



**Digital Photo Printer  
CHC-S2145  
Printer Driver  
Instruction Manual  
(PRELIMINARY)**

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## Using your printer with Windows computers

The supplied CHC-S2145 printer driver enables you to print an image stored on your computer with the CHC-S2145 digital photo printer. To print an image from the computer, you need appropriate application software that can open the image and print with the printer.

## System requirements

To use the supplied printer driver, you need a computer that meets the following system requirements:

OS: Windows 2000 Professional /

Windows XP Home Edition / Windows XP Professional (32 bit)

CPU: Pentium 150 MHz or better (Windows 2000 Professional)

Pentium 300 MHz or better (Windows XP Home Edition / Windows XP Professional)

RAM: 64 MB or more (Windows 2000 Professional)

128 MB or more (Windows XP Home Edition / Windows XP Professional)

Disk free space: 490 MB or more is recommended.

(It differs depending on the number of copies to be printed.)

Port: A built-in USB port on the personal computer.

CD-ROM drive: For software installation.

## Notes

- (1) Be sure to connect the printer directly to your computer. Connecting it via a USB hub may cause the printer to not operate properly.
- (2) Do not use the printer together with other USB devices except a USB keyboard or mouse.
- (3) Do not connect two or more CHC-S2145 digital photo printers at the same time.
- (4) Do not unplug the USB cable during data transferring or printing. To do so may cause the printer to not operate properly.
- (5) The printer driver cannot be used for network printer.
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- (8) For questions or problems please contact [chc-master@tokyo.shinko-elec.co.jp](mailto:chc-master@tokyo.shinko-elec.co.jp).

# Installing the printer driver

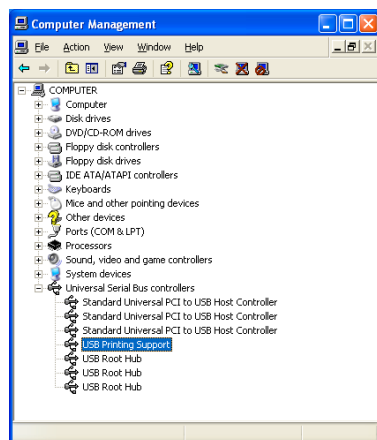
## NOTES

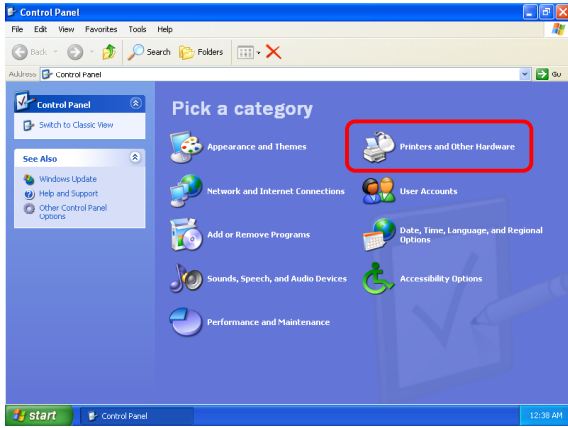
- (1) Make sure that the printer is not connected to the computer.
- (2) The explanations in this section are based on Windows XP. On another version of Windows, the actual screen contents and procedures may vary from those shown.

1. Turn on your computer and start Windows.
2. With Windows 2000 Professional or Windows XP, be sure to log on with Administrator privileges.
3. Be sure to close all running programs before installing the software.
4. Turn the printer on.
5. Connect the printer to your computer, using the USB cable.

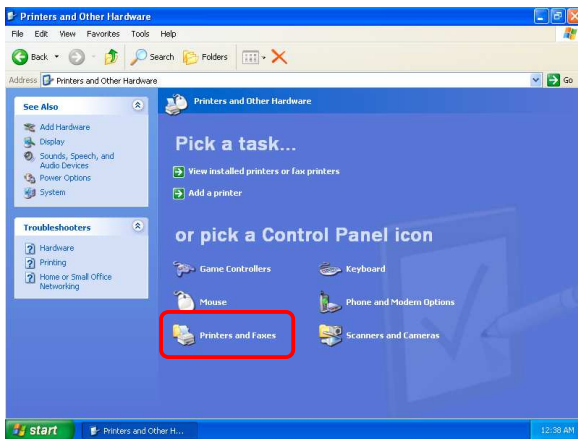
## **Windows 2000 Professional / Windows XP Home Edition / Windows XP Professional.**

When connection is established, USB printing support is automatically enabled by Device Manager.

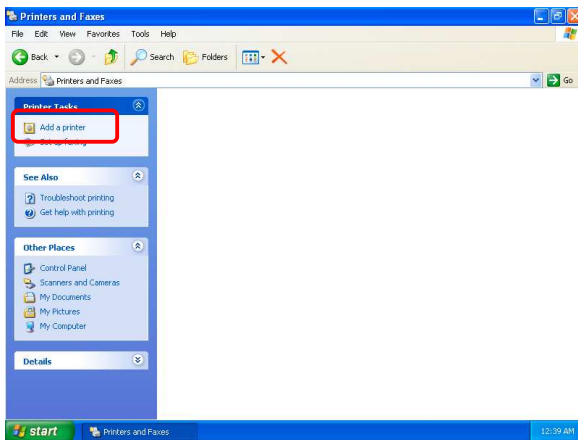




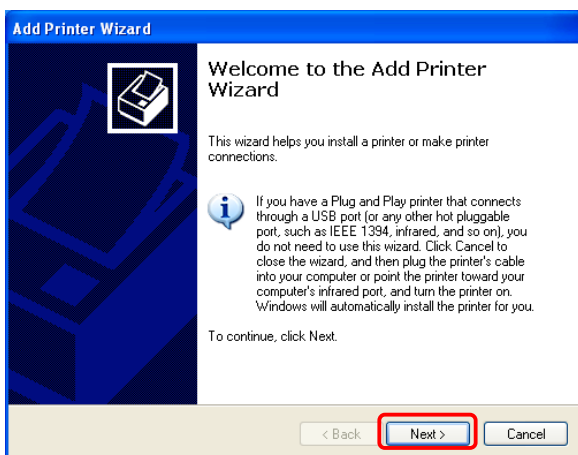
6. Open the Control Panel window from "start", and then click "Printers and Other Hardware".



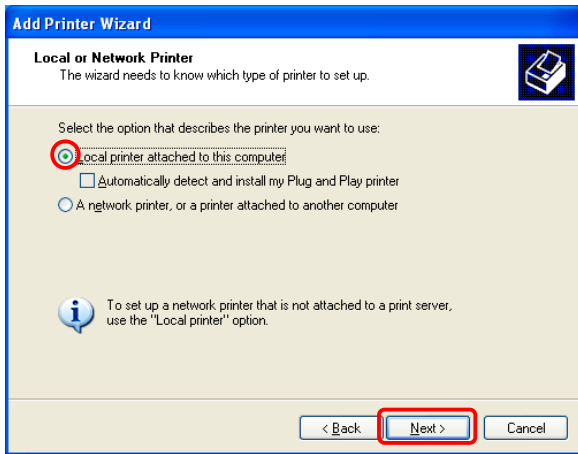
7. Select "Printers and Faxes".



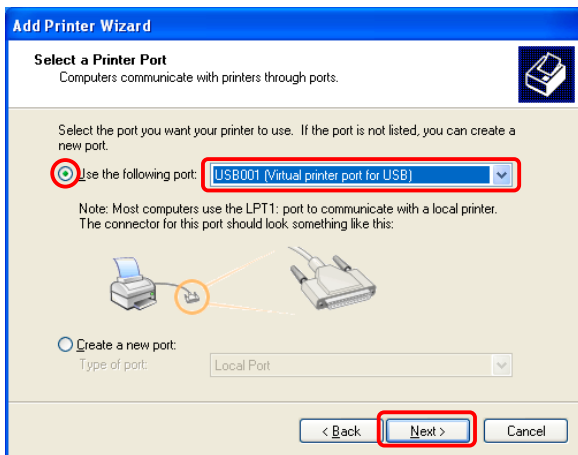
8. Click "Add a printer".



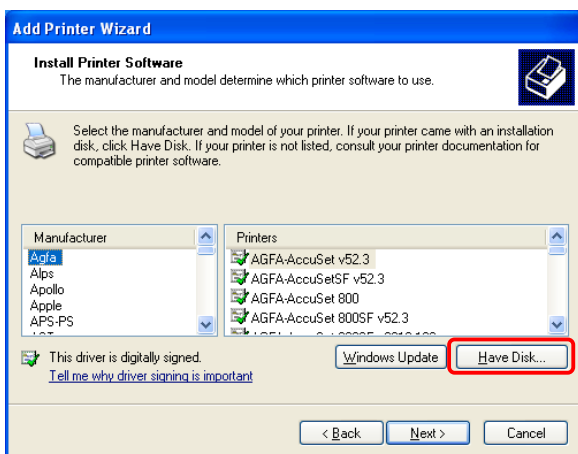
9. Click "Next".



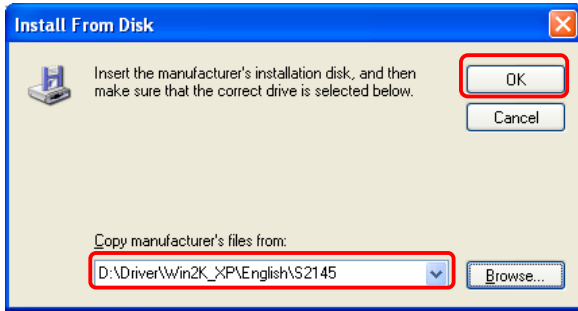
10. Check "Local printer attached to this computer" and uncheck "Automatically detect and install my Plug and Play printer", and then click "Next".



11. Check "Use the following port", then select "USB\*\*\*(Virtual printer port for USB)". Click "Next".



12. Click "Have Disk...".

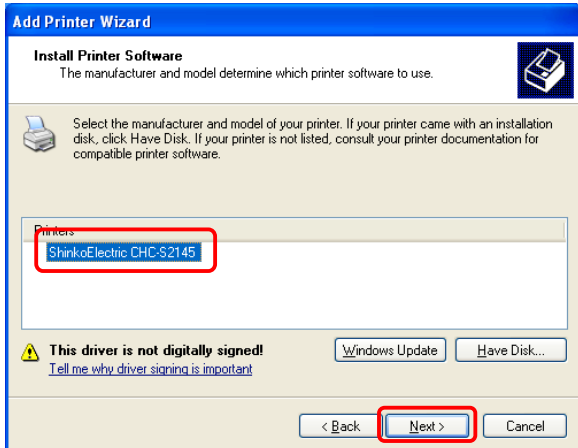


13. Insert the supplied CD-ROM.

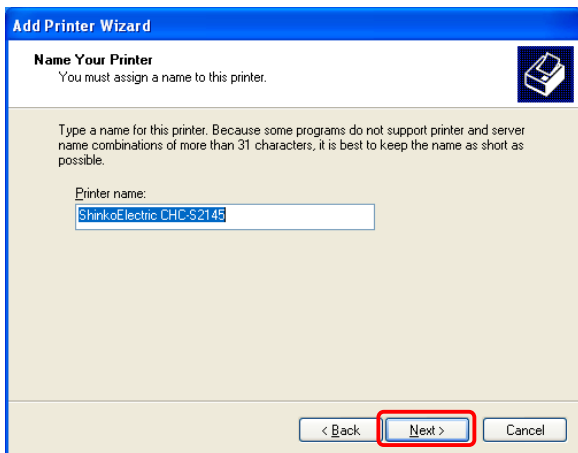
Click "Browse..." to select the folder "S2145" under the folder for each version of Windows.

For Windows XP:

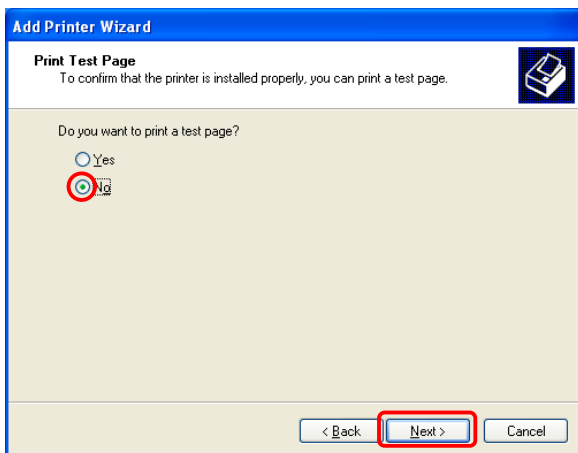
Select "D:\Driver\Win2K\_XP\English\S2145"



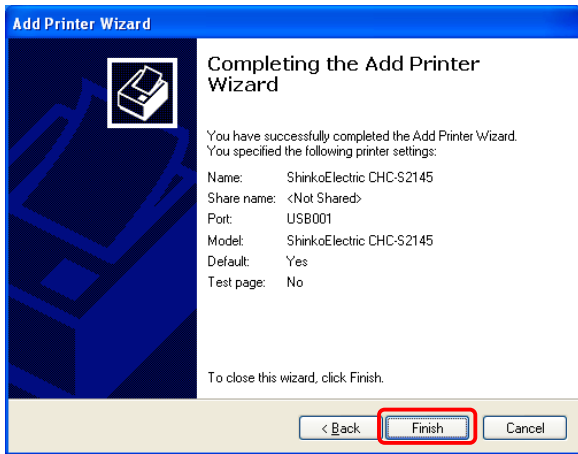
14. Select "ShinkoElectric CHC-S2145", and then click "Next".



15. Click "Next".



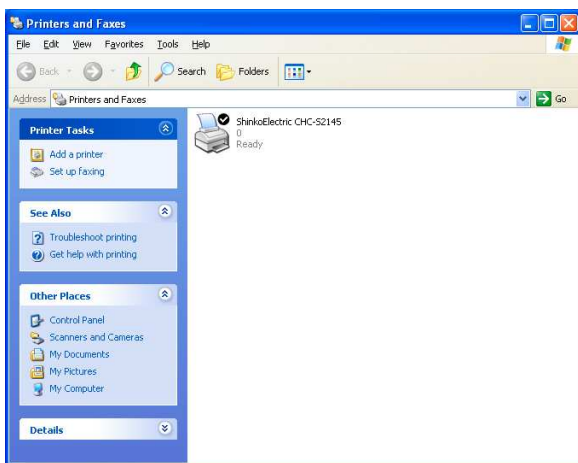
16. Check "No", and then click "Next".



17. Click "Finish".



18. Click "Continue Anyway".



19. The "ShinkoElectric CHC-S2145" printer icon appears in the "Printers and Faxes" window.



## Uninstalling the printer driver

To uninstall the printer driver, follow the procedures below.

### **Windows 2000 Professional / Windows XP Home Edition / Windows XP Professional.**

1. Unplug the USB cable from your computer.
2. Click "Start" and then "Printers and Faxes" in the Start menu.  
For Windows 2000 users: Click "Start", "Settings", and then "Printers" in the Start menu. The Printers folder will open.
3. Right-click on the "ShinkoElectric CHC-S2145" printer icon and select "Delete".
4. Click "Yes" in the message window "Are you sure you want to delete the printer 'ShinkoElectric CHC-S2145'?"  
The relevant files in the system will be deleted.
5. Click "Server Properties" in the "File" menu.
6. Select the "Drivers" tab, select "ShinkoElectric CHC-S2145", and then click "Remove".
7. Follow the on-screen instructions when a confirmation message appears.

## Printing from application software

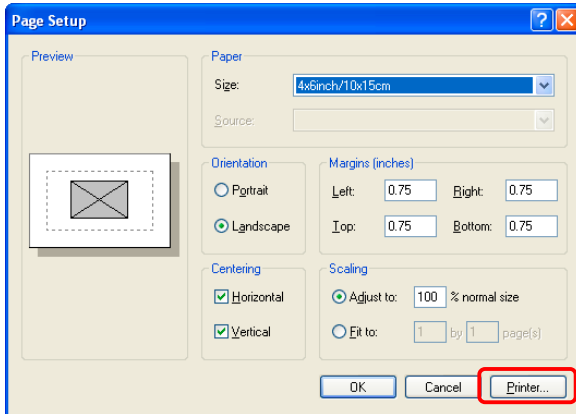
You can use the "Print" command of application software to print an image from your computer with CHC-S2145 digital photo printer.

### NOTES

- (1) **Before printing, make sure that the printer is properly connected to your computer with a proper USB cable.**
- (2) This section describes setting up the driver and printing from the Windows "Paint" program as typical application software.
- (3) The explanation in this section is based on Windows XP.
- (4) The maximum image size for each paper size is as follow.

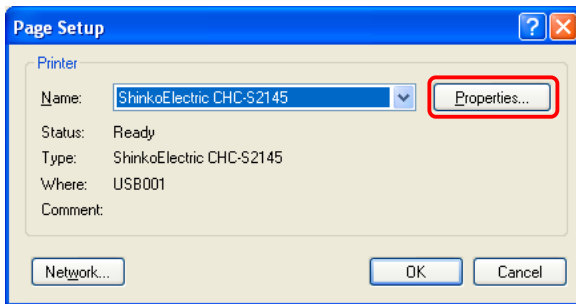
Paper size selected	Maximum image size in pixel units
4x6inch/10x15cm	1,240 x 1,844
3.5x5inch/9x13cm	1,088 x 1,548
5x7inch/13x18cm	1,548 x 2,140
6x8inch/15x20cm	1,844 x 2,434
6x9inch/15x23cm	1,844 x 2,740
6x9inch/15x23cm(Split-2UP)	1,844 x 2,492

1. Start the application software, and open the image to be print.
2. Click "Page Setup" from the "File" menu of the application.  
The "Page Setup" dialog window appears.



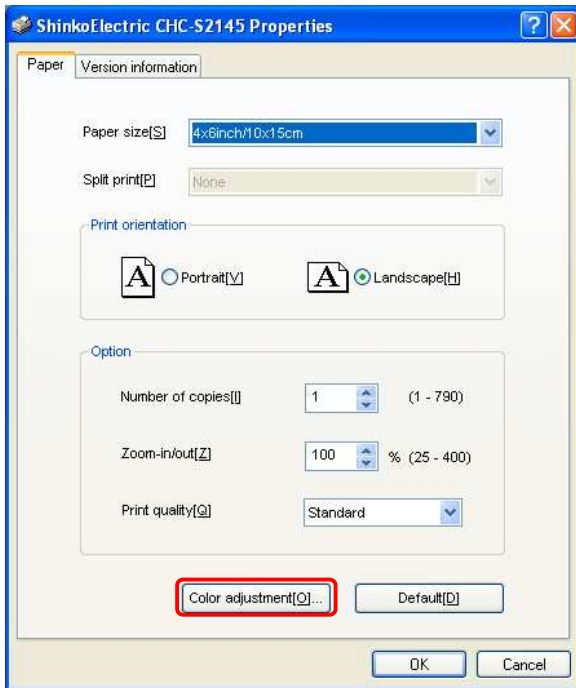
3. Page Setup.  
Your application software may show a different appearance.

3-1. Click "Printer" to show the "Page Setup" dialog window.



3-2. Select " ShinkoElectric CHC-S2145"

3-3. Click "Properties..."  
The ShinkoElectric CHC-S2145 Printing Preferences window is displayed.



3-4. Paper size  
In the "Paper" tab window, choose a paper size with or without Split print modifier.

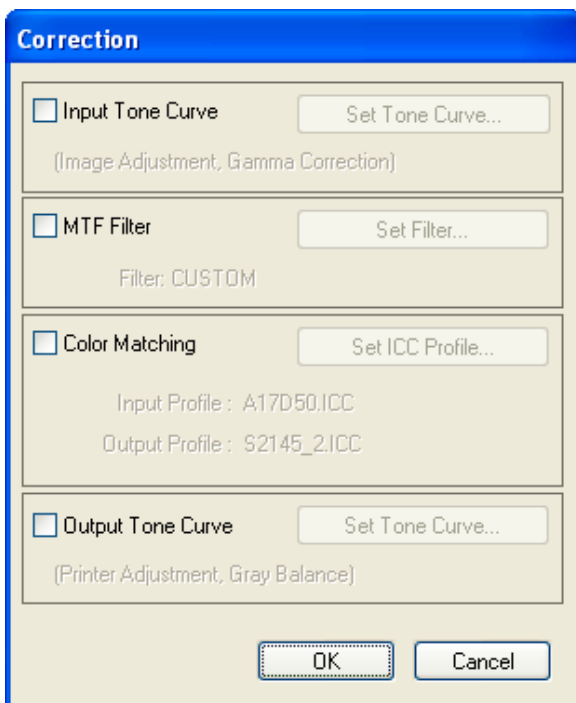
3-5. Check the Print orientation of an image either from "Portrait" or "Landscape".

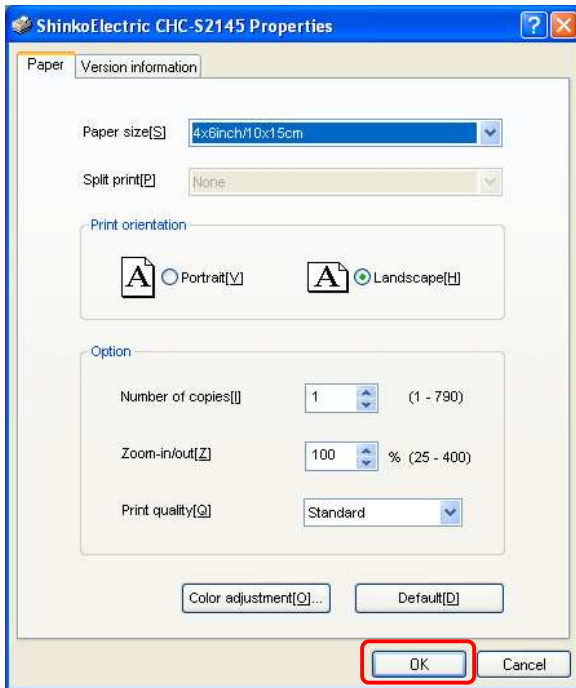
3-6. Number of Copies  
Set the number of copies.  
*Effective Range: 1 ~ 790 (Default: 1)*

3-7. Zoom In / Out  
Set percentage at "Zoom in / out".  
The origin for image scaling is on the center.  
*Effective Range: 25 ~ 400 (Default: 100)*

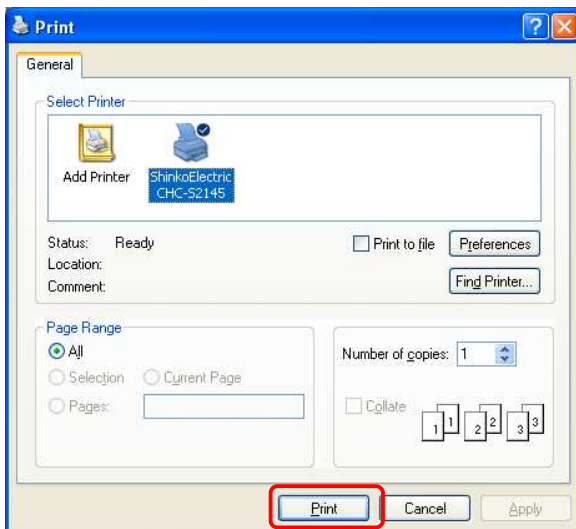
3-8. Print quality  
Choose a print quality from "Standard" or "Fine".

3-9. Color adjustment  
Clicking this button shows the "Correction" window for adjusting the print results.  
See the section of "Color correction" in this document.





3-10. Click "OK" to close the "Page Setup" dialog window.



4. Click "Print" from the "file" menu of the application software.  
The "Print" dialog window appears.

5. Click "Print".  
The printer starts printing.

## To cancel printing

- When the application software shows its printing dialog window, click "Stop" or "Cancel".  
The print job is canceled and the dialog window is closed.
- When the print job has already entered into the printer queue,
  1. Click "Start" and then "Printers and Faxes" in the Start menu.  
For Windows 2000 users: Click "Start", "Settings", and then "Printers" in the Start menu. The Printers folder will open.
  2. Double-click on the "ShinkoElectric CHC-S2145" icon.  
The "ShinkoElectric CHC-S2145" window is displayed. The documents in the print queue are listed in the window.
  3. Click the document you want to cancel.
  4. Click "Cancel" in the "Document" menu.  
The document is removed from the list and the print job is canceled.  
For the details, refer to the Windows documentation.

### **NOTES**

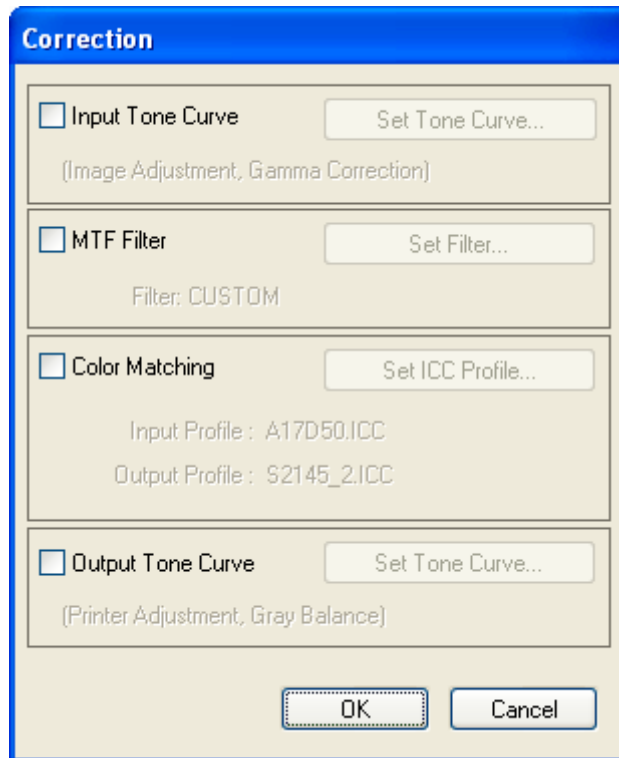
If printing has already started, do not cancel printing.

Please wait until the printing is completed.

# Color correction

## Correction dialog window

Click "Color adjustment" in the "ShinkoElectric CHC-S2145 Printing Properties" window, and then the "Correction" window will be displayed for adjusting the color to print.



### Input Tone Curve:

Checking this option enables the tone curve correction for input colors.

### Output Tone Curve:

Checking this option enables the tone curve correction for output colors as the final process in the color adjustments.

### Set Tone Curve...:

Clicking this button displays the "Input Tone Curve" or "Output Tone Curve" window to allow you to edit the tone curves independently.

### MTF Filter:

Checking this option enables the sharp/un-sharp mask filter to adjust resulting prints.

**Set Filter...:**

Clicking this button displays the "MTF" window to allow you to set a set of values for sharp/un-sharp mask filter.

**Filter:**

A parameter file name will be displayed as chosen in the "MTF" window. "CUSTOM" is displayed upon manually setting the parameter.

**Color Matching:**

Checking this option enables the color matching process for input images.

**Set ICC Profile...:**

Clicking this button displays the "Color Matching " window to allow you to define how the color matching applies to an input image.

**Input ICC Profile:**

An input ICC profile name is displayed to be used for the color matching process.

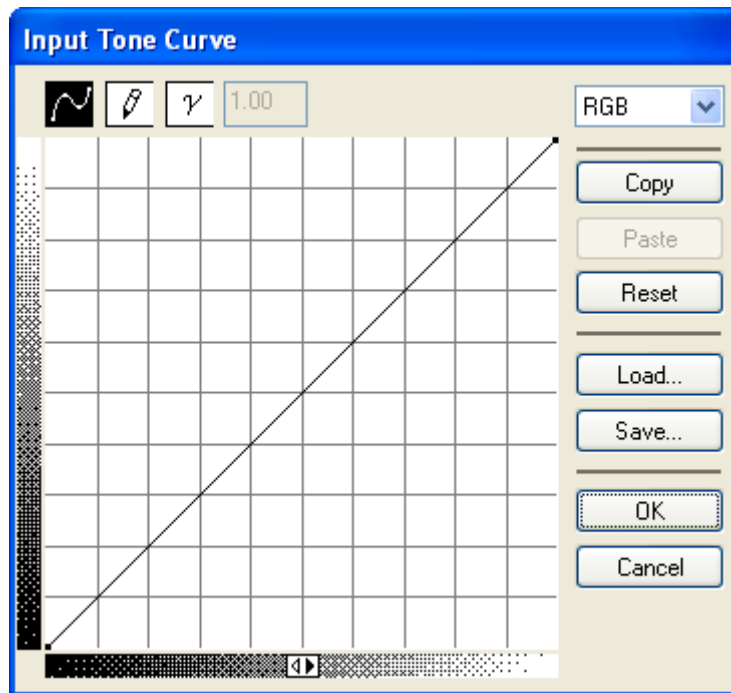
**Output ICC Profile:**

An output ICC profile name is displayed to be used for the color matching process.



## Input/Output Tone Curve dialog window

In the "Correction" window, clicking the "Set Tone Curve" button displays the "Input Tone Curve" or "Output Tone Curve" window respectively.



The setup procedures in the "Input Tone Curve" and "Output Tone Curve" window are the same.

The explanation in this section is based on "Input Tone Curve".



Clicking this icon enables to edit the current tone curve by spline curve method. By clicking on the edit area, you can set desired edit points where a smooth curve lies.



Clicking this icon enables to edit the current tone curve at every desired input levels.

The tone curve will be formed as you point and/or drag the mouse pointer.



Clicking this icon enables to edit the current tone curve by specifying a gamma value.

Type a desired gamma value in the text box next to this icon.



You can choose a color channel to edit.

For "Input Tone Curve", you can choose any one from "RGB", "R", "G", and "B".

For "Output Tone Curve", you can choose any one from "YMC", "Y", "M", and "C".

**Copy:**

Clicking this button copies the curve of the current channel.

**Paste:**

Clicking this button pastes the curve copied by the Copy button to the current channel.

**Reset:**

Clicking this button resets the current curve to linear line.

**Load:**

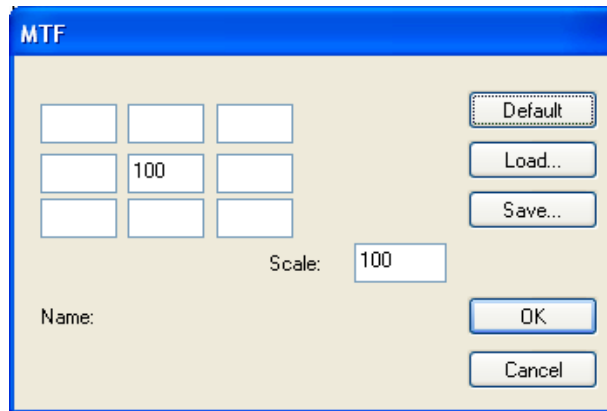
Clicking this button allows you to load a tone curve saved in a file.

**Save:**

Clicking this button allows you to save the current tone curve into a file.

## MTF dialog window

In the "Correction" window, clicking the "Set Filter..." button displays the "MTF" window, where you can define a set of values for sharp/un-sharp mask filter along with brightness.



(3 x 3 text box)

You can enter a set of values for sharp/un-sharp mask filter in these text boxes. (Effective range: -9999 to 9999)

### Scale:

The value entered in this text box determines the brightness of a resulting print. (Effective range: 1 to 99999)

The brightness is determined by the sum of the values entered in the 3x3 text box (A) and the value entered in the Scale text box (B) as follow.

A=B: The brightness of the image will stay.

A<B: The brightness will decrease.

A>B: The brightness will increase.

### Name:

A file name is displayed from which the current parameter set is loaded.

### Default:

Clicking this button resets all values to default.

### Load:

Clicking this button allows you to load a set of parameters saved in a file.

### Save:

Clicking this button allows you to save the set of parameters into a file.

### Example settings for filter parameters

- (1) The figure below shows an example filter parameters for edge enhancement.

	-50	
-50	300	-50
	-50	

Scale:

With this example, the brightness of the image will stay as the original, since the sum of the five values is 100 as same as the value of Scale. Adding values to the rest of four diagonal corners will extend the area that affects the target pixel.

The difference between the center and its neighbors is greater, the effect will enhance further.

Match the Scale value to a sum of the values entered in the 3x3 text box to maintain the brightness of the current image.

- (2) The figure below shows an example filter parameters for blurred edge.

	10	
10	60	10
	10	

Scale:

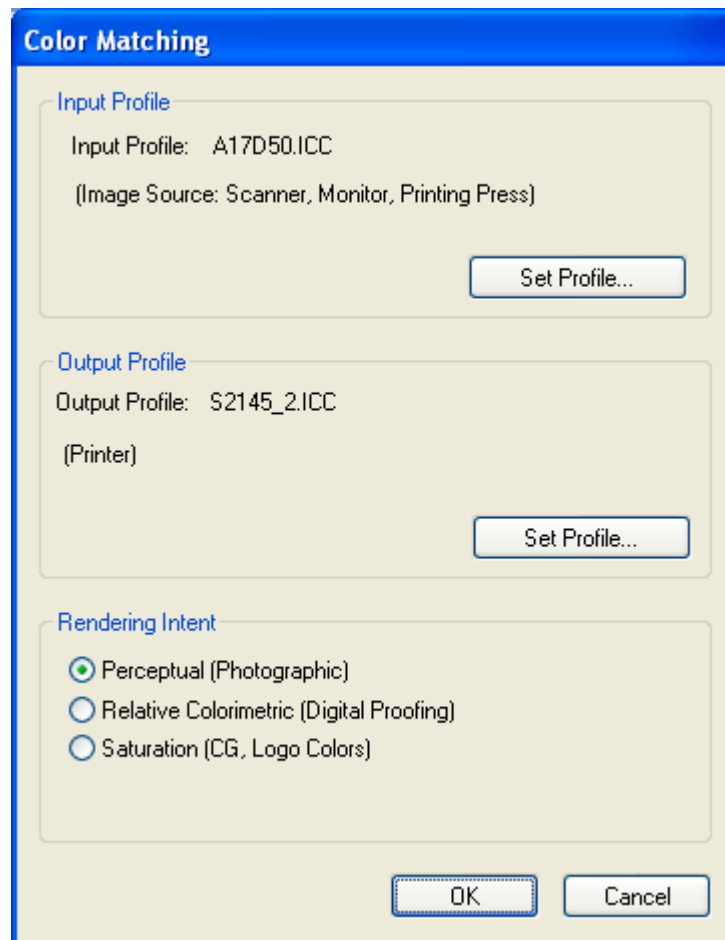
With this example, the brightness of the image will stay as the original, since the sum of the five values is 100 as same as the value of Scale. Adding values to the rest of four diagonal corners will extend the area that affects the target pixel.

The difference between the center and its neighbors is less, the effect will enhance further.

Match the Scale value to a sum of the values entered in the 3x3 text box to maintain the brightness of the current image.

## Color Matching dialog window

In the "Correction" window, clicking the "Set ICC Profile..." button displays the "Color Matching" window, where you can choose ICC profiles and a Rendering Intent.



### Input Profile:

An input ICC profile name is displayed if loaded.

### Output Profile:

An output ICC profile name is displayed if loaded.

### Set Profile...:

Clicking this button allows you to load an input ICC profile or an output ICC profile respectively.

At the Input Profile, load an ICC profile for the input device by which the current image was created.

At the Output Profile, load an ICC profile for the printer.

## Rendering Intent

You can choose Rendering Intent from the three options as shown in the table below.

Rendering Intent	Features
Perceptual (Photographic)	Maps color smoothly, preserving relationships between similar colors, and generally provides the best reproduction of photographs.
Relative Colorimetric (Digital Proofing)	Represents any remaining out of gamut colors by the closest match and is generally a good choice for proof print.
Saturation (CG, Logo Colors)	Prints punchy business charts and graphs, preserving the saturation or brightness of colors.

## Troubleshooting

When the printer driver displays an error message on the computer screen, refer to the following table below for its cause and correction.

Error Messages	Possible Causes	Possible Solutions
The printer is not connected.	An incompatible printer is connected to the computer.	Connect the CHC-S2145 digital photo printer to the computer with a USB cable.
Control circuit error. (xxh) Please contact service center.	A hardware malfunction may have occurred in the printer.	Consult the distributor of the printer or our support center.
Mechanical error. (xxh) Please contact service center.		
Sensor error. (xxh) Please contact service center.		
Temperature sensor error. (xxh) Please contact service center.		
Paper jam. (xxh) Please remove jammed paper.	A paper jam has occurred.	Remove the jammed paper in accordance with the user manual of the printer.
The cover is open. Please close the cover.	The printer cover is open.	Close the printer cover.
Out of ink ribbon. Please check ink ribbon.	The ink ribbon has run out or is not loaded.	Remove the used ink ribbon and load a new one.
No paper. Please load paper.	The paper roll has run out or is not loaded.	Load a new one.
Printing is not possible with the specified paper size. Please check the paper size.	The size of paper loaded in the printer does not match the size specified in the current print job.	Load the correct size of paper to the printer or print again with the same paper size in the printer after canceling the current print job.
In use. Please print again.	The operation panel is in use.	Exit from the "Test Print Mode" of the printer.
Unsupported file format.	The file to read is not in the applicable format; or the file is broken.	Check if the file is correct.
Can not use this profile on current ribbon and image mode.	Incorrect ICC profile(s) are specified for the current settings.	Check if the ICC profile(s) are compatible with the current settings.

Error Messages	Possible Causes	Possible Solutions
Can not find right ICC Profile.	The selected ICC profile is not found; or the ICC Profile has collapsed.	Check if the ICC Profile exists and is not broken.
An integer between –9999 and 9999 is required.	In "MTF" dialog window, the value(s) in the 3x3 text box are out of range.	Reenter value(s) in the rage of -9999 to 9999.
An integer between 1 and 99999 is required.	In "MTF" dialog window, the value in the Scale text box is out of range.	Reenter a value in the rage of -9999 to 9999.
Can not write file.	The current disk drive does not have enough space to save the file.	Check the current disk space.
Can not create file.	The specified file to write has the same name as existing one with write protected.	Save the file in a different name.
Can not open file.	Another program uses the file you specify to read or save.	Save the file in a different name or quit the program using the file.
Can not read file.	The file to read has less data than expected.	Use another correct file.



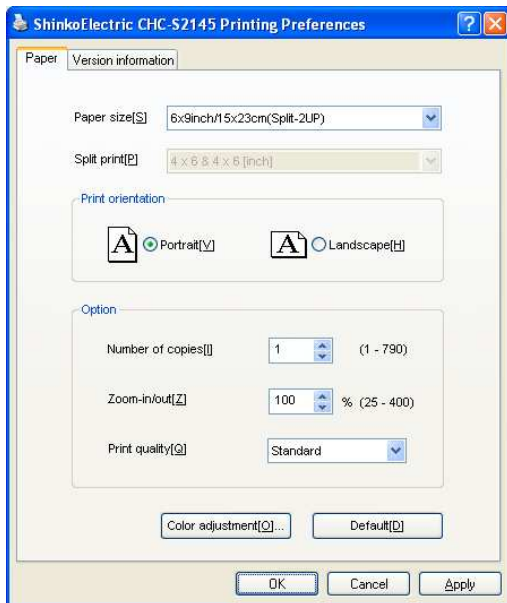
# Split Print

CHC-S2145 Printer Driver can perform Split Print in combination with 2 images, which are combined by certain application software. This method reduces printing time, and saves ink ribbon.

1. Combine 2 images with blank space by your application software.

The dimensions of whole and each image and blank space are shown in the table below.

Image A	Combination of image	Image A [Pixel]	Blank space [Pixel]	Image B [Pixel]
	4x6 inch & 4x6 inch	1240 x 1844	12 x 1844	1240 x 1844
Blank space				
Image B				



2. The proper settings in the Paper-tab sheet of the Printing Preference window are as shown in the table below.

3. The image A and B will be printed, cut and come out from the printer in this order.

Combination of image	Print size	Split print	Print orientation	Zoom-in/out
4x6 inch & 4x6 inch	6x9inch/15x23cm(Split-2UP)	4 x 6 & 4 x 6 [inch]	Portrait	100 %