



DIRECT ADVANTAGE PRINTER TROUBLESHOOTING GUIDE

Your Direct Advantage printer is a master, but complex, piece of electronic and mechanical wizardry that merits extra care to keep it operating perfectly and consistently day in and day out. Ignoring the recommended maintenance will lead to unsatisfactory printing results. This document describes the issues you are likely to encounter, their possible causes and pertinent remedies.

Your printer is designed to operate in the following atmospheric conditions:

- Relative humidity: 35%~60%
- Temperature: approximately 73° F (22° C).

Maintaining these conditions in your workplace will go a long way in preventing or minimizing printing problems.

Image Output Issues

The colors in my printed image are incorrect

- The profile being applied may be an incorrect one. Ensure that you used the correct PowerRIP DA settings. Make sure that the profile selected in the color-management dialog in your application (Adobe, Corel) is the *DirectAdvantage_Master.ICM*
- Use the preview screen in the RIP to check for color accuracy in the image before printing it.
- Press temperature, dwell time or pressure settings may be incorrect. Verify that all of these settings are in accordance with recommendations. White-ink images should be cured on a heat press set at 340° F, low pressure (10 – 12 psi), for 140 seconds. The curing parameters for CMYK (color only) images are 375° F, 40 psi, and 25 seconds, respectively.
- Some inkjet nozzles may not be firing. Perform a *Nozzle Check* from the *Utilities* drop-down menu in the Direct Advantage Queue (right-click on the selected printer in the Queue to access the *Utilities* menu) and verify that all of the nozzles are present. If one or more of the nozzles fail to print, perform a printhead cleaning operation (Select *Clean Heads* from the same *Utilities* menu).

Before or after pressing, there are streaks of ink showing in non-printed areas.

- The printhead may be striking the garment. Verify that the printhead is not touching the garment during printing.
- Ensure that the wet image did not rub against the garment when removing the garment from the printer or during pressing.
- Curing paper (parchment) may have imperceptibly slid across the garment, smearing the image. This phenomenon is most likely to occur when the humidity is high. Allow the press heating plate to hover—but not touch—over the garment for 10 – 15 seconds before laying the curing paper on it. Make sure you are using parchment paper to cure your garment and lay it down in one single stroke to prevent any further movement.

My image looks good, but it washes out

- You might have used too much pre-treatment, or used the incorrect temperature, pressure or dwell time settings. When applying pre-treatment, make sure you achieve a thorough, uniform coverage, but do not over-saturate the garment.

Colors are light and splotchy, or the image looks blurred

- The profile being applied may be an incorrect one. Ensure that you used the correct PowerRIP DA settings. Use the preview screen in the RIP to check for color accuracy in the image before printing it.
- Press temperature, dwell time or pressure settings may be incorrect. Verify that all of these settings are in accordance with recommendations.
- The printheads may be too far away from the garment. Perform an Auto Height operation to ensure proper head height.
- Some nozzles may not be firing. Perform a *Nozzle Check* from the *Utilities* drop-down menu in the Direct Advantage Queue and verify that all of the nozzles are present. If one or more of the nozzles fail to print, perform a printhead cleaning operation.

My image has gaps or bands present

- Some nozzles may not be firing. Perform a *Nozzle Check* from the *Utilities* drop-down menu in the Direct Advantage Queue and verify that all of the nozzles are present. If one or more of the nozzles fail to print, perform a printhead cleaning operation.
- Make sure that the garment is placed flat on the platen, and that all of the wrinkles are smoothed out prior to printing. Also, ensure that there are no wrinkles in the garment when you press it to cure the image.
- Possible printhead misalignment. Perform a head-alignment operation from the Epson's Utility menu (please refer to your Epson printer manual)

Printing Issues

Image is too dense, or garment exhibits extra heavy *hand*

- Garment may be over-saturated with pre-treatment. Be sure that pre-treatment coverage is uniform and thorough, but not in excess.
- Too much white ink is being laid down. Reduce the white-ink limit in the RIP, in small increments, from 100% to 95%, 90% or even 85%, until you achieve the desired results.
- The Teflon sheet is being used to cure the image. Teflon often imparts a heavy sheen to fabric. Switch to silicone-based (at least 10% silicone) parchment paper.

Colors are dull or not vibrant enough

- The profile being applied may be an incorrect one. Make sure that the profile selected in the color-management dialog in your application (Adobe, Corel) is the *DirectAdvantage_Master.ICM*
- Some color or white channels (nozzles) may be out. Perform a nozzle check and, if necessary, a cleaning cycle. Also be sure to perform the recommended daily maintenance (see below)
- The actual image may be of poor quality or resolution.

The color image consistently starts higher or lower than the white mask

- If your version of PowerRIP DirectAdvantage is FCxx (where xx could be any two-digit number up to 13), and your DA firmware version is lower than 6.0.0, check the adjusting entry in the "***shift.dat" file, which is located in the "C:/PowerRIPDA" folder. This entry should be 22, but it might be set at zero. Open the file with *Notepad*, correct the entry (if it is not 22), and save the edited file with the same name and in the same location. There are four such files, one for each print resolution: *360x360shift.dat*, *720x360shift.dat* (this is for the "360 Enhanced" mode), *720x720shift.dat*, and *1440x720shift.dat*. Edit only the file that pertains to your selected resolution. No such corrections are necessary if you are using PowerRIP version 7.4.4 Rev 3 and DA firmware 6.0.0 or higher.
- The hard stop in the platen might have shifted. Be sure that the hard stop is placed two inches from the rear edge, and that the jig hits and rests on it very gently as it moves back.
- The printer might be initiating in the incorrect position. Create a simple and small image and print it as the first image of the day, or when you have restarted the printer.

You press LOAD several times without response

- This usually occurs when there are wrinkles in the fabric or the head-height adjustment is off. Smooth out the garment, press LOAD and redo AUTO HEIGHT.
- Parts of the garment (sleeve junction, for example) may be too high and could cause a printhead strike. Be sure to smooth out the garment as best you can such that the overall height is uniform. If you cannot achieve perfect uniformity, press the UP button once or twice to raise the printhead enough to prevent a strike.

Printer exhibits a “grinding noise” when the jig moves back

- The printer might have missed an encoder count. Increase the head height one step (press the UP button once).
- Make sure that the settings on the Epson 4800 or 4880 printer are correct for your version of firmware. DA firmware versions 6.0.0 and higher enable the printer to operate in precision mode, thus ensuring crisp detail in fine traces and small-point text. To operate in precision mode, however, the firmware requires that the Epson printer be set to **Roll and Cut** mode, and the **Paper Margin set to 3 mm**. If your DA is not equipped for precision-mode operation, the Epson should be set to Roll mode only, the cutter should be off, and the Paper Margin should be set to *Default*.

Communication Error--The Queue cannot locate the printer

- The USB cable may be loose or connected to the wrong (programming) port. Make sure that the USB cable is securely attached to both the computer and to the Main port on the back of the Direct Advantage printer.
- USB communications might have terminated unexpectedly. Right-click on the printer name (or icon) and click on *Reset Communication* in the pull-down menu that opens up.
- Exit the Queue program and disconnect the USB cable from the printer. Reconnect the cable and open the Queue again. The Queue should find and recognize the printer.
- Click on the *Start > Printer and Faxes* menu in your Windows Operating System (OS) and verify that the printer is listed there and it is on a *Ready* state. If not, set it to “Ready” by double-clicking on it, clicking on *Printer* in the menu that opens up, and un-checking the *Use Printer Offline* selection.
- While in the *Printers and Faxes* list, right-click on the printer and select *Properties* from the pull-down menu that opens up. Click on the **Ports** tab and verify that a port, such as USB004, is assigned to it and it is not in conflict with another ports (i.e., the same port might be assigned to two different devices). If so, assign a different port in *Device Manager*
 - From your Windows OS start-up menu, right-click on *My Computer*, select *Manage*, double-click on *Device Manager*, double-click on *Ports*.
 - Right-click on the listed port, and click on *Properties* in the drop-down menu.
 - Click on the **Port Settings** tab and click on *Advanced*.
 - Click on the drop-down arrow in the Port field and select an available port.

General Maintenance

Following these simple steps daily, will ensure that your printer lasts longer, will help prevent many of the issues described above, and help you derive optimal performance with little-to-no down time.

Daily routine

- Agitate the white cartridges.
- Perform nozzle checks and head cleaning at the beginning of the day.
- Perform nozzle checks regularly throughout the day (the amount of ink consumed is negligible) to ensure top performance. If you notice more than a 10% nozzle dropout in any one of the white channels, or one single nozzle in the color channels, perform a head-cleaning operation.
- Inject a few drops of flushing solution into the capping station and spit cups every day at the end of the day before “parking” the printheads for the night.

Periodic maintenance

- Use textile substrates appropriate for the application. Not all cotton substrates are the same. For better opacity with our ink, Sawgrass recommends 100% cotton *Hanes Tagless 6.1* T-shirts.
- Clean the capping station and wiper blade. Take a foam swab moist with cleaning solution and clean around the capping station and wiper blade daily to remove any ink build up that can be deposited onto the print head. Removing ink build-up will help ensure smooth, uninterrupted printing.
- Clean the encoder strip. Moisten a swab with isopropyl alcohol or cleaning solution and gently wipe the encoder strip to remove any ink residue. Please refer to the section in the Preventive Maintenance CD for proper cleaning instructions.