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# **DNP Photo Imaging America Corp.**

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PRINTRUSH MP/MPL  
HARDWARE OPERATION AND MAINTENANCE MANUAL



# ACKNOWLEDGEMENTS

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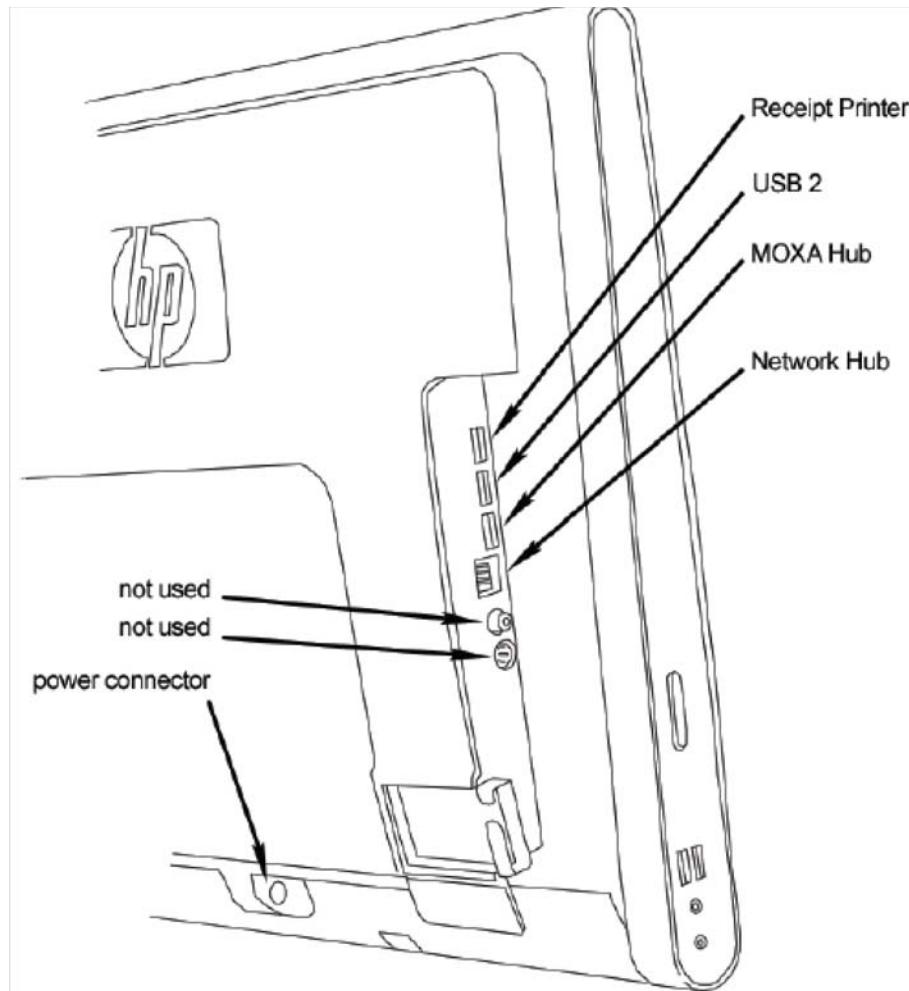
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# HP TOUCHSMART

## WIRING DIAGRAM

To ensure your system is set up correctly, use the following wiring diagram.



## CONNECTING POWER SOURCE

1. Plug the power cord into the AC adapter (brick), and the power adapter cord into the back of the computer.



Figure 1. AC Adapter

2. Plug the power cord into an AC power source through a surge protector or uninterruptible power supply.

## Turning the TouchSmart ON/OFF

To turn the HP TouchSmart ON:

1. Press the Power/Sleep button (A) on the top-right side of the computer. 

To turn the HP TouchSmart OFF:

2. Follow the instructions in the Tomo User Guide for shutting down the system.

## CABLE MANAGEMENT

The HP TouchSmart includes a cable-management feature that is located behind the back connector cover.

1. To remove the connector cover on the back of the computer, insert your finger under the gap on the bottom-left side of the cover, and pull gently.

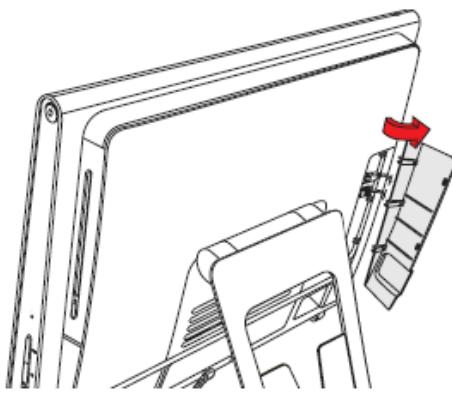


Figure 2. Connector Cover

2. Route your cable through the cable routing clip (**A**), and out of the back of the computer.



Figure 3. Routing Clip

3. Replace the connector cover by aligning the hooks on the right edge of the cover with the slots on the computer, and then pressing it until it snaps into place.

## CLEANING THE HP TOUCHSMART SCREEN

Before cleaning the touch screen, you must disable it by turning off the computer. If the computer is not turned off, the touch screen is enabled, and you could lose data while cleaning it.

For optimal touch performance, the screen requires periodic cleaning to remove any particles on the sides and surface of the screen.

To clean the touch screen:

1. Turn off the computer.
2. Disconnect the power cord from the wall.
3. Spray a small amount of a mild glass cleaner onto the cleaning cloth that came with your HP TouchSmart. You can also use a soft cloth or paper towel dampened with a typical household glass cleaner to clean the touch screen.
4. Wipe the surface and each side of the touch screen to remove any dirt, fingerprints, or other debris that could hinder the touch recognition of the screen.



### Attention

**Do not spray or place cleaner directly on the screen.** Spray the cleaner into the cloth, and then wipe the sides and surface of the touch screen.

**Do not use an abrasive cleaner or cloth when cleaning the sides or the surface of the screen,** because this could cause damage to the touch screen.



Figure 4. Cleaning

## CALIBRATING THE TOUCH SCREEN

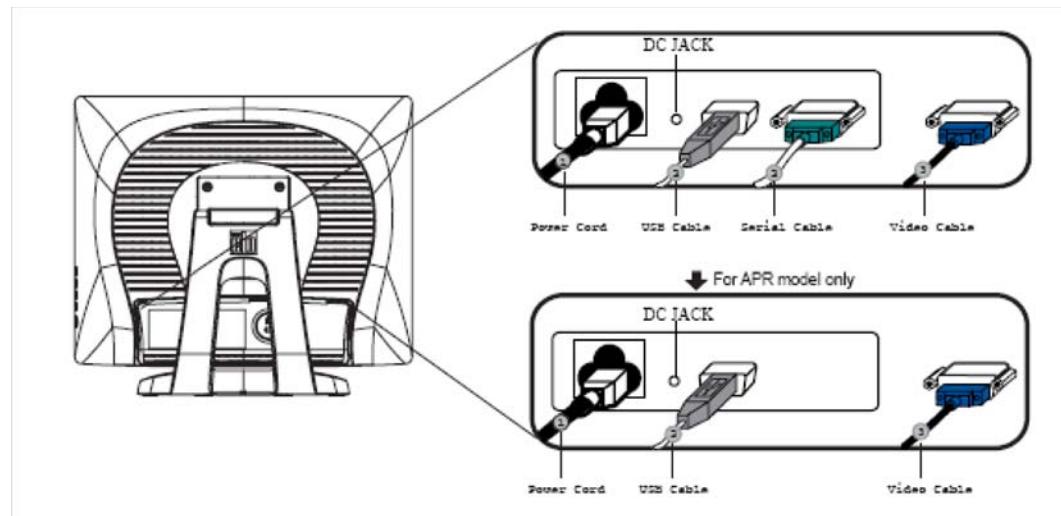
To calibrate the screen of the HP TouchSmart computer, complete the following steps:

1. Clean the screen before starting a calibration.
2. Log out of SiteKiosk and exit all applications to access the Windows desktop.
3. Click or tap **Start** on the task bar, and then click **Control Panel**.
4. In the Control Panel, click or tap **Hardware and Sound**.
5. Click or tap **HP Touch Screen Configuration**.
6. Click or tap the **Troubleshooting** tab.
7. Under **Calibration**, click or tap **Calibrate**.
8. Click or tap **Yes** on the message that opens.
9. Press and hold the crosshair (fingerprint icon) each time it appears until you hear a beep. Do not change the screen orientation, desktop resolution, or perform any other task until completing calibration.
10. Click or tap **Yes** to accept these calibration settings.  
The screen has been calibrated.
11. If touch points remain inconsistent, shut down the computer and unplug the power cord.  
Leave the power cord disconnected for at least 5 seconds.
12. Plug in the power cord and turn on the computer.  
Screen calibration is returned to its factory setting. If touch points remain inconsistent, continue to the next step.
13. Close any open software so that the Windows desktop is visible.
14. Press the **SCROLL LOCK** key on the keyboard 5 times.
15. Touch anywhere on the screen and the mouse pointer moves to the upper left.
16. Obtain a pencil that has a clean eraser on one end.
17. Gently touch the eraser to the mouse pointer and hold it until a beep is heard.
18. Release the eraser and the mouse pointer travels to another area of the screen.
19. Continue touching the eraser to the mouse pointer and releasing it until the mouse pointer moves to the center of the screen.  
Repeat these steps if touch points are inconsistent.

# 2

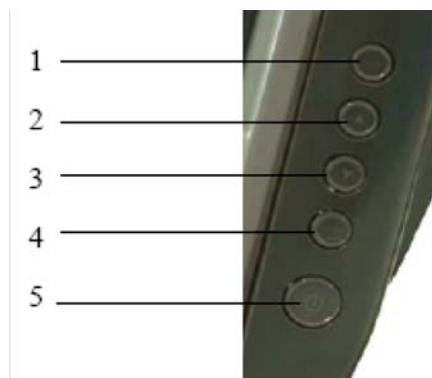
## *ELO 1715L MONITOR*

### MONITOR CONNECTIONS



1. Connect one end of the power cord to the monitor and the other end to an outlet.
2. Connect one end of the touchscreen USB cable to the rear side of the computer and the other end to the monitor.
3. Connect one end of the video cable to the rear side of the computer and the other to the LCD monitor.
4. Press the power button on the front panel to turn the monitor on.

## FRONT PANEL CONTROLS



- ■ 1 Menu/Exit – Display/Exits the OSD menus.
- ■ ▲ 2 1. Enter contrast of the OSD.  
2. Increase value of the adjustment item.  
3. Select item
- ■ ▼ 3 1. Enter brightness adjustment.  
2. Decrease value of the adjustment item.  
3. Select item counter-clockwise.
- ■ 4 Select – Selects the adjustment items from the OSD menus.
- ■ 5 Power Switch – Switches the power of the monitor.

## TROUBLESHOOTING

Problem	Suggestion(s)
The monitor does not respond after you turn on the system.	Check that the monitor's power switch is on.  Turn off the power and check the monitor's power cord and signal cable for the proper connection.
Characters on the screen are dim.	Adjust the monitor's brightness.
The screen is blank.	During operation, the monitor screen may automatically turn off as a result of the power saving feature. Press any key to see if the screen reappears.  Adjust the monitor's brightness.
Screen flashes "Out of Range" display when initialized.	Turn the monitor off then turn it on again.  Check to see if the resolution of your computer is higher than that of the LCD display.  Reconfigure the resolution of your computer to make it less than or equal to 1280 x 1024.
Touch doesn't work.	Make sure the touch cable is securely attached at both ends.

## MAINTENANCE

The following tips will help keep your touch monitor functioning at the optimal level.

- To avoid risk of electric shock, do not disassemble the touch monitor. There are no user-serviceable parts inside the monitor. Remember to unplug the touch monitor from the power outlet before cleaning.
- Do not use alcohol (methyl, ethyl, or isopropyl) or any strong solvent. Do not use thinner or benzene, abrasive cleaners or compressed air.
- To clean the touch monitor housing, use a cloth slightly dampened with a mild detergent.
- Avoid getting liquids inside your touch monitor. If liquid does get inside, have a qualified service technician check it before you power it on again.
- Do not wipe the touchscreen with anything abrasive that could scratch the surface.
- To clean the touchscreen, use window or glass cleaner. Put the cleaner on a clean cloth and wipe the touchscreen. Never apply the cleaner directly on the touchscreen.

### Calibrating the Touchscreen

1. Clean the screen before starting a calibration.
2. Log out of SiteKiosk and exit all applications to access the Windows desktop.
3. Click on the **Start Menu** and go to **Control Panel**.
4. Double-click **Elo Touchscreen**.

5. On the **General Tab**, click the **Align** button.

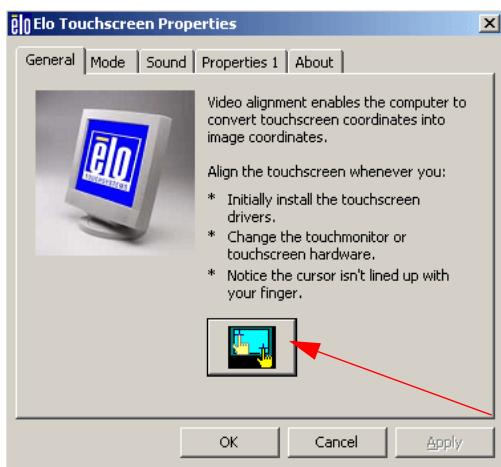
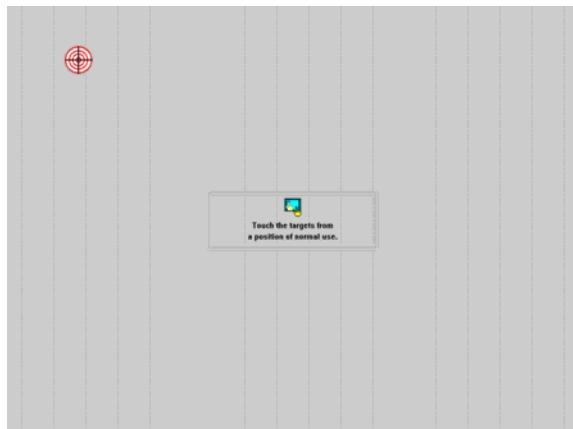


Figure 2. Elo Touchscreen Properties

6. Touch and release the upper left target. The target should jump to the lower right.
7. Touch and release the lower right target. The target should jump to the upper right.
8. Touch and release the upper right target. The target should jump to the lower left.
9. Touch and release the green check mark. The check screen should disappear.



10. The cursor should now jump to the point of each touch.
11. If the Elo Control Panel is open, close it. Close the Windows Control Panel.

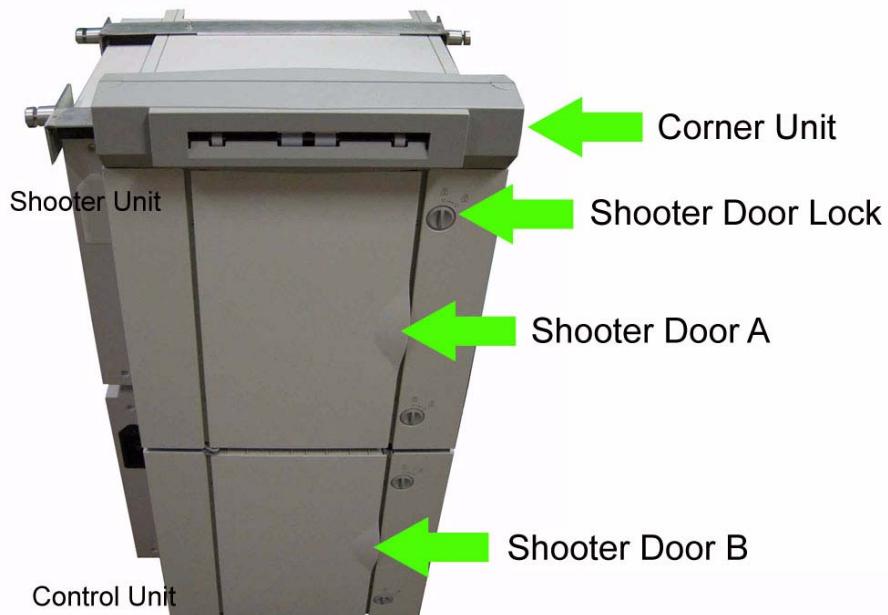
You have now calibrated the touchscreen.

# 3

## ***DS TOWER UNIT (No BACK PRINTER)***

The DS Tower unit is made up of three components:

- Control Unit – houses the DS80 printer(s), as well as the hardware that controls the tower unit, including the power strip and networking cables connecting the printers to the tower and the tower to the CPU
- Shooter Unit – houses the DS40 printers as well as the sorter mechanism for transporting prints
- Corner Unit – spits out the finished prints into the print catcher below



Tower Parts



Tower Door

## INSIDE THE TOWER



Figure 1. Inside Tower

Inside the tower there are up to four printers:

- ■ 1-4 DS40 (4x6) printers
- ■ Up to 3 DS80 (8x10) printers in the bottom 3 bays



### Attention

It is important that these printers are installed in the correct order. Failure to install the printers in their correct bays could result in corruption of the firmware.



### Note

For more information on the printers, see the chapter on DS printers.

## CLEANING THE TOWER UNIT

About once a month, it will be necessary to clean the air filters in the tower unit to maintain optimum performance.



### Attention

If the filter is clogged, the internal temperature of the housing becomes higher and can cause errors in printing.

1. Power down the unit and unplug it from the wall.
2. Using a Phillips head screwdriver, remove the wire housing from the back of the tower unit by loosening the two screws on the side of the tower unit. You do not have to remove the screws entirely.

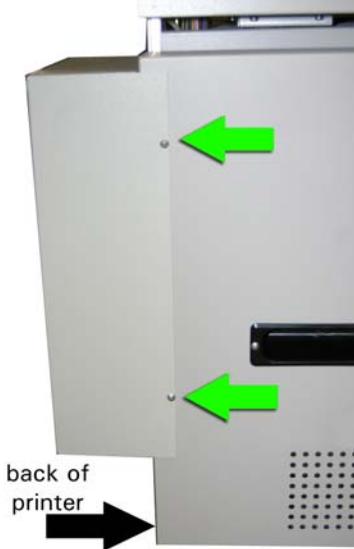


Figure 1. Remove Screws from Side of Printer

3. Pull the cover towards you until you can remove the panel by sliding the tabs from the back of the printer.

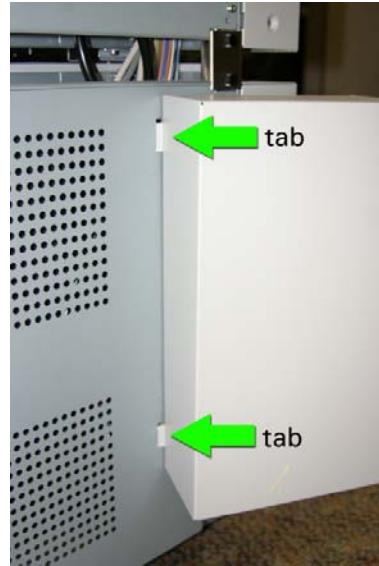


Figure 2. Panel Tabs

4. Remove the top and bottom panels from the back of the tower exposing the fan units inside.



#### Attention

The sides of the panels may be sharp. Take care when removing the back panels.



Figure 3. Back Panel Exposed

5. Pop off the fan cover by pulling from the bottom.
6. Vacuum the fan blades and filter cover.



#### Note

The air filters are very thin. Take care not to damage the air filters with the vacuum.

7. Replace the fan when you are done. Move to the next fan.
8. When you have vacuumed all the fans, replace the back panels.



#### Note

There is no particular order to replacing the back panels, but make sure you place the panels with the holes for the wire cover box on the bottom.



#### Attention

Do not pinch or cut the wires when replacing the panel.

9. Replace the wire cover by first inserting the tabs into the holes in the back panel, and then moving the box so that the indentations for the screws line up with the screws.
10. Make sure no wires are being pinched by the box. Tighten the screws.
11. Plug the unit in and power the unit back on.

*You have now cleaned the air filters on the tower unit.*

## TROUBLESHOOTING THE TOWER UNIT

If the tower experiences a printer error, a paper jam, or a communication error, a system error will come up on the screen. Errors fall into the following categories:

-  Printer Errors
-  Paper Jams
-  Communication Errors
-  System Errors



### Note

The printers will need to cool off periodically. The system will notify you when the printer is cooling, and the printer will resume printing in approximately 10 to 15 seconds.

## PRINTER ERRORS

Because the printers are routed through the tower, all printer errors will appear on the main screen. When the error appears, the system will tell you which printer is experiencing the problem and what to do to fix it. The most common errors are listed in the table below.

*Table 1: Printer Errors*

System Message	Solution
End of Paper	Change media set
End of Ribbon	Change media set
Cover is Open	Close front of printer
Paper Jam in Printer	Clear paper jam
Printer Ribbon Jam in Printer	Clear ribbon jam
Ribbon Tension Error	Reset ribbon
Scrap Box is Missing	Replace scrap box
USB Connection Failed	Check USB connection on printer



### Note

A media set contains one roll of paper and a new ribbon. Always change media together.

## PAPER JAMS

Most error messages deal with printer jams and media problems. Once the print has exited the printer, it can become jammed in two main areas:

-  tower door
-  paper path



### Attention

The tower will not allow another print to be send through the system if there is a paper jam in any of these areas.

## Tower Door Jam

If a print becomes jammed in the tower door:

1. Open the tower door by unlocking the door, pressing in on the handle, and then pulling the door towards you.



Figure 1. Opening the Tower Door

2. Look inside the door to find the print.

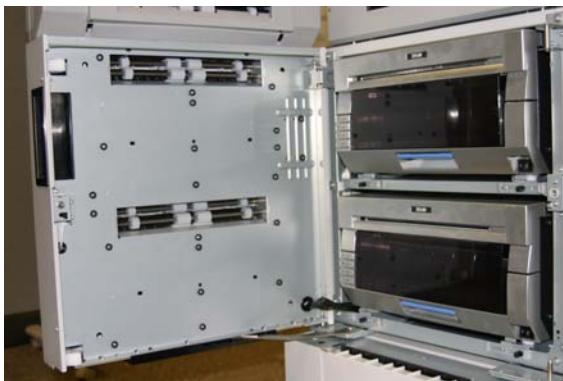


Figure 2. Inside the Tower Door

3. Remove the print, and then close the door, pressing firmly to ensure it is closed correctly. Relock the door.
4. The printer will reset.

You have now cleared a paper jam from the tower doors.

## Paper Path Jam

The paper path runs along the outside of the doors, and up into the corner unit. If a paper jam occurs in the paper path:

1. Unlock the paper path door where the jam is located.



### Note

You need to unlock both locks on the paper path door in order for the door to open.

2. Open the paper path door.



Figure 3. Paper Path Door Opened

3. Remove the jammed print and close the Paper Path Door and relock the door, holding the door shut with slight pressure.



#### Attention

The printer will not send another print if there is a print in the paper path or if the paper path door is open.

You have now cleared a paper jam from the paper path.

## COMMUNICATION ERRORS

The most common communication error happens when a USB cable has been disconnected, or is not fully inserted into the connection. Check both ends of the cable (when able) and reseat them if necessary. This should resolve the issue. If errors reoccur, or do not resolve when the cable is reseated, call Technical Support at 1-888-749-3587.

### System Errors

All other errors fall into the category of system errors and are listed below:

Table 2: System Errors

System Message	Solution
Head Voltage Error	Reset printer (turn off/on)
Head Position Error	Reset printer
Power Supply Fan Stopped	Reset printer
Cutter Error	Reset printer
Pinch Roller Position Error	Reset printer
Abnormal Head Temperature	Allow printer to cool, reset printer

*Table 2: System Errors*

System Message	Solution
RFID Module Error	Check printer media, reset printer

If any of these errors persist, call Technical Support.



### Attention

If any of the errors in Table 3 occur, call Technical Support immediately.

*Table 3: System Errors (Cont.)*

System Message	Solution
System Error	Call Technical Support
Firmware Error	Call Technical Support
Device Error while Transferring Firmware Data	Call Technical Support
Error while Sending Firmware Update	Call Technical Support

## REPLACING TOWER MEDIA



### Note

For more information on replacing media in the DS printers, look in the Installing Media section of the Printers manual.

# 4

## **DS40 PRINTER BASICS**

This chapter provides you with basic information on how to maintain and troubleshoot your printer.

### **GENERAL MAINTENANCE**

Part of the normal maintenance cycle for printers includes removing dust buildup from the printer vents. This is done to free ventilation holes from dust and foreign matter and to improve printer longevity. The following instructions are written in a generic fashion to include all printers for the systems:

1. Power OFF the system at the main power source.
2. Using a small hand vacuum with a non-metallic extension and nozzle, vacuum all of the printers ventilation ports.
3. Vacuum the base of the system and external ventilation ports.
4. Power ON the system and remaining components.

*You have now performed basic maintenance on the printer.*

## **DS40 AND DS80 PRINTERS**

### **Distinguishing Your DS40 and DS80 Printer Model**

The DS series are versatile photo printers for use in photo labs by professional photographers, or in other commercial situations which demand high speed and exceptional quality. Other information on the printers can be found in the printer's field service manual or your system's documentation suite.



*Figure 1. The DS40 or DS80 printer*



## Attention

Prior to moving the printer, the ink ribbon cassette and paper roll should be removed from the printer. Always take care when lifting the printer so as not to cause physical injury.

When reinstalling, check that the ribbon and paper are properly positioned before resuming printing. If either is positioned incorrectly, paper jams, print position errors, or other unexpected problems can occur.

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The DS40 and DS80 printers are quite similar. The instructions written for one will work for the other. The main difference is in paper size; DS40 printers print 4x6 size prints, and DS80 printers print 8x12 size prints.

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## Note

If your printer is configured for use in a tower system, the printer will have small rubber feet. These feet are essential to aligning the output for the printer with the tower conveyor system and keeping the printer from moving inside the unit. Do not remove the feet.

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## INSTALLING MEDIA

Use the following procedures with your DS40 and DS80:

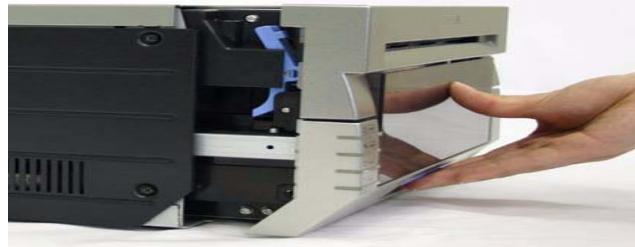
### ***Installing the Paper Roll and Ribbon***



#### Note

It is a good idea to check that there is enough paper in the printer to meet anticipated demand. Avoid touching the surface of the paper. Excessive fingerprints or smudges can lead to poor print quality.

1. Pull out the mechanism unit by lifting the blue handle beneath the scrap box, and pulling gently.



*Figure 1. Pulling the Mechanism Unit*

2. Free the paper release lever.



*Figure 2. Paper Release Lever*

3. Remove the scrap box, empty scraps into the trash.  
Set aside.



*Figure 3. Removing the Scrap Box*

4. Remove the spool ends from the printer.
5. Set the spools into the paper, ensuring there is no gap between the paper and the spool.



### Attention

Failure to set the paper correctly can result in print jams. Do not get dirt or fingerprints on the paper, as they will adversely affect print quality.



Figure 4. Paper Roll

6. Set the paper holder into the paper cassette in the printer. Make sure you set the paper in firmly.
7. Set the paper so that it is in the direction shown.

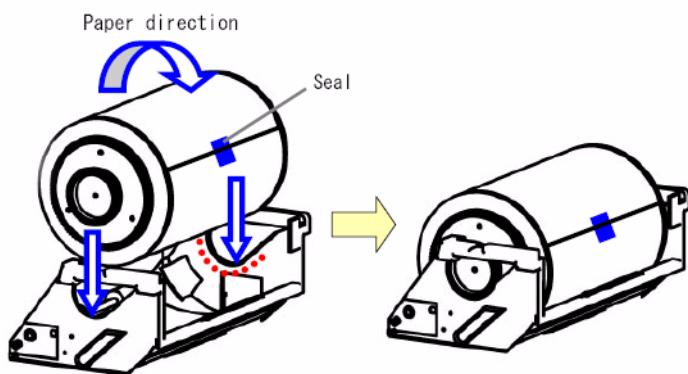
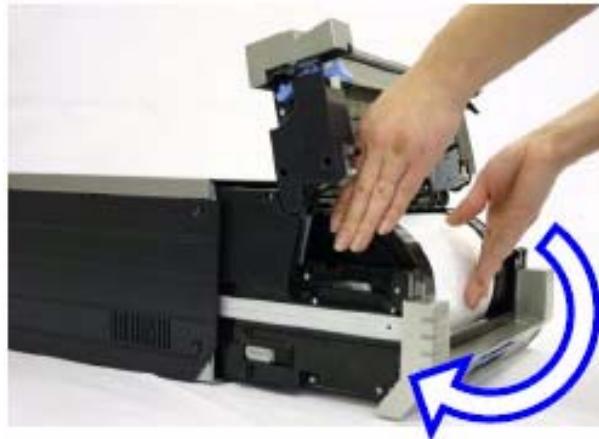


Figure 5. Inserting paper into cassette

8. Remove the seal



9. Advance the paper in the direction indicated. When it is inserted far enough, the buzzer will beep and the paper LED (orange) will stop blinking.



*Figure 6. Advancing the paper*



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**Note**

It is easier to set if you press down on the spool lightly while advancing the paper.

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10. Set a new ribbon into the ribbon cassette.  
Advance the ribbon in the direction shown and take up any slack in the ribbon.

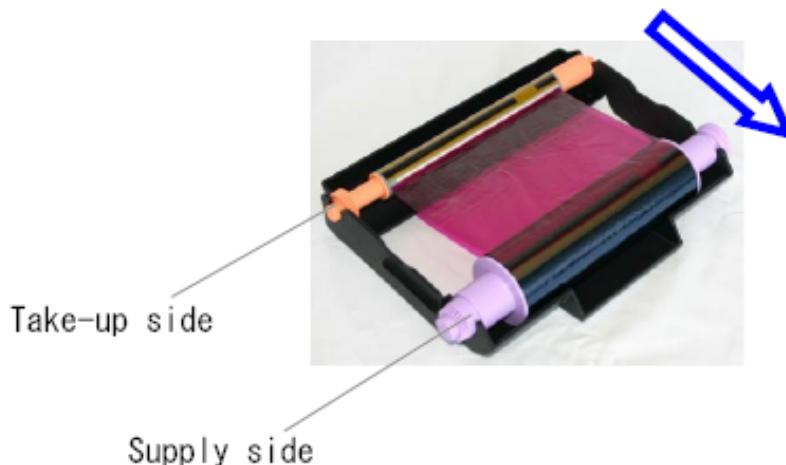


Figure 7. Advancing Ribbon

11. Set it with the supply side in the front.

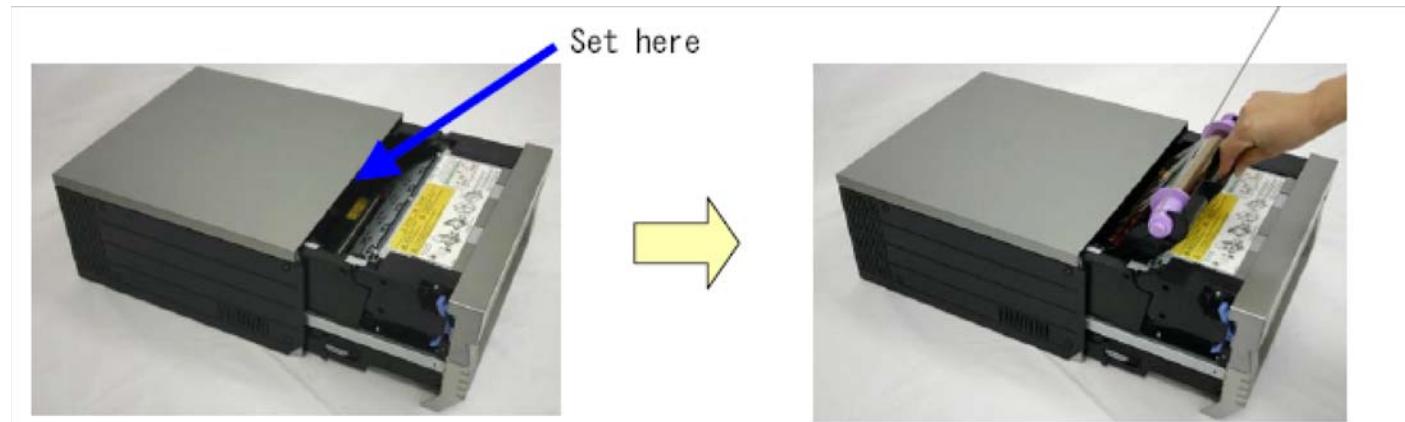


Figure 8.

12. Set the scrap box.



#### Attention

The printer will not operate without the scrap box attached. Closing the mechanism unit without the scrap box attached will cause a “No Scrap Box Error.” Clean any excess scraps from the printer.

You have now installed the media in the printer.

## MAINTAINING THE PRINTERS

### Emptying the Paper Scrap Bin

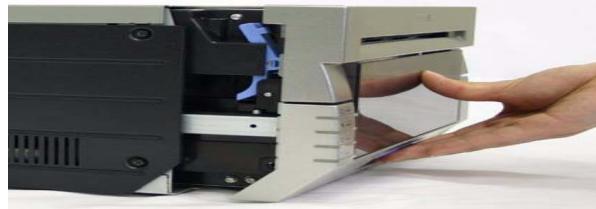


#### Attention

When the scrap box is removed, do not touch the cutter, as there is a danger of injury.

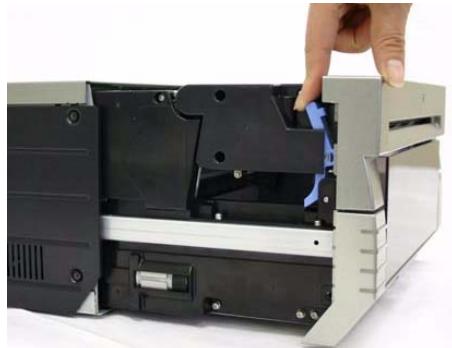
Before replacing the printer media, remove the paper's scrap bin.

1. Pull out the mechanism unit by lifting the blue handle beneath the scrap box, and pulling gently.



*Figure 1. Pulling the Mechanism Unit*

2. Free the paper release lever.



*Figure 2. Paper Release Lever*

3. Remove the scrap box, empty scraps into a proper receptacle...



4. Replace the scrap bin.



### Attention

The printer will not operate without the scrap box.

Closing the mechanism unit without the scrap box attached will cause a "No Scrap Box Error," and the red error LED will blink.

- 
5. Close the top of the mechanism unit, and push unit back in place.



### Note

Closing the mechanism unit starts initialization (4 blank sheets are fed out).

*You have now performed basic maintenance on the printer.*

## Cleaning the Ventilation Area

Periodically, you should check the ventilation or exhaust for the printer, as it can become clogged with dust.



### Attention

If the ventilation for the printer becomes clogged or blocked, the inside temperature of the housing becomes higher and can cause the thermal head to overheat.

When the thermal head overheats, printing halts and the power LED will blink. Printing resumes automatically when the head temperature cools. The thermal head can also overheat due to inputting continuous high-power such as printing all black images.

- 
1. Turn the printer OFF.

Access the rear of the printer.



### Note

You may need to unplug the power or network cables to completely access the back of the printer.

If you will have to disconnect power, make sure you power down the unit previous to unplugging the unit.

2. The exhaust for the printer is located near the top of the back plate, as indicated in the illustration below:

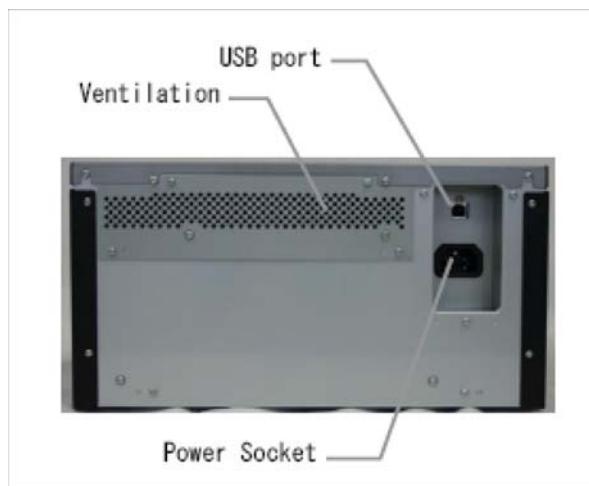


Figure 3. Ventilation Port

3. Wipe the dust from the unit using a cloth designed for dusting electronics, or use canned air to blow the dust from the back of the unit.
4. Replace any cables you may have had to disconnect to access the back of the printer, and put the printer back in place.
5. Power the unit ON.

You have now cleaned the dust from the ventilation unit.

## Cleaning the Platen Roller

If any impressions appear regularly in the same place on the prints, on either the front or back, you will need to clean the platen roller. There could be powder, paper scraps, or other debris stuck to the roller.

1. Pull out the mechanism unit by lifting the blue handle beneath the scrap box, and pulling gently.

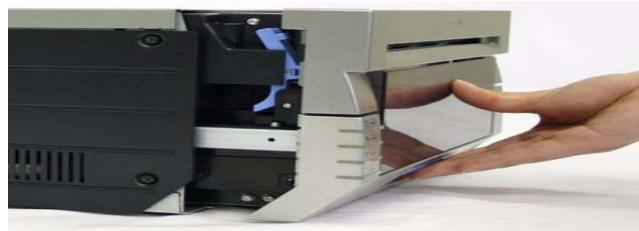
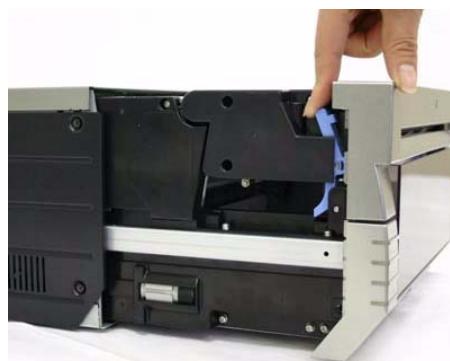


Figure 4. Pulling the Mechanism Unit

2. Free the paper release lever.



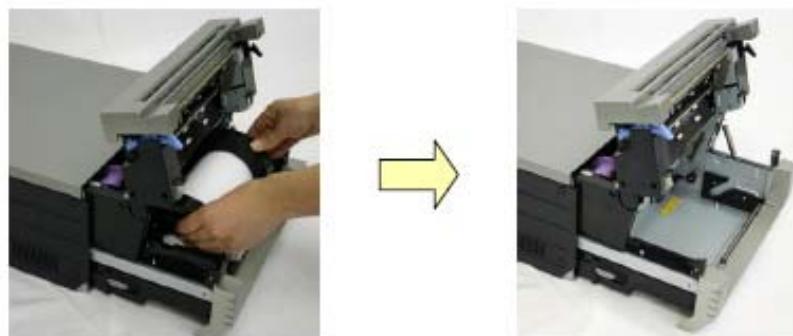
*Figure 5. Paper Release Lever*

3. Remove the scrap box, empty scraps into a proper receptacle...



*Figure 6. Removing the Scrap Bin*

4. Remove the paper cassette.



*Figure 7. Removing the Paper Cassette*

5. Using the alcohol pads provided, wipe any dirt off the platen roller while rotating the roller slightly.



#### Attention

Only use the alcohol pads provided in the cleaning kit.  
Take care to avoid injury and damage due to the sharp edges.



#### Note

If there is debris that will not come off using the alcohol pad, run the sandpaper provided in the cleaning kit over the area lightly until the debris is removed. Clean the area again with an alcohol pad.

6. Replace the paper cassette. Make sure the cassette is firmly seated.



Figure 8. replacing the paper cassette.

7. Advance the paper in the direction indicated until the buzzer beeps, and orange Paper LED stops blinking.



*Figure 9. Advancing the paper*

8. Replace the scrap bin and close the top of the mechanism.
9. Gently slide the mechanism back in place. The printer will re-initialize.

*You have now cleaned the platen roller.*

## TROUBLESHOOTING

### Error Messages



### The status of the LED indicates the Printer Status

Status	LED Display				Solution
	Power	Ribbon	Paper	Error	
Out of Paper*	●		○		Put in a new roll of paper
Out of Ribbon*	●	○			Put in a new ribbon
Door is open (No Paper)	●		○		Set the paper properly, and close the mechanism unit
Door is open	●		○	○	Close the mechanism unit
No scrap box	●			○	Set the scrap box
Paper Error	●		●	●	Reset the paper roll correctly
Ribbon Error	●	●		●	Reset the ribbon correctly
System Error**	●			●	Turn the power OFF, then back ON
Over-heated	○				The head is cooling off (auto-recovery)

● indicates lit, not blinking      ○ indicates lit and blinking      empty box indicates LED is OFF

\* Replace the paper and ribbon as a SET

\*\* If you cannot resolve the system error, contact your service representative

## RESOLVING MEDIA ERRORS

### If there is a Paper Jam:

1. Pull out the mechanism unit by lifting the blue handle beneath the scrap box, and pulling gently.

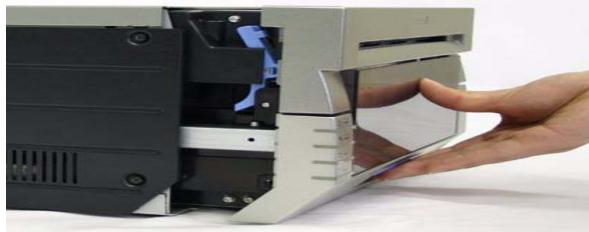


Figure 1. Pulling the Mechanism Unit

2. Remove the ribbon cassette by pulling the cassette up and out.



Figure 2. Removing the Ribbon Cassette

3. Pull any paper remaining in the printer in the direction indicated, and cut off any wrinkled or partially printed areas evenly with scissors.

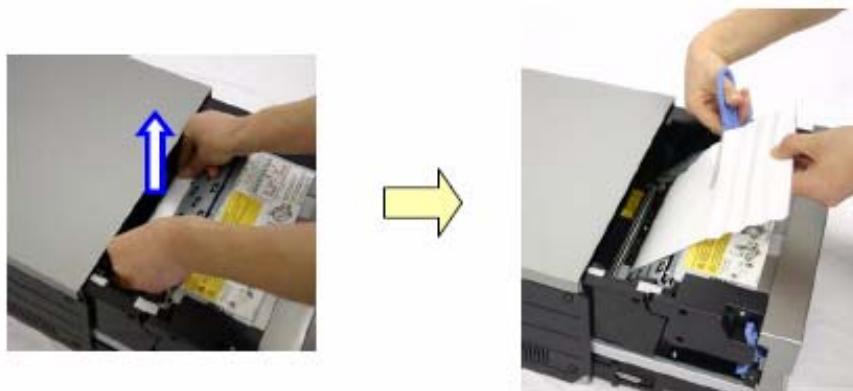
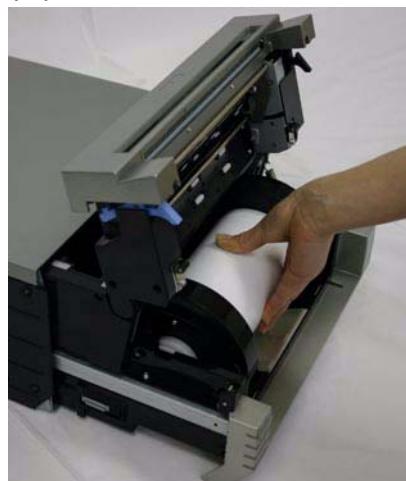


Figure 3. Pulling and Trimming the Paper

4. Remove the scrap box and rewind the paper.



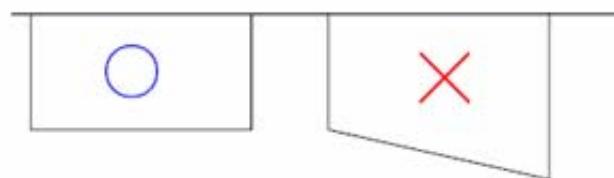
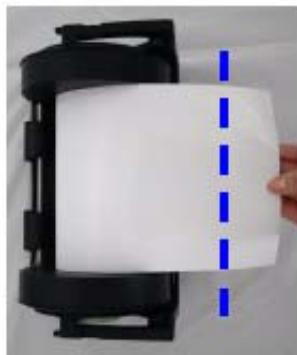
*Figure 4. Rewinding the Paper*

5. Cut off any partially printed, wrinkled, or otherwise inferior paper evenly with scissors and reset the paper.



**Note**

If wrinkles or partially printed areas are left, it could cause the paper to jam again.



Cut paper straight across.  
Do not cut paper at an angle.

*Figure 5. Cutting the Paper*

6. Advance the paper in the direction indicated. When it is inserted far enough the buzzer will beep, and the orange Paper LED light will stop blinking.



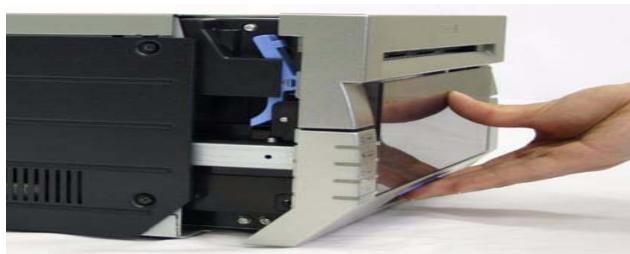
*Figure 6. Advancing the paper*

Close the top of the mechanism, and push the mechanism back in place. The printer will re-initialize.

*You have now cleared a paper jam.*

### **If the ribbon is torn or has been pulled into the mechanism:**

1. Pull out the mechanism unit by lifting the blue handle beneath the scrap box, and pulling gently.



*Figure 7. Pulling the Mechanism Unit*

2. Carefully remove the ribbon cassette by pulling up and out.



*Figure 8. Removing the Ribbon Cassette*

3. Cut the ribbon.



Figure 9. Cutting the ribbon

4. Carefully remove the remaining ribbon from inside the mechanism.



**Attention**

If the ribbon is torn or left in the printer, it could affect print quality.  
You may need to clean the platen roller (see *Cleaning the Platen Roller*).



Figure 10. Removing the Ribbon

5. Reattach the ribbon using clear or cellophane tape.



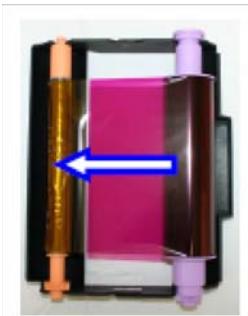
Figure 11. Placing the tape

6. Advance the ribbon several times as shown, until the tape is out of sight.



#### Attention

Make sure there is NO slack in the ribbon.  
Always wind ribbon onto the orange take-up spool.



*Figure 12. Advancing the ribbon*

7. replace the cassette.



#### Attention

Make sure the ribbon is placed in the printer correctly, inserting the take-up side first. If the cassette is inserted improperly, the mechanism will not close.



*Figure 13. Replacing the Cassette.*

8. Close the mechanism. The printer will re-initialize.

*You have now repaired a torn ribbon.*

**If the Printer is Stopped Mid-action:**

Figure 14. Printer Stopped

1. Turn the power OFF, and then back ON. The jammed paper should be released, and the cutter should return to its ready position

**Attention**

The mechanism will not open until the cutter has been returned to the ready position.

2. Remove any partially printed paper from inside the mechanism, following the instructions for "if there is a paper jam."

*You have reset a printer stopped in mid-action.*

**If the Power is Cut During Printing:****Attention**

If the power is cut during printing, the mechanism unit cannot be pulled out. The mechanism will not open until the cutter has been returned to the ready position.

1. Turn the power back ON. The partial print will be cut into scrap lengths and discarded in the scrap bin.
2. Once the cutter has returned to the ready position, the mechanism can be pulled out.
3. Check that there is no partially printed paper in the mechanism unit. If there is, see: "if there is a paper jam."



# 5

## ***EPSON RECEIPT PRINTER (TMT88IV)***

### **INSTALLING MEDIA**

#### **Installing the Paper Roll**

To install paper for the first time or to replace a used paper roll, follow these steps:



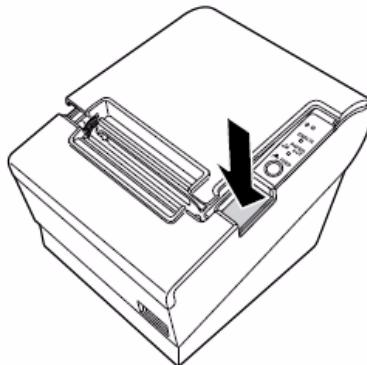
---

#### Note

Do not use paper rolls that have the paper glued or taped to the core because they might cause a paper jam.

---

1. Open the paper roll cover by pushing the printer cover button.



2. Remove the used paper roll core if there is one.

3. Insert the paper roll as shown.

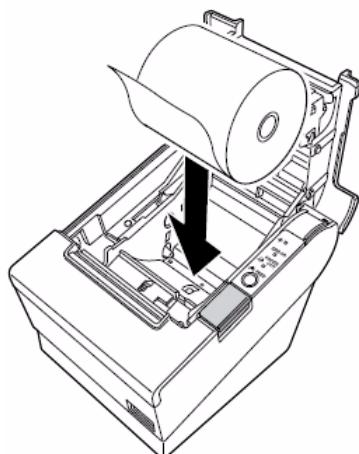


Figure 1. Insert Paper Roll

4. Make sure the leading edge of the paper is at the bottom of the roll.



Figure 2. Leading Edge of Roll

5. Pull out a few inches of paper. Close the cover and tear off the extra paper by pulling it towards the front of the printer.

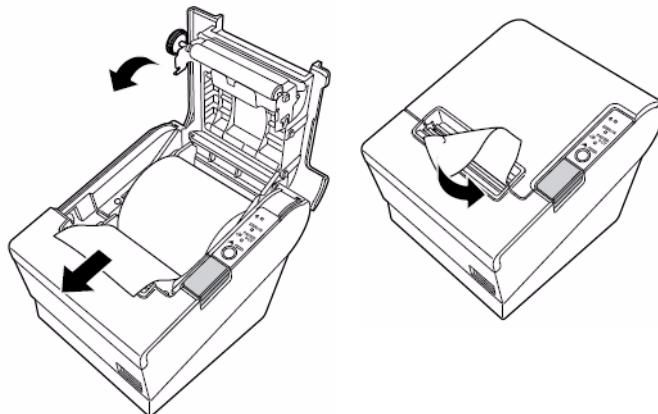


Figure 3. Installing Paper Roll



#### Note

To prevent paper jams, make sure that nothing obstructs paper coming out of the paper exit, and do not pull the paper out of the printer.

You have now installed a paper roll.

## RECEIPT PRINTER MAINTENANCE

### Cleaning the Thermal Print Head



#### Attention

After printing, the printhead can be very hot. Be careful not to touch it.  
Let the printhead cool before you clean it.

1. Open the paper roll cover.
2. Clean the thermal element (the green part) of the printhead with a cotton swab moistened with an alcohol solvent (ethanol, methanol, or IPA).



#### Note

Clean the thermal head every three months to maintain receipt printer quality.

*You have now cleaned the thermal print head.*

## TROUBLESHOOTING

### Removing a Paper Jam



#### Attention

Do not touch the paper feed motor because it can be very hot.

#### If the paper is jammed in the paper roll section:

1. Turn the printer off.
2. Open the paper roll cover, remove the paper roll, and remove the jammed paper.
3. Insert the paper roll. Make sure the paper roll is seated correctly and close the cover.
4. If paper is caught in the cutter and you cannot open the printer cover, open the cutter cover as shown below.

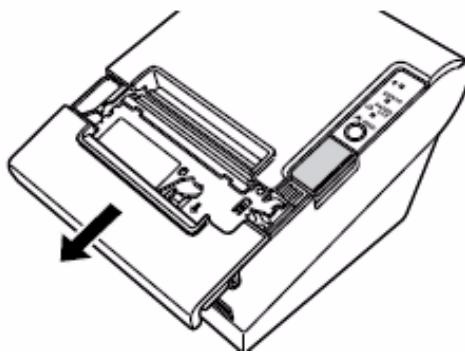
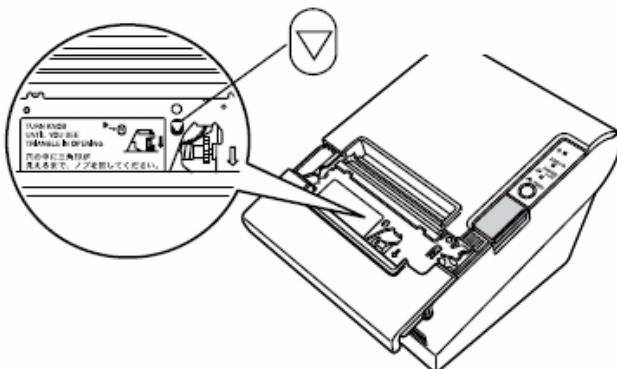


Figure 4. Cutter Cover

5. Turn the knob until you see a triangle in the opening. This returns the cutter blade to the normal position. There is a label near the cutter to assist you. (see below)



6. Close the cutter cover.
7. Open the printer cover and remove the jammed paper.

You have now removed a paper jam.

## THE CONTROL PANEL

This section explains the symbols and buttons on the control panel of the receipt printer.

- ■ **Power** – This light is on whenever the power is turned on.
- ■ **Error** – This light indicates an error.
- ■ **Paper Out** – This light comes on when the printer is out, or nearly out of paper.
- ■ **Feed** – Use this button to feed the paper out of the printer.

# 6

## *FARGO HDP5000 CARD PRINTER*



### **INCLUDED WITH YOUR PRINTER:**

- power supply
- input card cartridge
- output hopper
- cleaning roller & spindle



#### **Attention**

Place the printer unit in a location with adequate air circulation.

Do no install the printer near heat sources, such as radiators or air ducts, or in places subject to direct sunlight or excessive dust.



#### **Attention**

Before beginning installation, make sure to unplug the power supply and USB/ethernet cables from the printer.

## CONFIGURING THE HDP5000 CARD PRINTER

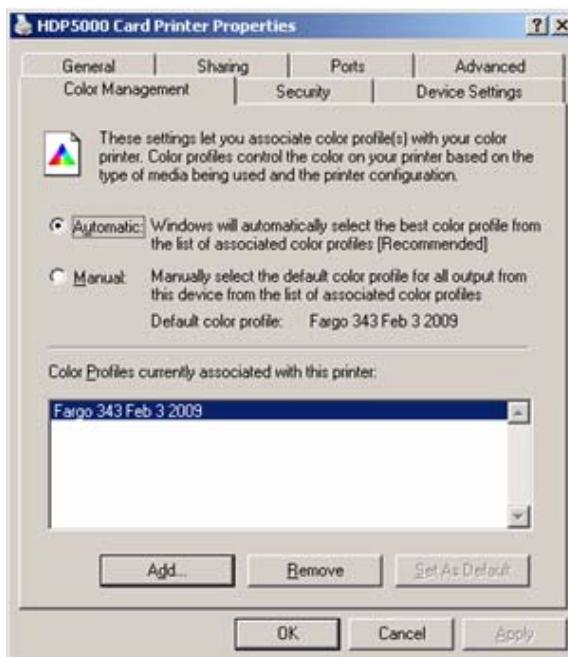
Follow these instructions for establishing the correct printer settings for the Fargo Card Printer.

### Setting the Fargo Color Profile

1. Click the **Start** button in the lower left corner of the screen.
2. From the *Start* menu select **Printers and Faxes**.
3. Right-click on the **Fargo HDP5000 Card Printer** icon.
4. Select **Properties** from the menu.



5. Select the **Color Management** tab.



6. Click the **Manual** radio button to prohibit *Windows* from making an automatic profile selection.

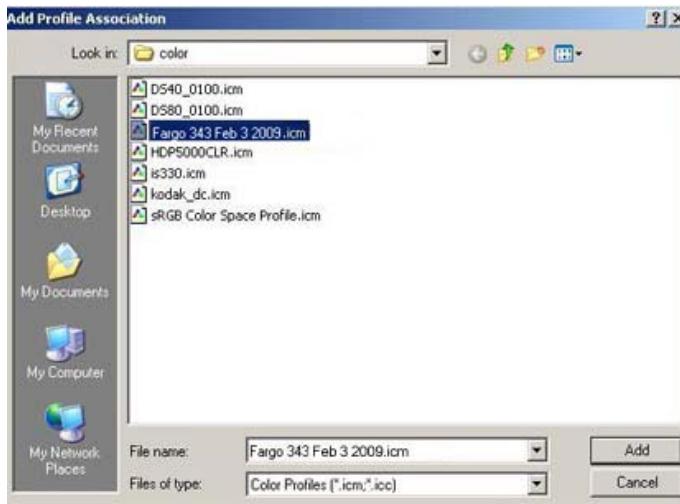


#### Note

If the **Fargo 343 Feb 3 2009** color profile is not available in the list of choices, it must be added.

7. To add the profile:

- a. Click the **Add** button.
- b. Browse to **C:\WINDOWS\system32\spool\drivers\color**

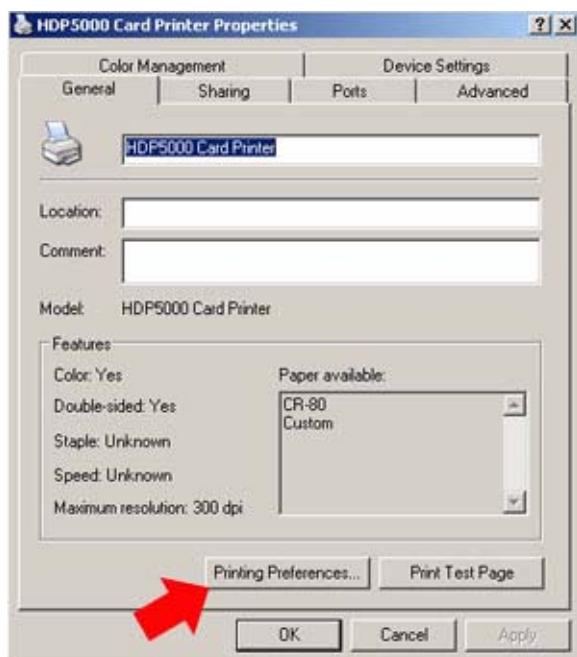
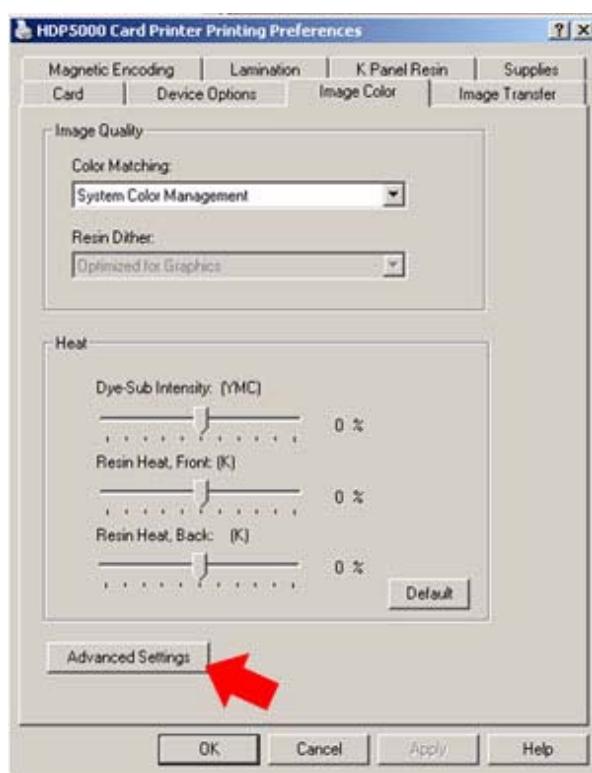


- c. Select the **Fargo 343 Feb 3 2009** color profile.
- d. Click the **Add** button.
8. Select the **Fargo 343 Feb 3 2009** color profile.
9. Click the **Set as Default** button.
10. Select the **HDP5000CLR** profile and click the **Remove** button.
11. Click the **Apply** button.
12. Click the **OK** button.

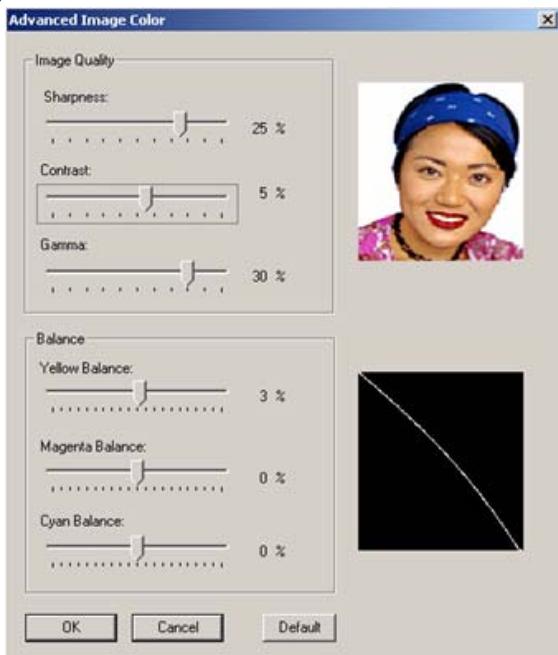
## Selecting the Fargo Advanced Settings

1. Click the **Start** button in the lower left corner of the screen.
2. From the **Start** menu select **Printers and Faxes**.
3. Right-click on the **FargoHDP5000 Card Printer** icon.
4. Select **Properties** from the menu.



5. Click the **Printing Preferences** button.6. Select the **Image Color** tab.

7. Click on the **Advanced Settings** button.



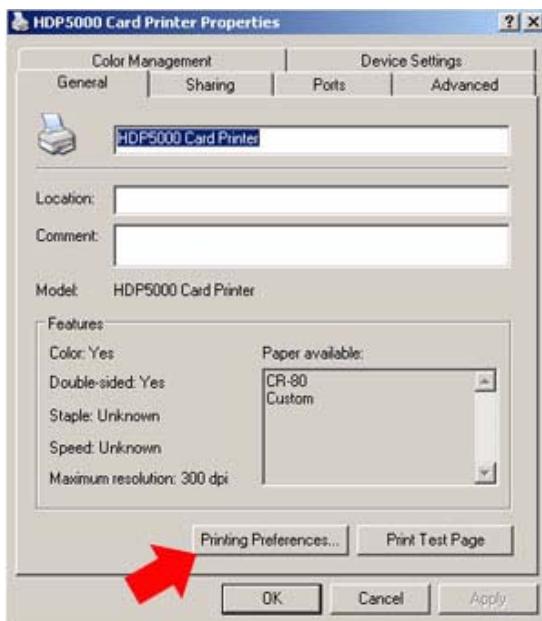
8. Using the slider, set the **Sharpness** value to **25**.
9. Using the slider, set the **Contrast** value to **5**.
10. Using the slider, set the **Gamma** value to **30**.
11. Using the slider, set the **Yellow Balance** to **3**.
12. Click the **OK** button to close the *Advanced Settings* window.

## Selecting the Transfer Temperature Offset Setting

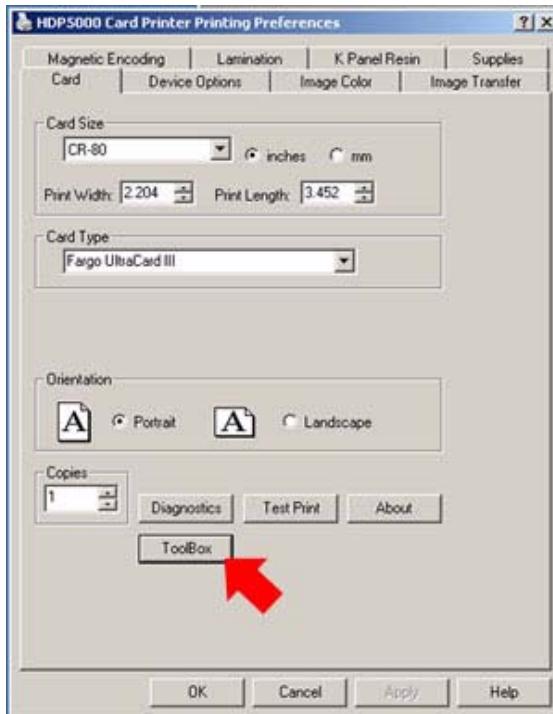
1. Click the **Start** button in the lower left corner of the screen.
2. From the **Start** menu select **Printers and Faxes**.
3. Right-click on the **Fargo HDP5000 Card Printer** icon.
4. Select **Properties** from the menu.



5. Click the **Printing Preferences** button.



6. Select the **Card** tab.



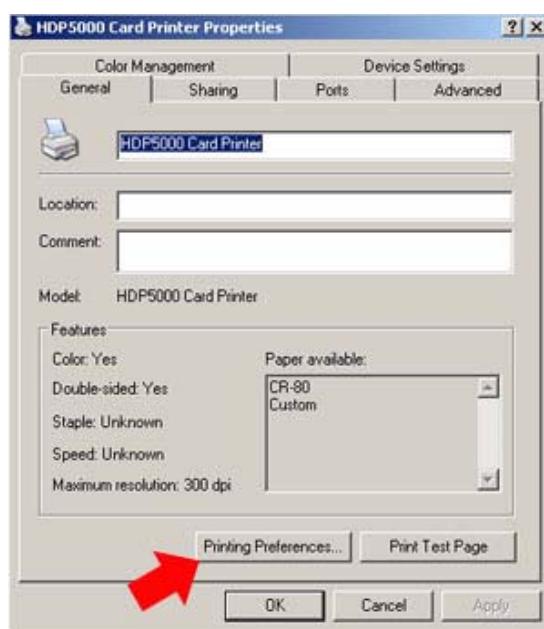
7. Click on the **Toolbox** button.
8. Click on the **Advanced Settings** button.
9. Scroll down the menu to *Transfer Temp Offset*.
10. Click on the value in the *Current* column.
11. Use the down arrow button to set the value to **-5**.
12. Click the **OK** button.

## Setting the Device Settings for Photo Card Printing

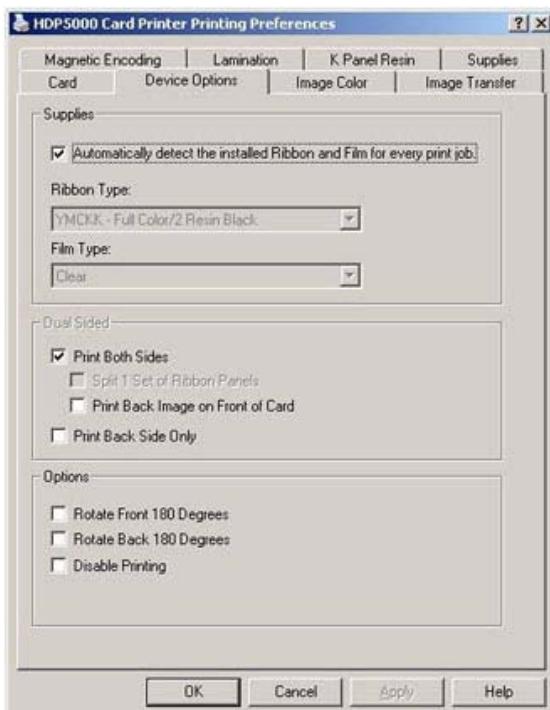
1. Click the **Start** button in the lower left corner of the screen.
2. From the **Start** menu select **Printers and Faxes**.
3. Right-click on the **Fargo HDP5000 Card Printer** icon.
4. Select **Properties** from the menu.



5. Click the **Printing Preferences** button.



6. Select the **Device Options** tab.



7. Check the box next to *Automatically detect the installed Ribbon and Film for every print job*.
8. Check the box next to *Print Both Sides*.
9. Click the **OK** button.

## LOADING MEDIA

To load film and ribbon into the printer:

1. Push in on the front cover to open it.



Figure 1. Open Front Cover



Figure 2. Cover Open

2. Remove the HDP film cartridge and print ribbon cartridge.

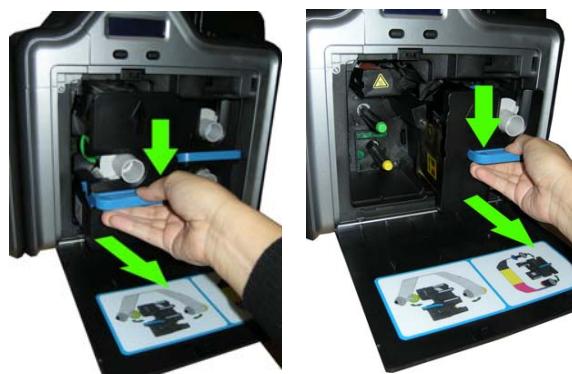


Figure 3. Remove Cartridges

3. Load the HDP film into the HDP film cartridge until the rolls click.

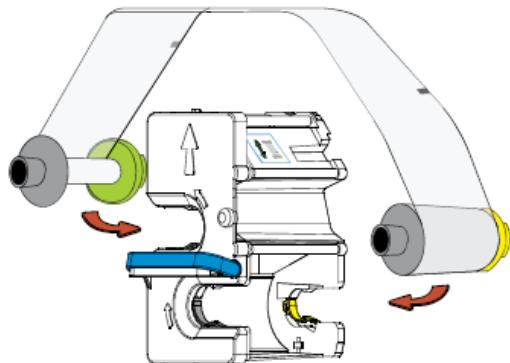


Figure 4. Load Film



**Note**

The film spindles and cartridge gears are color coded to ensure correct placement of the film.

4. Tighten the film by rotating the rolls in the directions indicated below.

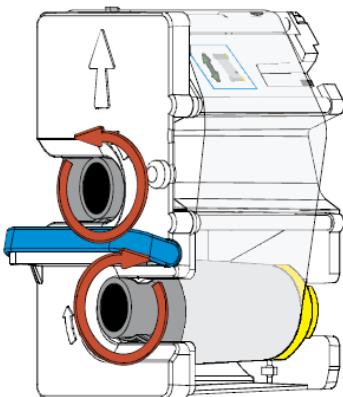


Figure 5. Tighten Film

5. Insert the HDP film cartridge back into the printer until it clicks.
6. Load the print ribbon into the print ribbon cartridge until the rolls click.

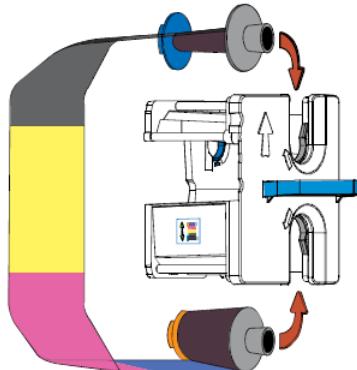
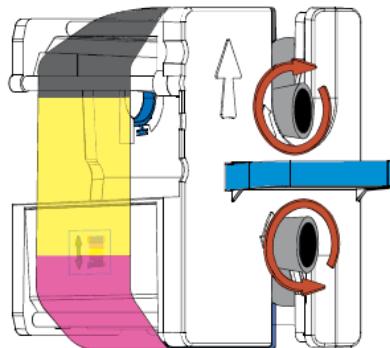


Figure 6. Load Print Ribbon

 Note

The ribbon spindles and the cartridge gears are color coded to ensure correct placement of the ribbon.

7. Tighten the print ribbon by rotating the rolls in the directions indicated below.



*Figure 7. Tighten the Ribbon*

8. Insert the print ribbon cartridge into the printer until it clicks.



*Figure 8. Both Cartridges Inserted*

9. Close the printer front cover.

## LOADING THE CLEANING ROLLER

1. Remove the card cleaning roller from the print ribbon packaging and insert the cleaning roller onto the cleaning roller spindle from the supply pack.

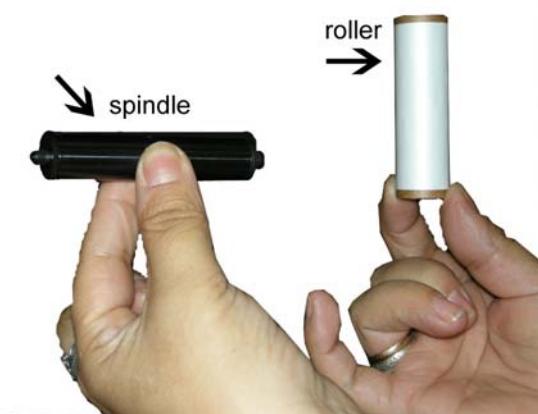
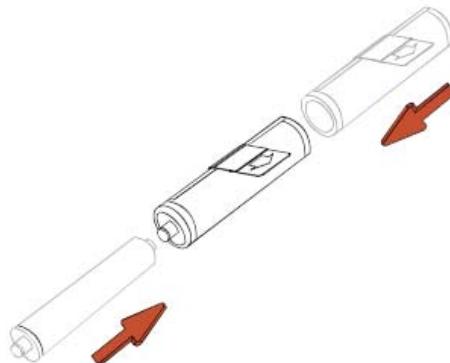


Figure 9. Cleaning Roller



### Attention

The cleaning roller spindle comes with the printer, not with each ribbon package.  
DO NOT discard the cleaning roller spindle.

2. Remove the protective sleeve from the card cleaning roller.

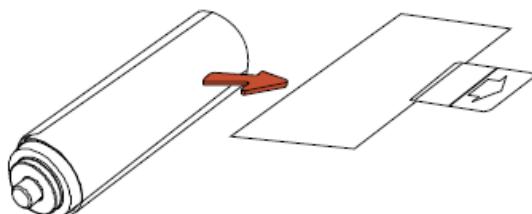
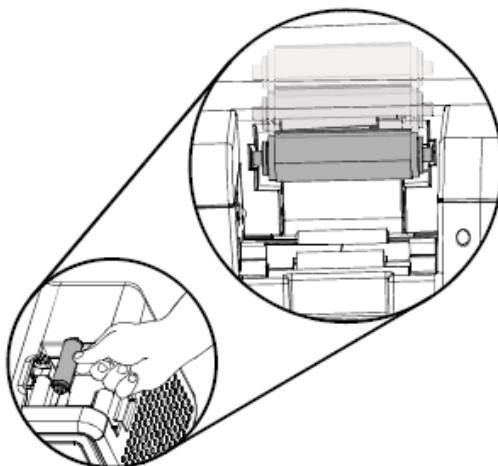


Figure 10. Remove Sleeve

3. Insert the card cleaning roller into the card input area.



*Figure 11. Location on Printer*



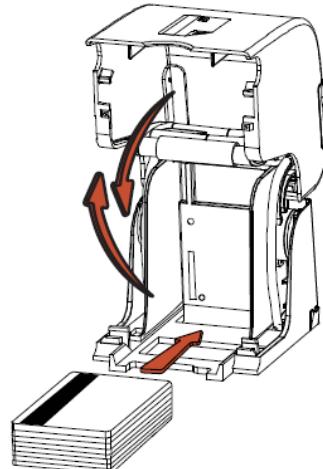
*Figure 12. Insert Roller*



*Figure 13. Roller Installed*

## LOADING CARDS

1. Pull the input cartridge open as shown below.



*Figure 14. Open Input Cartridge*



### Note

The card input cartridge will remain open if opened completely.  
There is a loading guide graphic on the top cover of the input cartridge.

2. Load cards into the card input cartridge.



*Figure 15. Loading Cards*



### Note

The front of the card should be facing down. The back of the card (or the magnetic strip) should be facing up.  
The input cartridge can hold up to 100 cards.

3. Close the input cartridge.

4. Place the input cartridge onto the printer and push until it clicks.



Figure 16. Install Input Cartridge

## INSTALLING THE OUTPUT HOPPER

1. Place the card output hopper onto the output (left) side of the unit. Line up the notches on the output hopper with the square openings on the printer and push down until it clicks.



Figure 17. Card Output Hopper



### Note

The output hopper can hold up to 200 cards.

## CLEANING THE PRINTER

Some cleaning processes require you to access the **Toolbox** dialog display. To access the toolbox:

1. Click on the **Start** menu.
2. Navigate to **Control Panel > Printers**.
3. Right-click on the **HDP5000** printer.
4. Select **Printing Preferences**.
5. Click on the **Toolbox** button at the bottom of the dialog box.



### Attention

Be sure to disconnect the printer's power cord whenever performing any type of maintenance unless otherwise directed.

For the maintenance procedures outlined, you will need a Printer Cleaning Kit. This optional kit includes the following:

- ■ Printhead Cleaning Swabs – pre-moistened with 99.99% isopropyl alcohol for cleaning the printhead
- ■ Cleaning Cards with adhesive backing for cleaning the printer's cleaning rollers
- ■ Gauze Pads pre-moistened with 99.99% isopropyl alcohol for cleaning the printer's interior/exterior
- ■ Alcohol Cards pre-moistened with 99.99% isopropyl alcohol for cleaning the printer's platen rollers and card feed rollers



### Attention

To prevent equipment or media damage, always remove the ribbon and cards from the printer before making any repairs, unless otherwise specified.



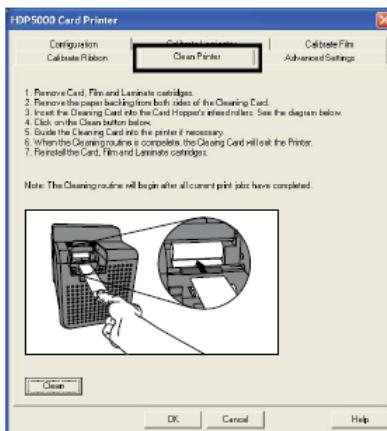
### Attention

To prevent equipment or media damage, take jewelry off of fingers and hands, as well as thoroughly clean hands to remove oil and debris before working on the printer.

## **Cleaning the Printer Platen Roller and Card Feed Rollers**

Perform this procedure approximately every 1000 prints to maintain a consistent print quality. The card feed rollers move the card throughout the print process. Rollers should be kept clean to prevent card jams and card contamination.

- From the HDP5000 Driver, click on the Toolbox button to bring up the **Clean Printer** tab.



*Figure 18. Clean Printer Tab*

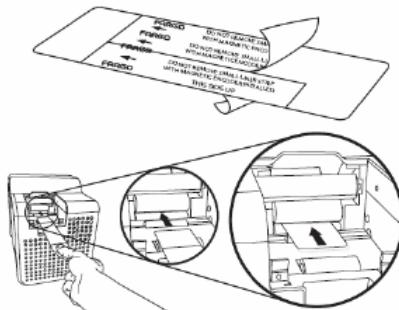
2. Follow the instructions from the **Clean Printer** tab on the driver.



---

### Note

If your printer is equipped with a Magnetic Encoder, you must insert the cleaning card with the printed side up and with a small liner strip towards the front of the printer.



*Figure 19. Cleaning Card*

3. Replace the printing supplies and close the print stations after the rollers are clean and completely dry.

## Cleaning Inside the Printer

1. Open the front cover.
2. Remove the print ribbon and film from the printer.
3. If you have a can of compressed air, blow out all visible areas of the printer interior. Remove any debris that may be inside.

If you do not have a can of compressed air, use a cleaning pad from the cleaning kit to wipe out all visible areas inside the printer. Remove any debris that may be inside.



### Attention

Be extremely careful not to let any alcohol drip inside the printer.

4. Re-install the printing supplies.
5. Close the front cover.

## Cleaning the Outside of the Printer

Clean the printer casing with a cleaning pad from the printer cleaning kit.



### Attention

Do not use cleaning solvents of any kind or spray with a cleaner.

## Cleaning the Printhead

Clean the printhead every time the print ribbon is changed to maintain consistent print quality. This procedure should also be performed approximately every 1000 prints in order to maintain print quality.



### Attention

Never use a sharp tool or abrasive object of any kind to clean the printhead. Watches, rings, bracelets and other jewelry can damage the printhead if accidentally bumped against. For best results, remove such items before touching any internal parts of the printer.

1. Open the front cover.
2. Remove the ribbon and film cartridges.

3. Use a printhead cleaning swab (squeeze to saturate the tip) from the cleaning kit to firmly wipe back and forth across the surface of the printhead.



*Figure 20. Cleaning Printhead*

4. Re-install the cartridges and close the front cover once the printhead is dry.

## Replacing the Card Cleaning Roller

Replace the card cleaning tape approximately every time the print ribbon is changed.



### Attention

DO NOT discard the cleaning roller spindle.

1. Remove the card cartridge to access the cleaning roller.
2. Remove the cleaning roller.



*Figure 21. Removing Cleaning Roller*

You have now completed maintenance on the printer.

## TROUBLESHOOTING

Some troubleshooting requires you to access the Printer Preferences dialog box. To access Printer Preferences:

1. Click on the **Start** menu.
2. Navigate to **Control Panel > Printers**.
3. Right-click on the **HDP5000** printer.
4. Select **Printing Preferences**.

### Troubleshooting the Printer Error Messages

Printer Error Message	Cause	Solution
General Error	A general printer error has occurred.	Press <b>Cancel</b> on the printer or click on <b>Cancel Print</b> from the driver's display dialog.
Card Not Found	The printer is unable to find the card.	Check the printer for a card or other obstruction. Remove the card and cancel the print by pressing the <b>Cancel</b> button on the printer or the <b>Cancel Print</b> button from the driver's display dialog.
Cover is Open	The printer cannot start printing because the cover is open.	Close the cover to continue printing.
Unable to Feed	The printer is unable to feed a card from the card cartridge.	Ensure that cards are available and loaded correctly. Press the <b>Resume</b> button located on the printers LCD display to continue printing.  To cancel the print, press the <b>Cancel</b> button on the printer and the <b>Cancel Print</b> button from the driver's display dialog.

Printer Error Message	Cause	Solution
Card Jam	A card has become jammed in the printer.	<p>a. Open the printer's front cover and remove the ribbon and film cartridges.</p> <p>b. Clear any cards in the printer by using the <b>Forward</b> and/or <b>Back</b> buttons located on the printer's LCD display.</p> <p>c. Re-insert the ribbon and film and close the printer's front cover.</p> <p>d. Press the Resume button located on the printer's LCD display to continue printing.</p> <p>e. To cancel the print, press the Cancel button on the printer and the Cancel Print button from the driver's display dialog.</p>
Card Jam (encoder)	A card has become jammed in the printer's encoding station.	<p>a. Open the printer's front cover and remove the ribbon.</p> <p>b. Open the printer's dual-sided module cover.</p> <p>c. Clear any cards in the encoding module by using the <b>Forward</b> and/or <b>Back</b> buttons located on the printer's LCD display.</p> <p>d. Re-insert the print ribbon and close the front cover.</p> <p>e. Press the <b>Resume</b> button located on the printer's LCD display to continue printing.</p> <p>f. To cancel the print, press the <b>Cancel</b> button located on the printer's LCD display or the <b>Cancel Print</b> button from the driver's display dialog.</p>

Printer Error Message	Cause	Solution
Card Jam (flipper)	A card has become jammed in the printer's flipper table.	<p>a. Open the printer's front cover and dual-sided module cover.</p> <p>b. Clear any cards in the flipper table by using the <b>Forward</b> and/or <b>Back</b> buttons located on the printer's LCD display.</p> <p>c. Close the printer's front cover and the dual-sided module cover.</p> <p>d. Press the <b>Resume</b> button located on the printer's LCD display to continue printing.</p> <p>e. To cancel the print, press the <b>Cancel</b> button on the printer's LCD display or the <b>Cancel Print</b> button from the driver's display dialog.</p>
Card Eject Error	The printer is unable to eject a card.	<p>Check the printer for a card jam or other obstruction and press the <b>Resume</b> button to continue printing.</p> <p>To cancel the print, press the <b>Cancel</b> button on the printer or the <b>Cancel Print</b> button from the driver's display dialog.</p>
Flipper Jam	The flipper table has jammed while either aligning itself or flipping a card.	<p>a. Open the printer's dual-sided module cover.</p> <p>b. Clear any cards in the module by using the <b>Forward</b> and/or <b>Back</b> buttons located on the printer's front cover.</p> <p>c. Ensure the flipper table can rotate freely. Close the module cover.</p> <p>d. Press the <b>Resume</b> button on the printer's front cover to continue printing.</p> <p>e. To cancel the print, press the <b>Cancel Print</b> button from the driver's display dialog.</p>

Printer Error Message	Cause	Solution
Ribbon RFID Error	The ribbon tag information is corrupted or incorrect.	<p>Check that the ribbon is installed properly. <b>Cancel</b> is the only option.</p> <p>Press the <b>Cancel</b> button on the printer, or the <b>Cancel Print</b> button from the driver's display dialog.</p>
Wrong Ribbon Installed	An incorrect ribbon has been installed or a driver setting is incorrect.	<p>Check that the ribbon is correct for the printer and job. Press the <b>Resume</b> button located on the printer's LCD display to continue printing.</p> <p>To cancel the print, press the <b>Cancel</b> button on the printer, or the <b>Cancel Print</b> button from the driver's display dialog.</p>
No Ribbon Installed	No ribbon is installed in the printer.	Install the correct ribbon and press <b>Resume</b> on the printer's LCD display.
Ribbon Out	The ribbon installed in the printer is empty.	Install a new ribbon and press <b>Resume</b> on the printer's LCD display.
Ribbon Break/Jam	A ribbon break/jam has been detected inside the printer.	<p>The printer has determined that the installed ribbon has either jammed or broken.</p> <ol style="list-style-type: none"> <li data-bbox="940 1163 1372 1290">Open the printer cover and remove the ribbon. If ribbon is jammed, remove jam and tighten ribbon.</li> <li data-bbox="940 1322 1372 1417">Clear any cards in the printer by using the <b>Forward</b> and/or <b>Back</b> buttons on the printer's LCD display.</li> <li data-bbox="940 1448 1372 1554">Tape the ends of the ribbon together and wind any excess onto the take-up spool of the ribbon.</li> <li data-bbox="940 1586 1372 1712">Re-install the ribbon, close the printer cover, and press the <b>Resume</b> button located on the printer's LCD display to continue printing.</li> <li data-bbox="940 1744 1372 1871">To cancel the print, press the Cancel button on the printer and the Cancel Print button from the driver's display dialog.</li> </ol>

Printer Error Message	Cause	Solution
Ribbon Sensor Error	The printer cannot find the next panel on the print ribbon.	<p>Recalibrate the ribbon sensor using the calibrate ribbon tab within the Toolbox.</p> <p>To cancel the print, press the <b>Cancel</b> button on the printer, and the <b>Cancel Print</b> button from the driver's display dialog.</p>
Invalid Ribbon	An incorrect ribbon has been installed in the printer. (This is if you are using a SecureMark ribbon.)	<p>A non-SecureMark ribbon is installed in a SecureMark printer.</p> <p>a. Replace with the appropriate SecureMark ribbon and press the <b>Resume</b> button located on the printer's LCD display to continue printing.</p> <p>b. To cancel the print, press the <b>Cancel</b> button on the printer, and the <b>Cancel Print</b> button from the driver's display dialog.</p> <p>c. Install a Certified print ribbon and press the <b>Resume</b> button located on the printer's LCD display to continue printing.</p> <p>d. To cancel the print, press the <b>Cancel</b> button on the printer, and the <b>Cancel Print</b> button from the driver's display dialog.</p>
Invalid Ribbon	The ribbon installed does not match the SecureMark configuration of the printer.	<p>Install a certified print ribbon and press the <b>Resume</b> button on the printer to continue printing.</p> <p>To cancel the print, press the Cancel button on the printer and the Cancel Print button from the driver's display dialog.</p>
Invalid Ribbon	An incorrect print ribbon has been installed in the printer.	<p>Check that the ribbon is correct for the printer and retry.</p> <p>To cancel, click on <b>Cancel Print</b>.</p>
Ribbon Error	The print ribbon caused a general error.	<p>Press the <b>Resume</b> button located on the printer to continue.</p> <p>To cancel, press the <b>Cancel Print</b> button on the driver's display dialog or the <b>Cancel</b> button on the printer.</p>

Printer Error Message	Cause	Solution
No Magnetic Encoder Installed	A print job with magnetic encoding was sent with no magnetic encoder installed in the printer.	Ensure that no encoding data is being sent with the print job and reprint the card.
Mag Verify Error	The printer is unable to verify encoded data.	Check the cards and click on <b>Cancel Print</b> .
No Mag Strip Present	The printer is unable to find a magnetic stripe on the card.	Check the cards and click on <b>Cancel Print</b> .
No Smart Card Encoder	No Smart Card encoder is installed on the printer.	To cancel, click on <b>Cancel Print</b> .
No Prox Card Encoder	No Proximity Card encoder is installed on the printer.	To cancel, click on <b>Cancel Print</b> .
Headlift Error	The headlift sensor is not detected movement from the headlift cam.	Reboot the printer by cycling power.  To cancel, press the <b>Cancel Print</b> button.
Invalid Password	The password entered is not a valid password.	Press <b>OK</b> to enter another password.  To cancel, press the <b>Cancel Print</b> button.
Print Film Out	The print film installed in the printer is empty.	Install new film and press the <b>Resume</b> button to continue printing.  To cancel the print, press the <b>Cancel</b> button on the printer, or the <b>Cancel Print</b> button from the driver's display dialog.
Print Film is not Installed	No print film is installed in the printer.	Install the film and press <b>Resume</b> .  To cancel the print, press the <b>Cancel</b> button on the printer, or the <b>Cancel Print</b> button from the driver's display dialog.
Print Film Sensor Error	The printer cannot find the next panel on the film.	Check that the film is installed properly and press <b>Resume</b> .  To cancel the print, press the <b>Cancel Print</b> button from the driver's display dialog, or the <b>Cancel</b> button on the printer.

Printer Error Message	Cause	Solution
Wrong Print Film Installed	An incorrect film has been installed, or a driver setting is incorrect.	<p>Ensure that the appropriate film is installed and press the <b>Resume</b> button located on the printer to continue printing.</p> <p>To cancel the print, press the <b>Cancel Print</b> button from the driver's display dialog, or the <b>Cancel</b> button on the printer.</p>
Invalid Print Film Installed	The film installed does not match the SecureMark configuration of the printer.	<p>A non-SecureMark film is installed in a SecureMark printer.</p> <p>Replace with the appropriate SecureMark film and press the <b>Resume</b> button on the printer to continue printing.</p> <p>To cancel, press the <b>Cancel Print</b> button from the driver's display dialog, or the <b>Cancel</b> button on the printer.</p>
Print Film Error	The film caused a general error.	<p>Ensure that the appropriate film is installed and press the <b>Resume</b> button located on the printer to continue printing.</p> <p>To cancel, press the <b>Cancel Print</b> button from the driver's display dialog or the <b>Cancel</b> button located on the printer.</p>

# **EPSON DISC PRODUCER**

## **TURNING THE POWER ON**

1. Make sure the power cable is connected.
2. Press the power button until the power light flashes.



**Note**

The power light flashes green, then stays on.



## **TURNING THE POWER OFF**

1. Press the power button for more than 1 second. The power light will flash green and then turn off. The power is now turned off.



**Note**

The fan will operate after turning the power off, but it will automatically stop after 15 minutes.  
If the unit is operating, wait for 10 seconds after operation is stopped to turn off the power.

## **LOADING DISCS**



**Attention**

The Epson Disc Producer is configured to use CD-R and DVD-R discs. Using any other type of disc may start to cause operation malfunctions.

Depending on whether you are using the product in Standard, External Output, or Batch mode, you will use a different combination of stackers.

See your Epson Disc Producer Setup Guide for instructions on setting up the product for operation with your PrintRush MPL system.

These instructions explain how to load each stacker.

**Follow these steps to load discs into Stacker 1.****Attention**

Do not open the disc cover while running a job (busy indicator is flashing), unless the application instructs you to add or remove discs. Do not put your hands inside the product while beeping, as the arm is still moving.

**Note**

A beep will sound if you open the disc cover while running a job, and the job will pause. Closing the disc cover automatically resumes the job.

Pause a job if you need to open the disc cover.

1. Open the disc cover.

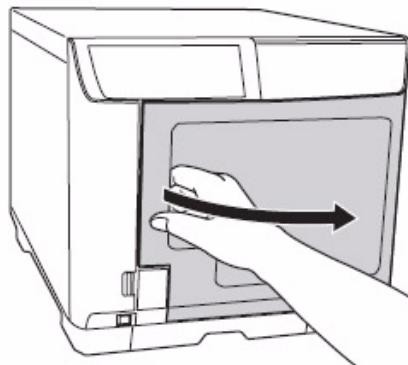


Figure 1. Open Disc Cover

2. Take out Stacker 1.

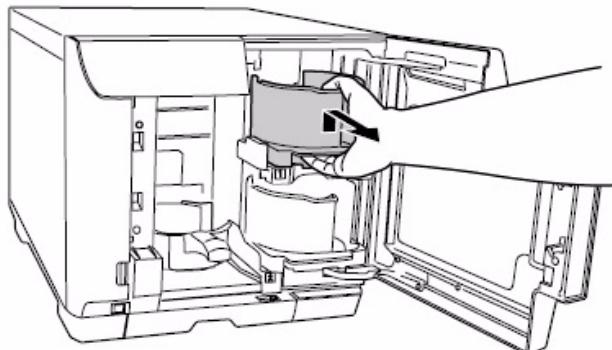


Figure 2. Remove Stacker 1

3. Fan a stack of discs to prevent them from sticking together. Be careful not to scratch the recording side of the disc.

4. Load the discs into Stacker 1 with the printable side facing up.

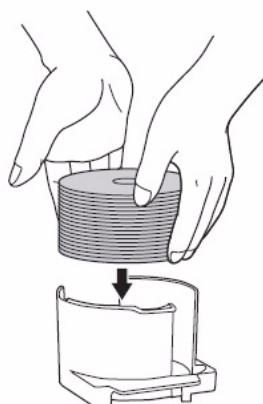


Figure 3. Load Discs



#### Attention

Do not load the discs above the red line marked on the stacker; otherwise, the discs or product may be damaged.

5. Insert Stacker 1.

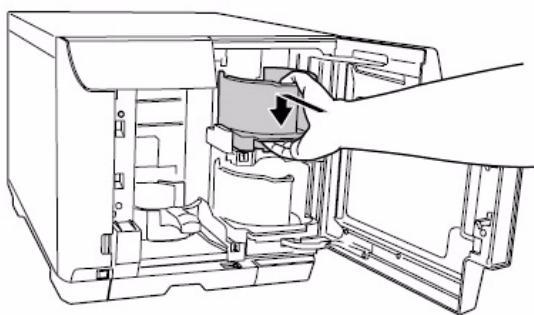


Figure 4. Insert Stacker 1

#### ***Follow these steps to load discs into Stacker 2.***

1. Remove Stacker 2.

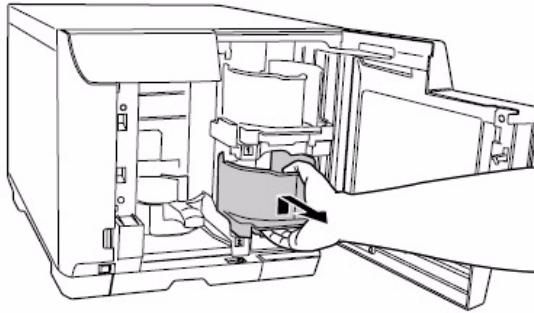


Figure 5. Remove Stacker 2.

2. Load discs into Stacker 2 with the printable side facing up.

3. Insert Stacker 2.

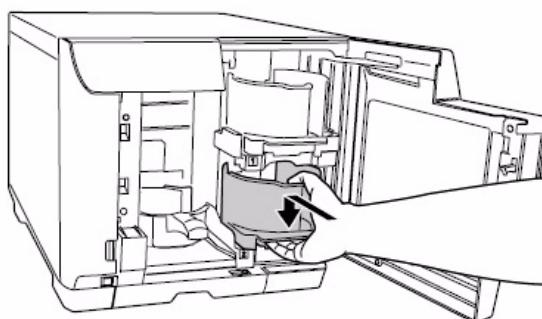


Figure 6. Insert Stacker 2.

**Follow these steps to load Stacker 3.**



**Note**

Stacker 3 is an output source. You will not load discs into Stacker 3.

Make sure there are no discs in Stacker 4 when using Stacker 3.

Do not remove Stacker 4.

1. Insert Stacker 3.

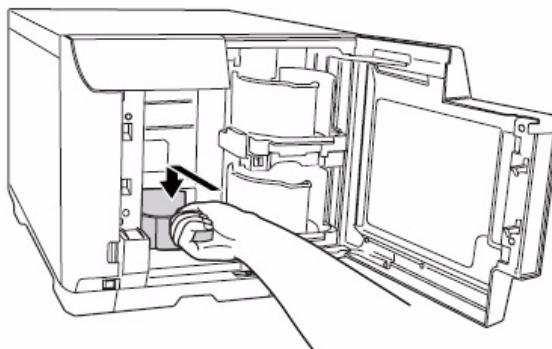


Figure 7. Insert Stacker 3



**Attention**

Be sure to lock the lever located on Stacker 4 when you use Stacker 3 (see below).

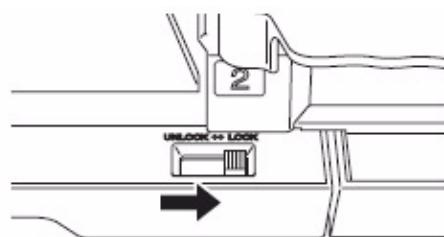


Figure 8. Lock Lever

**Follow these steps when using Stacker 4:****Note**

Stacker 4 is used as an output source. You will not load discs into Stacker 4.

**Attention**

When using Stacker 4 as an output source, do not use Stacker 3.  
Be sure to unlock the lever on Stacker 4 (see below).

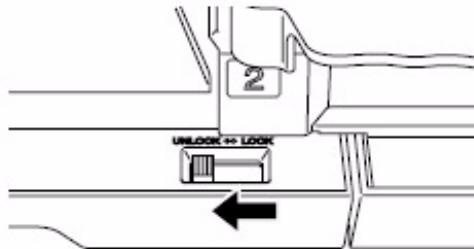


Figure 9. Unlock Lever

**REPLACING THE INK CARTRIDGES****Attention**

For maximum ink efficiency, only remove an ink cartridge when you are ready to replace it. Ink cartridges with low ink status may not be used when reinserted.

Do not refill the ink cartridges. Other products not manufactured by Epson may cause damage, and under certain circumstances may cause erratic product behavior.

When the ink light is flashing orange you will need to replace the ink cartridge. Follow the steps below:

1. Make sure that the power light is on, but not flashing.
2. Open the ink cartridge cover.

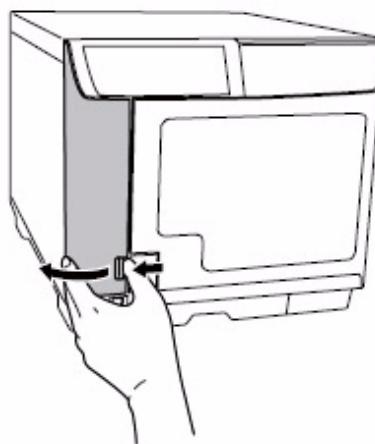


Figure 10. Open Cartridge Cover

**Note**

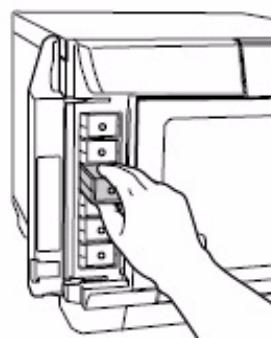
Wait 4 seconds or more before removing the ink cartridge.

3. Push the expended cartridge so the cartridge is slightly pushed out. (A flashing ink cartridge light will indicate which cartridge is low.)



*Figure 11. Push Cartridge*

4. Carefully pull the expended cartridge straight out of the slot. Dispose of it properly.



*Figure 12. Pull Out Cartridge*

5. Remove the new ink cartridge from the package.

**Attention**

Do not touch the green IC chip on the side of the cartridge (see below). This can damage the ink cartridge.



*Figure 13. Don't Touch*

6. Place the new ink cartridge into the slot. Then push the ink cartridge until it clicks into place.

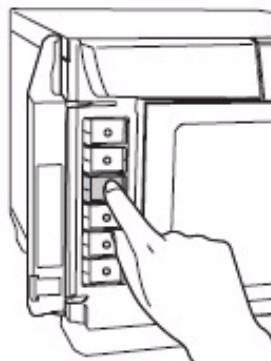


Figure 14. Push Cartridge In

7. When you are finished replacing cartridges, close the ink cartridge cover.

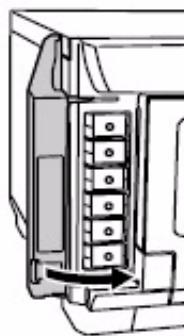


Figure 15. Close Cover

You have now replaced an ink cartridge.

## MAINTENANCE

### Checking the Print Head Nozzles

If you find that the printout is unexpectedly faint or that dots are missing, you may be able to identify the problem by checking the print head nozzles.

Follow these steps to use the Nozzle Check Utility:

1. At the server kiosk, touch and hold the Tomo logo in the upper left corner of the screen.
2. Enter the password 4301. Touch **OK**.
3. Touch **Exit Application**.



---

#### Note

You will need to connect a keyboard to the system.

---

4. From the Desktop Security screen, type CTRL + ALT + U.
5. Type d1gital08 as the password.
6. Select **Close SiteKiosk**.
7. Hit the Windows button. You now have access to Windows.

8. Make sure that an unprinted disc with a 116mm (4.57") or more outside diameter is installed in Stacker 1.
9. From Windows, navigate to **Start > Control Panel > Printers and Faxes**.
10. Right-click on the Epson Disc Producer and select **Printing Preferences**.
11. Click the **Utility** tab, then click the **Nozzle Check** button.
12. Follow the onscreen instructions.
13. Compare the quality of the printed disc with the sample shown below. If there are no gaps or missing segments in the test lines, the print head is fine.

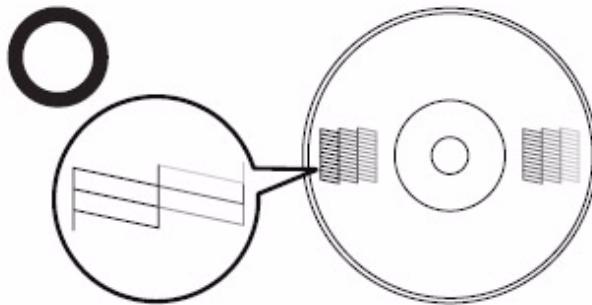


Figure 16. Good Sample

14. If any segment of the printed lines is missing, as shown below, this could mean a clogged ink nozzle or a misaligned print head.

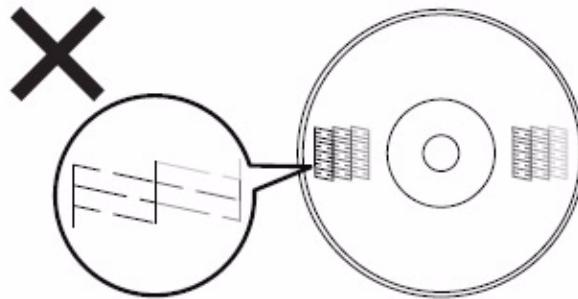


Figure 17. Bad Sample

15. See "Cleaning the Print Head" and "Aligning the Print Head" sections of this chapter.

You have now checked the Print Head Nozzles.

## Cleaning the Print Head

If you find that the printout is unexpectedly faint or that dots are missing, you may be able to solve these problem by cleaning the print head, which ensures that the nozzles are delivering ink properly.



### Note

Clean the print head only if print quality declines.

Use the Nozzle Check utility first to confirm that the print head needs to be cleaned.

When ink is low you may not be able to clean the print head. When ink is expended you cannot clean the print head. Replace the appropriate ink cartridge first.

Follow these steps to use the Head Cleaning Utility:

1. At the server kiosk, touch and hold the Tomo logo in the upper left corner of the screen.
2. Enter the password 4301. Touch **OK**.
3. Touch **Exit Application**.

**Note**

You will need to connect a keyboard to the system.

- 
4. From the Desktop Security screen, type CTRL + ALT + U.
  5. Type d1gital08 as the password.
  6. Select **Close SiteKiosk**.
  7. Hit the Windows button. You now have access to Windows.
  8. Make sure the disc producer is turned on.
  9. Make sure that no lights are indicating errors, and that the disc cover is closed.
  10. From *Windows*, navigate to **Start > Control Panel > Printers and Faxes**.
  11. Right-click the Epson Disc Producer and select **Printing Preferences**.
  12. Click the Utility tab, then click the **Head Cleaning** button.
  13. Follow the onscreen instructions.

**Note**

The power light flashes while the product performs the cleaning cycle.

**Attention**

Never turn off the product while the power light is flashing. Doing so may damage the product.

If print quality has not improved after repeating this procedure about four times, turn the product off and wait for at least six hours. Then run the nozzle check again and repeat the head cleaning process if necessary.

If print quality has still not improved, at least one of the ink cartridges may be old or damaged and may need to be replaced. If print quality remains a problem after replacing the ink cartridges, contact technical support.

## Aligning the Print Head

If you notice misalignment of vertical lines or horizontal banding, you may be able to solve his problem by using the Print Head Alignment utility.

Follow these steps to use the Print Head Alignment Utility:

1. At the server kiosk, touch and hold the Tomo logo in the upper left corner of the screen.
2. Enter the password 4301. Touch **OK**.
3. Touch **Exit Application**.

**Note**

You will need to connect a keyboard to the system.

- 
4. From the Desktop Security screen, type CTRL + ALT + U.

5. Type d1gital08 as the password.
6. Select **Close SiteKiosk**.
7. Hit the Windows button. You now have access to Windows.
8. Make sure that an unprinted disc with a 116mm (4.57") or more diameter is inserted in Stacker 1.
9. Make sure that no lights are indicating errors, and that the disc cover is closed.
10. From *Windows*, navigate to **Start > Control Panel > Printers and Faxes**.
11. Click the Utility tab, then click the **Print Head Alignment** button.
12. Follow the onscreen instructions to align the print head.

## Correcting the Printing Position

If you notice a misalignment of vertical printing position, you may be able to solve this problem by using the Correcting the Printing Position utility.

Follow these steps to use the Correcting the Printing Position Utility:

1. At the server kiosk, touch and hold the Tomo logo in the upper left corner of the screen.
2. Enter the password 4301. Touch **OK**.
3. Touch **Exit Application**.



### Note

You will need to connect a keyboard to the system.

4. From the Desktop Security screen, type CTRL + ALT + U.
5. Type d1gital08 as the password.
6. Select **Close SiteKiosk**.
7. Hit the Windows button. You now have access to Windows.
8. Make sure that an unprinted disc with a 116mm (4.57") or more diameter is inserted in Stacker 1.
9. Make sure that no lights are indicating errors, and that the disc cover is closed.
10. From *Windows*, navigate to **Start > Control Panel > Printers and Faxes**.
11. Click the Utility tab, then click the **Correcting the Printing Position** button.
12. Follow the onscreen instructions to adjust the vertical and horizontal printing position.

## Cleaning the Exterior of the Product



### Attention

Never use alcohol or thinner to clean the product. These chemicals can damage the product.  
Take care to prevent water from getting inside the product.

1. Make sure the product is turned off and all the lights are off.
2. Use a soft, clean cloth to carefully remove any dust or dirt. If the dirt does not come off, clean it using a soft, clean cloth dampened with a mild detergent. Wipe the outside of the product dry with a soft cloth.

## Cleaning the Interior of the Product

1. Make sure the product is turned off and all the lights are off.
2. Open the disc cover, and remove the stackers from the product.
3. Use a soft, clean cloth to carefully remove any dust or dirt from the stackers and inside of the product.
4. Place the stackers back into position.



### Attention

Keep water away from the electronic components.

Do not spray the inside of the product with lubricants.

Dirt attached to Stackers 3 or 4 should be wiped clean with a soft cloth moistened with neutral detergent.

## Cleaning the Filter

Clean the filter located on the rear of the product once every six months.

1. Make sure the product is turned off and all the lights are off.
2. Loosen and remove the screws from the filter covers to open them.

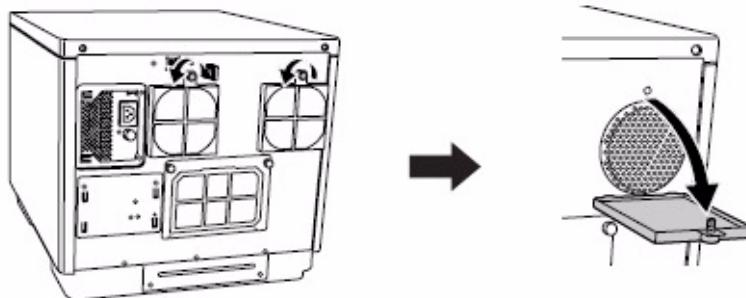


Figure 18. Remove the Filter Covers

3. Remove the filters from the filter covers.

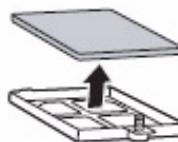


Figure 19. Remove Filter

4. Use a vacuum to clean the dust on the filters. If the dust or dirt does not come off, clean the filters with water. Be sure to dry them completely before placing the filters back into position.
5. Place the filters back into position.

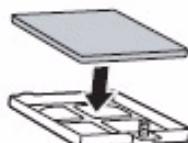


Figure 20. Replace Filter

6. Tighten the screws to close the filter covers.

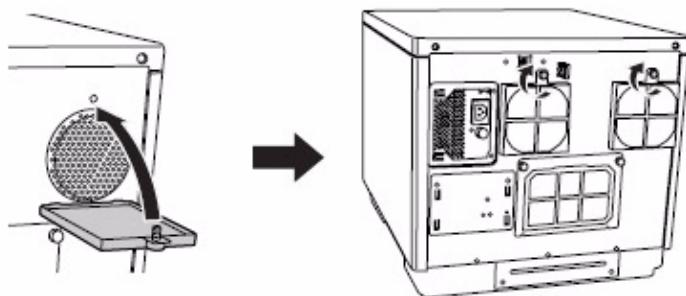


Figure 21. Replace Filter Covers

## TROUBLESHOOTING

You can identify many common problems using the lights on your product. If the product stops working and the lights are on or flashing, use the following tables to diagnose the problem. Then, follow the recommended procedures.

### Errors Associated with Cover

● : on, ○ : off, ◇ : flashing, ◉ : flashing fast

Lights					Stacker				Conditions/Remedies
Power	Busy	Error	Ink		1	2	3	4	
●	○	●	○	○	○	○	○	○	Disc cover or ink cartridge cover open Close covers.
●	○	●	○	○	○	○	○	○	Job is paused since disc cover or ink cartridge cover was opened while processing the job Wait for the job to resume.

### Errors Associated with Disc Transfer

Lights					Stacker				Conditions/Remedies
Power	Busy	Error	Ink		1	2	3	4	
●	○	●	○	○	○	○	○	○	Disc pick up error Turn off the product and remove the disc from the tray. If the same error occurs frequently, contact your dealer.
●	○	●	○	○	○	○	○	○	Multiple feed error Remove all discs from the drive and printer tray to avoid causing any damage to the product. Also, check that the discs are loosely arranged in the stacker.

Power	Busy	Error	Ink	Stacker				Conditions/Remedies
				1	2	3	4	
○	○	○	○	○	○	○	○	<b>Disc transfer error</b> Turn off the product and remove the disc. If the same error occurs frequently, contact your dealer.
○	○	○	○	○	○	○	○	<b>Arm failed to release disc</b> Turn off the product and remove disc. Do not remove disc from the arm by hand if arm is picking up the disc. This may damage the arm. If removing disc from the arm, turn on the product again and let initializing process remove the disc. To remove the disc from the arm, turn on the product again and let initializing process remove the disc. If the same error occurs frequently, contact your dealer.
○	○	○	○	○	○	○	○	<b>Internal error</b> Turn off the product and check inside for any objects, then turn on the product again. If the same error occurs frequently, contact your dealer. <ul style="list-style-type: none"><li>□ Do not remove disc from the arm by hand if arm is picking up the disc. This may damage the arm. To remove the disc from the arm, turn on the product again and let initializing process remove the disc.</li><li>□ If resuming label printing after the error, run Nozzle Check and confirm the condition of the print head.</li><li>□ If the publishing does not start, check if a print job remains in the print spooler and delete all print jobs.</li></ul>

## Errors Associated with Stacker

Power	Busy	Error	Ink	Stacker				Conditions/Remedies
				1	2	3	4	
●	○	●	○	○	○	●	○	Stacker 3 is inserted for Standard Mode or External Output Mode Remove Stacker 3.
●	○	●	○	○	○	○	○	Stacker 1 is not correctly inserted Make sure that Stacker 1 is correctly inserted.
●	○	●	○	○	○	○	○	Stacker 2 is not correctly inserted Make sure that Stacker 2 is correctly inserted.
●	○	●	○	○	○	○	○	Stacker 3 is not correctly inserted for Batch Mode Make sure that Stacker 3 is correctly inserted.
●	○	○	○	○	○	○	○	Stacker 1 is empty Load discs into Stacker 1.
●	○	○	○	○	○	○	○	Stacker 2 is empty Load discs into Stacker 2.
●	○	●	○	●	○	○	○	Stacker 1 is overloaded Remove discs so that discs are below the red line.
●	○	●	○	○	●	○	○	Stacker 2 is overloaded Remove discs so that discs are below the red line.
●	○	○	○	○	○	●	○	Stacker 3 is full Remove published discs from Stacker 3.
●	○	○	○	○	○	○	●	Stacker 4 is full Remove published discs from Stacker 4.
●	○	○	○	○	○	○	○	Stacker 4 is open Close Stacker 4.

## Errors Associated with Ink

Power	Busy	Error	Ink	Stacker				Conditions/Remedies
				1	2	3	4	
●	○	○	○	○	○	○	○	<b>Ink low</b> Obtain a replacement ink cartridge. To determine which cartridge is nearly expended, check the ink cartridge status. See "Checking the Ink Cartridge Status" on page 51.
●	○	○	●	○	○	○	○	<b>Incorrectly installed ink cartridge</b> Reinsert the ink cartridge. See "The Ink light is flashing or is on after you replace the cartridge" on page 82.
●	○	○	●	○	○	○	○	<b>Ink cartridge not fully inserted</b> All Ink lights are on. Check ink cartridges and make sure they are all fully inserted.

## Errors Associated with Product

Power	Busy	Error	Ink	Lights				Stacker	Conditions/Remedies
				1	2	3	4		
●	●	●	●	●	●	●	●		<p><b>Ink pad full</b></p> <p>Please have an authorized Epson service center service the ink pad right away. The pad is full and the unit can no longer function. Do not attempt to service the unit yourself.</p> <p><b>Note:</b>  <i>If ink pad is nearly full, an "Ink Pad Nearly Full" message will be displayed by the software. There will be no lights indicating it. Please have an authorized Epson service center service the ink pad right away. The pad is nearly full and the unit will stop functioning when the pad becomes full. Do not attempt to service the unit yourself.</i></p>
○	○	○	○	○	○	○	○		<p><b>Product maintenance error</b></p> <p>A product maintenance error has occurred. Turn off the product and contact your dealer.</p>
○	○	○	○	○	○	○	○		<p><b>Internal error</b></p> <p>Turn off the product and check inside for any objects. If the same error occurs frequently, contact your dealer.</p> <ul style="list-style-type: none"> <li>□ Leaving the product off after the error may result in clogging of print head. Make sure to turn on the product immediately after turned off.</li> <li>□ If resuming label printing after the error, run Nozzle Check and confirm the condition of the print head.</li> <li>□ If the publishing does not start, check if a print job remains in the print spooler and delete all print jobs.</li> </ul>

## Errors Associated with Drive

Power	Busy	Error	Ink	Stacker				Conditions/Remedies
				1	2	3	4	
○	○	○	○	○	○	○	○	<b>Drive tray open/close error</b> Turn off the product and check inside for any objects. Also, unplug the power cable to clear the error. Then, publish the disc again. If the same error occurs frequently, contact your dealer.
								<b>Internal drive error</b> Turn off the product, unplug the power cable, and then check the inside of the drive. If the same error occurs frequently, contact your dealer.
●	○	●	○	○	○	○	○	<b>Writing error</b> The error could not be cleared even if it repeated itself for the retry number of times. Disc may have a problem. Replace the disc and resume job. If there is a problem with the drive, change the drive with EPSON Total Disc Setup and resume the job. If the same error occurs frequently, contact your dealer.
								<b>Invalid disc error</b> An Invalid disc error has occurred, such as the disc may not be blank or the disc does not have enough space. Or, the disc loaded in the stacker differs from the disc type you set in the EPSON Total Disc Setup Properties dialog box. The error could not be cleared even if it repeated itself for the retry number of times. Check that the disc is blank and not damaged. Then, In the EPSON Total Disc Setup Properties dialog box, select the disc type that is the same as the discs loaded in the stacker. If you use the proper disc but the same error occurs frequently, contact your dealer.

## Other Errors

Lights					Stacker				Conditions/Remedies
Power	Busy	Error	Ink	1	2	3	4		
○	○	○	○	○	○	○	○	○	Improper status error Turn the product off and on. If the same error occurs frequently, contact your dealer.

## Disc Jams

If a disc is let in the drive or printer tray, it will be ejected when you turn off/on the product. If you cannot remove the disc by restarting the product, follow the procedures below:

- If a disc is stuck in the printer tray, turn off the product, unplug the power cable from the wall outlet, and open the disc cover located on the rear of the product. Then remove all the discs inside. Close the disc cover. After remove the discs, clean the printer tray.
- If a disc is stuck in the drive tray, turn off the product, unplug the power cable from the wall outlet, and then insert a pin into the eject hole to open the tray forcibly. Remove the disc from the tray and close it.



### Note

Only insert a pin into the hole to eject the tray when the tray doesn't unload by pressing the Eject button. Make sure the power is turned off and wait more than one minute until disc rotation is stopped before accessing the eject hole.

- If the arm is stopped while picking up a disc, do not try removing the disc by hand. If such an error occurs, turn off/on the power and try resolving the problem by initializing the product. If the error continues to occur, contact technical support.

# 8

## EPSON V300 SCANNER

In addition to the basic maintenance steps, the Epson V300 scanner requires additional servicing for optimum operation.

This section covers:

- Transporting the Scanner
- Cleaning the Scanner
- Troubleshooting the Scanner



### TRANSPORTING THE SCANNER

Before you transport the scanner for a long distance or store it for an extended period of time, the scanner's carriage (underneath the scanner glass) needs to be in the home position to prevent damage.

1. Make sure the carriage is in the home position on the right side of the scanner. If the carriage is not in the home position, turn on the scanner and wait until the carriage moves to the home position.
2. Press the Power button for 3 seconds to turn off the scanner, then unplug the AC adapter.
3. Disconnect the USB cable from the scanner.
4. Attach the packing materials that came with the scanner, then repack the scanner in its original box or a similar box that fits the scanner snugly.

### CLEANING THE SCANNER

Occasionally, the scanner requires cleaning. It is recommended that you clean the scanner quarterly, or on an as-needed basis. If you have questions about care and maintenance of the Epson V300 scanner, contact Technical Support at 1-888-749-3587.



#### Attention

Do not press the glass surface of the document table with any force. Be careful not to scratch or damage the glass surface and do not use a hard or abrasive brush to clean it.

Never use alcohol, thinner, or corrosive solvent to clean the scanner.

Be careful not to spill liquid into the scanner mechanism or electronic components.

Press the Power button for 3 seconds to turn off the scanner.

1. Unplug the AC adapter cord from the scanner.
2. Clean the outer case with a cloth dampened with mild detergent and water.
3. If the glass surface of the document table gets dirty, clean it with a soft dry cloth. If the glass surface is stained with grease or some other hard-to-remove material, use a small amount of glass cleaner on a soft microfiber cloth to remove it. Wipe off all remaining liquid.



### Attention

Do not spray glass cleaner directly on the scanner glass; otherwise, the fluid might leak inside the scanner and damage it.

4. Remove the document mat and clean the transparency unit window as described in step 4.

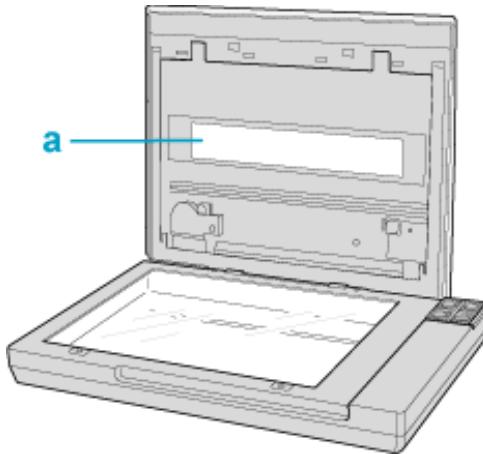


Figure 1. a – transparency unit window

5. Make sure that no dust builds up on the surface of the document table or the transparency unit window. Dust can cause spots in your scanned images.

## TROUBLESHOOTING

*Table 1: Troubleshooting the Status Light*

Color	Indicator Status	Meaning
Green	On	Ready to scan images
	Flashing	Initializing or scanning
Orange	Flashing	An error has occurred. Make sure the scanner is connected to your computer properly. Make sure the scanner software is fully installed. Press the Power button for 3 seconds to turn off the scanner, then turn it on again. If the Status light is still flashing orange, the scanner may be malfunctioning, or the scanner light source may need to be replaced.
None	Off	The scanner is off.

*Table 2: Troubleshooting Scan Quality*

Problem	Possible Cause	Resolution
The edges of the photo are not scanned.	The photo is beyond the edge of the scanner glass.	Move the photo 5mm away from the edges of the scanner glass to avoid cropping.
A line or line of dots always appears in the scanned images.	The scanner glass may need cleaning.	See Cleaning the Scanner.
Straight lines in the image come out crooked.	The photo may not be lying straight on the scanner glass.	Make sure the photo lies perfectly straight on the scanner glass.
The image is distorted or blurred.	The photo may not be lying straight on the scanner glass, or the photo has been moved.	<ul style="list-style-type: none"> <li>■■■ Make sure the photo lies flat on the scanner glass.</li> <li>■■■ Make sure the photo is not wrinkled or warped.</li> <li>■■■ Make sure you do not move the photo, or the scanner while scanning.</li> <li>■■■ Make sure the scanner is placed on a flat surface.</li> </ul>
Colors are patchy or distorted at the edges of the image.	External light may be entering from the scanner edges.	If the photo is very thick or curled at the edges, cover the edges with paper to block external light as you scan.
An image on the back of the original appears in the scanned image.	The original is printed on thin paper allowing the image on the back to be visible.	Try scanning the original with a piece of black paper on the back of it.



## ***SYMBOL MS1207 BAR CODE SCANNER***



### **SCANNING**

1. Ensure all connections are secure.
2. Once power is applied to the MiniScan, the LED lights a continuous red.
3. Ensure the bar code is within scanning range. Align the bar code and the trigger unit.
4. Upon successful decode, the scanner LED turns green.

### **Aiming Tips**

#### ***Scan the Entire Bar Code***

1. The scan beam must cross every bar and space on the bar code.



2. Adjust the aim so that the thin, red laser beam covers the entire length of the bar code.
3. If the decode is successful, the green LED lights and the data is transmitted to the host. The scanner may also beep.

## BEEPER INDICATIONS

The beeper indicates the scanner status as follows:

Beeper	Indication
1 beep	a bar code is successfully decoded
4 beeps	transmission error; bar code data was not received by host
fast warble	a programming parameter was entered successfully

## LED INDICATORS

LED	Indication
Red	Scanner is on.
Green	A bar code is successfully decoded.

## TROUBLESHOOTING

Problem	Possible Cause	Possible Solutions
No red LED, or nothing happens when you attempt to scan.	No power to the scanner	Check the system power. Confirm that the correct host interface cable is used. Power supply not plugged in. Check for loose cable connections.
Scanner cannot read bar code.	Interface/power cables are loose.	Check for loose cable connections.
	Scanner is not programmed for the correct bar type.	Ensure the scanner is programmed to read the type of bar code to be scanned. Try scanning other bar codes and other bar code types.
	Incorrect communications parameters	Check that the communication parameters (baud rate, parity, stop bits, etc.) are set properly.

## *VERIFONE MX870 CREDIT CARD READER AND PINPAD*



### MAINTENANCE

The MX870 credit card terminal has no user-maintainable parts. The smart card implementation is a proprietary hardware solution that has no serviceable parts.

#### Cleaning the Terminal

To clean the terminal, use a clean cloth slightly dampened with water and a drop or two of mild soap. For stubborn stains, use alcohol or an alcohol-based cleaner.



#### Attention

Never use thinner, trichloroethylene, or ketone-based solvents as they may deteriorate plastic or rubber parts. Do not spray cleaners or other solutions directly onto the display.



#### Attention

Do not attempt to clean the smart card reader. Doing so may void the warranty. For smart card reader service, contact technical support.

### CALIBRATING THE TOUCHSCREEN

The MX870 credit card terminal requires the touchscreen to be calibrated at the time of installation. The terminal should be powered on and allowed to stabilize at normal operating temperature; usually this takes longer than 30 minutes, even if the terminal was previously in a cooler or warmer location. The touchscreen calibration procedure should then be performed.

1. Press the recessed button near the top of the magnetic strip reader with a straightened paper clip and hold while three LEDs in the MSR track turn on.  
Release the button when the middle LED turns off. Keep hands away from the display until the prompt appears for password entry.
2. Enter the password.
3. In System Mode, perform a manual touch screen compensation. Tap **Configure > right blue arrow > Calibration > Calibrate**. Follow the directions on the display.

## TROUBLESHOOTING

During normal operation of your MX870 credit card terminal, it is possible for minor malfunctions to occur. The following are examples of possible problems and the steps to resolve them.



### Attention

Only perform the procedures specified in this guide. For all other services, contact technical support.

Each MX870 terminal is equipped with tamper-evident labels. Do not, under any circumstances, attempt to disassemble the terminal.

Problem	Resolution
Display is Blank	If the terminal display does not show correct or readable information, check all the cable connections. If the problem persists, contact technical support.
Serial Port Does Not Work	<p>Check whether the device connected to the serial port of the multiport cable of the MX870 terminal has power and is functioning correctly.</p> <p>The cable connecting the optional device to the MX870 terminal's serial port may be defective. Try a different serial cable.</p> <p>If the problem persists, contact technical support.</p>

Problem	Resolution
Transaction Fails to Process	<p>Check the magnetic card reader. Make sure that you are swiping cards correctly. The black, magnetic stripe on the card should face down and towards the screen.</p> <p>Perform a test transaction using several different magnetic stripe cards to ensure that the problem is not a defective card.</p> <p>Process a transaction manually using the screen instead of the card reader. If the manual transaction works, the problem may be a defect in the card reader. Contact technical support.</p> <p>Check the smart card reader. Make sure you are inserting cards correctly. The chip on the card should face down and inward.</p> <p>Perform a test transaction using several different smart cards to ensure that the problem is not with the card.</p> <p>Ensure the MSAM cards are correctly inserted and the cardholders are properly secured.</p> <p>Check the cable connections. Ensure that all cables are correctly connected.</p> <p>If cables are connected properly, check that the cable is in working order by connecting a known good cable. If transactions process with this cables, replace the defective cable.</p> <p>If problems persist, contact technical support.</p>
No Response from the Stylus	<p>Check the documentation to ensure that the terminal supports this stylus.</p> <p>Unplug the stylus that does not respond and connect a known working stylus.</p> <p>If the problem persists, call technical support.</p>
Gap in Captured Signature	<p>Ensure that the stylus is pressed hard during signature capture.</p> <p>If the problem persists, contact technical support.</p>
No Response from the Touchscreen	<p>Perform a touchscreen calibration. (See <i>Calibrating the Touchscreen</i>.)</p>

PN: 35-XXXX

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