DNP Photo Imaging America Corp.

MATTE PRINTING WITH YOUR DS40 OR DS80 PRINTER

INSTALLING THE DS PRINTER FIRMWARE WITH MATTE OPTION

- Note

The instructions use the DS40 as an example, but the steps are the same for the DS80. To install the printer firmware for the DS80, simply replace all instances of DS40 with DS80.



Attention

Make sure the Driver for the DS printers has been installed before updating the firmware.

1. Run the DS40_0130.exe update tool.



Figure 1. Update Tool

2. Select your printer from the drop-down list.



Figure 2. Select Printer

3. Click the OK button.

Installing the DS Printer Firmware with Matte Option

4. The update tool will display the old firmware and new firmware versions. Click the **Start** button.

lew Firmware	🔽 DS40 1.30		
rinter Firm	DS40 1.30		
WD Ver 300	DS40_300_0130.CWD	Sum	1.A03
WD Ver 600	DS40_600_0130.CWD	Sum	31C7
** Firmware U	Ipdate.** Push START butt	on.	STAR
** Firmware U tatus Transmitt	Ipdate.** Push START butt	on.	STAR
** Firmware U <i>tatus</i> Transmitt The printe Firmware	pdate.** Push START butt ing data is prepared. er changes to the rewrite mor is transmitted.	on.	STAR
** Firmware U Transmitt The printe Firmware Firmware	pdate.** Push START butt ing data is prepared. er changes to the rewrite mor is transmitted. is written in flash ROM.	on. de.	STAR
** Firmware U Transmitt The printe Firmware Firmware CWD data	pdate.** Push START butt ing data is prepared. er changes to the rewrite mod is transmitted. is written in flash ROM.	on.	STAR
** Firmware U tatus Transmitt The printe Firmware Firmware CWD data	pdate.** Push START butt ing data is prepared. er changes to the rewrite mod is transmitted. is written in flash ROM. t is transmitted and written.	on. 	STAR

Figure 3. Update Tool

- 5. Wait while the firmware is updated. The status will display at the bottom of the window.
- 6. Once the update is complete, press the **End** button.

Vew Firmware	🔽 DS40 1.30	
Printer Firm	DS40 1.30	
WD Ver 300	DS40_300_0130.CWD Sum	1 A03
WD Ver 600	DS40_600_0130.CWD Sum	31C7
** Compleat *	** Push END button.	STAP
** Compleat *	** Push END button.	CTAR
** Compleat * <i>tatus</i> Transmitt The printe	** Push END button.	STAR
** Compleat * <i>tatus</i> Transmitt The printe Firmware	** Push END button. ting data is prepared. er changes to the rewrite mode. is transmitted.	STAR
** Compleat * Status Transmitt The printo Firmware Firmware	** Push END button. ting data is prepared. er changes to the rewrite mode. is transmitted. is written in flash ROM.	STAR
** Compleat * Status Transmitt The printu Firmware CWD data	** Push END button. ting data is prepared. er changes to the rewrite mode. is transmitted. is written in flash ROM. a is transmitted and written.	STAR END
** Compleat * Status Transmitt The printu Firmware CWD data	** Push END button. ting data is prepared. er changes to the rewrite mode. is transmitted. is written in flash ROM. a is transmitted and written.	STAR

Figure 4. Update Complete

Figure 5.

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PRINTING USING MATTE



Note

If you will be printing with the Windows driver, and want to print Matte all the time, this is the best option to use. To have the printer use matte printing on demand, follow the instructions for **Setting Matte function from the Printer Properties within an Application.**

Setting Matte function from the Printer Properties in Windows

7. From the Start Menu, select Printers and Faxes.



Figure 6. Printers and Faxes

8. Select the DS Printer you wish to configure (shown here as the DS40).



Figure 7. Selecting DSPrinter

Setting Matte function from the Printer Properties in Windows

9. The Properties Window will open.

DS40 Propert	es			?
Color Ma	nagement		Device Setti	ngs
General	Sharing	Ports	A	dvanced
D54	I			
Location:				
Comment:				
Model: DS40				
Features				
Color: Yes		Paper available	в:	
Double-sided: N	0			~
Staple: No				
Speed: Unknow	m			
Maximum resolu	tion: 600 dpi			~
	Printing Pr	eferences	Print <u>T</u> e	at Page
		DK	Cancel	Apply

Figure 8. DS40 Properties Window

- 10. Click on Printing Preferences.
- 11. Open the Layout Tab, and click Advanced to open the Advanced Options.

🕹 DS40 Printing Preferences 🔹 💽	DS40 Advanced Options	? 🗙
Layout Paper/Quality Option Color Adjustment	Image: Sector	
OK Cancel Apply		

Figure 9. Layout Tab

Setting Matte function from the Printer Properties in Windows

12. Under Printer Features, Find the Overcoat Finish.



Figure 10. Layout Tab

13. The overcoat finish for the printed surface can be selected from two types.

Overcoat Finish	Function
Glossy	This finishes the print with a glossy surface.
Matte	This finishes the print with a matte (non-glossy) surface.

<mark>■</mark> Note

If you do not have the matte driver installed, you will only see the Glossy finish.

- 14. Select Matte finish and click **OK** to save.
- 15. The printer will now print with a matte finish.



Attention

Repeat as necessary for any other DS printers with Matte firmware installed.

Setting Matte function from the Printer Properties within an Application



If you will be printing with the Windows driver, and do not want to print Matte all the time, this is the best option to use. To have the printer use matte printing as the default, follow the instructions for **Setting Matte function from the Printer Properties in Windows.**

It is also possible to set your printer to Matte from within an application. This example uses the Windows Photo Printing Wizard, but the instructions would be the same for any "Print" command from within an application from instruction # on.

- 1. From the Widows Picture and Fax Viewer, select Print

Figure 11. Windows Picture and Fax Viewer

2. The Photo Printing Wizard will open. Click Next to continue.



Figure 12. Photo Printing Wizard

3. Select which prints you want to send to the DS printer. Click Next to continue.

🍓 Photo Printing Wizard	X
Picture Selection Pictures with check marks will be printed. To print all pictures, click Select All.	
<u>S</u> elect A	II <u>C</u> lear All
Next >	Cancel

Figure 13. Selecting Prints

4. The Printing Options window opens. Select the DS40 or DS80 from the drop down menu. Click the Printing Preferences button.

Photo Printing Wizard	
Printing Options Select the printer and paper you want to use.	
What printer do you want to use?	
Microsoft XPS Document Writer	Install Printer
DS40	
Epson Receipt Printer	
Printing Preferences	aper berore printing. To select paper, click
Printing Preferences	
	< <u>B</u> ack <u>N</u> ext > Cancel

Figure 14. Printing Options Window

5. In the Printer Preferences, open the Layout Tab, and press Advanced.

Layout Paper/Quality Option	Color Adjustment	
Orientation Portrait		
Page Order		
	(Advanced

Figure 15. Printer Preferences Window

6. In the Advanced Options window, find the Overcoat Finish option under Document Options >> Printer Features

DS40 Advanced Options
 DS40 Advanced Document Settings Paper /Output Paper Size: (6x4) Copy Count: 1 Copy Graphic Print Quality: 300 x 600dpi Print Quality: 300 x 600dpi Image Color Management ICM Method: ICM Handled by Host System ICM Intent: Pictures Document Options Advanced Printing Features: Enabled Printer Features Border: Disable 1-image retention: Off Overcoat Finish: Glossy Print Re-try: Disable
OK Cancel

Figure 16. Advanced Options

7. Click on Glossy, then select Matte (Printer V.1.30 or later) from the drop down that appears. Click OK to save.

S40 Advanced Options	2 🛛
DS40 Advanced Document Set	tings
🛓 🎝 Paper/Output	
Paper Size: (6x4)	
Copy Count: <u>1 Copy</u>	
Graphic Graphic	
Print Quality: <u>300 × 60</u>)Odpi
🖃 🧿 Image Color Managem	ient
ICM Method: ICM	Handled by Host System
ICM Intent: Picture	es
😑	
Advanced Printing Fea	atures: Enabled
🚊 🐔 Printer Features	
Border: Disable	
1-image retention:	: Off
Overcoat Finish:	Glossy
Print Re-try: Disab	Glossy
	Matte (Printer V.1.30 or later)
	OK Cancel

Figure 17. Matte Option in Advanced Options

8. You can now finish printing with the Photo Printing Wizard. Select either Full page fax print if you want the entire print to appear

a Photo Printing Wizard	
Layout Selection Select a layout from the choices below.	
Available layouts:	Print preview:
Full Page Prints Full page fax print: centered and rotated to fit Full page photo print: cropped and rotated to fit Number of times to use each picture: 1	
	< <u>B</u> ack <u>N</u> ext > Cancel

Figure 18. Layout Selection : Full page fax print

Or select Full Page photo print to crop and rotate your image to fit the print size.

a Photo Printing Wizard	
Layout Selection Select a layout from the choices below.	I
<u>A</u> vailable layouts:	Print preview:
Full Page Prints Full page fax print: centered and rotated to fit Full page photo print: cropped and rotated to fit Number of times to use each picture: 1	
	<back next=""> Cancel</back>

Figure 19. Layout Selection: Full page photo print

When you have selected the layout you like, select the number of copies you want from the drop-down box, and then click **Next** to continue.

9. The Photo Printing Wizard will send your prints to the printer queue. You can cancel printing at this time by clicking **Cancel Printing**.

DI 1.4 3	~~
The wizard is s	ending your pictures to the printer.
	~
]
	Printing page 1 of 1
	Cancel Printing
	Cancel Printing
	<u>Cancel Printing</u>
	Cancel Printing

Figure 20. Photo Printing Wizard: processing prints

10. After your prints have been sent to the queue, you can click **Finish** if you are done, or click **Back** to return to any part of the Photo Printing process.

🖥 Photo Printing Wizard	
	Completing the Photo Printing Wizard You have successfully printed your pictures.
	K Back Finish Cancel

Figure 21. Photo Printing Wizard: done printing

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DS40/DS80 MATTE PRINTING: THERMAL PRINT HEAD WEAR

The DS40 and DS80 Matte Firmware allows users to print matte prints from existing DS printers instead of purchasing new printers that have this capability. This firmware allows the user to print both glossy and matte finishes using the same dye-sublimate media, so there is no need to change the ribbon or paper to get the finish you want.

In order to create the satin finish of conventional matte photos, the thermal print head creates a random texture on the overcoat of the print that simulates a matte print. As such, creating a matte print increases the wear on the thermal head by 20% with each print, as illustrated below



1 print = 1 print



Figure 22. Thermal Head Wear

For example printing 5 matte prints is the equivelant of printing 6 glossy prints.



Attention

Extra wear on the thermal head from matte printing will be taken into account when determining if your printer is still within warranty.

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DS40/DS80 MATTE PRINTING THROUGHPUT: HIGH FLOW FANS

The DS40 and DS80 Matte Firmware allows users to print matte prints from existing DS printers instead of purchasing new printers that have this capability. This firmware allows the user to print both glossy and matte finishes using the same dye-sublimate media, so there is no need to change the ribbon or paper to get the finish you want.

In order to create the satin finish of conventional matte photos, the thermal print head creates a texture on the overcoat of the print that simulates a matte print. As such, the thermal head can get hot, and may require extra time to cool down between prints—particularly when printing a large number of matte prints—unless the printer has a high flow fan.

THROUGHPUT TIMES USING MATTE

When a DS40 printer produces a matte print, the average time per print doubles. In the same way, a DS80 printer's time will increase by 1.7 times. As an example, if it takes 9 seconds to print a 4x6 glossy print on the DS40, and 30 seconds to produce an 8x10 glossy print on the DS80, it will take <u>18 seconds</u> to print the matte 4x6, and <u>51 seconds</u> to produce the matte 8x10.

USING THE HIGH FLOW FAN TO IMPROVE THROUGHPUT TIME

Using a high flow fan will decrease the matte print time on the DS40 by 10%, and the print time on the DS80 by 30% when printing large orders. Using the same example from above, with the high flow fan, the matte 4x6 print will now take about <u>16</u> seconds, and the matte 8x10 print will take about <u>36 seconds</u>.

For smaller orders (less than 50), the time does not improve as much, and on single orders, it remains the same.



Attention

You do not need a high flow fan to use the matte feature, it just decreases time to print on larger orders.

Replacing your Fan

The DS40 fans can be replaced by an authorized DNP repair center. Contact your sales representative for more information.