PRINTER DRIVER GUIDE

(CPD9810X/CPD9810V Ver. 1.00)

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Refer to the following web site to check the latest version of the printer driver.
http://www.MitsubishiElectric.co.jp/vcp

Use the printer driver corresponding to the operating system.

System requirements

Computer   :Computer equipped with Pentium class CPU or more
Main storage memory   :512 Mbytes or more
Hard disk   :Empty capacity 512 Mbytes or more
USB cable   :Be sure to use a cable 2m or shorter.
Operating system and interface

OK:Support

Driver	Operating system	USB*1
CPD9810X	Microsoft(R) Windows(R) 2000	OK
	Microsoft(R) Windows(R) XP	OK
CPD9810V	Microsoft(R) Windows Vista	OK

*1:CP9810DW supports the USB 2.0 (Hi-Speed USB) interface.
　 As USB 2.0 is completely upwardly compatible with USB 1.1, CP9810DW can be connected with a personal computer on which USB1.1 interface is available.
　 When you use CP9810DW with USB 2.0 (Hi-Speed USB), the personal computer has to support USB 2.0 (Hi-Speed USB).
　 For the compatibility of the personal computer with USB 2.0 (Hi-Speed USB), ask the manufacturer of the personal computer.

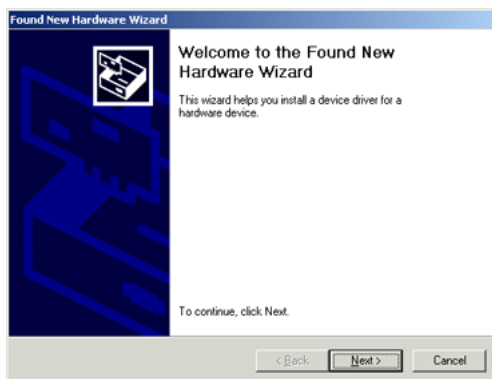MITSUBISHI Digital Color Printer CP9810DW

Installation

1.Windows2000

1.1.Installing the USB port
1) Start Microsoft(R) Windows(R) 2000 Operating system.
2) Connect a USB cable between the computer and the printer before the installation begins.
3) Turn on the printer.
4) A USB Printing Support will be installed automatically.
5) "Found New Hardware Wizard" appears. (Fig.1)
   *The OS standard USB port is used for USB connection in Windows 2000.

1.2.Installing the driver
1) Insert the CD-ROM.
2) Click "Next" button on "Found New Hardware Wizard". (Fig.1)
3) Select "Search for a suitable driver for my device (recommended)" and click "Next" button. (Fig.2)
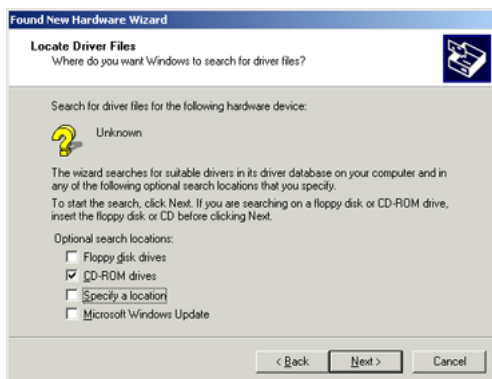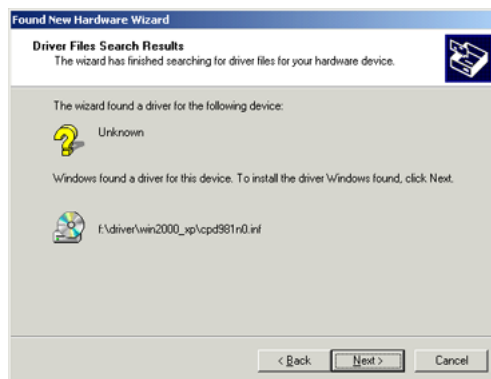
<Fig.1>   <Fig.2>

4) Select "CD-ROM drives" and click "Next" button.(Fig.3)
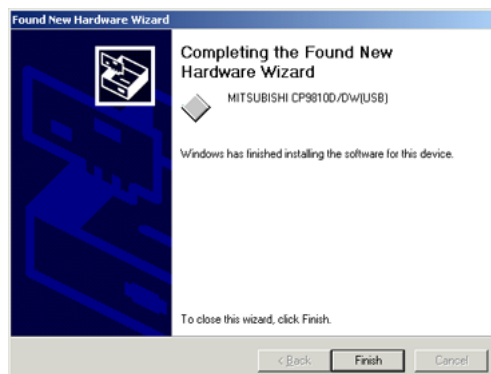5) Click "Next" button.(Fig.4)

<Fig.3>   <Fig.4>

6) Click "Yes" button.(Fig.5)
7) Click "Finish" button.(Fig.6)

<Fig.5>   <Fig.6>

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8) Carry out "Test print" from the printer property to check the printer setting. When printing the test page, select a correct paper size that is loaded in your printer. The paper selection is shown on "Print" tab on the printer property.

2.WindowsXP

2.1.Installing the USB port
1) Start Microsoft(R) Windows(R) XP Operating system.
2) Connect a USB cable between the computer and the printer before the installation begins.
3) Turn on the printer.
4) A USB Printing Support will be installed automatically.
5) "Found New Hardware Wizard" appears. (Fig.7)
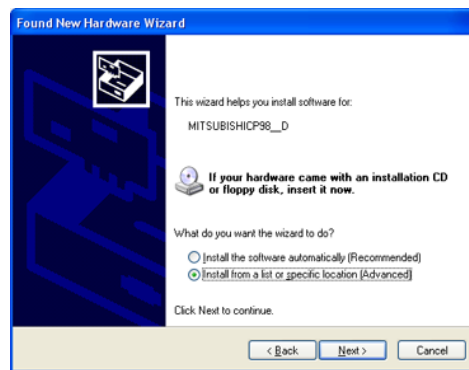   *The OS standard USB port is used for USB connection in WindowsXP.

2.2.Installing the driver
1) Insert the CD-ROM.
2) Select "No, not this time" on "Found New Hardware Wizard" and click "Next" button. (Fig.7)
3) Select "Install from a list of specific location (Advanced)" on "Found New Hardware Wizard" and click "Next" button. (Fig.8)
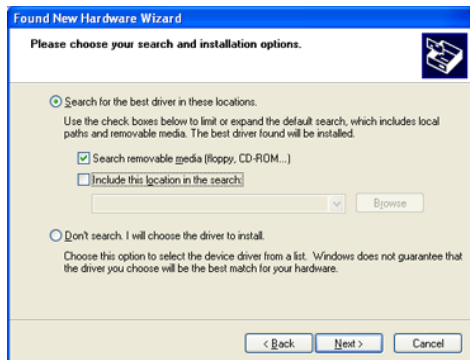

<Fig.7>

<Fig.8>

4) Select "Search removable media (floppy, CD-ROM...)" and click "Next" button. (Fig.9)
5) Click "Continue Anyway" button. (Fig.10)

<Fig.9>

<Fig.10>
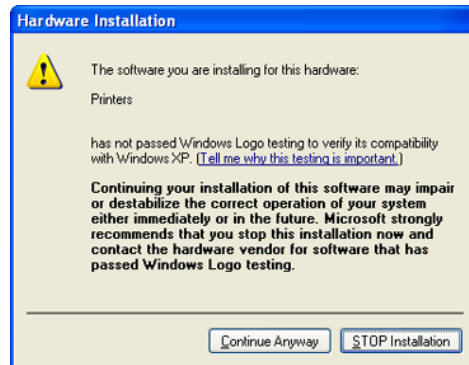
6) Click "Finish" button.(Fig.11)

<Fig.11>

7) Carry out "Test print" from the printer property to check the printer setting. When printing the test page, select the size of the paper that is loaded in the paper tray on "Print" tab on the printer property.

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3.Windows Vista
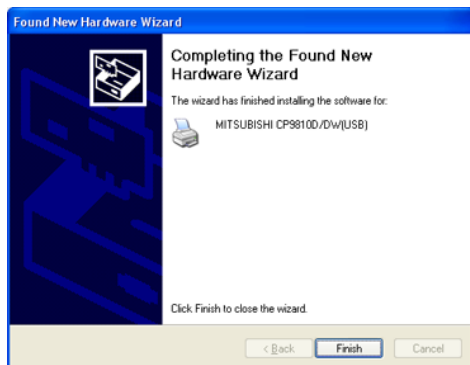3.1.Installing the USB port
    1) Start Microsoft(R) Windows Vista Operating system.
    2) Connect a USB cable between the computer and the printer before the installation begins.
    3) Turn on the printer.
    4) A USB Printing Support will be installed automatically.
    5) "Found New Hardware Wizard" appears.
    *The OS standard USB port is used for USB connection in Windows Vista.
3.2.Installing the driver
    1) Start Microsoft(R) Windows Vista Operating system.
    2) Logon as an administrator or an administrator group member.
    3) Connect a USB cable between the computer and the printer before the installation begins.
    4) Turn on the printer.
    5) Select "Locate and install driver software" in the "Found New Hardware" window. (Fig.12)

<Fig.12>
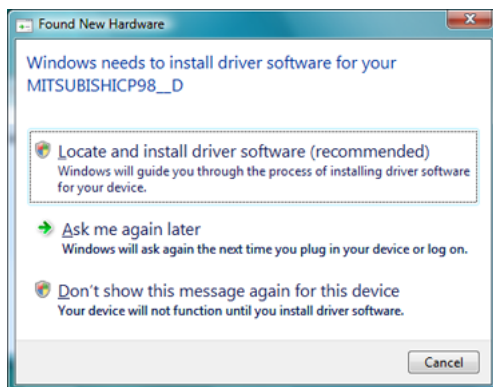
    6) Click the "Continue" button in the "User Account Control" dialog.
    7) Insert the CD-ROM containing the printer driver module to the PC. (Fig. 13)

<Fig.13>

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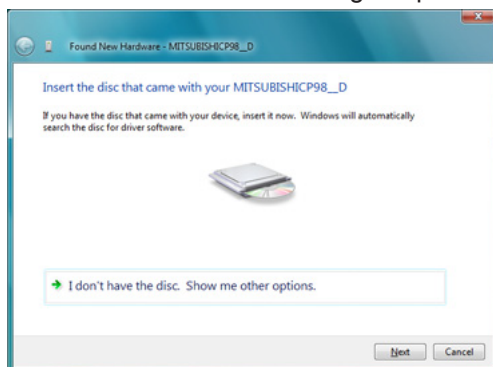
8) Select "Install this driver software anyway". (Fig. 14)

<Fig.14>

9) Click "Close" button. (Fig. 15)

<Fig.15>

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Uninstallation

Operate the following procedures to uninstall the printer driver.
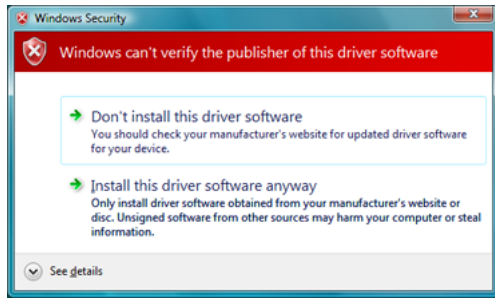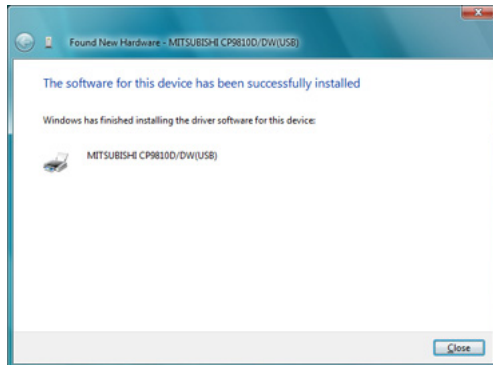When uninstalling the printer driver, confirm that the printer driver is not used from the application or the print job does not remain in the spooler.
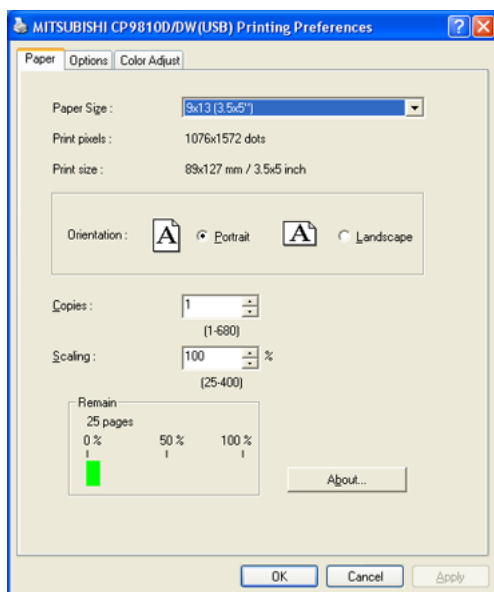
CPD9810X (Windows2000/XP)
1) Insert the CD-ROM.
2) Start up Rem9810.exe of the Win2000_XP folder in the Driver folder.
3) After confirming that "CP9810D" is listed in the list box, press the "Uninstall" button.
4) When uninstallation is completed, a message of "Uninstallation was completed. Is a computer rebooted?" is displayed.
   When you reboot the computer immediately, click the "Yes" button. When you reboot it later, click the "No" button.
   Make sure to reboot the computer.

CPD9810V (Windows Vista)
1) Click "Start" and select "Control Panel".
2) Select "Printers" on the "Hardware and Sound" panel.
3) Right-click the printer icon in the "Printers" folder and select "Delete".
4) Click "Yes" in the printer deletion confirmation dialog.
5) Right-click within the "Printers" folder and select "Run as Administrator".
   Click "Server Properties", and the "Printer Server Properties" window will be displayed.
6) Click the "Continue" button in the "User Account Control" dialog.
7) Select the "Drivers" tab in the "Printer Server Properties" dialog and select the driver to be uninstalled from the tab. Then, click the "Remove" button.
8) Select "Remove driver and driver package." in the "Remove Driver And Package" dialog and then click the "OK" button.
9) Click "Yes" in the "Printer Server Properties" dialog.
10) Check that the "Driver package information collected." is displayed in the "Remove Driver And Package" dialog and then click the "Delete" button.
11) Select "Remove driver and driver package." and then click the "OK" button.
12) Restart the computer.

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Function explanation

1. Paper dialog

<Fig.16 The dialog of "Paper" (Windows XP)>

1) Paper Size
   The size of paper is selected.
   The number of print pixels for each paper size is shown in the right table.
   When using the paper for post card, select 10x15(4x6"). The print pixels
   vary depending on the setting of Paper Size.
2) Print pixels
   The number of pixels to print in each paper size is displayed.
3) Print size
   The print size is displayed.
4) Orientation
   The direction of paper is set.
5) Copies
   The printer prints the number of printouts which is shown in dialog. (Range : 1 - 680)
   *When multiple copies are printed, it becomes like the example below usually.
   (example) The print result of 2 copies of 3 pages:1p 1p 2p 2p 3p 3p
   *Some applications might not transmit as the above method.
   (example)The print result of 2 copies of 3 pages
    :To achieve 1p 2p 3p 1p 2p 3p, the application outputs each image twice.
6) Scaling
   Enlargement scale is set. (Range : 25-400%)
7) Remain
   The remaining amount of the ink ribbon is displayed in a bar.
   When a printer is not connected or information from the printer can not be read, this bar is displayed in
   gray.
8) About...
   Displays the version information of this driver.

Paper size	Print pixels
9x13(3.5x5")	1076*1572
10x15(4x6")	1228*1868
13x18(5x7")	2128*1572
15x20(6x8")	1868*2422
15x21(6x8.5")	1868*2564
15x23(6x9")	1868*2730

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2. Option dialog

<Fig.17 Option setting dialog (Windows XP)>
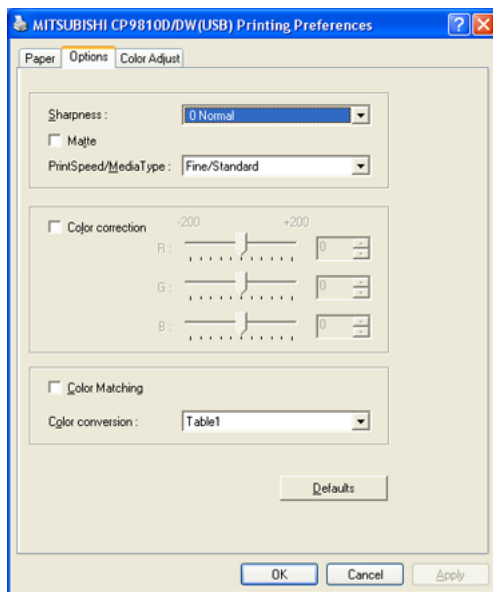
1) Sharpness
   none / -3 / -2 / -1 /0 / 1 / 2 / 3
   Level of outline correction is changed.
   none   :Not perform the outline correction.
   -3 to 3   :The value is smaller, the outline becomes softer.
             The value is larger, the outline becomes sharper.
2) Matte
   Surface-laminated (overcoated) prints are outputted in the matte mode.
3) PrintSpeed/MediaType
   Select the combination of the printing speed and the type of the media installed in the printer.

Item	PrintSpeed	MediaType
Fine/Standard	Fine	Standard
Fine/HighGrade	Fine	HighGrade
SuperFine/Standard	SuperFine	Standard
SuperFine/HighGrade	SuperFine	HighGrade

   When "Matte" is checked, only SuperFine mode is selectable.
4) Color correction
   The tone of light colors can be changed.
   R   :-200 - +200
             As the value is smaller, the red tone is weakened.
             As the value is larger, the red tone is intensified.
   G   :-200 - +200
             As the value is smaller, the green tone is weakened.
             As the value is larger, the green tone is intensified.
   B   :-200 - +200
             As the value is smaller, the blue tone is weakened.
             As the value is larger, the blue tone is intensified.

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5) Color Matching

Color matching is carried out according to the ICC profile set in the "Color control" tab.

When the ICC profile is not set in the "Color control" tab, set the "Color matching" to OFF because the color matching is not carried out in this case.

Select the ICC profile from the "Manual" menu on the "Color Management" tab depending on the selection of the PrintSpeed/Media type.

The ICC profiles are in the ICCProfile folder in the CD-ROM of the printer driver.

PrintSpeed/MediaType	ICC profile supported
Fine/Standard	CP981FST.icc
Fine/HighGrade	CP981FHG.icc
SuperFine/Standard	CP981SST.icc
SuperFine/HighGrade	CP981SHG.icc

6) Color conversion

none / Table1

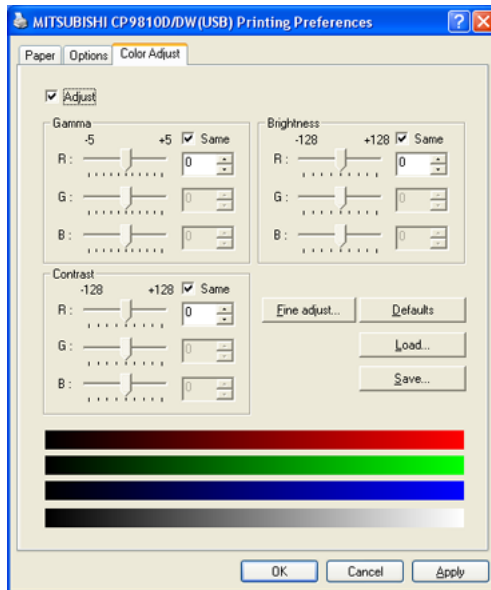none   :Color conversion is not performed.

Table1   :Color conversion is performed.

When the color matching is set to ON, color conversion is not available.

7) Defaults

All the settings in Option dialog are reset to the defaults.

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3.1 Color Adjust dialog

<Fig. 18 Color Adjust dialog(Windows XP)>

1) Adjust
   Tick the box for the color adjustment.
2) Gamma
   Adjusted value(-5 - +5)
   When you want to increase the density of the middle tones, decrease the value of "Gamma" of the color adjustment dialog.
   Same check box   ON:R,G and B are same value, OFF:R,G and B are individually adjusted.
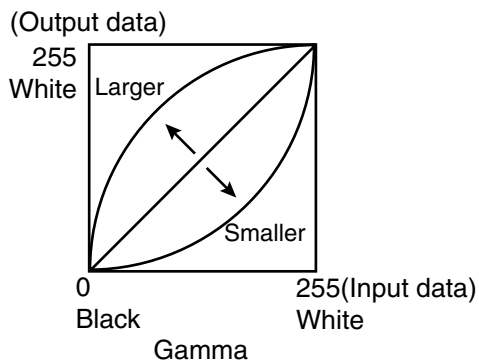
3) Brightness
   Adjusted value (-128-+128)
   When you want the brightness of the print picture to be dark, the value of "Brightness" of the color adjustment dialog must be decreased.
   Same check box   ON:R,G and B are same value, OFF:R,G and B are individually adjusted.

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4) Contrast

Adjusted value (-128-+128)

When you want the contrast of the print picture to be strong, the value of "Contrast" of the color adjustment dialog must be increased.

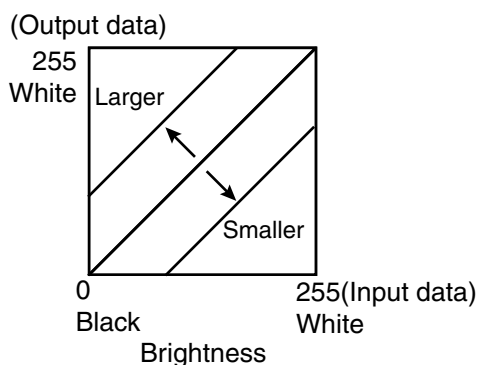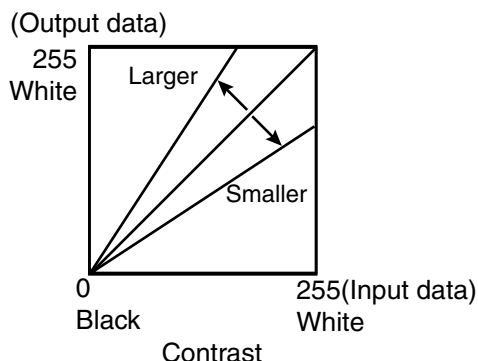Same check box   ON:R,G and B are same value, OFF:R,G and B are individually adjusted.

(Output data)

255
White

Larger

Smaller

0
Black

255(Input data)
White

Contrast

5) Fine adjust

The more minute color adjustments are carried out by the Gamma adjustment tone curve.

6) Defaults

All adjustable values in Color Adjust dialog become 0.

7) Load...

The color adjustment setting file is loaded.

8) Save...

The color adjustment setting is saved.

3.2. Fine Adjust dialog

<Fig.19 Fine Adjust dialog (Windows XP)>
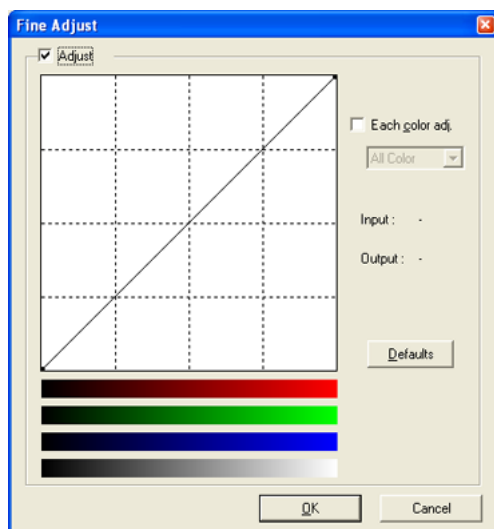
1) Adjust

Tick the box for the color adjustment.

2) Each color adjustment

ON: Each RGB color is individually adjusted.

OFF: The same adjustment of each RGB color carries out.

3) Selecting the color to be adjusted

When adjusting color individually, select the color to be adjusted.

4) Input/Output value display

The input (gradation value before adjustment) and output (gradation value after adjustment) of the adjustment point are displayed.

5) Defaults

All the tone curves become a linear straight line of the range (0, 0) - (255, 255).

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4. Error indication

No.	Error dialog message	Button	Operation
(1)	Printer is not connected.	OK	Click OK button. After connecting the printer (Turn on the printer./ Connect the I/F cable), printing starts automatically.
(2)	The printer does not respond. Turn the printer Off and then On again, and try again.	OK	When clicking OK button, the dialog disappears and the print job is deleted. After turning the power off and turning it back on, start printing process again.
(3)	Something is wrong with the printer.	Cancel	When the error is resolved, the dialog disappears and printing starts automatically. When Cancel button is clicked, printing is canceled. All the jobs in the printer are cancelled and printing is cancelled.
(4)	Mechanical Error. After removing Error, press the FEED&CUT button.		
(5)	Mechanical Error. After removing Error, open and close the door.		
(6)	Door is opened.		
(7)	Open and close the door.		
(8)	Ink ribbon and paper type do not match.		
(9)	Ink ribbon is not correctly installed.		
(10)	Ink ribbon end.		
(11)	Paper empty.		
(12)	The ink ribbon is not standard.		
(13)	The printer was turned off while printing. Press the FEED&CUT button.		
(14)	Paper jam. After removing Error, press the FEED&CUT button.		
(15)	Paper jam. After removing Error, open and close the door.		
(16)	Paper size of printer driver and ink ribbon type do not match.		
(17)	Ink ribbon empty. After removing Error, press the FEED&CUT button.		
(18)	Paper end.		

When no error message is displayed on the monitor and printing is not carried out, check the indicators on the front of the printer.
When an error occurs in the printer, printing starts automatically by resolving the error.
For the indicator on the printer, see the operation manual of CP9810DW.
The error may not be displayed in the case of system configurations other than that shown below.

Interface	Operating system	Setting
USB	Windows2000	Set "Enable bi-directional support for this printer" for printer properties.
	WindowsXP	
	Windows Vista	

In Windows 2000/XP and Windows Vista, the print job is not deleted if the printer is not turned on or the I/F cable is not connected. By turning on the printer or connecting the I/F cable, the data will be transferred again.

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Notes

1) Secure of Hard disk for spool file
   Secure the capacity of Hard disk for spool file enough for the printer operation and the number of printing sheets.
   The printing cannot be correctly carried out when the capacity is running short.
   The drive for spool file is the same drive as the drive of Windows system usually.

2) Operation of the printer
   Refer to the operation manual of the printer.
   Do not turn off the power switch during data transfer or print.
   If you turn off the power switch, restarting of a computer may be needed.
   When deletion of a printing data cannot be performed, restarting of a computer is required.

3) Applicability of color adjustment
   The color adjustment is applied the entire printing range including the background.

4) About "Print directly to the printer"
   With some applications, if "Print directly to the printer" is selected, objects may not be printed correctly.
   In that case, select "Spool print documents ..." for printing.
   CPD9810X   : the "details" page of CPD9810X's printer property sheet

5) About connection of a computer and a printer
   Do not disconnect the interface cable during data transfer.
   If the interface cable is disconnected, connect it after the DATA indicator on the printer stops blinking. If the cable is connected before the DATA indicator stops blinking, the printer driver may not work correctly.

6) System requirements for USB interface
   Use the computers equipped with USB interface listed below.
   Computers pre-installed with Windows2000/XP or Windows Vista.
   Computers installed with Windows2000/XP or Windows Vista that are USB-guaranteed by the manufacturer.
   CP9810DW supports the USB 2.0 (Hi-Speed USB) interface.
   As USB 2.0 is completely upwardly compatible with USB 1.1, CP9810DW can be connected with a personal computer on which USB1.1 interface is available.
   When you use CP9810DW with USB 2.0 (Hi-Speed USB), the personal computer has to support USB 2.0 (Hi-Speed USB).
   For the compatibility of the personal computer with USB 2.0 (Hi-Speed USB), ask the manufacturer of the personal computer.

7) Connection of USB cable
   When you take out and insert a USB cable after installation of a printer driver, wait 10 seconds or more after extracting a cable.
   If the cable is reinserted without leaving an interval, the printer may not operate normally.

8) Print job
   Do not delete the print job in the spooler during data transfer. When deleting it, do not start printing until the printer becomes to the initial status.

9) Number of prints
   With some applications, the number of prints set by the printer driver does not work. Set the number of prints from the print dialog box of the application.

10) Remainings
   Remainings on the Paper tab shows the remainings of the ink ribbon by a bar, by reading information from the printer when the Paper tab is displayed. The correct information may not be acquired during printing.

11) Connection with more than one printer
   When more than one CP9810DW is connected to one personal computer, the "Add New Hardware Wizard" will be displayed and installation of printer drivers will be carried out repeatedly for each of connected printers. The same number of printer drivers as that of connected printers are installed.

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12)Errors during printing
   When an error occurs during printing, it may not be displayed on the monitor. To resume printing, check the indicator on the front of the printer and take the countermeasure. For the indication by the indicator of the printer and the countermeasures, see the operation manual of the printer.

13)Print on the post card size paper
   When using the paper for post card , select 10x15(4x6") from the Paper Size.

14)Setting of the color matching
   Even if the color matching is set to ON by the printer driver, color matching may not be available with some applications.
   With some applications, color matching is effective even if it is set to OFF.

15)When you print and it is displayed as "Parameter's value is invalid.", perform the following operations.
   a) Select "Device Manager" from "Hardware" tab of "System Properties."
   b) Select "Scan for hardware changes."

16)After you install the printer driver by "Add New Hardware Wizard" in Windows Vista, make sure to reboot your computer.

17)When you install more than one printer driver, make sure that the already installed printer drivers have no errors.

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Operating directions for customer's purpose

1. When you want to adjust the color of the print image.
   Note that the effects are invalid on the display if you make following setting.
   1) When you want the density of entire print picture to be thick (dark), decrease the value of "Brightness" of the color adjustment dialog.
   2) When the focus of the print picture is loose (The contrast is weak), increase the value of "Contrast" of the color adjustment dialog.
      The contrast becomes stronger.
   3) When you want to change the color of printout.
      Change the value of "Brightness".
      Increase Red   :Increase the "R" value of the color adjustment dialog.
      Increase Green   :Increase the "G" value of the color adjustment dialog.
      Increase Blue   :Increase the "B" value of the color adjustment dialog.
   4) When you want to adjust Gamma of the printout.
      By moving the graph of the Gamma adjustment dialog with mouse, The density of the entire image can be adjusted to the arbitrary Gamma curve.
      The density becomes high (dark) when decrease the output value compare with the input value.
      The density becomes low (bright) when enlarging the output value compare with the input value.

2. Making the ICC profile
   Refer to the following when you make a suitable ICC profile for the system to be used and apply it to the printer driver.
   1) Set the printer driver as follows when you print the basic color chart for making ICC profile using the printer.
      Delete the ICC profile set on the "Color control" tab of the printer property.
      Set the "Color matching" on the option tab of the printer driver to OFF.
      Set the "Color conversion" on the option tab of the printer driver to "none".
      Set the "Gamma" on the option tab of the printer driver to a desired setting.
   2) Add the new ICC profile using the "Color control" tab of the printer property.

3. To adjust the gray balance in the low gray levels, use "Color correction" on the option tab.
   To weaken the Yellow tone   :Increase the "B" value.
   To weaken the Magenta tone   :Increase the "G" value.
   To weaken the Cyan tone   :Increase the "R" value.
   To weaken the Red tone   :Decrease the "R" value.
   To weaken the Green tone   :Decrease the "G" value.
   To weaken the Blue tone   :Decrease the "B" value.

Prohibition matter

We prohibit Reverse Engineering, decompiling or reverse assembling of this driver software.

Exemption from responsibility

Occasionally, this software does not operate normally depending on operating environment.
Moreover, Mitsubishi Electric Co. will not assume any responsibility for damage (including, but not limited to, lost profit or damage caused from special circumstances etc.) occurring during the use of this driver.

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