AstroJet™ S1 COLOR PAGE PRINTER

OPERATOR MANUAL

Powered by memjet®

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SAFETY PRECAUTIONS

THIS EQUIPMENT PRESENTS NO PROBLEM WHEN USED PROPERLY. OBSERVE SAFETY RULES WHEN OPERATING THE S1 PRINTER.

BEFORE USING 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 machine is in use. Before clearing a jam, be sure machine mechanisms come to a stop.
- ✓ Always turn machine off before making adjustments, cleaning the machine, or performing any maintenance covered in this manual.
- ✓ Power cord and power supply supplied with machine. Plug it into a properly grounded, easily accessible wall outlet near machine. Failure to properly ground machine can result in severe personal injury and/or fire.
- ✓ Power cord and wall plug are primary means of disconnecting machine from power supply.
- ✓ **DO NOT** use an adapter plug on line cord or wall outlet.
- ✓ **DO NOT** remove ground pin from line cord.
- ✓ **DO NOT** route 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.
- ✓ Make sure there is no strain on power cord caused by jamming it between equipment, walls or furniture.
- ✓ **DO NOT** remove covers. 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. Contact your authorized service representative for required service schedules.
- ✓ To prevent overheating, do not cover vent openings.
- ✓ Use this equipment only for its intended purpose.

In addition, follow any specific occupational safety and health standards for your workplace or area.

This manual is intended solely for the use and information of Astro Machine Corp., its designated agents, customers, and their employees. The information in this guide was obtained from several different sources that are deemed reliable by all industry standards. To the best of our knowledge, that information is accurate in all respects. However, neither Astro Machine Corp. nor any of its agents or employees shall be responsible for any inaccuracies contained herein.

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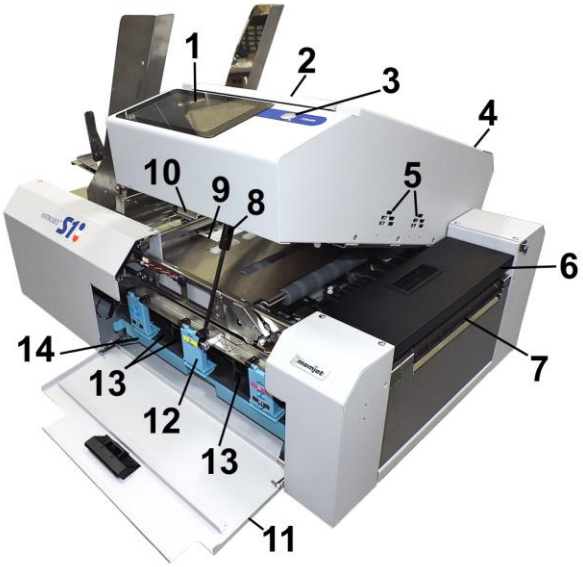
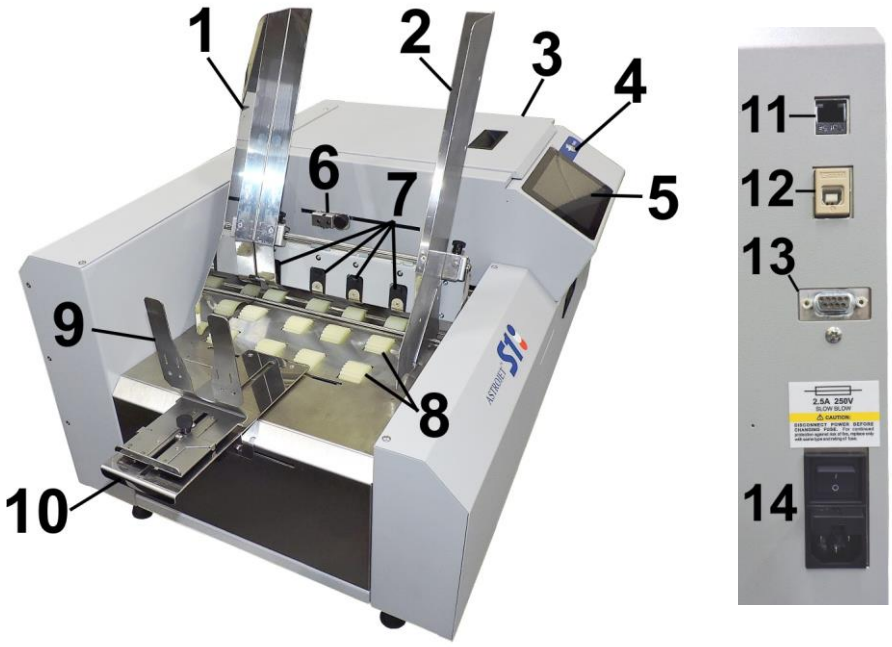
NOTES

SECTION 1 – *Getting Acquainted*



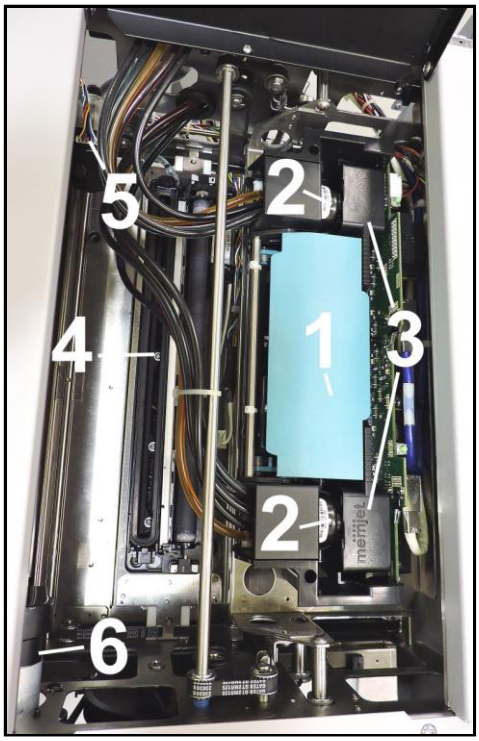
Front View

1.	**Control Panel Touchscreen** – Displays **Menu** and information about Printer status. Controls Printer functions and setup.
2.	**Top Cover** – Provides access to Print Engine, Printhead and Service Station.
3.	**ON/OFF LED Button** – Turn power ON or OFF during idle time and maintenance.
4.	**Top Assembly ("Clamshell")** – Holds upper section of Print Engine including Printhead and Service Station. Lifts up to clear media path.
5.	**Vent Fans –** Remove excess ink mist from the Printing area.
6.	**Exit Transport Cover** – Opens to provide access Media Exit Conveyor.
7.	**Exit Conveyor –** Transports media out of the Printer.
8.	**Clamshell Support** – Holds Printhead Assembly up during maintenance/service.
9.	**Media Sensor Reflector –** Allows Media Sensor to track media passing through the Printer.
10.	**Clamshell Latch** – Release to raise Printhead Assembly to clear media jams or for other maintenance.
11.	**Ink Tank Door** – Access to Ink Tanks. When open, disconnects Printer communication to Ink Tanks and allows safe installation and replacement.
12.	**Ink Tank Latches** – Used to hold Ink Tanks in slots. ***NOTE***: Make sure both sides at bottom part of latch are engaged.
13.	**Ink Tanks** – Printer has five Ink Tanks: Cyan, Yellow, Magenta, two Black.
14.	**Ink Waste Tray** – Catches any waste ink produced by system. Tray is filled with absorbent material. Tabs located at left and right sides of tray secure tray to print engine frame. Please be sure tabs click in to secure tray.



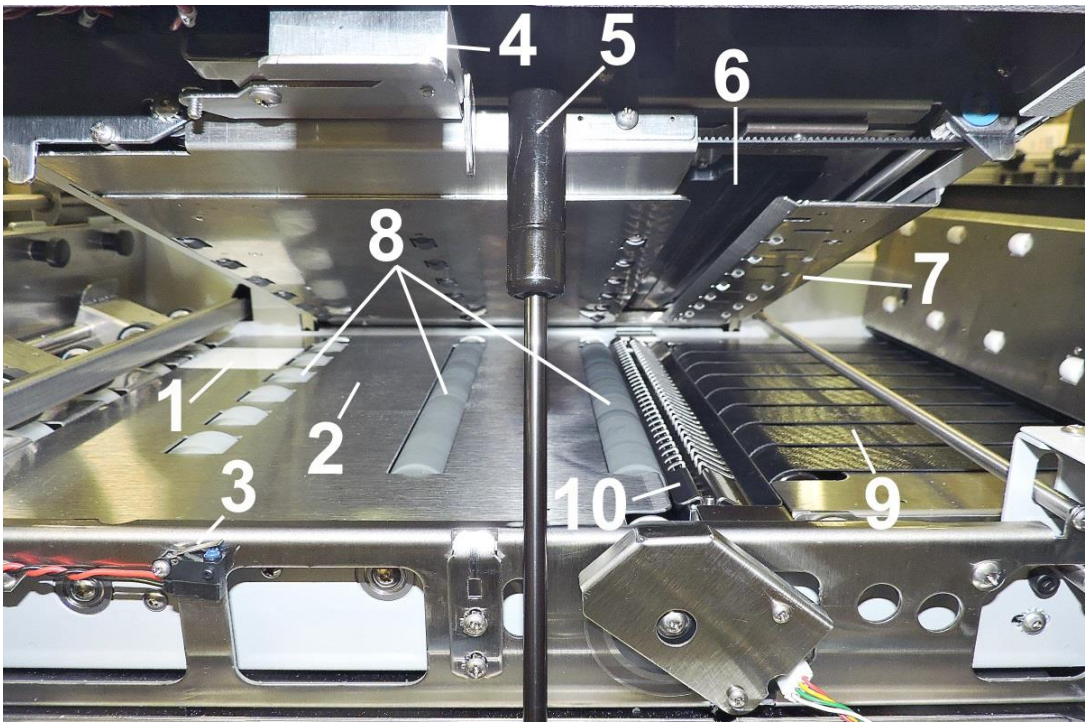
Rear View

1.	**Envelope/Media Guide** – All printing is registered against this Guide. It has adjustable positions for envelopes and other media.
2.	**Adjustable Media Guide** – Adjusts to hold media against Envelope/Media Guide.
3.	**Top Cover** – Provides access to Print Engine, Printhead and Service Station.
4.	**ON/OFF LED Button** – Turn power ON or OFF during idle time and maintenance.
5.	**Control Panel Touchscreen** – Displays **Menu** and information about Printer status. Controls Printer functions and setup.
6.	**Adjustable Feed/Media (Entry) Sensor** – Senses when media is moving, not feeding or jammed. Adjusts to accommodate varying media widths.
7.	**Sheet Separators** – Separates each piece of media as it is fed.
8.	**Feed Rollers** – Move media into print area.
9.	**Rear Media Guide** – Holds media against Front Plate.
10.	**Rear Media Guide Support** – Supports the paper/media.
11.	**Network Port** – Ethernet cable plugs in here.
12.	**USB Port** – USB cable attaches to Printer here.
13.	**Interface Port** – DB-9 Interface to connect Printer with other equipment.
14.	**Main Power Switch, Receptacle and Fuse** – Plug in power cord here. Switch turns main power ON/OFF. (*Use Control Panel LED Power switch to turn off machine for cleaning and maintenance*). Fuse protects Printer's electronic circuits.



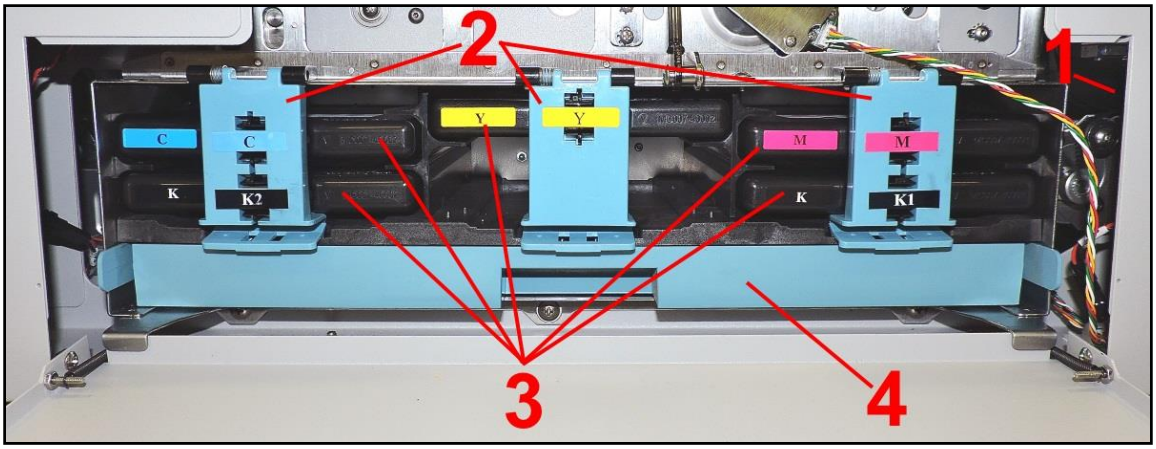
Print Engine View

1.	**Printhead Latch** – When closed, connects Ink Revolver Couplings with Printhead Cartridge. When opened, retracts Ink Couplings from Printhead Cartridge and provides access to Printhead Cartridge for cleaning and replacement. **WARNING!** Never attempt to open Printhead Latch manually, severe damage will result. Use the **Printhead Release** in the **Touchscreen "Service"** drop-down menu when no ink is in system. Use **System Deprime** when ink is in system.
2.	**Ink Revolver Couplings** – Connect ink hoses to Printhead Cartridge. Printhead Latch extends and retracts couplings from Printhead.
3.	**Printhead Cartridge** – Memjet® Printhead produces an 8.77" wide full color print area.
4.	**Service Station** – Cleans Printhead Cartridge of excess ink and debris, keeps Printhead hydrated and protected when not in use, captures and removes ink used to keep nozzles clear, and moves out of the way of the Printhead during printing.
5.	**Service Station Inspection Motor** – Moves the Service Station in and out from under the Printhead Assembly for inspection, cleaning or service.
6.	**Printhead Assembly Lifter Motor** – Lifts and lowers the Printhead Assembly over the Service Station for Service Station access and Printing.



Print Area View (Under Clamshell)

1.	**Media (Entry) Sensor Reflector** – Reflects beam back to Entry Sensor to indicate next piece of media is coming into printing position.
2.	**Print Platen** – Flat surface helps media transport smoothly through Print Area.
3.	**Clamshell "Open" Switch** – Signals Printer when the Clamshell Latch is released and Clamshell is opened. Shows on Touchscreen display and in Toolbox System Status icon.
4.	**Clamshell Latch** – Release to raise Clamshell to clear media jams or for cleaning and other maintenance.
5.	**Clamshell Support** – Holds up Printhead Assembly during maintenance and service.
6.	**Service Station** – Cleans Printhead Cartridge of excess ink and debris, keeps Printhead hydrated and protected when not in use, captures ink used to keep nozzles clear and directs it to the Waste Ink Tray. Service Station moves out of the printing path during printing.
7.	**Exit Starwheel Assembly** – Helps media exit smoothly from the Printer.
8.	**Transport Rollers** – Keep media moving through Print Area.
9.	**Media Exit Conveyor** – Moves printed media out of the Printer.
10.	**Ink Drip Cover and Tray** – Located under Printhead. Catches any excess ink coming from Service Station and Printhead.



Ink Tank Door View

1.	**Ink Tank Disconnect Switch** – When Ink Door is opened, Switch shuts down communication between Printer and Ink Tanks for safe removal and replacement.
1.	**Ink Tank Securing Latches** – Used to hold Ink Tanks in slots. ***NOTE***: Make sure both sides at bottom part of latch are engaged.
3.	**Ink Tanks** – Printer has 5 Ink Tanks: Cyan, Yellow, Magenta, Black, Black
4.	**Ink Waste Tray** – Catches any waste ink produced by system. Tray is filled with absorbent material. Pull on tab to remove Tray.

Control Panel Button/LED Indicators

Control Panel has three buttons with LED indicators.

POWER (ON/OFF) – Turns Printer power ON and OFF. Turn off power for cleaning and maintenance.

SECTION 2 – *Installing Printer*

Contents of Packaging

1.	S1 Printer
2.	Ink Drip Tray Assembly (*Includes High and Low Ink Drip Grates*)
3.	Five Ink Tanks – Cyan, Magenta, Yellow, Black, Black
4.	Printhead Cartridge
5.	Media Side Guides: Registration (*Left*) and Adjustable (*Mounting screws attached to Printer*)
6.	Rear Media Support Guide Assembly (*Thumbscrew and mounting screws attached to Printer*)
7.	Media Support Wedges: Narrow and Wide (*Attach to slots in Rear Media Support Guide*)
8.	AC Power Cord
9.	USB Cable
10.	Operator Manual
11.	Driver Software CD

Before using Printer:

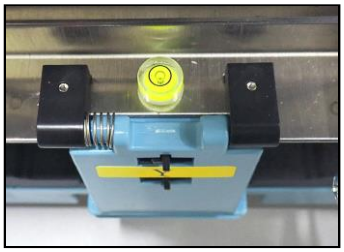
- Unpack Printer and verify package contents Printer
- Choose a location for the Printer
- Install Ink Drip Tray Assembly and assemble Printer
- Plug in Printer and connect it to computer
- Install Printer Driver
- Install Ink Tanks
- Install Printhead
- Set up feed on Printer

Unpack and Set-up

Remove Printer and its parts from carton. Remove all packing tape. Find screws that attach various parts of Guides to Printer are under tape in their respective mounting positions.

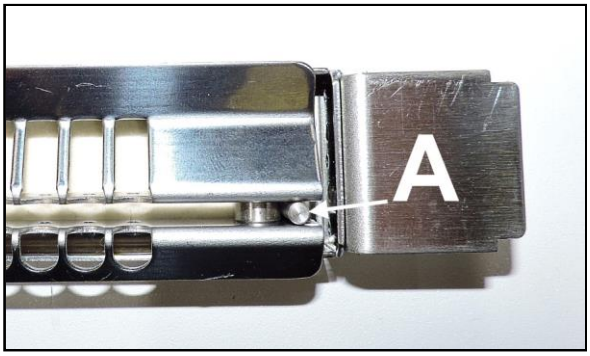
Choose a Location

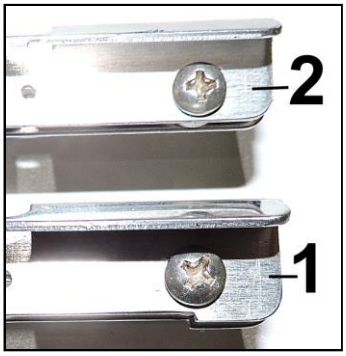
Place Printer on a sturdy level worktable or cabinet at least 9" from any walls. Open the Ink Tank Door and raise the Clamshell Assembly. Use the Bubble Gauge mounted on the Ink Station Frame (*or a small level*) placed on the Ink Station Frame to make sure Printer is level. Protect Printer from excessive heat, dust, and moisture. Avoid placing it in direct sunlight.



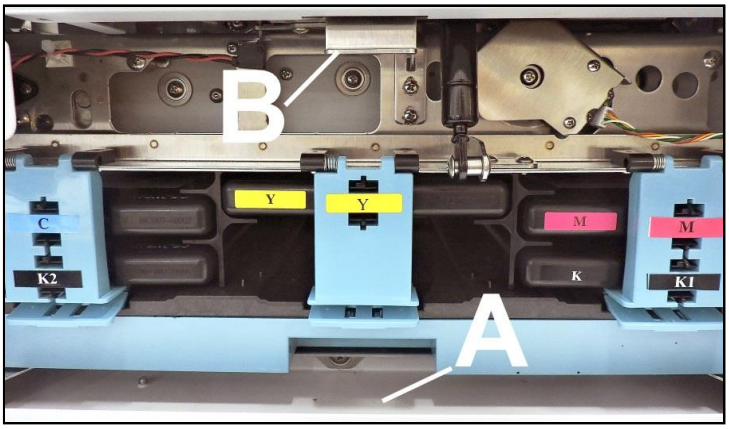
Install Ink Drip Tray Assembly

1. **Assemble the Ink Drip Tray Assembly:**
   Select the High or Low Bridge and install it on the Ink Tray Pins as shown **[A].**
   High Bridge [1] is for thinner media (*paper or envelopes*).
   Low Bridge [2] is for thicker card stock and cardboard.



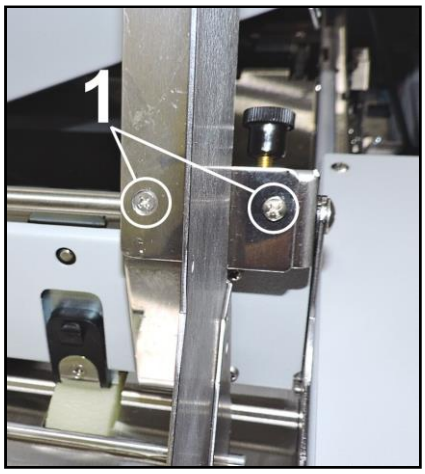


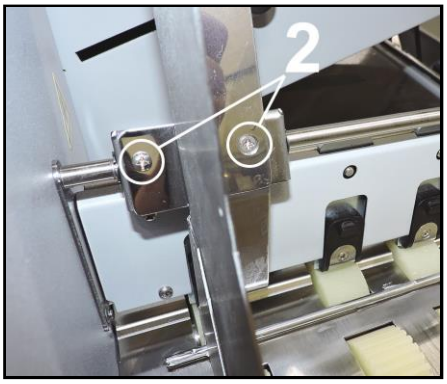
2. **Install the Ink Drip Tray Assembly:**
   Open the Ink Tank Door **[A]**.
3. Release Latch **[B]** to raise the Clamshell.
4. Insert tabs on Ink Drip Tray into frame slots **[C]** as shown.
5. Close Clamshell.

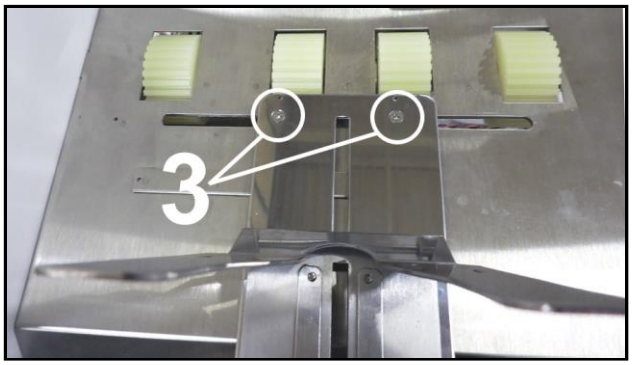


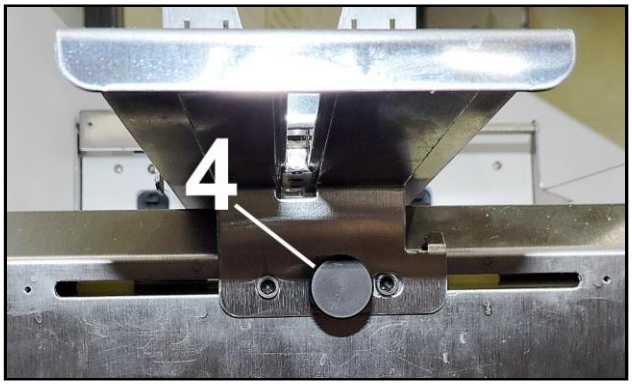
Assemble Printer

1. Install Right Adjustable Media Guide with (2) screws **[1]** (*included*).
2. Attach Left Adjustable Media Side Guide with (2) screws **[2]** *(included*).
3. Attach Rear Media Support using (2) screws (*included*) to secure it to the mounting holes on the Center Plate **[3]**. Attach Adjusting Knob **[4]**.
   NOTE: Two outside holes fit over socket head screws.









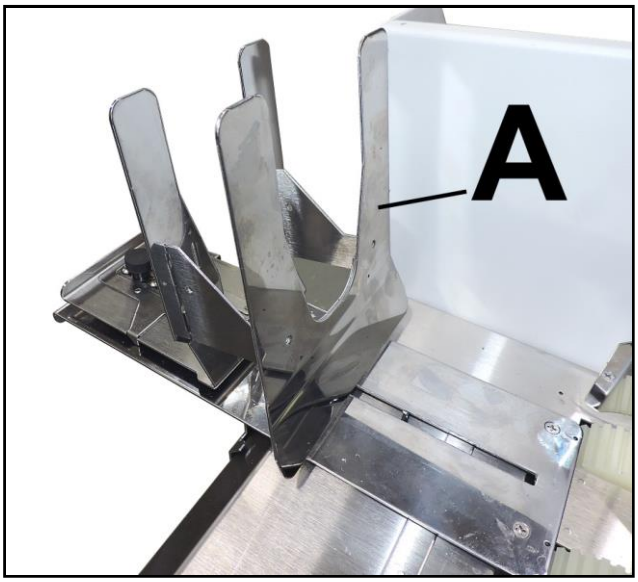
Narrow and Wide Media Support Wedges:

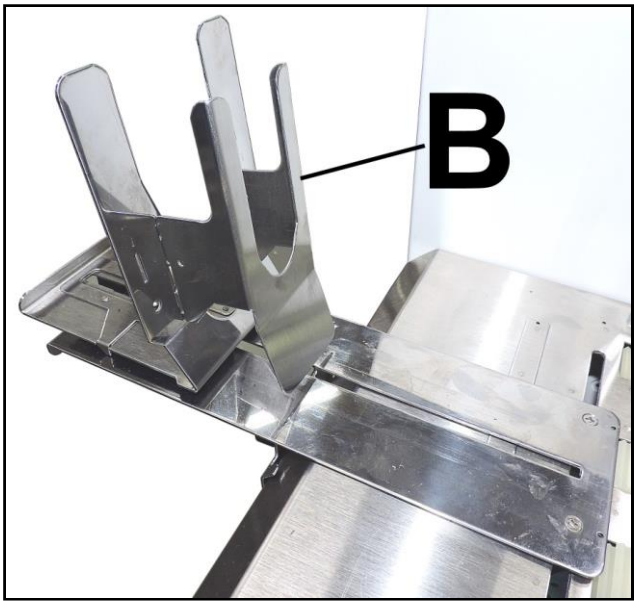
Use the Narrow or Wide Media Support Wedges to accommodate very wide or very narrow media.

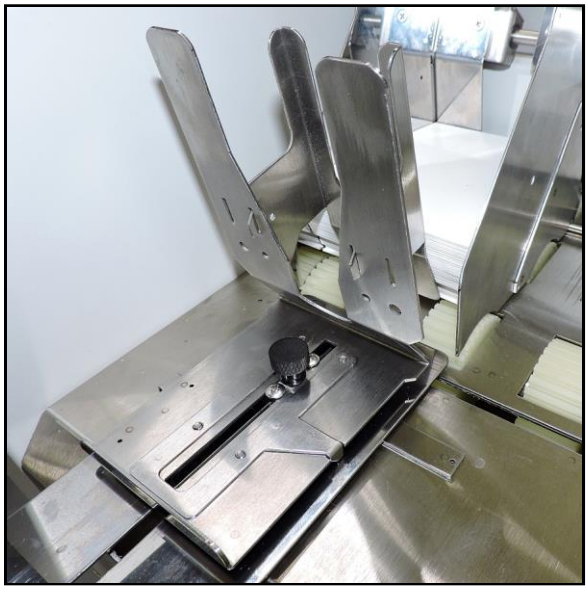
1. Fit the tabs on the Wedges into the appropriate slots on the Media Support Guide. See examples below.

   [A] Wide Guide installed.

   [B] Narrow Guide installed.







Connect Printer

Plugging in Printer

Plug power cord into receptacle **[1]** at rear of Printer. Internal power supply in Printer is rated 100 to 240VAC, 50/60 Hz.

CAUTION

DO NOT USE AN ADAPTER PLUGS OR EXTENSION CORDS TO CONNECT PRINTER TO WALL RECEPTACLE.

DO NOT USE OUTLETS CONTROLLED BY WALL SWITCHES.

DO NOT USE OUTLETS THAT SHARE SAME CIRCUIT WITH LARGE ELECTRICAL MACHINES OR APPLIANCES.

Connect to Computer

Printer connects to computer through **USB Port [2]**.
Network Port [3] for operating in a network environment.
See **"Network Connection Setup"** in **"Using Control Panel Touchscreen"**.

Turning Power ON and OFF

IMPORTANT!

CLOSE ALL COVERS AND DOORS BEFORE STARTING OR POWERING DOWN THE PRINTER.

IMPORTANT! START ONE PRINTER AT A TIME WHEN SIMILAR PRINTERS ARE ON THE SAME NETWORK.

Powering Up Printer:

1. **Press Main Power Switch on Rear Panel.**
2. **Press Power Button on Control Panel.**

Powering Down Printer:

CAUTION

WHENEVER POWERING DOWN UNIT, ALWAYS:

1. **CLOSE ALL COVERS.**
2. **PRESS POWER BUTTON ON CONTROL PANEL.**
3. **WAIT FOR PRINTER TO STOP PROCESSING.**
4. **THEN PRESS MAIN POWER SWITCH ON REAR PANEL.**

Install Printer Driver

For Printer software to operate properly, check that computer system meets **minimum requirements:**

- **Operating System:** Windows 8/8.1, Windows 10 (*Desktop Mode only*). Windows XP, Windows Vista, Windows 7. Supports 32 and 64 bit systems. (*You must have administrative privileges on system*.)
  NOTE: Windows 8, 8.1 and Windows 10 will only work in desktop mode. No Windows 8 or 10 metro apps will be supported (*applications that work ONLY in Windows 8 or 10 environments*).
- **Microprocessor:** Pentium II, 2 GHz minimum (*Pentium Dual Core, 2.5 GHz or better, is optimal*)
- **System memory:** 2 GB minimum; or as recommended for your operating system.
- **Free hard-disk space:** At least 10 GB.
- **Web Browser:** Firefox recommended; Chrome, Safari, and Opera also supported.
- CD/DVD drive.
- **USB port (2.0/3.0):** (*Ports will be identified as "USB" or "Enhanced" in Device Manager*)
- Microsoft .Net Framework version 3.5 (*for 32 bit systems*) or Microsoft .Net Framework version 4 (*for 64 bit systems*) must be installed. **NOTE:** Even if a higher .NET Framework version is installed; version 3.5 or 4 must also be installed, or Toolbox will not open.

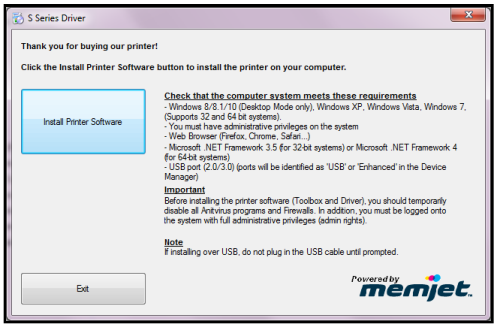
IMPORTANT: Before installing Printer software (*Toolbox and Driver*), **temporarily disable all antivirus programs and firewalls**. In addition, you must be logged onto system with full administrative privileges (*admin rights*). **NOTE:** If installing over USB, **do not plug in USB cable until prompted**.

Install Over USB Connection

This is the procedure for installing the Print Driver over the USB connection. The procedures for installing the Print Driver over a network connection follow.

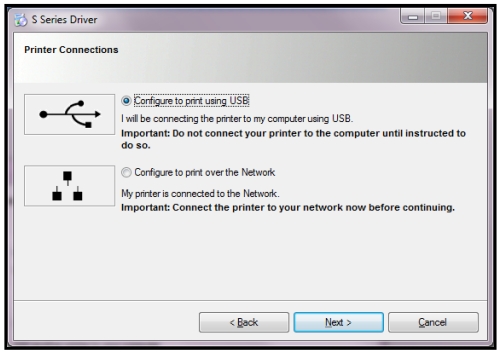
1. Check that Printer is plugged in and turned OFF. **Disconnect USB connection if already plugged in.** Install disk supplied with Printer in your CD drive. When **AutoPlay** Window opens, click **"Run Setup.exe"** to start.

2. **Install Printer Software.** Make sure computer system meets **minimum requirements** and you followed other instructions listed on screen.
   Click **"Install Printer Software"**.



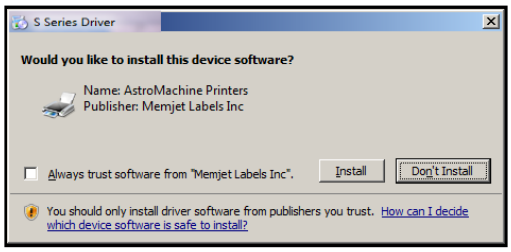
3. **License Agreement.**
Check "I accept…" then click **"Next>"**.

4. **Printer Connections.** Click **"Configure to print using USB"**. Then click **"Next>"**.

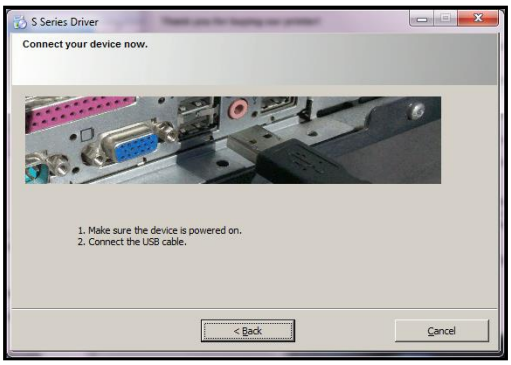


5. **Installing Printer Software.**
Software download begins.

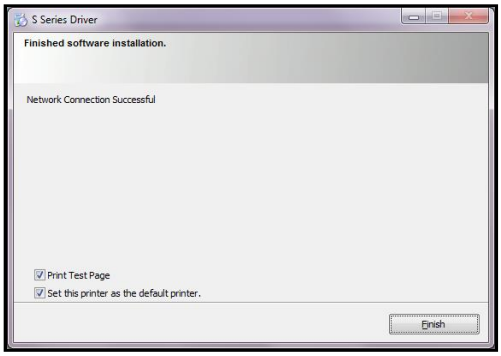
6. **Would You Like to Install This Device Software?**
Click **"Install"**.



7. **Connect Device Now.** Turn Printer ON and connect USB cable. **Don't click on either button.**
Software will finish installing.

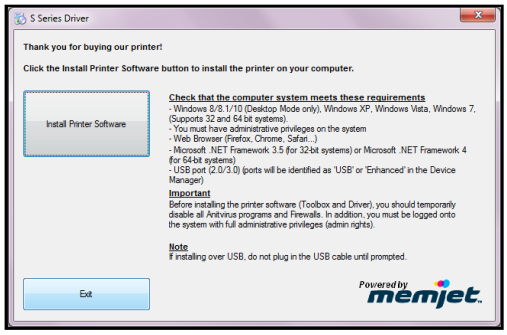


8. **Finished software installation.** Do not check the **Print Test Page** as Printer is not set up yet. You can check "Set this printer as the default printer" at this time.
Click **"Finish"**.



9. **Install Printer Software.**
Click **"Exit"** to close CD.

10. Restart computer to complete installation.

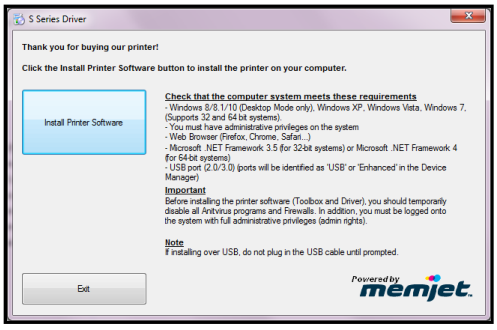


Install Over Network Connection, Version A

Use this procedure to install the Print Driver over the Network connection. This procedure works for almost all networks that allow automatic assignment of the IP address (*factory default*).
NOTE: Copy the 12-digit Hardware ID number listed on the Printer(s) on the label located below the Ethernet port so you can identify the Printer(s) in a later step.

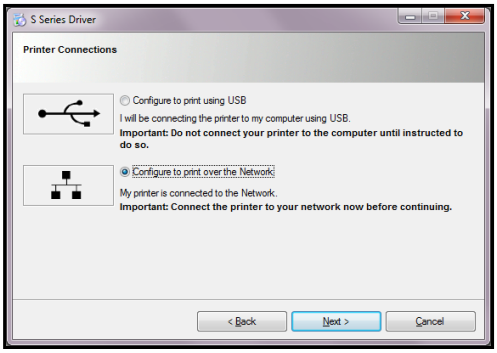
1. Check that Printer is plugged in and turned ON. **Make sure the Ethernet (*network*) cable is plugged into the Ethernet port on the Printer.** Install disk supplied with Printer in your CD drive. When **AutoPlay** Window opens, click **"Run Setup.exe"** to start.

2. **Install Printer Software.** Make sure computer system meets **minimum requirements** and you followed other instructions listed on screen.
Click **"Install Printer Software"**.



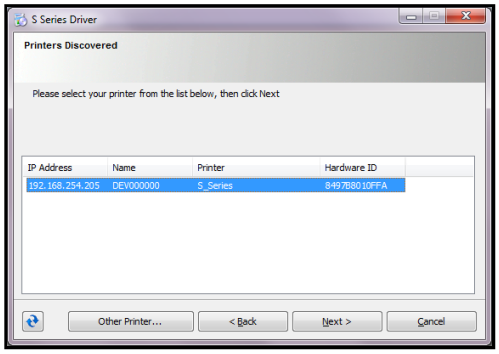
3. **License Agreement.**
Check "I accept…" then click **"Next>"**.

4. **Printer Connections.** Click **"Configure to print using the Network"**. Make sure the Printer is connected to the Network. Then click **"Next>"**.

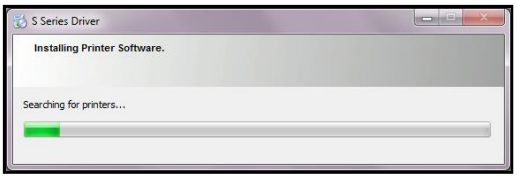


5. **Printers Discovered.** A list of available Printers opens. Check the **Printer** column to verify you have an **S-Series** printer. Check the **Hardware ID** column and match the number listed to the number you copied previously from the Printer label. Select that Printer. Click **"Next>".**

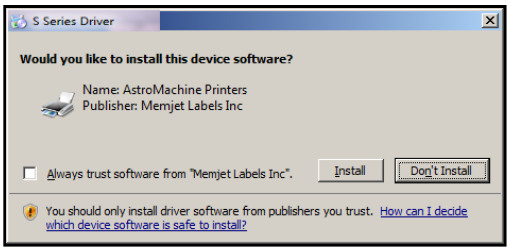
NOTE: If the Printer does not appear on the list, the IP address may have to be assigned manually. See "Install Over Network Connection, Version B".



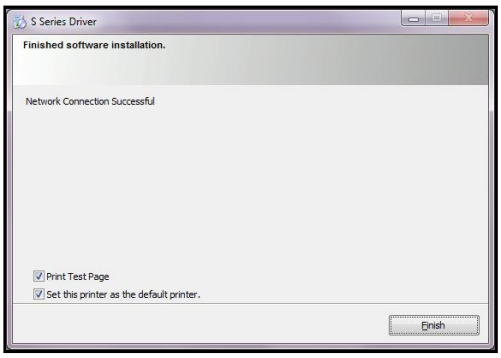
6. **Installing Printer Software.**
Software download begins.



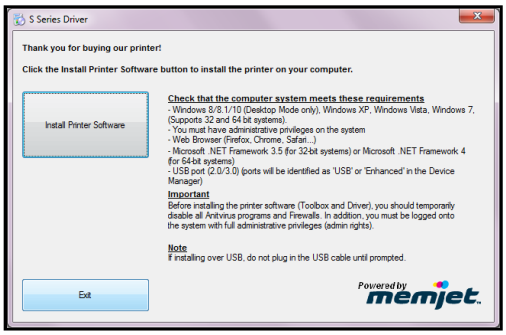
7. **Would You Like to Install This Device Software?**
Click **"Install"**.



8. **Finished software installation.** Do not check the **Print Test Page** as Printer is not set up yet. You can check "Set this printer as the default printer" at this time.
Click **"Finish"**.



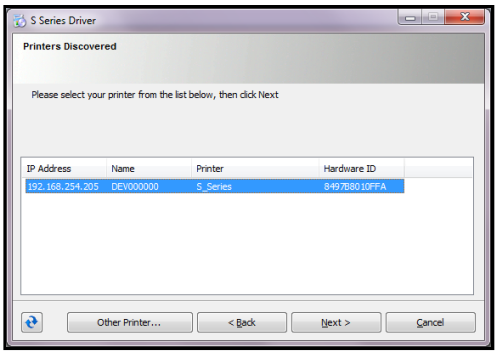
9. **Install Printer Software window.**
Click **"Install Print Software"** again to install software on another Printer, or click **"Exit"** to close the CD.



Tip: To help distinguish between multiple S-Series Drivers on your system; open the **"Printers and Faxes"** (*Devices and Printers*) folder and rename the Printers. **For example,** rename a network-configured printer **"S Series (Network-1)"** and a USB-configured printer **"S Series (USB)"**.

To open the "Toolbox" utility over an Ethernet (network) connection:
Click **Start**, **All Programs**, **Memjet**, **S Series Driver**, **Toolbox**.

If more than one copy of the S-Series Driver is installed, you will have to choose which device you want the **Toolbox** to connect to. To help choose the proper device, you can identify the Printer(s) using the **Hardware ID** you copied earlier or you can rename the Printer(s) as outlined in the **Tip** above.



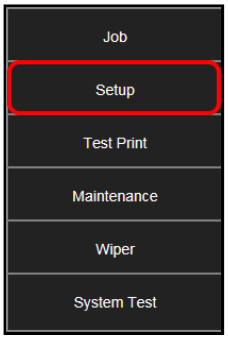
Example:

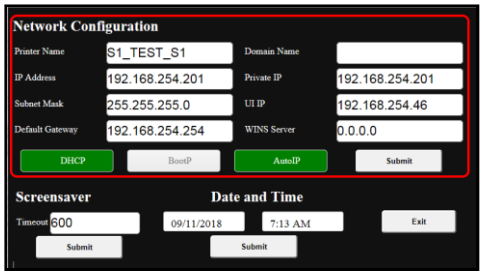
S-Series Driver configured for USB: suggested name **"S Series (USB)"**
S-Series Driver (Copy 1) configured for Network: suggested name **"S Series (Network-1)"**.
S-Series Driver (Copy 2) configured for Network: suggested name **"S Series (Network-2)"**.

Install Over Network Connection, Version B

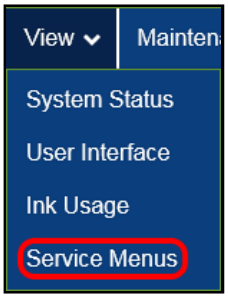
Use this procedure to install the Print Driver over the Network connection on **Static IP** systems requiring that an IP address is assigned manually. **NOTE: Copy the 12-digit Hardware ID number listed on the Printer(s) on the label just below Ethernet port so you can identify the Printer(s) in a later step. NOTE: This procedure can also be performed from the Touchscreen or Toolbox.**

1. **Touchscreen:** In **"Menu"**, tap **"Setup"**. On the **Setup** screen, tap **"Network Config"**. The **"Network Config"** screen opens. Uncheck the DHCP button. You or your IT person can enter the necessary information under **"Network Configuration"**. Tap **"Submit"**.

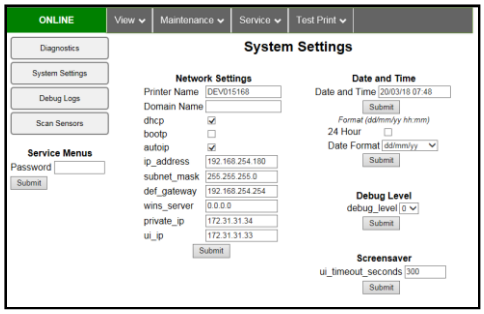




Toolbox: Install the Printer Software over a USB connection using a nearby computer or laptop. Once the Driver and Firmware are installed on the Printer, use that same computer to open the **Printer Toolbox**.



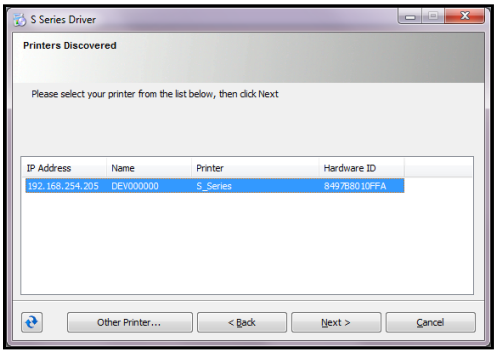
In the **"View"** drop-down menu, click **"Service Menus"**. When the **Diagnostic** screen opens, click the **"System Settings"** button.



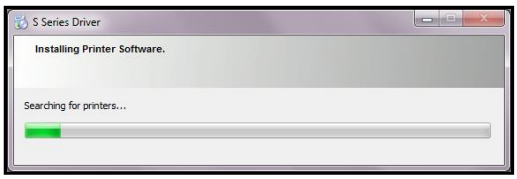
The **"System Settings"** screen opens. Uncheck the DHCP button. Your IT support person can fill in the necessary information under **"Network Settings"** (*or you can get it from them*.) Click **"Submit"**.

NOTE: Disconnect the USB from the local computer or laptop. If not using that computer for printing, the S-Series Software can be uninstalled.

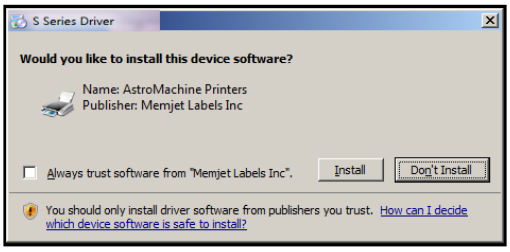
2. Connect the Ethernet cable to the Ethernet port and rerun the **"Install Over Network Connection, Version A"** procedure. The Printer should now appear on the **"Printer s Discovered"** window. The Printer can still be identified by its **"Hardware ID"**, but the new IP address entered by your IT support person (*or operator*) is shown. Select the desired Printer and click **"Next>"**. Follow the remaining steps.



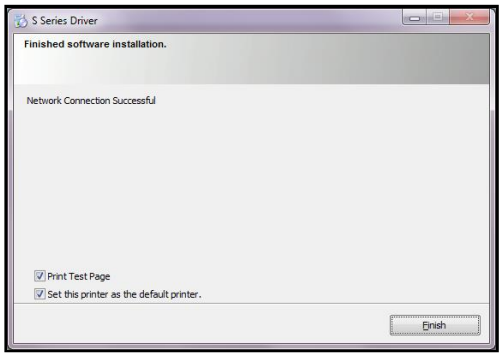
3. **Installing Printer Software.**
Software download begins.



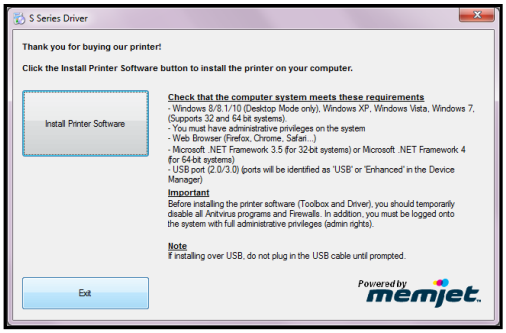
4. **Would You Like to Install This Device Software?**
Click **"Install"**.



5. **Finished software installation.** Do not check the **Print Test Page** as Printer is not set up yet. You can check "Set this printer as the default printer" at this time.
Click **"Finish"**.



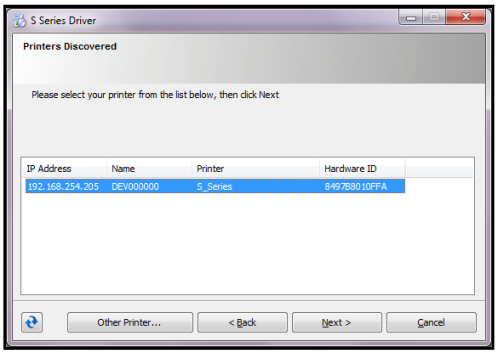
6. **Install Printer Software window.**
Click **"Exit"** to close the CD.



Tip: To help distinguish between multiple S-Series Drivers on your system; open the **"Printers and Faxes"** (*Devices and Printers*) folder and rename the Printers. **For example,** rename a network-configured printer **"S Series (Network-1)"** and a USB-configured printer **"S Series (USB)"**.

To open the "Toolbox" utility over an Ethernet (network) connection:
Click **Start**, **All Programs**, **Memjet**, **S Series Driver**, **Toolbox**.

If more than one copy of the S-Series Driver is installed, you will have to choose which device you want the **Toolbox** to connect to. To help choose the proper device, you can identify the Printer(s) using the **Hardware ID** you copied earlier or you can rename the Printer(s) as outlined in the **Tip** above.

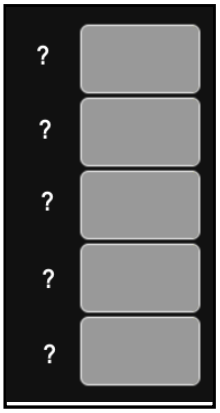


Example:

S-Series Driver configured for USB:
suggested name **"S Series (USB)"**
S-Series Driver (Copy 1) configured for Network: suggested name **"S Series (Network-1)"**
S-Series Driver (Copy 2) configured for Network:
suggested name **"S Series (Network-2)"**

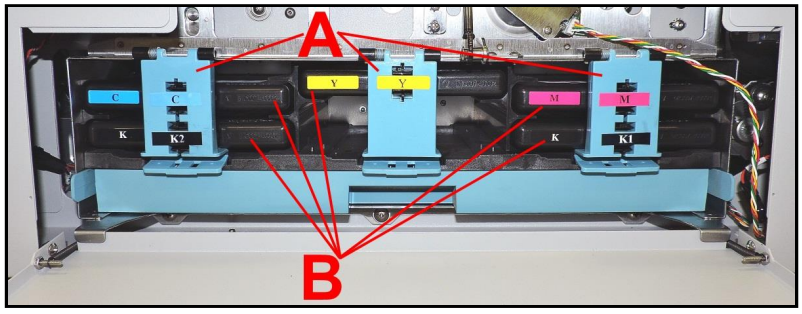
Install Ink Tanks

Printer uses one Printhead Cartridge and five Ink Tanks (*two Black, one Cyan, one Magenta, and one Yellow*).



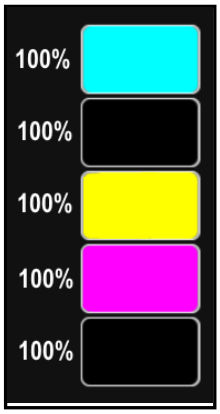
1. **Look at the Control Panel Touchscreen.**
   Ink Tank status information appears in left side of the Touchscreen. Note that the **Ink Tank** indicator boxes are empty. **NOTE:** The question marks indicate that no Ink Tanks are detected by the Printer.

2. **Open the Ink Tank Door** (*hinged at bottom*).
   (*Disconnects Printer communication with Ink Tanks and allows safe installation and replacement.*)
   Open Ink Tank Latches **[A]**.



3. Remove new Ink Tank(s) from packaging.

4. Insert Ink Tanks (*labels up*) into appropriate color slots **[B]**. Close Ink Tank Latches.
   INSTALLATION TIP: Make sure Ink Tanks seat properly.
   Insert Ink Tank into appropriate Ink Station, then pull Ink Tank back about an inch and push forward firmly to insure that Ink Nozzles penetrate seals on Ink Tanks.



5. **Close Ink Tank Door.** Ink colors fill in as Ink Tanks are installed. If ink colors do not fill in after a few seconds, open Ink Tank Door again and reinstall Ink Tank(s).

WARNING!

Ink in Ink Tanks may be harmful if swallowed. Keep new and used Ink Tanks out of reach of children. Discard empty tanks immediately.

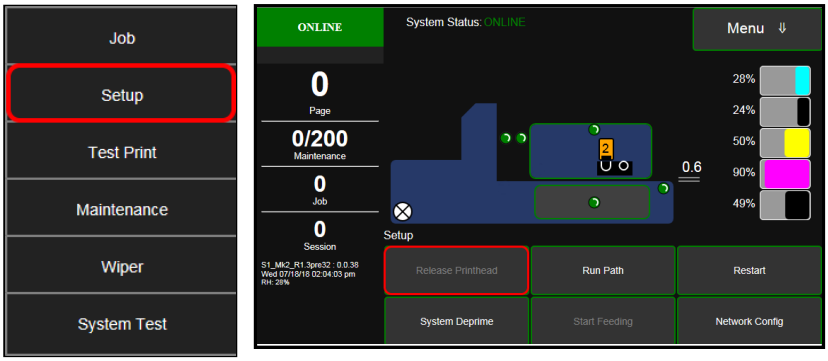
First Time Install Printhead Cartridge

Printhead Cartridge is a delicate precision device. Handle with extreme care to avoid damage and issues that could degrade print quality.

CAUTION

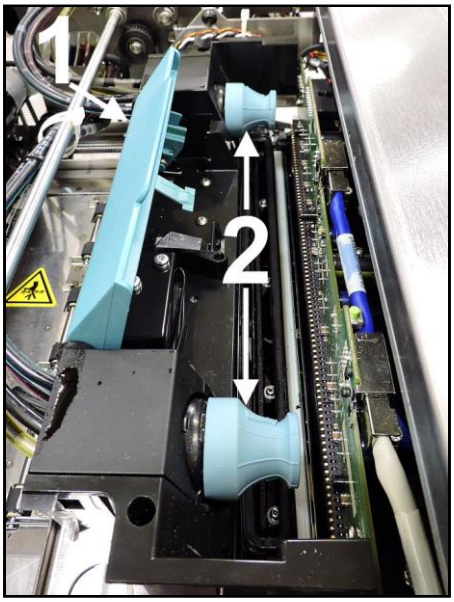
- **Use electrostatic discharge (ESD) protection when handling.**
- **Hold Printhead Cartridge by handles ONLY.**
- **DO NOT touch ink couplings, nozzle surface or electrical contacts.**
- **DO NOT unpack Printhead Cartridge until Printer is ready for installation. Once unwrapped, delay in installing Printhead can compromise print quality due to dehydration.**
- **DO NOT place an unwrapped Printhead on any surface before installing. Protect Printhead from scratches, dust, fibers, dirt and other contaminants at all times.**

1. **Open Top Cover.** On the Touchscreen, open the **Setup** dropdown from **Menu**. Press **Release Printhead**. Printer runs, then Latch **[1]** pops open. **NOTE: Remove Cap Protectors [2] on Ink Nozzles. Be sure to open the Latch fully to retract the Ink Nozzles.**



CAUTION

DO NOT PRY OR MANUALLY LIFT THE PRINTHEAD LATCH OR THE LATCH MAY BREAK. ONLY OPEN THE LATCH USING THE RELEASE PRINTHEAD BUTTON ON THE TOUCHSCREEN OR IN THE PRINTER TOOLBOX.

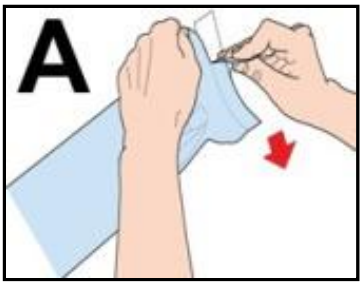


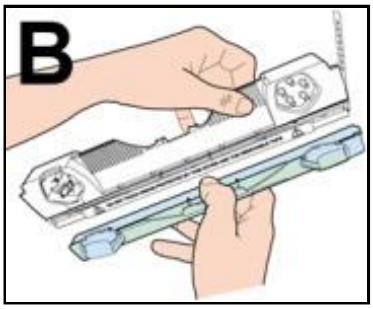
2. **[A] Carefully remove Printhead Cartridge from foil packaging**. Tear foil at notch or cut the end with scissors.

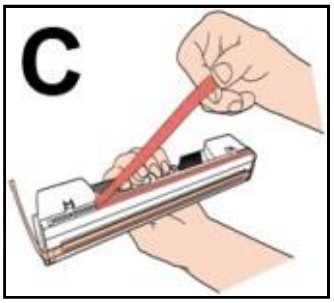
   [B] Remove protective plastic cover. Hold Printhead by handle and unclip cover from Printhead.

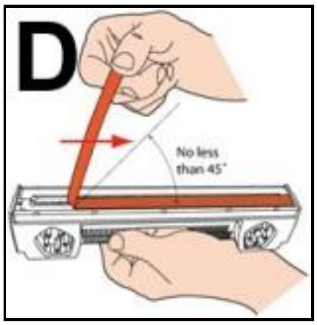
   [C] Remove protective strip from Printhead Electrical Contacts. **Once removed, DO NOT allow strip to touch electrical contacts.**

   [D] Remove protective strip from Printhead Nozzles. Hold Printhead by the handle. Pull strip tab and slowly peel strip from Printhead. **DO NOT pull strip at less than a 45° angle from Printhead surface. DO NOT allow removed strip to touch Printhead Nozzles.**

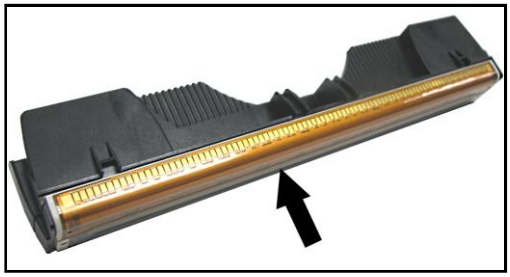




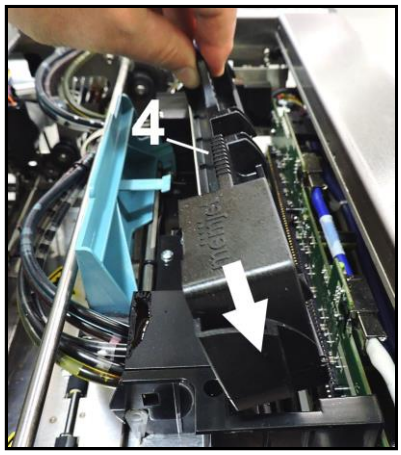


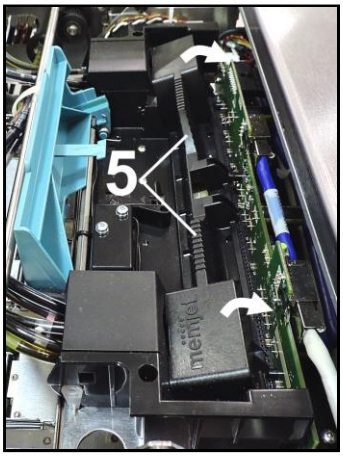


3. **Wet Printhead Surface. (*Ensures that Printhead will prime correctly*.). Moisten Printhead nozzles using distilled water and a damp, lint-free cloth, wiping end to end. (*Gray strip located below orange strip.*) Take care not to damage copper contacts, metal plate, or gold Printhead surface.**

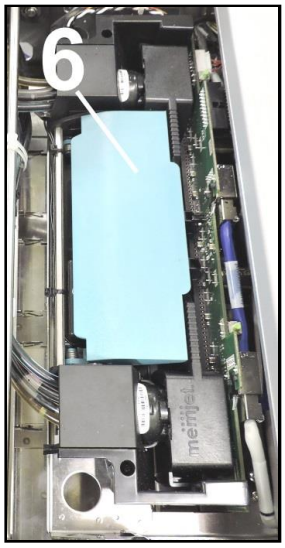


4. Carefully insert Cartridge into compartment at an angle **[4]**, with Printhead surface facing down and Ink Nozzles facing Ink Hoses. Once seated, gently tilt Cartridge back until it snaps into an upright position **[5]**. **DO NOT FORCE Cartridge into position.**



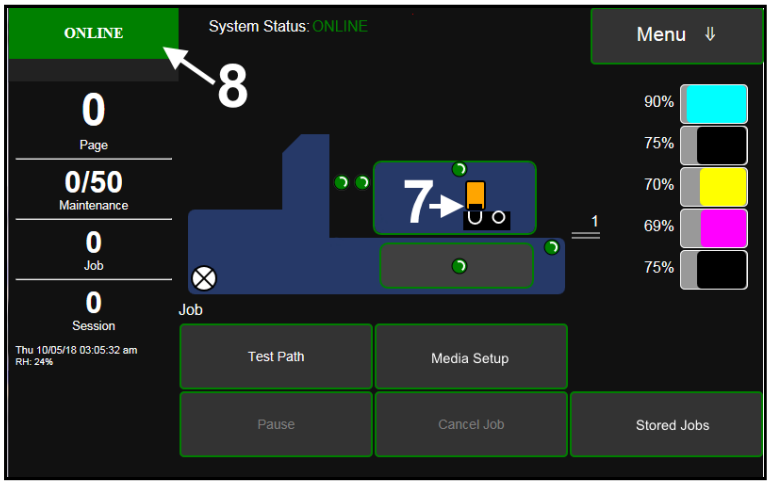


5. **Close Printhead Latch [6]**. Printer starts up and primes ink into Printhead (*this may take a few minutes*.) Make sure ink is flowing through hoses.



6. **Watch the Control Panel Touchscreen.** Check that the Printhead icon **[7]** in Printer image is primed (*solid color*).

7. When **ONLINE [8]** appears, the Printer is ready for use. Close the Top Cover.
NOTE: If the Printhead icon continues to display an outline or a question mark (?) try the following procedures:



[1] Printhead icon shows an outline (*Printhead unprimed)*: Click **"Circulate Ink"** under **"Maintenance"** drop-down in Printer Toolbox. If issue persists, try the **"Install Printhead"** procedure again. If this does not clear up the issue, call for technical support.

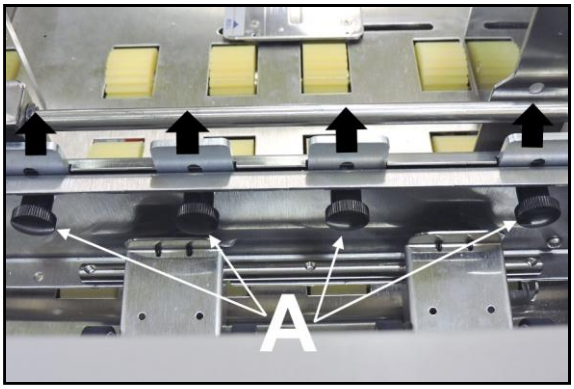
[2] Printhead icon displays a question mark (*Printhead not recognized*): Try the **"Install Printhead"** procedure again. If the issue continues, call for technical support.

NOTE: Printer may take up to 12 minutes to set itself up during initial startup. This is normal.

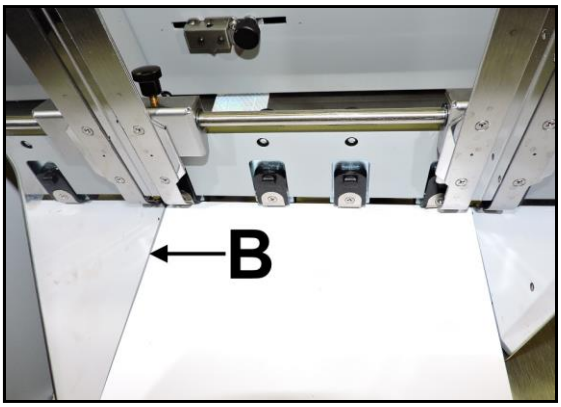
Set up Feed

Printer is equipped with four Sheet Separators, two Side Guides (*one adjustable*), a Rear Media Guide and an adjustable Feeder/Media Sensor.

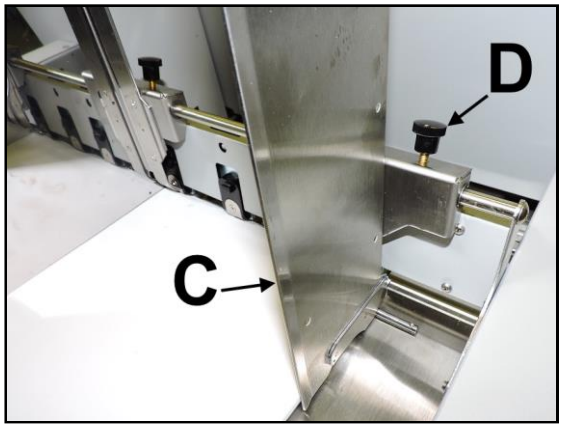
1. Loosen locking screws located behind Sheet Separators **[A]** and raise Separators; then tighten the locking screws to hold the Separators in the "Up" position.



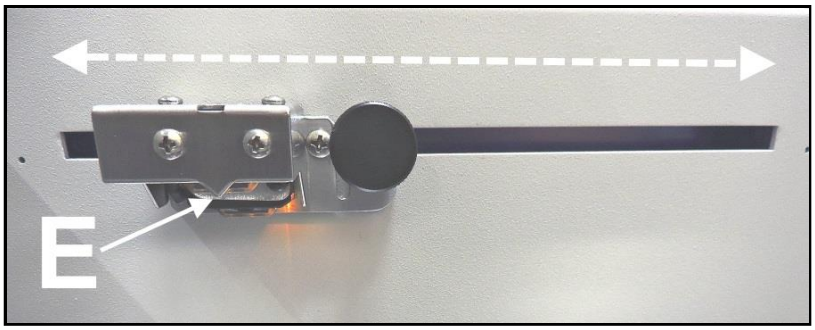
2. Place a single piece of media to be run under Separators. Always place media against Left-hand Media Guide **[B]**. Loosen Separator locking screw and allow Separator to settle onto media. Then tighten locking screw. Repeat for each Separator.



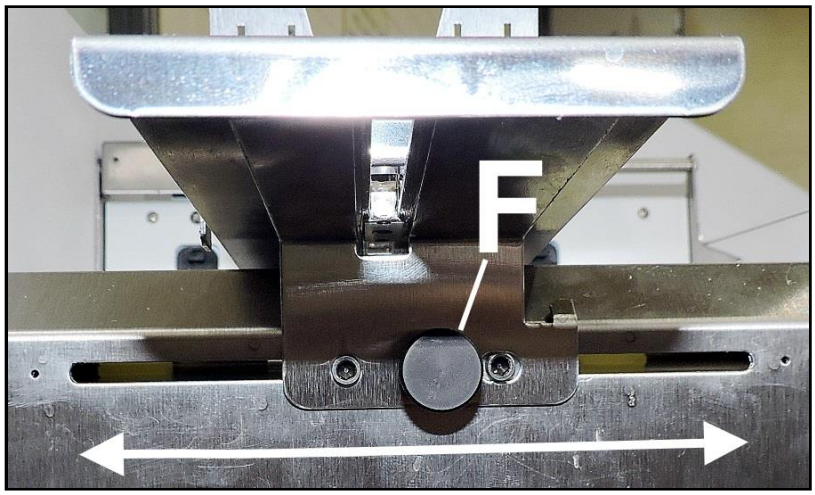
3. Position **Adjustable Media Side Guide [C]** so that it is about 1/32" from sides of media. Tighten locking knob on Side Guide **[D]**. Place a stack of media in machine. Press and hold **Paper** key to feed one piece through Separator. **NOTE: To prevent misfeeds and tearing, keep the Adjustable Media Side Guide at least 1/8" from the Side Frame.**



4. **Adjust Feeder/Media Sensor Assembly to media width.** Unlock and slide Sensor to align with media being used. Align edge of media with the pointer **[E]** on the Sensor Assembly. This is particularly useful when using very narrow media.

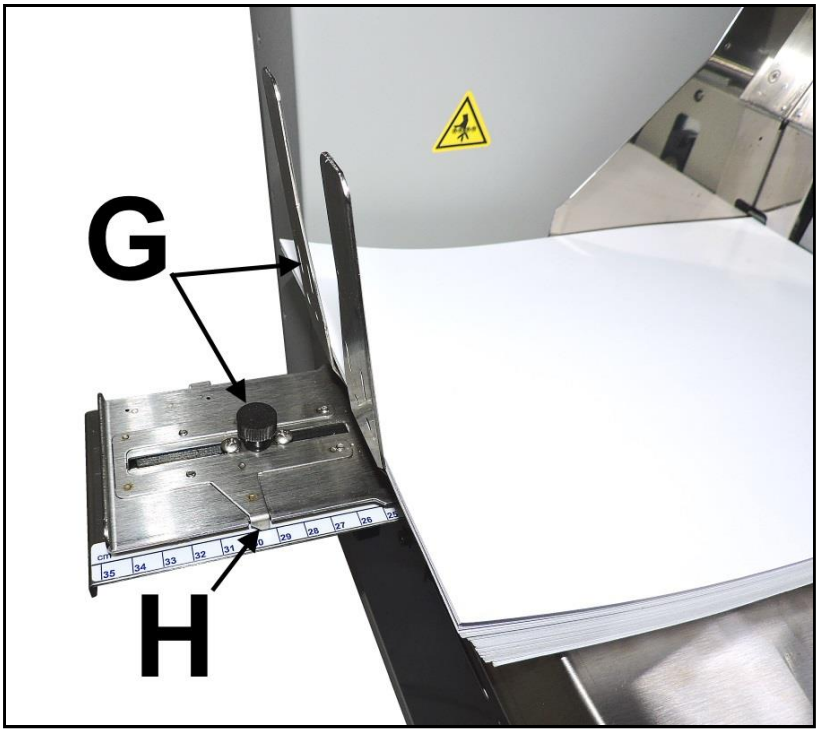


5. **Adjust Rear Guide Support** by using knob **[F]** to slide Guide right and left.
If experiencing feeding problems, slide the Rear Support Guide right or left to keep media aligned with Media Guides.



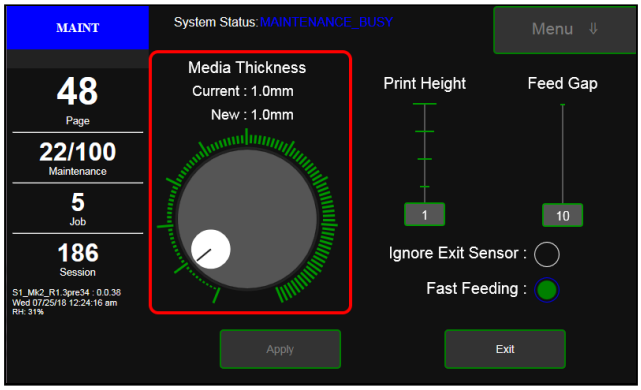
6. **Adjust Rear Media Guide [G]** by loosening locking screw and moving the Guide until the arrow **[H]** points to the length of the media being used on the scale attached to the Guide.

NOTE: Amount of media that can be stacked on Printer is determined by weight of material. Feeder may not feed larger and heavier media when stack is full. If so, reduce amount of media in stack until Feeder functions properly.



Adjust Media Thickness

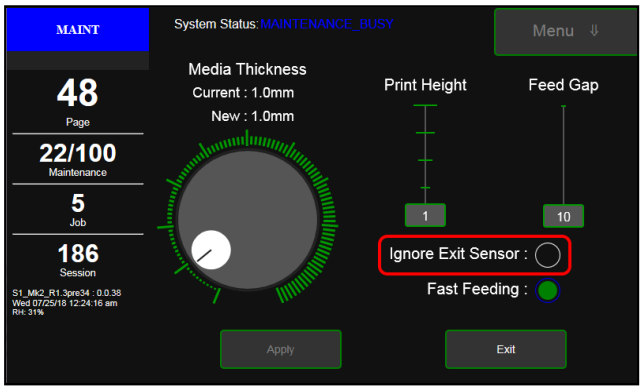
Before running media through the Printer; adjust the Clamshell height to accommodate your media using **"Media Thickness"**. See **"Using Media Setup"** in the **"Using the Touchscreen"** section.



Ignore Exit Sensor

If primarily running narrow media, (*such as #10 envelopes*), you can adjust the **Feeder Sensor** to allow you to move the left edge of the media to use the half of the Printhead that would normally be idle during these types of jobs. This also extends printhead service life if you are primarily printing this type of job. Before running media through the Printer; open the **Media Setup** screen on the Touchscreen and turn the **"Ignore Exit Sensor"** button ON. This will prevent the Printer from creating an ERROR when the media bypasses the **Exit Sensor**.

See **"Using Media Setup"** in the **"Using the Touchscreen"** section.



SECTION 3 – *Operating Printer*

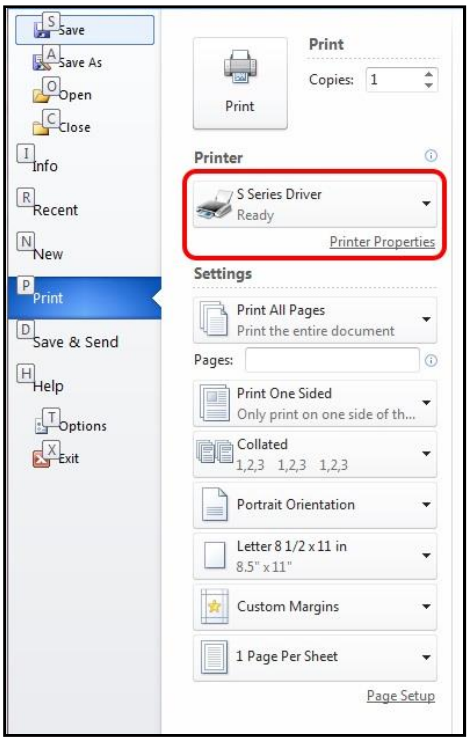
Once Printer Driver is installed and Printhead is primed, you are ready to start printing. Set up your job and send it to Printer. Printer will start and print.

Set the **Printer Driver** installed in Section 2 as default driver. It is then accessible through your applications (*such as Microsoft Word*). Other types of applications and database management software will work in a similar manner when using this Driver.

Printer Driver Properties

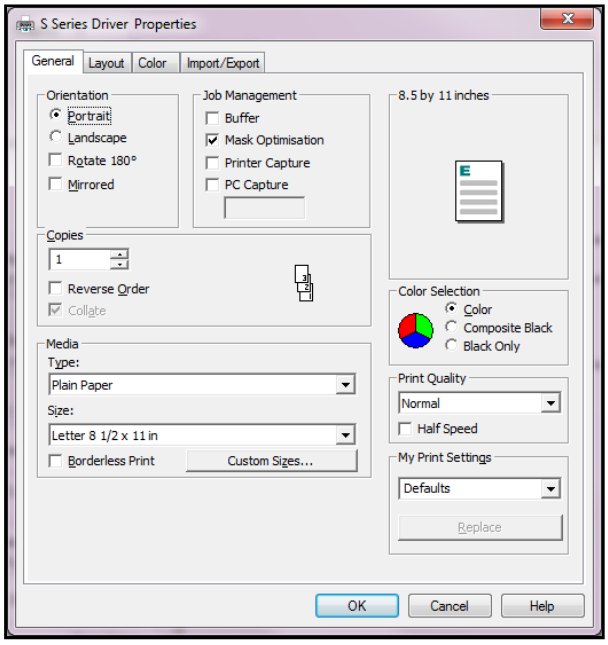
Printer Driver works the same as any other Printer Driver for Windows. It does have some enhancements to help maximize the Printer's ability to print variable addressed pieces quickly and efficiently.

Windows 8, 8.1, and 10: Once job is set up, click **File**, then **Print**. Window at right opens. Make sure **S Series Driver** is the selected Printer. Clicking **Printer Properties** opens **"General" Tab** window.



General Tab

General tab lets you select:

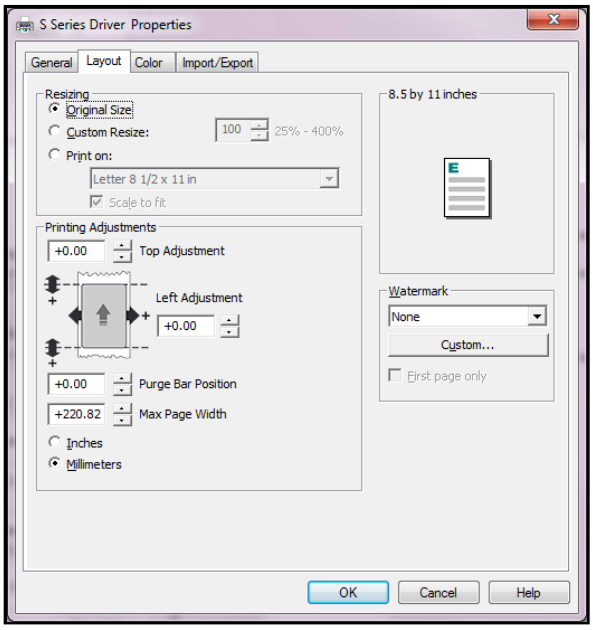


- **Orientation** – Portrait (*default*), Landscape, Rotate 180° and Mirrored.
- **Job Management** – **Buffer** loads entire print job before printing starts.
  Mask Optimization (*checked is default*) optimizes images for printing in most applications.
  NOTE: Some applications (*like FlexMail*) may display image boundaries when printed; unchecking **Mask Optimization** box eliminates these lines. (*Remember to check box when changing applications*.)
  Printer Capture – When selected, the Printer stores the print job in the Printer Job Library after the job is printed.
  PC Capture – When selected, saves a Print File (*.prn) on the PC (C:\Windows\Temp) for later use. (*Unchecked is default*.)
  NOTE: Use the box below the selection to name the file, otherwise the Printer assigns the current date and a numerical name.
- **Copies** – Enter the number of copies to be printed. **NOTE: Default setting (*Reverse Order unchecked*)** prints job starting with first page. Printing starts as soon as first page loads.
  Reverse Order allows job to start printing from last page. Since entire job has to load into Printer before printing starts, large jobs may take longer to load.
  Collate: When printing multiple copies of multi-page documents, checking the box allows all pages of the document to be printed in proper order before printing the next copy.
- **Media** – Choose a type of media or different size media than document was originally designed for.
  Type: Chart at right lists media profiles associated with type of media chosen.
  Sizes: 21 sizes are available. Document is automatically resized to fit new media.
- **Custom Size** lets you create and save a **Custom Size** to suit your needs. **NOTE: Do not exceed maximum paper size for Printer.**
- **Color Selection –** Set Printing for Color, Composite Black (*uses all colors to print Black*), or Black Only (*uses only Black ink*).
- **Print Quality** – Select **Normal** or **Best**. **Normal** is 1600 x 800 dpi. **Best** setting is 1600 x 1600 dpi, for use when high quality images are required. **"Speed"** allows you to adjust the Printer speed for the media being used (*i.e., slow the printing speed for higher quality on glossy stock*).
- **My Print Settings** – Access your saved custom print settings for various jobs.

MEDIA PROFILE	MEDIA TYPE
Plain Paper	Plain Paper Bright White Paper
Matte Paper	Presentation Paper Postcards Matte Brochure Matte Labels Matte Other Inkjet Paper Matte
Premium Matte Coated Paper	Premium Inkjet Paper Premium Photo Paper Matte
Glossy Paper	Photo Paper Semi-gloss Photo Paper Glossy Labels Glossy Postcards Glossy Brochure Glossy
Premium Glossy Paper	Premium Photo Paper Glossy

Layout Tab

Layout allows you change how document prints without changing original document.



- **Resizing** – Specify **Original Size** or **Custom**.

  Resize: Resizes original as a % of normal size. Printer prints document in size you selected regardless of paper size selected.

  Print on: Specify particular size of paper to print on regardless of size of original document. Checking **"Scale to Fit"** automatically resizes document to fit on new page size.

- **Printing Adjustments** – Make minor positioning changes to print area in relation to media if needed. Also set measurements to be in **Inches**, **Millimeters** or **Pixels**.
  NOTE: Printing Adjustments only works when Print Area is less than full print width (*less than 8.77"/222.8 mm wide*). See "Using Layout Tab Printing Adjustments" on next page.

- **Watermark** – Prints a light background watermark in paper while printing original document. When selected, **"First page only"** option prints watermark on first page, but not subsequent pages, unchecking prints watermark on all pages.

  Custom button lets you create a new watermark or edit an existing watermark, including font selection, color, size and printing angle.

Using Layout Tab Printing Adjustments

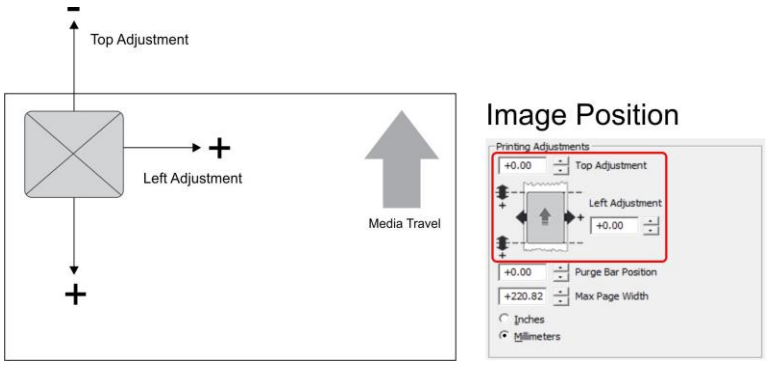
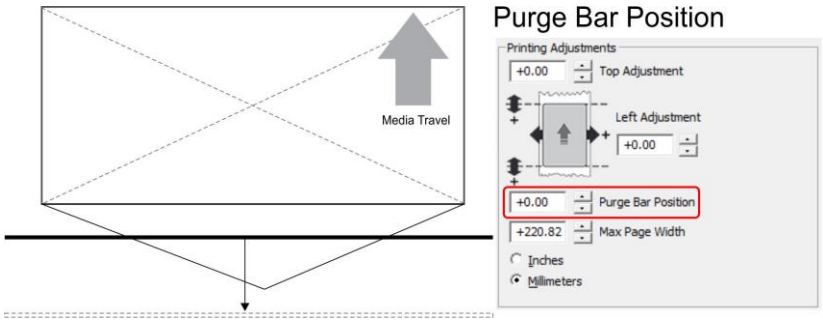


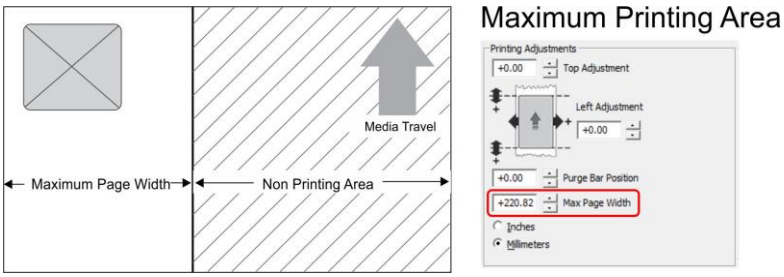
Image Position – **Top Adjustment** moves image up or down (*-5mm up to +200mm down*) from top left corner of media used. (*0.1mm increments*)

Left Adjustment moves image area away (*-3mm left to +200mm right*) from left edge of media.



Purge Bar Position* – In operation, Printhead spits a small amount of ink in gap between pieces to keep nozzles refreshed. For irregular-shaped pieces (*like an envelope flap*), Sensor may "read" lower end as the edge and spray on the tip of the flap instead of actual gap between pieces. This feature allows you to manually set gap (*in 0.1mm increments*) to account for extra length needed to reach actual gap.

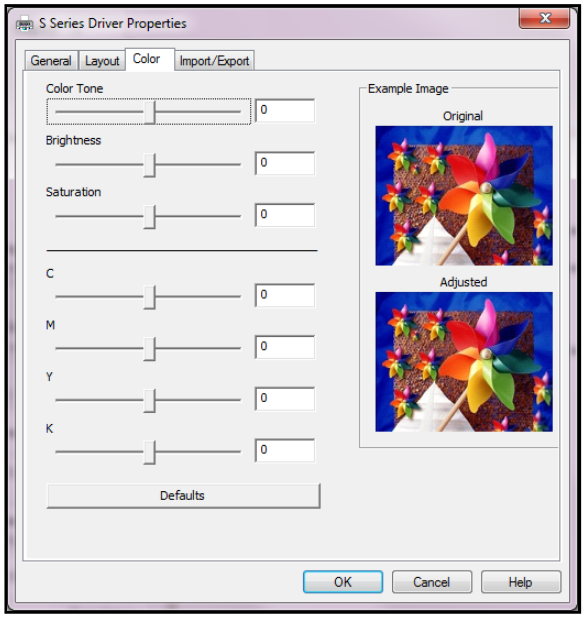
* See also **"Purge Bar Position"** in **Printer Toolbox** section.



Max Page Width – Sets width of actual print area. (*0.1mm increments*) This shuts off nozzles in non-printing area (*not used for printing*) and saves ink. **NOTE: Can be no larger than maximum print width for Printer (8.77"/222.8 mm).**

Color Tab

Color is used to adjust the color output of the Printer. Use the sliders to adjust **Color Tone, Brightness** and **Saturation.** The **C, M, Y, K** sliders adjust individual colors. Use **Defaults** to reset to **0** settings.

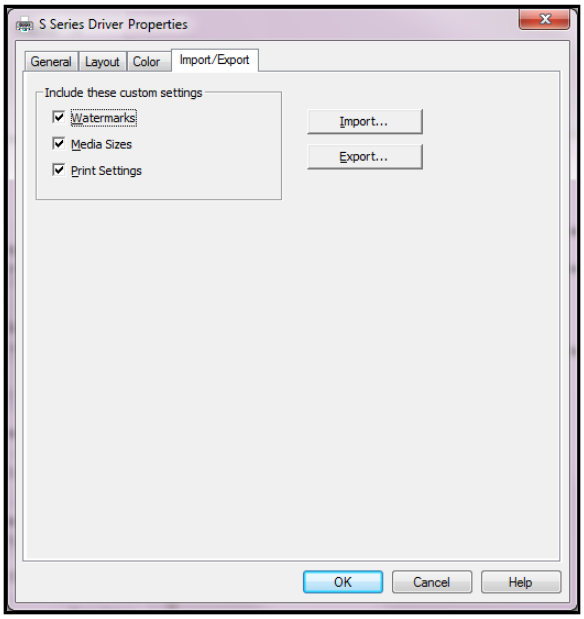


Import/Export Tab

Import/Export is used to preserve any custom Media Sizes, Watermarks and/or Print Settings you may have developed and saved for various jobs when you update Printer firmware.

- **Export –** Send custom settings to a holding file before downloading new firmware.
- **Import –** Return custom settings after firmware installation is complete.

The Import/Export tab is also used to import custom media size packages or watermarks from your dealer if they are available.



IMPORTANT!

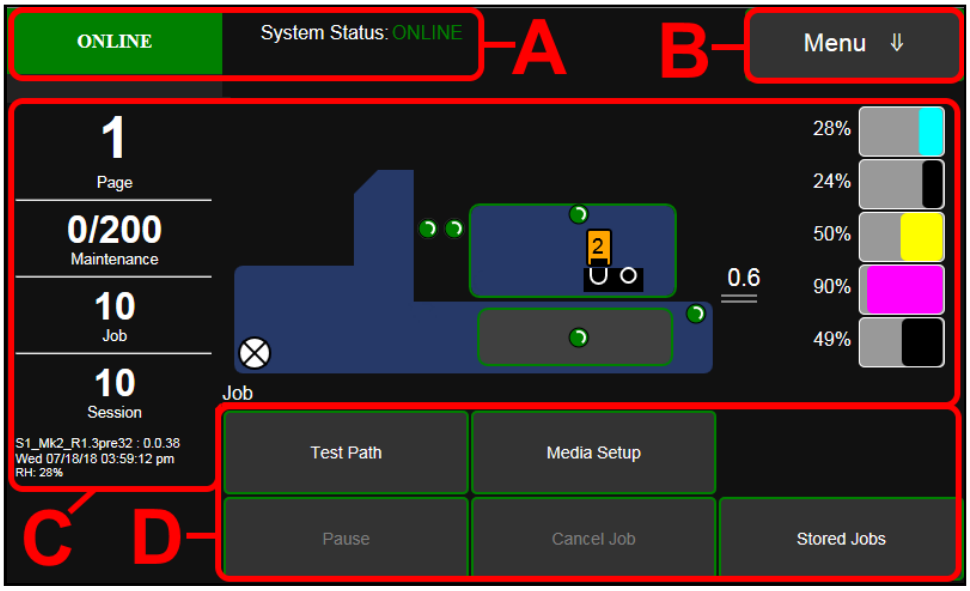
BEFORE UPDATING ANY PRINTER FIRMWARE, REMEMBER TO FIRST EXPORT ANY CUSTOM MEDIA SIZES, WATERMARKS OR PRINT SETTINGS YOU HAVE ADDED TO AN OUTSIDE HOLDING FILE. THIS PREVENTS THE LOSS OF YOUR CUSTOM SETTINGS.

Using Printer Touchscreen

Once the Printer Driver is installed, and the Printer is turned ON, you can use the **Printer's Touchscreen**. You can check Printer status, monitor ink usage, perform diagnostic checks, print reports and run maintenance tasks on the Printer from the Touchscreen. **NOTE:** These functions and more can also be operated remotely from a computer using the **Printer Toolbox**. See **"Using the Printer Toolbox"** following this section.

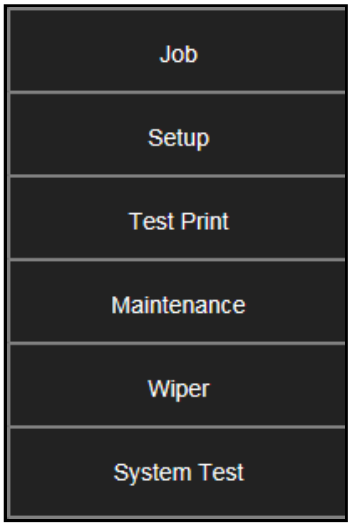
Tap the screen to view the **Printer Touchscreen.**

[A] System Status Indicator (*at top of screen*)
[B] Drop-Down Menu Options (*at top of screen*)
[C] Check Printer Status (*across middle of screen*)
[D] Five often-used control buttons (*at bottom of screen*)



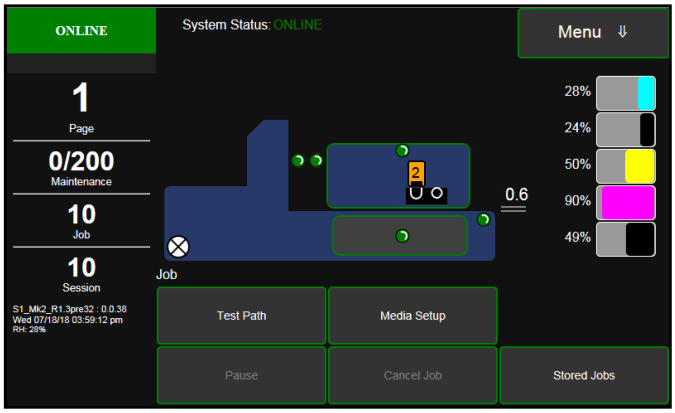
Drop-Down Menu Options

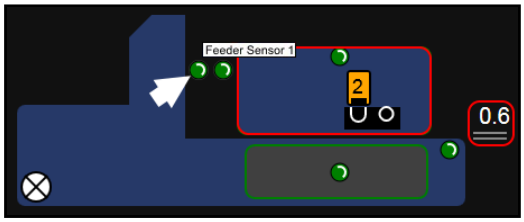
The **Menu** drop-down gives you five selections:
Job, Setup, Print, Maintenance, Wiper and **System Test.**

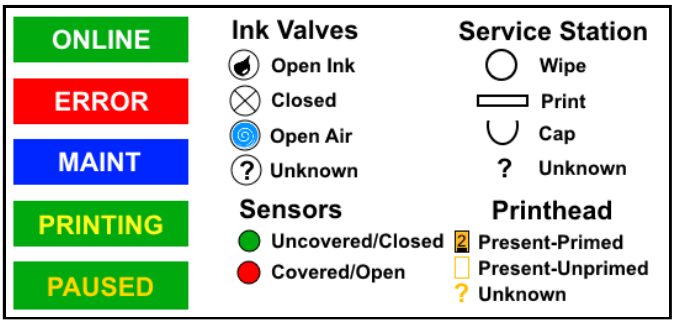


Job (Status Screen)

The opening screen provides information about the status of the Printer.







Status Indicator box shows Printer activity as **ONLINE**, **ERROR**, **MAINTENANCE**, **PRINTING** or **PAUSED**. The gray box (*below Status Indicator*) shows the name of the job being processed.

System Status displays current status of Printer and/or error message.

Page shows the page count for a given job.

Maintenance counts down pages until the next automatic Printhead maintenance is performed by the Service Station. **NOTE:** The count can be adjusted by opening the Printer Toolbox **User Interface** screen, **Mid-Job Servicing**. In this example, service is performed every 200 pages.

Job shows number of jobs printed (*resettable*), **Session** shows the total number of pages printed by the Printer (*resettable*) over the length of a Session (*shift, day, week, etc*).

Firmware: UI Version displays the current firmware and UI firmware (*Touchscreen*) versions currently installed on the Printer.

Date and Time shows current date and time. These can be configured and set by opening the **Setup** screen, then **Network Config**, then **Date and Time**.

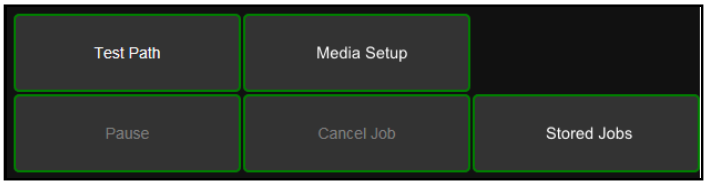
Relative Humidity (RH) displays the current ambient humidity detected near the Printer.

Printer Messages may appear under **RH (*Relative Humidity*)**.

Printer Icon: Shows status of Media Sensors located in the media feed path of the Printer. Also shows status of Ink Valves, Service Station, and Printhead. These can alert the operator to the type and location of a problem. (*See icon key above.*) Rolling over any of the status icons with your cursor pops up a description of that icon. **NOTE:** The indicator at the exit end of the Printer icon (*example, 3.5mm*) displays the current Clamshell print height setting. The number inside Printhead Cartridge icon displays current Printhead Cartridge print height setting.

Ink Levels displays percentage of ink remaining in each of the Ink Tanks.

CONTROL BUTTONS (*located along the bottom of the screen*): Provide quick access to often-used functions.



Test Path: Tap to run media through the Printer without printing to check the media feed set-up.

Pause: Tap to temporarily stop printing. Tap again to resume printing.

Media Setup – Raise or lower the Clamshell Assembly from 1mm to 10mm in 0.1mm increments to accommodate varying thicknesses of media. Also set the **Printhead Height** and **Media Gap**. **See "Using Media Setup" on the next page.**

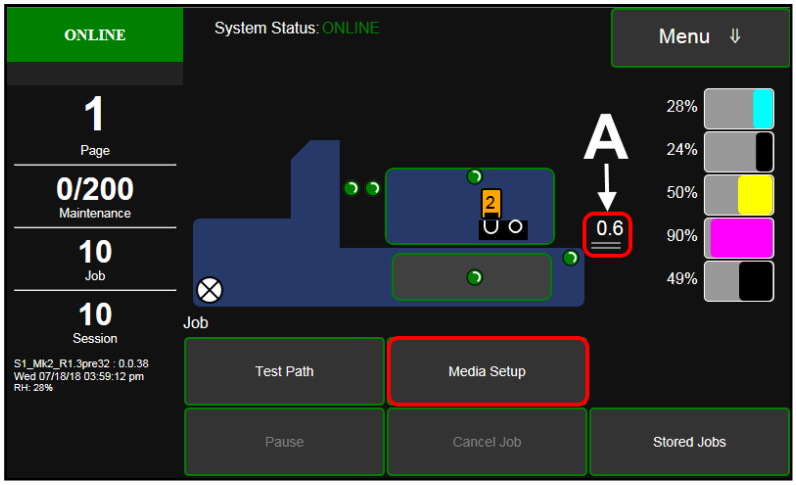
Cancel Job: Cancels a paused job from the printing queue. **Cancel** is unavailable unless the **Pause** button has been pressed first. **NOTE: Cancelled jobs must be reloaded before printing can resume.**

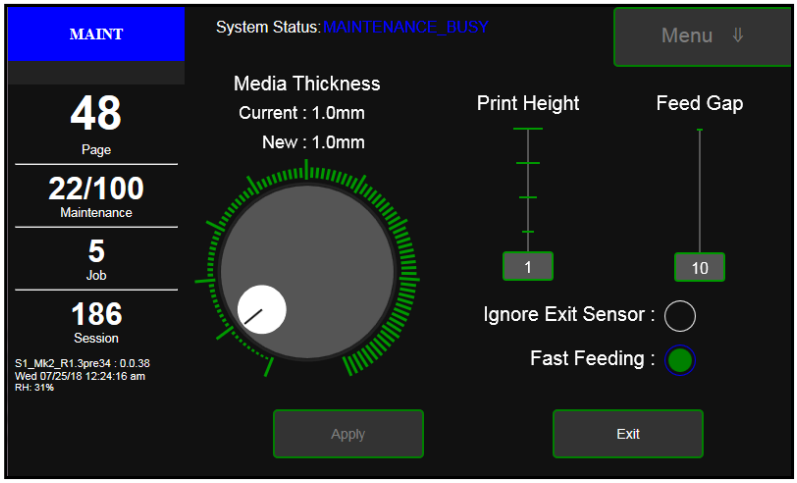
Stored Jobs: Opens the Printer's **Job Library** to access print jobs saved in the Printer's memory. You can also make changes to the job specifications and delete jobs as needed. **See "Using Stored Jobs". NOTE: If no jobs are saved on the Printer, this button will be inactive.**

Using Media Setup

To raise or lower the Clamshell to accommodate the media thickness of the media used for a particular job:

1. Tap the **Media Setup** button to open the **Media Setup** screen.
2. Move the small white circle around the edge of the larger blue circle to raise or lower the Printhead Assembly. (***Range:*** *1mm to 10mm in 0.1mm increments*).
3. Look at **New:** to see the amount the Printhead Assembly has been raised or lowered. If OK, press the **Apply** button to confirm the change. Press the **Exit** button to exit the screen.
   NOTE: The indicator at the exit end of the Printer icon **[A]** displays the current Printhead height setting.
4. Test thickness adjustment by running 1 piece of media. Adjust as necessary.





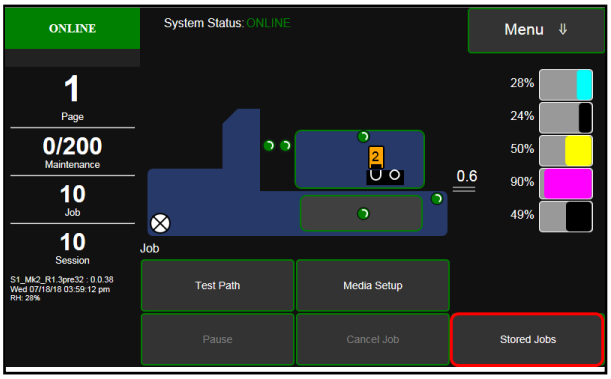
Print Height: Moves the Printhead in micro increments to raise it higher than normal above the media. 5 settings. **Range:** 1-Lowest, 5-Highest.

Feed Gap: Works with the **Fast Feeding** function. Allows you to adjust the gap between media to optimize printing speed and efficiency for different types and sizes of media. Increase (*up*) or decrease (*down*) the gap between media by moving the slider button. 10mm = Smallest Gap, 80mm = Largest Gap.
NOTE: Fast Feeding must be turned ON (*default is ON*) to use Feed Gap. With certain types of media, turning Fast Feeding OFF (*deactivating Feed Gap*), allows the Printer to set its own feed gap, which may work best for that type of media.

Fast Feeding: Fast Feeding button (*Green = ON, Blank = OFF*) must be turned on to use **Feed Gap** (*default is ON*). **NOTE: The Feed Gap function is inactive if Fast Feeding is turned OFF.**

Ignore Exit Sensor: Press the **Ignore Exit Sensor** button (*Green = ON, Blank = OFF*) to prevent causing a media feed error if the media bypasses the Exit Sensor. (*For example, if #10 envelopes are set up to use only the right side of the Printhead, the left edge will not pass under the Exit Sensor*). Deactivate this feature by touching the green button.

Using Stored Jobs (Print Job Library)



Print jobs can be saved to the Printer's **Job Library** by selecting the **Printer Capture** option under **Job Management** on the **General Tab** of the **Printer Driver**. You can access jobs saved in the Printer's **Job Library** using the **Stored Jobs** button on the **Jobs Screen**. **NOTE: If no jobs are saved on the Printer, this button will be inactive.**

To view the Printer's **Job Library**, press **Stored Jobs** on the **Jobs** Touchscreen. The **Jobs Library** opens.

Use the **View** button **[A]** to change the Library view from Icon to List.

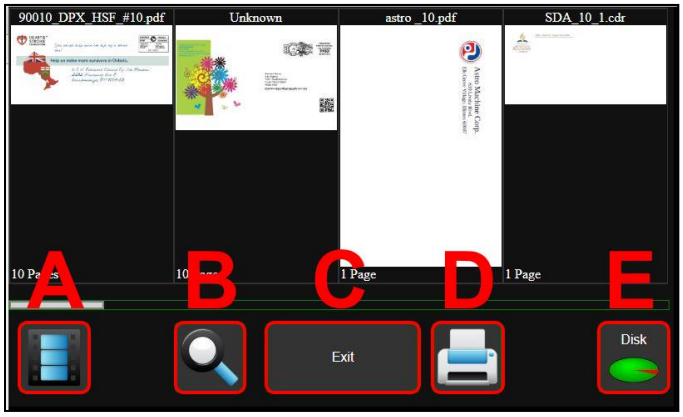
Use the **Search** icon **[B]** to search for a particular print job.

The **Exit** button **[C]** returns you to the **Jobs** (*Status*) screen.

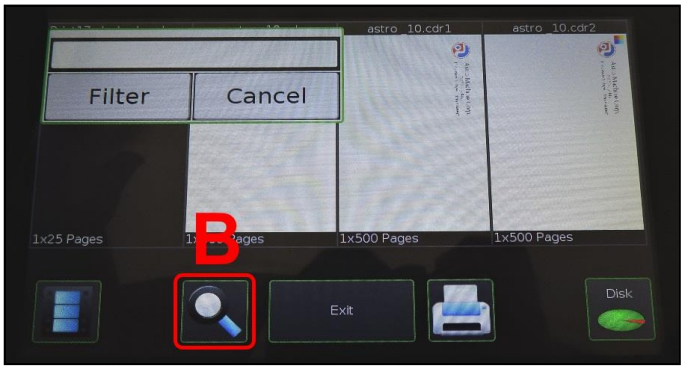
The **Printer** icon **[D]** prints the selected job.

The **Trashcan** icon **[E]** (*List view only*) deletes selected job(s) (*checked in the **Delete** column in the Jobs List*) from the Library.

The **Disk** icon **[F]** displays the available space left in the Printer's Job Library memory.



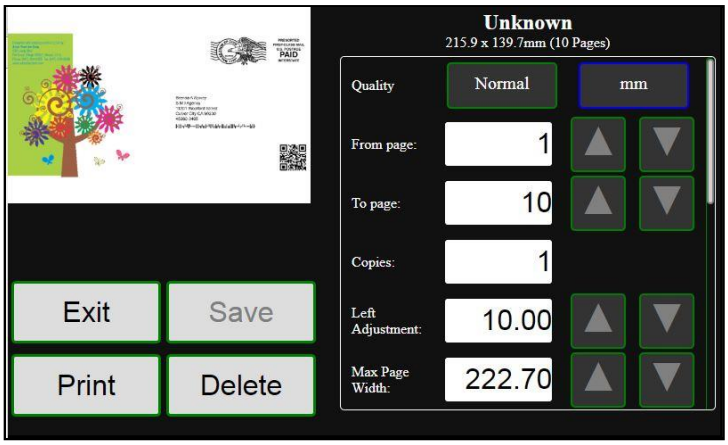
List View



Select a job by tapping the job icon or the list name. The **Job Print Options** screen opens.

The (4) **Control** buttons let you **Exit**, **Print**, **Save** or **Delete** the print job. The **Save** button saves any changes you make to the job specifications in the **Print Options** on the right side of the screen. If you do not tap **Save**, the print job reverts to its original settings when you **Exit**.

The **Print Options** allow you to change or adjust print specifications for the print job. Scroll down the screen to access all options. Tap inside the white box to open the keyboard.



Quality – Tap the button to select **Normal** or **Best**. **Normal** is 1600 x 800 dpi. **Best** setting is 1600 x 1600 dpi.

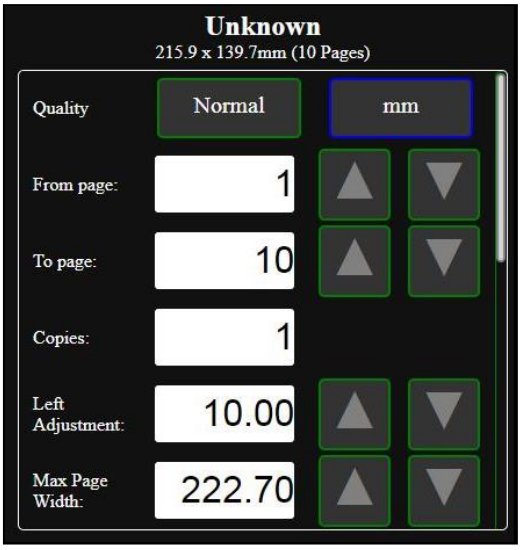
mm or inches – Tap the button to change measurements to millimeters or inches.

From page and **To page** – Select the first and last pages of a job (*or part of a job*) to print using the Up or Down arrows or tap inside the boxes to use the keyboard.

Copies – Enter the number of copies to be printed.

Left Adjustment – Moves the image area away (*-3mm left to +200mm right*) from the left edge of the media. (*Up or down arrows move in 0.1mm increments*)

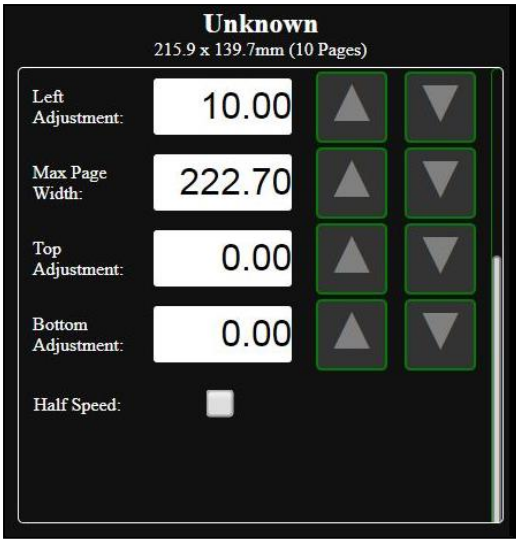
Max. Page Width – Sets the width of the actual print area. (*Up or Down arrows move in 0.1mm increments*) This shuts off nozzles in the non-printing area (*not used for printing*) and saves ink. **NOTE: Can be no larger than maximum print width for Printer (8.77"/222.8 mm)**



Top Adjustment moves image up or down (*-5mm up to +200mm down*) from top left corner of media used. (*0.1mm increments*)

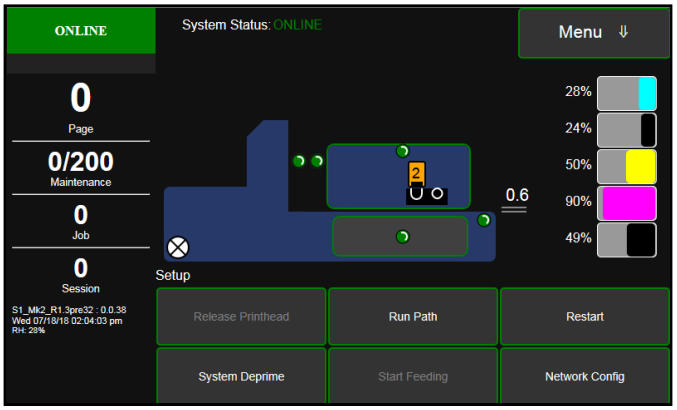
Bottom Adjustment – In operation, Printhead spits a small amount of ink in gap between pieces to keep nozzles refreshed. For irregular-shaped pieces (*like an envelope flap*), Sensor may "read" lower end as the edge and spray on the tip of the flap instead of actual gap between pieces. This feature allows you to manually set gap (*in 0.1mm increments*) to account for extra length needed to reach actual gap.

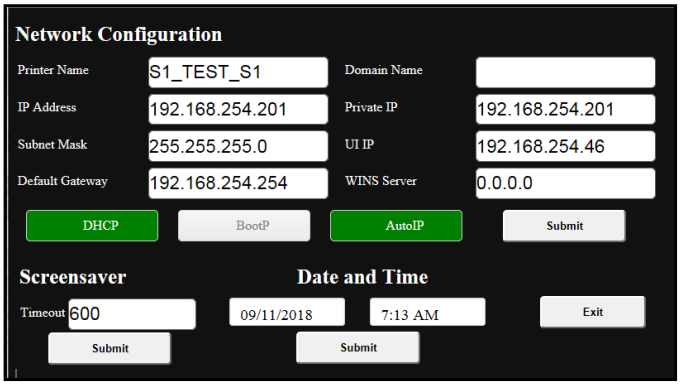
Half Speed – Check the box to reduce current print speed by half. For example, for pieces requinng longer drying time.



Set-up Screen

Tap the **Menu button**, then **Setup** button to open the **Setup** screen.





Release Printhead – Pumps ink back into Ink Tanks and opens Printhead Latch to remove or install Printhead Cartridge. **NOTE: Button is only active if the system is deprimed first.**

System Deprime – Pumps ink back into Ink Tanks prior to replacing the Printhead Cartridge or transporting the Printer.

Run Path – Test media path for obstructions. Press to test the media path.

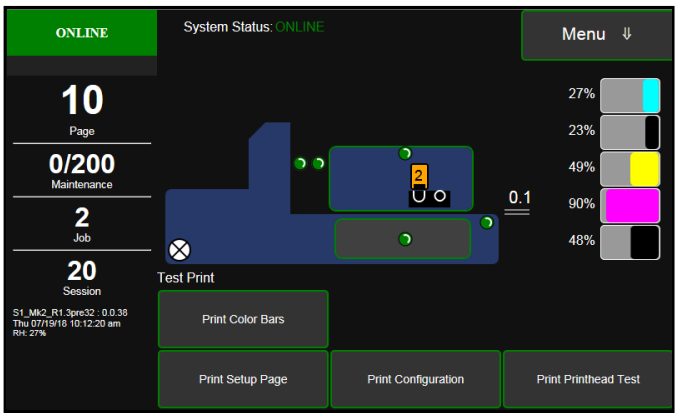
Start Feeding button. Test feed media. Press to start feeding media.

Restart – Restarts the Printer without having to perform the startup routine (*purging ink tanks, priming, etc*.)

Network Config button. Click to view, enter or change settings to connect the Printer to your network. You can also set the **Printer Date and Time**. (*See also **System Settings** in **Using Printer Toolbox***.)

Test Print Screen

Tapping **Menu**, then **Test Print** opens the **Test Print** screen options for printing different reports.



Print Color Bars – Prints a series of 7 color bars (*per Printhead*) to indicate how well Printheads are mixing colors and printing.

Print Setup page – Prints a printing pattern used for positioning image on the page.

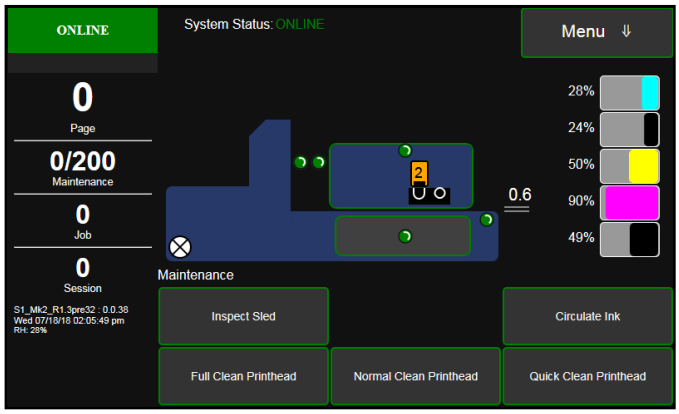
Print Configuration – Prints current Printer configuration including Firmware Version, Network Connection, Printer Serial Number and more for Printer.

Print Printhead Test – Prints color bands, text and patterns to check condition of Printhead's ink nozzles.

NOTE: Uses less ink than Print Color Bars.

Maintenance Screen

Tapping **Menu**, then **Maintenance** opens the **Maintenance** screen. These buttons operate functions for Printer and Printhead maintenance.



Inspect Sled – Moves Service Station out for inspection, cleaning or service.

Circulate Ink – Purges air from ink lines and primes system after replacing the Ink Tanks or the Printhead Cartridge.

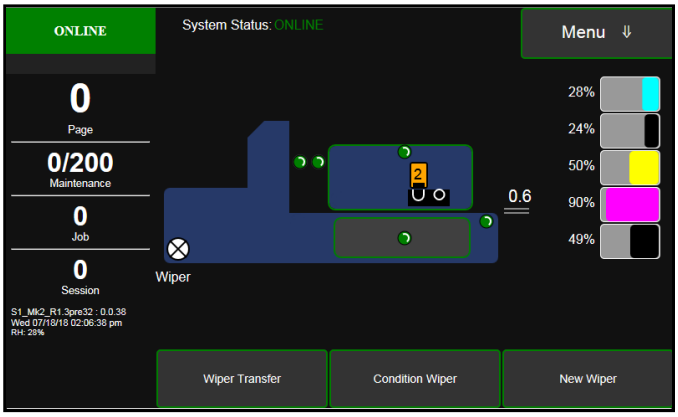
Full Clean Printhead – Runs cleaning routine multiple times for the most thorough flushing and cleaning of the Printhead.

Normal Clean Printhead – Runs cleaning and wiping routine twice for a thorough flushing and cleaning.

Quick Clean Printhead – Circulates ink; wipes and cleans Printhead Cartridge.

Wiper Screen

Tapping **Menu**, then **Wiper** opens the **Wiper** options screen. Selections are **Wiper Transfer**, **Condition Wiper** and **New Wiper**.



Wiper Transfer – Manually initiates a Wiper Transfer instead of waiting for a Transfer to automatically occur during normal operating cycles. Squeegees excess ink off of the Service Station Wiper Roller.

Condition Wiper – Resaturates, conditions and cleans the Wiper Roller with ink to remove dried residue if the Printer is left inactive for long periods of time.

New Wiper – Initiates a **System Deprime**. Moves Service Station out to remove and replace the Service Station Wiper Roller. Once the new Wiper is installed, the Printer primes the system with ink and conditions the Wiper to optimal operating condition.

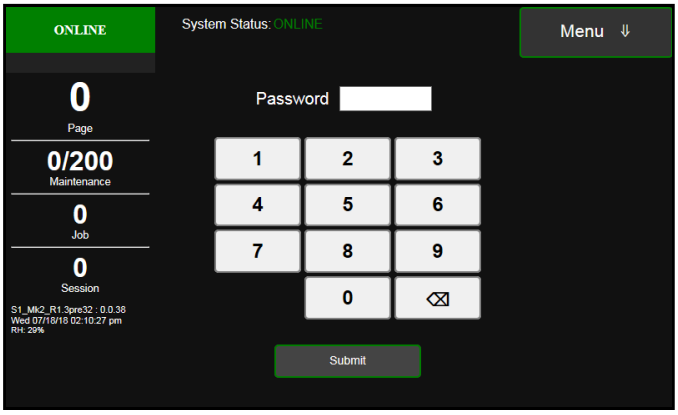
1. Printer runs a **System Deprime**.
2. Replace Wiper Roller or Wiper Module.
3. **Finish button:** System primes with ink and **Wiper Condition** runs.

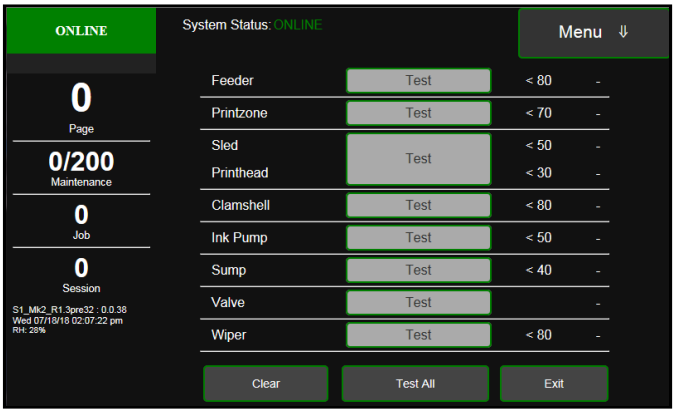
System Test

NOTE: These tests should only be performed by authorized service personnel.

System Test allows testing individual or all Printer systems listed to check that they are operating within specifications. It also allows service people to check the Printer after servicing or replacing parts, particularly belts.

Tap **Menu**, then **System Test** to open the **Password** screen. Enter the password and tap **"Submit"** to open the **System Test** screen.
NOTE: Prior to running the System Test make sure no media is loaded in the Printer and there are no obstructions in the media path.





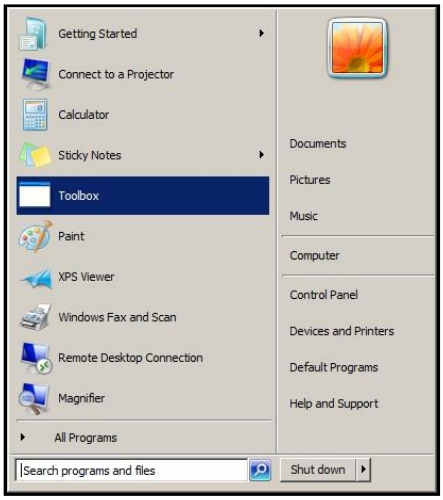
Using Printer Toolbox

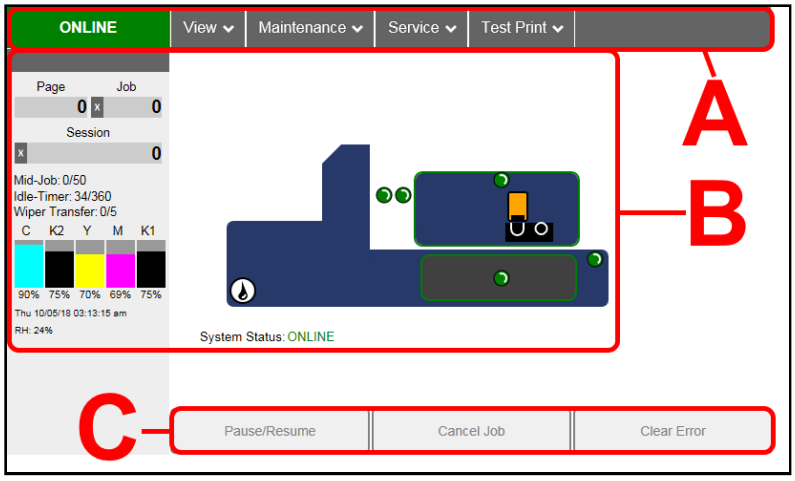
Once Printer Driver is installed, you can access the **Printer Toolbox** remotely from a computer. You can check Printer status, monitor ink usage, perform diagnostic checks, print reports and run maintenance tasks on Printer from your computer. The **Toolbox** also has a more extensive list of functions not available on the **Touchscreen** and a password protected access to a range of options for qualified service personnel. For **Touchscreen** functions, see **"Using Printer Touchscreen"** preceding this section. **The Toolbox works with both conventional and touchscreen computer screens.**

To open Toolbox (*on a computer*):

Open **Start Menu**; then click on **Toolbox**:
NOTE: Conventional Screens: Use your cursor. **Touchscreens:** Tap buttons or selections or use your cursor.

[A] System Status Indicator and Drop-Down Menu Options (*at top of screen*).
[B] Check Printer Status (*across middle of screen*).
[C] Three often-used control buttons (*at bottom of screen*).



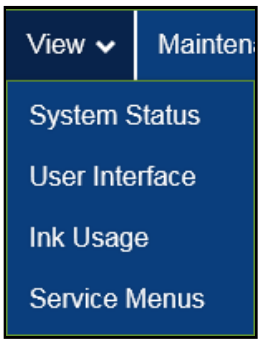


Drop-Down Menu Options

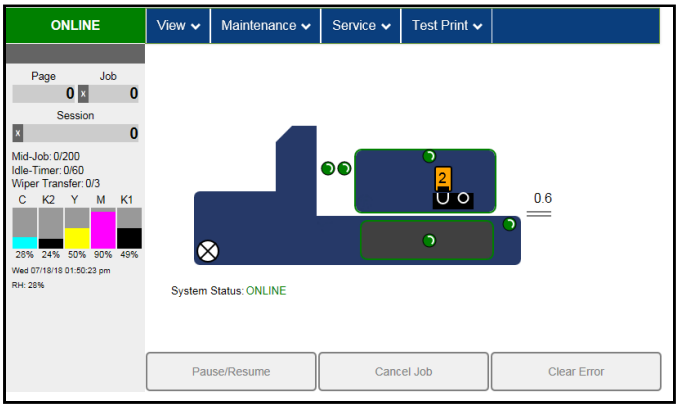
There are four **Drop-Down Menus**: **View, Maintenance, Service** and **Test Print**. The drop-down menus are available on every Toolbox screen allowing you to toggle between menus and select different Printer features and functions.

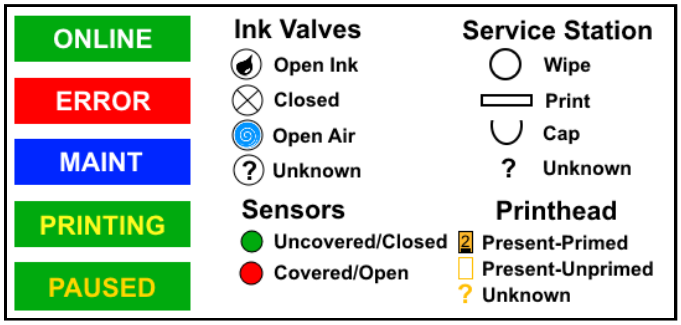
View Drop-Down

The **View** drop-down gives you four choices:
System Status, User Interface, Ink Usage and **Service Menus.**



System Status





This screen opens when you access the Toolbox. It provides information about the Printer.

Status Indicator shows Printer activity as **ONLINE**, **ERROR**, **MAINTENANCE**, **PRINTING** or **PAUSED**. The gray box (*below Status Indicator*) shows the name of the job being processed.

Page shows the page count for a given job.

Job shows number of jobs printed (*resettable*), **Session** shows the total number of pages printed by the Printers (*resettable*) over the length of a Session (*shift, day, week, etc*).

Mid-Job counts down pages until the next automatic Printhead maintenance is performed by the Service Station. Count can be adjusted on the **User Interface** screen, **Mid-Job Servicing**. In this example, service is performed every 200 pages.

Idle Timer shows in minutes how often maintenance will run when Printer is not running. Minutes are settable on the **User Interface** screen, **Idle Timeout (min)**. **Example:** 0 = idle minutes elapsed. 60 = Preset amount of minutes Printer has to be idle before automatic maintenance is performed.)

Wiper Transfer shows how often a Wiper Transfer (*cleaning excess ink from the Service Station roller*) will be performed in relation to when Wipe Printhead or Printhead Cleaning is performed. This is settable on the **User Interface** screen, **Wipe Transfer Frequency**. Can be set from 0 (*every time a Wipe Printhead is performed*) or a set number such as 2 (*after every second Wipe Printhead is performed*.)

Ink Levels displays percentage of ink remaining in each of the Ink Tanks.

Date and Time shows current date and time. These can be configured and set by opening the **Service** dropdown screen, **System Settings**, **Date and Time**.

Relative Humidity (RH) displays the current ambient humidity detected near the Printer.

Printer Messages may appear under **RH (Relative Humidity).**

Printer Icon: Shows status of Media Sensors located in the media feed path of the Printer. Also shows status of Ink Valves, Service Station, and Printhead. These can alert the operator to the type and location of a problem. (*See icon key above*.) Rolling over any of the status icons with your cursor pops up a description of that icon. **NOTE:** Indicator at the exit end of the Printer icon (*example, 3.5mm*) displays the current Clamshell print height setting. The number inside Printhead Cartridge icon displays current Printhead Cartridge print height setting.

System Status displays current status of the Printer and/or an error message.

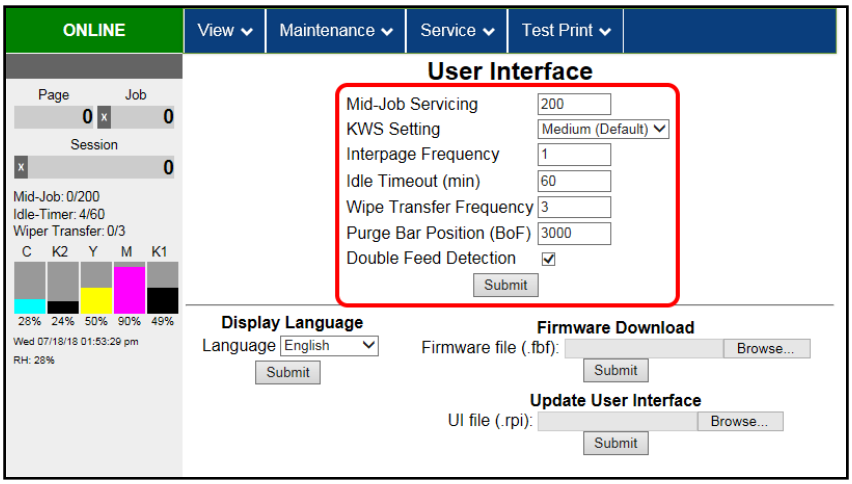
CONTROL BUTTONS (*located along bottom of screen*): Provide quick access to often-used functions.

Pause/Resume: Tap to temporarily stop printing. Tap again to resume printing.

Cancel Job: Cancels a paused job from the printing queue. **Cancel** is unavailable unless the **Pause** button has been pressed first. **NOTE: Cancelled jobs must be reloaded before printing can resume.**

Clear Error. Click to clear error messages after a Printer problem is resolved (*ie, after clearing a paper jam*).

User Interface



SET-UP SETTINGS:
Adjust automated service and cleaning intervals, adjust feeder speed for a job, manually set gap between pieces and adjust Printer for pre-printed media.

Mid-Job Servicing – Sets frequency of automatic maintenance cycles run during a job after a set amount of pages are run. In this example, maintenance will run after every 200 pages printed.

KWS Setting – (*Keep Wet Spitting*) Keeps the Printhead hydrated while running a job.
Select from 4 settings:
None, **Light**, **Medium** (*default*), and **Heavy** to determine how much ink will "spit" from Printhead Nozzles. Set in conjunction with **"Mid-Job Servicing"** which determines frequency of the Printer stopping for self-servicing during a job.

Interpage Frequency – Set how often the Printhead spits between pages to keep Printhead hydrated. Settable from **1-5** pages. For longer media a setting of **1** is normal (*between every page*); for short media a setting of **4** might be preferable (*spit after every fourth page*).

Idle Timeout (min) – Set in minutes how often maintenance will run when Printer is not running.

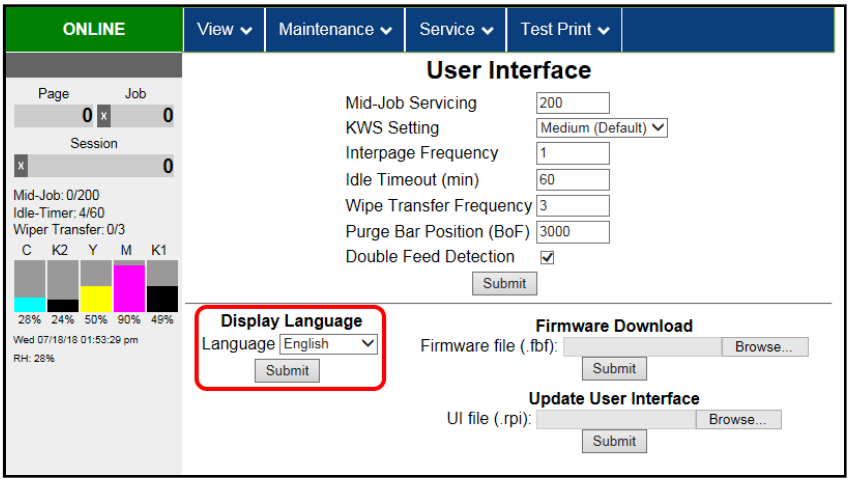
Wipe Transfer Frequency – Set how often a Wiper Transfer (*cleaning excess ink from the Service Station roller*) will be performed in relation to when Wipe Printhead or Printhead Cleaning is performed.
Can be set from 0 (*every time a **Wipe Printhead** is performed*) or a set number such as 2 (*after every second **Wipe Printhead** is performed*.)

Purge Bar Position (BoF) – In operation, Printhead spits a small amount of ink in gap between pieces to keep nozzles refreshed. For irregular-shaped pieces (*like an envelope flap*), Sensor may "read" lower end as the edge and spray on the tip of flap instead of actual gap between pieces. This feature allows you to manually set gap (*1 micron increments*) to account for extra length needed to reach actual gap.

Double Feed Protection – When checked (*default*), stops feeding media when a double feed condition (*2 sheets at once*) is detected.

Click **"Submit"** to apply settings.

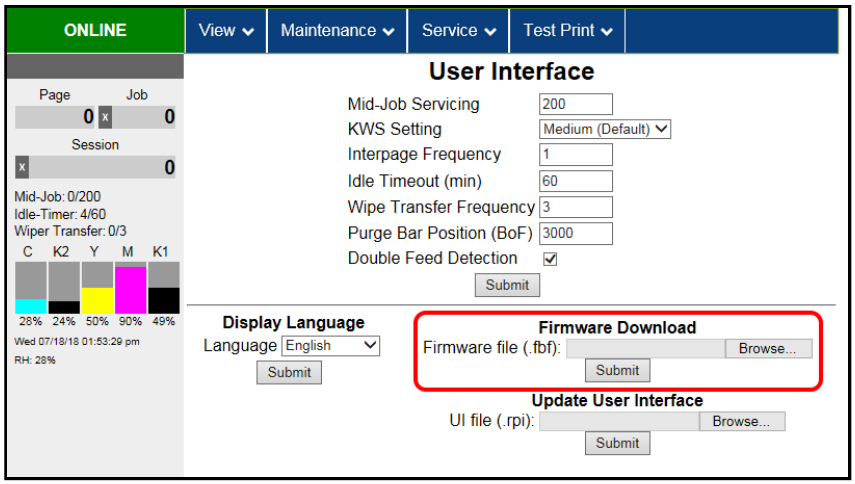
DISPLAY LANGUAGE: Selects language EWS (*Toolbox*) will display. Click **"Submit"** after selecting language.



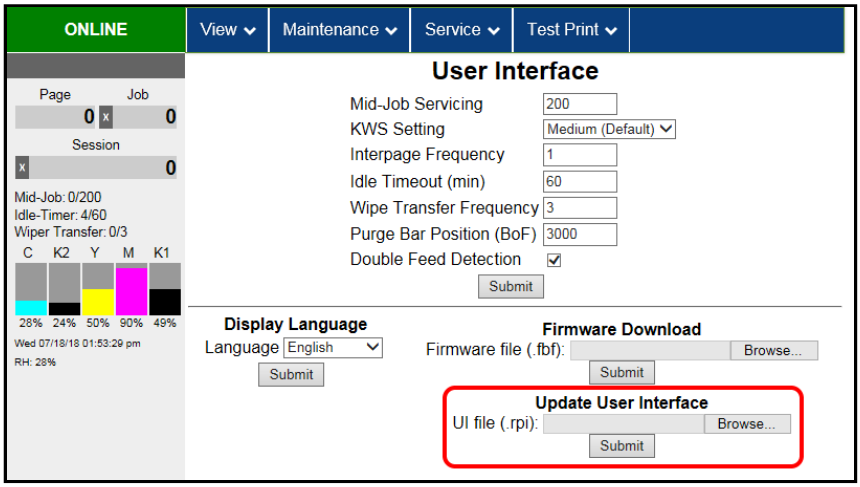
FIRMWARE DOWNLOAD: Get the latest version of firmware for your Printer. **Two types of firmware files are normally provided: ".bin"** files and **".fbf"** files. **".fbf"** files are loaded using the **Printer Toolbox.**

NOTE: Using the ".fbf" file procedure is an alternative method for downloading firmware. See "Updating Firmware Using ".bin" File" for the recommended procedure using the ".bin" files.

WARNING: This procedure should only be performed by qualified service personnel. In some cases firmware must be loaded using "Firmware Migration Tool". If this process is not performed properly, Printer is rendered inoperable.

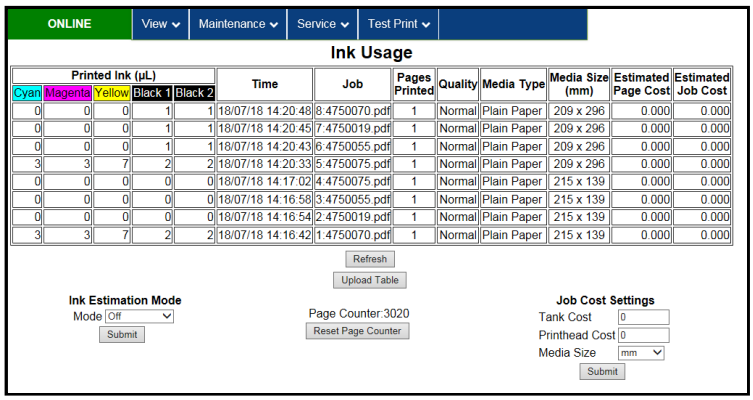


UPDATE USER INTERFACE: Download and install the latest User Interface UI (.rpi) file for the Printer Touchscreen.
NOTE: Updating this file does not require shutting down or rebooting the Printer.



Ink Usage

Displays the amount of ink used and other information for each job sent to the Printer. Also tracks estimated **Page** and **Job Costs** if information is entered in **Job Cost Settings**.



Upload Table – Creates and opens a linkable tabular data file using programs such as Microsoft Excel. (*Microsoft Excel is the default.*)

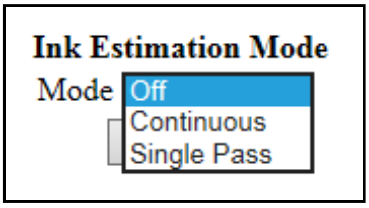
Mode selection:

Off – Feature is disabled.

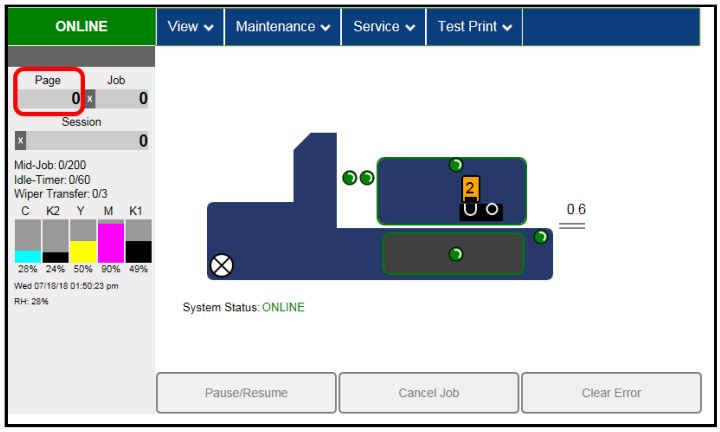
Continuous – Ink Estimation Mode continues running (*Printer will not print*), until feature is turned **"OFF"**.

Single Pass – Ink Estimation Mode runs once, then turns off. Printer will then be ready to print.

Click **"Submit"** to activate the **Mode** setting selected.

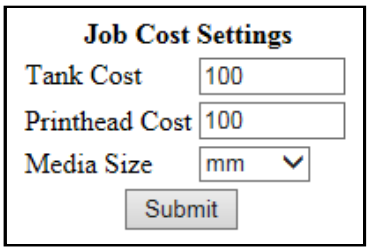


NOTE: Estimating process takes as long as job would take to print (*i.e., if job would take 1 hour to print, estimate will take 1 hour to display. Track progress on the Counter located in the System Status window.*)



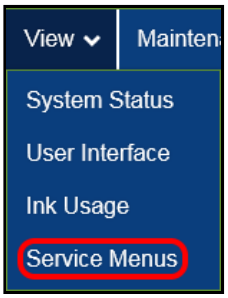
Reset Page Counter – Tap or click this button to reset the Printer page count to 0. (**Page** on the Printer Toolbox and Touchscreen.)

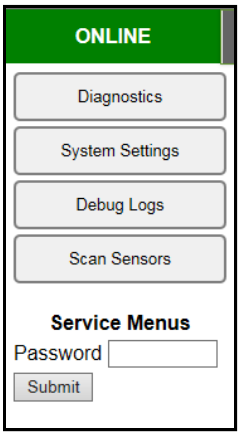
JOB COST SETTINGS – Enter your ink cost and printhead cost and media size preference (*inches or mm*).
Set a minimum of at least 100 pcs. to ensure a large enough sample size. Click **"Submit"**. In **Ink Estimation Mode**, this feature estimates per page cost and job cost without printing job. With **Ink Estimation Mode** disabled, Printer still tracks estimated per page cost and estimated job cost as job is being printed. Once costs are entered, they will remain until changed again, even if Printer is turned OFF.



NOTE: This is only an estimate and does not include other factors such as Printer maintenance routines, (*printhead wiping and cleaning, power up/down, etc*.) that may affect overall result.

Service Menus





Clicking **Service Menus** opens the **Service Menus** (*Diagnostics*) screen and service menu buttons.

Diagnostics button. Click to check the status of the Printer. (*See **Diagnostics** below.*)

System Settings button. Click to view, enter or change settings to connect Printer to your network. (*See **Network Settings***.) Also configure and set the Printer's **Date and Time**. And set the level of detail desired for **Debug Logs**.

Debug Logs. Click to display a list of available Debug Logs that can be opened or uploaded. Then select the Log or Logs to be uploaded.

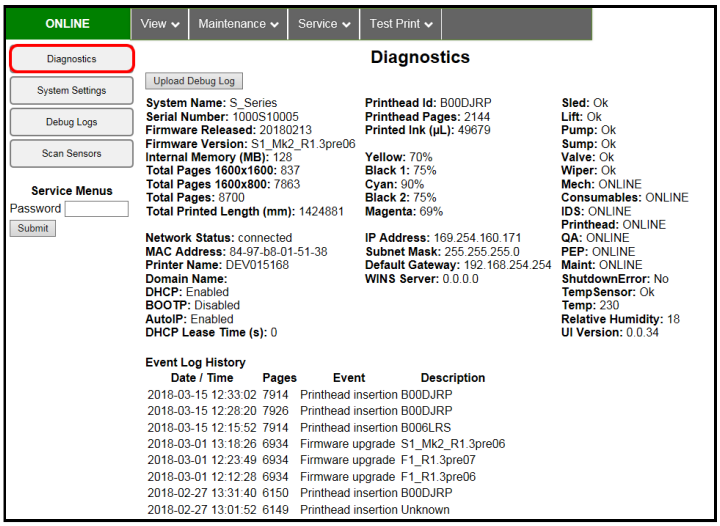
Scan Sensors button. Provides status and a log of sensor activity on sensors located throughout the Printer. (*See **Scan Sensors***.)

Service Menus, Password: Entering the **Service Menu password** provides access to more advanced Printer control and maintenance menus. For authorized service personnel only.

Diagnostics

This is the screen that opens when you select **"Service Menus"**. From this screen you can see current status of the Printer.

Other features:



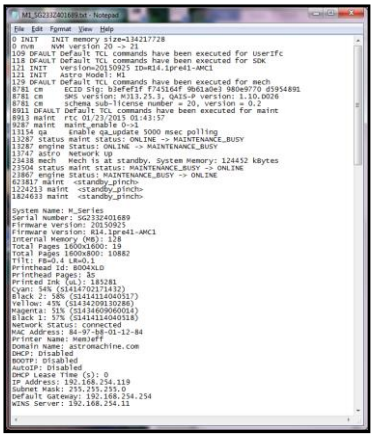
"Service Menus". From this screen you can see current status of the Printer.

Other features:

Upload Debug Log – Upload and save a log of the Printer status to send to a technician to help diagnose a problem. Clicking this button creates a snapshot log showing everything going on with the Printer since powering up. (*See Sample Log below right.*)

NOTE: If a problem arises, try to recreate the problem, then press the **Upload Debug Log** button without performing any other actions. This may make it easier for the technician to determine the problem. If this is not possible, include any actions you may have taken after the problem began.

Other information provided in the Diagnostics window:



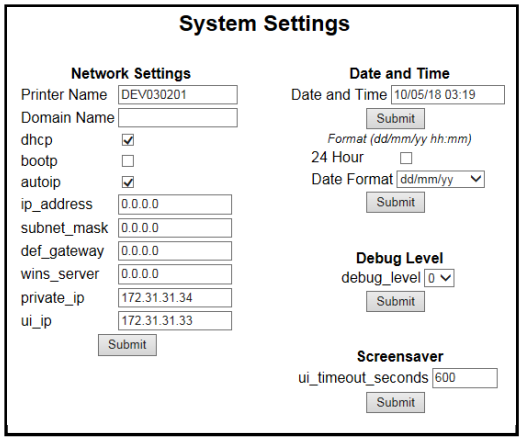
Event Log – Displays significant events occurring on the Printer (*such as firmware updates, errors, power off, etc.*) Useful for troubleshooting Printer problems.

NVM Settings – Displays Printer's current NVM (*Non-Volatile Memory*) settings. (*Once settings are saved, they remain even when Printer is turned off, until they are manually changed.*)

VARS Settings – Displays Printer's current VARs (*Variable*) settings. (*Settings that are set for a particular job that automatically revert to the default settings when the Printer is turned off or rebooted.*)

System Settings

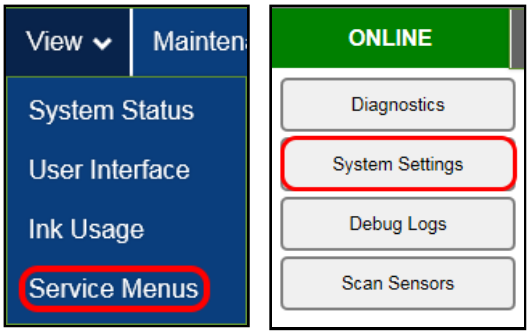
Set up a network connection for the Printer. You can also configure and set the Printer **Date and Time**, set the **Debug Log Level** and **Screensaver** sleep timeout.



Network Settings – Permits you to view, enter or change settings to connect the Printer to your network.

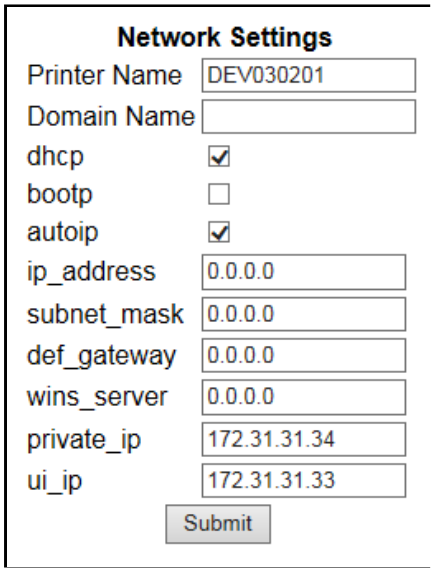
Network Connection Set Up:

1. Printer is still connected to computer via USB cable. **To connect the Printer to a network:** From the **Toolbox,** select **"View"** drop-down menu, click **"Service Menus"**, then click **"System Settings"**.



2. **"System Settings"** screen opens. Use **Network Settings** to enter correct settings for your network.

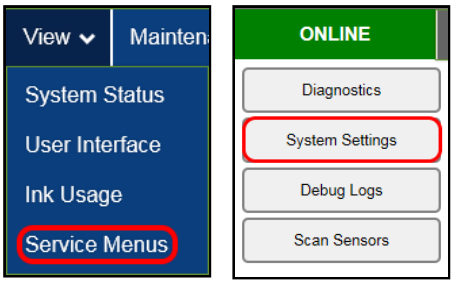
   NOTE: If manually changing the **ip_address**, make sure the **"dhcp" and "autoip" boxes are unchecked**. (*Default is checked*.) Enter changes in the appropriate boxes. Click **"Submit"**.

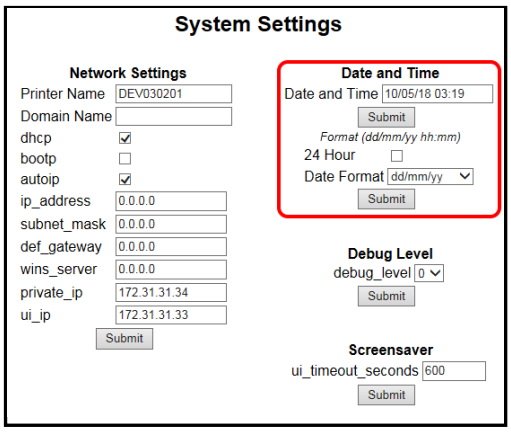


3. Connect Ethernet cable to Network Port on Rear Panel of Printer.

Date and Time – Enter or change the way the date and time will appear in the Printer Status section of the Toolbox screens. **To enter or change Date and Time:**

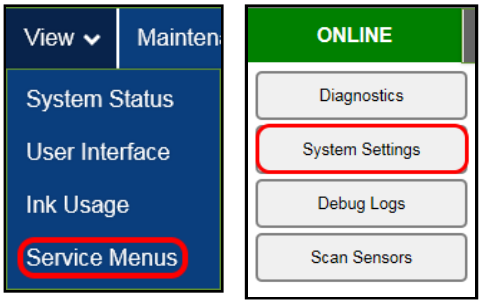
1. **From the Toolbox,** select **"View"** drop-down menu, click **"Service Menus"**, then click **"System Settings"**.
2. **"System Settings"** page opens. Use **Date and Time options** to enter, edit and format the Date and Time for the Printer.
3. Click **"Submit"**.

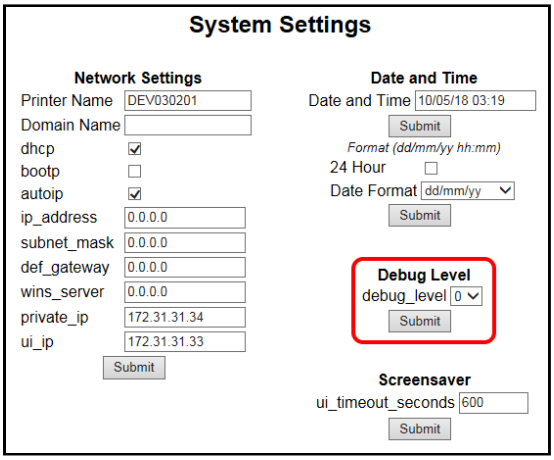




Debug Level – Set the detail level of the Debug Logs.
To change the Debug Level:

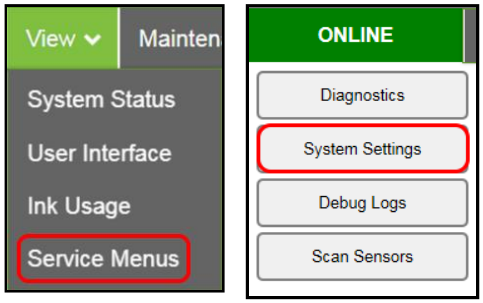
1. **From the Toolbox,** select **"View"** drop-down menu, click **"Service Menus"**, and then click **"System Settings"**.
2. **"System Settings"** page opens. Go to **Debug Level** options and select 0, 1, or 2 to set the desired detail level for the Printer. (0 = least detailed, 2 = most detailed).
   NOTE: Because of the amount of data collected and stored, it is recommended that you not set the **Debug Level** over 1 unless asked by a service technician.
3. Click **"Submit"**.

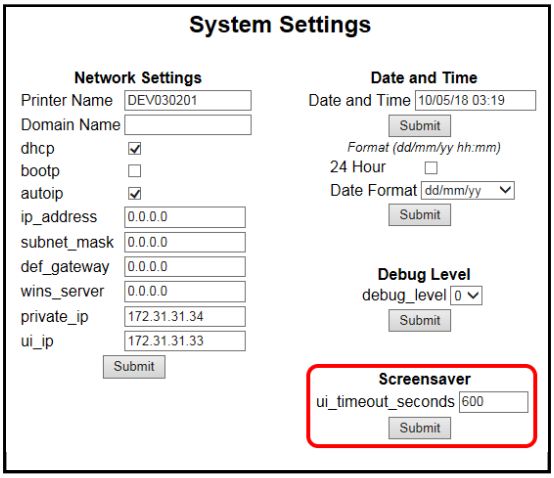




Screensaver – Set the amount of time the Touchscreen will remain idle before automatically going to Sleep Mode.

1. **From the Toolbox,** select **"View"** drop-down menu, click **"Service Menus"**, and then click **"System Settings"**.
2. **"System Settings"** page opens. Go to **Screensaver**. Enter the number of seconds the Touchscreen will remain idle before going to Sleep Mode.
3. Click **"Submit"**.





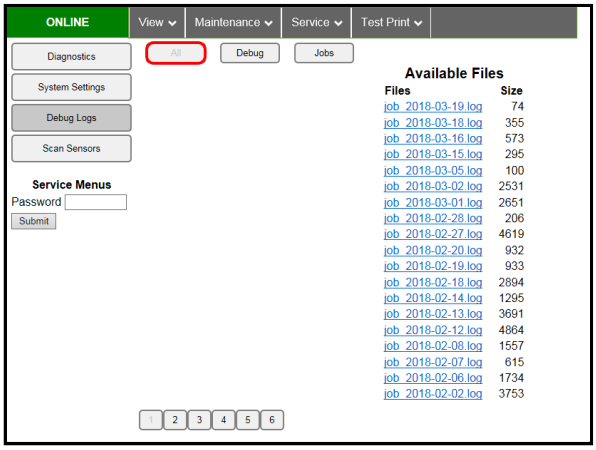
Debug Logs

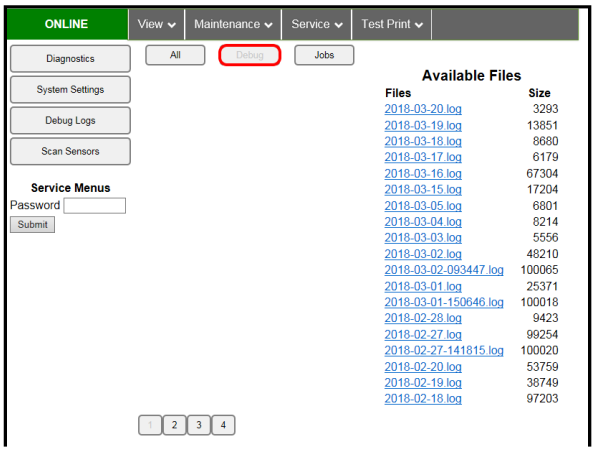
Access, print or send activity logs for the Printer and for jobs run on the Printer. These files are valuable for diagnosing and servicing problems.

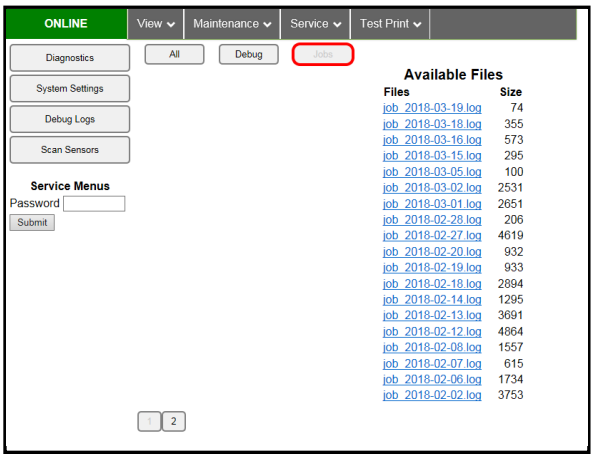
All – Shows all log files available.

Debug – Shows only **Debug** log files.

Jobs – Shows only **Jobs** printed log files.

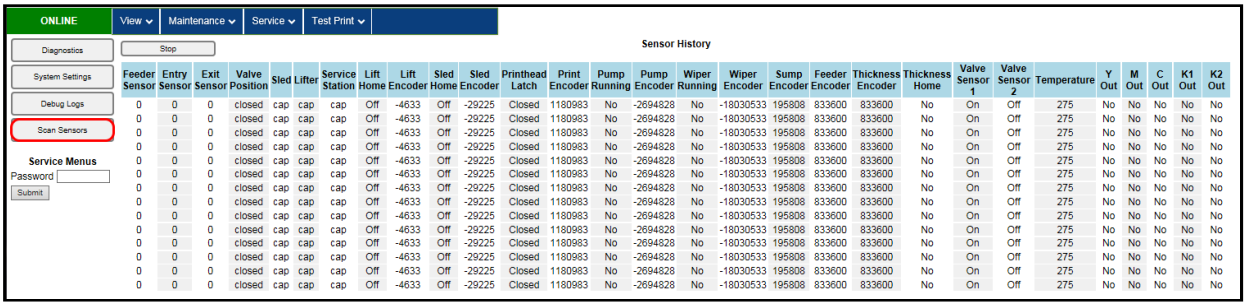






Scan Sensors

Provides status updates and an activity log on the Sensors located throughout the Printer.
Click **"Stop"** button to stop scanning or click out of **"Scan Sensors"**.



Feeder Sensor	Entry Sensor	Exit Sensor	Valve Position	Sled	Lifter	Service Station	Lift Home	Lift Encoder	Sled Home	Sled Encoder	Printhead Latch	Print Encoder	Pump Running	Pump Encoder	Wiper Running	Wiper Encoder	Sump Encoder	Feeder Encoder	Thickness Encoder	Thickness Home	Valve Sensor 1	Valve Sensor 2	Temperature	Y Out	M Out	C Out	K1 Out	K2 Out
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No
0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1180983	No	-2694828	No	-18030533	195808	833600	833600	No	On	Off	275	No	No	No	No	No

Maintenance Drop-Down

Perform maintenance tasks on the Printer.

Circulate Ink – Purges air from lines and primes system after replacing Ink Tanks or Printhead Cartridge.

Normal Clean Printhead – Runs cleaning and wiping routine twice for better flushing and cleaning.

Wipe Printhead – Wipes and cleans excess ink from Printhead Cartridge.

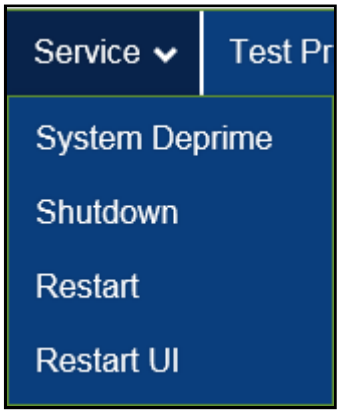
Inspect Sled – Moves Service Station out for inspection, cleaning or service.

End Inspection – Moves Service Station back into position under the Printhead.

Wiper Transfer – Squeegees excess ink off of Service Station Wiper Roller.

Service Drop-Down

Control functions that require the Printer to be out of service for extended periods of time while they are being performed.



System Deprime – Pumps ink back into Ink Tanks prior to replacing the Printhead Cartridge or transporting the Printer.

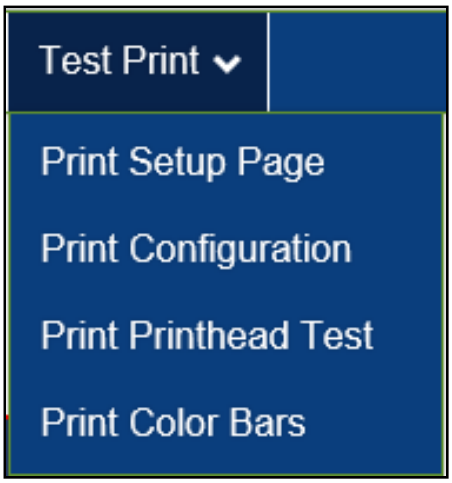
Shutdown – Turns Printer OFF. For best system performance, it is recommended to keep Print Engine powered-up (*ON/OFF light illuminated*) at all times. If turning Printer off, first power-down Print Engine using **"Shutdown"** button in **Toolbox** or ON/OFF button on Control Panel. Wait until all Control Panel buttons go out before turning off Main Power Switch.

Restart – Restarts the Printer without having to perform the startup routine (*purging ink tanks, priming, etc*.)

Restart UI – Restarts the Printer Touchscreen without having to perform the Printer startup routine (*purging ink tanks, priming, etc*.)

Test Print Drop-Down

Print various reports and Printer tests.
Each printout displays information about the Printer.



Print Setup – Prints a printing pattern used for positioning an image on the page.

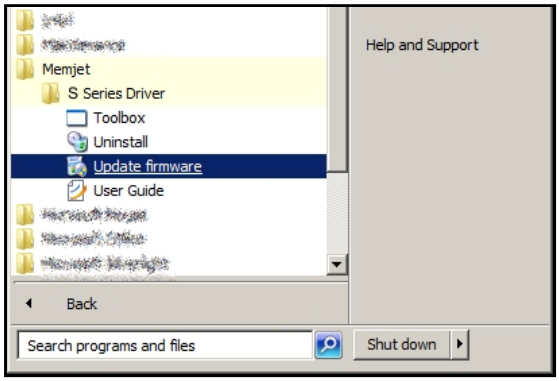
Print Configuration – Prints current Printer configuration including Firmware Version, Network Connection, Printer Serial Number and more.

Print Printhead Test – Prints color bands, text and patterns to check condition of Printhead's ink nozzles. **NOTE: Uses less ink than Print Color Bars.**

Print Color Bars – Prints a series of 7 color bars (*per Printhead*) to indicate how well Printheads are mixing colors and printing.

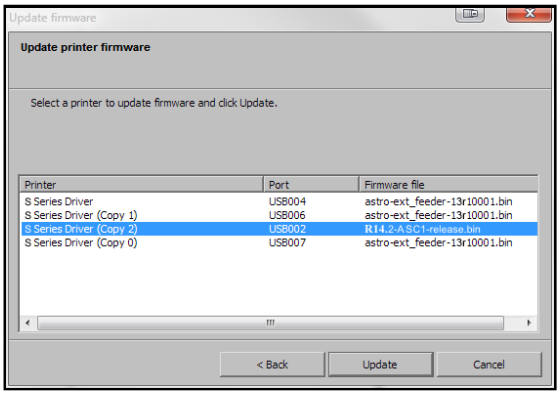
Update Firmware using ".bin" Files

Get latest version of firmware for your Printer.
NOTE: Use this procedure to update firmware AFTER you have updated the Printer Driver.
***Printer Driver update procedure is included with an "Update Package" which includes both updated Printer Drivers and firmware updates*.**



<u>How to download new firmware using ".bin" file:</u>

1. When you are notified that new firmware is available for your Printer, download the **"*.bin"** file and save it to your desktop.
2. From **Start Menu**, open **All Programs**.
   Open **"Memjet"** folder, then **"<u>S Series Driver</u>"**.
   Click **"Update Firmware"**.
3. Click **"Browse"** button. Find and select file just saved to your desktop. Click **"Open"**.
4. When **"Update printer firmware"** window opens, select S-Series Printer you want to update.
   NOTE: You can only update one Printer at a time.
5. Click **"Update"**. **DO NOT touch Printer until firmware is loaded!** A message appears on screen warning you not to unplug or shut off Printer.
6. Once firmware finishes loading (*about 5-10 minutes*), Control Panel lights and Printer shuts OFF, then restarts automatically to complete installation.

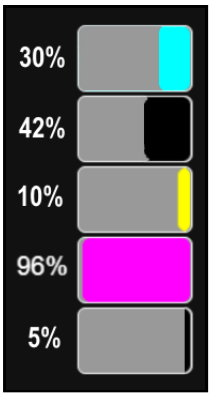


SECTION 4 – *Maintenance*

General, periodic maintenance is needed to keep Printer in good working order. This section covers how to care for Ink Tanks, Printhead Cartridge, Service Station, and clear paper jams.

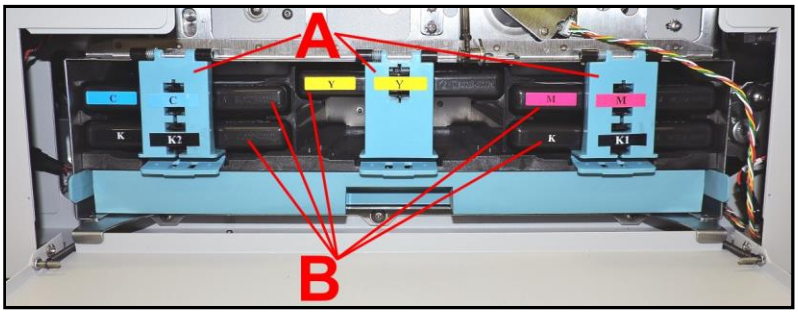
Replace Ink Tanks

Replace Ink Tanks when ink runs out.



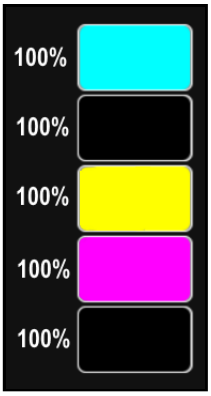
1. **Look at the Control Panel Touchscreen.** Ink Tank Status information appears left side of the Touchscreen. Note that some or all of ink boxes may be low or empty.

2. **Open Ink Tank Door** (*hinged at bottom*). (*Disconnects Printer communication with Ink Tanks and allows safe installation and replacement*.) Open Ink Tank Latches **[A]** and pull Ink Tank(s) **[B]** out of the Printer.



3. Remove new Ink Tank(s) from packaging.

4. Slide new Ink Tanks (*labels up*) into appropriate color slots **[B]**. Close Ink Tank Latches.
INSTALLATION TIP:
Make sure Ink Tanks seat properly. Insert Ink Tank into appropriate Ink Station, then pull Ink Tank back about an inch and push forward firmly to insure that Ink Nozzles penetrate seals on Ink Tanks.



5. **Close the Ink Tank Door.** Ink colors fill in as Ink Tanks are installed. If ink colors do not fill in after a few seconds, open the Ink Tank Door and reinstall Ink Tank(s).

   NOTE: If Ink Tank is installed, but Ink Tank indicator still does not refresh, see "Clean Ink Tank Contacts" below.

WARNING!

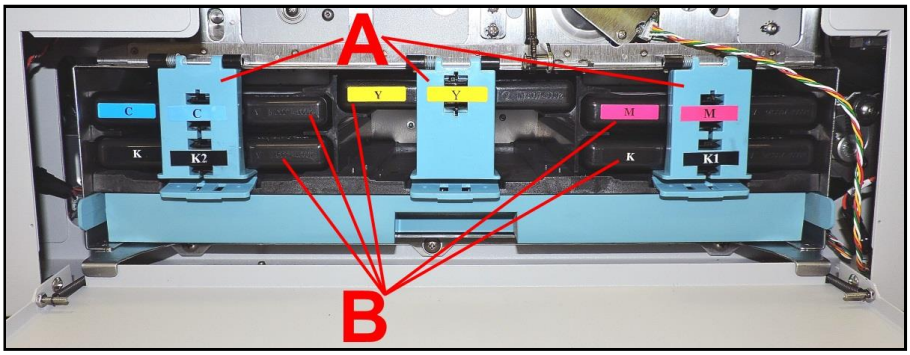
Ink in Ink Tanks may be harmful if swallowed. Keep new and used Ink Tanks out of reach of children. Discard empty Ink Tanks immediately.

Clean Ink Tank Contacts

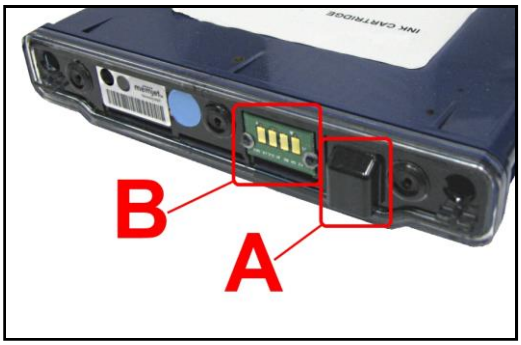
When reinstalling or replacing Ink Tanks, the Ink Level indicators on the Touchscreen may not refresh. This may be due to a dirty Ink Tank Level Prism and/or QA Chip contacts on that Ink Tank(s).

Clean contacts as follows:

1. **Remove Ink Tank(s).** Open Ink Tank Door. Release Ink Tank Latch(es) **[A]**. Remove Ink Tank(s) **[B]** that did not refresh.



2. Clean Ink Level Prism **[A]** and QA Chip contacts **[B]** with a clean, dry, lint-free cloth. **NOTE: Dampen cloth with distilled water to wipe Prism, but DO NOT get QA Chip contacts wet.**



3. Reinstall Ink Tank(s) (*labels up*), close Ink Tank Latch(es). Close Ink Tank Door.

Storage

New Ink Tanks should be stored in original packaging and kept away from heat.

Opened Ink Tanks should remain in Printer.

Nominal Ink expiration date: 24 months following date of manufacture (*ink fill date*).

Disposal

Safely dispose of Ink and Ink Tanks in accordance with local/national regulations.

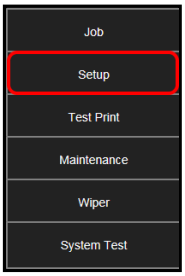
Clean up spills with soap and water. Abrasive soap is effective in cleaning ink off your hands.

Clean/Replace Printhead Cartridge

Cleaning

The Printhead is cleaned automatically each time Printer is turned on or when the **"Quick Clean Printhead"** routine is performed. This can be found under **"Service" Tab**, **"Normal Clean Printhead"** in **Printer Driver** or **"Maintenance"** drop-down menu on **Touchscreen**. If running automated Cleaning Levels doesn't help improve print quality, Printhead Cartridge can be cleaned manually.

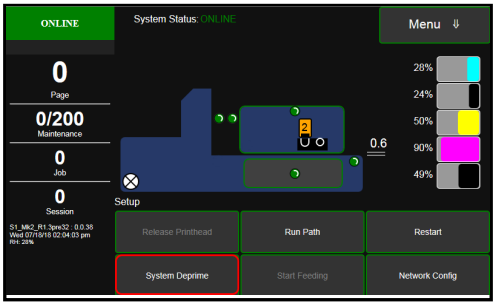
1. **Open Top Cover.** From the Touchscreen, tap **"Setup"** in the **Menu** drop-down, then tap **"System Deprime"**. The Printer pumps any ink in system back into Tanks. Then the Printhead Latch pops open.



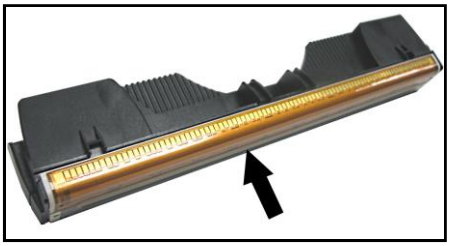
CAUTION

DO NOT PRY OR MANUALLY LIFT PRINTHEAD LATCH OR LATCH MAY BREAK. ONLY OPEN LATCH USING THE RELEASE PRINTHEAD BUTTON ON THE TOUCHSCREEN OR IN THE PRINTER TOOLBOX.

2. Make sure Printhead Latch is fully opened to retract ink lines. Remove used Printhead Cartridge by tilting it toward ink lines, then carefully lifting it out of Printhead Compartment.



3. Moisten Printhead nozzles using deionized/distilled water (*reference ASTM D5127-90 Type E-II Electronic Grade Water*) and a damp, lint-free cloth, wiping end to end. (*Gray strip located below orange strip*.) **Take care not to damage copper contacts, metal plate, or gold Printhead surface.**



4. Reinstall Printhead, close Printhead Latch and close Top Cover**.**

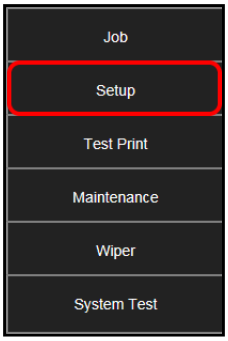
Generally, when ink supply is adequate and print quality remains poor, or when automated cleaning processes or manually cleaning Printhead does not help image quality, replace Printhead.

CAUTION

- **Use electrostatic discharge (ESD) protection when handling.**
- **Hold Printhead Cartridge by handles ONLY.**
- **DO NOT touch ink couplings, nozzle surface or electrical contacts.**
- **DO NOT unpack Printhead Cartridge until Printer is ready for installation. Once unwrapped, delay in installing Printhead can compromise print quality due to dehydration.**
- **DO NOT place an unwrapped Printhead on any surface before installing. Protect Printhead from scratches, dust, fibers, dirt and other contaminants at all times.**

Replace Printhead Cartridge

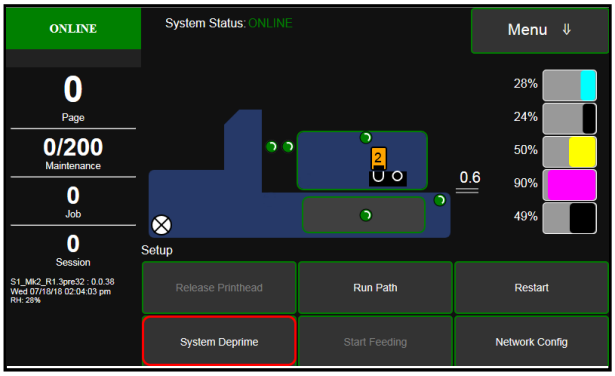
1. **Open Top Cover.** From the Touchscreen, tap **"Setup"** in the **Menu** drop-down, then tap **"System Deprime"**. The Printer pumps any ink in system back into Tanks. Then the Printhead Latch pops open.



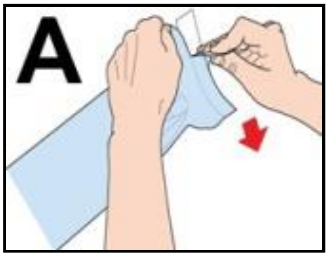
CAUTION

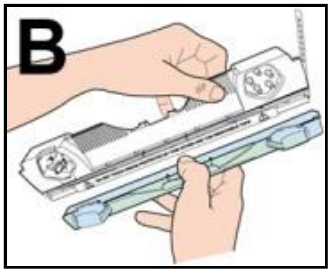
DO NOT PRY OR MANUALLY LIFT PRINTHEAD LATCH OR LATCH MAY BREAK. ONLY OPEN LATCH USING THE RELEASE PRINTHEAD BUTTON ON THE TOUCHSCREEN OR IN THE PRINTER TOOLBOX.

2. Make sure the Printhead Latch is fully opened to retract ink lines. Remove used Printhead Cartridge by tilting it toward ink lines, then carefully lifting it out of the Printhead Compartment.



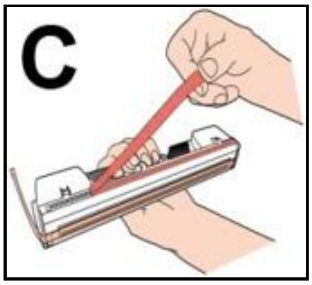
3. **[A] Carefully remove Printhead Cartridge from foil packaging**. Tear foil at notch or cut the end with scissors.

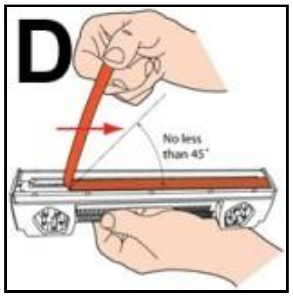




[B] Remove protective plastic cover. Hold Printhead by handle and unclip cover from Printhead.

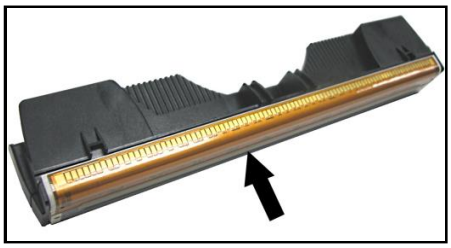
[C] Remove protective strip from Printhead electrical contacts.
Once removed, DO NOT allow strip to touch electrical contacts.



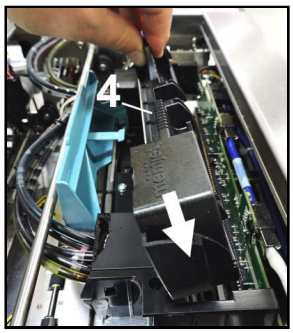


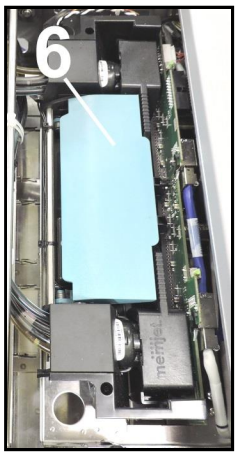
[D] Remove protective strip from Printhead Nozzles. Hold Printhead by handle. Pull strip tab and slowly peel strip from Printhead.
DO NOT pull strip at less than a 45° angle from Printhead surface.
DO NOT allow removed strip to touch Printhead Nozzles.
NOTE: Keep foil packaging to store/dispose of old Printhead Cartridge.

4. **Wet Printhead Surface. (*Ensures that Printhead will prime correctly*.)** Moisten Printhead nozzles using distilled water and a damp, lint-free cloth, wiping end to end. (*Gray strip located below orange strip*.) **Take care not to damage copper contacts, metal plate, or gold Printhead surface.**



5. Carefully insert Cartridge into compartment at an angle **[4]**, with Printhead surface facing down and Ink Nozzles facing Ink Hoses. Once seated, gently tilt Cartridge back until it snaps into an upright position **[5]**. **DO NOT FORCE Printhead Cartridge into position.**

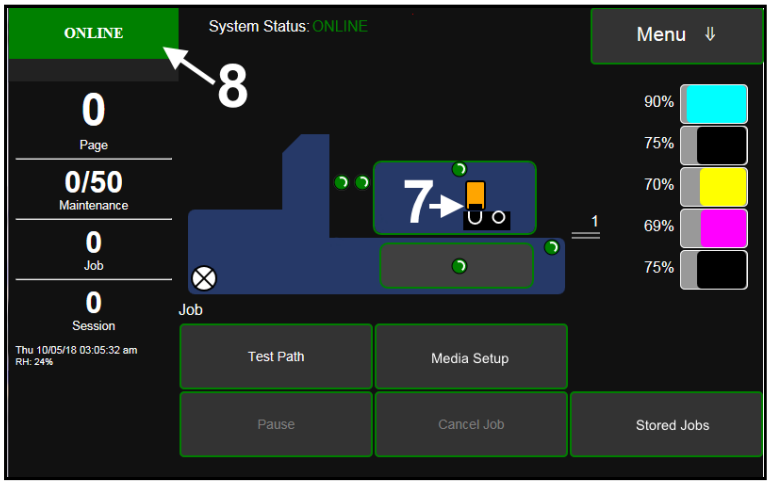




6. **Close Printhead Latch [6]**. Printer starts up and primes ink into Printhead. (*This may take a few minutes*.) Make sure ink is flowing through hoses. If air bubbles appear, tap lines or click **"Circulate Ink"** on Touchscreen to clear them.

7. **Watch Control Panel Touchscreen.** Check that Printhead icon **[7]** in Printer image is primed (*solid color*).

8. When **ONLINE [8]** appears, the Printer is ready for use. Close the Top Cover.
NOTE: If the Printhead icon continues to display an outline or a question mark (?) try the following procedures:



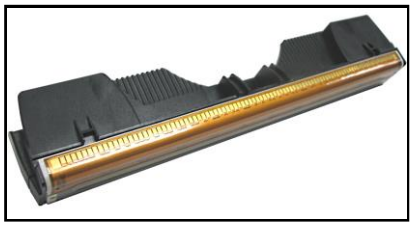
[1] Printhead icon shows an outline (*Printhead unprimed)*: Click **"Circulate Ink"** under **"Maintenance"** drop-down in Printer Toolbox. If issue persists, try the **"Install Printhead"** procedure again. If this does not clear up the issue, call for technical support.

[2] Printhead icon displays a question mark (*Printhead not recognized*): Try the **"Install Printhead"** procedure again. If the issue continues, call for technical support.

NOTE: Printer may take up to 12 minutes to set itself up during initial startup. This is normal.

IMPORTANT!
CHECK INK TANKS. PRINTER MAY NOT FULLY REPRIME IF INK TANKS ARE LESS THAN 1/3 FULL.

Printhead Storage



Store and transport cartridge as indicated by **"this side up"** arrow symbol on packaging.

Cartridge and ink supply must be within operating temperature range before attempting to prime cartridge with ink and starting to print. When stored at temperatures below operating range, it may take up to 3 hours for a cartridge in its packaging to reach operating temperature. **NOTE: Additional packaging will increase time needed to reach operating temperature.**

Storage Life: 12 months from date of manufacture (*printed on shipping box*).

Storage Temperature Range:	**Long Term:** 14° F to 86° F (-10° C to 30° C) **Short Term:** -11° F to 140° F (-25° C to 60° C) **NOTE:** Cumulative storage duration above 86° F (30° C) must not exceed 72 hours.
Humidity Range:	5% to 95% Relative Humidity, non-condensing
Atmospheric Pressure Range:	70 kPa to 106 kPa
Electrostatic Discharge:	8 kV air discharges or 4 kV contact discharges* ***When tested in accordance with IEC 61000-4-2**

Printhead Service Life

Projected: 50,000,000 ejections per nozzle. Printhead has a total of 70,400 nozzles (*14,080 per color channel*.) Since printing does not use the entire length of Printhead, some nozzles do not fire as often. The most often used Nozzles will degrade more quickly. Noticing effects of failing nozzles depends partly on the relative position of those nozzles to each other. In simple terms, number of images printed and amount of ink that will pass through printhead prior to printhead degradation will depend on make-up of the images printed, operating environment, servicing, media characteristics (*including cleanliness*) and other factors.

S-Series Printhead Return Policy

Return Policy and Return Procedure for Memjet Printheads for S-Series Printers:

Limited Printhead Replacement Policy: S-Series Printheads are manufactured to be free from defects in materials and workmanship. However, should an S-Series Printhead display an obvious defect or exhibit a significant degradation of print quality prematurely, Printhead may be returned for replacement.
Returns for these conditions can be made:

- Up to 12 months after shipping date from Astro Machine Corp. *and*
- Printhead's **"Total pages printed"** = 40,000 or fewer pages (*at 15% page coverage*), whichever comes first.

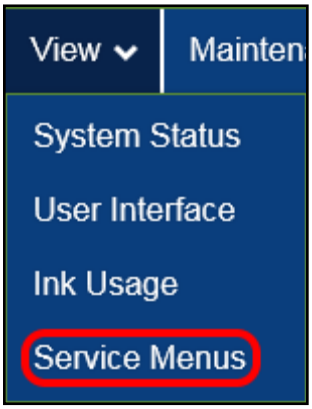
This return policy excludes damage due to mishandling, tampering or misuse, improper storage or transport, or material incompatibility*.

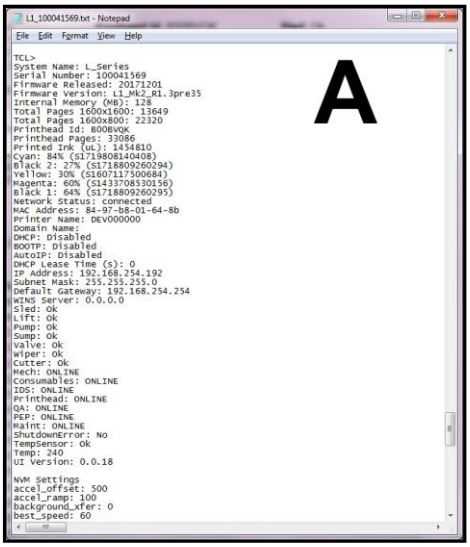
***See "Printhead Installation" and "Replacement" sections of this manual.**

Return Procedure:

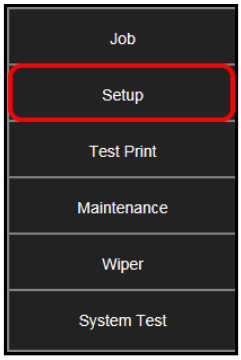
1. Make sure Printer is powered up and connected via USB or network.

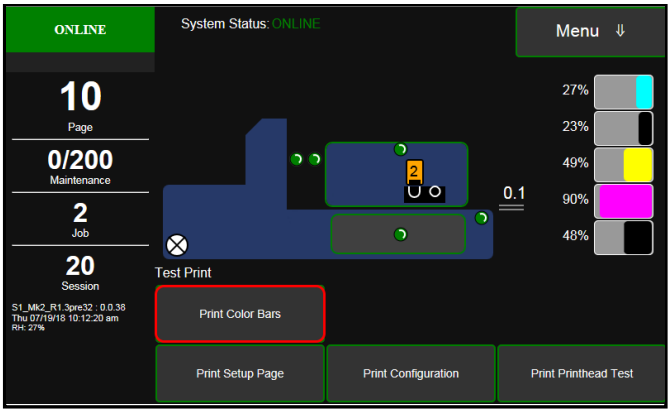
   To check Printhead Page count: Open **"View"** drop-down menu in computer's **Toolbox**. Select **"Service Menus"**. The **"Diagnostics** screen opens. Select **"Upload Debug Log"**. Open and print the file **[A]** to include with your return.

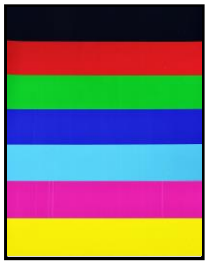




2. **From Touchscreen (*or open Printer Toolbox*).** Open the **"Print Menu"** drop-down. Tap **"Print"**. Then tap the **"Print Color Bars"** button.







Color Bars Printout

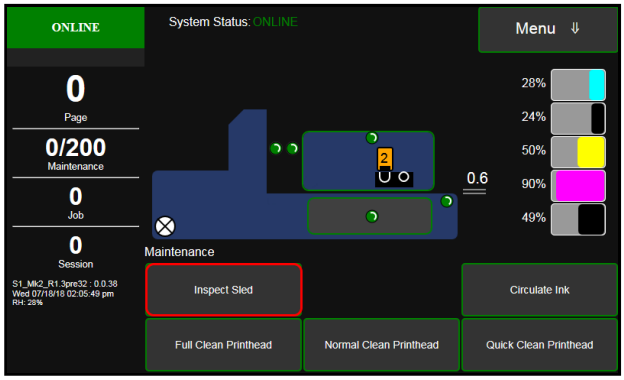
3. Remove Printhead Cartridge from Printer per replacement instructions found in Operator's Manual.
4. Snap Printhead back into orange plastic protective cover it was shipped in. **IMPORTANT! Make sure all foam pads that came with protective cover are installed and in place (*two versions shown in images at right*).**
5. Reseal Printhead and Cover in a plastic bag (*reuse and reseal original packaging if possible*).
6. Place Printhead, Printhead Page Count printout and Color Bars printout in a shipping box. Remember to include your company name, contact information and return address as well.
7. Return to your Astro Machine distributor.

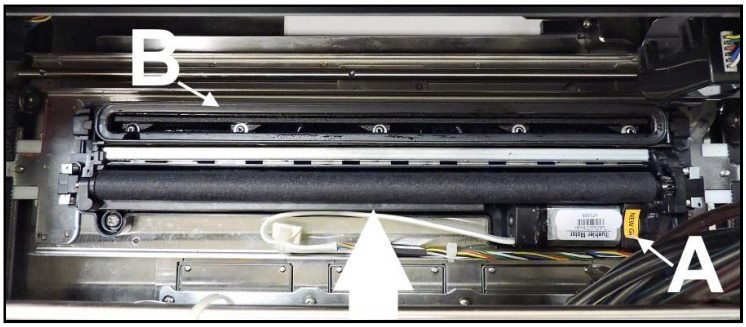
Inspect the Service Station

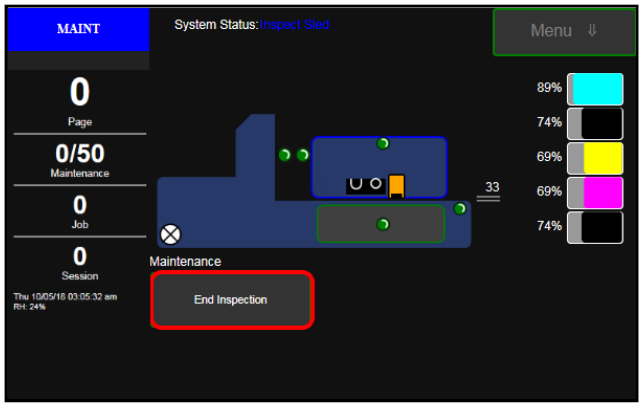
The Service Station (*located directly under the Printhead Assembly*) cleans Printhead Cartridge of excess ink and debris, keeps Printhead hydrated and protected when not in use, and captures and removes ink used to keep nozzles clear. It moves out of the way of the Printhead during printing. It is designed to provide a long service life.

To access the Service Station for inspection and cleaning:

1. Using the **Touchscreen**, select **"Menu,"** then tap **"Maintenance"** from the drop-down menu. Tap **"Inspect Sled"**. The Service Station **[A]** moves out from under the Printhead Assembly.
2. Open the Top Cover.
3. Visually inspect the Service Station for cleaning or service.
   Use a dry, lint-free cloth to soak up any excess ink from the Cap Station **[B]**.
4. Tap **"End Inspection"** on the Touchscreen to move the Service Station back under the Printhead Assembly.
5. Close the Top Cover.



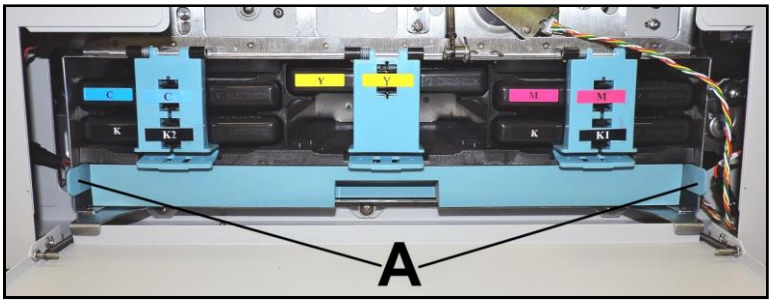




Replace Ink Waste Tray

Ink Waste Tray soaks up any excess ink that may drip from Print Engine during operation. After a period of time it may become saturated and need replacement.

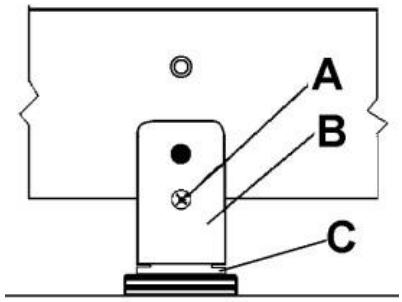
1. Open Ink Tank Door.
2. Pull on tabs to slide Ink Waste Tray **[A]** out of Printer.
3. Replace with a new Ink Waste Tray.



Replace Sheet Separators

Sheet Separators ensure separation of pieces as they are being fed. If experiencing double sheet feeding and cannot adjust Separators to prevent it, replace Separators.

Replacing Sheet Separators is not difficult:



1. Turn Printer OFF and unplug it from power source.
2. Release Separator by loosening Locking Knob and moving Media Side Guides to maximum opened position.
3. Lower Separators so they touch Feed Roller.
4. Remove screw **[A]** and Separator Cover **[B]**. Remove Separator **[C]** by prying it out of Holder.
5. Install a new Separator and reinstall Separator Support and screw. **DO NOT** overtighten screw to prevent distorting or damaging Separator.

Jams in Printer

If a jam occurs, **STOP the Printer.** Some possible causes for jamming are:

1. Feeding more than one piece of media (*double-feeding*).
2. Damaged media, such as dog-eared (*turned down corners*).
3. Media that is not stiff enough may not be usable. Media that meets Postal stiffness requirements for automated feeding is acceptable in Printer.
4. Envelopes caught under flap of another envelope or stick to one another.

Remove Jammed Media

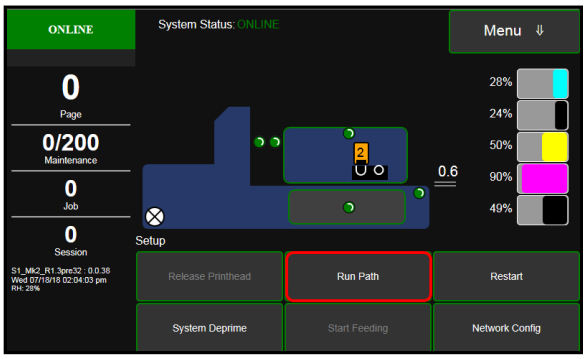
Clearing a jam depends on where jam occurred.

Feed Section:
Loosen Sheet Separators and remove jammed media.
Readjust Sheet Separators to media.

Print Area:

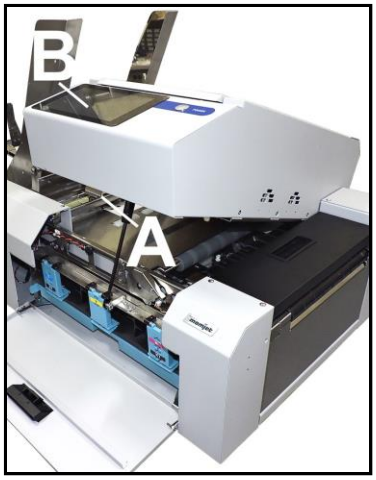
If you are sure nothing is obstructing the paper path:

- Open **Touchscreen "Setup" screen**. Press **"Run Path"**; this will clear the media from the paperpath without feeding more media..
- Press **"Clear Error"**.
- Press **"Resume"** to continue printing.



If you are not sure if the paper path is obstructed:

- Open the Ink Tank Door.
- Pull the Clamshell Latch **[A]** toward you to unlatch the Clamshell
- Raise Clamshell **[B]**.
- Clear jam, the carefully lower the Clamshell.



Misfeeds

Misfeeds can be corrected by readjusting or replacing the Sheet Separators. See **"Replacing Sheet Separators"** on previous page.

Cleaning

WARNING!

PRINTER IS A PRECISION MACHINE. CLEAN REGULARLY TO INSURE MANY YEARS OF SERVICE. BEFORE PERFORMING ANY MAINTENANCE, DISCONNECT MACHINE FROM ITS POWER SOURCE!

DO NOT REMOVE SIDE COVERS! HIGH VOLTAGES PRESENT.

Clean Printer regularly to remove accumulated paper dust and ink. Depending on types of media run, paper dust may accumulate inside Printer and on Transport.

1. Turn Printer OFF and unplug it from power receptacle. Then open or remove Covers.
2. **Interior:** Use a vacuum with a soft brush attachment or a can of compressed air to help loosen dust particles. **NOTE: Be careful around ink tray and capping station** in Print Engine area as accumulated ink may splash onto other parts of Printer. Take care not to damage PC Boards or electrical wiring.
3. **Exterior:** Wipe clean with a lint-free cloth using any standard nonabrasive household cleaner that does not contain plastic-harming solvents.

CAUTION

NEVER SPRAY OR POUR CLEANERS DIRECTLY ON OR INTO PRINTER. EXCESS LIQUID COULD HARM ELECTRONIC PARTS. DAMPEN A LINT-FREE CLOTH WITH THE CLEANER AND APPLY IT TO PARTS TO BE CLEANED.

Feed Rollers and Forwarding Rollers

Feed, Forwarding and Transport Rollers can become glazed with paper lint and ink from media. Clean regularly with a mild abrasive household cleaner on a damp lint-free cloth.

NOTE: Avoid using solvents on Rubber Rollers.

Print Engine

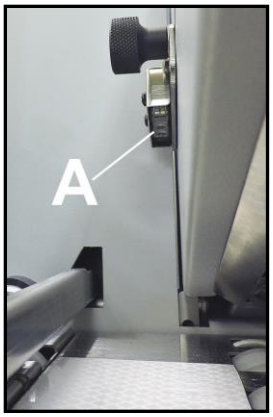
Areas in Print Engine can become glazed with a buildup of dust, paper lint and accumulated ink and have to be cleaned regularly. Open Top Cover. Use a vacuum to pick up any loose debris.

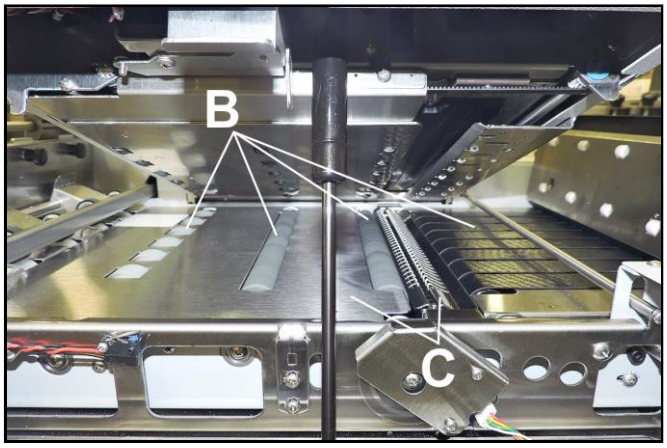
NOTE: Be careful around Ink Tray and Capping Station in Print Engine area as accumulated ink may splash onto other parts of Printer. Take care not to damage PC Boards or electrical wiring.

CAUTION

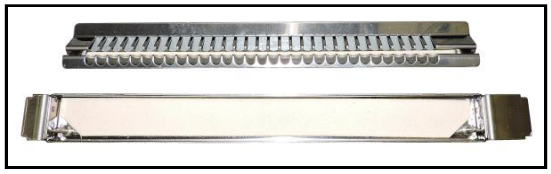
USE ONLY DEIONIZED/DISTILLED WATER TO CLEAN PRINT ENGINE COMPONENTS. AVOID CONTAMINATING PRINTHEAD WITH CLEANERS, LUBRICANTS OR OTHER CHEMICALS.

[A] Media Sensors: Paper lint and dust may build up on Media Sensors. Use a can of compressed air or a damp (*not wet*) foam or lint-free cotton swab to gently swab Sensors. Take care not to drip water into Circuit Boards. Use a clean, dry swab to dab surfaces dry.





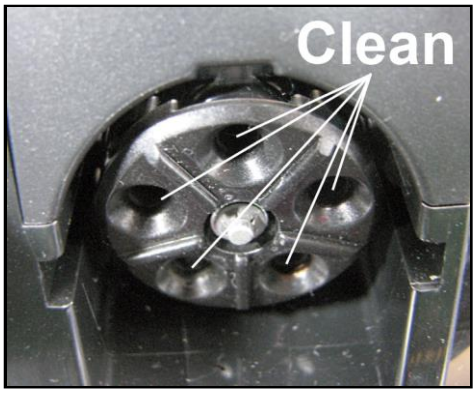
[B]. Rubber Rollers and Conveyor Belts. Clean as needed using distilled water with a damp, lint-free cloth.
NOTE: Be careful not to splash or drip ink on other parts of Printer.



[C] Printing Surfaces, Ink Drip Cover and Tray. Wipe using distilled water and a damp, lint-free cloth. Pat dry with a lint-free cloth. **Ink Drip Tray:** Carefully remove Ink Drip Tray Cover and Ink Drip Tray. **DO NOT tip the Tray or ink may spill.** Wipe off excess ink then clean using distilled water and a damp, lint-free cloth.

Cleaning Ink Revolver Couplings

1. **First Deprime system and remove Printhead Cartridge.**
2. Moisten a foam swab in distilled water.
3. Insert the swab into one of the ink channels and rotate swab to clean chamber.
4. Use a new swab for each of remaining ink channels until all 10 openings are clean. (*5 on each side.*)

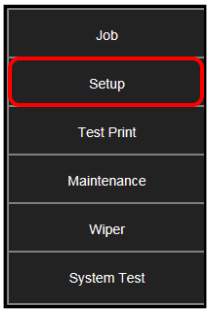


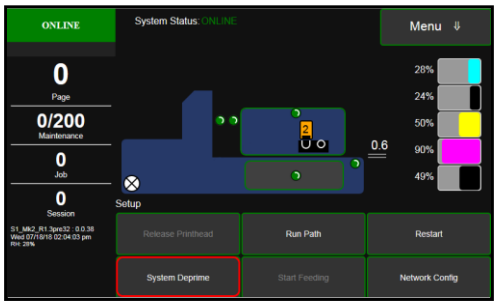
Shipping or Transporting Printer

If you have to ship or transport Printer for any reason, unit will have to be prepared. Once Printer is prepared, carefully package Printer, Printhead Cartridge, Service Station and Ink Tanks in original packaging.

Remove Printhead Cartridge

1. **Open Top Cover.** From the Touchscreen, tap **"Setup"** in the **Menu** drop-down, then tap **"System Deprime"**. The Printer pumps any ink in system back into Tanks. Then the Printhead Latch pops open.



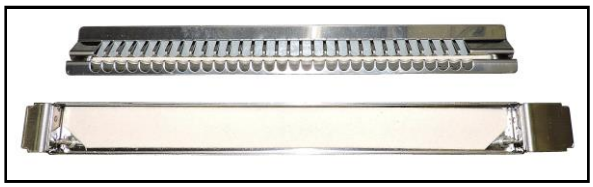


CAUTION
DO NOT PRY OR MANUALLY LIFT PRINTHEAD LATCH OR LATCH MAY BREAK. ONLY OPEN LATCH USING THE RELEASE PRINTHEAD BUTTON ON THE TOUCHSCREEN OR IN THE PRINTER TOOLBOX.

2. Make sure Printhead Latch is fully opened to retract ink lines. Remove used Printhead Cartridge by tilting it toward ink lines, then carefully lifting it out of Printhead Compartment.
3. Pack Printhead Cartridge area with absorbent towels to catch any ink drips or spills. Carefully pack Cartridge using original packaging.

Empty and Clean Ink Drip Tray

1. **Open Clamshell.**
2. Carefully lift the two tabs out of the slots in the Print Engine Frame and remove Ink Drip Tray Assembly **[A]**. **DO NOT tip the Tray or ink may spill.** Empty the Tray if necessary and wipe off excess ink. Clean using distilled water and a damp, lint-free cloth.
3. Reinstall the Ink Drip Tray Assembly.



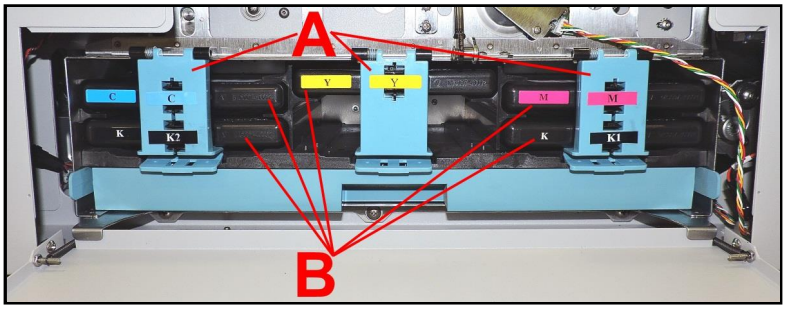
TURN PRINTER POWER OFF.

CAUTION

WHENEVER POWERING DOWN UNIT, ALWAYS:

1. **PRESS POWER BUTTON ON CONTROL PANEL.**
2. **WAIT FOR PRINTER TO STOP PROCESSING.**
3. **THEN PRESS MAIN POWER SWITCH ON REAR PANEL.**

Remove Ink Tanks



1. After depriming the system. Open Front Cover (*hinged at bottom*). Open the Ink Tank Latches **[A]** and pull Ink Tank(s) **[B]** out of Printer.

2. Carefully package Ink Tanks in original packaging. **IMPORTANT:** Make sure ink seals on Ink Tanks face up to prevent leakage.

3. Pack Ink Tank bays with absorbent towels to catch any ink drips or spills.

SECTION 5 – *Troubleshooting Guide*

Troubleshooting Guides are provided to assist in solving any problems that might occur with Printer. We tried to make them as complete as possible. The best advice we can offer is to make sure that system is set up properly, plugged in, and has an adequate supply of ink before attempting to troubleshoot any problem.

Memjet® Printhead

CONDITION	PROBLEM	SOLUTION
Missing parts of letters or text.	Air and bubbles blocking Nozzles.	Clean Printhead using recirculation, priming or cycles of depriming and priming found on the **Printer Touchscreen** or in **Printer Toolbox**. Rehydrate Printhead using distilled water and a wet, clean, lint-free cloth. Air bubbles often disappear with Printer use.
Print shows regularly missing or misdirected nozzles or ink color mixing.	Debris on Printhead.	Perform startup routine. Clean Printhead using a Cleaning Level on the **Printer Touchscreen** or in **Printer Toolbox**. Wipe Printhead manually with distilled water and a wet, clean, lint-free cloth. Replace Printhead.
Ink mixing – Mixed or muddy colors.	**Causes:** Ink flooding, air in Printhead or a dirty Printhead.	Clean Printhead using a Cleaning Level on the **Printer Touchscreen** or in **Printer Toolbox**. Wipe Printhead manually with distilled water and a wet, clean, lint-free cloth.
No print or crisp blocks of missing drops.	Electrical failure or poor electrical connection.	Reseat Printhead. Replace Printhead.
System will not reprime ink after replacing Printhead Cartridge	Printhead nozzles dry. Ink Tanks may be 1/3 full or less.	Wipe Printhead manually with distilled water and a wet, clean, lint-free cloth. Replace Ink Tanks.

WARNING!

DO NOT REMOVE SIDE COVERS OF PRINTER!
HIGH VOLTAGES PRESENT BEHIND COVERS!

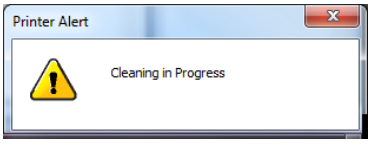
Printer

CONDITION	PROBLEM	SOLUTION
Ink Tank installed, no Ink Level indication in Toolbox	Ink Tank contacts dirty, preventing Printer/Ink Tank communication.	Remove Ink Tank(s). Clean prism and QA Chip contacts, see **Maintenance**, *Cleaning Ink Tank Contacts*.
Extra lines; losing data	Database problem.	Check data in database program.
Improper output (*address information out of order, misfeeding, etc.*)	Wrong interface settings. Static electricity. Dirty Media Sensor.	Check software or database on PC. Close software, then turn Printer OFF and ON. Clean Media Sensor.
Media jams	Double feeding. Media is curled or bent. Media is too thin.	Adjust Sheet Separators on Feeder. Uncurl media. Minimum thickness for media is 0.004".
No communication	Improper cabling / connector. Unit not receiving power.	Use proper USB cable (*see Operator Manual.*) Check plug connections, ON/OFF button and fuse on back panel.
Print too light or missing character dots	Clogged or dirty Printhead. Running out of ink.	Check Printhead. Check Ink Tanks.
Blurry address 	Image is not sharp.	Clean Printhead using a Cleaning Level on the **Printer Touchscreen** or in **Printer Toolbox**. Clean Printhead manually using distilled water and a wet, clean, lint-free cloth.
Feeding problems	Double sheets. Misfeeds.	Adjust Sheet Separators.
Job is sent to print but does not print.	Printer not turned ON. Printer not connected to computer. Media Sensor is covered in Print Engine.	Check that Printer is ON. Connect printer cable to computer and resend job. Open Print Engine and remove media.

Errors and Warnings

Printer Alert Window Messages

Messages sent from Driver and displayed on PC screen in a small popup window.



MESSAGE	SOLUTION
Cleaning in Progress	Wait until message disappears. Printer will start printing your job once cleaning process is complete.
Excessive Tilt Error	See details under **"Toolbox System Status Messages"** section.
Incompatible Printhead	Remove and reinsert your Printhead Cartridge. Replace Printhead. Printhead Cartridges must be purchased from authorized supplier for this printer model.
Incorrect … Ink Tank	Replace Ink Tank. Ink Tanks must be purchased from authorized supplier for this printer model.
…. Ink Low Example: Black Ink Low	Reorder Ink.
…. Out of Ink Example: Cyan Ink Out	Replace empty Ink Tank.
Load Paper	Out of Paper. Load media into Printer and press **PAUSE/RESUME** button to resume printing.
Mechanical Jam	Check for and remove obstruction, then press **PAUSE/RESUME** button to resume printing. Check/Clean Sensors. If problem persists, contact technical support.
Missing Printhead	Remove Printhead Cartridge. Check/clean electrical contacts. Reinsert Printhead. Replace Printhead. If problem persists, contact technical support.
Multiple Inks Low	Reorder Ink.
Multiple Ink Tanks Out	Replace empty Ink Tanks.
Multiple Ink Tanks are missing	Insert missing Ink Tanks. Clean electrical contacts and reseat Ink Tanks.
Multiple Unauthorized Ink Tanks	Remove and reinsert Ink Tank. Replace Ink Tank. Ink Tanks must be purchased from authorized supplier for this printer model.
Paper Jam	Remove jammed media. Check for proper feed setup then press **PAUSE/RESUME** button to resume printing. Check/Clean Sensors. If problem persists, contact technical support.
Printhead Latch Open	Ensure that Printhead Cartridge is inserted properly, then close Printhead Latch so that it locks.
Print Zone Assembly (Clamshell) Open	Check to be sure Clamshell is completely closed and latched.
The … Ink Tank is missing	Insert missing Ink Tank. Clean electrical contacts and reseat Ink Tank.
Unauthorized … Ink Tank Installed	Replace Ink Tank. Ink Tanks must be purchased from authorized supplier for this printer model.
Unauthorized Printhead	Replace Printhead Cartridge. Printhead Cartridges must be purchased from authorized supplier for this printer model.

Appendix A – Printer Specifications

PRINT RESOLUTION	**Best:** 1600 x 1600 DPI **Normal:** 1600 x 800 DPI
SPEED (color or mono)	Up to 3600 letter size pages or 9000 envelopes per hour
MEDIA SIZE	**Minimum:** 3" x 4.2" (76 mm x 107 mm) **Maximum:** 10.5" x 14.25"* (266.7mm x 362 mm) (*) Optional Extended Media Support available for media over 14.25" long.
PRINT AREA	8.77" x 40" (222.8 mm x 1016 mm)
MEDIA THICKNESS	**Minimum:** 0.004" (0.102 mm) **Maximum:** 0.4" (10 mm)
FEEDER CAPACITY	Up to 500 single sheets or 750 #10 envelopes
SOFTWARE	Windows™ Printer Drivers for Windows™, 8, 8.1, 10. RIP available
DIAGNOSTICS	Viewable on 7" Touchscreen Display and S-Series Toolbox
DATA STORAGE	Onboard Printer storage for Job Library
DUTY CYCLE	350,000 #10 Envelopes per month
INK	Water-based ink. 5 individual 250 ml ink tanks (CMYKK)
INK MONITOR	Viewable on 7" Touchscreen Display and S-Series Toolbox
PRINT CARTRIDGE	Memjet® Replaceable Printhead
INTERFACE	USB 2.0 and Ethernet
ELECTRICAL	100-240 VAC, 50/60 Hz
INTERNAL MEMORY BATTERY	CR 2032 Lithium Battery
DIMENSIONS	21-1/8" W x 39" L x 20-1/4" H (53.6 cm x 99.1 cm x 51.4 cm) (Media Guides and Support attached)
WEIGHT	95 lbs. (43.9 kg)

All Specifications Subject To Change Without Notice

Appendix B – Supplies and Optional Hardware

The following supply items and optional hardware are available from your Astro Machine Distributor:

SUPPLIES	
Black Ink Tank	123-2412
Cyan Ink Tank	123-2413
Magenta Ink Tank	123-2414
Yellow Ink Tank	123-2415
Conveyor /Stacker Conveyor Drop Tray	CDM-700 DTM-255
Drop Tray (Printer)	DT-420
Extended Media Support (*for media over 14.25" (362 mm) long*)	

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PRINTER MAINTENANCE SCHEDULE

General, periodic maintenance is needed to keep Printer in good working order. Many tasks can be performed by operators with basic supplies, no special tools needed. Other tasks should only be performed by trained service personnel. **NOTE:** High volume usage may require more frequent maintenance.

Maintenance Supplies & Equipment: Flashlight, small telescoping mirror, hard-bristled toothbrush or equivalent, powder-free nitrile gloves, protective clothing and eyewear, small flathead screwdriver, tweezers, vacuum with wand, deionized distilled water, Super Lube 21030 synthetic grease (*or equivalent*), Loctite 38650 copper anti-seize (*or equivalent*), can of compressed air, foam or lint-free cotton swabs, lint-free wipes, disposable shop towels.

COMPONENTS/TASKS	MAINTENANCE TYPE				
	DAILY	BI-WEEKLY	MONTHLY	YEARLY	AS NEEDED
PERFORMED BY OPERATOR					
Printhead (Manual Wiping)					WIPE
Ink Revolver Couplings and Connections: Inspection/Cleaning					EVERY PRINTHEAD REMOVAL
Residue and Debris Removal	CLEAN	CLEAN	CLEAN	CLEAN	CLEAN
Optical Sensors (Media Path)		CLEAN	CLEAN	CLEAN	
Wiper Assembly: Inspection		INSPECT	INSPECT	INSPECT	
Grit Rollers (Media Path)			INSPECT	CLEAN	
Ink Tank Latches/Ink Bay				INSPECT	
Ink Tubing, Couplings, Components			INSPECT	INSPECT	
Ink Waste Tray			INSPECT	INSPECT	REPLACE
Printhead Lift Motor Belts, Service Station Motor Belts, Feed Motor Belt, Paper Path Motor Belt, Media Thickness Adjustment Belts			INSPECT	INSPECT	
PERFORMED BY SERVICE TECHNICIAN					
Lubrication				APPLY	APPLY
Pen Driver PCA Contacts: Cleaning					EVERY PRINTHEAD REMOVAL
Moving Parts/Motor				TEST	
Service Station Sled Assembly				CLEAN	
Wiper Assembly: Cleaning				CLEAN	

WARNING!

ALWAYS POWER DOWN PRINTER BEFORE CONNECTING OR DISCONNECTING ANY WIRING HARNESSES OR CABLE CONNECTIONS TO AVOID SERIOUS SHOCK OR INJURY.

CAUTION

- **ALWAYS USE APPROPRIATE PERSONAL PROTECTION EQUIPMENT (PPE).**
- **USE ELECTROSTATIC DISCHARGE (ESD) PROTECTION WHEN MAINTAINING EQUIPMENT.**
- **DISPOSE OF ALL MAINTENANCE WASTE IN ACCORDANCE WITH LOCAL REGULATIONS.**

NOTES

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