DS-RX1

Printer Driver Instruction Manual

Version 1.01

DNP IMS America Corp.

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The ICC profile is prepared by the technology of X-Rite.

Concerning Safety Warnings
Please read the Instruction Manual well before using the printer, and follow all instructions carefully. The contents of the safety warnings and comments in the Instruction Manual concerning use met safety standards at the time of publishing.

Concerning Modification
The DS-RX1 printer and the DS-RX1 Printer Driver and CD contents were planned, developed, and manufactured by Dai Nippon Printing Co., Ltd.
For safety purposes, any modification is prohibited.

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Introduction

Thank you for purchasing this device. This document explains the handling and operation required to use this printer. Please read this document *well* before use. Be sure to read the "For Safe Operation" section carefully, and operate the printer correctly.

For Safe Operation

- Be sure to read this document before use. After reading, keep the manual in a safe place, where it can be re-read as needed.
- The warnings listed here are to ensure the proper use of the device, to prevent physical injury to the customer or other persons, and to prevent property damage. Please obey these warnings.

About "Warning" and "Caution"

The possible levels of injury or damage due to misuse are categorized below, and are listed as "Warning" and "Caution," according to the degrees of danger involved.

⚠️ **Warning**	Accidents caused by failure to heed the warnings accompanying this symbol could lead to serious or fatal injury.
⚠️ **Caution**	Accidents caused by failure to heed the warnings accompanying this symbol could lead to physical injury or property damage.

About the Symbols

Symbols shown have the following meanings:

⚠️	This symbol calls attention to contents of warnings and cautions. Details are indicated in or near this symbol.
🚫	This symbol indicated prohibited actions. Details are indicated in or near this symbol.
🔵	This symbol designates necessary actions, and relevant content. Details are indicated in or near this symbol.

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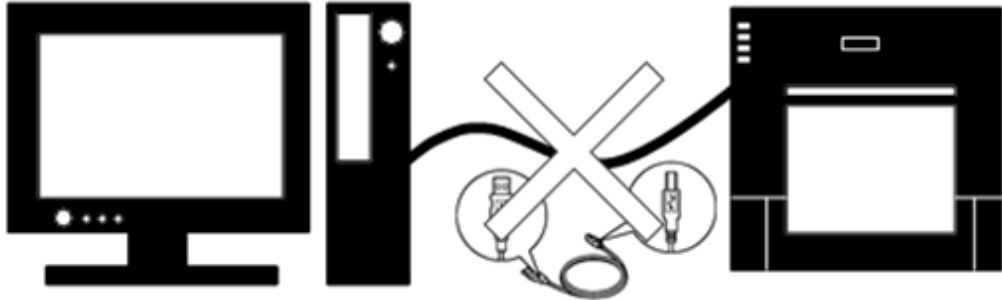# Contents

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Chapter One: Installation

Installation Flow

Follow the steps below. Details for each step are shown on subsequent pages.

STEP 1 Prepare the printer and computer → "1.1 Printer and Host computer Preparation"

Do not connect the USB cable at this step.
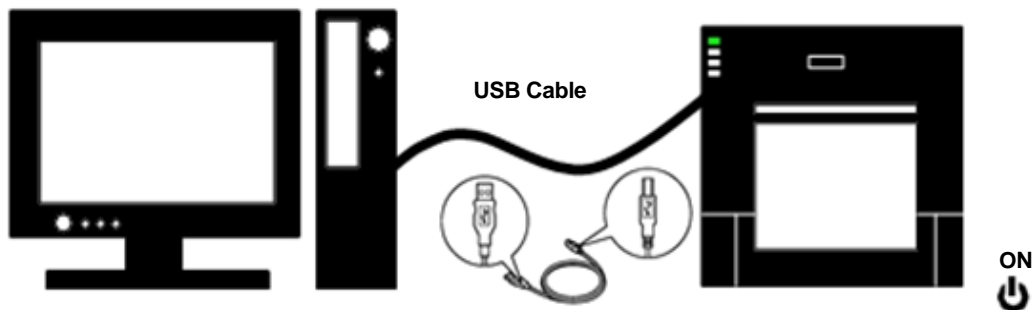
STEP 2 Install the driver package → "1.2 Installing the Driver Package"

Insert the accessory CD into the disk drive and install the driver package.

STEP 3 Install the printer driver → "1.3 Installing the Printer Driver"

USB Cable

ON

Connect the USB cable, turn the printer power ON, and install the printer driver.
After installation is complete, reboot the computer.

Printer and Host computer Preparation

Check that the power for the DS-RX1 printer is OFF.
Have a USB cable ready, but do not connect the printer to the computer with the USB cable at this point.

Attentio In order to install the driver you must be logged into an account with Administrator rights. All steps that assume login to an Administrator account.
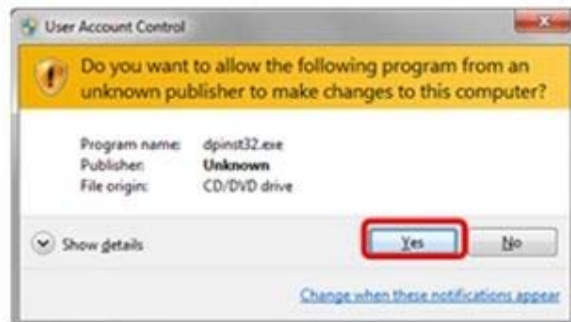
Installing the Driver Package

1. Insert the accessory CD into the disk drive.

2. Start Explorer, and click on the corresponding drive.
   If the AutoPlay function is on, select "Open folder to view files-using Windows Explorer."
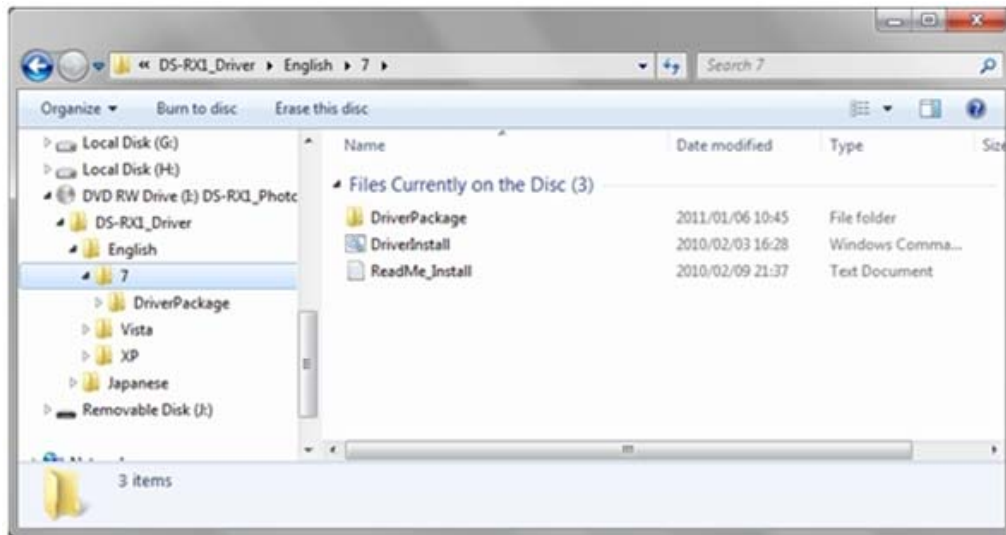
3. Select the following folders from the accessory CD:
   [CD Drive]\DS-RX1 Driver\English\7

4. If the User Account Control dialog appears, asking to allow the program to make changes to the computer, click on *Yes*.

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

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

7. This starts the Driver Package installation, wait until it is complete.
   When the *Completeing the Device Driver Installation Wizard* window appears, click on *Finish*.

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Installing the Printer Driver

1. Connect the printer to the computer with the USB cable, and turn the printer power ON. The printer will be recognized, and the driver installation should begin.
   *Please refer to the manual for the DS-RX1 printer for connection instructions if necessary.
2. When the driver installation begins, the message *Installing device driver software* will appear above the task bar.

3. By clicking on the message, the *Driver Software Installation* window will open showing the driver installation status. Click on *Close* to close the window.
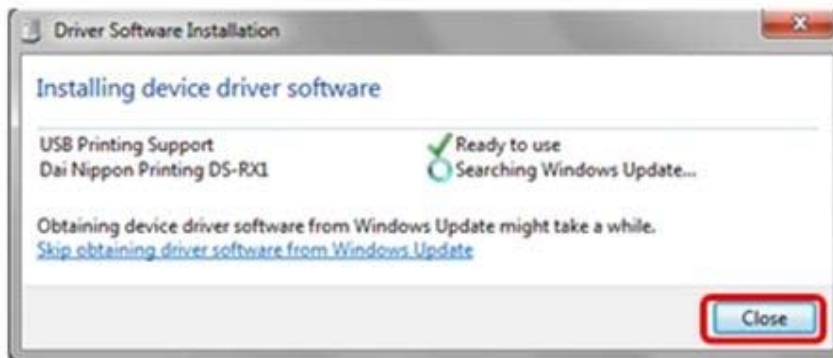
 NOTE: If the operating system is set up so that it will get the driver software from Windows Update, it will first search for the driver through Windows Update and will take more time to complete the installation. If you skip getting the driver software through Windows Update, you will decrease the installation time (depending on the environment, it may take some time to complete the installation).
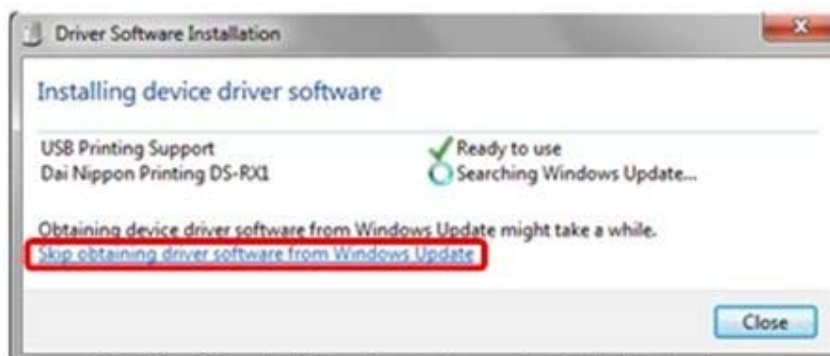
Click on *Skip obtaining driver software from Windows Update* in the *Driver Software Installation* window.

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4. When the confirmation window appears, click on *Yes*.

5. When the installation is complete, the message *Your device is ready to use* will appear above the task bar, and the printer driver installation will be complete.
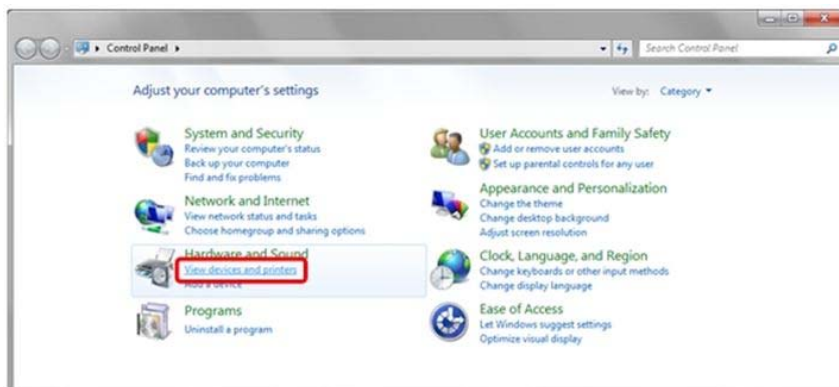

6. By clicking on this message, the *Driver Software Installation* window will be opened, and *Your device is ready to use* will be shown. Click on *Close* to close the window.
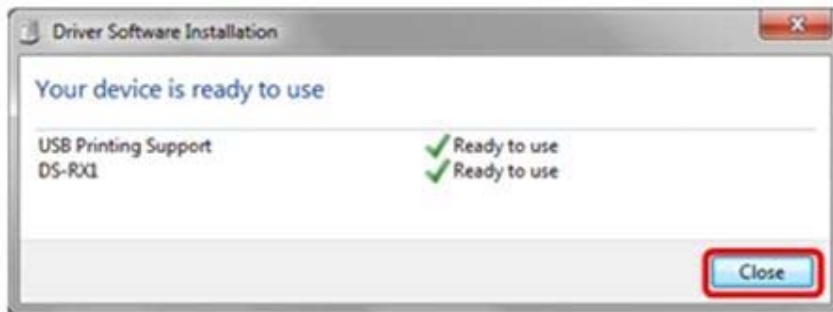
    If the *Driver Software Installation* window is shown from the start of installation, the message above will not be shown.

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

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8. Check that the DS-RX1 is shown in the *Devices and Printers* window.
   The installation of the DS-RX1 printer driver is complete.

9. After installation is complete, make sure to reboot the computer.

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Configuring the DS-RX1 as the receipt printer

1. If the DS-RX1 printer driver installation was unsuccessful, the message *Device driver software was not successfully installed* will appear above the task bar.

2. By clicking on this message, the *Driver Software Installation* window will be opened, and the message *Device driver software was not successfully installed* will appear. Click on the *Close* button.

   - If the *Driver Software Installation* window is shown from the start of the installation, the message above will not be shown.

   - If the driver installation was unsuccessful, refer to the next section: *Installing a Driver for an Unspecified Device* and install the printer driver.

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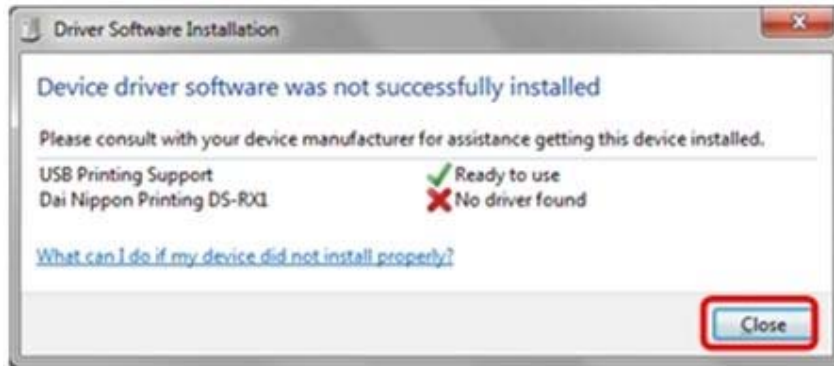
## Installing a Driver for an Unspecified Device

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. Using this method, the printer driver can be installed as follows. Also, when a driver is not installed correctly but the *Unspecified* device is created by the method of connecting a printer after installing the driver package of usual painter driver installation procedure, you can install the driver using the following method.

Installing the Driver Package:

If the driver package has not been installed yet, follow the procedure shown in *Installing the Driver Package*. When the driver package has been installed, the *Unspecified device installation* may be completed automatically.

### Installing a driver for an Unspecified device:

1. In the *Unspecified* device of the *Devices and Printers* window, right-click on *Photo Printer*, and click on *Troubleshoot* from the pull-down menu.
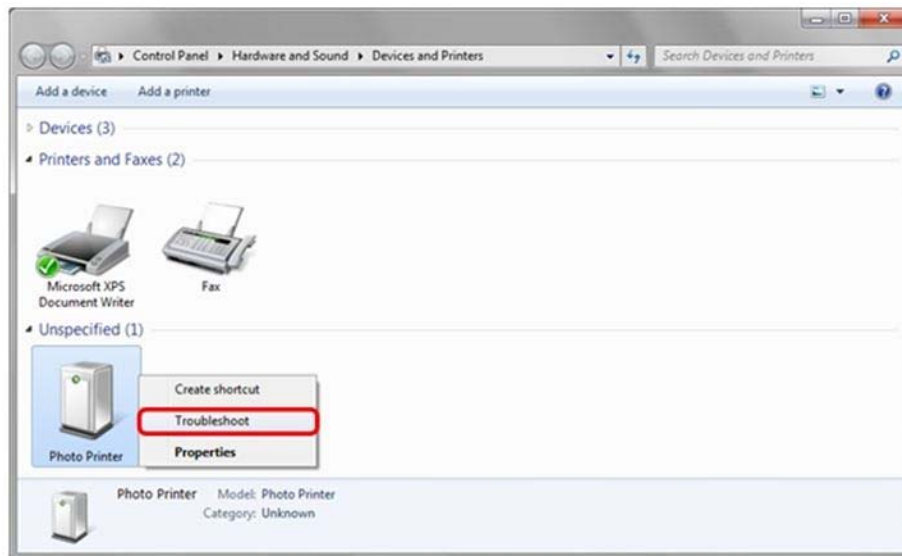

2. When the *Install a driver for this device* window appears, click on *Apply this fix*. It will automatically search for the driver and start the installation.

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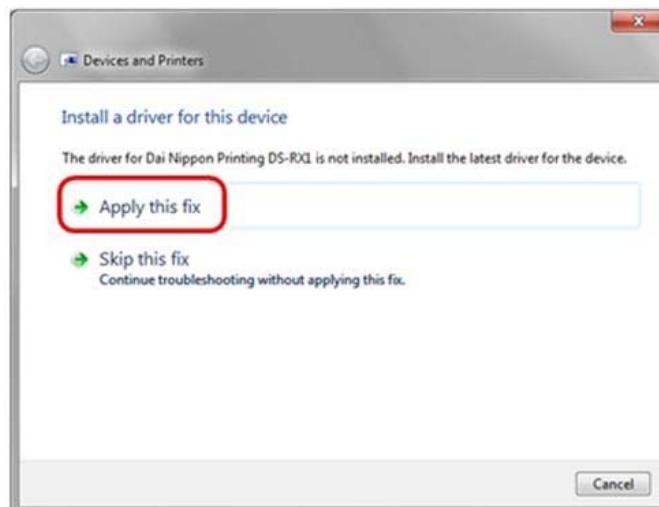
3. When the driver has been installed, *Troubleshooting has completed* will appear.
   Click on *Close the troubleshooter* to end the troubleshooting.
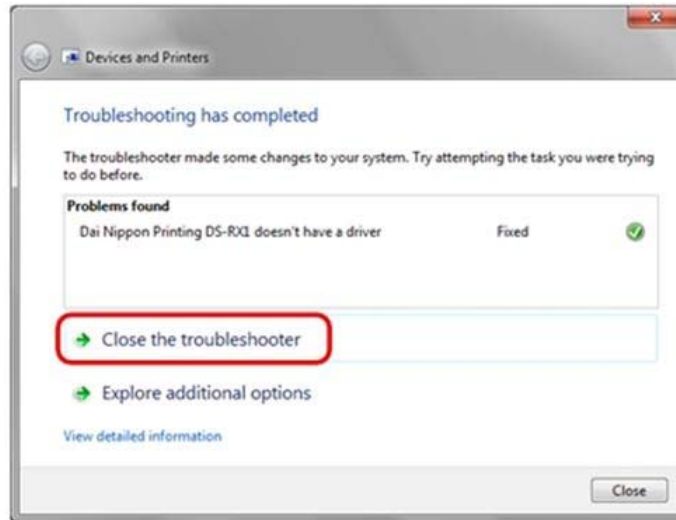
4. Check that the DS-RX1 is displayed in the Devices and Printers window.
   If it is displayed, the installation is complete.

5. Reboot the computer.

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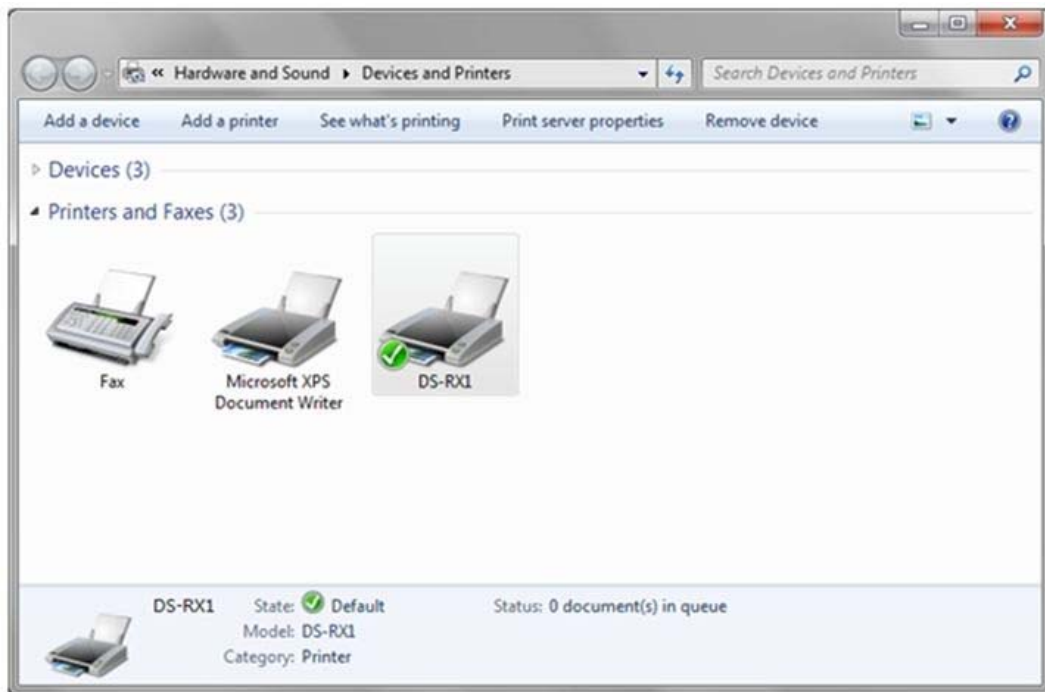
Chapter Two: Properties

Various printer settings can be made using the DS-RX1 Driver properties. As a rule, the printer settings should not be altered. Use the default settings present at installation.

Opening Printer Properties

1. Click *Start → Control Panel → open the control panel*
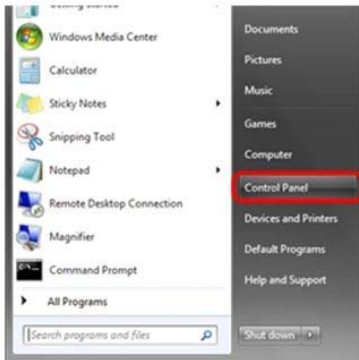
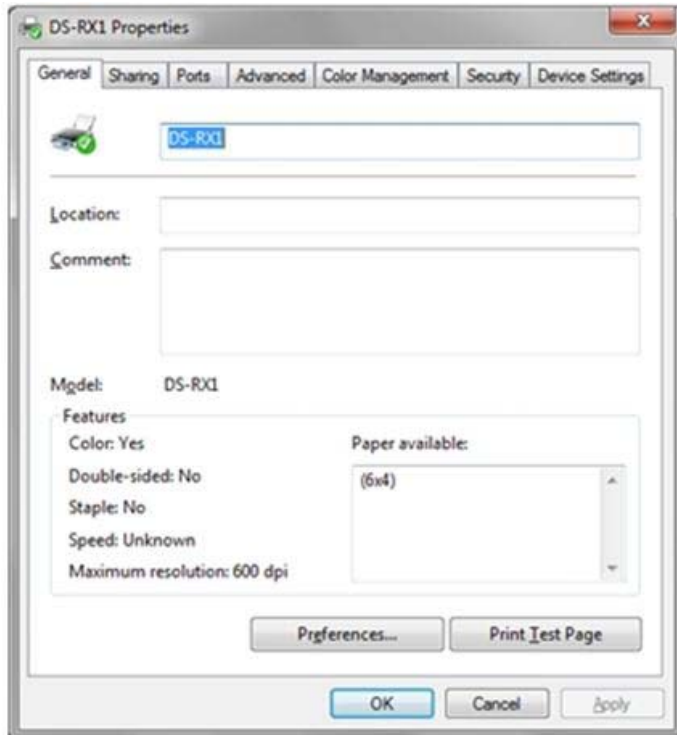2. In the control panel, select *View devices and printers → Open the Devices and Printers* window.

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3. Right-click on the DS-RX1 icon and select *Printer Properties* from the pull down menu. Open the *Properties* window.
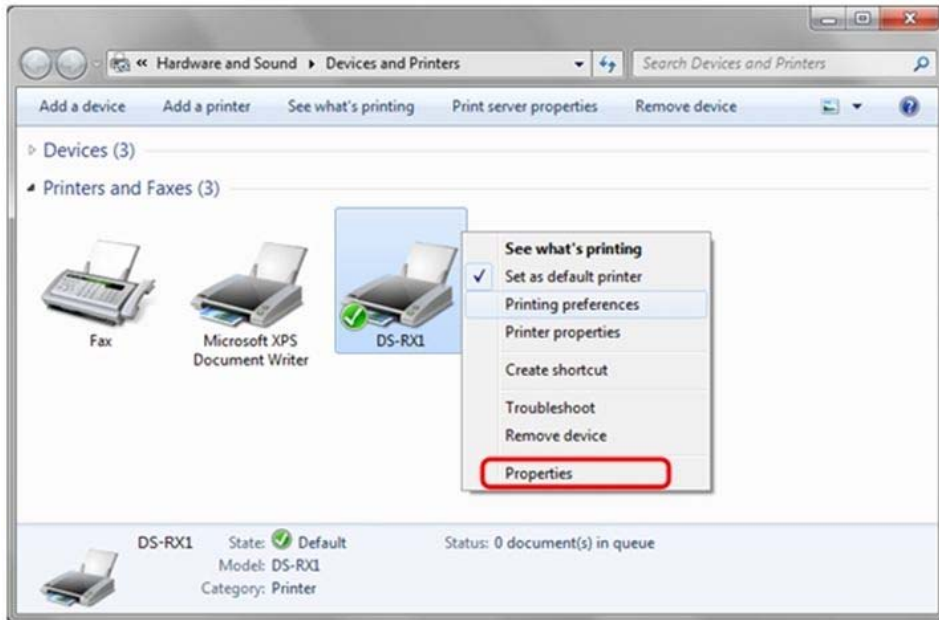
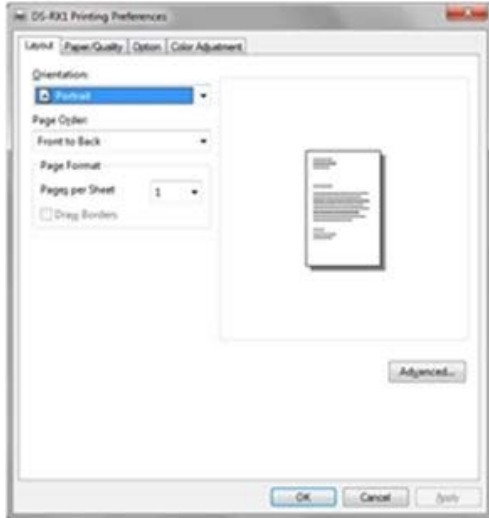4. The DS-RX1 Properties window will appear.

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Print Setting Functions

From the *Properties* window, by selecting *Preferences* you can make various print settings.
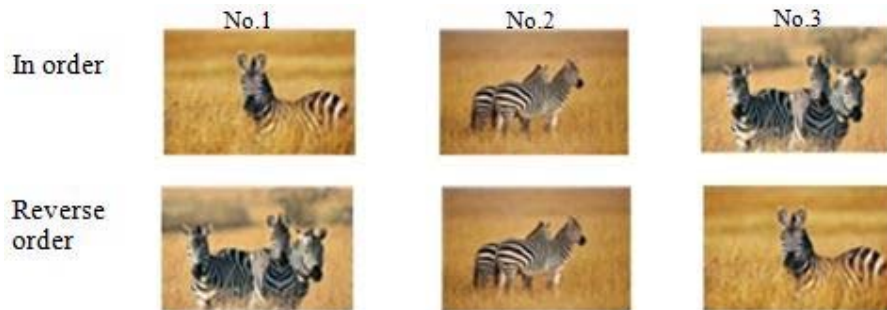
Layout Tab

Orientation

Assign print orientation as Landscape or Portrait. Refer to section on Print Direction.
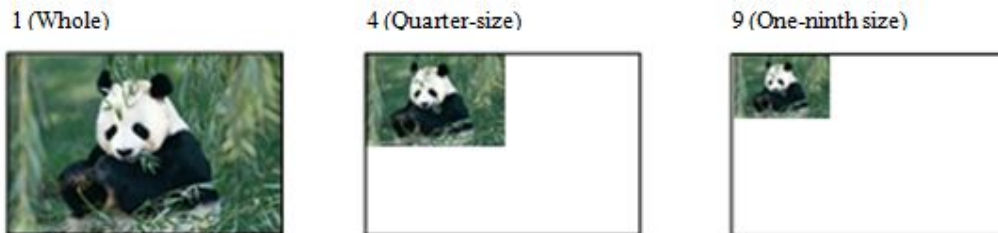
Page Order

When printing multiple images in the application, you can set the order.
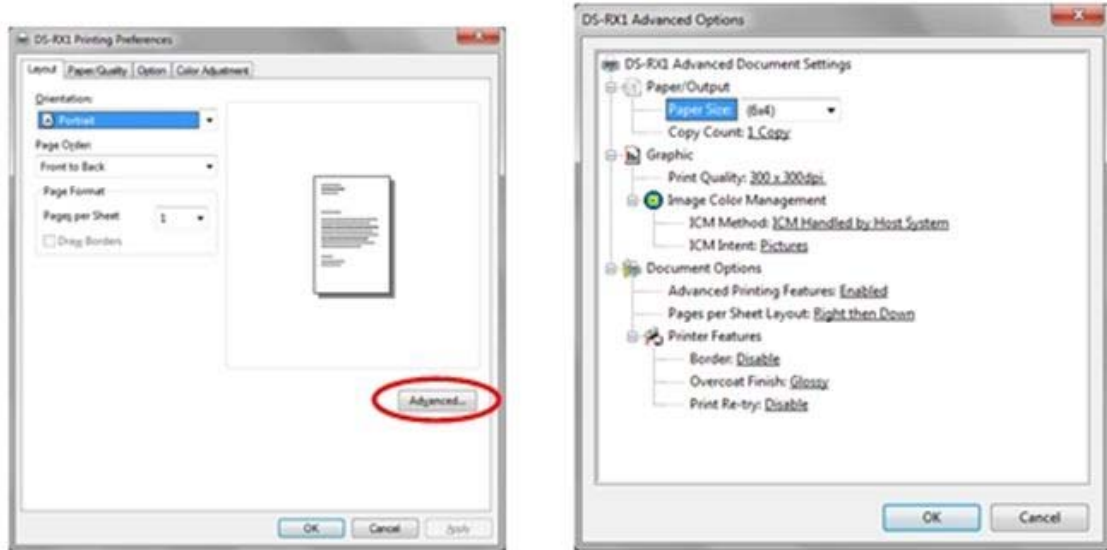
eg. Print Order

Pages per Sheet

Prints the designated fractional size.

eg. Fractional Size

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Advanced Options

By selecting *Advanced* in the Layout window, various settings can be made using *Advanced Options.*

Paper Size
You can designate the paper size. Please match the paper size to the media size installed in the printer.

Copy Count
You can designate the number of times an image will be printed.

Print Quality
You can designate the print quality. Please match the print quality to the printer settings.

ICM Method

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
This designates the rendering method when using ICM. Always have the ICC profile for the DS-RX1 set to *Picture*. Please do not use it at other settings.

Advanced Printing Features
Always set to *Enabled*. Please do not use other settings.

Pages per Sheet Layout
The layout direction of a picture specified, when *Pages per Sheet* setting is multiple pages per sheet.

Border
Synchronous with the border option in the paper option.

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Overcoat Finish

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

Overcoat Finish	Function
Glossy	2.2.4 Synchronous with *Color Management: None* in paper option.
Matte	2.2.4 Synchronous with *Color Management: ICM* in paper option. Performs color management with the driver.

Print Re-try

This sets up whether print data in the printer buffer will print after error recovery, or will not print.

ICM intent	Function
Diable	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 to print. 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.

According the contents of a printer error, the power supply of a printer needs to be re-switched on for error recovery. In this case, it is not dependent on a set up of "Print Re-try" and printed data in a printer buffer is cleared. Operation by Print Re-try in each error is shown below.

Contents of an error	Print re-try setup is **Disable**	Print Re-try set up is **Enable**
Paper End Ribbon End Cover Open Paper Jam (*1) Ribbon Error (*1) Paper Definition Error	Please resend the picture data not printed after the 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.
Data Error Head Position Error Power Supply Fan Stop Cutter Error Head Voltage Error Abnormal Head Temp. Abnormal Media Temp. Ribbon Tension Error RFID Module Error System 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. Please resend the picture data not printed after printer restarts.	For error recover, 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 isf the Print Re-try function is set to "Enable." Please resend picture data not printed after printer restarts.

*1: After an error stop, a paper or a ribbon should perform removal work of an error factor according to a printer user's manual.

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[Multiple layout]
When the DS-RX1 is using 6x8 size media, 2 image layout is possible.
With the printer driver paper setting, multi-image layout is possible, and the image sizes are as follow:

Layout designation

Driver paper setting (layout)	Paper Orientation	Image size Widthxheight (mm)	Using Media
(6x4) x 2	Portrait	(156.0 x 105.0) x 2	6x8
	Landscape	(105.0 x 156.1) x 2	
PR (4x6) x 2	Portrait	(105.0 x 156.1) x 2	6x8
	Landscape	(156.0 x 105.0) x 2	
Image layout median size		2.54	

Multiple layouts are possible under the following conditions:
1. The printer is using 6x8 size media.
2. The printer driver paper size is set to one of the above sizes.
3. Multiple images are sent from the application.

NOTE: Because the multi-image layout occurs on a per job basis, this works when there are multiple images for 1 job. If you want to print the same image, be sure to send the image data for each copy to be printed. The printer prints 2 images in one operation, and the paper is cut as it is fed out.

[Multi-image layout patterns]
The following is possible for the multi image layout pattern.

Layout for 1 sheet with 2 same-size images

Cut as sheet is fed out

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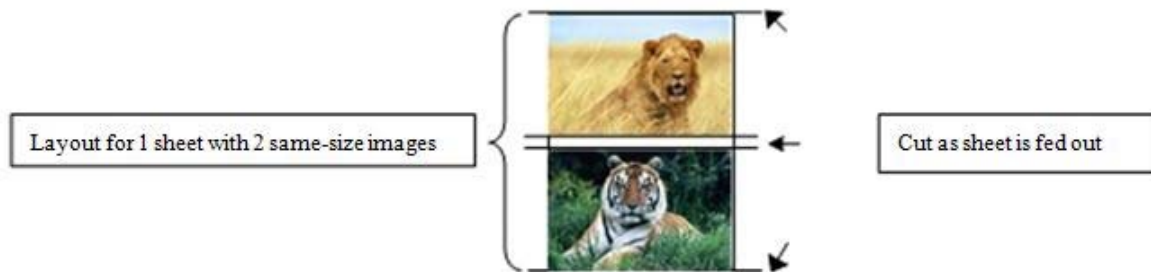
[Example of Application Use]
These examples use Windows Explorer
1. Select 2 or more images, and click *Print*.
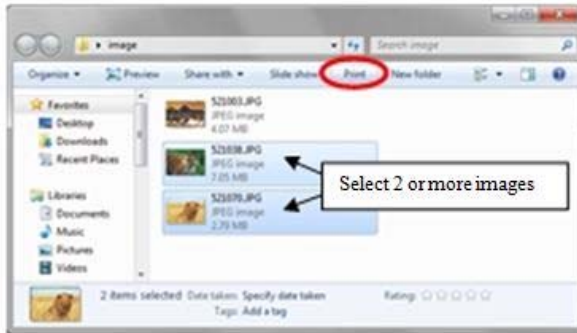
2. Check *Fit picture to frame* and click *Options*.
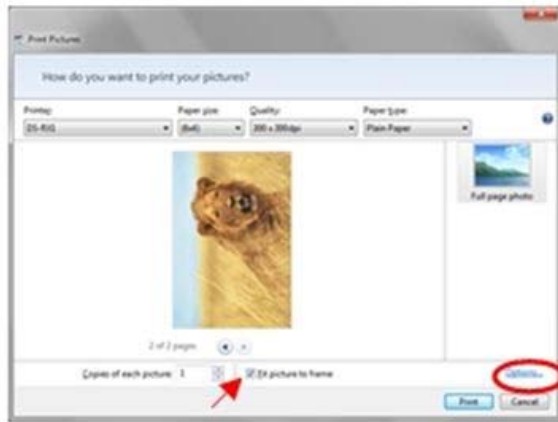
3. Click on *Printer Properties*.
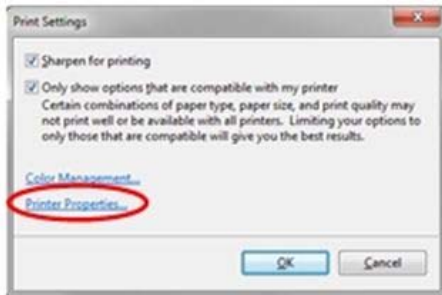
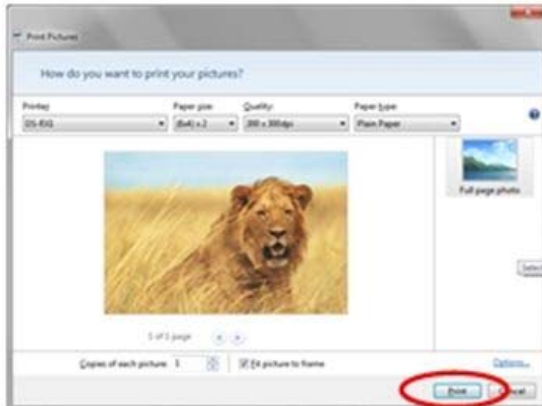4. From the *Orientation* pull-down menu, select *Portrait*.

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5. Click on *Advanced*.
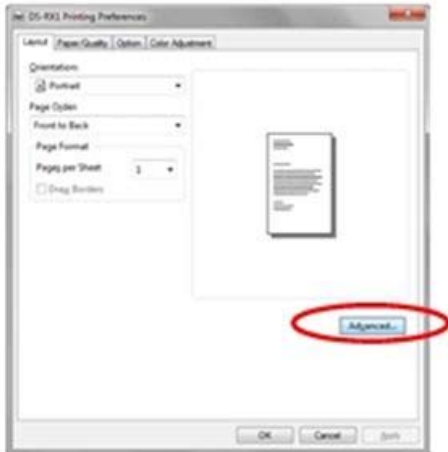
6. Set the paper size to *(6x4)x2*.
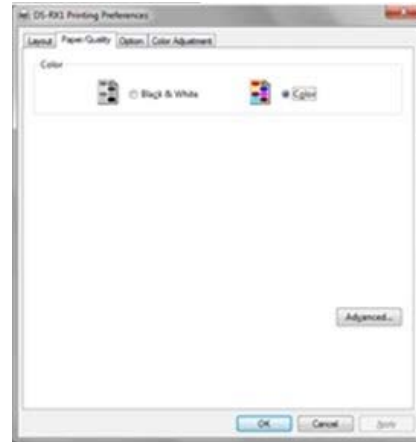   Then click *OK* on the windows from steps 6→5, returning to the window displayed in Step 2.

7. Click on *Print*.

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Paper Quality

Color
Please set to color prints. Do not use for black and white printing.

Option

Paper Option Tab	Sharpness Setting

Border
Designates yes or no for border (check means → border). Sane as border in the *Advanced Settings*.

Sharpness
0 is the initial setting, and there is no sharpness processing.
- blurs the image **+** increases the sharpness

Color Adjustment
None
Checking disables the ICM and the *Color Adjustment* tab, and is not done by the driver.
Handled by Driver
Checking this item disables ICM and *Color Adjustment* is enabled. The adjustment values for gamma, brightness, contrast, and chroma are shown.
ICM
Synchronous with the ICM Method in the *Advanced Settings* (ICM Handled by Host System). Checking this item enables color management from the driver.
ICM & Driver
If you check this, ICM (color management) and color adjustment will be enabled.

About
Displays the driver version.

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Color Adjustment

If you check *Handled by Driver* in *Options* the respective color adjustment values in the Color Adjustment tab are shown here:
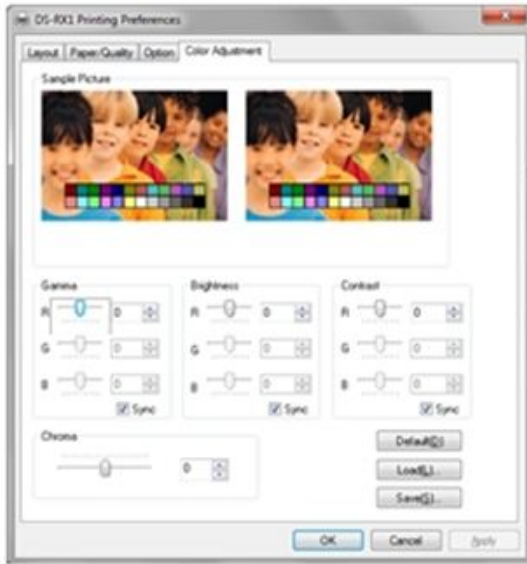
Setting ranges in the Color Adjustment goes as follows:

Adjustment Item	Adjustment Value

Gamma	-100 (dark) ~ 100 (light) where 0 means NO adjustment. Gamma ranges 2.0 ~ 0.5
	Adjusts the density of the highlights in the image. The greater the gamma value, the brighter the highlights.
	  ON : Sets RGB at the same value
	  OFF : Sets RGB at a different value

Brightness	-100 (dark) ~ 100 (light) where 0 means NO adjustment.
	Adjusts the brightness of the images. The larger the value, the greater the overall brightness of the image.
	  ON : Sets RGB at the same value
	  OFF : Sets RGB at a different value

Contrast	-100 (weak) ~ 100 (strong) where 0 means NO adjustment.
	Adjusts the contrast of the image. The larger the value, the greater the contrast.
	  ON : Sets RGB at the same value
	  OFF : Sets RGB at a different value

Chroma	-100 (weak) ~ 100 (strong) where 0 means no adjustment Adjust 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 the options, please return the options to the default settings.

NOTE: According to the Service Pack and use environment of OS, the default value at the time of installation may differ from the following chart.

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		(6x4)
		Copy Count		1
	Graphic	Print Quality		300 x 300 dpi
		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 Finish	Glossy
			Print Re-try	Disable

Color Management

In *Color Management,* this designates the color profile. Default at installation associates [RX1.icc].

Select Color Management tab in Printer Properties, and click on Color Management button.
Choose the DS-RX1 from a device.

The installer associated this file

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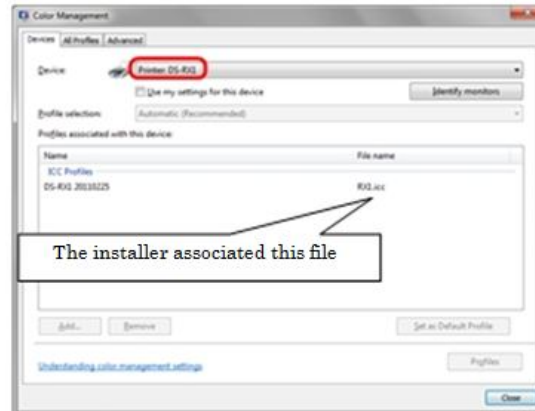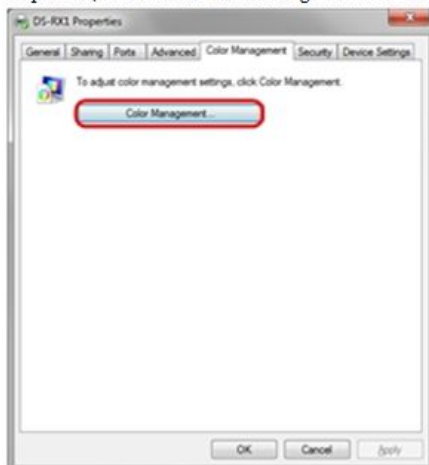
Print Area

Paper	Paper Orientation	Images size (width x height)		Image pixel amount (width x height)		
		Inches	mm	300x300 dpi	300x600 dpi	600x600 dpi
(5x3.5)	Portrait	5"x3.5"	131.1 x 92.1	1548 x 1088	1548 x 2176	3096 x 2176
	Landscape	3.5" x 5"	92.1 x 131.1	1088 x 1548	2176 x 1548	2176 x 3096
(6x4)	Portrait	6" x 4"	156.1 x 105.0	1844 x 1240	1844 x 2480	3688 x 2480
	Landscape	4" x 6"	105.0 x 156.1	1240 x 1844	2480 x 1844	2480 x 3688
(5x7)	Portrait	5" x 7"	131.1 x 181.0	1548 x 2138	1548 x 4276	3096 x 4276
	Landscape	7" x 5"	181.0 x 131.1	2138 x 1548	4276 x 1548	4276 x 3096
(6x8)	Portrait	6" x 8"	156.1 x 206.2	1844 x 2436	1844 x 4872	3688 x 4872
	Landscape	8" x 6"	206.2 x 156.1	2436 x 1844	4872 x 1844	4872 x 3688
PR (3.5x5)	Portrait	3.5" x 5"	92.1 x 131.1	1088 x 1548	2176 x 1548	2176 x 3096
	Landscape	5" x 3.5"	131.1 x 92.1	1548 x 1088	1548 x 2176	3069 x 2176
PR (4x6)	Portrait	4" x 6"	105.0 x 156.1	1240 x 1844	2480 x 1844	2480 x 3688
	Landscape	6" x 4"	156.1 x 105.0	1844 x 1240	1844 x 1240	3688 x 2480

Print Direction

Regarding the print direction setting, the relationship between the application-generated image and the print (feed direction) is as shown in the following chart. The generated image is the image generated through enlargement/reduction to fit the size shown in *Print Area*, without having the application rotate the original image.

Original Image	Driver Setting						
	Orientation Setting	Paper Setting					
		(5 x 3.5) (6 x 4) (6 x 4) x 2		PR (3.5 x 5) PR (4 x 6) PR (4 x 6) x 2		(5 x 7) (6 x 8)	
		Generated image	Output image	Generated image	Output image	Generated image	Output image
	Portrait						
	Landscape						
	Portrait						
	landscape						

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Updating the Driver

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

Part 1: Driver Removal

1. Before removing the printer-driver, shut down all other applications. In the *Devices and Printers* window, select the printer icon of the printer you want to remove, check the bottom of the window to ensure that there are no documents in the queue, and start removal of the driver.
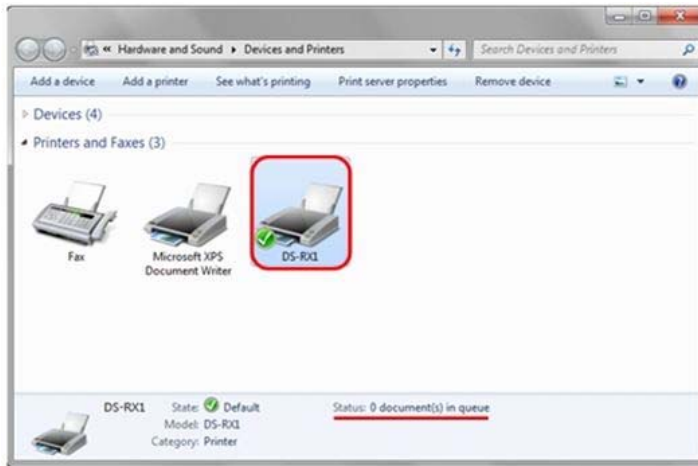

2. Select *Start → Control Panel* and click on *View devices and printers* in the control panel. From the *Devices and Printers* window, select DS-RX1 printer, right click to get the pull-down menu, and click on *Remove Device*.
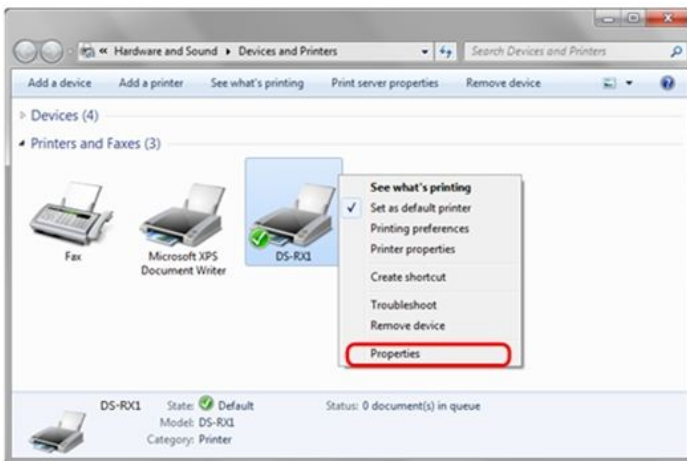

3. When *Are you sure you want to remove this device?* Appears, click on *Yes*.

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4. After the DS-RX1 printer has been removed, select another printer (for example: FAX) and click on *Print Server Properties* in the menu bar.
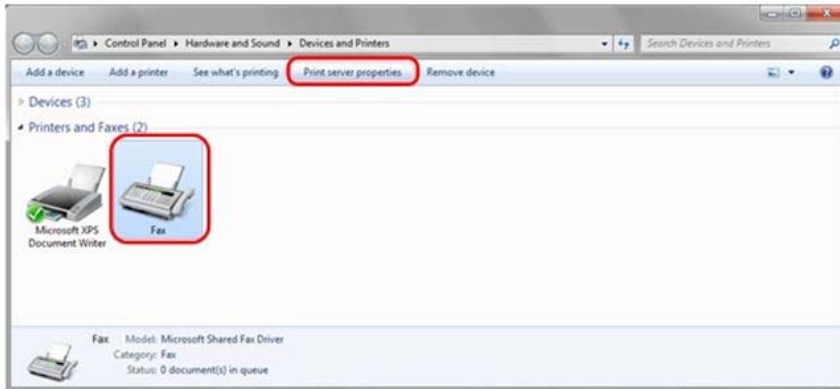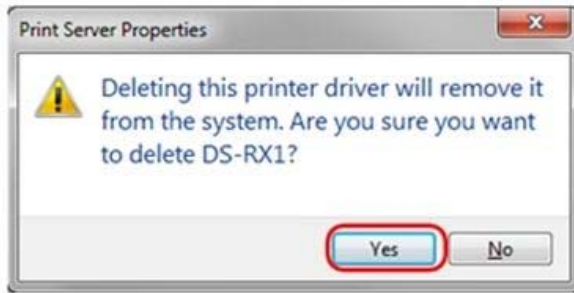

5. When the Print Server Properties window appears, clikc on the *Drivers* tab. From the list of installed printer drivers, select *DS-RX1* and click the *Remove* button.
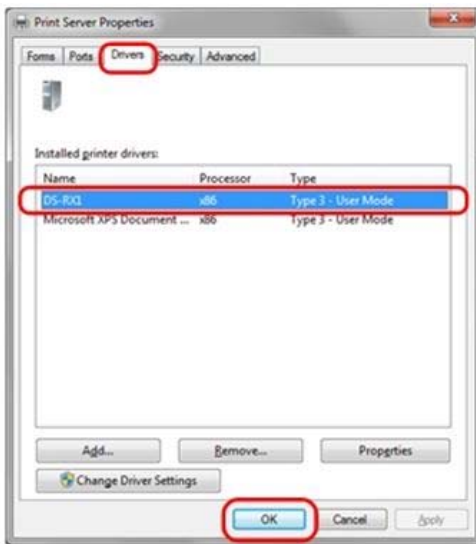

6. When the *Remove Driver and Package* window appears, select *Remove driver only* and click on the *OK* button. Removal of the driver package takes place in the next section: *Uninstalling a Driver Package*.

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7. When the Print Server Properties confirmation window appears, click on the *Yes* button.

8. Using the Print Server Properties window, confirm that *DS-RX1* has been removed, and click on the *Close* button. After removing the printer driver, uninstall the driver package.
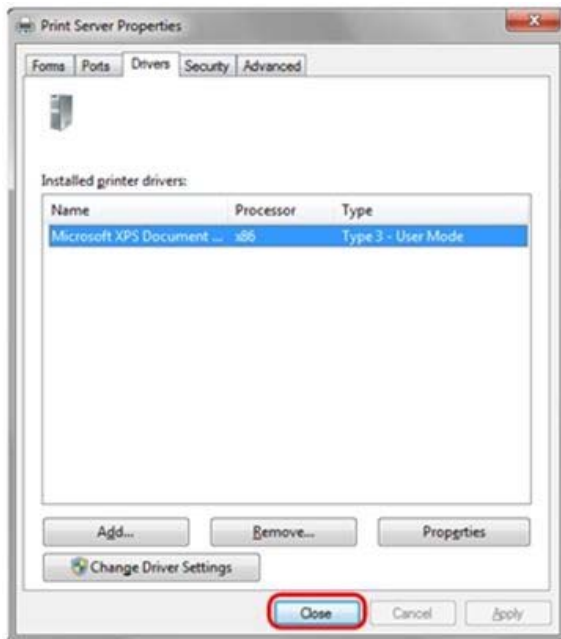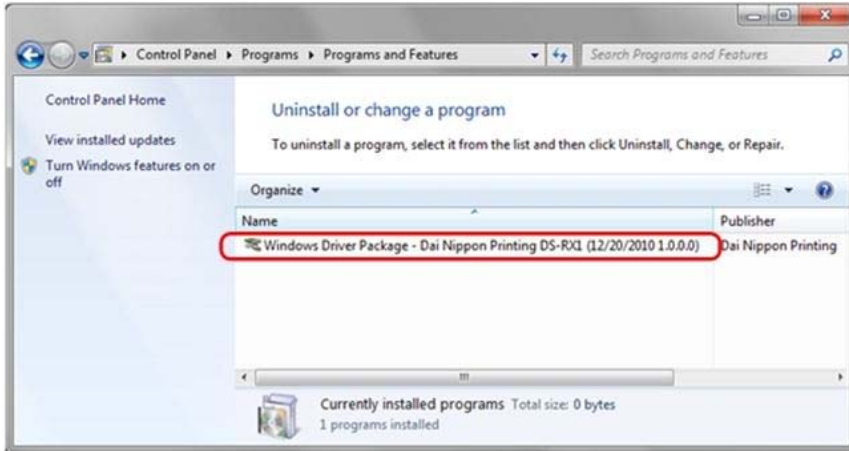

Part 2: Uninstalling a Driver Package

1. Select *Start*, then *Control Panel*, and open the control panel.
   Click on *Uninstall a program* in the control panel.

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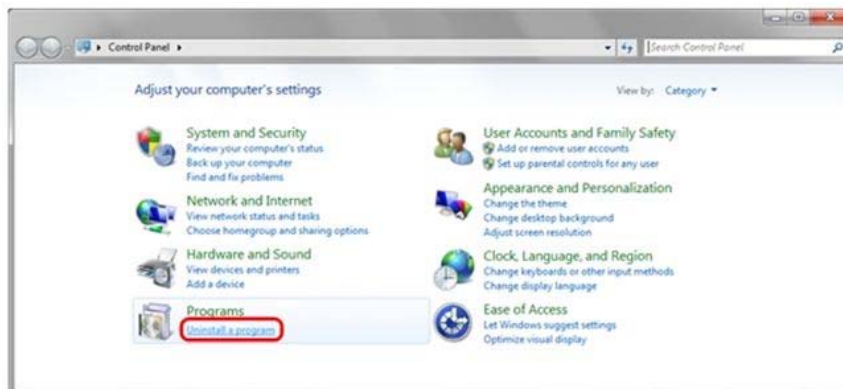
2. When the *Uninstall or change a program* window appears, double-click on *Windows Driver Package –
Dai Nippon Printing DS-RX1 (mm/dd/yyyy x.x.x.x)*. Where (mm/dd/yyyy = date) & (x.x.x.x = version).

3. When the *Uninstall Driver Package* window appears, click on *Yes.* The Uninstall will complete.
After you are finished with uninstalling the driver package, reboot the computer.

Part 3: Installing the printer-driver upgrade

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

Finish: Reboot the computer

After installation of the printer-driver is complete, be sure to reboot the computer.
Do NOT print immediately after installation; first reboot the computer.

Driver Removal

For steps to remove the printer driver, refer to Chapter 3: *Driver Removal* & *Uninstalling a Driver Package*.