



Digital Photo Printer
DS40/DS80

Printer Driver Manual for Windows 7

Before operating the unit, please read this manual thoroughly and retain it for future reference.

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1. Installing Drivers for DS Printers

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INSTALLING DRIVERS FOR DS PRINTERS

The installation workflow will consist of three steps:

- ■ Prepare the printer and computer
- ■ Install the driver package
- ■ Install the printer drivers

PREPARING THE PRINTER AND COMPUTER

Check that the power for the DS40/DS80 printer is OFF. Have the USB cable ready, but DO NOT connect the printer to the computer with the USB cable at this point.



Note

In order to install the printer drivers you must be logged in to the computer with administrator privileges.



Note

Installing the driver is the same for both the DS40 and DS80 printers. The following instructions are for the DS40, but if you are using a DS80, it will be the same (read DS40 as DS80).

INSTALLING THE DRIVER PACKAGE

1. Insert the Driver Installation CD into the disc drive.
2. Start Windows Explorer and double-click on the CD drive.



Note

If the AutoPlay function is on, select **Open folder to view files – using Windows Explorer**.

Installing the Driver Package

3. Select the following folder from the Driver Installation CD.

■ DS40 = DS_Driver\DS40\English\7

■ DS80 = DS_Driver\DS80\English\7

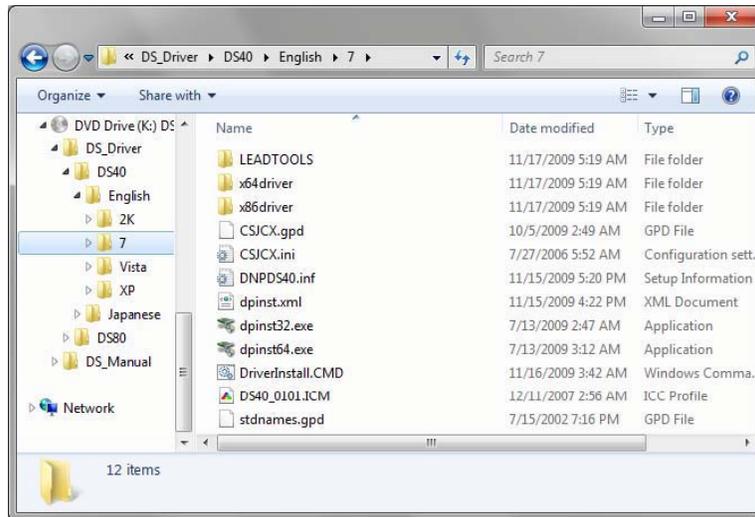


Figure 1. Driver Package Folder

4. Double-click on the **Driver Install.CMD** file inside the folder. (Depending on your operating environment, the .CMD extension may not be displayed.)

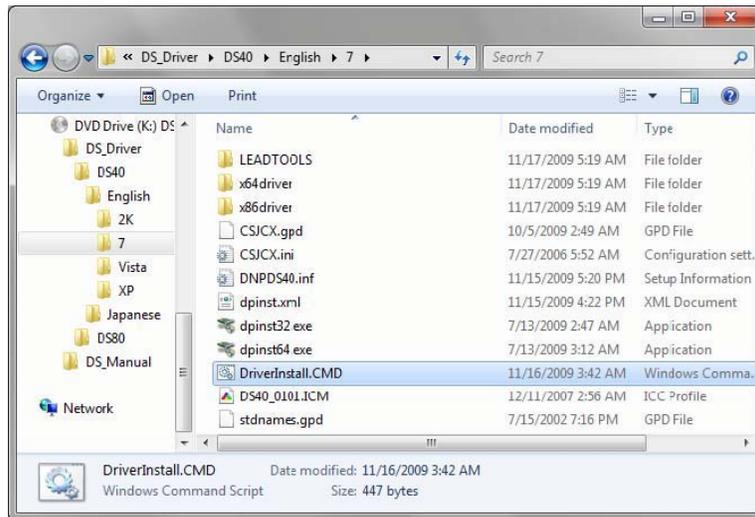


Figure 2. Install File

5. The best Driver Package Installer for your operating system (32- or 64-bit) will automatically be selected.

6. If the User Account Control dialog appears, click on **Yes**.

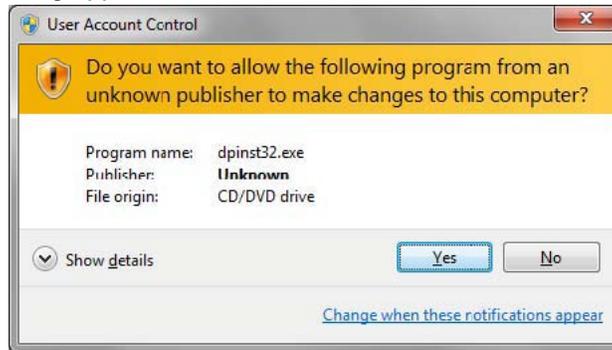


Figure 3. User Account Control

7. When the **Welcome to the Device Driver Installation Wizard** appears, click on **Next**.



Figure 4. Installation Wizard

8. If the **Windows Security** confirmation window appears, click on **Install this driver software anyway**.



Figure 5. Windows Security Confirmation

9. The Driver Package Installation will begin. When the **Completing the Device Driver Installation Wizard** appears, click **Finish**.



Figure 6. Finish Installation Wizard

INSTALLING THE PRINTER DRIVER

Connect the printer to the computer using the USB cable and turn the printer power ON. The printer will be recognized, and the driver installation will begin.

1. When the driver installation begins, the message **Installing device driver software** will appear above the task bar.

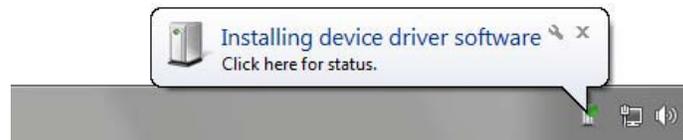


Figure 7. Driver Installation Message

2. Click on the driver installation message and the **Driver Software Installation** window will open. The driver installation status will be shown. Click **Close**.



Figure 8. Driver Software Installation



Note

The operating system may be configured to search for the driver software from Windows Update, so it may take more time to complete the installation. Click on **Skip obtaining driver software from Windows Update** to decrease the time it takes to complete the installation. (see below)



Figure 9. Skip Obtaining Driver Software from Windows Update

3. When the confirmation window appears, click **Yes**.



Figure 10. Confirmation Window

4. After the installation is complete, the message above the task bar will read, **Your device is ready to use**.

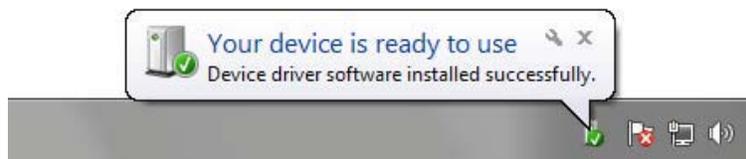


Figure 11. Driver Installation Complete Message

Note

If the DS printer driver installation was unsuccessful, the message **Device driver software was not successfully installed** will display. (see below) If the driver installation was unsuccessful, refer to the next section, **Installing a Driver for an Unspecified Device** and install the driver.



Figure 12. Driver Not Installed Message

5. Click on the Driver Installation Complete message and the Driver Software Installation window will open. **Your device is ready to use** will display. Click Close.

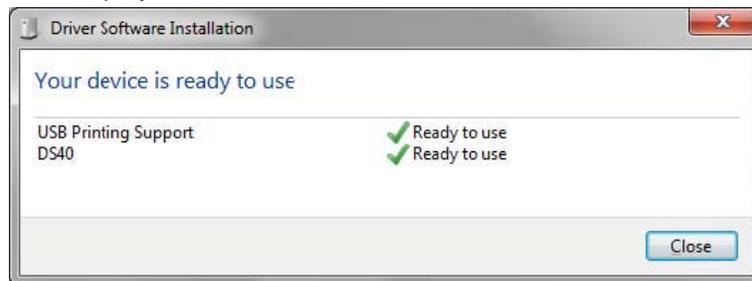


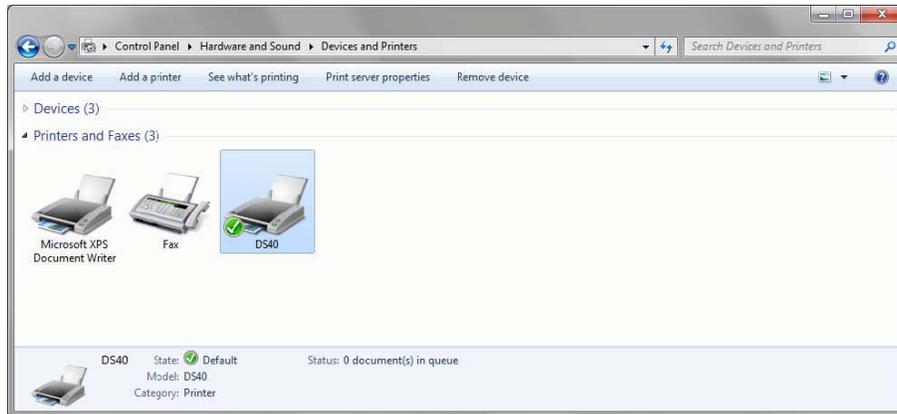
Figure 13. Driver Installation Software Complete

6. Select **Start**, then **Control Panel**. Click on **View devices and printers** in the Control Panel.



Figure 14. Control Panel

7. Confirm that your DS printer is shown in the **Devices and Printers** window. Installation is complete.



8. When installation of the printer driver is complete, reboot the computer.

INSTALLING A DRIVER FOR AN UNSPECIFIED DEVICE

Before installing the driver package, connect the printer (with the power ON) to the computer, to create an **Unspecified** device in the **Devices and Printers** window. The printer driver can then be installed using the following instructions.

1. Install the driver package by following the instructions in the previous section, **Installing the Driver Package**. After the driver package has been installed, the driver for the Unspecified device may be automatically installed.
2. In the **Devices and Printers** window, under **Unspecified**, right-click on the **Photo Printer** and select **Troubleshoot** from the menu.

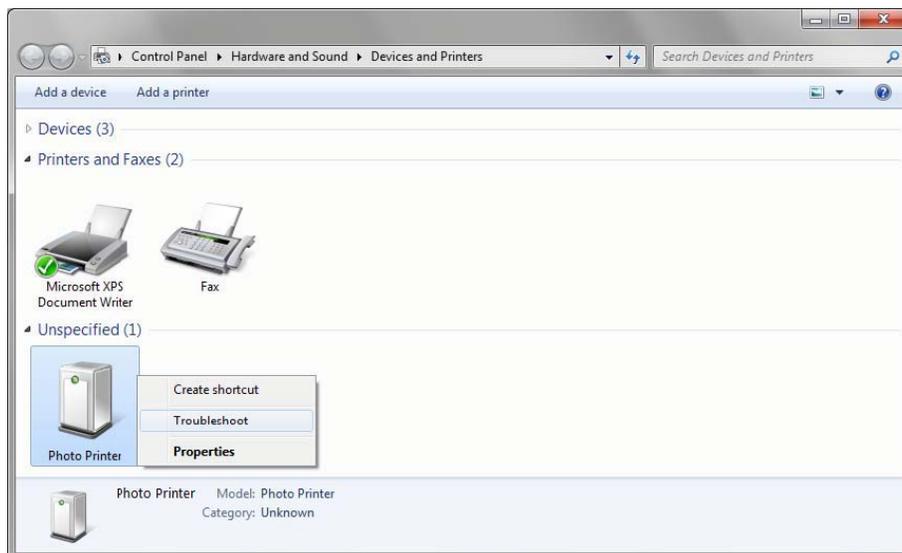


Figure 15. Unspecified Photo Printer

3. When the **Install a driver for this device** window appears, click on **Apply this fix**. It will automatically search for the driver and the installation will begin.

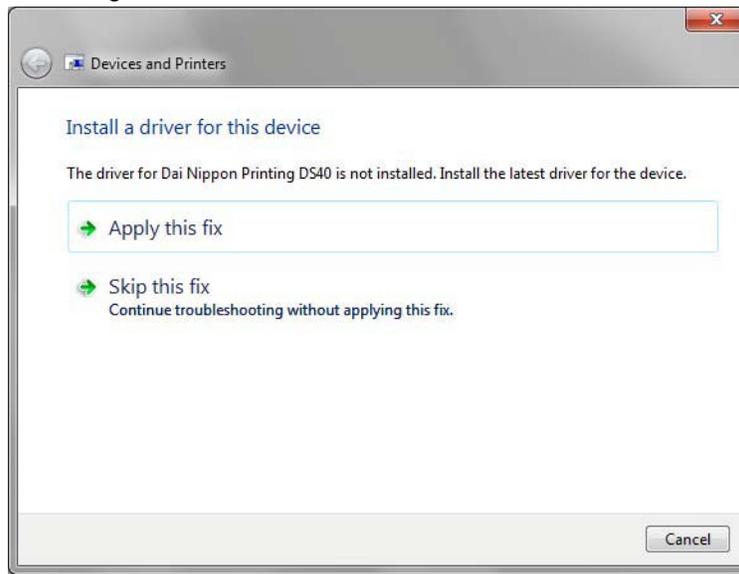


Figure 16. Apply This Fix

4. After the driver has been installed, the message **Troubleshooting has completed** will display. Click **Close the troubleshooter**.

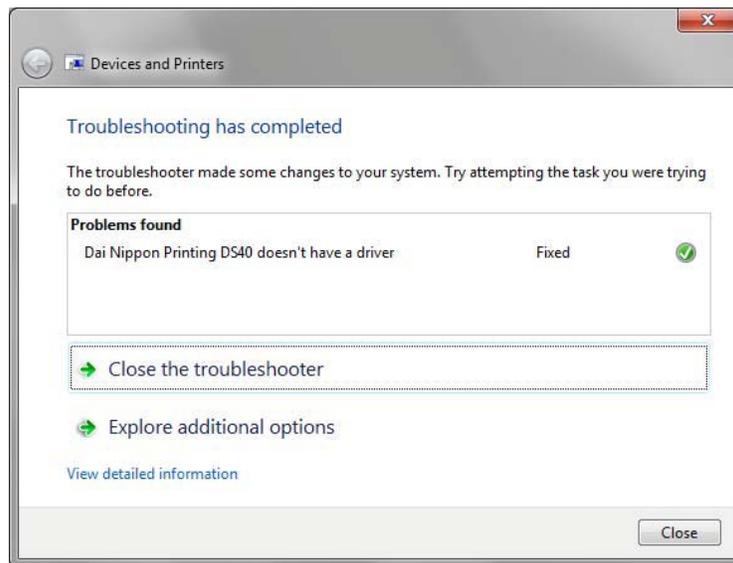


Figure 17. Troubleshooting Complete

5. Confirm that your DS printer is displayed in the **Devices and Printers** window. The driver installation is complete.

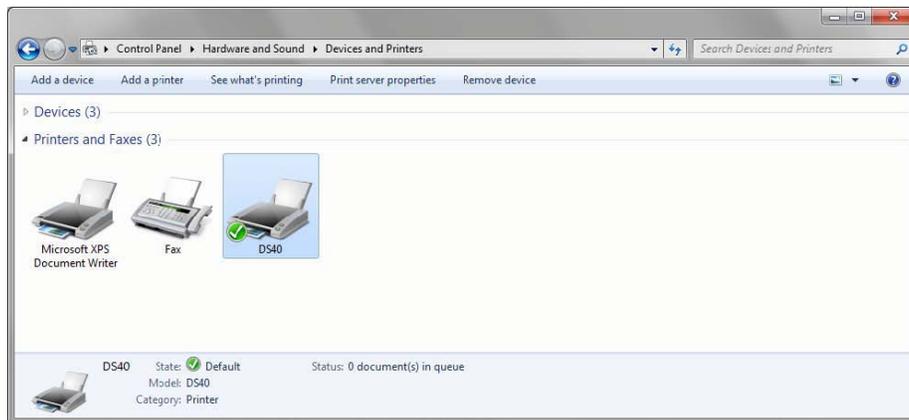


Figure 18. Devices and Printers

6. When installation of the printer driver is complete, reboot the computer.

DRIVER PROPERTIES

OPENING DRIVER PROPERTIES

7. From the **Start Menu**, click on **Control Panel**.

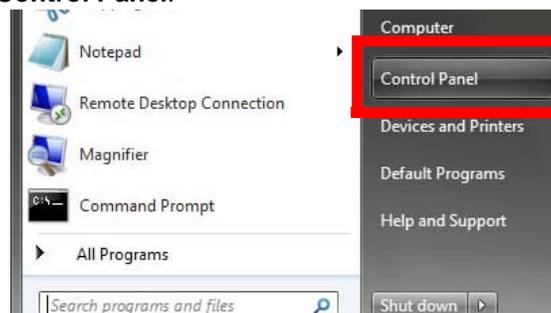


Figure 19. Control Panel

8. In the **Control Panel**, select **Printer** to open the printer window.

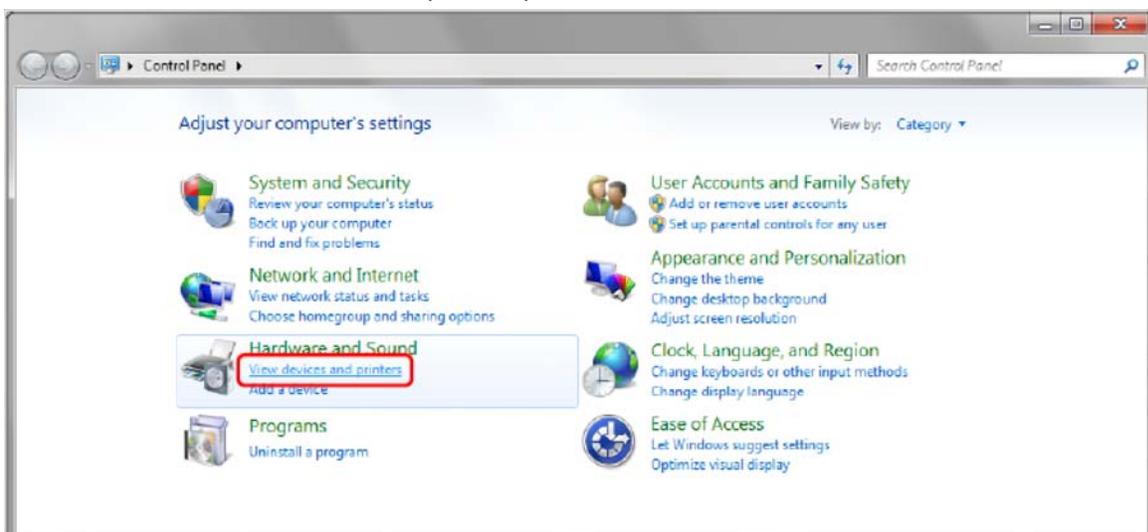


Figure 20. Control Panel

Opening Driver Properties

9. Select the DS Printer you wish to configure (shown here as the DS40), right-click on the printer, and from the pull-down menu select **Properties** to open the DS Properties window.

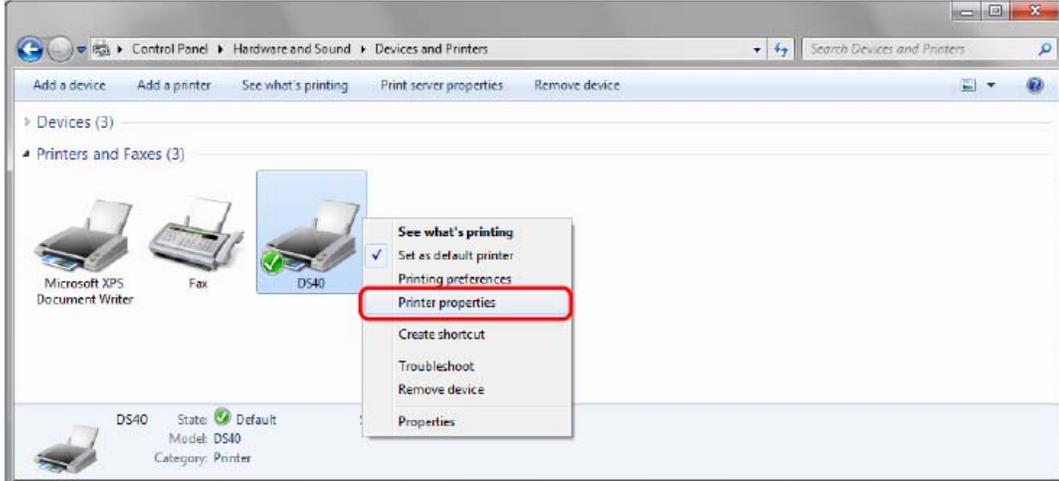


Figure 21. Selecting DS Printer

10. The Properties Window will open.

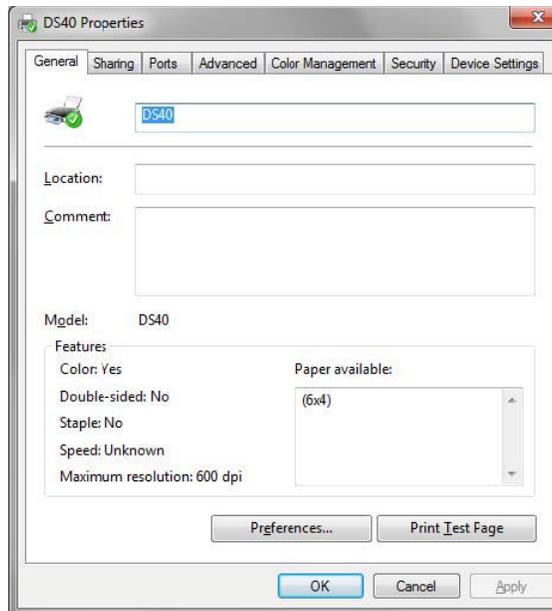


Figure 22. DS40 Properties Window

EXPLORING THE PRINT SETTING FUNCTIONS

Using the properties window, you can use the Print Settings to change the Layout of your prints, change Advanced Options, change the Paper or Quality of the print, change the Paper Options, or Adjust the Color of the prints.

Layout Tab

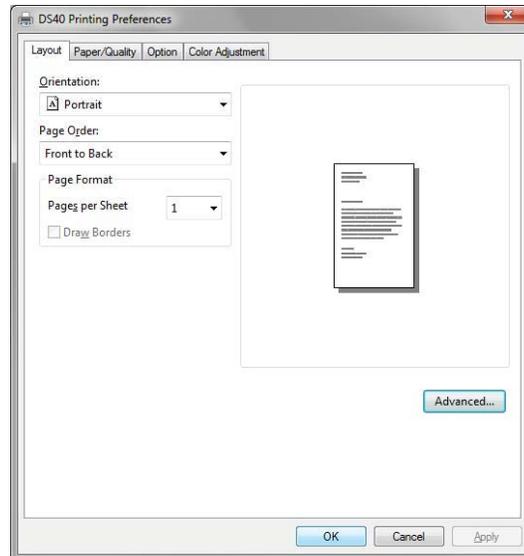


Figure 23. Layout Tab

Using the Layout tab, you can change Print Orientation, Page Order, or how many pages per sheet will print.

Print Orientation

You can assign Print Orientation to be vertical or horizontal.

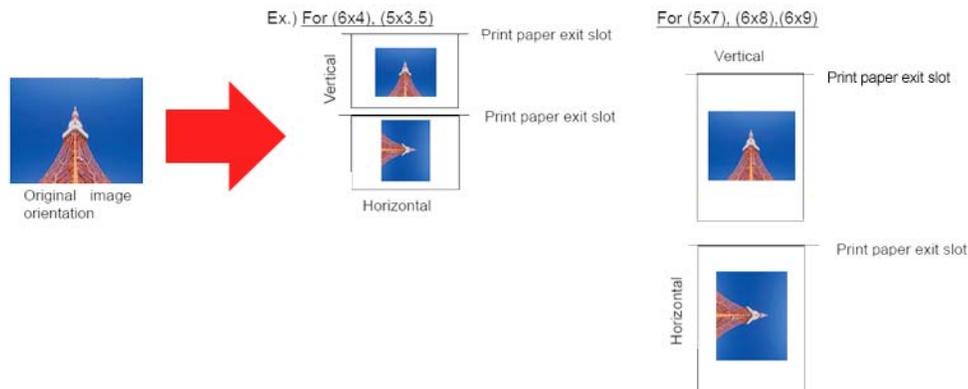


Figure 24. Print Orientation

Print Order

When printing multiple images within the application, you can change which will print first.

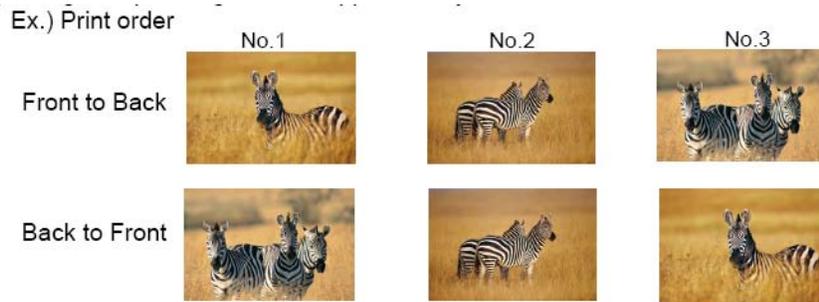


Figure 25. Print Order

Pages per Sheet

You can select a fraction to determine the print size.



Figure 26. Prints per Sheet

Advanced Options in Layout

By selecting the **Advanced Settings** tab in the Layout window, you can change Items in the **Paper Output**, **Graphic** and **Document Options** sections.

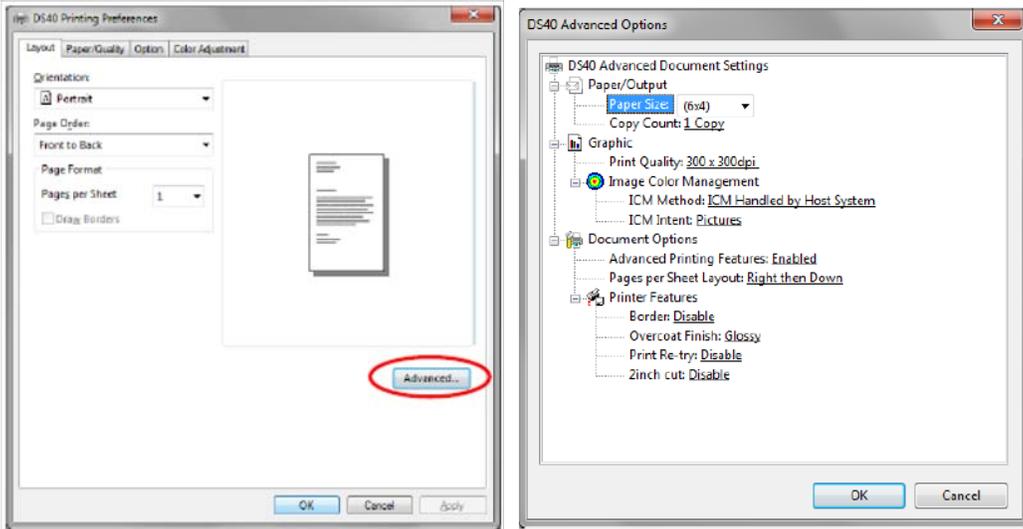


Figure 27. The Advanced Settings Button

Paper Output Settings

- Paper Size:** designate paper size (for multiple layout options, see section **Multiple Image Layout**)



Note

Please match paper size to the media size in the printer. (4x6, 6x9, 8x12)

- Copy Count:** change number of times the image will be printed.

Graphic Settings

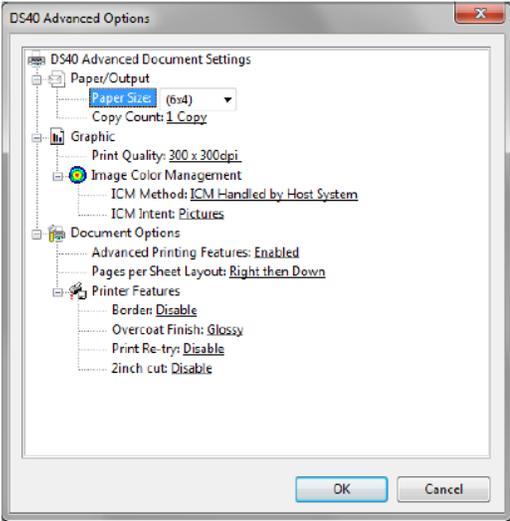
- Print Quality:** choose the DPI for your prints.

Print Quality	Function
300 x 300dpi	Printing in the high-speed mode
300 x 600dpi	Printing in the high-quality mode (If the application can not set an asymmetric aspect resolution, please set the 600x600dpi.)
600 x 600dpi	Printing in the high-quality mode (Printer driver converts to 300x600dpi data, and sends it to the printer.)

Image Color Management

ICM intent	Function
ICM Disabled	2.2.4 Synchronous with "Color Management: None" in paper option.
ICM Handled by Host System	2.2.4 Synchronous with "Color Management: ICM" in paper option. Performs color management with the driver.
ICM Handled by Printer	This is the same as setting "ICM Handled by Host System".

- ICM Intent:** designates the rendering method when using ICM. Always have the ICC profile for the DS printer set to **Picture**. DO NOT use other settings.



Document Options

- ■ **Advanced Printer Features:** always have set to “enabled.” Do NOT use other settings
- ■ **Printer Features**
 - ■ **Border:** syncs with the border option within the paper option. These should always match.

■ ■ **Overcoat Finish:** 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.



Note

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



Attention

If you replace a printer with matte firmware installed with a printer with a lower firmware (glossy only), you **MUST** reboot the computer in order for the driver to detect the correct finishes available.

■ ■ **Print Re-try:** determines if the print data stays in the buffer for reprinting after recovery from an error.

Print Re-try	Function
Disable	Printing data in a printer buffer is cleared in the case of a printer error. After an error recovery, the cleared image data must be re-sent. When using an application that has an error recovery function, select this option.
Enable	Printing data in a printer buffer is held in the case of a printer error. After an error recovery, the print process resumes with the saved data. However, if the power is turned OFF, the data will not be saved.

Depending on the error, you may have to power cycle the printer. When you power cycle the printer, the buffer will be cleared, even if you have set the print re-try to enable. Please reference the error table below.

Contents of an error	Print Re-try setup is "Disable"	Print Re-try setup is "Enable"
Paper End	Please resend picture data not printed after error recovery.	Printing processing is resumed from data currently held in a printer buffer after error recovery. When paper initialization operation is performed, it is printed after paper initialization operation.
Ribbon End		
Cover Open		
Papape Jam		
Ribbon Error		
Paper Definition Error		
Scrap Box Error		
Data Error	For error recovery, the power supply of a printer once needs to be turned OFF. Therefore, print data in a printer buffer is cleared by power-supply OFF of a printer regardless of a setup of the Print Re-try function.	For error recovery, the power supply of a printer once needs to be turned OFF. Therefore, print data in a printer buffer is cleared by printer power-supply OFF even if the Print Re-try function is set to "Enable".
Head Voltage Error		
Head Position Error		
Power Supply Fan Stop		
Cutter Error		
Abnormal Head Temp.		
Abnormal Media Temp.		
Ribbon Tension Error	Please resend picture data not printed after printer re-starting.	Please resend picture data not printed after printer re-starting.
RFID Module Error		
Abnormal motor Temp.		
System Error		



Attention

If you replace a printer with matte firmware installed with a printer with a lower firmware (glossy only), you **MUST** reboot the computer in order for the driver to detect the correct buffer settings available.

2inch cut (for DS40 ONLY): If the proper paper size is used, the 2inch cut sets up whether the printer will cut into two or more sheets 2" in length.

2inch cut	Function
Disable	It cuts in usual size.
Enable	By the length of 2 inches, in the case of 6x4 size, it cuts to two sheets, and, in the case of 6x8 size, it cuts to four sheets.



Note

If you do not have the corresponding firmware, "disable" may be the only option available.

Multiple Image Layout

Multiple layout is possible under the following conditions:

1. The DS40 is using 6x9 (A5W) or 6x8 media
The DS80 is using 8x12 or 8x10 media
2. The printer driver paper size is set to one of the sizes in the table below.
3. Multiple images are sent from the application.



Note

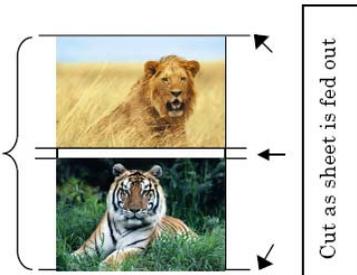
Because the multi-image layout occurs on a per job basis, this will only work when you send more than one image on a single job. If you want to print the same image multiple times, be sure to send the image data for each copy to be printed. The printer prints 2 or 3 images in one operation, and the paper is cut as it is fed out.

	Driver paper setting (layout)	Image size (mm)	Using media
DS40	(6x4) x 2	(156.1x105.0) x 2	6x9 (A5W), 6x8
DS80	(8x4) x 2	(207.3x104.6) x 2	8x12, 8x10
	(8x5) x 2	(207.3x130.0) x 2	8x12, 8x10
	(8x6) x 2	(207.3x155.4) x 2	8x12
	(8x5) _ (8x4)	(207.3x130.0) x (207.3x104.6)	8x12, 8x10
	(8x6) _ (8x4)	(207.3x155.4) x (207.3x104.6)	8x12, 8x10
	(8x6) _ (8x5)	(207.3x155.4) x (207.3x130.0)	8x12
	(8x8) _ (8x4)	(207.3x206.2) x (207.3x104.6)	8x12
	(8x4) x 3	(207.3x104.6) x 3	8x12

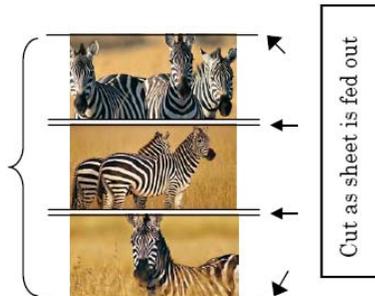
Multi-image layout patterns

The following combinations are possible for the multi-image layout patterns:

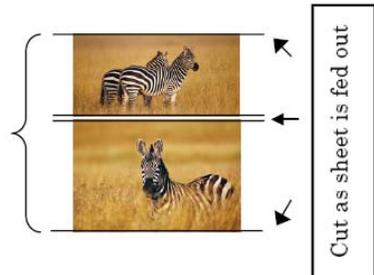
Layout for 1 sheet with 2 same-size images ⇒ x2



Layout for 1 sheet with 3 same-size images ⇒ x3



Layout for 1 sheet with 2 different-size images ⇒ (8x6)_(8x4) etc.

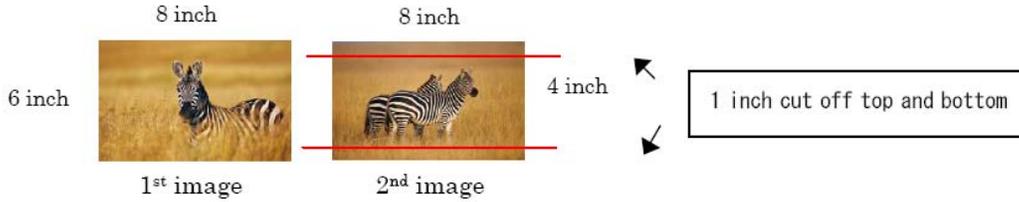


Cautions for printing 2 DIFFERENT sized images on one sheet

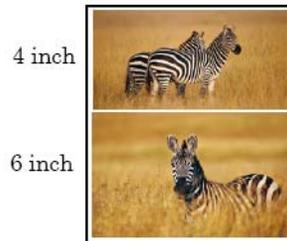
When printing 2 different sized images on one sheet, 1 inch will be cut off the top and bottom of the 2nd image when the image is generated. When creating the original image, you should be aware of the following points (see examples below).

Example 1: When the layout is set for (8x6)_(8x4), the driver orders as thus:

- 1. It creates two 8x6 images

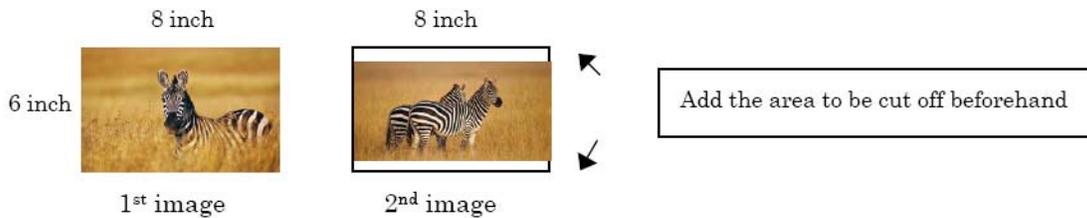


- 2. The driver then lays out the 2 different-size images from step 1 as one (8x10) image, and sends it to the printer.



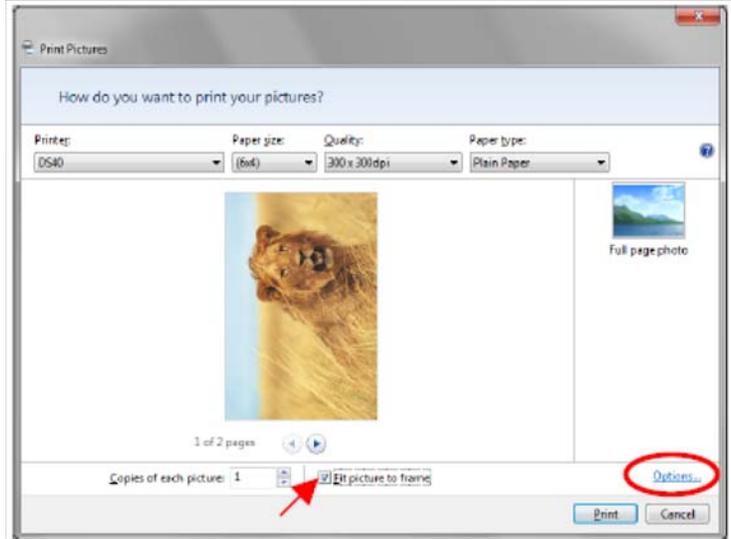
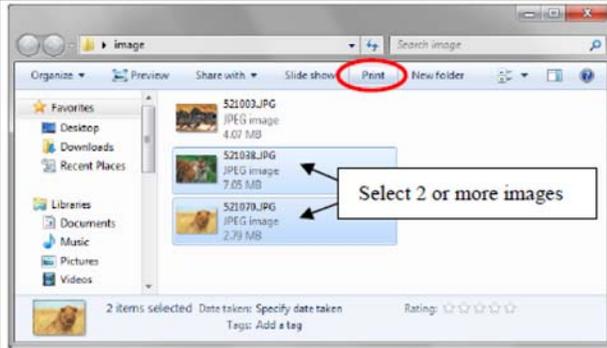
Example 2: How to avoid having the image cut off (keeping the original image)

Before sending the images to the printer, the images are adjusted to the same size, so that the 1” that will be cut off from the second image (to make the 8x10 print) is blank, and the original image is retained.

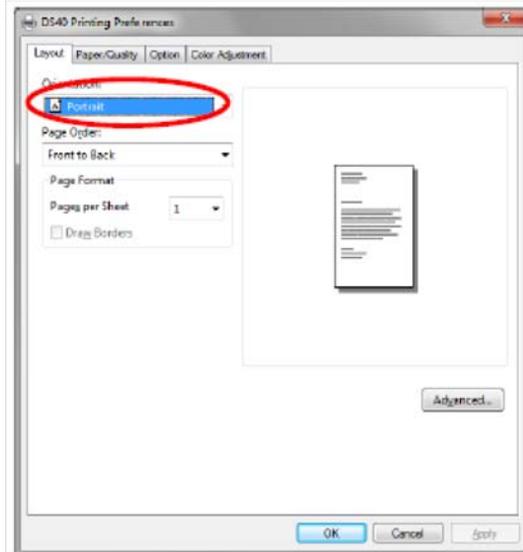
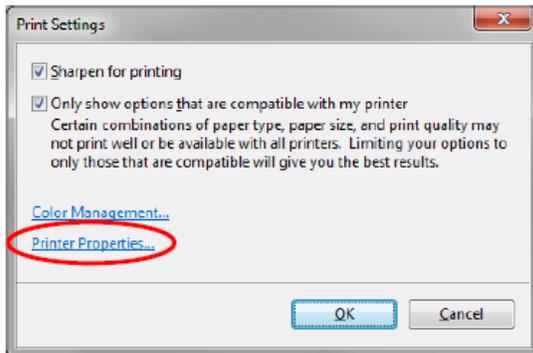


Example of Application use (Windows Explorer)

1. Select 2 or more images, and click Print, then check "Fit Picture of Frame", and click "options"

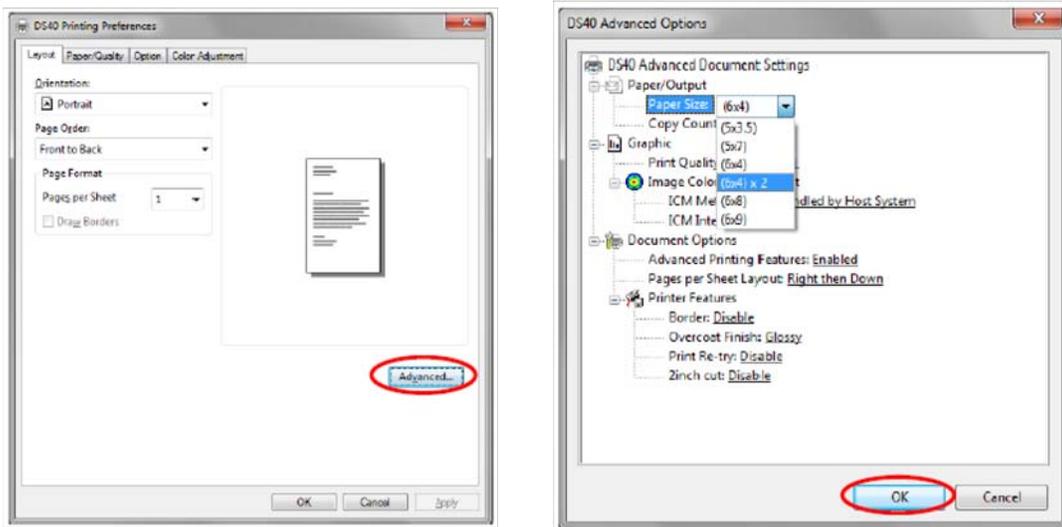


2. Click on "Printer Properties", and from the "orientation" pull down menu, select Portrait.

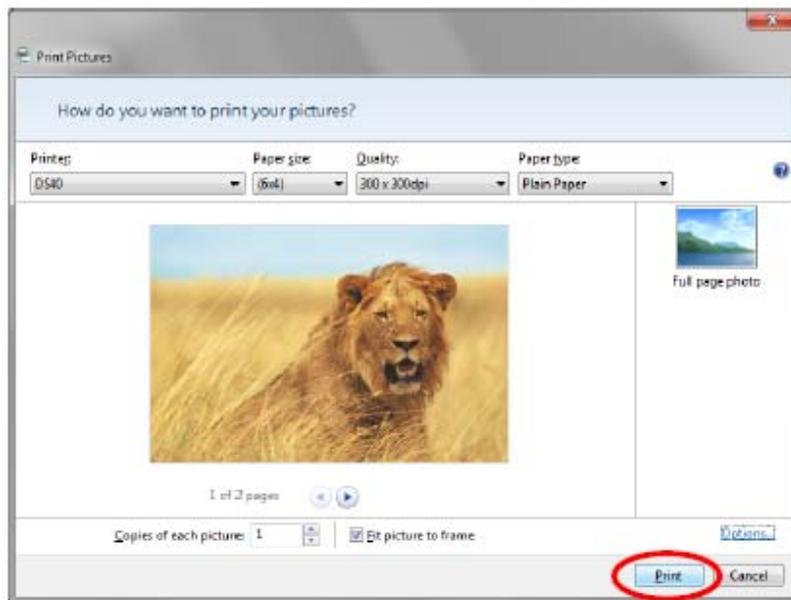


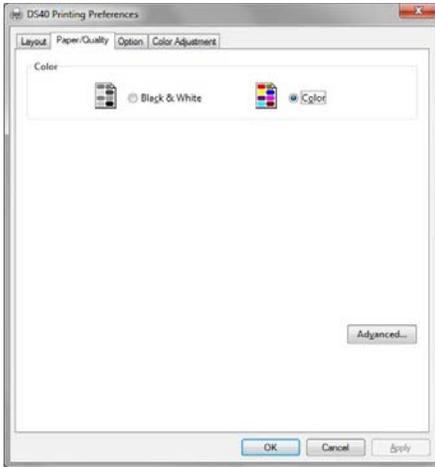
Multiple Image Layout

3. Click on "Advanced," and Set the Paper Size to "(6x4)x2". Then click "OK" on both Advanced and Printing Preferences options windows to return to the Print Picture screen.



4. Click on "print."



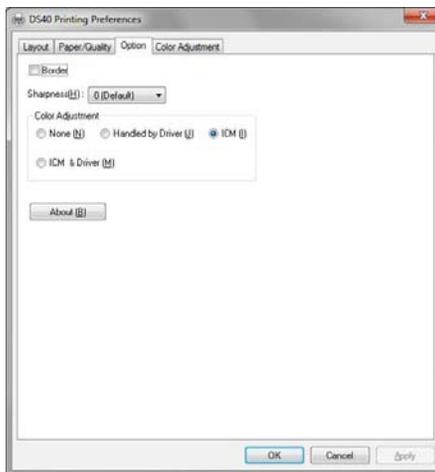


Paper/Quality Tab



Attention

Color settings should ALWAYS be set to Color.
Do NOT select black and white printing.



Paper Options Tab

Border

Check the box if you want to add a border to your prints.

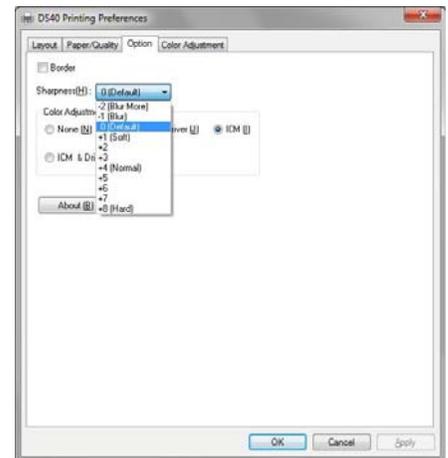


Note

Border setting syncs with the settings in
Advanced Settings > Border

Sharpness

Processes for 11 separate sharpness levels (see image at right), where 0 means there is NO sharpness processing. Moving to (-) negative numbers will blur the image, and moving to (+) positive numbers will increase the sharpness.



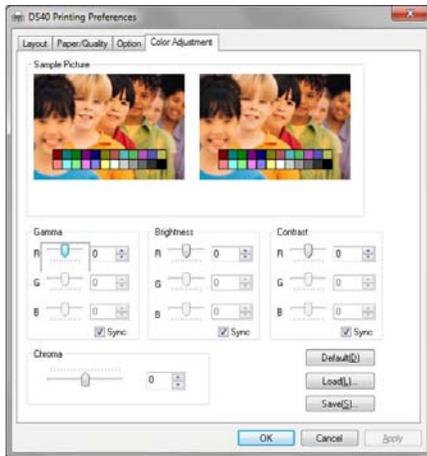
Color Adjustment

(syncs with the ICM method in Advanced Settings)

- **None:** disables the ICM and Color Adjustment tab, and color management will not be handled by the driver.
- **Handled by Driver:** disables the ICM and enables Color Adjustment tab.
You can adjust gamma, brightness, contrast and chroma.
- **ICM:** enables the ICM from the host system, and enables color management from the driver.
- **ICM & Driver:** ICM and color adjustment are enabled.

About

displays the driver version



Color Adjustment Tab

If you check **Handled by Driver** in the **Paper Options Tab**, you can now use this tab to adjust the Gamma, Brightness, Contrast, and Chroma of your images.

Use the following range chart to adjust your image:

Setting ranges in the Color Adjustment tab are as follows:

Adjustment Item	Adjustment Value
Gamma	-100(dark) ~ 100(light) (0 means no adjustment, Gamma 2.0 ~ 0.5) Adjusts the density of the highlights in the image. The greater the gamma value, the brighter the highlights. Synchronous check box ON : Sets RGB at the same value OFF:Sets RGB at a different value
Brightness	-100(dark) ~ 100(light) (0 means no adjustment) Adjusts the brightness of the image. The larger the value, the greater the overall brightness of the image. Synchronous check box ON :Sets RGB at the same value OFF:Sets RGB at a different value
Contrast	-100(weak) ~ 100(strong) (0 means no adjustment) Adjusts the contrast of the image. The larger the value, the greater the contrast. Synchronous check box ON : Sets RGB at the same value OFF: Sets RGB at a different value
Chroma	-100(weak) ~ 100(strong) (0 means no adjustment) Adjusts the color saturation of the image.

DEFAULT VALUES FOR VARIOUS SETTINGS

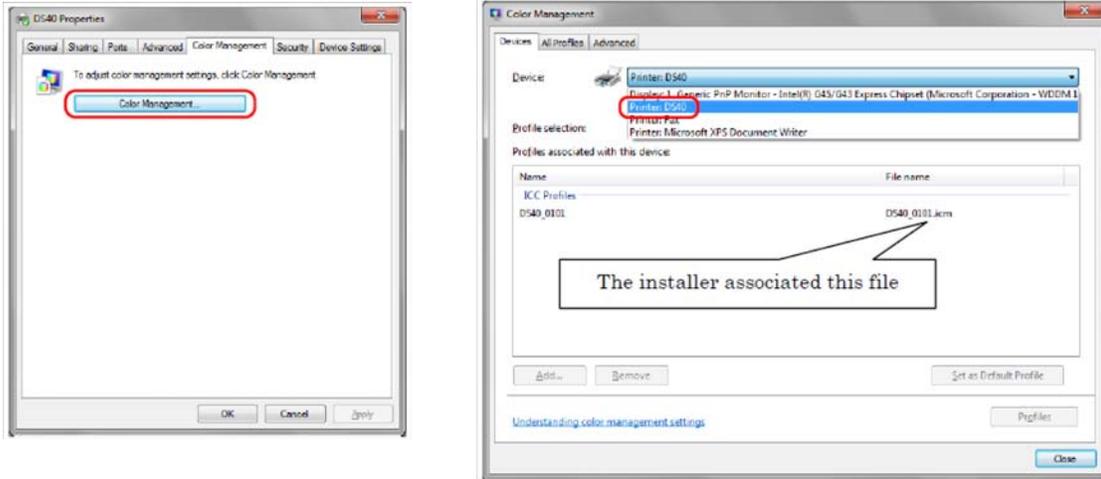
Default values for each option (at the time of installation) are shown below. If the printer driver does not work correctly after changing these options, please return the options to the default settings.

Tab	Options		Default	
Layout	Orientation		Portrait	
	Page Order		Front to Back	
	Pages Per Sheet		1	
Paper/Quality	Color		Color	
Option	Border		Disable	
	Sharpness		0 (Default)	
	Color Adjustment		ICM	
Color Adjustment	Gamma		0	
	Brightness		0	
	Contrast		0	
	Chroma		0	
Advanced (Click [Advanced] button of Layout tab)	Paper/Output	Paper Size	DS40 (6 x 4) DS80 (8x10)	
		Copy Count	1	
	Graphic	Print Quality	300 x 300dpi	
		Image Color Management	ICM Method	ICM Handled by Host System
			ICM Intent	Pictures
	Document Option	Advanced Printing Features		Enable
		Pages per Sheet Layout		Right then Down
		Printer Features	Border	Disable
			Overcoat Finsh	Glossy
			Print Re-try	Disable

COLOR MANAGEMENT

Color Management designates the color profile. Default at installation is [DS40_XXXX], where XXXX is a four-digit number that refers to the version.

Select the Color Management tab in the Printer Properties, and click on the Color Management button, then choose the printer DS40 from the device listed.



PRINT AREA

Depending on the paper size designated at the driver, the image and DPI will be as below:

Model	Paper	Size (inch)	Print Area (mm)	300 x 300 DPI Dot amount	300 x 600 DPI Dot amount
DS40 / DS80 (*)	(5x3.5)	3.5" x 5"	92.1 x 131.1	1088 x 1548	2176 x 1548
	(6x4)	4" x 6"	105.0 x 156.1	1240 x 1844	2480 x 1844
	(5x7)	5" x 7"	131.1 x 181.0	1548 x 2138	1548 x 4276
	(6x8)	6" x 8"	156.1 x 206.2	1844 x 2436	1844 x 4872
	(6x9)	6" x 9"	156.1 x 232.0	1844 x 2740	1844 x 5480
DS80	(8x4)	8" x 4"	207.3 x 104.6	2448 x 1236	2448 x 2472
	(8x5)	8" x 5"	207.3 x 130.0	2448 x 1536	2448 x 3072
	(8x6)	8" x 6"	207.3 x 155.4	2448 x 1836	2448 x 3672
	(8x8)	8" x 8"	207.3 x 206.0	2448 x 2436	2448 x 4872
	(8x10)	8" x 10"	207.3 x 257.0	2448 x 3036	2448 x 6072
	A4 Length	8" x 11.7"	207.3 x 297.0	2448 x 3544	2448 x 7088
	(8x12)	8" x 12"	207.3 x 307.8	2448 x 3636	2448 x 7272

*With the DS80 printer, the paper size (output size) can be designated as less than 8 inches, but the media used will be the DS80 8 inch width media.

UPDATING THE DRIVER

In order to update the printer driver, follow the steps below.



Note

Updating the driver is the same for both the DS40 and DS80 printers. The following instructions are for the DS40, but if you are using a DS80, it will be the same (read DS40 as DS80).

DRIVER REMOVAL

5. Before removing the printer-driver, shut down all other applications. In the **Devices and Printers** window, double-click the icon for the driver to be removed, and make sure there are no documents in the queue before you begin removal of the driver.

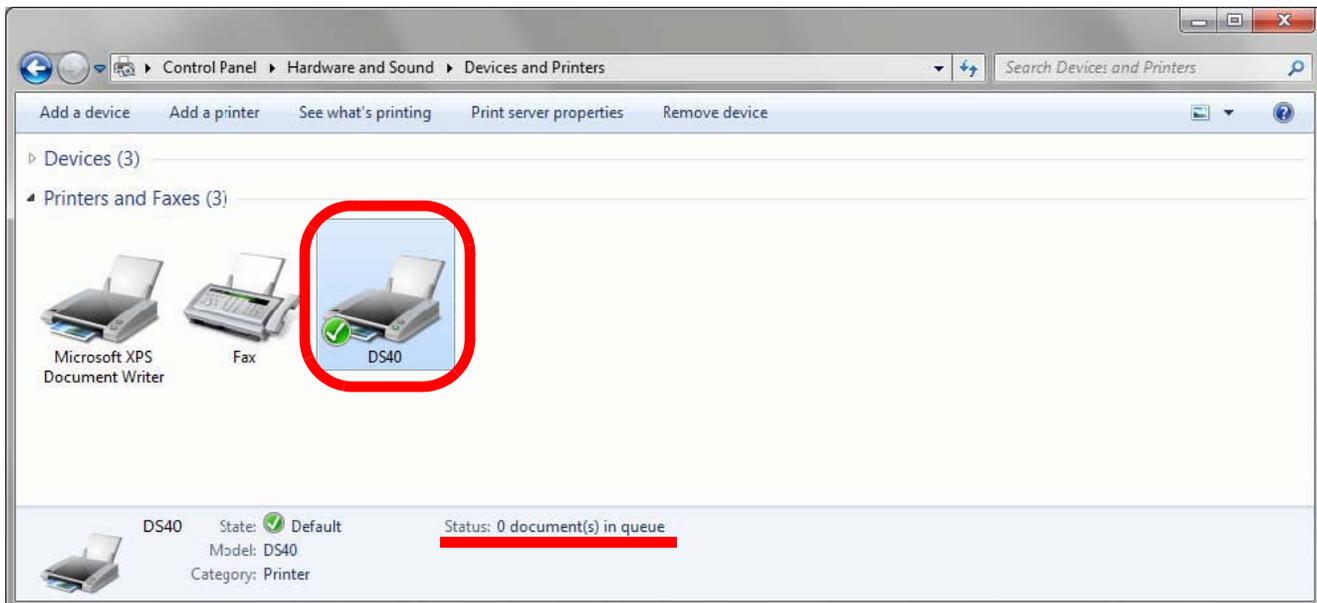


Figure 28. Devices and Printers Window

- From the **Devices and Printers** window right-click on the **DS** printer. Select **Remove Device** from the File Menu. When prompted *Are you sure you want to delete the printer 'DS40'?*, click **Yes**.

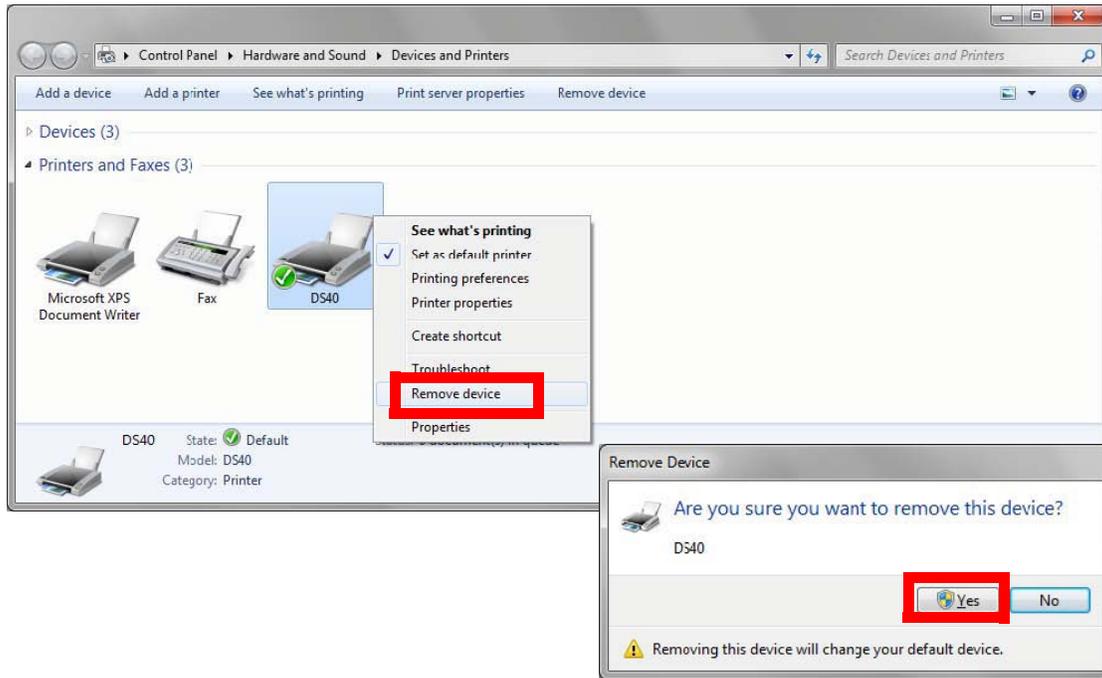


Figure 29. Remove Device

- After the DS40 printer has been removed, select another printer (for example: Fax), and click on **Print server properties** in the menu bar.

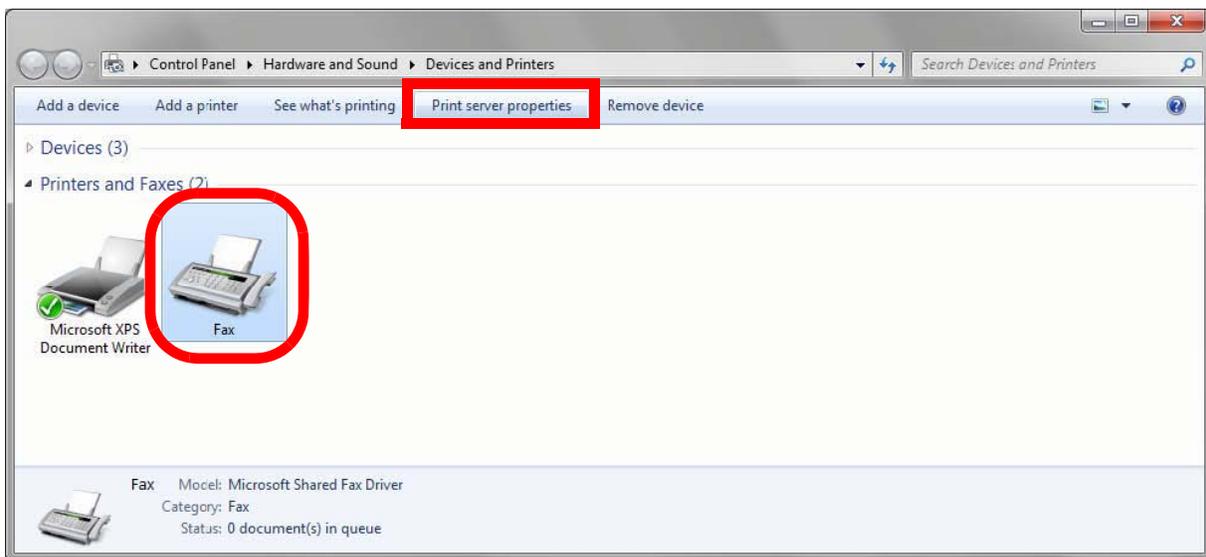


Figure 30. Print Server Properties in File Menu

- When the **Print Server Properties** window opens, click on the **Drivers** tab. From the list of installed printers, find your DS printer, and click the **Remove** button.

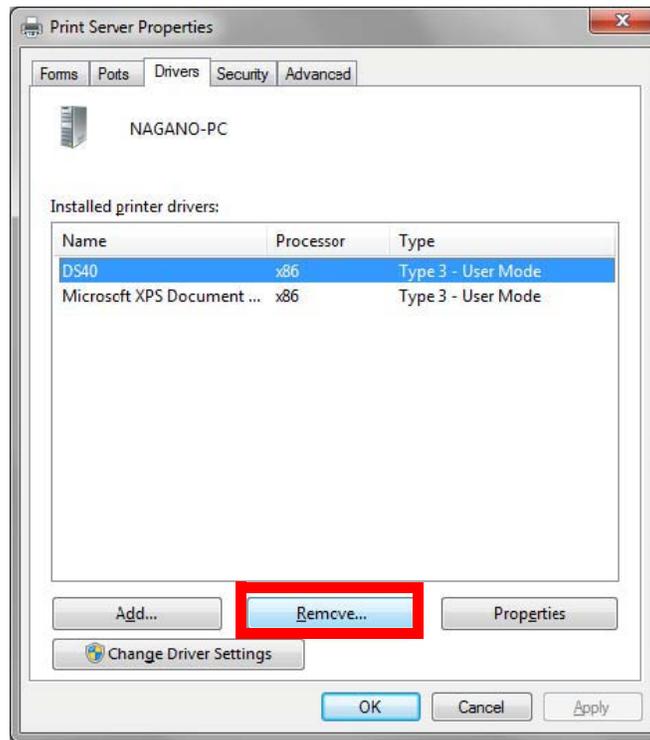


Figure 31. Print Server Properties Window

- When the **Remove Driver and Package** window appears, select **Remove driver only** and click on the OK button.



Figure 32. Remove Driver and Package Window



Note

Removal of the driver package takes place in the next section, **Uninstalling the Driver Package**.

10. When the **Print Server Properties** confirmation window opens, click the **Yes** button.

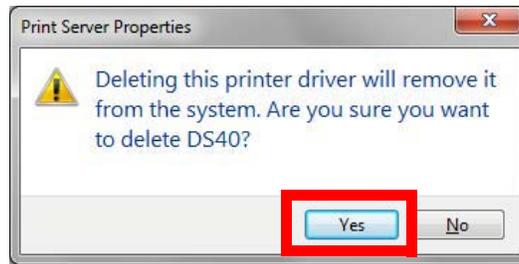


Figure 33. Print Server Properties confirmation window

11. Using the **Print Server Properties** window, confirm that your DS printer has been removed, and click the on the **Close** button.

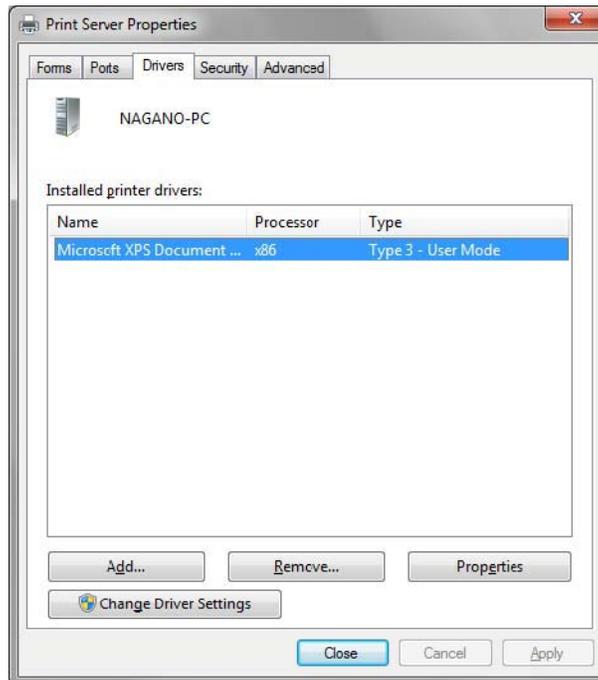


Figure 34. Remove Driver Package window

UNINSTALLING THE DRIVER PACKAGE

1. Select **Start**, then **Control Panel**. Click on **Uninstall a Program** in the Control Panel.

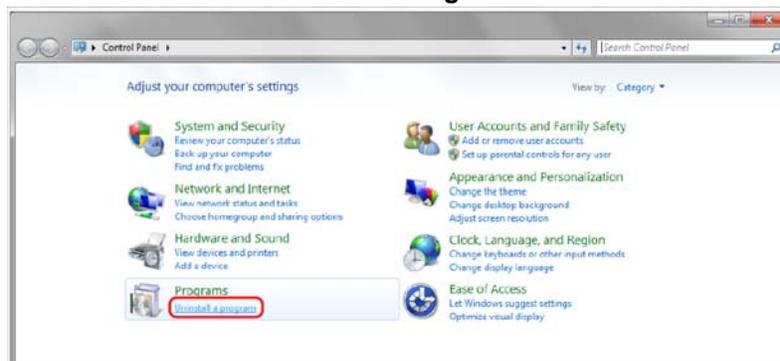


Figure 35. Control Panel

- When the **Uninstall or Change Name** window appears, double-click on **Windows Driver Package – Dai Nippon Printing DS40/DS80 (mm/dd/yyyy x.x.x.x)**.



Note

mm/dd/yyyy is the date. x.x.x.x is the version.

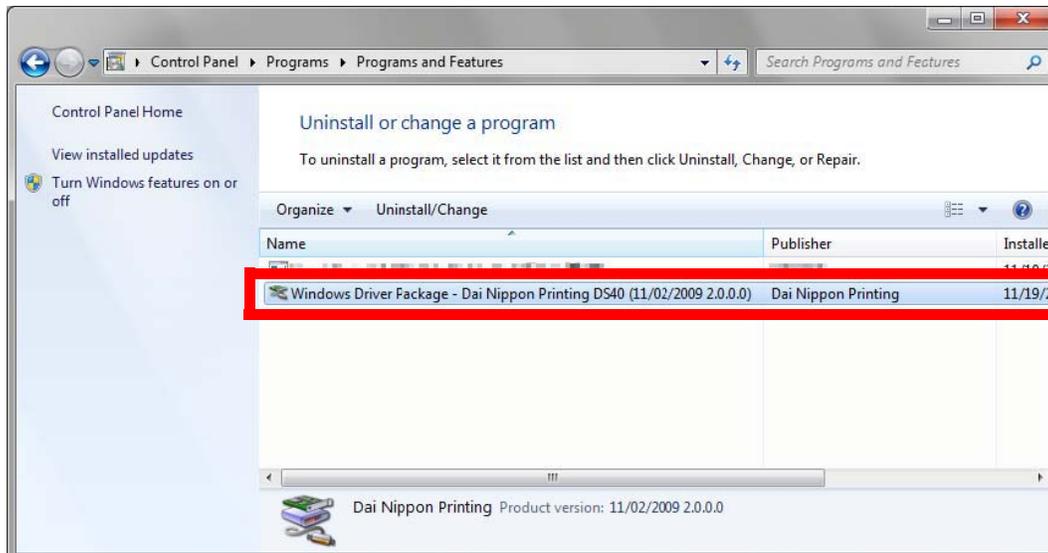


Figure 36. Uninstall or Change Name Window

- When the Uninstall Driver Package window appears, click on Yes. The uninstall will be complete.

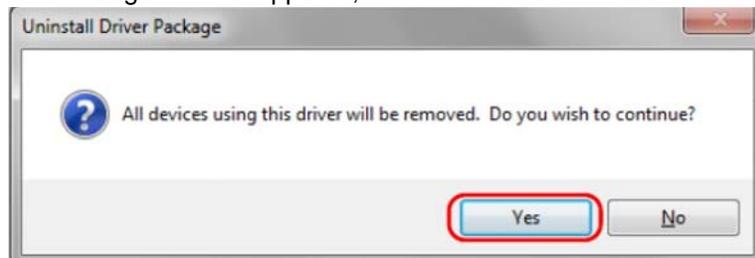


Figure 37. Uninstall Driver Package

- After you are finished uninstalling the driver package, reboot the computer.

INSTALLING THE PRINTER DRIVER UPGRADE

After removing the printer-driver and driver package, install the new printer-driver. For installation steps, please refer to Chapter 1.

REBOOTING THE COMPUTER

After installation of the printer-driver is complete, be sure to reboot the computer.



Attention

Do NOT print immediately after installation. First reboot the computer.

Rebooting the computer