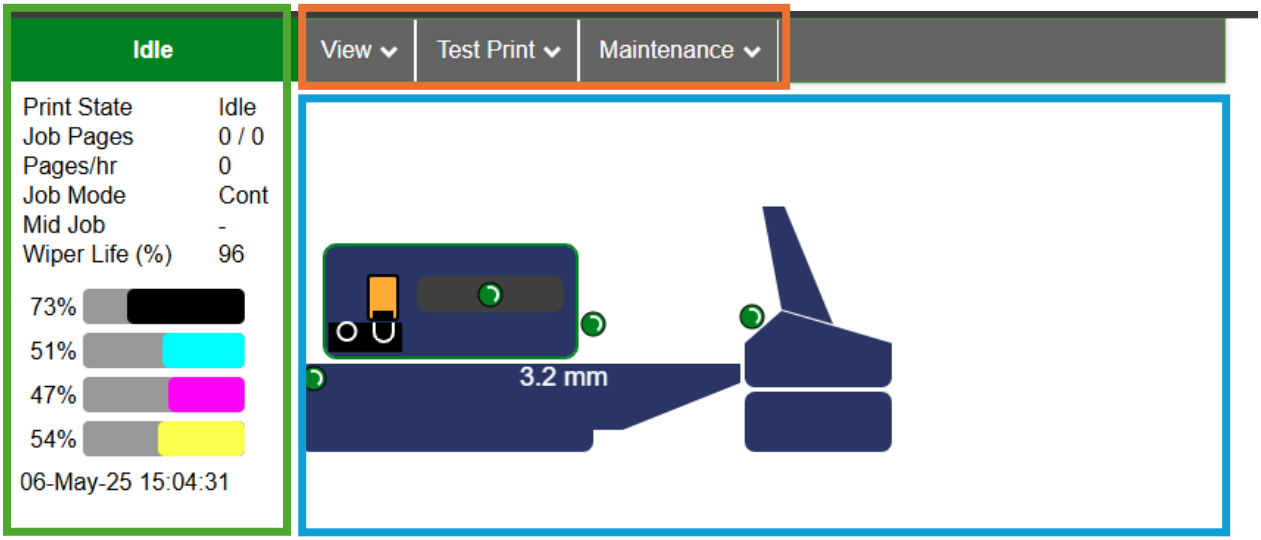


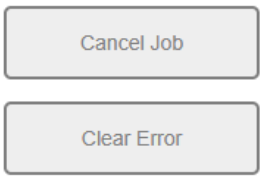


Using the Printer Toolbox

The **Toolbox** on the PC provides an interface for managing the printer using a Web Browser. It is launched using the **Toolbox** option in the **Windows Start Menu**. If only one printer is installed, the user will be taken directly to the printer. If there are multiple printers, then a list of available printers is provided allowing the user to select the desired printer. The Toolbox for that printer is then launched in a new browser tab.

The Toolbox is arranged into three main sections as shown below:



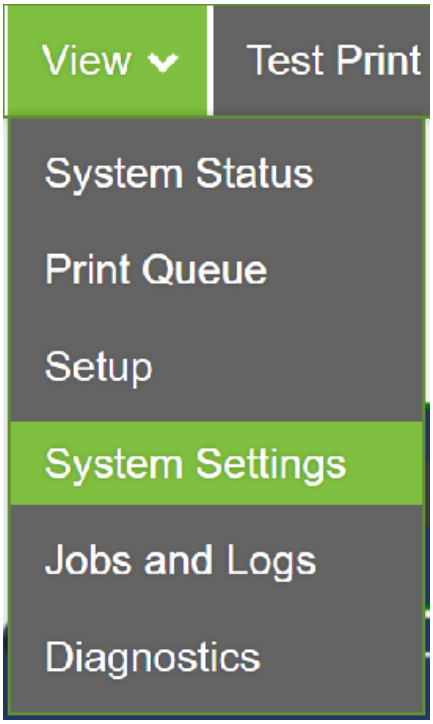


- **Drop-Down Menus**: These menus provide access to a range of functions that are always accessible irrespective of the current view. The main one, being the **View** menu, determines what information is displayed in the current view area.
- **Current View:** This area shows information based on the current View menu selection
- **System Status**: This area shows a high-level current statis of the printer. This includes Ink Tank information as well as any warnings or errors that may occur.

  The **Cancel Jo**b and **Clear Error** buttons are provided so that they are always accessible. The system clock should always be updating, and can be used to determine if the printer has stopped responding. If this occurs, use the touchscreen to determine the state of the printer.

View

The **View** menu lets you see and adjust details of the printer's operation, including **System Status**, **Print Queue**, **Setup**, **System Settings**, **Jobs** and **Logs**, and **Diagnostics**.

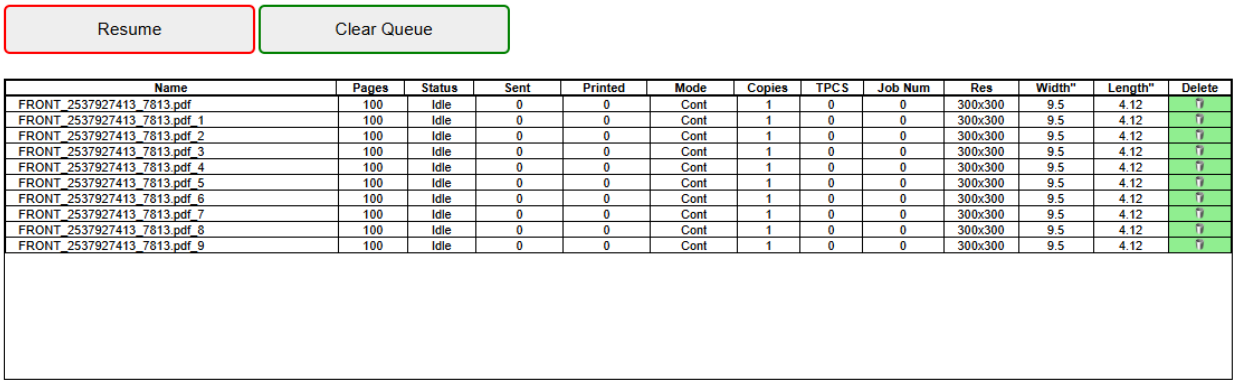


System Status

The **System Status** view in the Toolbox provides a graphic status of the printer and its various sensors and components. Hover-Over functionality is provided to allow users to identify parts plus determine the remaining life of the wiper module.

Print Queue

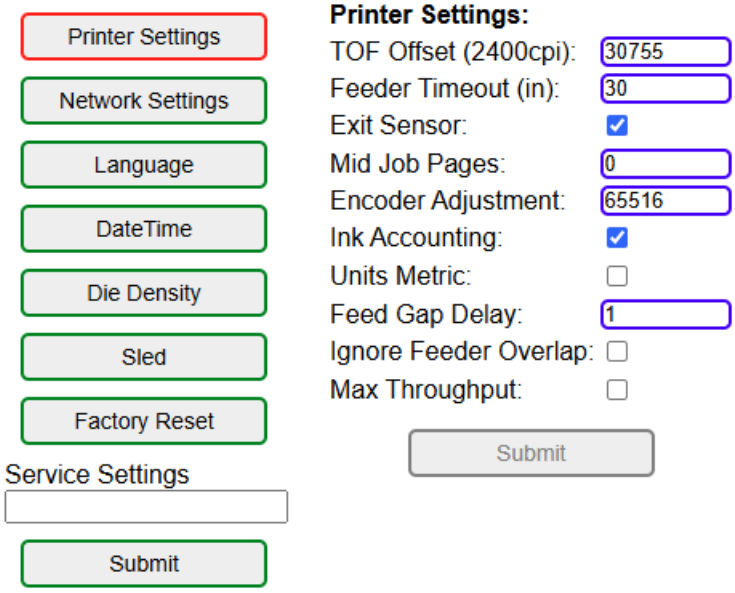
The **Print Queue** shows the current status of the internal print queue. It provides basic functionality for pause control and clearing jobs out of the queue. More extensive control is available on the touch screen.



Setup

Various printer setup details and settings can be accessed on the **Setup** page. As illustrated below, the settings are organized into a variety of sections which are accessed via the Setup Section buttons.

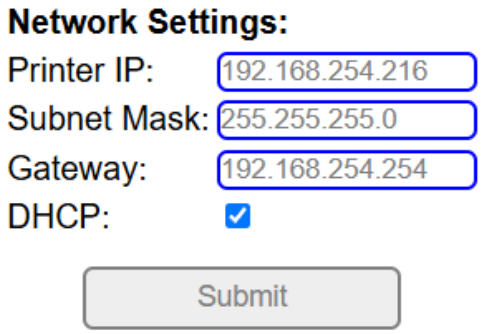
- **Printer Settings**: Allows for the setup of certain printer settings and cost analysis tools.



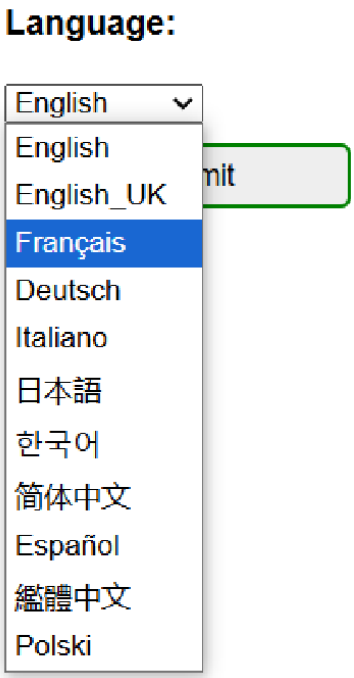
The parameters are defined as follows:

  - **TOF Offset**: Distance (2400 cpi) from the TOF Sensor to the nozzles on the printhead. Increasing the value will make printing start later and/or move down the page.
  - **Exit Sensor**: Determines whether the exit sensor should be used to detect media jams between the TOF and the Exit Sensor. It should be disabled if false

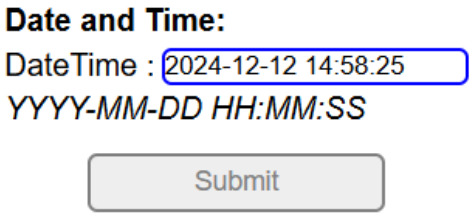
readings occur due to external light interference or if media with pre-printed images on the underside are used.
    - **Mid Job Pages**: The number of pages to print before performing Mid Job Maintenance during printing.
    - **Encoder Adjustment**: A percentage value indicating that the encoder rate should be adjusted slightly to correct any print quality issues detected in the print images. The **Setup** page can be used to detect and help set up the correct value.
    - **Ink Accounting**: Determines whether ink usage data should be collected for each print job. If set, the printer will need to enter an Idle state between jobs, which triggers the printhead to update the current ink usage statistics.
    - **Units Metric**: Determines if the various distance outputs should be displayed with imperial or metric units. This does not affect the Printer Settings which have fixed units.
    - **Feed Gap Delay**: Inserts an additional delay (inches) in the feeding process to increase the gap between fed media.
    - **Ignore Media Overlap**: Determines if the Feeder Overlap Detection should be ignored. The length of the first feed page is compared to subsequent pages to determine if multiple pages have been fed at once. This can be disabled if required.
    - **Max Throughput** – Enables the smart algorithm to minimize the gap between the pieces in transport. This can increase the printing rate to up to 20%. Best results are shown with feeder friendly media printed in Duplicate mode.
- **Network Settings**: Allows for the setup and adjustment of the printer's Network Settings.



- **Language**: Selects the language that the Toolbox and the Touchscreen will display. Click **Submit** after selecting a language from the drop-down menu.



- **DateTime**: Selects the date and time that the Toolbox and Touchscreen will display.



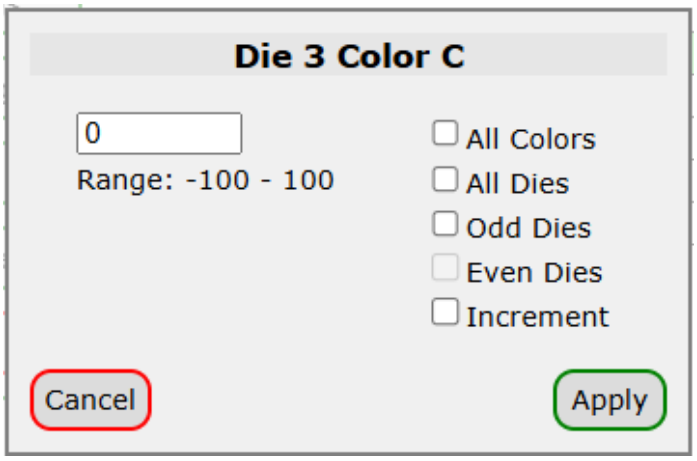
- **Die Density**: Allows modification of the ink droplet size within a die for each ink channel separately, CMYK. This may be used to compensate for worn out dies that may give washed out printouts over time.

  Use the **Alignment** page to check die density. When doing so, use A4 or Letter paper in landscape format**.**

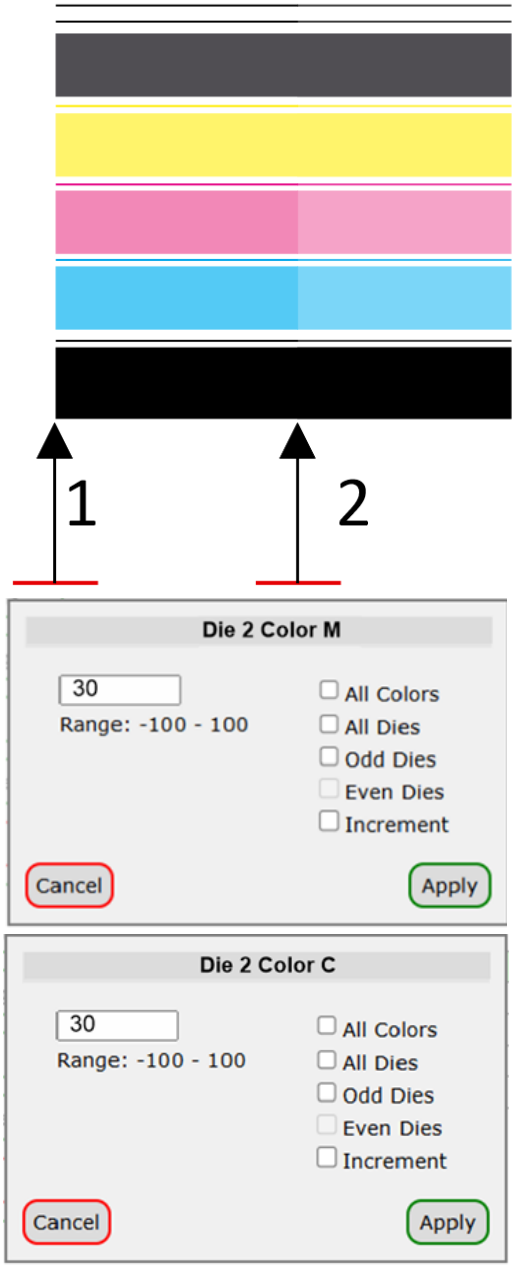
Die Density Adjustment:

Die	0	1	2	3	4	5	6	7	8	9	10	11	12	13
K	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Submit



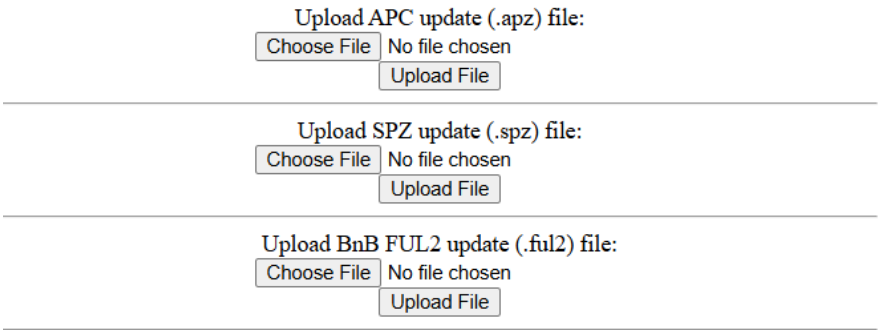
Example:
Increase Dies size for C and M in Die #2 for 30% to even out the printout.

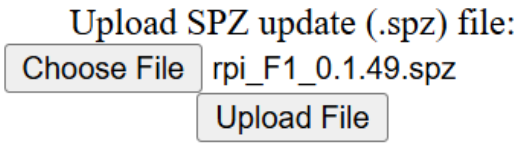


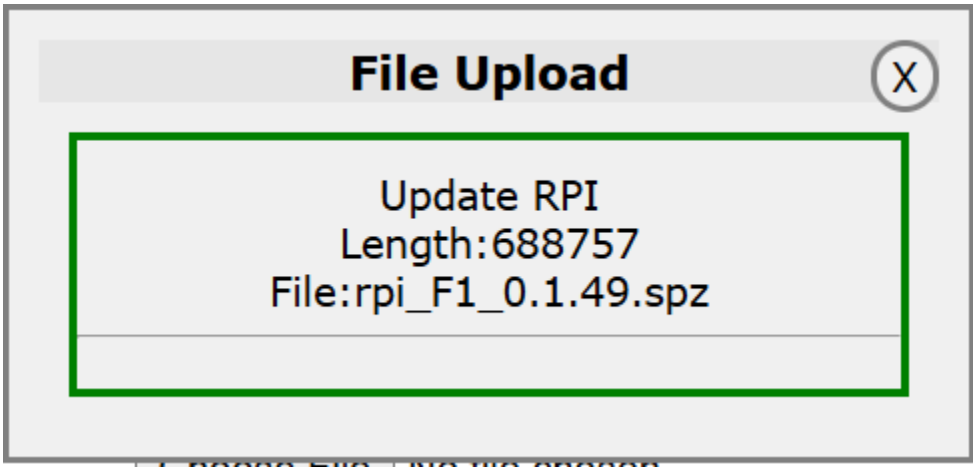
- **Sled**: Allows you to **Eject** and **Install** the **Service Station**. Note that the back cover must be removed before the sled is ejected.
- **Factory Reset**: Resets the printer back to its original factory settings.
- **Service Settings**: Password-protected menu that allows trained service personnel to perform high-level maintenance tasks.
-

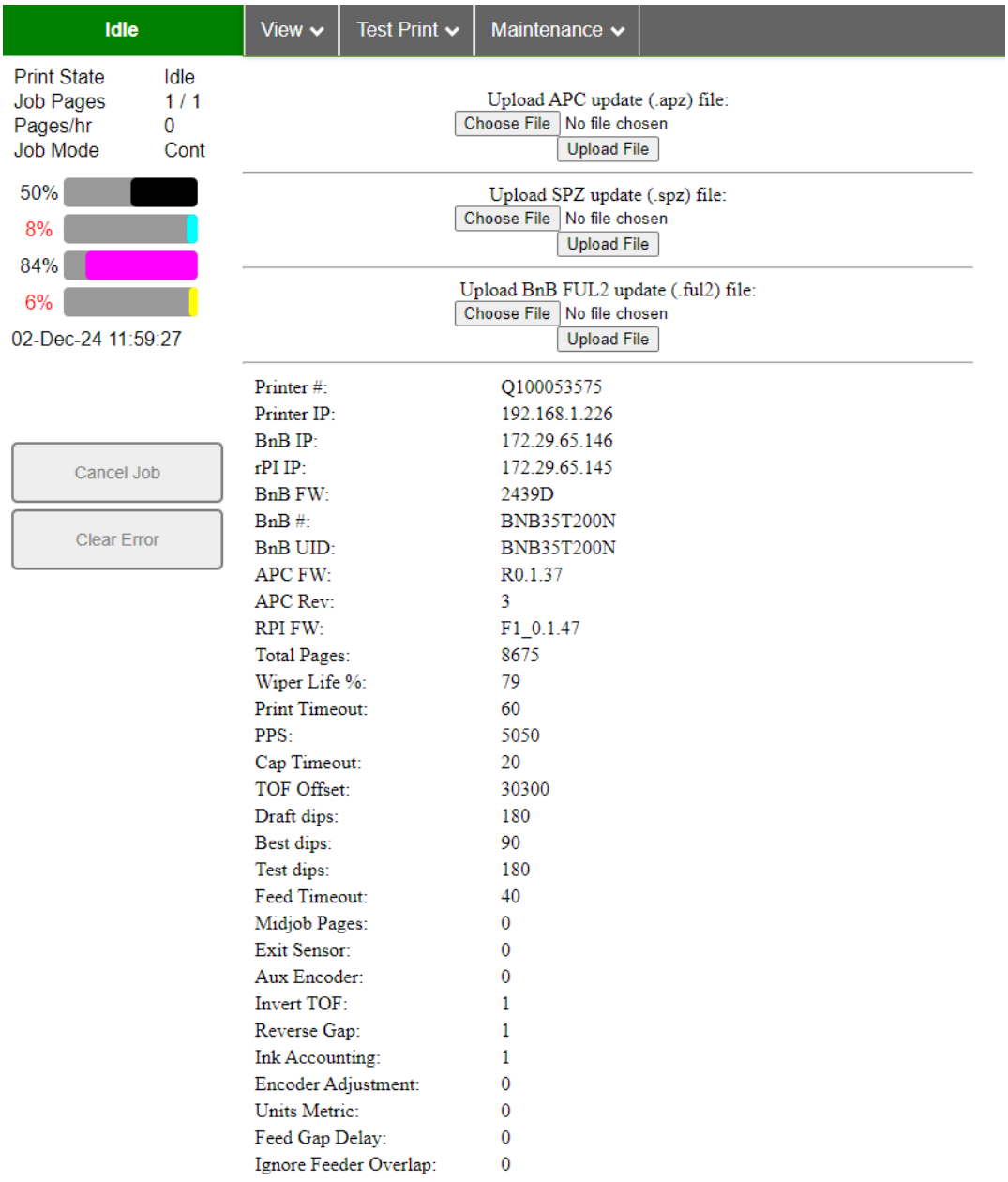
System Settings

The **System Settings** view shows current printer settings. It also provides the interface for uploading any required printer updates. As the printer has various components, different update options are provided depending on which components need updating. If a file copy of the current printer settings is required, then it can be accessed via the **Jobs and Logs** View.



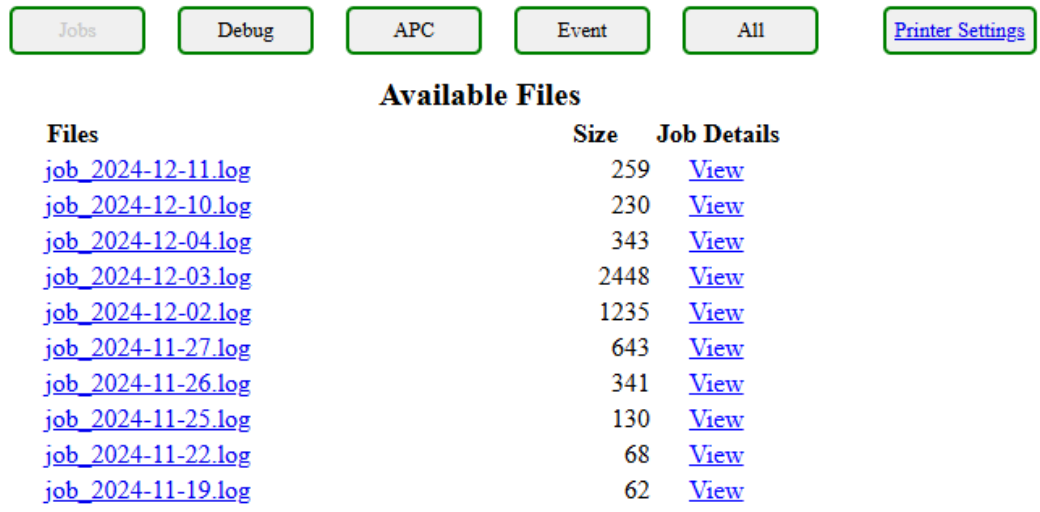




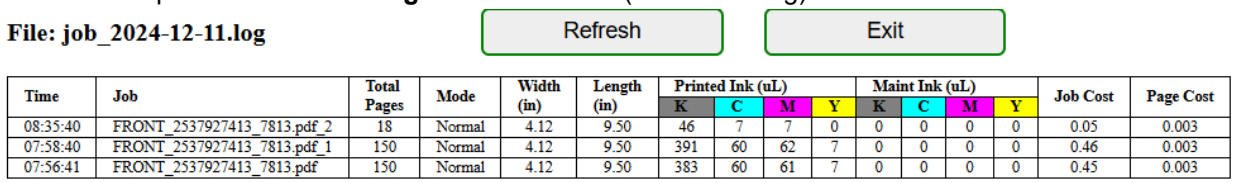

Idle
View
Test Print
Maintenance
Print State Idle
Job Pages 1 / 1
Pages/hr 0
Job Mode Cont
50%
8%
84%
6%
02-Dec-24 11:59:27
Cancel Job
Clear Error
Upload APC update (.apz) file:
Choose File No file chosen
Upload File
Upload SPZ update (.spz) file:
Choose File No file chosen
Upload File
Upload BnB FUL2 update (.ful2) file:
Choose File No file chosen
Upload File
Printer #: Q100053575
Printer IP: 192.168.1.226
BnB IP: 172.29.65.146
rPI IP: 172.29.65.145
BnB FW: 2439D
BnB #: BNB35T200N
BnB UID: BNB35T200N
APC FW: R0.1.37
APC Rev: 3
RPI FW: F1_0.1.47
Total Pages: 8675
Wiper Life %: 79
Print Timeout: 60
PPS: 5050
Cap Timeout: 20
TOF Offset: 30300
Draft dips: 180
Best dips: 90
Test dips: 180
Feed Timeout: 40
Midjob Pages: 0
Exit Sensor: 0
Aux Encoder: 0
Invert TOF: 1
Reverse Gap: 1
Ink Accounting: 1
Encoder Adjustment: 0
Units Metric: 0
Feed Gap Delay: 0
Ignore Feeder Overlap: 0

Jobs and Logs

Available **Job and Log Files** jobs are listed in this view, with most recent files listed first. The four types of files are as follows:



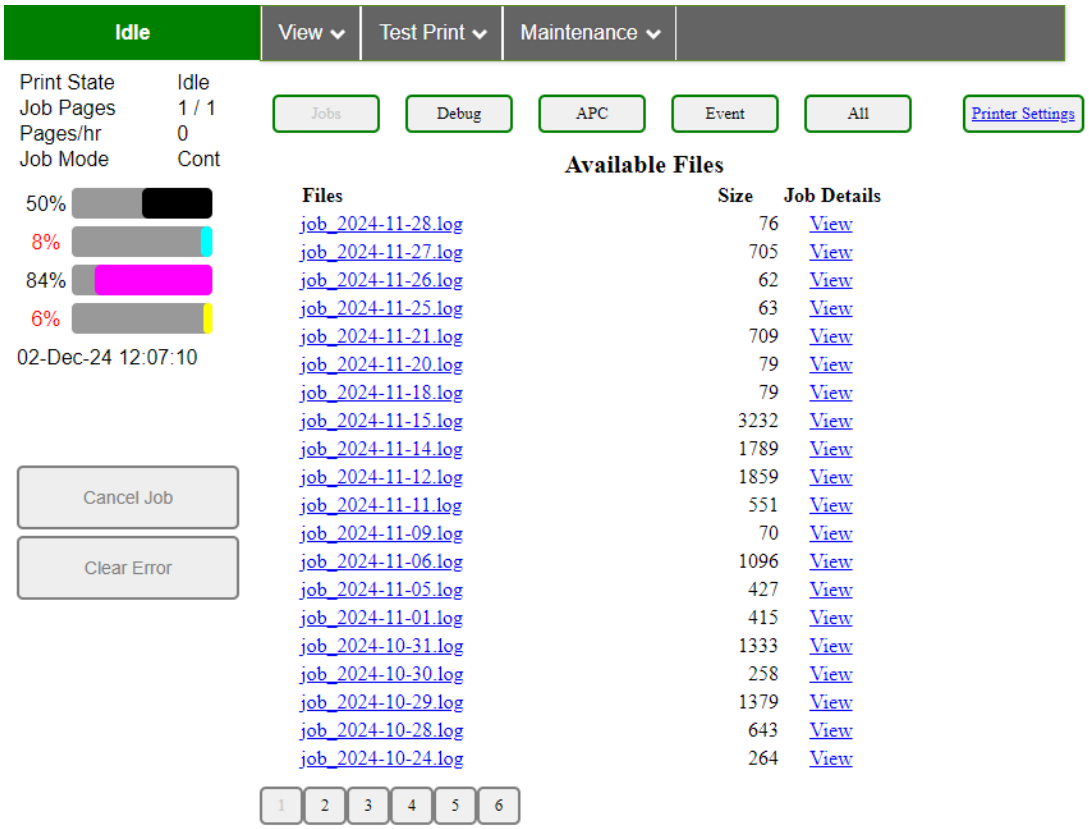
- **Jobs:** List of jobs with statistical data of the size and ink usage of each one. Note that **Ink Statistics** requires **Ink Accounting** to be turned ON (default setting).



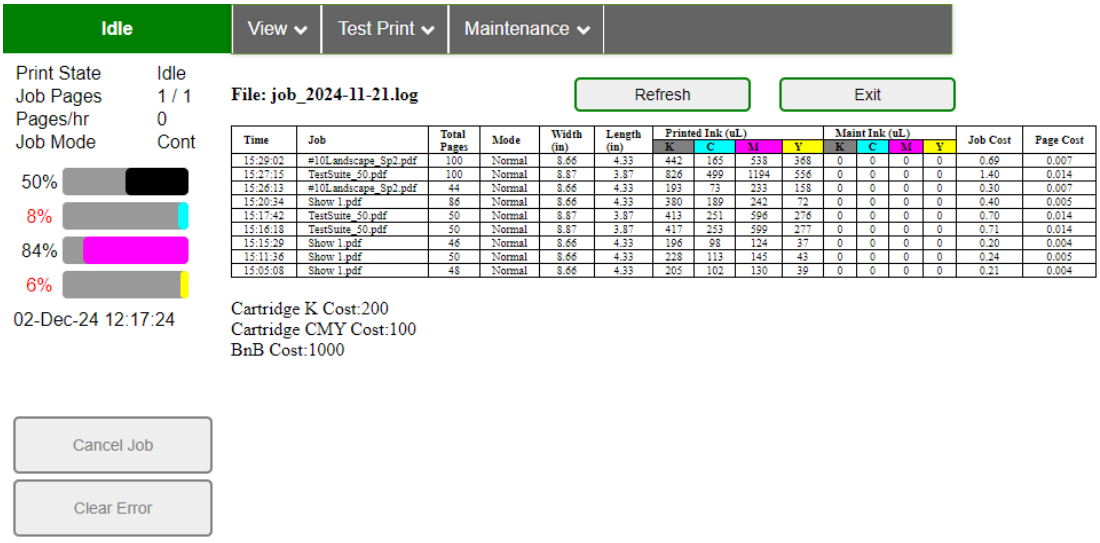
Time	Job	Total Pages	Mode	Width (in)	Length (in)	Printed Ink (uL)				Maint Ink (uL)				Job Cost	Page Cost
						K	C	M	Y	K	C	M	Y		
08:35:40	FRONT_2537927413_7813.pdf_2	18	Normal	4.12	9.50	46	7	7	0	0	0	0	0	0.05	0.003
07:58:40	FRONT_2537927413_7813.pdf_1	150	Normal	4.12	9.50	391	60	62	7	0	0	0	0	0.46	0.003
07:56:41	FRONT_2537927413_7813.pdf	150	Normal	4.12	9.50	383	60	61	7	0	0	0	0	0.45	0.003

- **Debug:** System level debug file. These may be split into multiple files for a single day to avoid files becoming too large
- **APC**: Paper path controller debug file

- **Event**: List of events that have occurred.



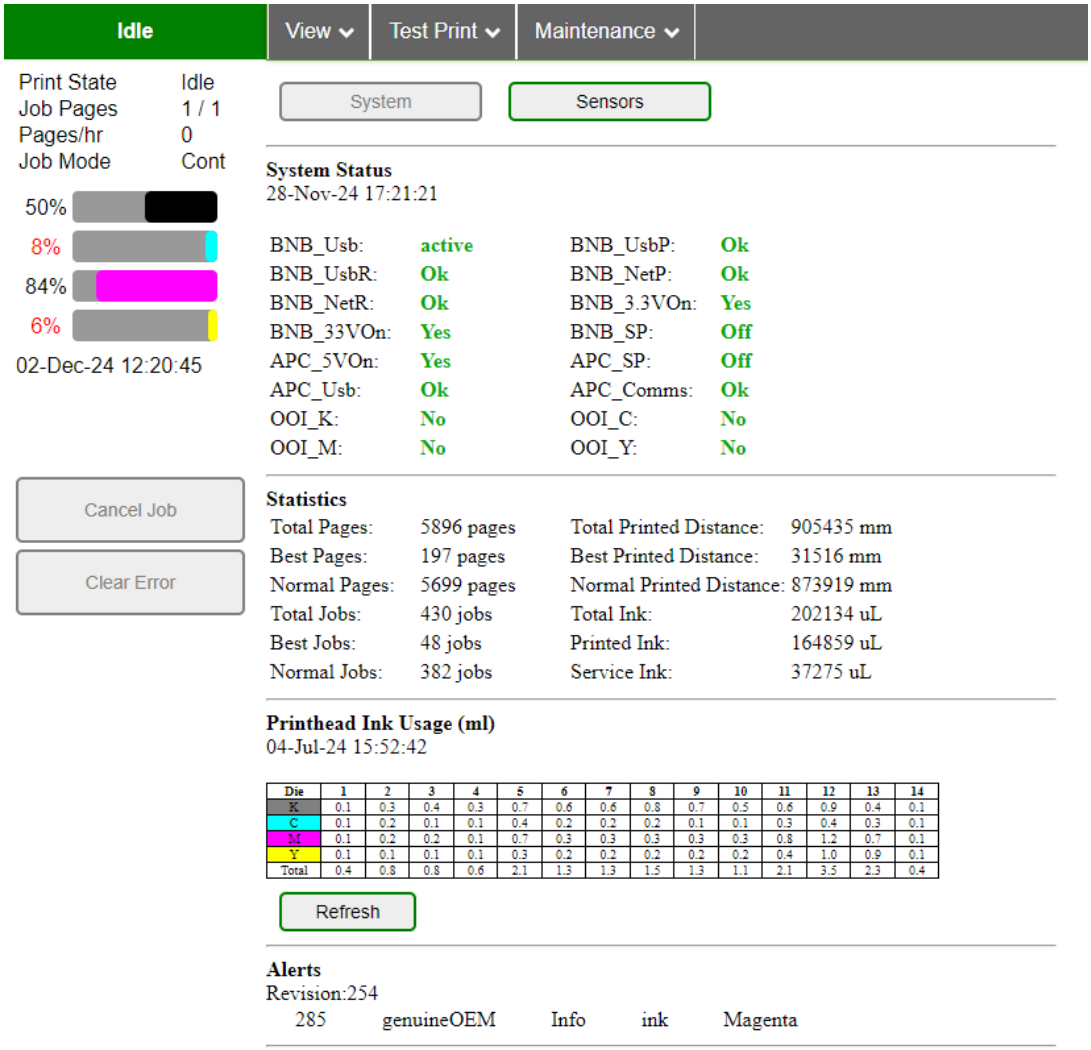
Detailed information on job usage can be displayed by clicking on the **View** link beside each listed job title. Job and Page costs can be estimated and utilize the user-entered consumable costs.



Diagnostics

The **Diagnostics** page is organized into two sections – **System** and **Sensors**.

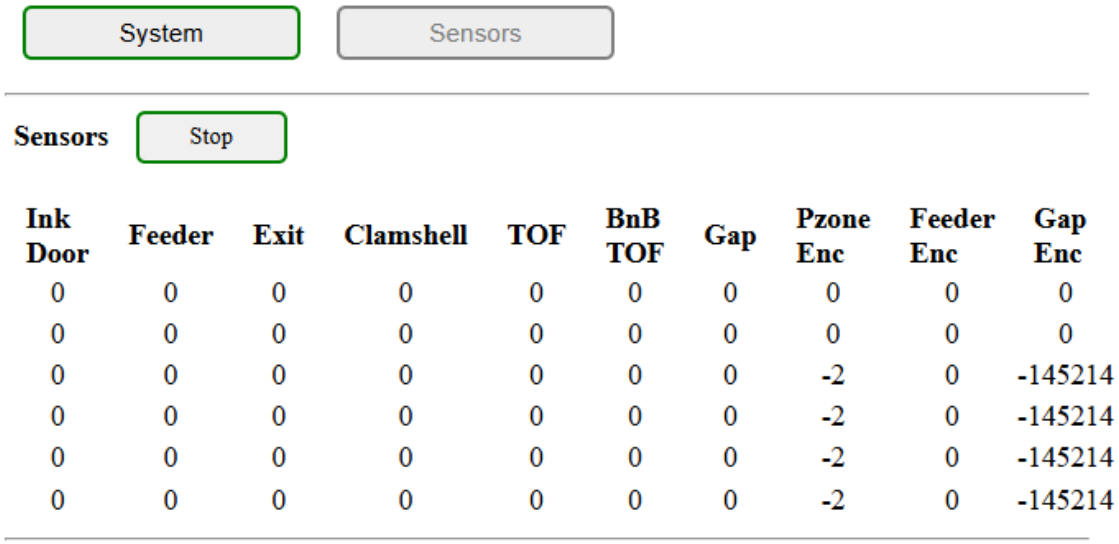
- **System**



Die	1	2	3	4	5	6	7	8	9	10	11	12	13	14
K	0.1	0.3	0.4	0.3	0.7	0.6	0.6	0.8	0.7	0.5	0.6	0.9	0.4	0.1
C	0.1	0.2	0.1	0.1	0.4	0.2	0.2	0.2	0.1	0.1	0.3	0.4	0.3	0.1
M	0.1	0.2	0.2	0.1	0.7	0.3	0.3	0.3	0.3	0.3	0.8	1.2	0.7	0.1
Y	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.4	1.0	0.9	0.1
Total	0.4	0.8	0.8	0.6	2.1	1.3	1.3	1.5	1.3	1.1	2.1	3.5	2.3	0.4

  - **System Status**: Shows the states of various system components. When operating correctly, all these components should be **green**.
  - **Statistics**: Printer Statistics are based on the life of the printer.
  - **Printhead Ink Usage**: Provides a detailed view of how printing is being distributed across the printhead.
  - **Alerts**: Show any alerts that the printhead may have raised including errors. Any errors will be cleared by the **Clear Error** button when pressed by the user.

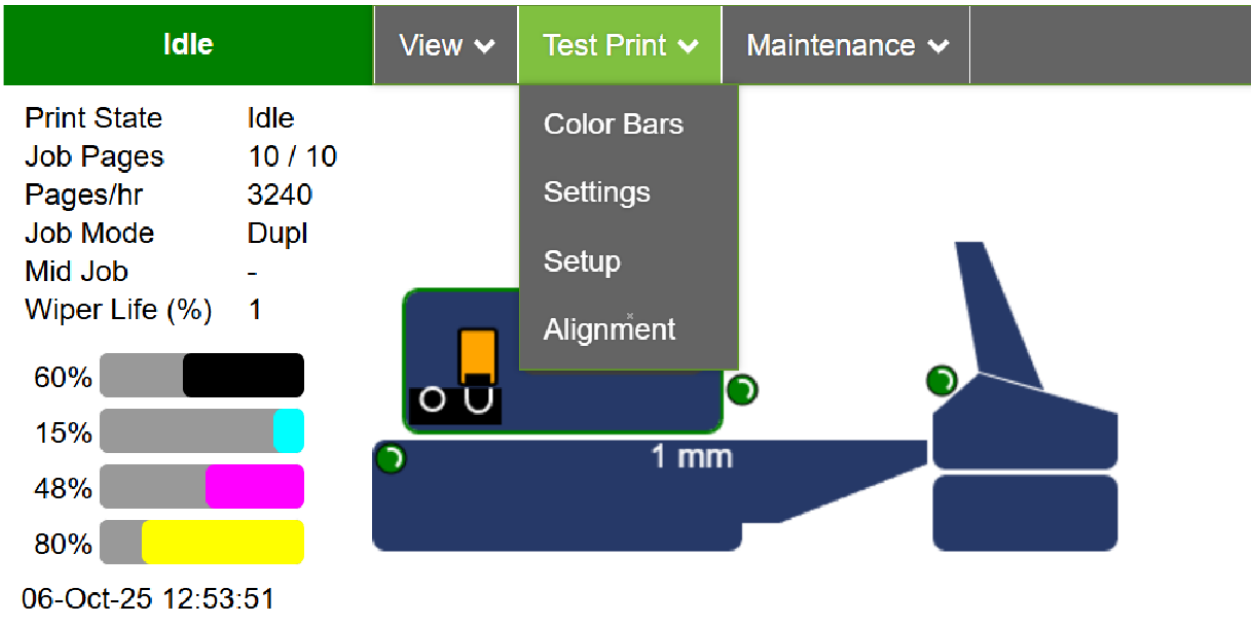
- **Sensors:** Shows the status of the printer's various sensors and collects data on their operation



Ink Door	Feeder	Exit	Clamshell	TOF	BnB TOF	Gap	Pzone Enc	Feeder Enc	Gap Enc
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	-2	0	-145214
0	0	0	0	0	0	0	-2	0	-145214
0	0	0	0	0	0	0	-2	0	-145214
0	0	0	0	0	0	0	-2	0	-145214

Test Print

The **Test Print Menu** provides a list of standard test prints that the user can request. Each print is designed to be printed using the full width of the printer using either A4 – Landscape or US Letter – Landscape media loaded into the feeder.

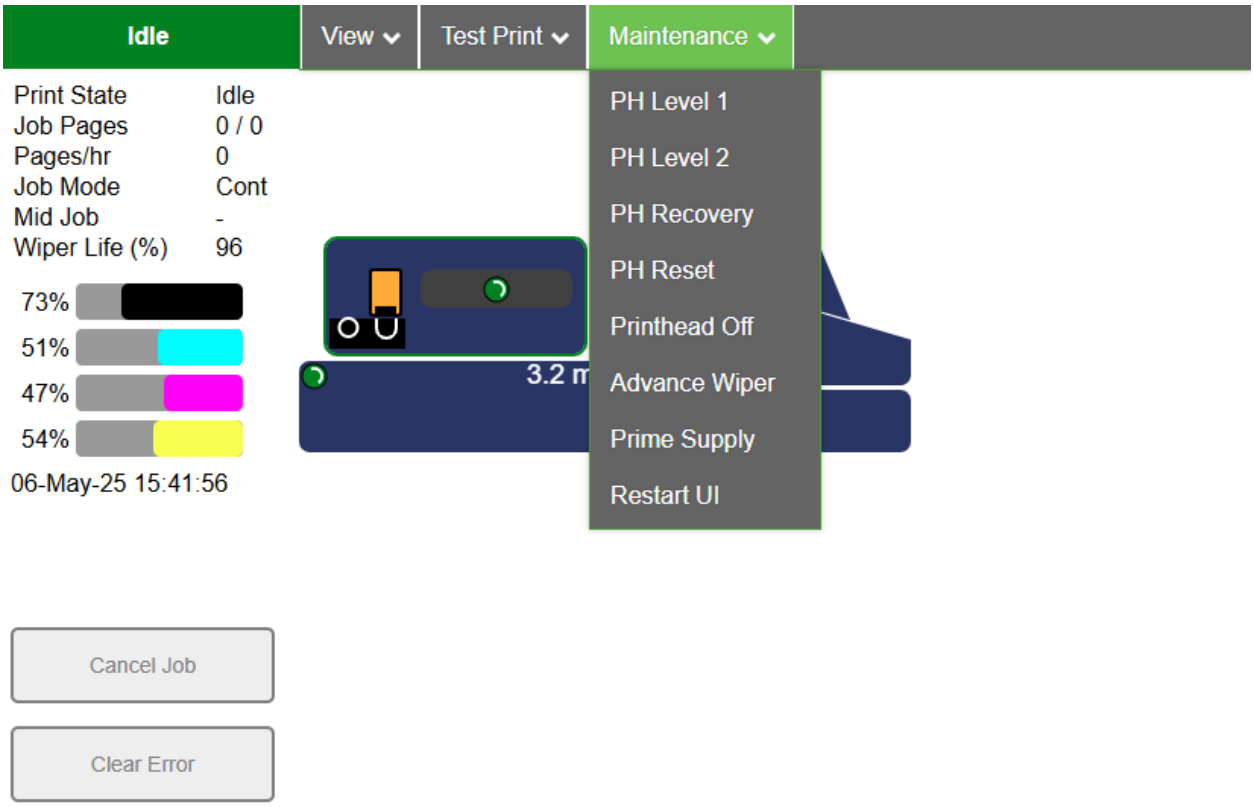


When a test print is selected, a popup box will appear prompting the user to confirm the selected test print is required.

- **Print Alignment:** Select the **Print Alignment** option from the **Test Print** menu to print out a report showing the print alignment.
- **Settings:** Select **Settings** from the **Test Print** menu to print a **Print Settings Report.**
- **Setup:** Preloaded page for A4/Letter format. It is used to check print quality and adjust TOF or Encoder scaling. Use this page after a new Print Engine Installation or other major repair.
- **Calibration**

Maintenance

The **maintenance** menu in the Toolbox lets you perform various levels of printhead maintenance:



- **Level 1:** The initial maintenance to try when the printer indicates that the printhead needs cleaning. This option provides basic a printhead clean and should be tried before any other maintenance is completed.
- **Level 2:** The secondary maintenance to use if PH Level 1 was unsuccessful. This option provides a more intense printhead cleaning.
- **PH Reset**: Resets the printhead after the printer has stopped from an error that has been fixed without having to restart the job.
- **Printhead Off:** Turns the Printhead off.
- **Advance Wiper**: Moves the maintenance wiper forward 0.25” (6mm). It may require multiple advances to get to a clean portion of the printhead.
- **Prime Supply**: Primes the ink supply.
- **Restart UI**: Restarts the User Interface after update installation.

Chapter 4: Maintenance

Periodic maintenance is needed to keep the printer in good working order. Many tasks can be performed by operators with basic supplies, with no special tools needed. Other tasks should only be performed by trained service professionals.

***Note**: High volume usage may require more frequent maintenance.*

Replace Ink Cartridges

The ink level for each ink cartridge Is displayed on the left side of the touchscreen and in the Toolbox on the PC. Use the following instructions to remove and empty an ink cartridge and install a new one.

1. Open the magnetic **Ink Tank Door** to access the ink cartridges.
2. Gently press on the empty ink cartridge. The spring-loaded cartridge will pop out.
3. Gently remove the cartridge.
4. Gently place the new cartridge in the empty slot, making sure that the correct side of the cartridge is facing inwards.
5. Once in place, press the cartridge into the Ink Tank to activate the spring lock.
6. Close the magnetic Ink Tank Door.
7. If the printer was off, power up the printer.
   If the printer was on, give the printer 30 seconds to read the cartridges and update the ink status.
   If ink tanks are not recognized, open the ink door and keep it open until the status changes to INK DOOR OPEN. Then, close the ink door.

Ordering Ink Cartridges

Use the following information when ordering replacement ink cartridges:

Item Description	Part Number
Cyan Ink Cartridge	27610031
Magenta Ink Cartridge	27610032
Yellow Ink Cartridge	27610033
Black Ink Cartridge	27610034

***Caution**: Ink Cartridges are not refillable. Do not attempt to modify or refill ink cartridges or printer damage may result. Printer damage caused by modified or refilled ink cartridges is excluded from printer warranty.*

Handling Ink Cartridges

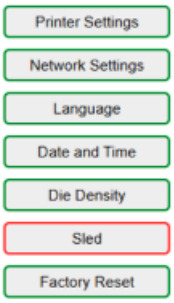
Use the following precautions when handling Ink Cartridges:

- Keep Ink Cartridges out of reach of children. If ink is accidentally ingested, contact a physician immediately.
- Keep ink cartridges in their sealed packages until they are needed. Ink cartridges should be stored at room temperature.
- Do not leave an ink cartridge outside of the printer for over 30 minutes.
- Do not touch the ink cartridge nozzles or copper contacts. Touching these parts can result in clogs, ink failure, and bad electrical connections. Do not remove the copper strips as they are required electrical contacts.

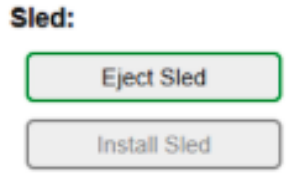
Replace Service Station

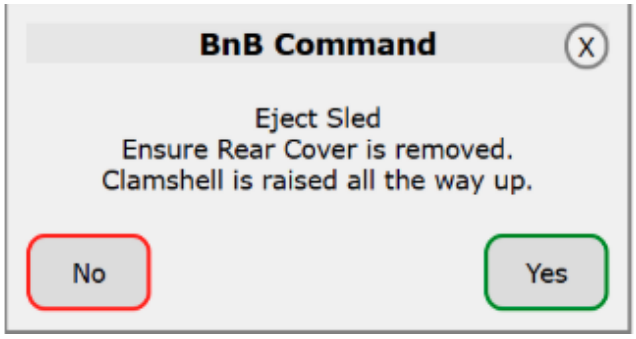
The **service station** is a sled assembly within the printer that maintains the printheads health. It is a consumable with the life being displayed on the touchscreen. When it nears the end of its life, users will need to order a new one and then replace the used one using the sled commands on the Toolbox interface.

1. Set the **Media Thickness** to 12.5 mm to raise the Clamshell to its highest position.
2. Open and secure the Clamshell's Top Cover.
3. Open the **Sled Access Cover** by removing the five screws that secure it.
4. From the Toolbox's **Setup Menu**, select **Sled**.



5. Select **Eject Sled.** The Sled will be driven out partially by the Print Engine (BnB)





Important: *"Motor Stall" can occur during the Eject Sled process. If this happens, repeat this step. Manually remove the sled using a T20 Torx screwdriver. Insert Sled back in and press* ***Clear Error****. Motor will pull Sled back in. Wait a minute for printer to enter IDLE mode before try to Eject Sled again.* ***Do not continue until Sled is ejected without an error****.*

6. Turn a **Torx T20** tool clockwise to manually drive the Sled the rest of the way out of the BnB.

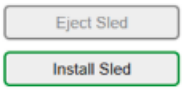
   Note: *You will need to manually pull the sled out once it has disengaged from the drive shaft.*

7. Install the new Sled. While lightly pushing the Sled into the BnB, drive the Sled into the BnB by turning the **Torx T20** tool counterclockwise.

   Important: *Verify that the Sled is entering the BnB squarely. The trailing edge of the Sled must be parallel with the BnB frame. If not, drive the Sled out and back in again to correct. Drive the Sled into the BnB just enough so that you can replace the Sled Access Cover.*

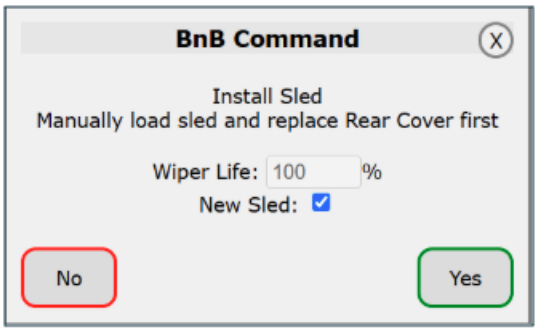
8. From the Toolbox's **Setup** menu, select **Sled**.

9. Select **Install Sled.**



   a. **If installing a NEW Sled, select (check) the New Sled checkbox.**

      Important: New Sled *must only be selected when a NEW Service Tray (Sled) is installed. If* ***New Sled*** *is selected for a used Service Tray, it may cause improper calibration leading to inaccurate life tracking and print quality issues due to inaccurate Sled positioning during head capping and wiping processes.*



b. If reinstalling the same Sled that you ejected, the Wiper Life currently displayed should be the correct value for the Sled. In this case, leave the Wiper Life value as is.

c. If reinstalling a Sled from a different printer, enter the Wiper Life value that was displayed at the time the Sled was removed from the other printer.

Jams in Printer

If a jam occurs, STOP the printer. Some possible causes for a jam are the following:

- Damaged media, such as media that is wrinkled or dog-eared (turned down corners)
- Media that is not per printer specifications.
- Media caught under the flap of an envelope or stuck to one another.

Removing Jammed Media

If your media gets stuck inside the printer, use the following instructions to remove it:

***Caution**: When the media is stuck in the printzone, do not immediately attempt to pull media out by hand, or printer damage may result. Use the procedure in this section to clear media jams.*

1. Raise the clamshell all the way up
2. Open clamshell, clear jam.
3. Close the clamshell.
4. Lower the clamshell to its previous height.

Cleaning

Dust and ink smudges may eventually appear on the printer exterior. Use the following instructions to clean the printer as needed.

1. Ensure that the printer is powered off. If the printer is on, press the power button for two seconds and then release. The power button will light up red and the printer will shut down.
2. Dampen a lint-free cloth with distilled water.
3. Gently clean the printer exterior with cloth.
   ***Note:** Do not use household cleaners or detergent to clean the printer exterior, or printer damage may result.*

Shipping or Transporting Printer.

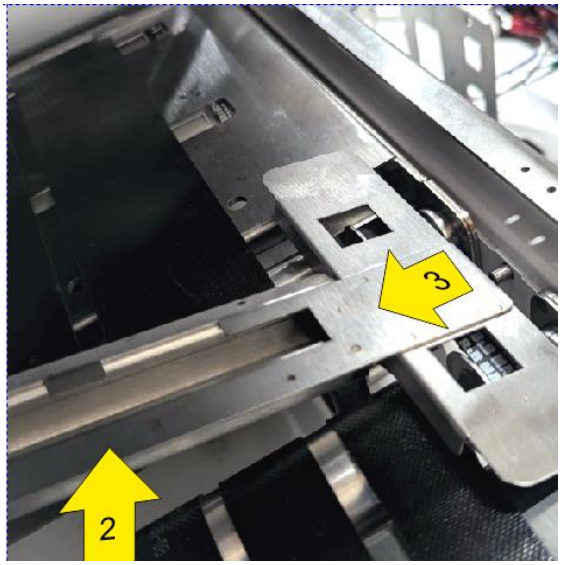
If you must ship or transport the printer for any reason, the unit will need to be prepared. Once the printer is prepared, carefully package the printer and all of its components in the original packaging.

1. Remove the Ink Tanks
2. Install the orange Transport Inserts

Empty and Clean Ink Drip Tray

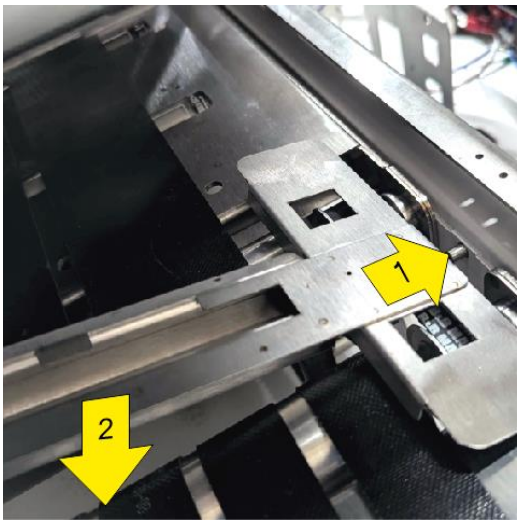
1. Open the clamshell.

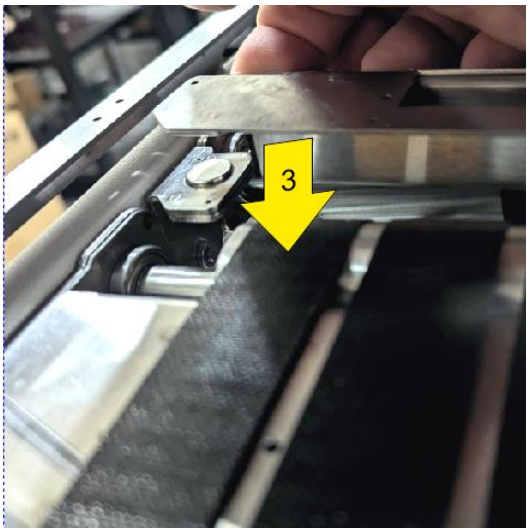
2. Remove the **Ink Drip Tray Assembly**. Be careful not to tip the tray in order to avoid spillage.

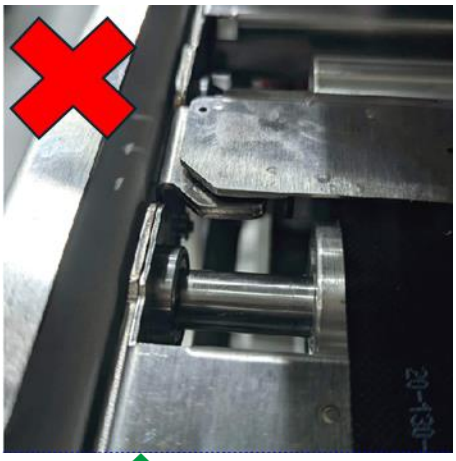


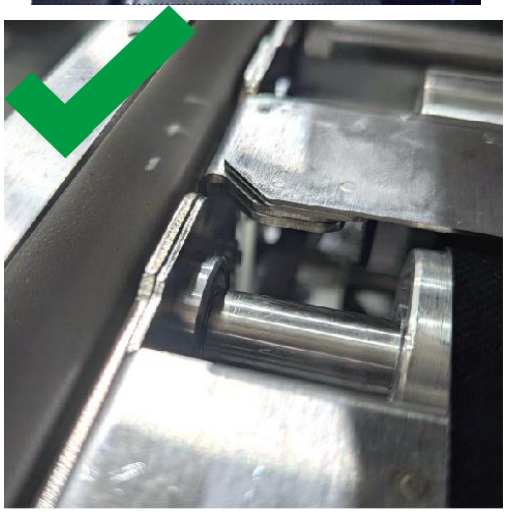
3. Empty the **Ink Drip Tray** if necessary and wipe off excess ink. Clean using distilled water and a damp, lint-free cloth.

4. Reinstall the Ink Drip Tray Assembly.









Chapter 5: Troubleshooting Guide

Printer

This section is arranged first by the condition that may occur and then by possible problems, causes, and recommended solutions.

Power Problems

Condition	Problem	Solution
Power is ON, nothing happens.	No power to printer.	Check that the power cord is plugged in. Check that the power outlet is live. Check the AC Adapter.

Communications Problems

Condition	Problem	Solution
Cannot open Toolbox	Connection problems.	Network: - Make sure that the printer has an assigned. Valid IP address. Ping the printer from your PC to ensure that the printer is accessible. - Refresh your browser (Shift+F5) USB: - Make sure that the printer driver is installed successfully. - Do not use a USB cable longer than 10 ft. - If you must use a longer USB cable, it is recommended to insert powered USB hub between the PC and the printer. Refresh your browser (Shift + F5).

Service Station Problems

Condition	Problem	Solution
Service Sled Motor Error	Service Station is skewed	Eject the service station out back and reinsert it, ensuring that it is entering the engine straight. Check the FFC Cable connecting the Sled Motor with the Control Boar. If the motor is still stalled, replace the motor.
Color Mixing	Ink migration within the printhead. Common when transporting a primed printer.	Print an alignment page to locate the channel / die affected. Print multiple pages in the affected channel to clear it out.

Feeding Problems

Condition	Problem	Solution
Failure to Feed	No power to printer.	Check that power buttons are ON (Control Panel and Main Power) and that the power cord is plugged in.
	Double-Feeding	Make sure that media is within specifications. Separator is not adjusted. Rear support is too far back.
	Motor is running, but the clutch is not engaging	Check that the feeder sensor is not covered. Check that the clutch pin is present. Check the clutch wiring
	Motor is not running	Check connections to and from Speed Control. Ensure that the Green LED is ON. Check Encoder feedback from the toolbox. Check the condition of the Encoder
	Media Path Obstruction	Clear the jam and remove the pieces remaining under the printhead.
	Media not loaded properly	Instruct the operator in the proper loading of media
	Feeder Speed is not matching printer speed	Feeder ERPI is not correct (Advanced Printer Settings

Errors and Warnings

Toolbox System Status Messages

Use the touchscreen or the Toolbox to quickly determine and locate a problem within the printer.

The status indicator shows ERROR in a red box. The printer graphic icon highlights the printer and system affected. The system status information displays the basic problem (in red). Ink levels display the ink status. Control buttons (at the bottom of the screen) allow you to perform frequently used tasks without leaving the screen.

Listed below are some of the messages that may appear in System Status Messages:

System Status	Source	Solution
Paper Motor	Printzone Motor Servo Control Loop Error. No Encoder pulses of error limit reached, due to mechanical friction. Reported by APC.	Confirm Error using the Sensor Diagnostic Chart Check the Print Zone Encoder wiring, extension, and connection to an APC (J10)
Feed Timeout	Media not detected at the Feeder Sensor in time. TOF Sensor detected media without feed. Exit Sensor detected media without feed. Reported by APC	Confirm Error using the Sensor Diagnostic Chart. Check if the Feeder Sensor has two lights on (amber and green) when not interrupted, and only the green light on when interrupted. Check the condition of the reflective tape. Clear it of paper dust. Replace the sensor if necessary.
Gap Motor	Media Thickness Gap Servo Control Loop error. No encoder pulses of error reached due to mechanical friction. Reported by APC	Confirm Error using the Sensor Diagnostic Chart. Check the Media Gap Motor and Media Gap Encoder wiring and connections (APC J38 and J34).
Gap Sync	Media Gap could not find home position. 1. Motor not turning. Clamshell not moving.	Check motor functionality. Check sensor functionality, Check APC outputs.

	2. GAO Sensor not detecting home position. Reported by APC	
Feeder Motor	Feeder Motor Servo Control Loop Error. No encoder pulses of error limit reached due to mechanical friction. Reported by APC	Confirm Error using the Sensor Diagnostic Chart. Inspect the Encoder Reader wiring and connection. Inspect the condition and alignment of the encoder wheel. Ensure that there are no scuff marks on the wheel.
Feed Overlap	Page length mismatch at Feeder Sensor with following pages longer than the first page. Reported by APC	Ensure that all media you load is the same size for each job. Ensure that the separator is adjusted properly. Ensure that the feeder sensor is functional. Ensure that the clutch is functional.
Print Seq	Excessive TOFs detected indicate pages not being printed. GPIO signaling may have failed on the print engine. Reported by APC	Confirm Error using the Sensor Diagnostic Chart or UI. Ensure media is interrupting the sensor as it exits the printer. Clear the face of the sensor of all paper dust. Ensure there is no directional light source placed above the sensor.
Print Zone	Media error between TOF and Exit Sensor indicating that media has stalled within the print engine. Reported by APC	Confirm Error using the Sensor Diagnostic Chart or UI. Ensure that the media is interrupting the sensor as it exits the printer. Clear the face of the sensor of paper dust if necessary. Ensure there is no directional light source placed above the sensor.
Page Error	Error with the page event handling configuration.	This feature should only be used in conjunction with

		appropriate support equipment. If not present, then this feature should disable via the Toolbox Service Settings.
APC Comms	Error communicating to the APC Controller Board	The system has the ability to automatically restart the board in most cases. This may take several minutes. If it cannot do this, then Clear Error may be required (if enabled). If the Status LED on the APC is flashing, then cabling between the APC and UI should be checked If the status LED is not flashing, then the APC may require replacement.
Job Error	The printhead has reported an error without providing a reason.	If the system cannot be recovered by a Clear Error, then the printhead should be reset.
PH Feed Timeout	The printhead has reported a feed timeout during printing. This occurs when the system waits too long for the media to arrive at the TOF Sensor.	Ensure that the media is feeding correctly, and that the Feed Timeout is correctly set.
User Cancel	The printhead has reported a user cancel request during printing	
Job Canceled	The printhead cancelled the job with no specific reason given	If the system cannot be recovered by a Clear Error, then the printhead should be reset
Job Timeout	The printhead has reported a timeout receiving information during printing.	If the system cannot be recovered by a Clear Error, then the printhead should be reset.
PH Processing Error	The printhead has reported an error during printing and cancelled the job.	The Printhead Alerts should be checked on the Diagnostics page to determine what sort of error may be occurring. Service Technician should be contacted to help resolve this issue.

PH Stall	The printhead has mechanically stalled during printing.	The Printhead Alerts should be checked on in the Diagnostics page to determine what sort of error may be occurring. Service Technician should be contacted to help resolve this issue. If it is a sled stall, then it may be resolved by ejecting and correctly reinserting the sled.
PH Out of Ink	The printhead has reported an Out of Ink error during printing	The ink levels in the suppls should be checked, and any empty cartridges should be replaced. If the problem persists, a Service Technician should be contacted to help resolve the issue.
Ink Door Open	The printhead has detected the Ink Door being open during printing.	Ensure the Ink Door remains closed. Check to ensure the wiring and sensor mechanical setup is correct
PE Error	An error has occurred validating the print engine	This may be caused by outdated firmware running on the Print Engine. Service Technician should be contacted to help resolve this issue.
MPCA Error	An error has occurred communicating with the Print Engine	An error has occurred communicating with the Print Engine Controller. Service Technician should be contacted to help resolve the issue.
Ink	AN ink-related error has occurred.	The cartridges should be checked to ensure they are authentic cartridges, and that one of each color is installed. If valid cartridges are being used, a Service Technician should be contacted to help resolve the issue.
Ink Out	The printhead engine has reported that at least one cartridge is out of ink	Check the Ink Levels and Diagnostics page to determine which cartridge/s

		are causing the problem. Replace cartridges that are out of ink. If valid, non-empty cartridges are being used, a Service Technician should be contacted to help resolve the issue.
Paperpath	A generic issue has occurred with the APC Paperpath Controller	The system has the ability to automatically restart the board in most cases. This may take several minutes. If it cannot do so, Clear Error may be required (if enabled). If the Status LED on the APC is flashing, then the cabling between the APC and UI should be checked. If the Status LED is not flashing, then the APC may require replacement.
PE Alerts	Print Engine Alerts can be displayed on the system status screen and will depend on what error has been detected.	The Diagnostics page in the Toolbox should be checked to determine the type of fault that is being reported. Many of these can be cleared using Clear Error, but may require some user intervention prior to attempting Clear Error. If the problem cannot be cleared, a Service Technician should be contacted to help resolve the issue.
PE Comms Err	Internal network communication with the MPCA is interrupted.	Make sure that there is no internal IP address conflict with another unit in the facility. Check Network Switch functionality. Make sure that the MPCA is paired with the PE

Appendices

Appendix A: Printer Specifications

The technical specifications for the SP2 operation, supplies, media, and environment are shown in the following tables.

Operation

Operation	
Print Technology	Thermal Inkjet
Ink Type	Pigment-based ink, 4 individual CMYK cartridges. HP TIJ 4.0 Technology.
Print Resolution	1200 dpi x 1200 dpi @ 9 ips (13.5 m/min) 600 dpi x 1200 dpi @ 18 ips (27 m/min)
Print Speed	Up to 6,500 Letter/A4 pages per hour Normal Quality: (1200 x 600 dpi) Up to 10,000 #10 envelopes/hour Up to 5,000 Letter pages/hour Best Quality: (1200 x 1200 dpi) Up to 15,000 #10 envelopes/hour Up to 2,500 Letter pages/hour
Duty Cycle	500,000 Letter/A4 sheets per month
Feeder Capacity	16.0” (406 mm) Feed Hopper
Print Area	Up t 11.7 W x 30” L with full bleed capacity for media under 11.5”
Connectivity	USB 2.0; 802.3 LAN (10/100/100) Ethernet Port
Software	Microsoft Windows® 11, 10, 64/32-bit Driver, with built-in color profiles Digital firmware updates via PC Electronic thickness control via printer touchscreen TrueType or PostScript system fonts RIP Software Available (optional)
Color Matching	ICC Color Profile support for qualified media. Color management: Windows Driver with Color Controls

Supplies

Supplies	
Ink Cartridges	CMYK Aqueous Pigment Inks: C:238 ML M: 233 ML Y: 225 ML K: 498 ML ISO Pages: K: 20,000 pages CMY: 16,000 pages
Maintenance	Replaceable Wiper Service Tray

Media

Media	
Width	3.0” (76 mm) – 14” (355 mm)
Length	3.75 (95 mm) – 15.0” (380 mm)
Thickness	0.004” (0.1 mm) – 0.500” (12.0 mm)

Environmental & Physical Requirements

Environmental & Physical Requirements	
Printer Operating	15º C to 30º C (59º F to 86º F) 30% to 80% Relative Humidity (non-condensing)
Printer Storage	-40º C to 60º C (-40º F to 140º F)
Ink	-40º F to 140º F (-40º C to 60º C), 30% to 80% Relative Humidity (non-condensing)
Power Requirements	Input: 115-240 VAC 50/60Hz
Duty Cycle	500,000 per month
Dimensions	Printer Only” 23” W x 38” L x 22” H With Feeder: 24” W 55” L x 26” H
Weight	Printer Only: 145 lbs. With Feeder: 195 lbs. 110 lbs. (50 kg) 145 lbs. printer only 20 lbs. (9.1 Kg) shipping
What’s Included in the Boxes	Larger Box: SP2 printer and registration table, AC Power Cord, USB Cable, Installation Guide Smaller Box: Media Feeder with Media Guides and media holder, table for media feeder, AC Power Cord.

Appendix B – Printer Maintenance Schedule

Part	Action
DAILY MAINTENANCE	
Check Ink Levels	Make sure that you have enough ink for the day of printing.
Print Platen w/ Spittoon	Wipe ink residue from the platen surface.
Media Sensors	Make sure that sensor reflective tape is clean.
BI-WEEKLY	
Print Platen w/ Spittoon	Check waste ink level. Flush and dry ink tray if needed.
Print Zone	Clean by removing media fibers and ink residue.
Service Sled	Check the remaining Service Sled Life.
Sensors	Check the Exit Sensor. Clean with dump Q-tip if needed.
MONTHLY	
Transport	Clean the transport and feeder belts with soap and water.
EVERY SIX MONTHS	
Check Firmware version	Verify that you are using the latest version and update if needed
Transport	Verify smooth operation. Listen to noise indicating damage or wear.

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For Service or Supplies

SV63441 Rev. A