



AstroJet™ S1/S1-DN COLOR PAGE PRINTER



OPERATOR MANUAL

Powered by
memjet®

ASTRO MACHINE CORP.

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SAFETY PRECAUTIONS

THIS EQUIPMENT PRESENTS NO PROBLEM WHEN USED PROPERLY. OBSERVE SAFETY RULES WHEN OPERATING THE S1/S1-DN 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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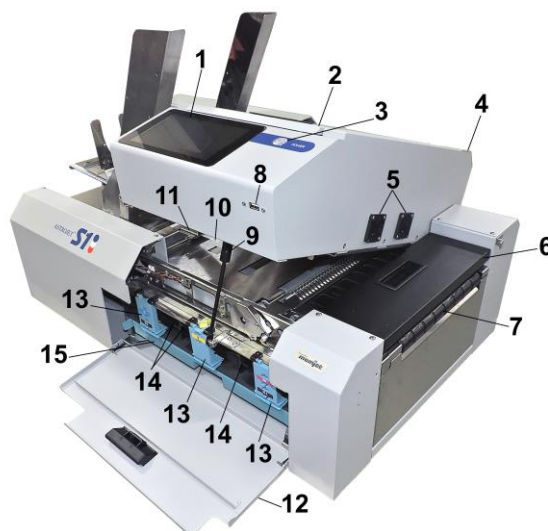
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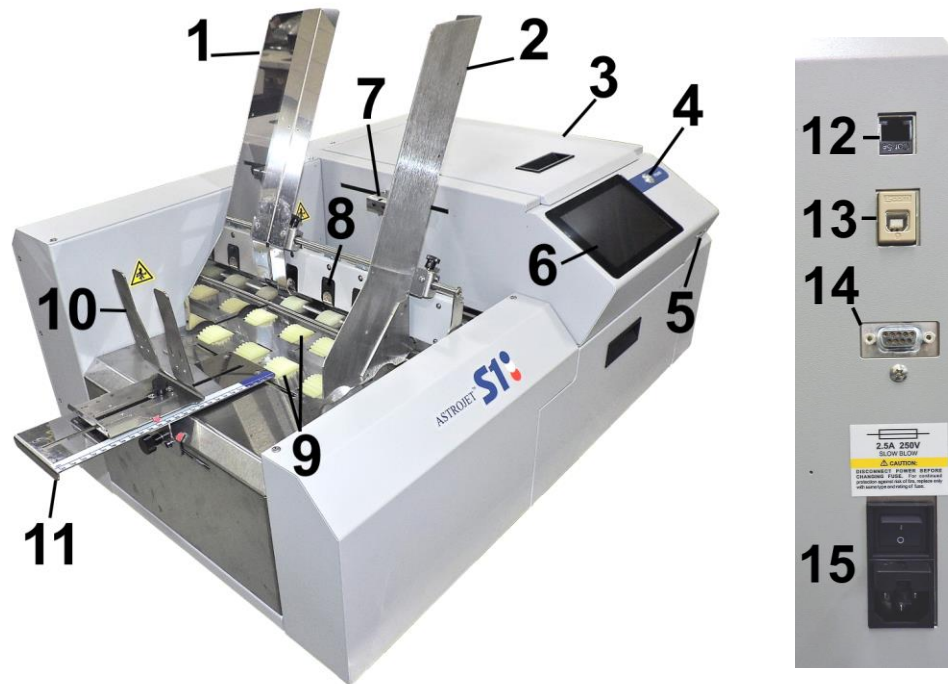
SECTION 1 – *Getting Acquainted*



Front View

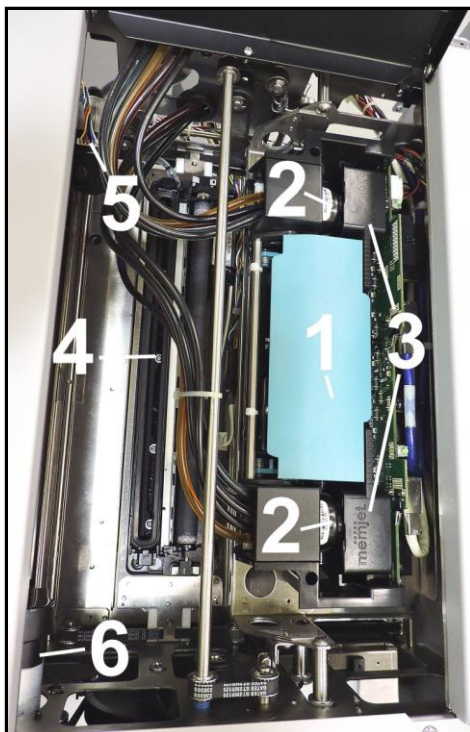
1.	Control Panel Touchscreen – Displays Menu and information about Printer status. Controls Printer functions and setup.
2.	Top Cover – Provides access to Print Engine, Printhead and Service Station.
3.	ON/OFF LED Button – Turn power ON or OFF during idle time and maintenance.
4.	Clamshell – Holds upper 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.	Control Panel USB Port – Use a USB thumb drive to back-up Print Jobs in the Printer Job Library and Debug Logs. Upload Print Jobs from other sources and same model printers. Upload MP4 videos and apply Printer firmware (*.fbf) and Touchscreen UI (*.rpz) files.
9.	Clamshell Support – Holds Printhead Assembly up during maintenance/service.
10.	Media Sensor Reflector – Allows Media Sensor to track media passing through the Printer.
11.	Clamshell Latch – Release to raise the Printhead Assembly.
12.	Ink Tank Door – Access to Ink Tanks. When open, disconnects Printer communication to Ink Tanks and allows safe installation and replacement.
13.	Ink Tank Latches – Used to hold Ink Tanks in slots. NOTE: Make sure both sides at bottom part of latch are engaged.
14.	Ink Tanks – Printer has five Ink Tanks: Cyan, Yellow, Magenta, and two Black. S1: Use only Versapass™ DG Ink S1-DN: Use only Versapass™ DN Ink
15.	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.

SECTION 1 GETTING ACQUAINTED



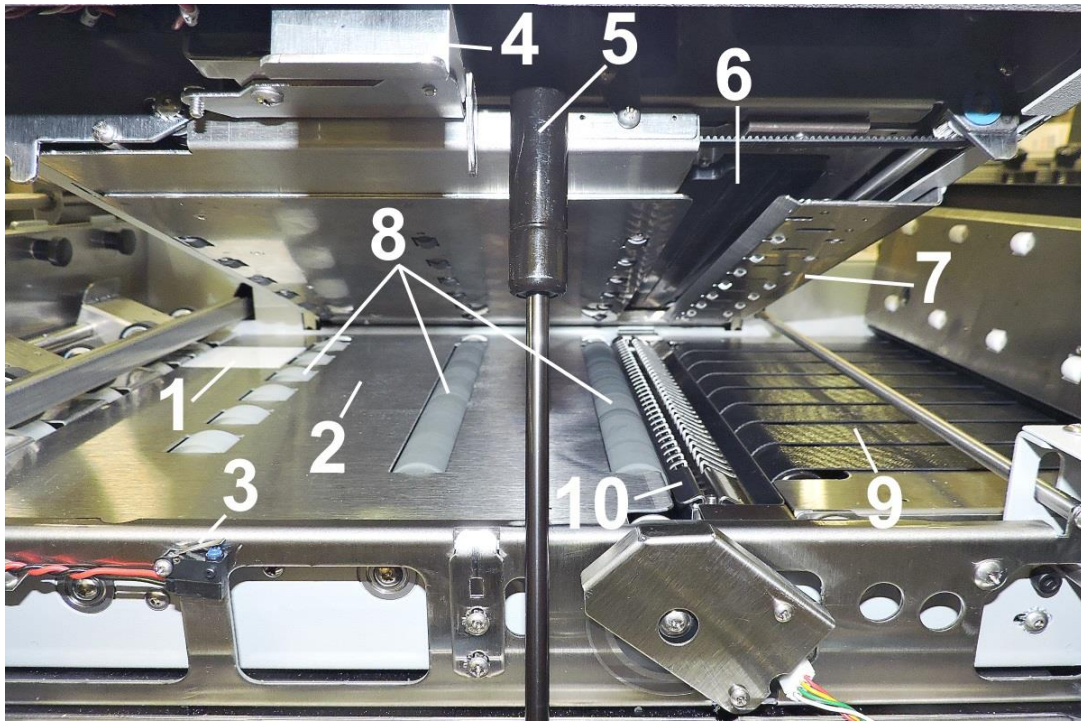
Rear View

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.	Control Panel USB Port – Use a USB thumb drive to back-up Print Jobs in the Printer Job Library and Debug Logs. Upload Print Jobs from other sources and same model printers. Upload MP4 videos and apply Printer firmware (*.fbf) and Touchscreen UI (*.rpz) files.
7.	Adjustable Feed/Media (Entry) Sensor – Senses when media is moving, not feeding or jammed. Adjusts to accommodate varying media widths.
8.	Sheet Separators – Separates each piece of media as it is fed.
9.	Feed Rollers – Move media into print area.
10.	Rear Media Guide – Holds media against Front Plate.
11.	Rear Media Guide Support – Supports the paper/media.
12.	Network Port – Ethernet cable plugs in here.
13.	USB Port – USB cable attaches to Printer here.
14.	Interface Port – DB-9 Interface to connect Printer with other equipment.
15.	Main Power Switch, Receptacle and Fuse – Plug in power cord here. Switch turns main power ON/OFF. <i>(Use Control Panel LED Power switch to turn off machine for cleaning and maintenance).</i> Fuse protects Printer's electronic circuits.



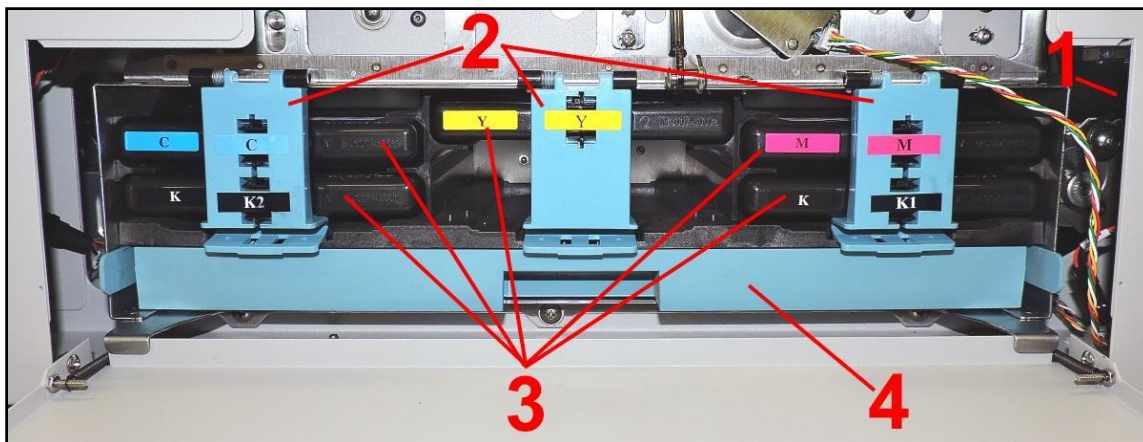
Print Engine View

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 the 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 Depprime 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 S1: Use only Versapass™ DG Ink S1-DN: Use only Versapass™ DN Ink
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 Indicator

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



SECTION 2 – *Installing Printer*

Contents of Packaging

1.	S1 or S1-DN Printer
2.	Ink Drip Tray Assembly (Includes High and Low Ink Drip Grates)
3.	Five Ink Tanks – Cyan, Magenta, Yellow, Black, Black S1: Use only Versapass™ DG Ink S1-DN: Use only Versapass™ DN ink
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-Ft.)
10.	Ethernet Cable (10-Ft.)
11.	Quick Start Guide
12.	Driver Software: USB Flash Drive (Includes Printer Driver and Operator Manual)

Before using Printer:

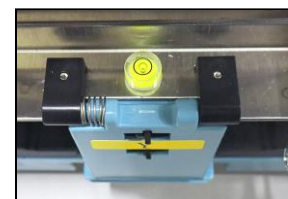
- Unpack the Printer and verify the package contents
- Choose a location for the Printer
- Remove shipping materials from the Printer
- Install the Ink Drip Tray Assembly and assemble the Printer
- Plug in the Printer and connect it to a computer or network
- Install the Printer Driver
- Install the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

Unpack and Set-up

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

Choose a Location

Place the 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 the Printer is level. Protect the Printer from excessive heat, dust, and moisture. Avoid placing it in direct sunlight.

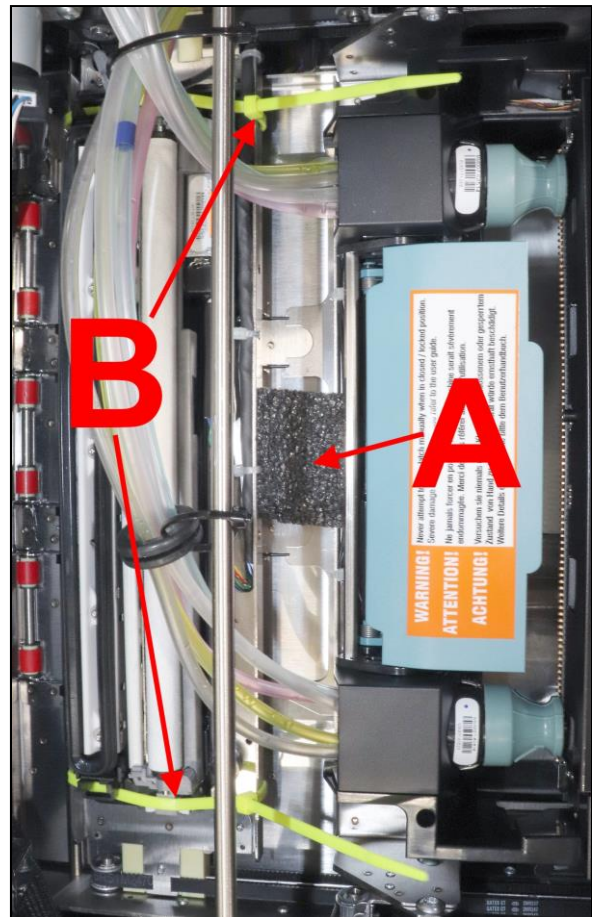


Remove Shipping Materials

WARNING

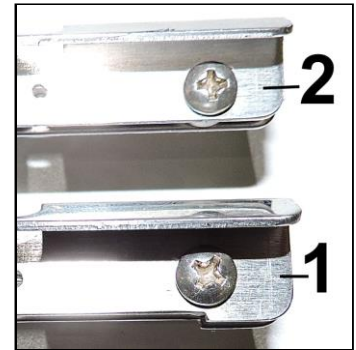
TO AVOID POSSIBLE DAMAGE TO PRINTER; DO NOT PLUG-IN OR POWER-UP PRINTER UNTIL ALL SHIPPING MATERIALS ARE REMOVED.

1. Open the **Top Cover**.
2. Remove the Foam Shipping Block **[A]**. (Color of foam block may vary.)
NOTE: Foam Shipping Block is used to secure the Service Station Sled during transport.
3. Cut and remove the two yellow zip-ties **[B]**.
NOTE: These zip-ties are used to secure the **Wiper Motor Assembly** during transport. **DO NOT** cut the white or black zip-ties used to restrain the Ink Hoses.
IMPORTANT: Remove all cut pieces of the yellow zip-ties from the Printer.
4. Gently close the **Top Cover**.
5. Remove the protective film from the **Touchscreen**.
6. Remove the masking tape used to secure the Side Guide mounting screws during transport.

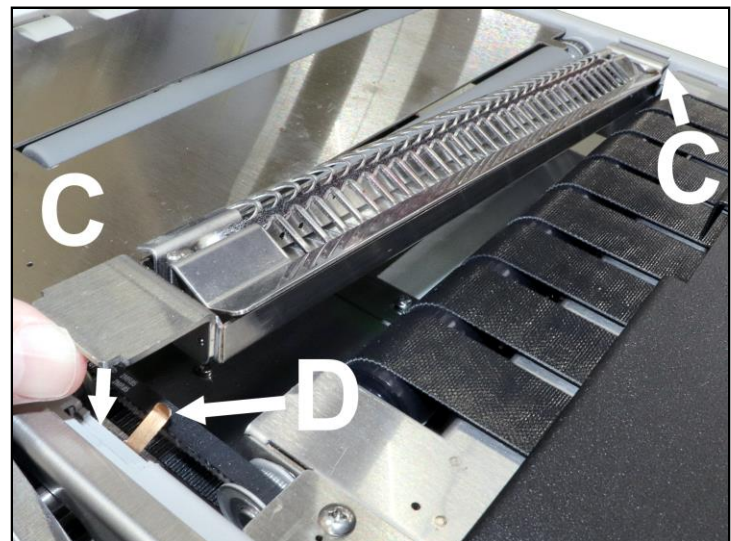
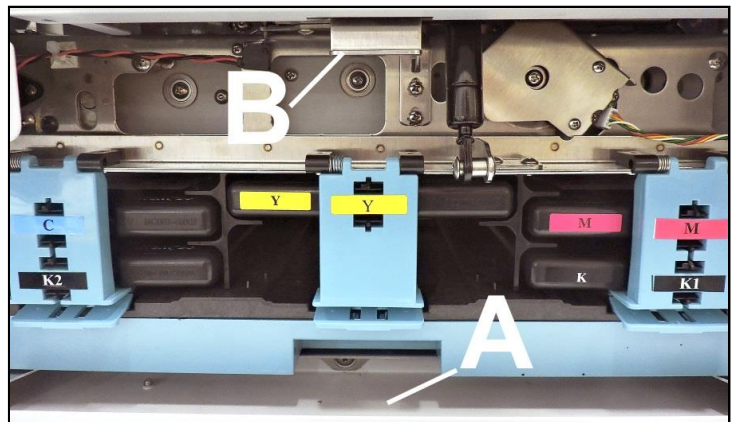


Install Ink Drip Tray Assembly

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.

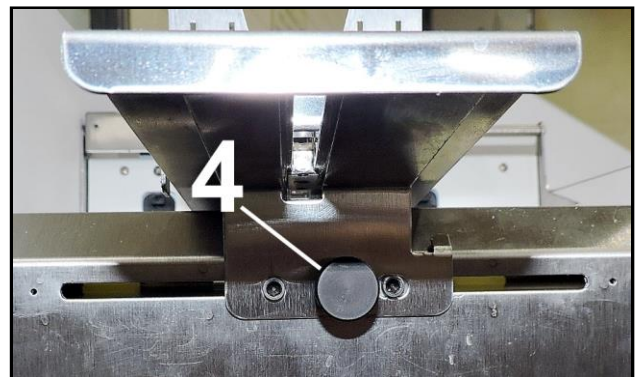
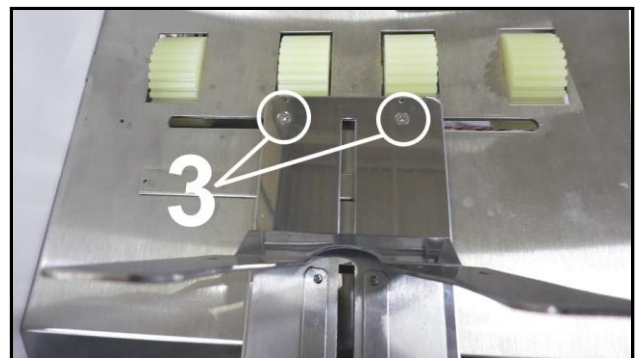
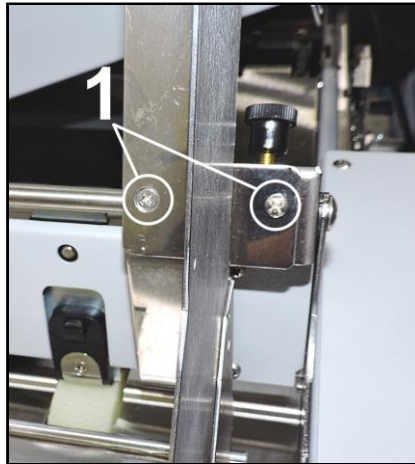


2. **Install the Ink Drip Tray Assembly:**
Open the Ink Tank Door [A].
3. Release the Latch [B] to raise the Clamshell.
4. Insert tabs on the Ink Drip Tray into the frame slots [C] as shown.
NOTE: If necessary, bend the tab on the Grounding Spring [D], so it touches the bottom of the Ink Drip Tray tab.
5. Close the Clamshell.



Assemble Printer

1. Install the Right Adjustable Media Guide with (2) screws [1] (*included*).
2. Attach the Left Adjustable Media Side Guide with (2) screws [2] (*included*).
3. Attach the 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.



SECTION 2

INSTALLING PRINTER

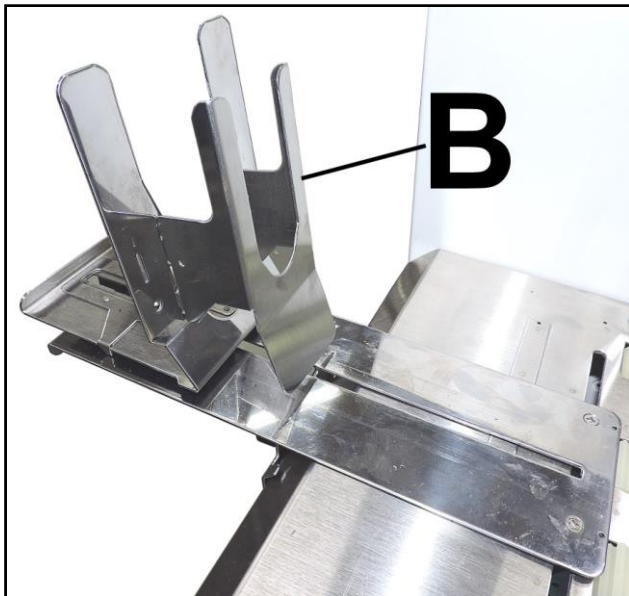
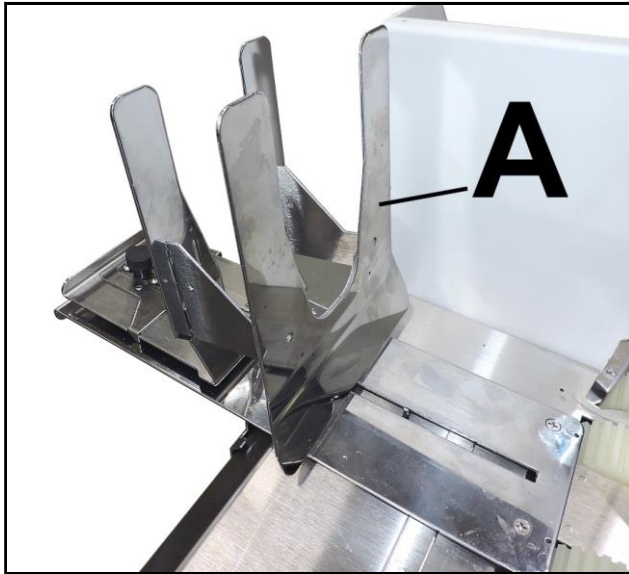
Narrow and Wide Media Support Wedges:

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 the power cord into the receptacle [1] at the rear of the Printer. Internal power supply in the 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.



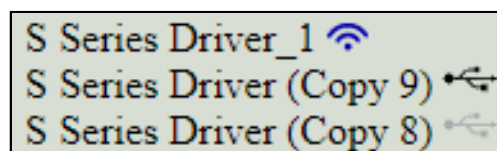
Connect to Computer

Printer connects to the computer through the **USB Port [2]**.

Network Port [3] for connecting to a network.

See “**Network Connection Setup**” in “**Using Control Panel Touchscreen**”.

Once the Printer is connected and set up, opening the **Printer Toolbox** displays the Printer(s) available and whether they are connected to the network or by USB cable. You can then select the desired Printer to open its Toolbox screens. **NOTE:** If the symbol is grayed out or blank, that Printer is not currently connected.



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 the Printer software to operate properly, check that the hardware meets **minimum requirements**:

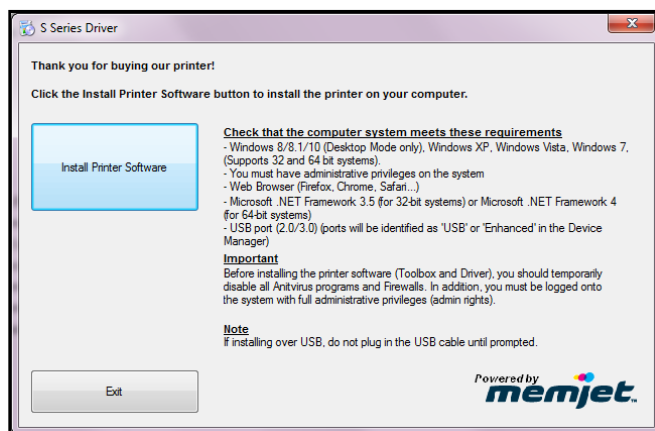
- **Operating System:** Windows 8/8.1, Windows 10 (*Desktop Mode only*). Windows XP, Windows Vista, Windows 7. Supports 32 and 64 bit systems. (*You must have administrative privileges on system.*)
NOTE: Windows 8, 8.1 and Windows 10 will only work in desktop mode. No Windows 8 or 10 metro apps will 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.
- **Ethernet Speed:** 1,000 Mbps.
- **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 newer .NET Framework version is installed; version 3.5 or 4 must also be installed, or Toolbox will not open.

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

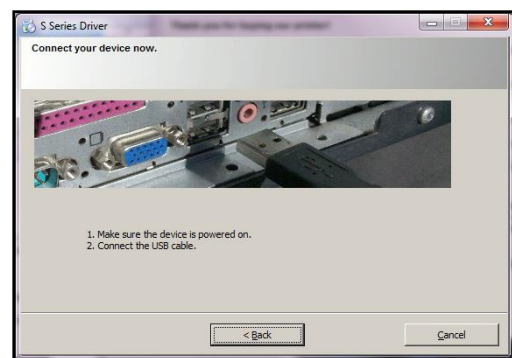
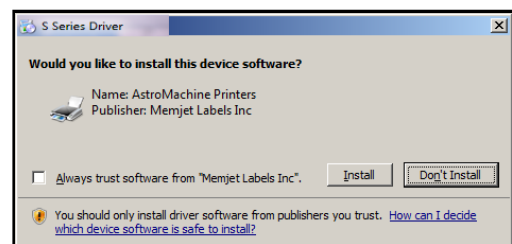
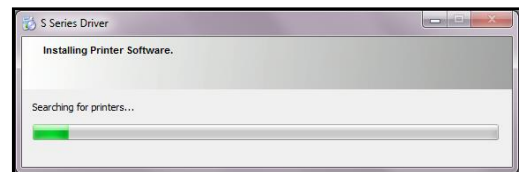
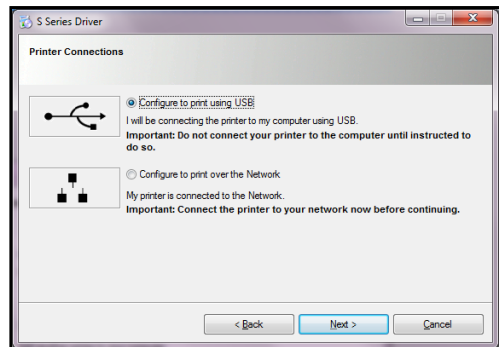
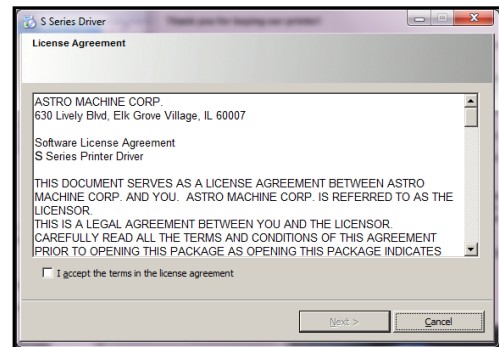
Install Over USB Connection

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 the USB connection if it is already plugged in.** Insert the Printer Driver USB Flash Drive supplied with the Printer into your computer's USB port.
Open the USB Flash Drive Directory:
Open the “S-Series” folder.
Open the “Driver” folder.
Open the “Driver Version” folder.
Select and click “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”.



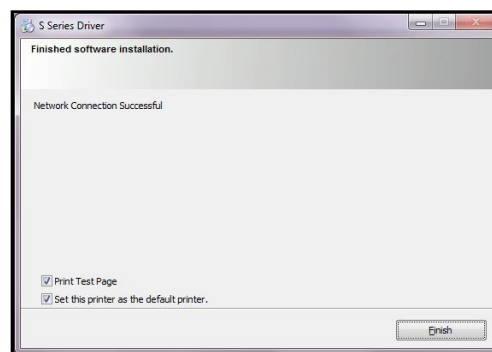
3. **License Agreement.**
Check “I accept...” then click “Next>”.
4. **Printer Connections.** Click “Configure to print using USB”. Then click “Next>”.
5. **Installing Printer Software.**
Software download begins.
6. **Would You Like to Install This Device Software?**
Click “Install”.
7. **Connect Device Now.** Turn Printer ON and connect USB cable. **Don’t click on either button.**
Software will finish installing.



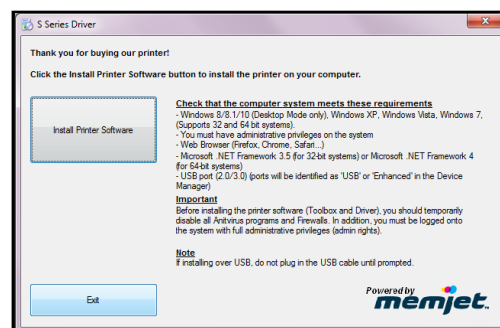
SECTION 2

INSTALLING PRINTER

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.

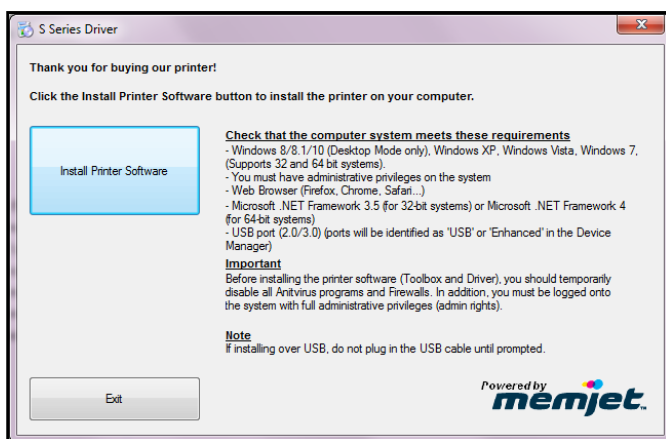


Install Over Network Connection, Version A

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*).

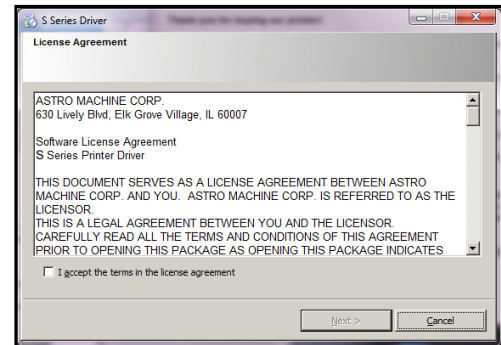
NOTE: Copy the 12-digit Hardware ID number listed on the Printer(s) on the label located below the Ethernet port so you can identify the Printer(s) in a later step.

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.** Insert the Printer Driver USB Flash Drive supplied with the Printer into your computer's USB port. **Open the USB Flash Drive Directory:** Open the “S-Series” folder. Open the “Driver” folder. Open the “Driver Version” folder. Select and click “**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**”.

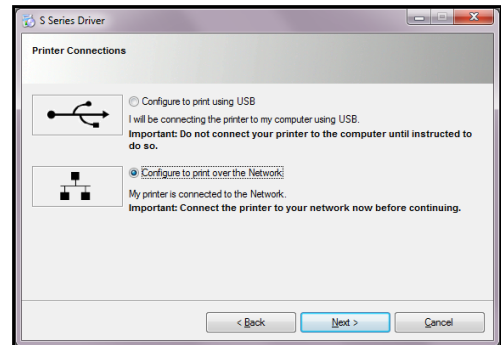


3. **License Agreement.**

Check “I accept...” then click “Next>”.

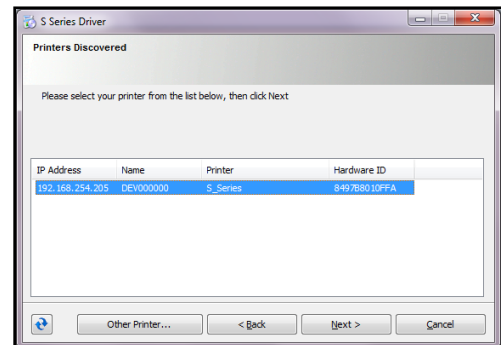


4. **Printer Connections.** Click “Configure to print using the Network”. Make sure the Printer is connected to the Network. Then click “Next>”.



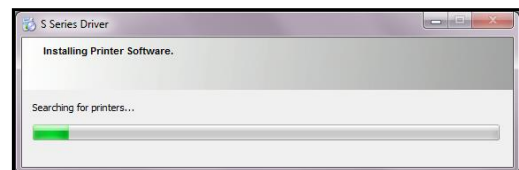
5. **Printers Discovered.** A list of available Printers opens. Check the **Printer** column to verify you have an **S-Series** printer. Check the **Hardware ID** column and match the number listed to the number you copied previously from the Printer label. Select that Printer. Click “Next>”.

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”.



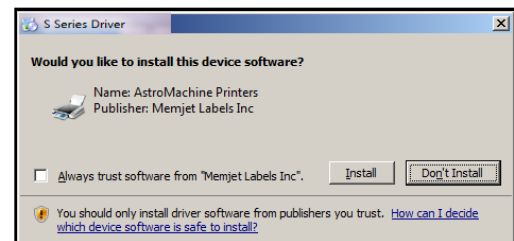
6. **Installing Printer Software.**

Software download begins.



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

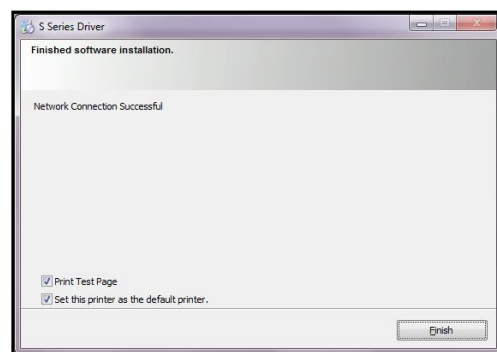
Click “Install”.



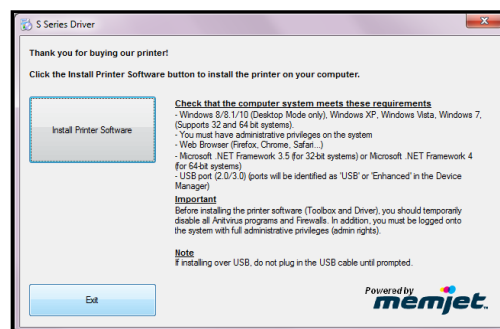
SECTION 2

INSTALLING PRINTER

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**.

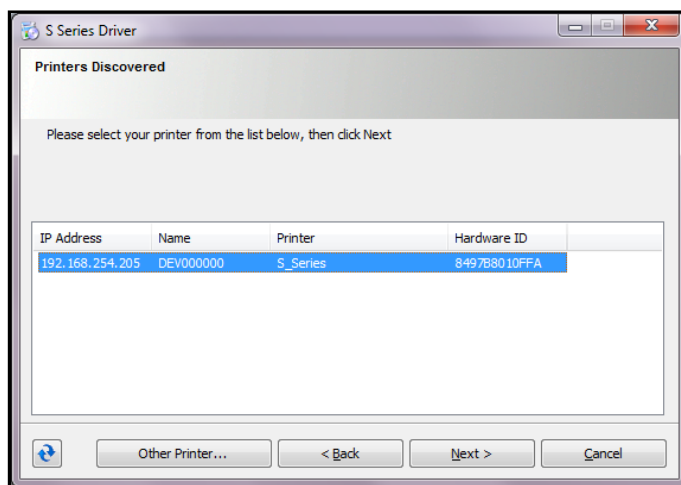
If more than one copy of the S-Series Driver is installed, you will have to choose which device you want the **Toolbox** to connect to. To help choose the proper device, you can identify the Printer(s) using the **Hardware ID** you copied earlier or you can rename the Printer(s) as outlined in the **Tip**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

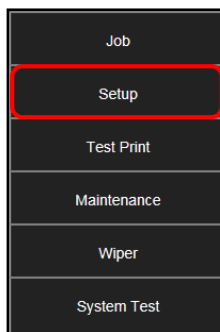
S-Series Driver (Copy 2) configured for Network: suggested name “**S Series (Network-2)**”.



Install Over Network Connection, Version B

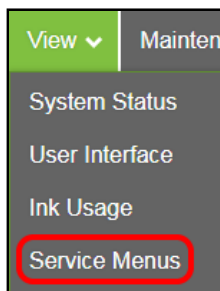
Use this procedure to install the Print Driver over the Network connection on **Static IP** systems requiring that an IP address is assigned manually. **NOTE: Copy the 12-digit Hardware ID number listed on the Printer(s) on the label just below Ethernet port so you can identify the Printer(s) in a later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

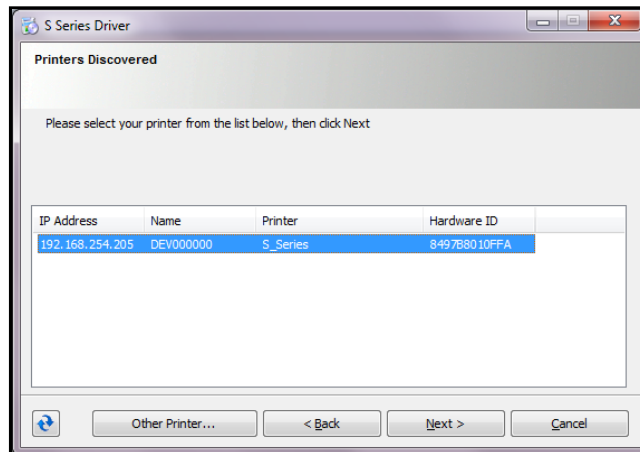
In the “View” drop-down menu, click “Service Menus”. When the **Diagnostic** screen opens, click the “System Settings” button.



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.

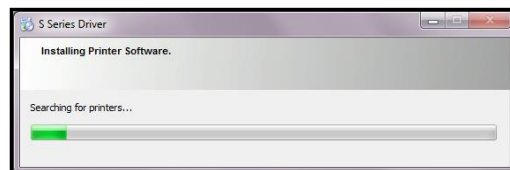
2. Connect the Ethernet cable to the Ethernet port and rerun the “Install Over Network Connection, Version A” procedure. The Printer should now appear on the “Printers Discovered” window. The Printer can still be identified by its “Hardware ID”, but the new IP address entered by your IT support person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



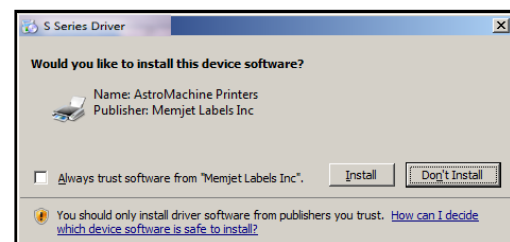
SECTION 2

INSTALLING PRINTER

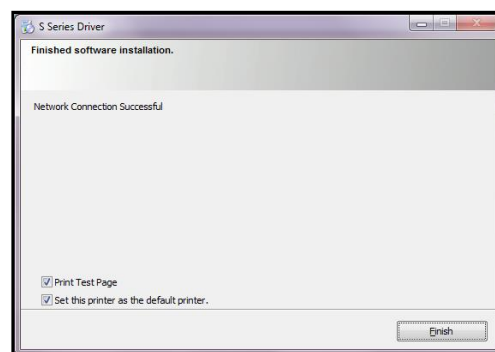
3. **Installing Printer Software.**
Software download begins.



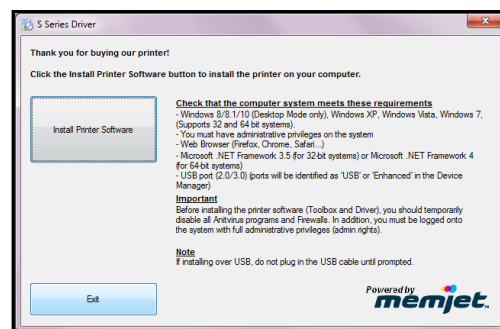
4. **Would You Like to Install This Device Software?**
Click “Install”.



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.

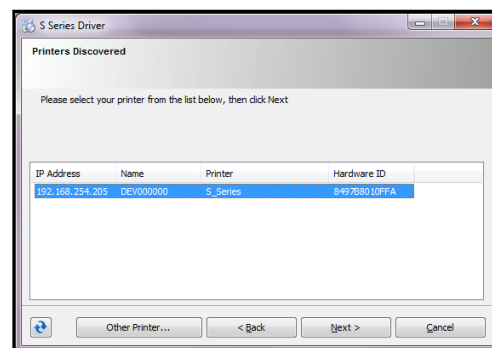
Example:

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)**”

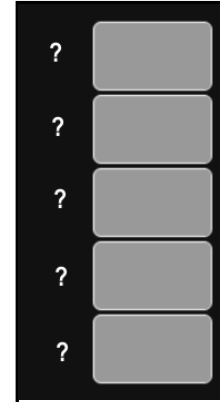


Install Ink Tanks

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.

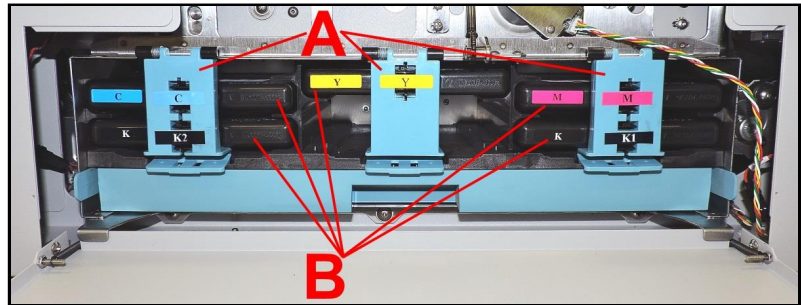
Ink Tank status information appears on the right side of the Touchscreen. Note that the **Ink Tank** indicator boxes are empty. **NOTE:** The question marks indicate that no Ink Tanks are detected by the Printer.



CAUTION

VERIFY THAT THE LABELS ON THE INK CARTRIDGE AND THE PRINTER'S INK STATION MATCH. BOTH SHOULD BE "DN" OR BOTH SHOULD BE "DG".

- 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].

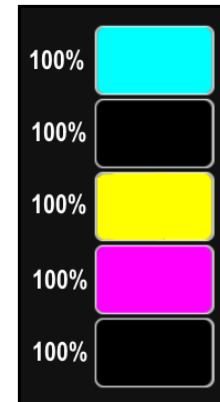


- 3. Remove the new Ink Tank(s)** from packaging.

- 4. Insert the Ink Tanks** (labels up) into the appropriate color slots [B].
Close the Ink Tank Latches.

INSTALLATION TIP: Make sure the Ink Tanks seat properly. Insert the Ink Tank into the appropriate Ink Station, then pull the Ink Tank back about an inch and push forward firmly to insure that the Ink Nozzles penetrate the seals on the Ink Tanks.

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

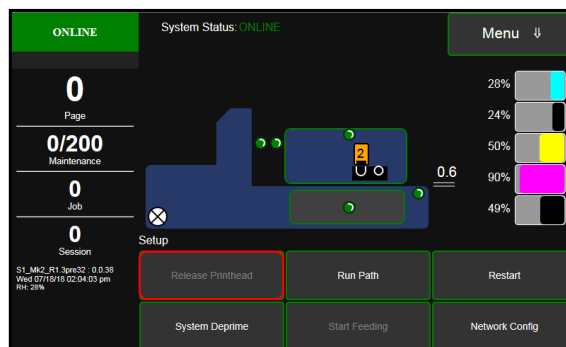
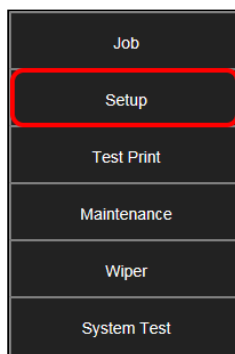
Printhead Cartridge is a delicate precision device. Handle with extreme care to avoid damage and issues that could degrade print quality.

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 the Printhead Cartridge until the Printer is ready for installation. Once unwrapped, delay in installing the 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.

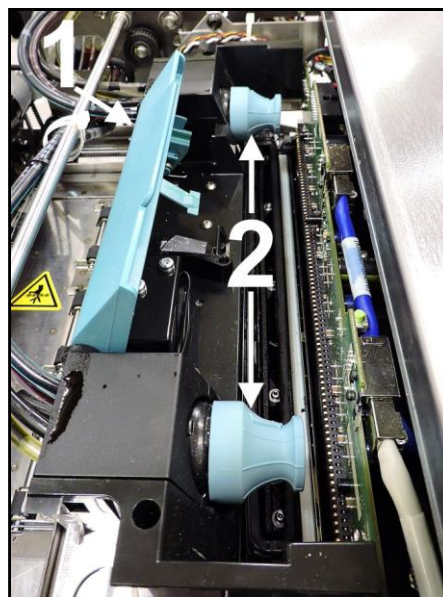
1. **Open the Top Cover.**
The Printhead Latch [1] is shipped in the open position, if it is not:
Close the Top Cover.
Use the Touchscreen to tap **Menu**, then **Setup**.
Press **Release Printhead**.
The Printer runs, then the Latch [1] pops open.
Open the Top Cover.

NOTE: Remove Cap Protectors [2] on Ink Nozzles. Be sure to open the Latch fully to retract the Ink Nozzles.



CAUTION

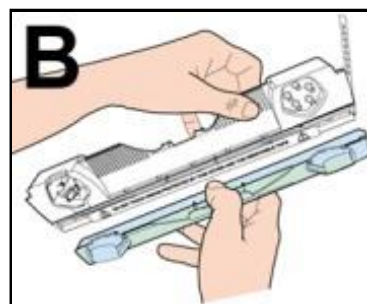
DO NOT PRY OR MANUALLY LIFT THE PRINthead LATCH OR THE LATCH MAY BREAK. ONLY OPEN THE LATCH USING THE RELEASE PRINthead BUTTON ON THE TOUCHSCREEN OR IN THE PRINTER TOOLBOX.



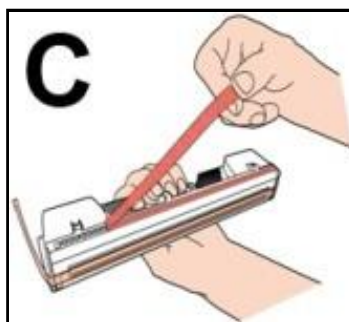
2. **[A] Carefully remove Printhead Cartridge from foil packaging.** Tear foil at notch or cut the end with scissors.



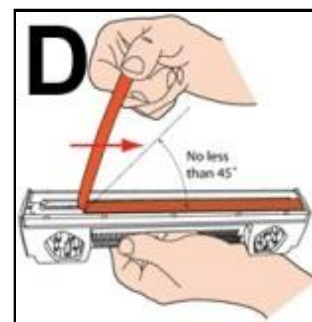
[B] Remove protective plastic cover. Hold Printhead by handle and unclip cover from Printhead.



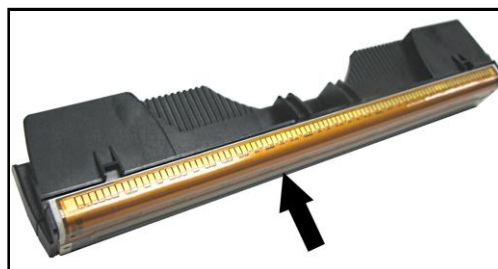
[C] Remove protective strip from Printhead Electrical Contacts. Once removed, **DO NOT** allow strip to touch electrical contacts.



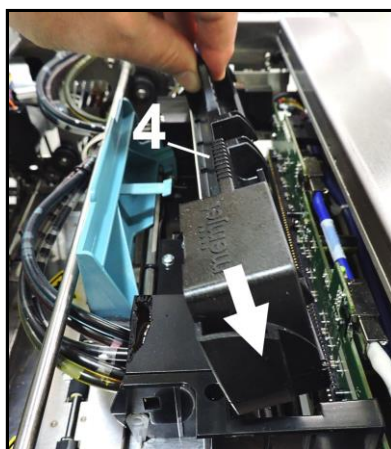
[D] Remove protective strip from Printhead Nozzles. Hold Printhead by the handle. Pull strip tab and slowly peel strip from Printhead. **DO NOT** pull strip at less than a 45° angle from Printhead surface. **DO NOT** allow removed strip to touch Printhead Nozzles.



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.



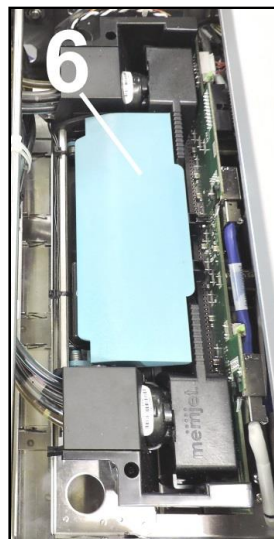
4. Carefully insert Cartridge into compartment at an angle [4], with Printhead surface facing down and Ink Nozzles facing Ink Hoses. Once seated, gently tilt Cartridge back until it snaps into an upright position [5]. **DO NOT FORCE** the Cartridge into position.



SECTION 2

INSTALLING PRINTER

5. **Close Printhead Latch [6].** Close the Top Cover. Printer starts up and primes ink into Printhead (*this may take a few minutes.*) **NOTE:** When priming stops, open the Top Cover and check that ink is flowing through hoses. If air bubbles appear, tap lines and close the Top Cover. Or close the Top Cover and click **“Circulate Ink”** on Touchscreen to clear the air bubbles.

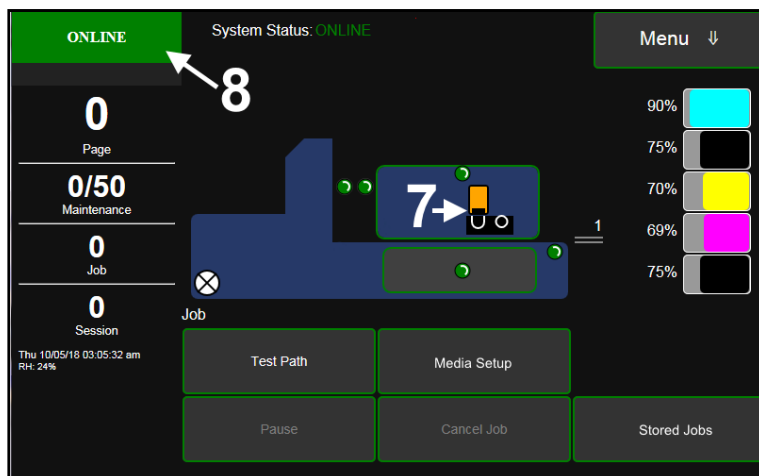


6. **Watch the Control Panel Touchscreen.** Check that the Printhead icon [7] in Printer image is primed (*solid color*).
7. When **ONLINE [8]** appears, the Printer is ready for use.
NOTE: If the Printhead icon continues to display an outline or a question mark (?) try the following procedures:

[1] Printhead icon shows an outline (Printhead unprimed): Click **“Circulate Ink”** under the **“Maintenance”** drop-down in the 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.

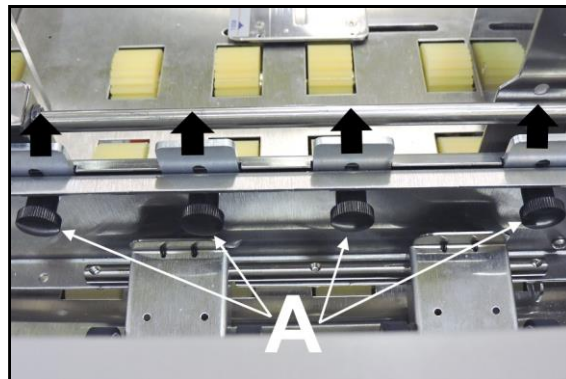


NOTE: Printer may take up to 12 minutes to set itself up during initial startup. This is normal.

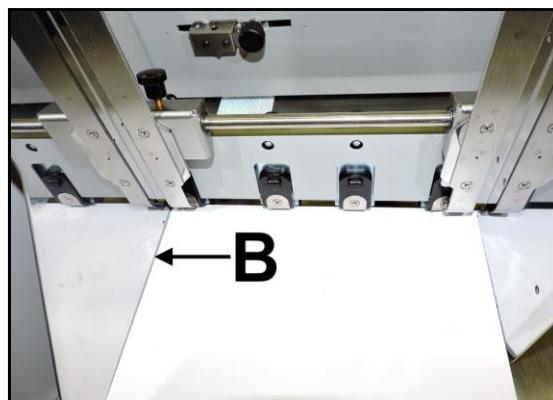
Set up Feed

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

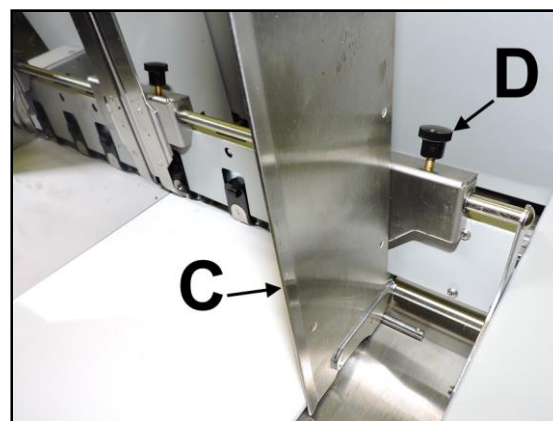
1. Loosen locking screws located behind the Sheet Separators [A] and raise the Separators; then tighten the locking screws to hold the Separators in the “Up” position.



2. Place a single piece of media to be run under the 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.



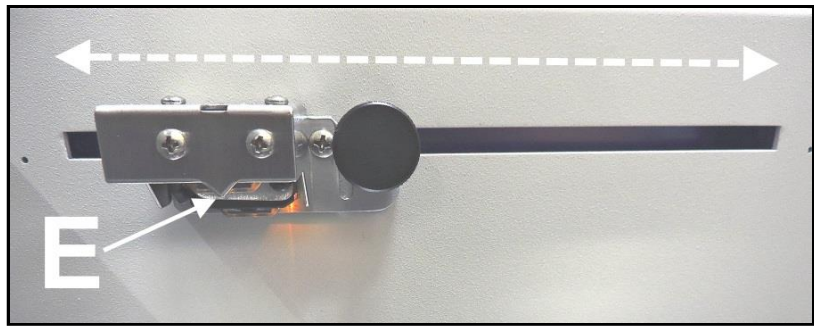
3. Position **Adjustable Media Side Guide [C]** so that it is about 1/32" from the sides of the media. Tighten the locking knob on the Side Guide [D]. Place a stack of media in the machine. Press and hold the **Paper** key to feed one piece through the Separator.
NOTE: To prevent misfeeds and tearing,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



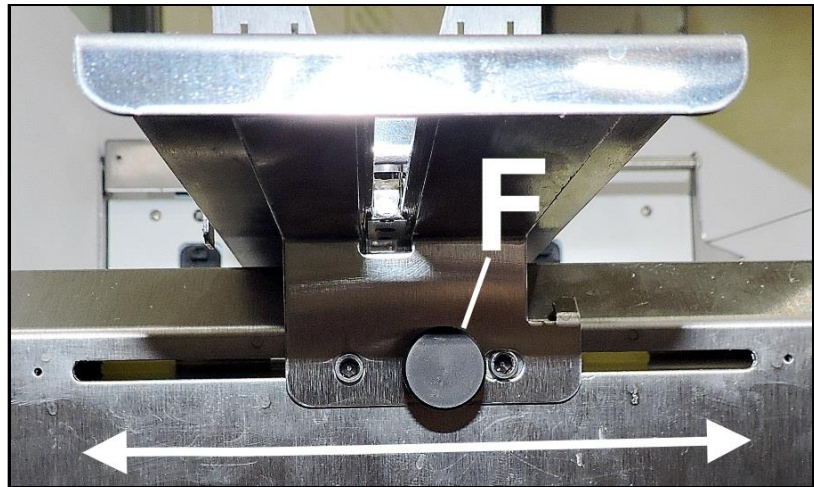
SECTION 2

INSTALLING PRINTER

4. **Adjust Feeder/Media Sensor Assembly to align with the 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.

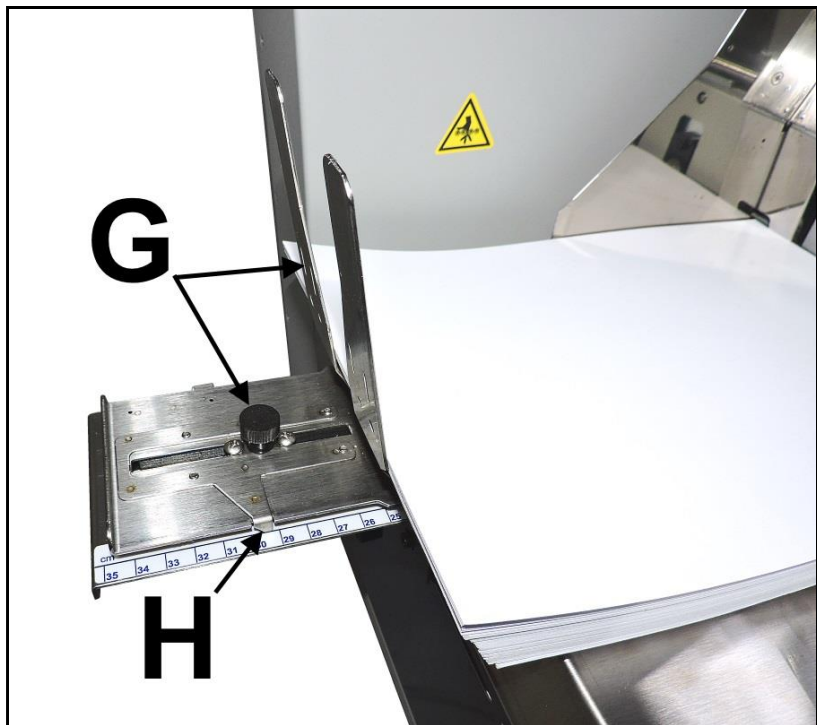


5. **Adjust Rear Guide Support** by using knob [F] to slide the Guide right and left. If experiencing feeding problems, slide the Rear Support Guide right or left to keep media aligned with the Media Guides.



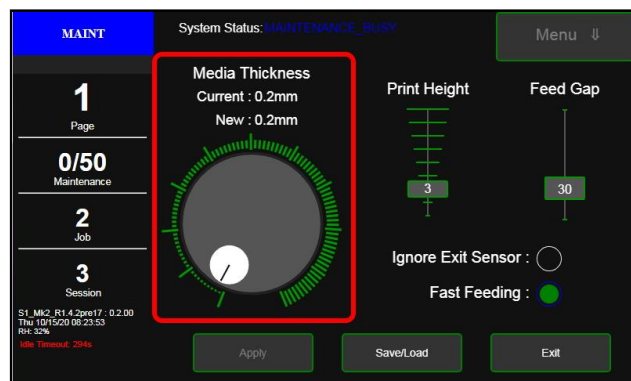
6. **Adjust Rear Media Guide [G]** by loosening locking screw and moving the Guide until the arrow [H] points to the length of the media being used on the scale attached to the Guide.

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

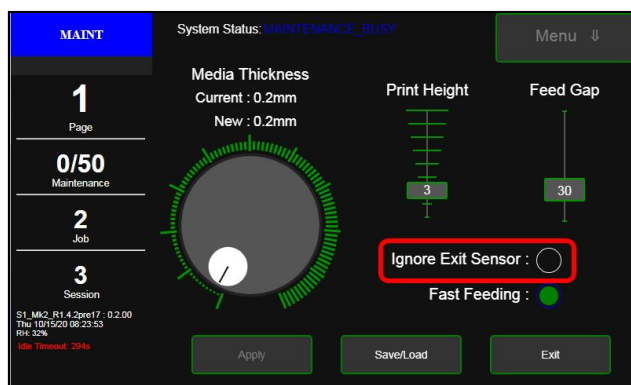


Ignore Exit Sensor

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**.

NOTE: If using dark or black media, the Sensor may not detect the end of a piece and initiate a “Paper Jam” error. To prevent this, select “Ignore Exit Sensor”.

See “Using Media Setup” in the “Using the Touchscreen” section.



SECTION 3 – *Operating Printer*

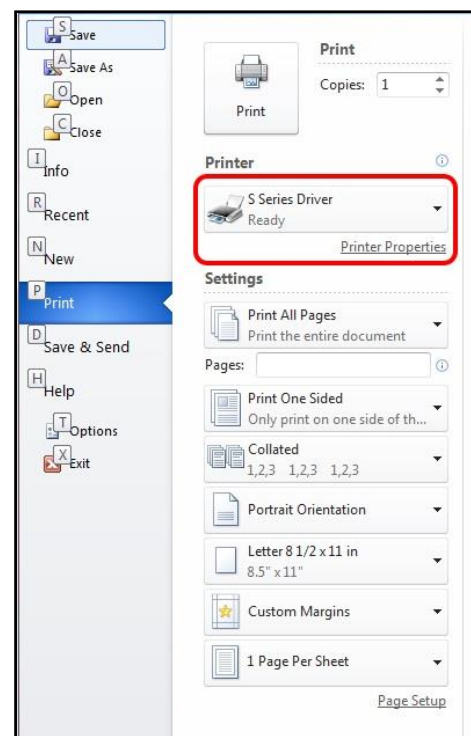
Once the Printer Driver is installed and the Printhead is primed, you are ready to start printing. Set up your job and send it to the Printer. The Printer will start and print.

Set the **Printer Driver** installed in **Section 2** as the 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

The 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.

NOTE: The **Stored Jobs** button on the Printer Touchscreen accesses the **Job Library**.

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.

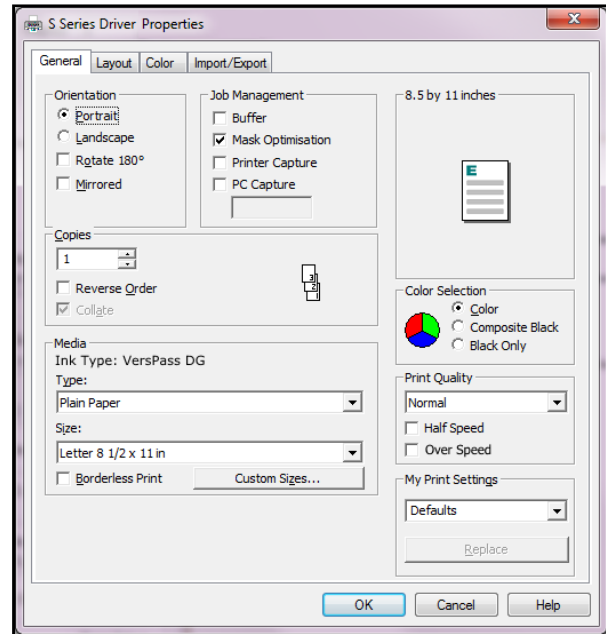
- **Media** – Choose a type of media or different size media than document was originally designed for.

Ink Type: Displays ink type this model Printer is configured for: VersaPass DG or VersaPass DN.

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 the maximum paper size for the Printer.
- **Color Selection** – Set Printing for Color, Composite Black (*uses all colors to print Black*), or Black Only (*uses only Black ink*).

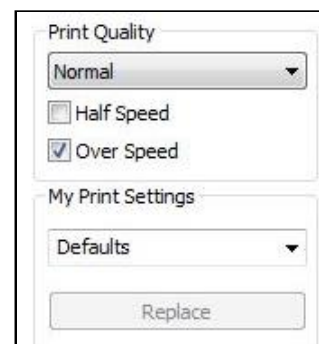


MEDIA PROFILE	MEDIA TYPE
Plain Paper	Plain Paper Bright White Paper
Matte Paper	Presentation Paper Postcards Matte Brochure Matte Labels Matte Other Inkjet Paper Matte
Premium Matte Coated Paper	Premium Inkjet Paper Premium Photo Paper Matte
Glossy Paper	Photo Paper Semi-gloss Photo Paper Glossy Labels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

SECTION 3

OPERATING PRINTER

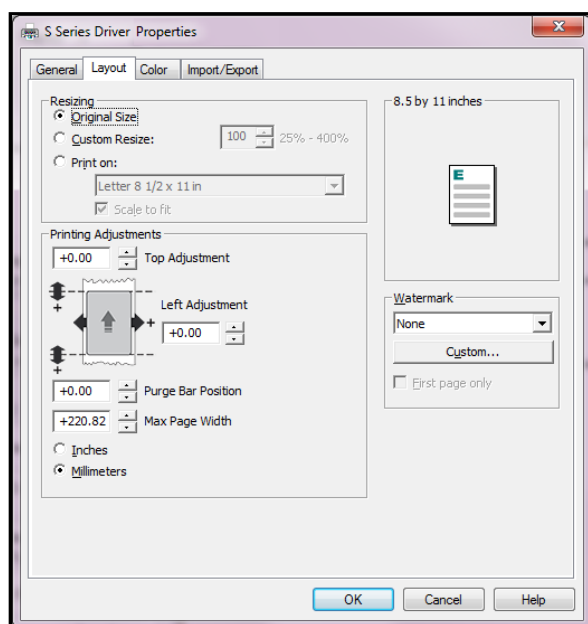
- **Print Quality** – Select **Normal** or **Best**:
Normal is 1600 x 800 dpi. **Best** setting is 1600 x 1600 dpi, for use when high quality images are required.
“**Half Speed**” allows you to adjust the Printer speed for the media being used (i.e., *slow the printing speed for higher quality on glossy stock*).
“**Over Speed**” increases transport speed by 25%. **NOTE**: Try turning this feature off (*unchecked*) if feeding or printing issues occur.
- **My Print Settings** – Access saved custom print settings for various jobs.



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 the document in the size you selected regardless of the paper size selected.
Print on: Specify a particular size of paper to print on regardless of the size of the original document. Checking “**Scale to Fit**” automatically resizes document to fit on new page size.
- **Printing Adjustments** – Make minor positioning changes to the print area in relation to the 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

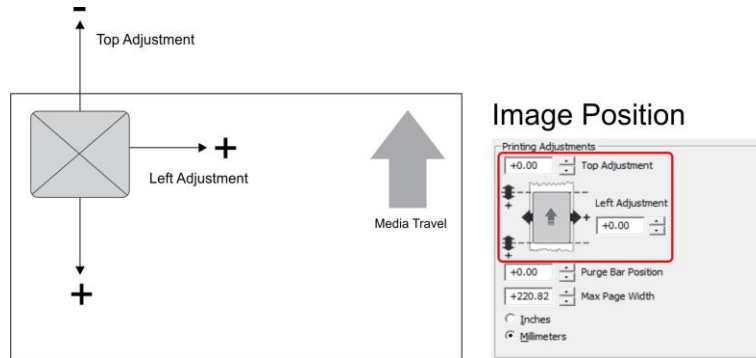
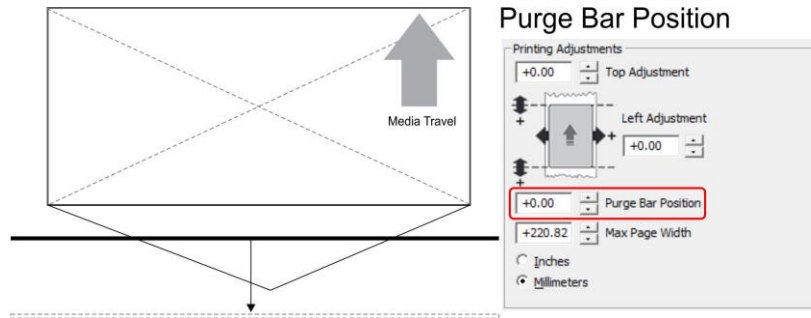


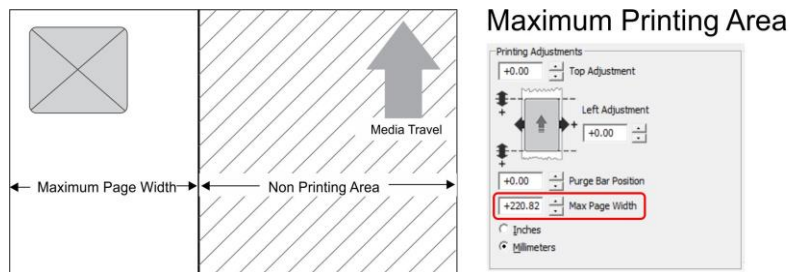
Image Position – Top Adjustment moves the image up or down (-5mm up to +200mm down) from the top left corner of the media used. (0.1mm increments)

Left Adjustment moves the 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), the Sensor may “read” the lower end as the edge and spray on the tip of the flap instead of the actual gap between pieces. This feature allows you to manually set the gap (in 0.1mm increments) to account for the extra length needed to reach the actual gap.

* See also “Purge Bar Position” in Printer Toolbox section.

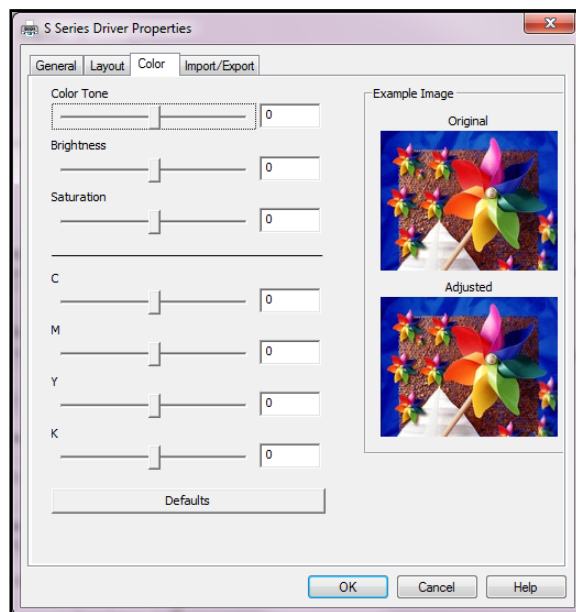


Max Page Width – Sets the width of the actual print area. (0.1mm increments) This shuts off nozzles in the non-printing area (not used for printing) and saves ink.

NOTE: Can be no larger than maximum print width for Printer (8.77"/222.8 mm).

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

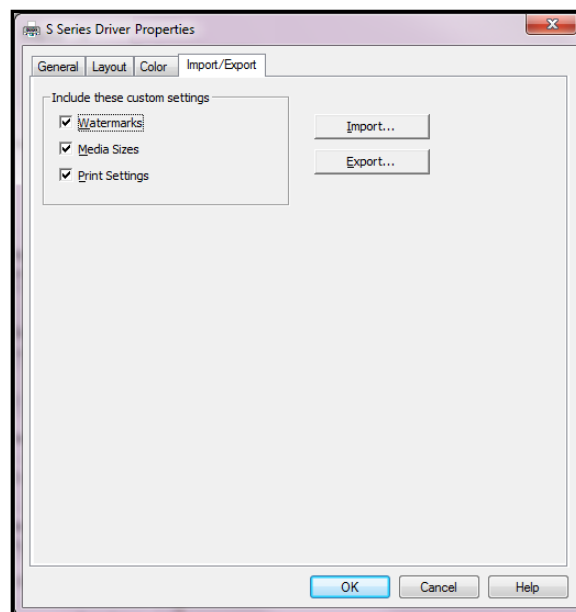
Import/Export is used to preserve any custom Media Sizes, Watermarks and/or Print Settings you may have developed and saved for various jobs when you update Printer firmware.

- **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.

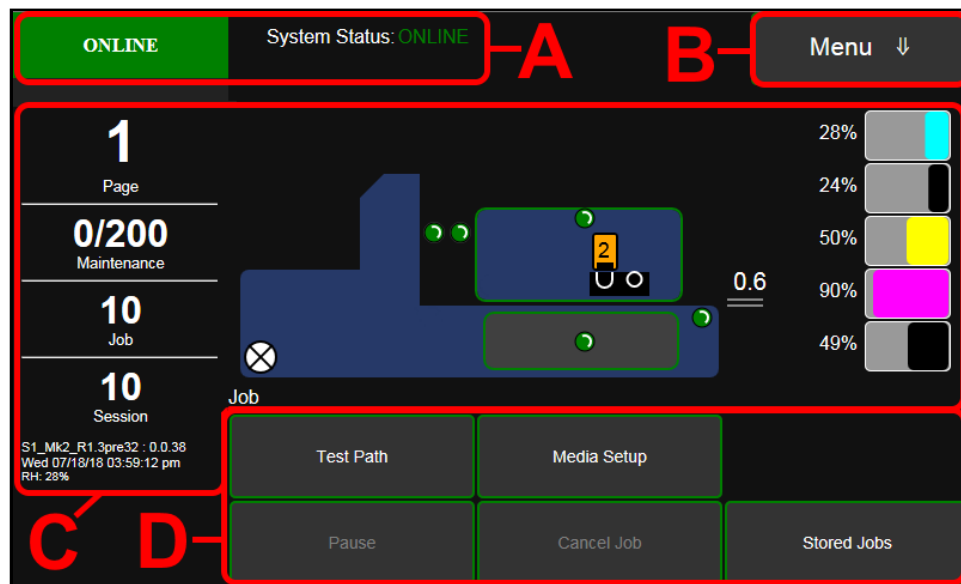


Using Printer Touchscreen

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.

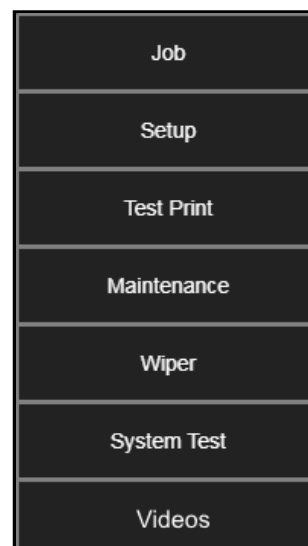
Tap the screen to view the **Printer Touchscreen**.

- [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 six selections: **Job**, **Setup**, **Test Print**, **Maintenance**, **Wiper**, **System Test** and **Videos**. **NOTE:** “Videos” is only available when MP4 video files are loaded on the Printer.



SECTION 3 OPERATING PRINTER

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.

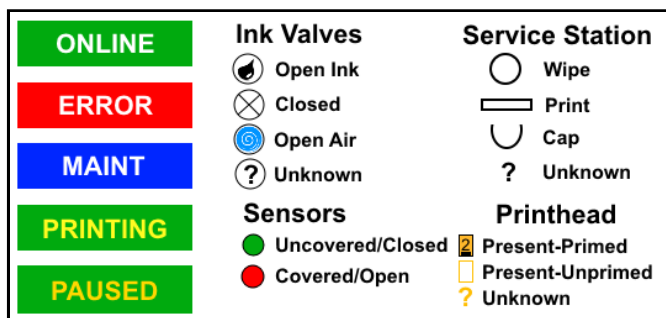
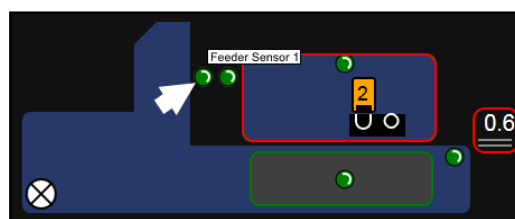
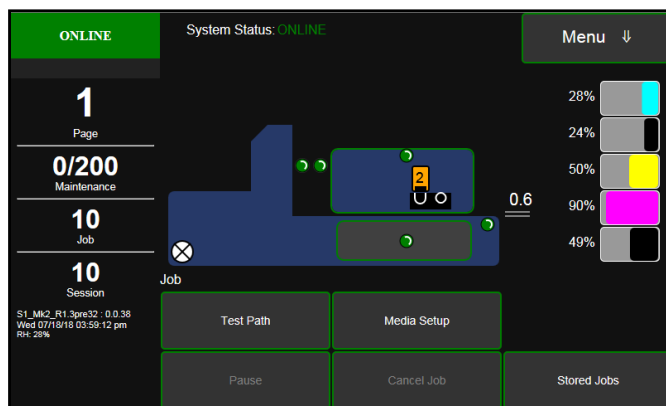
IMPORTANT: The RH % on the screen enlarges and blinks if the Relative Humidity consistently falls below 30%. To set the Printer for low humidity conditions see “Using the Printer Toolbox, User Interface, Low Humidity”.

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

Printer Icon: Shows status of the **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.

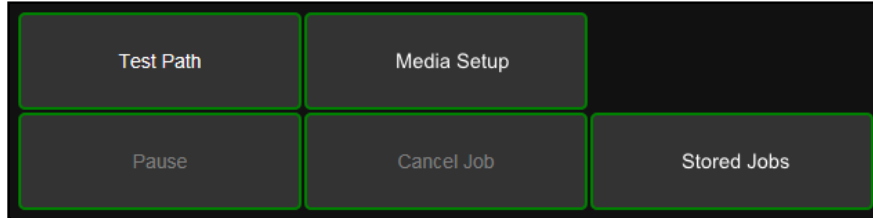
Ink Levels displays percentage of ink remaining in each of the Ink Tanks.



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. 9 settings.
Range: 1-Lowest, 9-Highest.

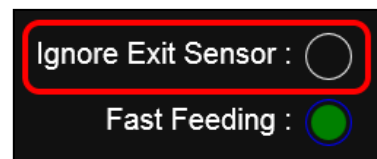
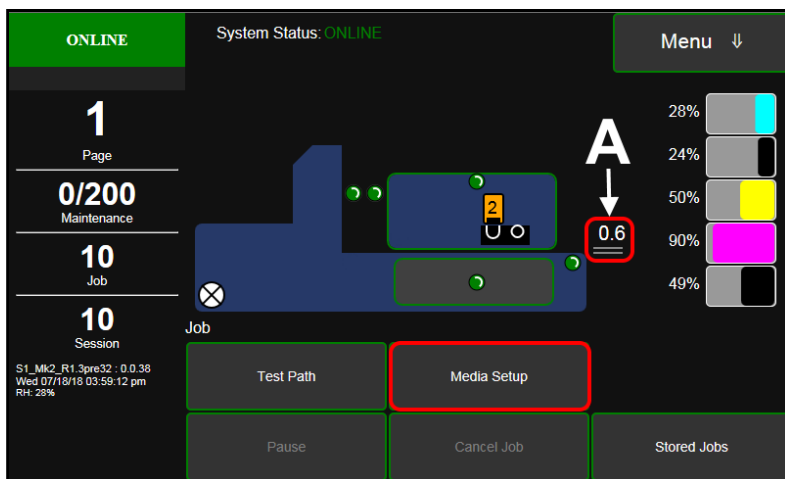
Feed Gap: Works with the **Fast Feeding** function. Allows you to adjust the gap between media to optimize printing speed and efficiency for different types and sizes of media. Increase (*up*) or decrease (*down*) the gap between media by moving the slider button. 10mm = Smallest Gap, 80mm = Largest 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.

NOTE: If using dark or black media, the Sensor may not detect the end of a piece and initiate a “Paper Jam” error. To prevent this, select “Ignore Exit Sensor”.

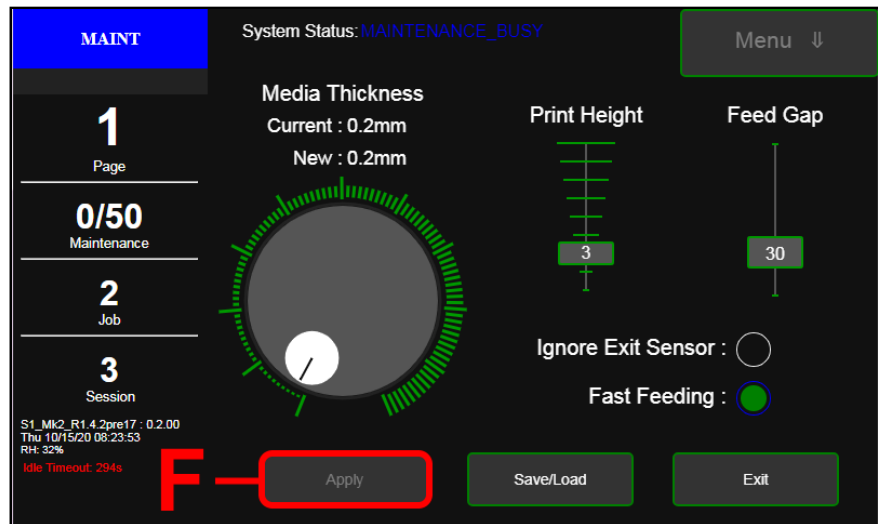
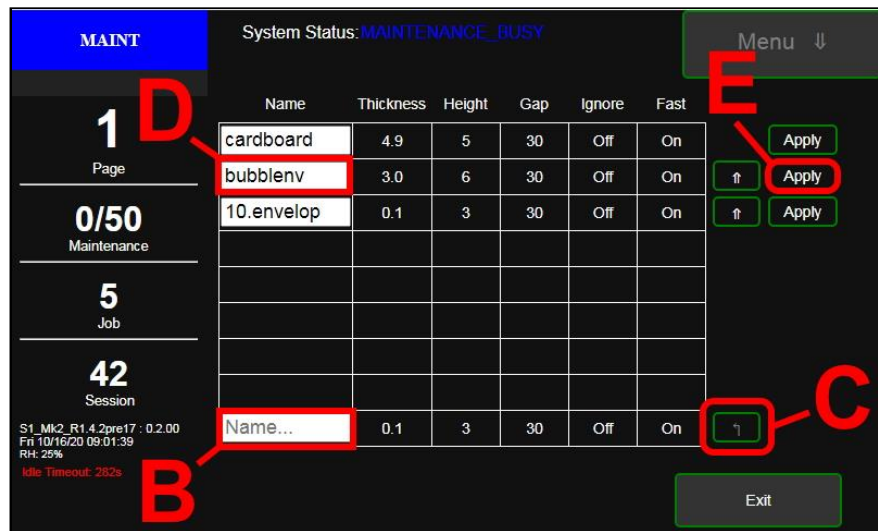


Save/Load:

To “Save” the current job's parameters: Press **Save/Load** to open a screen to save job parameters for the print job currently running on the Printer. Touch the **Name** box [B] to open a keyboard to enter a name for that job (*up to 10 characters*). Press the **Enter** key [C] to save these parameters to the Printer's memory for later retrieval. Notice that the saved job is added to the list [D].

To “Load” a saved job's parameters: Press **Save/Load** to open this screen. Select the desired saved job and press the **Apply** button [E] located next to that job to load it. The **Media Setup** screen returns. Press the **Apply** [F] button. Notice that the settings automatically change to the saved job's parameters. **NOTE:** The **Up Arrow** icon moves that entry up one row at a time.

NOTE: This library holds 8 entries; so you may wish to reserve this feature for your most often used print jobs.



SECTION 3 OPERATING PRINTER

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.

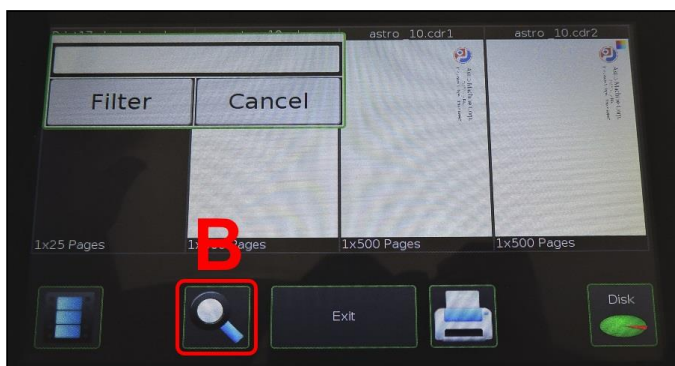
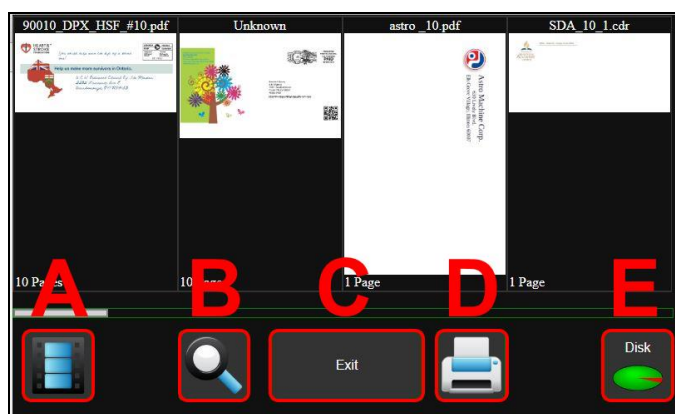
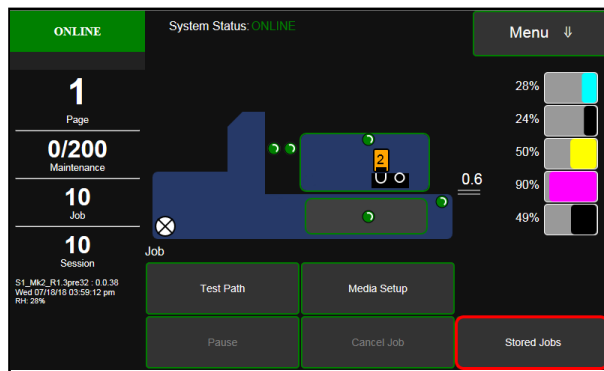
The **Printer** icon [D] prints the selected job.

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.

File	Pages	Date	Copies	Del
90010_DPX_HSF_#10.pdf (9MB)	10	Tue 07 03 18 14:10	1	☐
Unknown (5MB)	10	Thu 07 19 18 11:32	1	☐
astro_10.pdf (369kB)	1	Wed 07 25 18 14:31	1	☐
SDA_10_1.cdr (339kB)	1	Thu 08 02 18 10:42	1	☐
SDA_10_1.cdr1 (360kB)	1	Thu 08 02 18 10:55	1	☐
Untitled-1 (0MB)	1	Fri 08 10 18 08:24	65	☐
ColorCard.cdr (596kB)	1	Mon 08 13 18 08:03	3	☐
Untitled-12 (0MB)	1	Thu 08 16 18 13:34	1	☐

List View



Search Screen

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

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

Over Speed – Checking the box increases speed by 25% over whatever the set print speed is for that job.

NOTE: This function should be used on print jobs with limited coverage. Printing issues may occur with complex or full coverage print jobs. Try turning this feature off (*unchecked*) if feeding or printing issues occur.

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

SECTION 3 OPERATING PRINTER

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.**

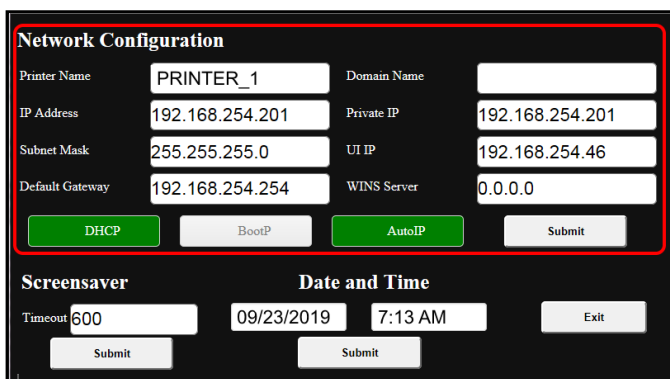
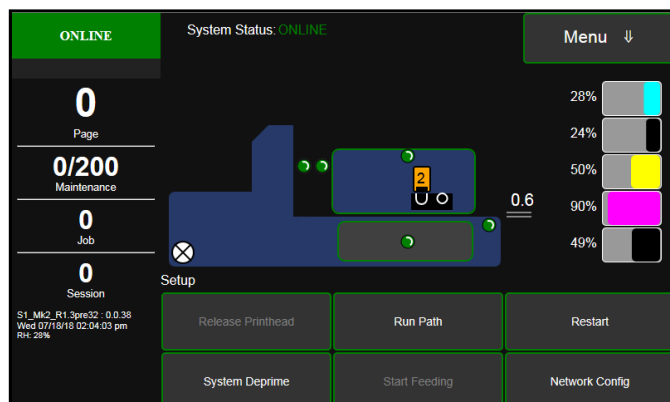
System Deprime – Pumps ink back into Ink Tanks prior to replacing the Printhead Cartridge or transporting the Printer.

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.

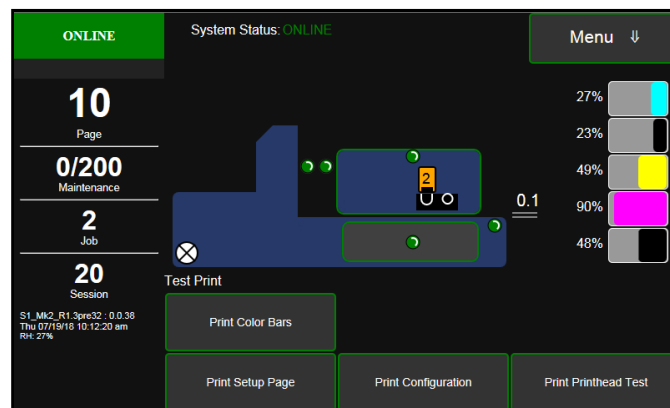
Print Color Bars – Prints a series of 7 color bars (*per Printhead*) to indicate how well Printheads are mixing colors and printing.

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 the condition of the 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.

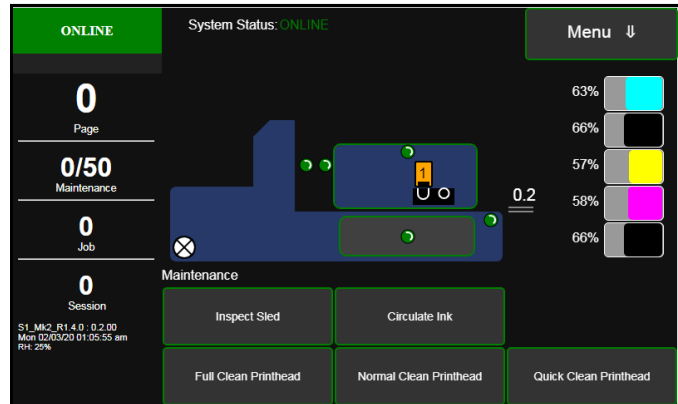
Inspect Sled – Moves the **Service Station** out for inspection, cleaning or service.

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 more thorough flushing and cleaning than “**Quick Clean**”.

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



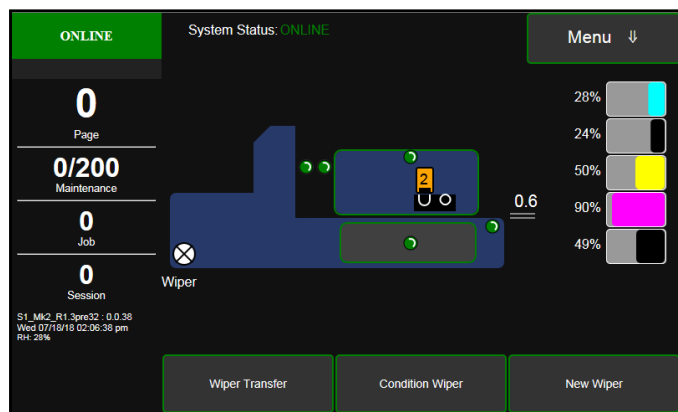
Wiper Screen

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 – Saturates, 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 – Moves the **Service Station** out to remove and replace the **Service Station Wiper Roller** or **Wiper Module**. Once the new **Wiper** or **Wiper Module** is installed, the Printer primes with ink to condition the **Wiper** to optimal operating condition. The **Wiper Revolution Counter** also resets to 0.



1. Press **New Wiper**. The **Service Station** moves out.
2. Open the **Top Cover**. Replace the **Wiper Roller** or **Wiper Module**.
3. Close the **Top Cover**. Printer primes with ink to condition the **Wiper** and the **Wiper Revolution Counter** resets to 0.

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.

ONLINE

System Status: ONLINE

Menu ↓

0
Page

0/200
Maintenance

0
Job

0
Session

S1_Mk2_R1 3pre32 : 0.0.38
Wed 07/18/18 02:10:27 pm
RH: 29%

Password

1

2

3

4

5

6

7

8

9

0

⌫

Submit

ONLINE

System Status: ONLINE

Menu ↓

0
Page

0/200
Maintenance

0
Job

0
Session

S1_Mk2_R1 3pre32 : 0.0.38
Wed 07/18/18 02:07:22 pm
RH: 26%

Feeder	Test	< 80	-
Printzone	Test	< 70	-
Sled	Test	< 50	-
Printhead	Test	< 30	-
Clamshell	Test	< 80	-
Ink Pump	Test	< 50	-
Sump	Test	< 40	-
Valve	Test	-	-
Wiper	Test	< 80	-

Clear

Test All

Exit

Videos

MP4 video files can be uploaded to the Printer using the **Control Panel USB Port**. Access saved video files by tapping **Menu**, then **Videos**. This opens the **Video Library** screen. **NOTE: “Videos” is only available when video files are loaded on the Printer.**

NOTE: Requires User Interface (UI) firmware version 2.0 or higher.

To load video files: See “Using the Control Panel USB Port” below.

[A] **Video Library Playlist.** Lists all video files available on the Printer. Simply tap a title to play the video.

[B] **Trashcan icon.** Deletes the selected video from the **Video Library**.

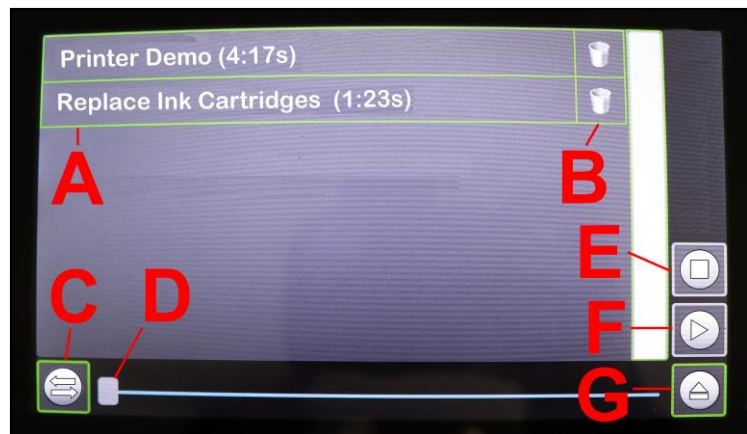
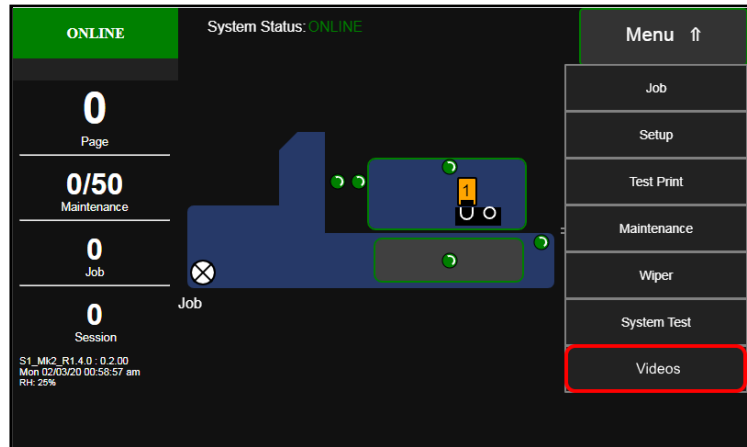
[C] **Viewing Mode button.** Switch between **Single play** (two-way arrows) or **Continuous Loop** (circular arrows).

[D] **Playing Time indicator.** Shows how much of the video has played. The slider selector is also used to forward or reverse a video.

[E] **Stop button.** Stops playing the selected video.

[F] **Play/Pause button.** Pauses or restarts the selected video.

[G] **Exit button.** Returns you to the **Jobs (Status)** screen.



Using the Control Panel USB Port

The USB port, (located below the Touchscreen), can be used to backup stored **Print Jobs** and **Debug logs**, upload **Print Jobs**, upload MP4 video files and apply Printer firmware and Touchscreen (UI) updates. Backed-up **Print Jobs** can then be transferred (uploaded) to another S1 Printer. **NOTE: Stored Print Jobs** are jobs that have been saved to Printer's memory. See “**Stored Jobs**” for more details on saving and using stored **Print Jobs**.

IMPORTANT
DO NOT CONNECT ANY DEVICES OTHER THAN FAT32 FORMATTED USB FLASH DRIVES TO THE PRINTER.

Overview: When a USB thumb drive is inserted into the **Control Panel USB Port**, it is automatically detected and a **USB Management** application opens on the **Touchscreen (UI)**. Select a range of functions via six buttons, depending on what is available on that particular USB Drive.

Green outline: active. **White outline:** inactive or display only.

Important: When finished backing up or uploading, press the **Quit** button and give the system a few seconds to correctly shut down the USB Drive before removing it.



SECTION 3

OPERATING PRINTER

When a FAT32 formatted USB Flash Drive is plugged into the USB port [A] the **USB Management** screen opens:

USB Storage Device Detected:

Displays the Printer you are connected to, and the date and time.

USB: The graph displays the amount of usable memory left on the USB Flash Drive plugged into the Printer.

Backup Logs button: Backs up all of the **Debug Log** files currently on the Printer. There are two groups of logs. Each group is automatically backed up as a zip file located at the top level on the USB drive directory using the following format:

- **Printer Logs:**
Model_SerialNumber_YYMMDDHHMM.tgz
- **System Logs:** Model_SerialNumber_YYMMDDHHMM_syslog.tgz

Log files can be opened/unzipped using a zip file utility.

Backup Print Jobs button: Backs up all of the **Print Jobs** currently stored in the Printer's **Print Job Library** onto the USB drive. They are stored in a directory using the following format:

- prns/Model_SerialNumber_YYMMDDHHMM/job_files

Under the main **prns** directory, the job files are the individual **prns**. There is also a directory of thumbnails associated with each job file.

Upload Print Jobs button: Allows you to copy and transfer Print Jobs between same model Printers. (See **Backup Print Jobs** above). During the upload, the **Printer Model** is checked against the **saved jobs** to ensure the job matches the Printer. **NOTE: Invalid jobs are skipped and duplicate jobs are ignored.** The USB drive's file format is the same as the **Backup Print Jobs** format. This means the job files should be contained in a directory located under a top level directory called **prns**. When **Upload Print Jobs** is selected, the list of directories below **prns** is displayed, allowing you to select which directory to import. All of the valid files in the selected directory are imported.

Upload Videos button: Copy or transfer training or demonstration videos to the Printer. (MP4 files only, this is the only way to upload videos given the size of the files.) Before saving a video to the USB Drive, create a directory on the top level of the USB called **videos**. Creating directory levels (folders) under the **videos** directory allows you to save a single video or groups of videos into that folder or folders. When **Upload Videos** is selected, the **videos** directory opens and displays the list of sub-directories (folders) where you have saved individual or groups of video files. You can now select which directory (folder) to import. All **MP4 files** in the selected directory are imported. **NOTE: Requires User Interface (UI) firmware version 2.0 or higher.**

Apply Updates button: Apply UI (*.rpz format) and **Firmware Updates (*.fbf format)** directly via the USB Interface. When saving the **UI** and **Firmware Updates** to the USB drive, place them in a directory named **updates** at the top level of the USB drive. When the USB is plugged into the **Printer's Control Panel USB Port**, and the **Apply Updates** button is selected, the files are checked to ensure the update is compatible with the current UI version or Printer Model to avoid applying incompatible updates. To avoid accidentally applying the wrong update, a **Confirmation screen** helps to ensure the correct file is selected. Once an update has been applied, the **UI** will usually reboot. After rebooting, the USB Drive will not be automatically detected. The USB needs to be manually removed and reinserted if more operations are required.

NOTE: Requires User Interface (UI) firmware version 2.0 or higher.

Quit button: Press to exit the **USB Management** screen. Wait a few seconds for the Printer to safely shut down the USB Flash Drive before removing it from the **Control Panel USB Port**.



Using Printer Toolbox

Once the 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):

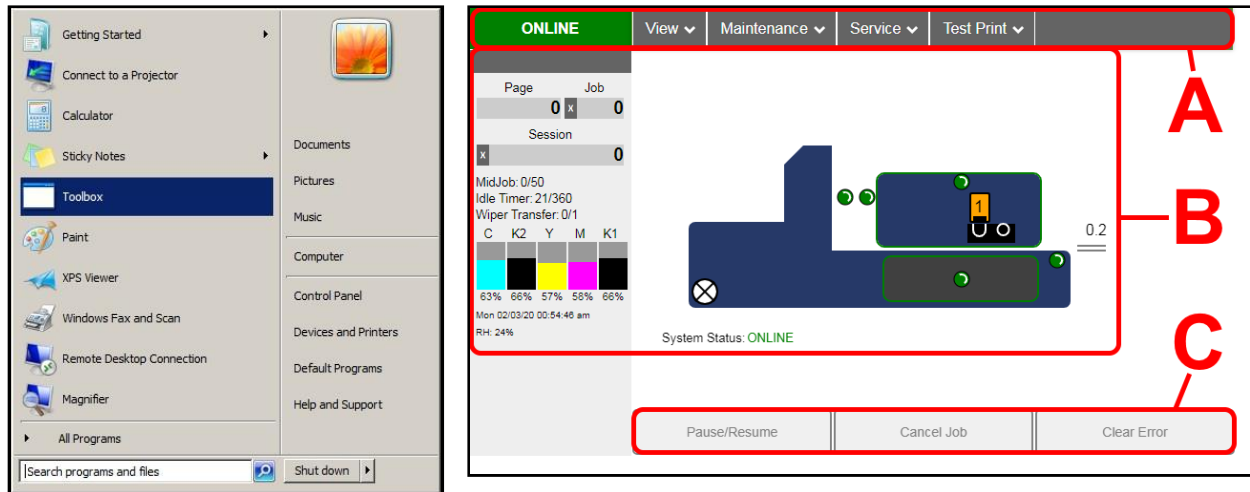
Open **Start Menu**; then click on **Toolbox**:

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**:

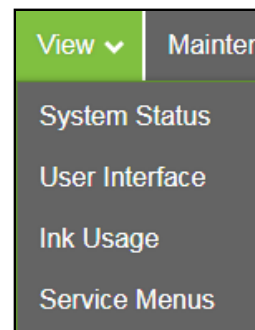
View, Maintenance, Service and **Test Print**. The drop-down menus are available on every Toolbox screen allowing you to toggle between menus and select different Printer features and functions.



View Drop-Down

The **View** drop-down gives you four choices:

System Status, User Interface, Ink Usage and **Service Menus**.



SECTION 3 OPERATING PRINTER

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 50 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: 21 = idle minutes elapsed. 360 =

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**.

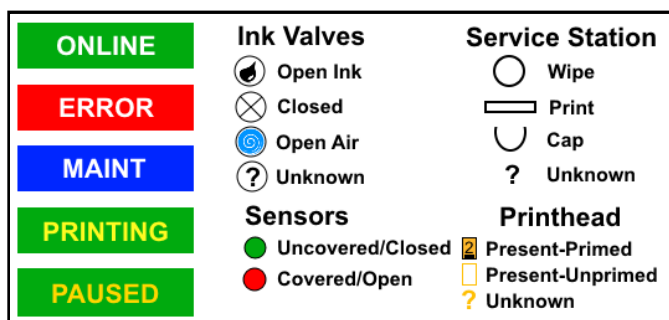
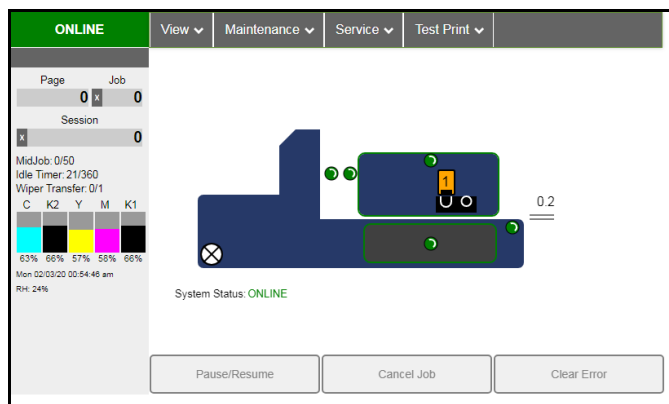
Relative Humidity (RH) displays the current ambient humidity detected near the Printer.

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

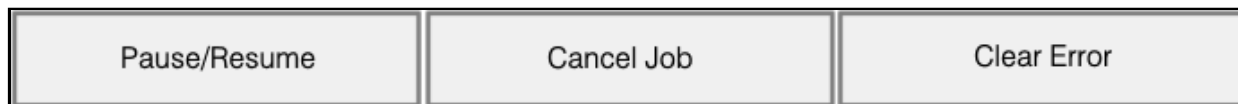
Printer Icon: Shows status of **Media Sensors** located in the media feed path of the Printer. Also shows status of Ink Valves, Service Station, and Printhead. These can alert the operator to the type and location of a problem. (See icon key above.) Rolling over any of the status icons with your cursor pops up a description of that icon.

NOTE: Indicator at the exit end of the Printer icon (*example, 0.2mm*) 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 (*i.e., 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 50 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 the 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*), the Sensor may “read” the 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.

Low Humidity – The RH % on the screen enlarges, turns red and blinks if it falls below 30%. If the relative humidity remains below 30% it may affect the Printer's performance. Checking the **Low Humidity** box changes the parameters within the Printer to cope with low humidity environments. **NOTE:** Checking the box will return the RH% display to normal. **IMPORTANT:** Monitor the RH %; if it regularly rises above 30%, remember to uncheck the box to return the Printer to normal parameters.

NOTE: Low Humidity button is not available on S1-DN Printers. DN Ink tolerates low humidity conditions.

Click “**Submit**” to apply settings.

The screenshot shows the printer's web interface. At the top, there are tabs for 'View', 'Maintenance', 'Service', and 'Test Print'. The 'User Interface' section is highlighted with a red box and contains the following settings:

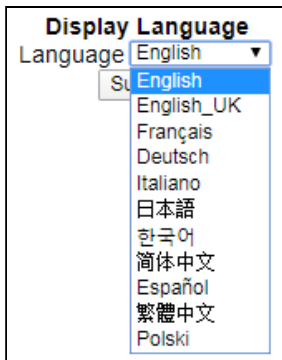
- Mid-Job Servicing: 50
- KWS Setting: Heavy
- Interpage Frequency: 1
- Idle Timeout (min): 300
- Wipe Transfer Frequency: 10
- Purge Bar Position (BoF): 5000
- Double Feed Detection: ☒
- Low Humidity: ☒

Below the 'User Interface' section, there are two other sections:

- Display Language:** Language: English, Submit
- Firmware Download:** Firmware file (.fbf): Choose File, No file chosen, Submit
- Update User Interface:** UI File (rpz): Choose File, No file chosen, Submit

SECTION 3 OPERATING PRINTER

DISPLAY LANGUAGE: Selects language EWS (*Toolbox*) and Touchscreen will display. Click “**Submit**” after selecting language.

A screenshot of the printer's 'User Interface' web page. The page has a top navigation bar with 'ONLINE' in green and tabs for 'View', 'Maintenance', 'Service', and 'Test Print'. On the left, there's a sidebar with 'Page' (1 of 2), 'Job' (2), 'Session' (3), and printer status (MidJob: 0/50, Idle Timer: 215/300, Wiper Transfer: 0/10, and ink levels for C, K2, Y, M, K1). The main area is titled 'User Interface' and contains settings for Mid-Job Servicing (50), KWS Setting (Heavy), Interpage Frequency (1), Idle Timeout (300), Wipe Transfer Frequency (10), Purge Bar Position (5000), Double Feed Detection (checked), and Low Humidity (checked). At the bottom, there are three sections: 'Display Language' (Language: English, Submit), 'Firmware Download' (Firmware file (.fbf): Choose File, No file chosen, Submit), and 'Update User Interface' (UI File (.rpz): Choose File, No file chosen, Submit). The 'Display Language' section is highlighted with a red box.

FIRMWARE DOWNLOAD: You can find and load the latest firmware (“**.fbf**”) files for your Printer using the **Printer Toolbox**.

WARNING: This procedure should only be performed by qualified service personnel. If this process is not performed properly, the Printer is rendered inoperable.

NOTE: Printer firmware can also be applied using a USB Flash Drive and the **Control Panel USB Port**. See “**Using the Control Panel USB Port**”.

A screenshot of the printer's 'User Interface' web page, similar to the one above. The 'Firmware Download' section is highlighted with a red box. It shows the 'Firmware file (.fbf)' field with a 'Choose File' button and 'No file chosen' text, and a 'Submit' button.

UPDATE USER INTERFACE:

Download and install the latest User Interface UI (“**.rpz**”) file for the Printer Touchscreen.
NOTE: Updating this file does not require shutting down or rebooting the Printer.

NOTE: User Interface (UI) firmware can also be applied using a USB Flash Drive and the **Control Panel USB Port**. See “**Using the Control Panel USB Port**”.

A screenshot of the printer's 'User Interface' web page, similar to the ones above. The 'Update User Interface' section is highlighted with a red box. It shows the 'UI File (.rpz)' field with a 'Choose File' button and 'No file chosen' text, and a 'Submit' button.

Ink Usage

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

Ink Usage

Printed Ink (µL)					Time	Job	Pages Printed	Quality	Media Type	Media Size (mm)	Estimated Page Cost	Estimated Job Cost	Estimated Page Cost (1000 Pages)	Estimated Job Cost (1000 Pages)
Cyan	Magenta	Yellow	Black 1	Black 2										
1416	4746	5717	1305	1293	18/05/19 23:37:16	4.3.5x4.25-PMB.pdf	150	Best	Premium Glossy Paper	215 x 279	0.108	16.296	0.107	107.844
12	16	20	9	8	18/05/19 23:34:42	3.5068106_CV_18_edit.pdf	20	Normal	Plain Paper	104 x 241	0.004	0.085	0.002	2.154
19	24	29	23	22	18/05/19 23:28:55	2.SUN PRINTING.pdf	30	Normal	Plain Paper	104 x 241	0.005	0.163	0.004	4.075
11	13	18	47	46	18/05/19 21:56:42	1.Microsoft Word - L901_upgrade.docx	10	Normal	Plain Paper	215 x 279	0.018	0.180	0.016	16.354

Refresh

Upload Table

Ink Estimation Mode

ModeContinuous

Submit

Page Counter:2713

Reset Page Counter

Job Cost Settings

Tank Cost250

Printhead Cost500

Media Sizemm

Submit

INK ESTIMATION MODE – Lets you predetermine how much ink a given job may use prior to printing a job. This is useful for determining per piece costs. Job is sent to Printer and loads, but does not print. Once a job is loaded, click **“Refresh”** to show the amount of ink (by color) that job will use.

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: The estimating process takes as long as the job would take to print (*i.e., if a job would take one hour to print, the estimate will take one 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 Tank Cost**, **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 the job (*note that there are columns providing results at both single-page and 1000-page levels*). With **Ink Estimation Mode** disabled, Printer still tracks estimated per page cost and estimated job cost as the job is being printed. Once costs are entered, they will remain until changed again, even if the Printer is turned OFF.

NOTE: This is only an estimate and does not include other factors that may affect the overall result.

Ink Estimation Mode

Mode:

ONLINE

Page: 0 x Job: 0

Session: x 0

MidJob: 0/50
Idle Timer: 21/360
Wiper Transfer: 0/1

Job Cost Settings

Tank Cost:

Printhead Cost:

Media Size:

SECTION 3 OPERATING PRINTER

Service Menus

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

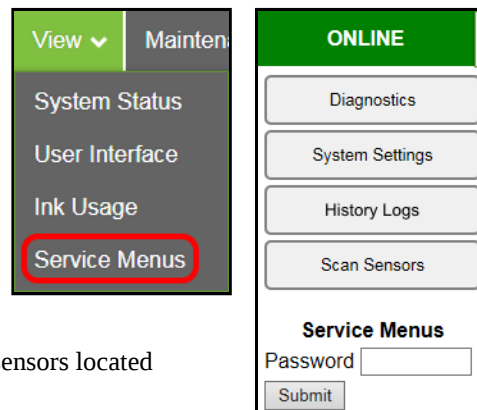
Diagnostics button. Click to check the status of the Printer.
(See **Diagnostics** below.)

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**.

History Logs. Click to display a list of available 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.



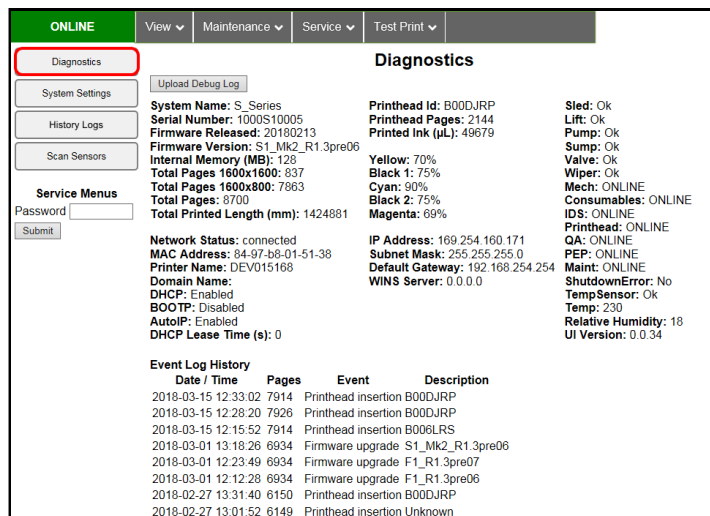
Diagnostics

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

Other features:

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.

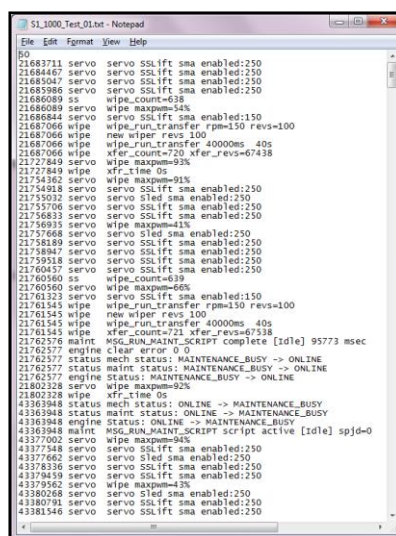


Other information provided in the Diagnostics window:

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 the 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 the 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.

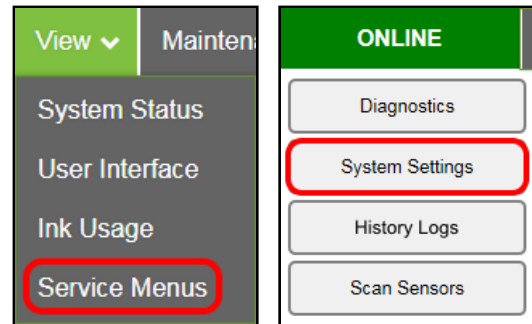
Network Settings – Permits you to view, enter or change settings to connect the Printer to your network.

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**”.



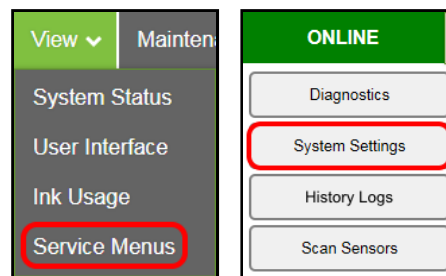
3. Connect Ethernet cable to Network Port on Rear Panel of Printer.



SECTION 3 OPERATING 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**”.



System Settings

Network Settings

Printer Name
Domain Name
dhcp ☒
bootp ☐
autoip ☐
ip_address
subnet_mask
def_gateway
wins_server
private_ip
ui_ip

Date and Time

Date and Time

Format (dd/mm/yy hh:mm)
24 Hour ☐
Date Format

Debug Level

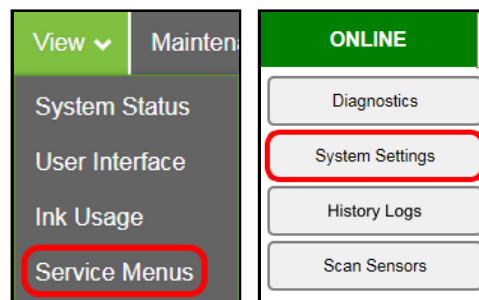
debug_level

Screensaver

ui_timeout_seconds

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**”.



System Settings

Network Settings

Printer Name
Domain Name
dhcp ☒
bootp ☐
autoip ☐
ip_address
subnet_mask
def_gateway
wins_server
private_ip
ui_ip

Date and Time

Date and Time

Format (dd/mm/yy hh:mm)
24 Hour ☐
Date Format

Debug Level

debug_level

Screensaver

ui_timeout_seconds

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**”.

SECTION 3 OPERATING PRINTER

History 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.

From the **Toolbox**, select the “**View**” drop-down menu, click “**Service Menus**”, and then click “**History Logs**”.

All – Shows all log files available.

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

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

Delete All – Deletes all **Debug** and **Jobs** log files.

Recycle symbol – Deletes the selected file.

The screenshot shows the printer's web interface. The top navigation bar includes 'ONLINE', 'View', 'Maintenance', 'Service', and 'Test Print'. The left sidebar has buttons for 'Diagnostics', 'System Settings', 'History Logs' (highlighted with a red box), and 'Scan Sensors'. The 'Service Menus' section includes a 'Password' field and a 'Submit' button. The main area is titled 'Available Files' and displays a table of log files. The 'All' filter is selected and highlighted with a red box. The table lists files with their names, sizes, and recycle symbols.

Files	Size
debug_2020-02-06.log	10227
job_2020-02-05.log	74
debug_2020-02-05.log	13006
debug_2020-02-05-0529.log	100427
debug_2020-02-04.log	13872
job_2020-02-03.log	387
debug_2020-02-03.log	17641
debug_2020-02-02.log	52706
job_2020-02-02.log	1010
debug_2020-01-28.log	21
debug_2020-01-27.log	90046
debug_2020-01-22.log	9179
job_2020-01-21.log	372
debug_2020-01-21.log	91581
debug_2020-01-21-0752.log	100135
debug_2020-01-21-0519.log	100144
debug_2020-01-20.log	61019
debug_2020-01-20-0519.log	100039
debug_2020-01-19.log	21

The screenshot shows the printer's web interface with the 'Debug' filter selected and highlighted with a red box. The 'Available Files' table now only displays debug log files.

Files	Size
debug_2020-02-06.log	10227
debug_2020-02-05.log	13006
debug_2020-02-05-0529.log	100427
debug_2020-02-04.log	13872
debug_2020-02-03.log	17641
debug_2020-02-02.log	52706
debug_2020-01-28.log	21
debug_2020-01-27.log	90046
debug_2020-01-22.log	9179
debug_2020-01-21.log	91581
debug_2020-01-21-0752.log	100135
debug_2020-01-21-0519.log	100144
debug_2020-01-20.log	61019
debug_2020-01-20-0519.log	100039
debug_2020-01-19.log	21
debug_2020-01-18.log	26969
debug_2020-01-18-0549.log	100302
debug_2020-01-16.log	48154
debug_2020-01-16-0507.log	100251

The screenshot shows the printer's web interface with the 'Jobs' filter selected and highlighted with a red box. The 'Available Files' table now only displays job log files.

Files	Size
job_2020-02-05.log	74
job_2020-02-03.log	387
job_2020-02-02.log	1010
job_2020-01-21.log	372
job_2020-01-18.log	131

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**”.

ONLINE	View	Maintenance	Service	Test Print	Sensor History																													
Diagnosics Stop																																		
System Settings					Feder Sensor	Enty Sensor	Exit Sensor	Valve Position	Sted	Lifter	Service Station	Lift Home	Lift Encoder	Sied Home	Sied Encoder	Pinthead 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	
History Logs					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
Scan Sensors					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
Service Menus					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
Password					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
Submit					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	No	On	Off	275	No	No	No	No	No
					0	0	0	closed	cap	cap	cap	Off	-4633	Off	-29225	Closed	1108093	No	-2649428	No	-18030533	195808	833600	83600	No	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.

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 more thorough flushing and cleaning than “Quick Clean”.

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

- Maintenance ▾
- Service ▾
- Circulate Ink
- Full Clean Printhead
- Normal Clean Printhead
- Quick Clean Printhead
- Inspect Sled
- End Inspection
- Wiper Transfer

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.*)

- Service ▼
- Test P
- System Deprime
- Shutdown
- Restart
- Restart UI

Test Print Drop-Down

Print various reports and Printer tests.

Each printout displays information about the Printer.

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

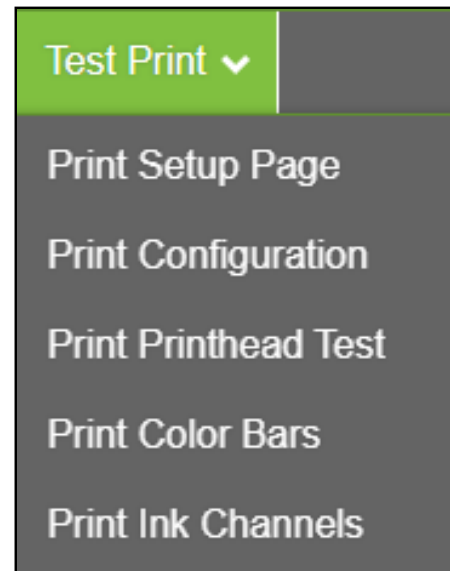
Print Configuration – Prints current Printer configuration including Firmware Version, Network Connection, Printer Serial Number and more.

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.

Print Ink Channels – Prints 5 bars per Printer (*1 bar from each ink tank*) to indicate how well Printhead Nozzles are working.



SECTION 4 – Maintenance

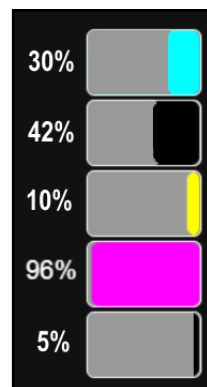
General, periodic maintenance is needed to keep the Printer in good working order. This section covers how to care for Ink Tanks, Printhead Cartridge, Service Station, and clear paper jams.

Replace Ink Tanks

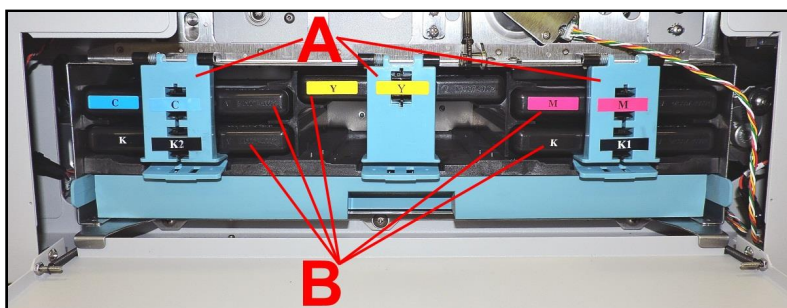
Replace the Ink Tanks when ink runs out.

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

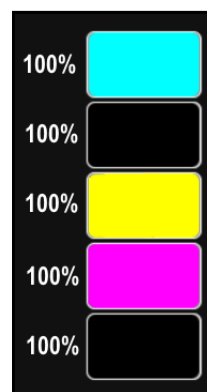
CAUTION
VERIFY THAT THE LABELS ON THE INK CARTRIDGE AND THE PRINTER'S INK STATION MATCH. BOTH SHOULD BE "DN" OR BOTH SHOULD BE "DG".



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] and pull Ink Tank(s) [B] out of the Printer.



3. Remove the new Ink Tank(s) from packaging.
4. Slide the new Ink Tanks (labels up) into the appropriate color slots [B]. Close the Ink Tank Latches.
INSTALLATION TIP: Make sure the Ink Tanks seat properly. Insert the Ink Tank into the appropriate Ink Station, then pull the Ink Tank back about an inch and push forward firmly to insure that the Ink Nozzles penetrate seals on the Ink Tanks.
5. **Close the Ink Tank Door.** Ink colors fill in as the Ink Tanks are installed. If the ink colors do not fill in after a few seconds, open the Ink Tank Door and reinstall the Ink Tank(s).
NOTE: If the Ink Tank is installed, but the Ink Tank indicator still does not refresh, see "Clean Ink Tank Contacts" below.



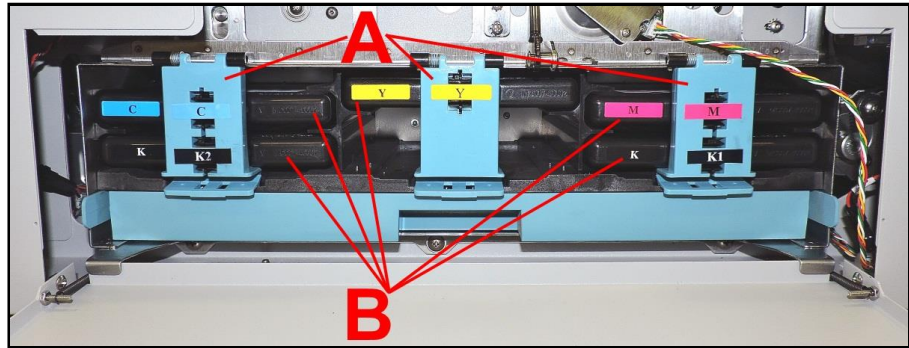
WARNING!
Ink in Ink Tanks may be harmful if swallowed. Keep new and used Ink Tanks out of reach of children. Discard empty Ink Tanks immediately.

Clean Ink Tank Contacts

When reinstalling or replacing the 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).

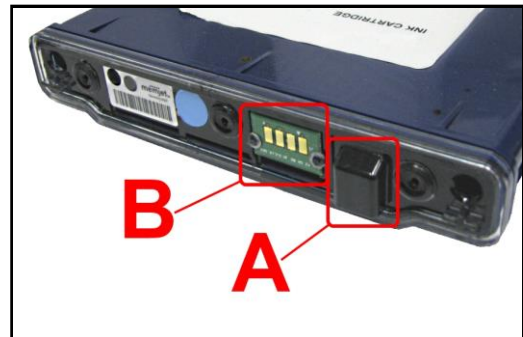
Clean contacts as follows:

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



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

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



Storage

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

Opened Ink Tanks should remain in the 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

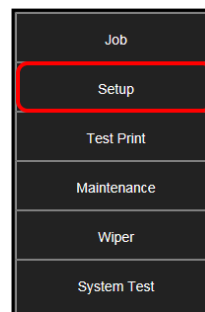
Cleaning

The Printhead is cleaned automatically each time the 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, the Printhead Cartridge can be cleaned manually.

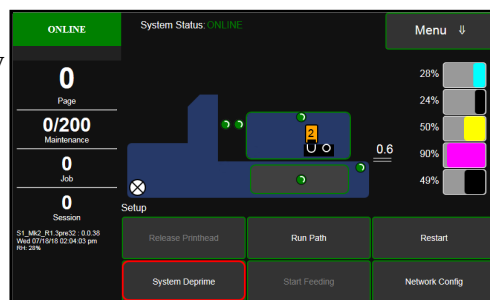
1. From the Touchscreen, tap “Setup” in the Menu drop-down; then tap “System Deprime”. The Printer pumps any ink in the system back into the Ink Tanks. Then the Printhead Latch pops open.

CAUTION

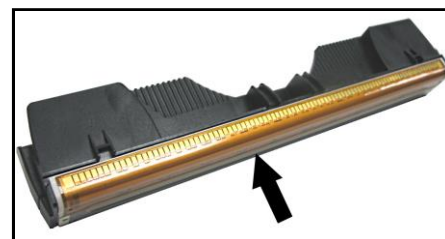
DO NOT PRY OR MANUALLY LIFT PRINTHEAD LATCH OR LATCH MAY BREAK. ONLY OPEN LATCH USING THE RELEASE PRINTHEAD BUTTON ON THE TOUCHSCREEN OR IN THE PRINTER TOOLBOX.



2. **Open the Top Cover.** Make sure the Printhead Latch is fully opened to retract the ink lines. Remove the used Printhead Cartridge by tilting it toward the ink lines, then carefully lifting it out of the 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 the ink supply is adequate and the print quality remains poor, or when automated cleaning processes or manually cleaning the Printhead does not help image quality, replace the 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 the Printhead Cartridge until the Printer is ready for installation. Once unwrapped, delay in installing the 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

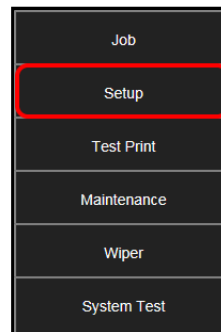
IMPORTANT

TO ENSURE OPTIMUM PRINTING PERFORMANCE, INSPECT AND REPLACE THE WIPER ROLLER AS NECESSARY WHEN REPLACING THE PRINthead.

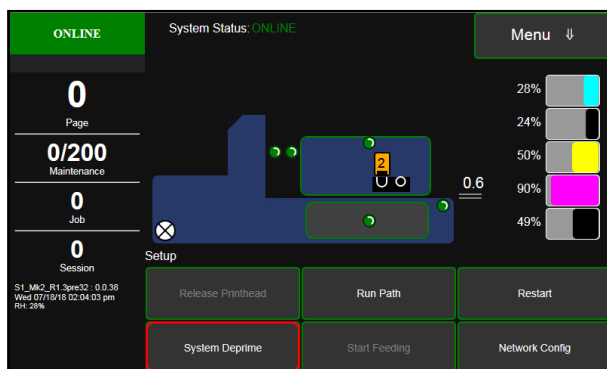
1. From the Touchscreen, tap “Setup” in the Menu drop-down; then tap “System Deprime”. The Printer pumps any ink in the system back into the Ink Tanks. Then the Printhead Latch pops open.

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



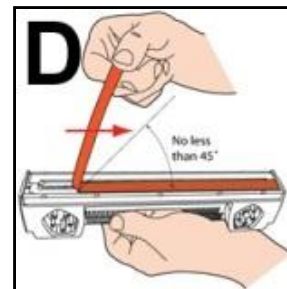
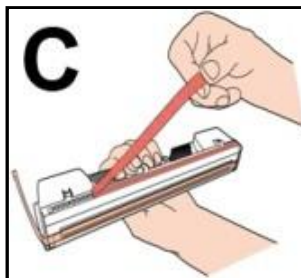
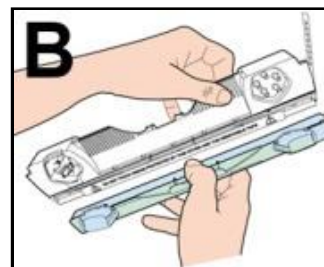
3. [A] Carefully remove new Printhead Cartridge from foil packaging. Tear foil at notch or cut the end with scissors.

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

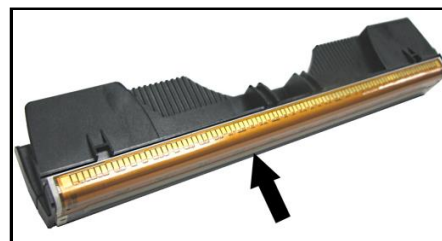
[C] Remove protective strip from Printhead electrical contacts. Once removed, DO NOT allow strip to touch electrical contacts.

[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.

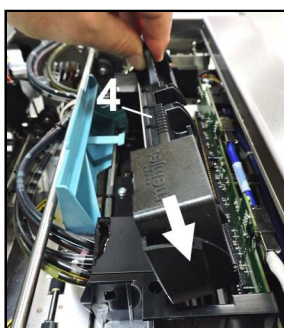
NOTE: Keep foil packaging to store/dispose of old Printhead Cartridge.



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.**

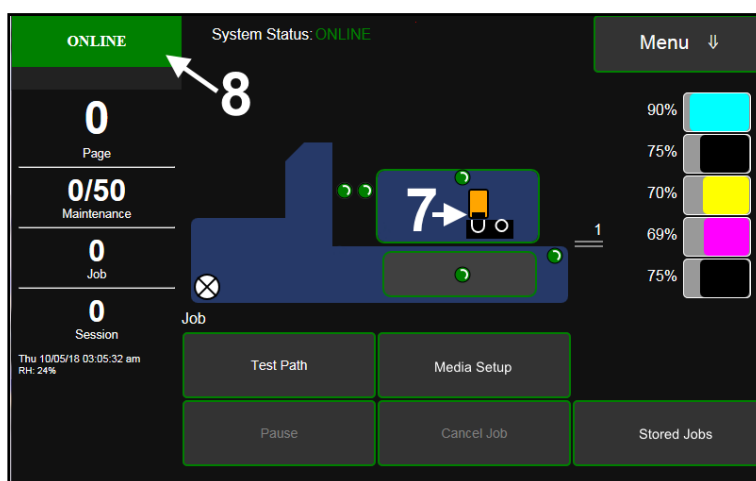


5. Carefully insert Cartridge into compartment at an angle [4], with Printhead surface facing down and Ink Nozzles facing Ink Hoses. Once seated, gently tilt Cartridge back until it snaps into an upright position [5]. **DO NOT FORCE the Printhead Cartridge into position.**



6. **Close Printhead Latch [6]. Close the Top Cover.** Printer starts up and primes ink into the Printhead. (*This may take a few minutes.*)
NOTE: After priming stops, open the Top Cover and make sure ink is flowing through hoses. If air bubbles appear, tap lines and close the Top Cover. Or close the Top Cover and click “**Circulate Ink**” on the Touchscreen to clear the air bubbles.

7. **Watch the Control Panel Touchscreen.** Check that the Printhead icon [7] in the 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 the 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!

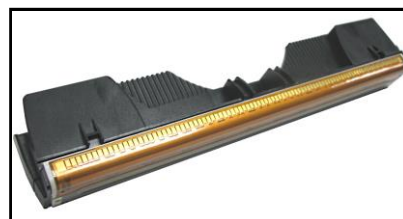
CHECK INK TANKS. PRINTER MAY NOT FULLY REPRIME IF INK TANKS ARE LESS THAN 1/3 FULL.

Printhead Storage

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

Cartridge and ink supply must be within operating temperature range before attempting to prime the 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 the 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 the Printhead, some nozzles do not fire as often. The most often used Nozzles will degrade more quickly. Noticing the effects of failing nozzles depends partly on the relative position of those nozzles to each other. In simple terms, the number of images printed and the amount of ink that will pass through the 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*.

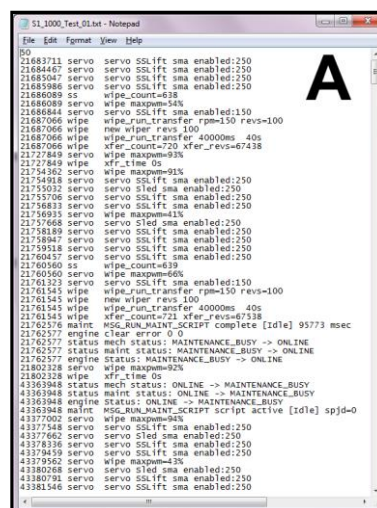
***See “Printhead Installation” and “Replacement” sections of this manual.**

Return Procedure:

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

To check Printhead Page count:

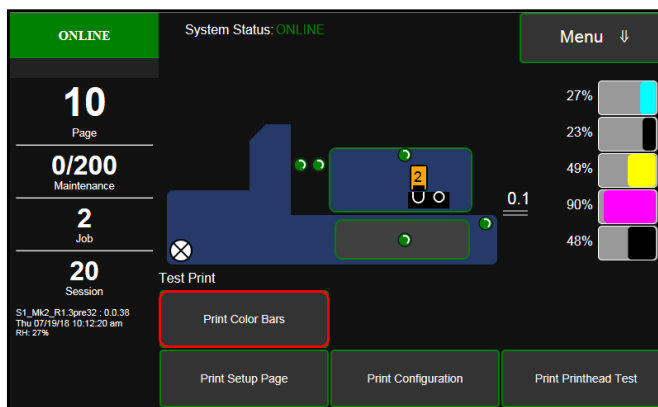
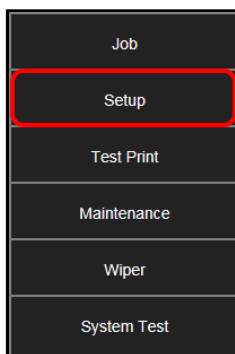
Open “View” drop-down menu in computer’s Toolbox. Select “Service Menus”. The “Diagnostics” screen opens. Select “Upload Debug Log”. Open and print the file [A] to include with your return.



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 the Printhead Cartridge from the Printer per replacement instructions found in the Operator's Manual.
4. Snap the Printhead back into the orange plastic protective cover it was shipped in. **IMPORTANT! Make sure all foam pads that came with the protective cover are installed and in place (two versions shown in images at right).**
5. Reseal the Printhead and Cover in a plastic bag (reuse and reseal original packaging if possible).
6. Place the 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.

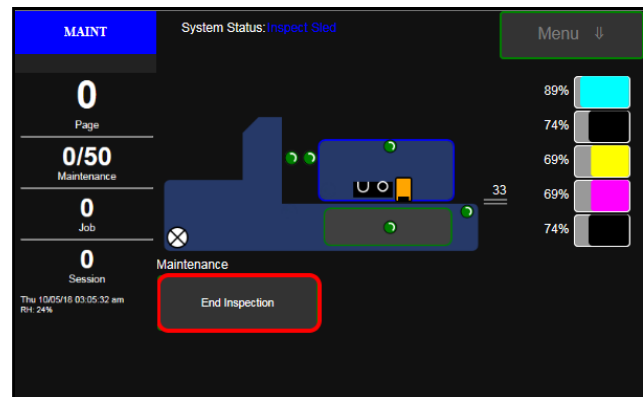
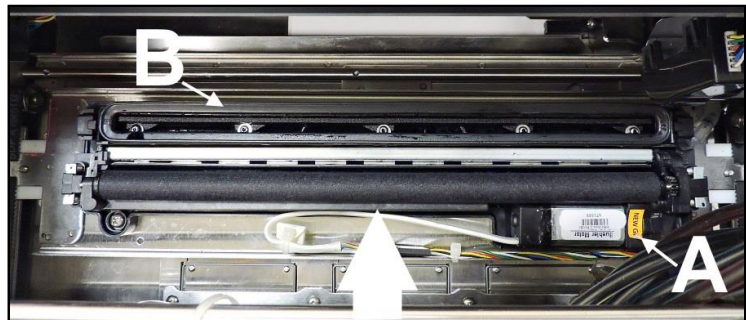
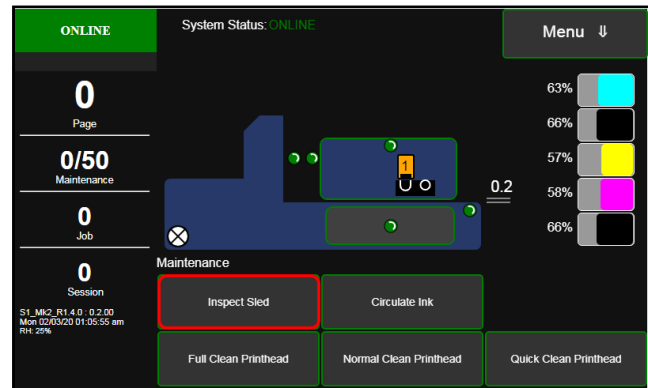


Inspect the Service Station

The Service Station (*located directly under the Printhead Assembly*) cleans the Printhead Cartridge of excess ink and debris, keeps the Printhead hydrated and protected when not in use, and captures and removes the ink used to keep the 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:

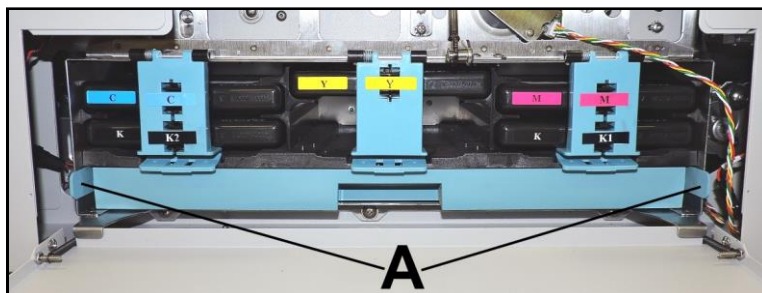
1. Using the **Touchscreen**, select “**Menu**” then tap “**Maintenance**” from the drop-down menu. Tap “**Inspect Sled**”. The Service Station **[A]** moves out from under the Printhead Assembly.
2. Open the Top Cover.
3. Visually inspect the Service Station for cleaning or service. Use a dry, lint-free 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 the Print Engine during operation. After a period of time it may become saturated and need replacement.

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

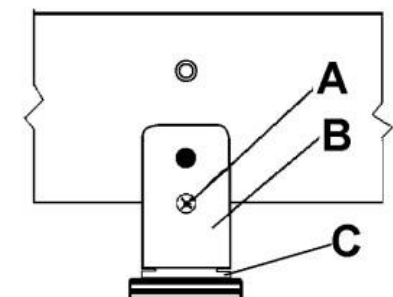


Replace Sheet Separators

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 the jam occurred.

Feed Section:

Loosen Sheet Separators and remove the jammed media. Readjust the Sheet Separators to the media.



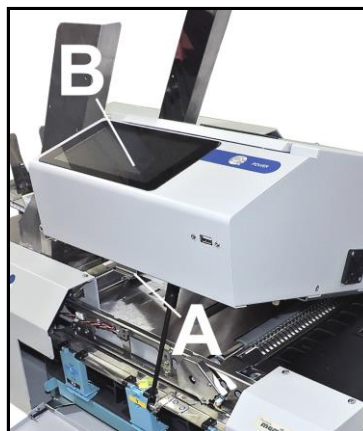
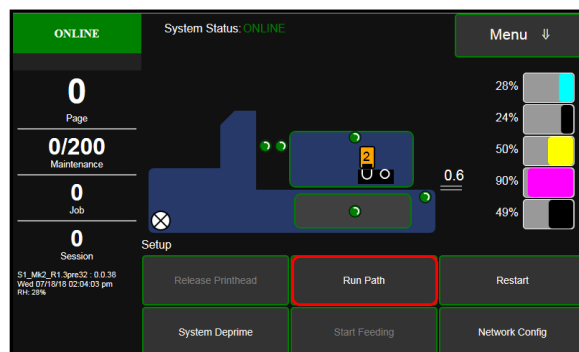
Print Area:

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 the Clamshell [B].
- Clear the jam, then 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 the Printer regularly to remove accumulated paper dust and ink. Depending on the types of media run, paper dust may accumulate inside the Printer and on the Transport.

1. Turn the Printer OFF and unplug it from the power receptacle. Then open or remove the 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 the ink tray and capping station** in the Print Engine area as accumulated ink may splash onto other parts of the Printer. Take care not to damage the 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 the Print Engine can become glazed with a buildup of dust, paper lint and accumulated ink and have to be cleaned regularly. Open the Top Cover. Use a vacuum to pick up any loose debris.

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

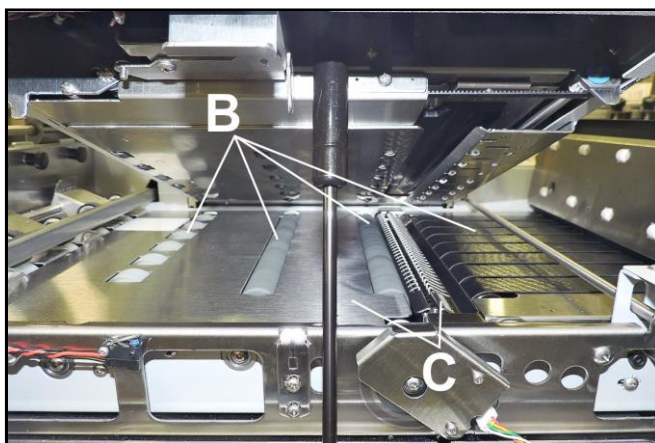
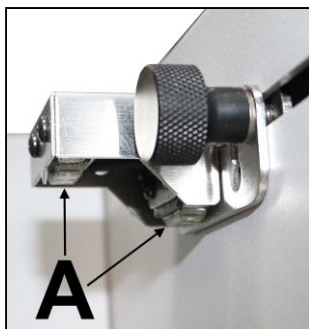
CAUTION

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

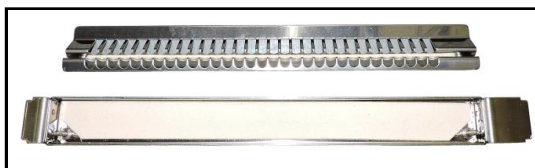
[A] Feed and Media Sensors:

Paper lint and dust may build up on the Sensors.

Use a can of compressed air or a damp (*not wet*) foam or lint-free cotton swab to gently swab the Sensors. Take care not to drip water into the 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 the Printer.



[C] Printing Surfaces, Ink Drip Cover and Tray.

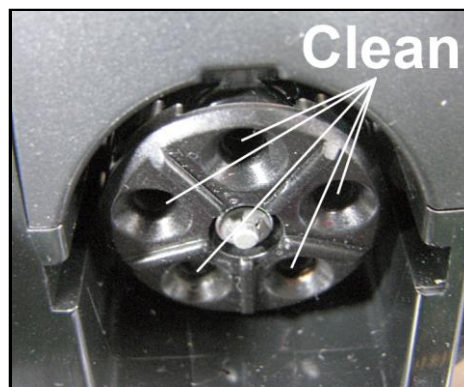
Wipe using distilled water and a damp, lint-free cloth.

Pat dry with a lint-free cloth. **Ink Drip Tray:** Carefully remove the 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 the system and remove the Printhead Cartridge.**
2. Moisten a foam swab in distilled water.
3. Insert the swab into one of the ink channels and rotate the swab to clean the chamber.
4. Use a new swab for each of the remaining ink channels until all 10 openings are clean. (*5 on each side.*)



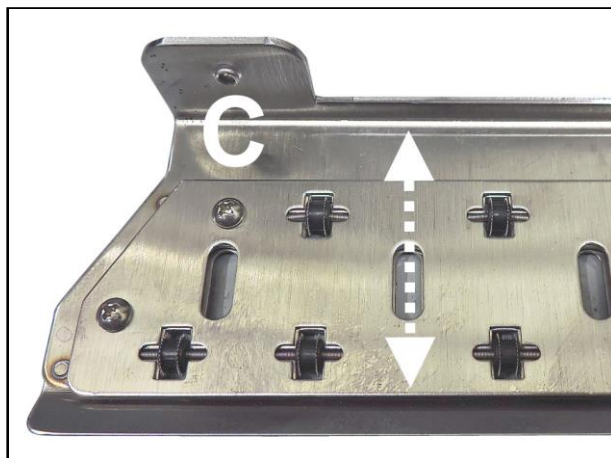
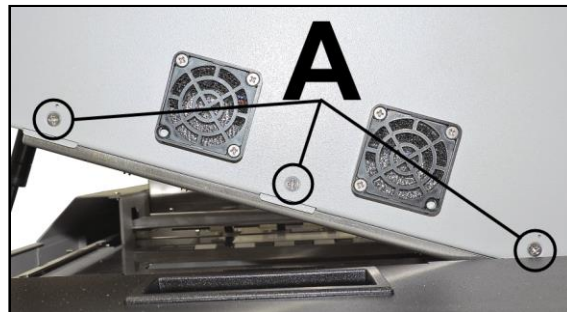
Clean Clamshell Star Wheels

NOTE: This procedure may have to be performed weekly to remove ink residue, depending on printer use. For easier access when cleaning the Star Wheel Assemblies:

1. Remove (3) screws [A] securing the Star Wheel Assembly to the Clamshell.
2. Remove the Star Wheel Assembly [B].
3. Soak the Assembly for 20 minutes in clean, warm water. Rinse off with clean water.
4. Thoroughly wipe and dry the Star Wheels with a clean, lint-free cloth.

IMPORTANT: Only wipe the Star Wheels in the direction they roll [C]; never wipe across the Wheels.

5. Install in reverse order.



Shipping or Transporting Printer

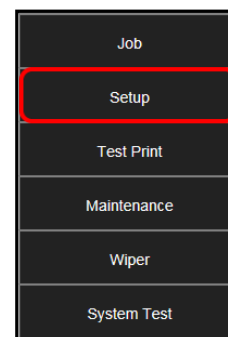
If you have to ship or transport the Printer for any reason, unit will have to be prepared. Once the Printer is prepared, carefully package the Printer, Printhead Cartridge, Service Station and Ink Tanks in the original packaging.

Remove Printhead Cartridge

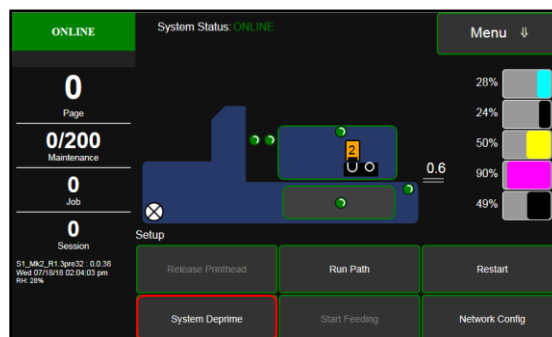
1. From the Touchscreen, tap “Setup” in the **Menu** drop-down; then tap “System Deprime”. The Printer pumps any ink in the system back into the Ink Tanks. Then the Printhead Latch pops open.

CAUTION

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

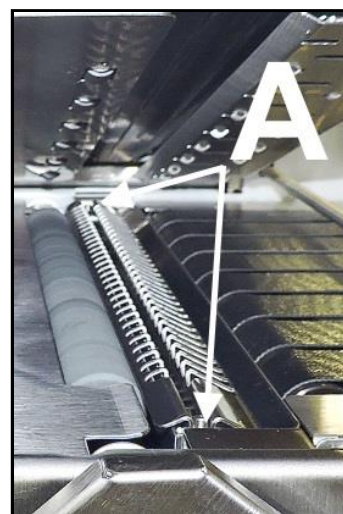
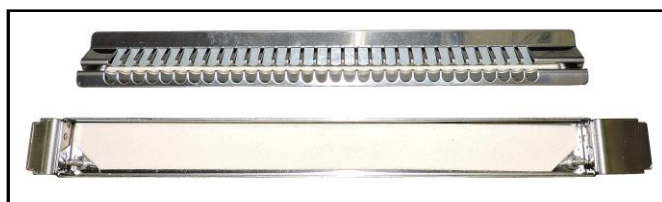


2. **Open the Top Cover.** Make sure the Printhead Latch is fully opened to retract the ink lines. Remove the used Printhead Cartridge by tilting it toward the ink lines, then carefully lifting it out of the Printhead Compartment.
3. Pack the Printhead Cartridge area with absorbent towels to catch any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



Empty and Clean Ink Drip Tray

1. **Open the 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.

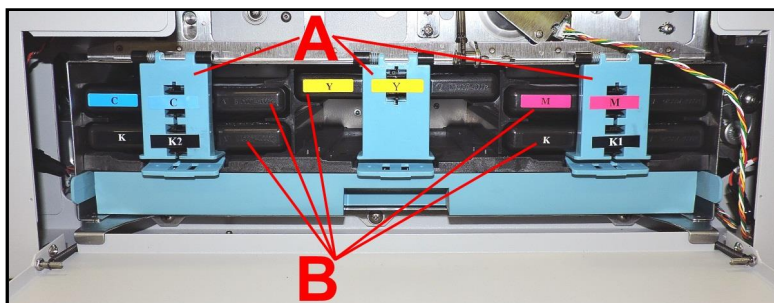
CAUTION

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 the Front Cover (*hinged at bottom*). Open the Ink Tank Latches [A] and pull the Ink Tank(s) [B] out of the Printer.
2. Carefully package the Ink Tanks in the original packaging.
IMPORTANT: Make sure the ink seals on the Ink Tanks face up to prevent leakage.
3. Pack the 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 the Printer. We tried to make them as complete as possible. The best advice we can offer is to make sure that the 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!**

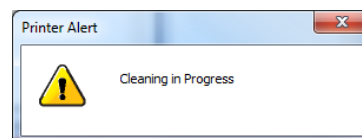
Printer

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 , <i>Cleaning Ink Tank Contacts</i> .
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. 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 the Driver are displayed on the 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 reseal 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 reseal 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.

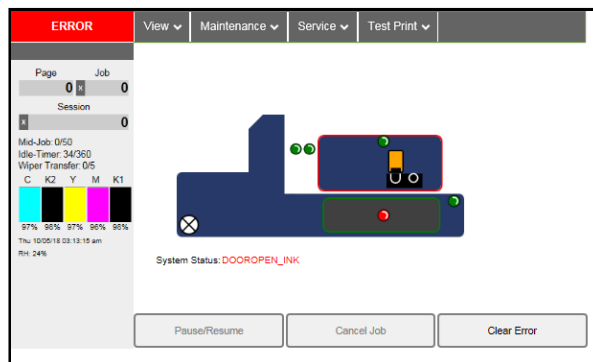
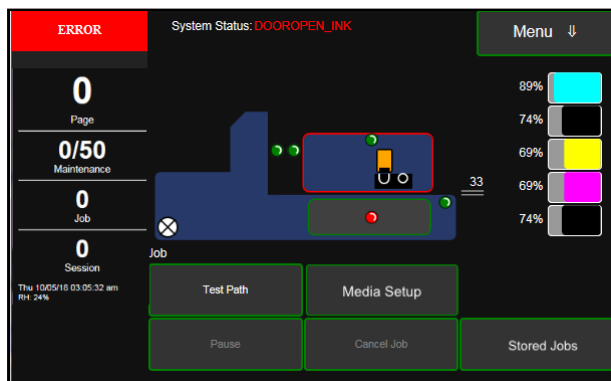
Toolbox System Status Messages

Use the **Touchscreen** or **Toolbox** screen to quickly determine and locate a problem in the Printer.

Status Indicator shows **ERROR** in a red box. **Printer Graphic Icon** highlights the Printer and system affected.

The **System Status** information on the right displays the basic problem (*in red*). **Ink Levels** displays ink status.

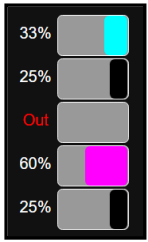
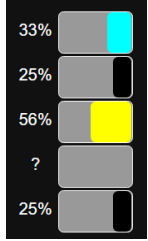
Control Buttons (at screen bottom) let you perform often used tasks without leaving the screen.



Listed below are some of the messages that may appear in **System Status**.

SYSTEM STATUS	SOURCE	SOLUTION
System Status: PAPERPATH_FEED_TIMEOUT	Out of Paper Hesitation in media feed. Media not passing under Feeder/Entry Sensors.	Load media into the Printer and tap Clear Error button and then tap the Resume button on the Job Menu screen to resume printing. If media is present; check/adjust the Guides and Separators. Reposition media or Feeder/Entry Sensor Assembly, so paper passes under sensors.
System Status: PAPERPATH_PAPERJAM	Paper/Media jam detected. Printer has detected that one (<i>or more</i>) Media Sensors are blocked (<i>interrupted</i>).	Carefully remove jammed media from Printer and close Print Engine. System Status message in red should go away. Touchscreen and Toolbox Paperpath Sensor indicators should change from red to green. After jam is cleared, you can: Check/adjust sheet separation. Tap Clear Error button and then tap the Resume button on the Job Menu screen to resume printing.
System Status: PAPERPATH_PAGE_SEQUENCE	Change in media length detected. Overlapping pieces.	Remove media from the Printer transport. Check/adjust sheet separation. Tap Clear Error and then tap the Resume on the Job Menu screen to resume printing.
System Status: MAINTENANCE_BUSY	Using "Job" menus "Media Setup" feature. Machine is performing a maintenance procedure.	Exit out of the "Media Setup" feature. No action required. Wait for the Printer to finish.

Toolbox System Status Messages (*Continued*)

SYSTEM STATUS	SOURCE	SOLUTION
System Status: DOOROPEN_PRINTHEAD	Indicates that the Printhead Door is open. Switch damaged or disconnected.	Verify that Printhead Door is closed. Make sure that Printhead Door switch (<i>located at the back center of the door</i>) is activated when the Printhead Door is open and closed. Use Scan Sensors in the Printer Toolbox to check that the Printhead Door switch is functioning.
System Status: DOOROPEN_INK	Indicates that Ink Tank Door is open. Switch damaged or disconnected.	Verify that Ink Tank Door is closed. Make sure that Ink Tank Door switch (<i>located at the upper right corner of the door</i>) is activated when the Ink Tank Door is open and closed. Use Scan Sensors in the Printer Toolbox to check that the Ink Tank Door switch is functioning.
System Status: DATA_PATH_UNDERRUN	Media is not moving from the Entry Sensor to Exit Sensor within a specified time. Possible issue with format or orientation of job being sent. Dirty Encoder Wheel.	Check/clean the Media Transport Rollers. Check/clean the Sensors and Reflector. Try changing the orientation setting in software/driver or setting a different media size. If the problem persists contact technical support. They should check/clean the Encoder Wheel.
System Status: INK_LOW_X	One or more Ink Tanks are low on ink. X = Color. MULT = more than one Tank color.	Ink Tank replacement will be necessary soon. Reorder Ink.
System Status: INK_OUT_YELLOW	 One or more Ink Tanks are out of ink. X = Color. MULT = more than one Tank color. "Out" = System calculated that 250ml of ink was drawn from Tank or visible ink sensor sees no ink in Tank prism.	Open the Ink Tank Door. Replace empty Ink Tank(s). Verify that Ink Tanks are seated firmly and latches are fully closed. Close the Ink Tank Door and tap "Clear Error". The ink levels should fill in. NOTE: A premature visible ink "Out" condition can occur if the Printer is not on a sturdy, level surface.
System Status: CARTRIDGE_MISSING_MULT or CARTRIDGE_MISSING_X	 Ink Tank is missing or not recognized (<i>obtained from an unauthorized reseller</i>). X = color (C M Y K1 K2) MULT = more than one Tank color.	Insert the missing Ink Tank or pop Ink Tank in and out to improve connection. Check/clean the Ink Tank contacts. Tap Clear Error and then tap Resume button on the Job Menu screen to resume printing.

Toolbox System Status Messages (*Continued*)

SYSTEM STATUS	SOURCE	SOLUTION
System Status: MECH_FAIL_PERMANENT ERROR on System Status screen. Check the Printer Graphic to determine which component has a problem or failed: Service Station, Ink Valve or Printhead , (usually indicated with a steady “?”)	Mechanical error One of Printer's mechanical components was not properly registered at expected position. Mechanical failure or Sensor failure.	Visually inspect the component stated as a “ Reason ” for failure. Using the Scan Sensors page in the Printer Toolbox , perform toggle test on Sensor responsible for registration of failed mechanical component position. Try rebooting (<i>restarting</i>) the Printer. If problem persists call for Service.
System Status: [Crit 63 03-phead offline cancelpage restart]	Dirty/damaged Printhead contacts at Printhead or board.	Try rebooting (<i>restarting</i>) the Printer. Try replacing the Printhead. If problem persists call for Service.
System Status: ONLINE ERROR on System Status screen. Printer Graphic shows Printer Service Station as “?”.	Service Station position sensors are damaged or malfunctioning.	Check Service Station position. Check for mechanical jam. Try rebooting (<i>restarting</i>) the Printer. If problem persists call for Service.
System Status: MECH_CANCELPAGE	Job was cancelled by user pressing the Cancel Job button.	Wait until the print job has cleared from the Printer. Then manually clear job from the computer's print queue. Send a new print job.
System Status: PRINthead_MISSINGQA Printer Graphic shows Printer Printhead as “?”.	Printhead missing or Printhead not making proper connections.	Install Printhead. Remove the Printhead, clean the contacts and reinstall the Printhead. Replace Printhead. Refer to appropriate sections in this manual for removing and installing Printhead Cartridge. Try rebooting (<i>restarting</i>) the Printer. If problem persists call for Service.
System Status: PRINthead_UNPRIMED	Printhead unprimed. Printhead Latch is open and/or the Door is open. Printhead priming process has failed.	After installing the Printhead you must close the Printhead Latch and close all doors to start priming process. Remove Printhead Cartridge; wet the print nozzles using distilled water and reinstall Printhead Cartridge. Refer to appropriate sections in this manual for removing and installing the Printhead Cartridge. If you continue to have trouble priming the Printhead; check for kinked or pinched ink tubes. Try rebooting (<i>restarting</i>) the Printer. If problem persists call for Service.

Toolbox System Status Messages (*Continued*)

SYSTEM STATUS	SOURCE	SOLUTION
System Status: WIPER OVERTEMP	Wiper Motor is overheated due to performing a Wiper Transfer (<i>removing excess ink off Service Station Wiper</i>) too often or for multiple or extended periods. Printer will continue maintenance after Wiper Motor cools down. Message will disappear once the temperature returns to operating range.	Wait for the Wiper Motor to cool down. The Printer will automatically resume operation. Tip: To reduce this issue; set the Mid-Job Servicing interval to a higher number of pages. NOTE: If the value is set too high, print quality issues may occur; caused by clogged or dehydrated nozzles. Run “Condition Wiper” from Touchscreen Wiper Menu. This rehydrates the Wiper Roller and Wiper Motor Module which may help to reduce energy it takes to turn the motor.
System Status: WIPER ERROR	Wiper Roller is not turning or is too hard to turn. Possible causes: 1. Ink coagulation is making the motor hard to turn. 2. Wiper Motor cable is broken or disconnected. 3. Wiper Motor Module failure.	1. Run “Condition Wiper” from Touchscreen Wiper Menu. This will rehydrate the wiper roller and wiper motor module. 2. Check cable and connections. 3. Replace Wiper Motor Module. If problem persists call for Service.
System Status: MAINTENANCE_JAM NOTE: To determine the error; check the Touchscreen to see if it displays one of the following messages. Sled Error – Service Station Sled Lift Error – Printhead Carriage Lifter Wipe Error – Wiper Motor	Printhead or Ink Tank Door opened during process. Motor that drives component has detected a problem or movement is impeded.	Close doors (<i>Printhead and Ink Tank</i>) and tap “Clear Error”. Check for anything that may be hindering movement of item (<i>Sled, Lifter, or Wiper</i>). If “Wipe Error”; run “Condition Wiper” to rehydrate the Wiper Roller. If “Sled Error” or “Lift Error”; check/clean the Sled and Lifter Home Sensors. If problem persists call for Service. CAUTION: After pressing “Clear Error”, the system will try to drive the sled, lifter or wiper motor again. If the same error comes up again, after trying the above solutions, call for service. Pressing the “Clear Error” button more than a few times in a row may cause system damage.

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 3.66" (76 mm x 92.96 mm) Maximum: 10.5" x 14.25"* (266.7mm x 362 mm) (* Optional Extended Media Support available for media over 14.25" long. Optional Narrow Media Kit available.
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 600 #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 (Landscape) per month
INK	Water-based ink. 5 individual 250 ml ink tanks (CMYKK) S1 Printer: Use only VersaPass™ DG S1-DN Printer: Use only VersaPass™ DN
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	
Printhead Cartridge	123-2393
Waste Ink Tray Assembly (<i>Tray with Ink Waste Pad</i>)	123-2487
Waste Ink Tray Pad (<i>Pad only</i>)	123-2491
VERSAPASS™ DG INK CARTRIDGES (FOR S1 PRINTER ONLY)	
VersaPass™ DG Black Ink Cartridge, 250 ML	123-2412
VersaPass™ DG Cyan Ink Cartridge, 250 ML	123-2413
VersaPass™ DG Magenta Ink Cartridge, 250 ML	123-2414
VersaPass™ DG Yellow Ink Cartridge, 250 ML	123-2415
VERSAPASS™ DN INK CARTRIDGES (FOR S1-DN PRINTER ONLY)	
VersaPass™ DN Black Ink Cartridge, 250 ML	123-3106
VersaPass™ DN Cyan Ink Cartridge, 250 ML	123-3107
VersaPass™ DN Magenta Ink Cartridge, 250 ML	123-3108
VersaPass™ DN Yellow Ink Cartridge, 250 ML	123-3109
OPTIONAL HARDWARE	
Conveyor /Stacker Conveyor Drop Tray	CDM-700 DTM-255
Drop Tray (Printer)	DT-420
Long Media Support (<i>for media over 14.25" (362 mm) long; up to 20" (508 mm) long</i>)	47-116-06
Magnetic Media Support Assembly (<i>Allows additional options for feeding envelopes</i>)	47-116-25
Small Media Kit (<i>for media down to 2" (50.8mm) wide x 3.5" (88.9mm) long</i>)	47-900-05
Adjustable Exit Wheel Assembly Kit (<i>Replaces existing Exit Cover and Exit Wheel Assembly</i>)	47-900-10
Media Retainer Guide Kit (<i>Holds down uneven or wavy media to prevent binding and media jams</i>)	47-900-15

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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, 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	
Ink Tank Latches/Ink Bay				INSPECT	
Ink Tubing, Couplings, Components			INSPECT	INSPECT	
Ink Drip Tray, Clamshell Star Wheel Assembly	CLEAN WEEKLY OR AS NEEDED				
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.
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NOTES
