

PRINTER DRIVER README

(PD91UN0)

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Refer to the MITSUBISHI A4-A6 PRINTER World Wide Web Site, on the Internet.

<http://www.vcp.melco.co.jp>

Use the printer driver corresponding to the operating system.

PD91UN0 :Windows2000/XP

System requirements

Computer	:Computer equipped with Pentium class CPU or more
Main storage memory	:32MByte or more
Hard disk	:Empty capacity 24 MByte or more
Operating system	:Microsoft(R) Windows(R)2000, Microsoft(R) Windows(R)XP
USB cable	:Use a cable 2m or shorter, comply with USB2.0 standard High speed, USB-IF (USB Implementers Forum) approved.

Use the computers equipped with USB interface listed below:

Computers pre-installed with Windows 2000/XP.

Computers installed with Windows 2000/XP that are USB-guaranteed by the manufacturer.

Installation

Windows 2000

1. Install 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. Then, turn on the printer.

3) A USB port will be installed automatically.

*The OS standard USB port is used for USB connection in Windows 2000.

*Do not install the printer driver from "New hard ware addition wizard" which appears when the operating system is started. (Push the key "Cancel.")

2. Install the driver

1) Connect a USB cable between the computer and the printer before the installation begins. Then, turn on the printer.

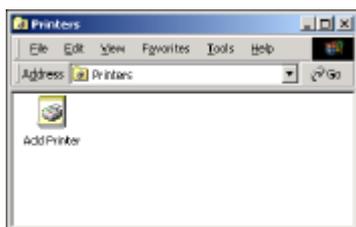
2) Start Microsoft(R) Windows(R) 2000 Operating system.

3) Click "Start" button and select "Printer (P)" of "Setting (S)" menu.

4) The window of "Printers" will be displayed.

Double-click "Add Printer" icon. (Fig.1-1)

5) "Add Printer wizard" starts. Click "Next" button. (Fig.2-1)

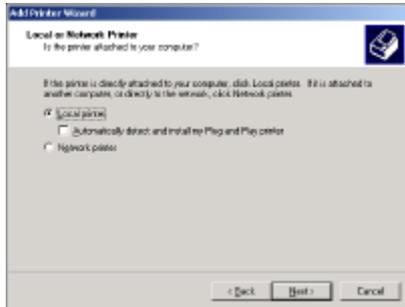


<Fig1-1>

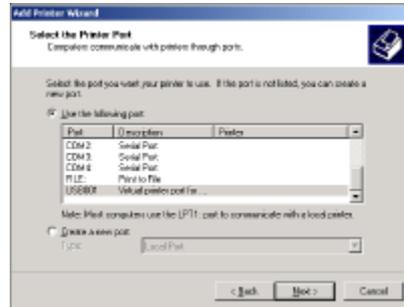


<Fig.2-1>

- 6) In case of Windows 2000 in that the network is set, the selection window of the local printer or the network printer will be displayed.
 Select the local printer. (Fig.3-1)
- 7) Select the port which you would like to use, and click “NEXT”.(Fig.4-1)
 Click “Next” button.
 USB printer :USB001 is usually selected, in case of the usb printer.
 If several USB printers are connected, they are displayed as “USB001”,”USB002”, etc.
 Select the port installation of the P91DW(UB).

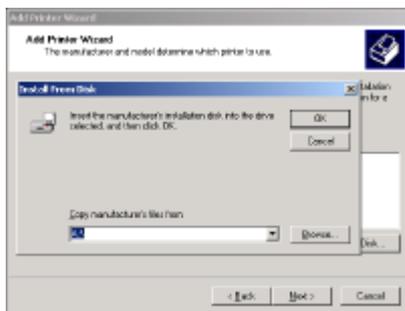


<Fig.3-1>



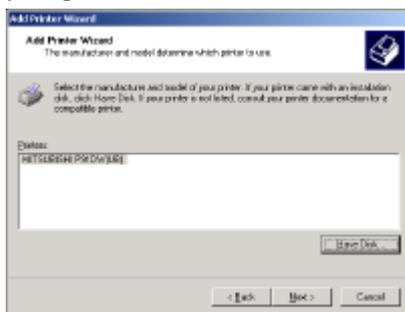
<Fig.4-1>

- 8) Click “Have Disk (H)” button.
- 9) If the dialog “Install From Disk” is displayed, insert the installation disk.
 Input the path, and specify the PD91UN0 folder (ex. A:\PD91UN0). Click the “OK” button. (Fig.5-1)

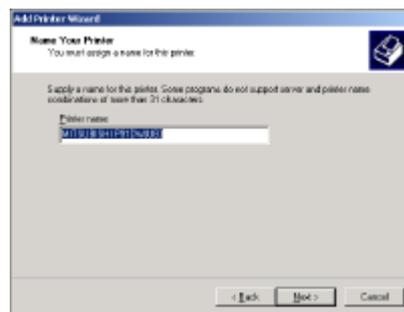


<Fig.5-1>

- 10) Select the printer to be used and click “Next” button. (Fig.6-1)
- 11) Name your printer and click “Next” button. (Fig.7-1)

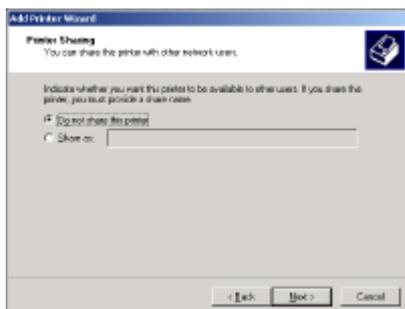


<Fig.6-1>

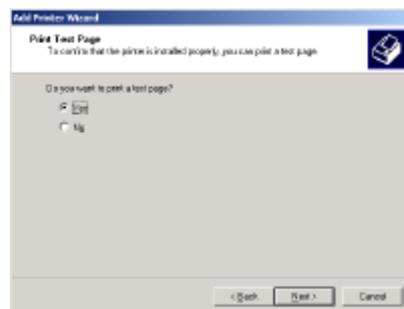


<Fig.7-1>

- 12) Indicate whether this printer will be shared with other network users. (Fig.8-1)
 Select “Not shared” and click “Next” button.
- 13) Set the test page printing. Please select “No” and click “Next” button. (Fig.9-1)



<Fig.8-1>

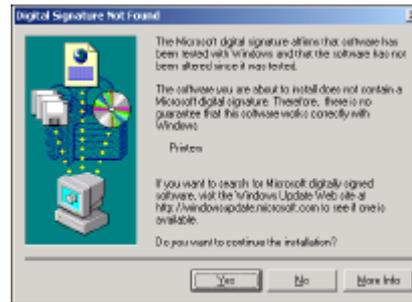


<Fig.9-1>

- 14) Click “Finish” button. (Fig.10-1)
- 15) Click “Yes” button.(Fig.11-1)



<Fig.10-1>



<Fig.11-1>

- 16) Reboot after completing all procedures.
- 17) Confirm whether the test page is printed and the printer setting is normal.
When you print the test page, please choose the correct “Image size” from the Paper tab.

Windows XP

1. Install 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. Then, turn on the printer.
- 3) A USB port will be installed automatically.
*The OS standard USB port is used for USB connection in Windows XP.
**“Welcome to the Found New Hardware Wizard” is displayed. (Fig.1-2)



<Fig.1-2>

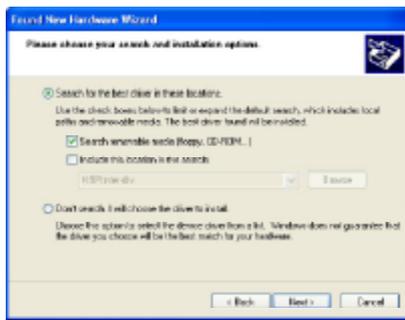
2. Install the driver

- 1) Connect a USB cable between the computer and the printer before the installation begins. Then, turn on the printer.
- 2) Start Microsoft(R) Windows(R) XP Operating system.
- 3) Select “Install from a list or specific location” and click “Next” button. (Fig.2-2)

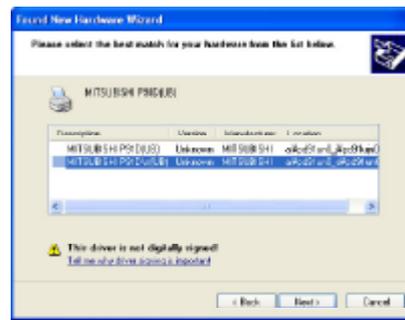


<Fig.2-2>

- 4) Select the search and installation options. Select “Search for the best driver in these locations”.
Insert the install disk and click “Next” button. (Fig.3-2)
- 5) Select the printer to be used and click “Next” button. (Fig.4-2)



<Fig.3-2>



<Fig.4-2>

- 6) Click "Continue Anyway" button. (Fig.5-2)
- 7) Click "Finish" button. (Fig.6-2)



<Fig.5-2>



<Fig.6-2>

- 8) Reboot after completing all procedures.
- 9) Confirm whether the test page is printed and the printer setting is normal.
When you print the test page, please choose the correct "Image size" from the Paper tab.

Uninstallation

Uninstallation procedure of PD91UN0 printer driver

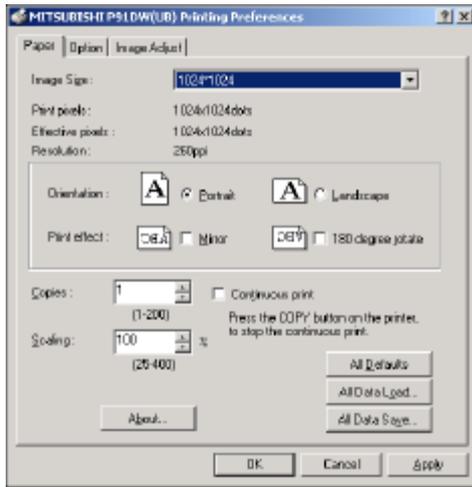
Operate the following procedures to uninstall PD91UN0.

- 1) Delete all printers installed from PD91UN0 in the printer folder.
- 2) Reboot after completing the above-mentioned procedure.

Uninstallation has completed.

Function explanation

1. Paper dialog



<Fig.12. The dialog of “Paper”>

<Table. Image size and print pixels>

Paper size	Print pixels	Effective pixels
1024 * 1024	1024 * 1024	1024 * 1024
1024 * 768	1024 * 768	1024 * 768
1024 * 1365	1024 * 1365	1024 * 1365
1024 * 5120	1024 * 5120	1024 * 5120
4 split of different screen (512 * 512)	1024 * 1024	512 * 512
4 split of different screen (512 * 384)	1024 * 768	512 * 384
150% (640 * 480)	960 * 720	640 * 480
125% (800 * 600)	1000 * 750	800 * 600
User definition	1024 * (1024 - 5120)	1024 * (1024 - 5120)

The number of available pixels in each paper size is shown.

1) Image Size

The size of Image is selected.

Refer to “2. User definition paper setting dialog” when you select the user definition paper type.

*The different screen split function does not operate normally due to the application occasionally.

2) Print pixels

The number of available pixels for the user in each image size is displayed.

3) Effective pixels

The number of pixels for the print data which fills the whole print area of 1 page is displayed.

*The transmission time changes depending on the size of effective pixels.

4) Resolution

The resolution of printer is displayed (260 ppi fixed).

5) Orientation

The direction of paper is set.

6) Print effect

Mirror : The function horizontally reverses the print output.

180 degree rotate : The function rotate 180 degrees the print output.

*When mirror & 180 degree rotates, the order is processed in order of rotation - > mirror.

7) Copies (1-200)

The printer prints number of printouts which is shown in dialog.

*When plural pages 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

*In case of the different screen split, only when the printout is actually executed at printing, the set number of copies becomes effective.

Please note that the consecutive same images are not transmitted to the split screen.

*Some application might not transmit as the above-mentioned.

(example) The print result of 2 copies of 3 pages

:To achieve 1p 2p 3p 1p 2p 3p, the application outputs twice partially.

8) Scaling

Enlargement scale is set. (set range 25-400%)

9) Continuous print

When turning on, the same image has been printed until paper runs out.

*Press the COPY button on the printer, to stop the continuous printer.

*The printer gives priority to a continuous print even if the number of copies is set from the application.

*When you print the different screen split and the plural page, the page, printed out in the beginning, is continuously printed out.

10) About...

Displays the version information of this driver.

Though there is no description about Windows XP, Windows XP is available.

11) All Defaults

All the settings are reset to the default settings.

12) All Data Load...

All the set data loaded from the saved data.

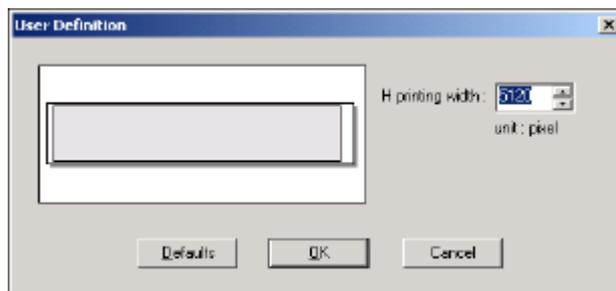
13) All Data Save...

All the set data are saved.

*The save changed setting value, click "Apply" button or "OK" button first to set the value. Then save the changed value.

2. User definition paper setting dialog.

When user definition is selected, "User definition paper setting dialog" open. The arbitrary paper size can be set at the arbitrary horizontal width (Only the even number specifiable). The width of a vertical printing is 1024 pixel. The width of horizontal printing is 1024 -5120 pixel.



<Fig13. The dialog of 'user Definition'>

1) Horizontal printing width

The horizontal size of print area is input. (1024 - 5120 pixel)

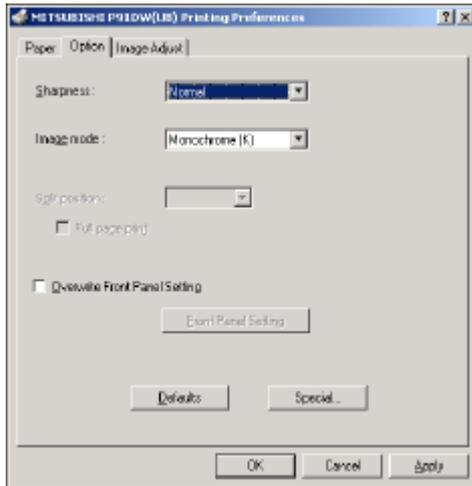
2) Defaults

The command of default.

Default data

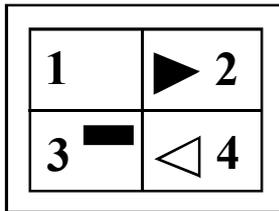
Horizontal printing width : maximum (5120 pixel)

3. Option dialog

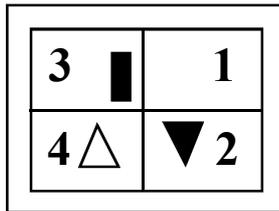


<Fig.14. Option dialog>

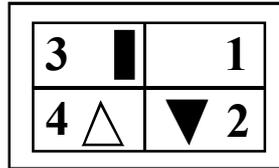
- 1) Sharpness
Soft / Normal / Hard
Level of outline correction is changed.
- 2) Image mode
Color (RGB) / Monochrome (K)
Image transformation mode is changed.
- 3) Split position
The position of begin the print at different screen Split mode is decided.
*When different screen is selected, Split position is available.



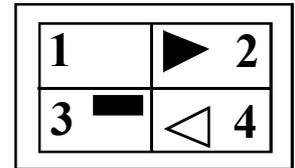
< (512 * 512) : Portrait >



< (512 * 512) : Landscape >



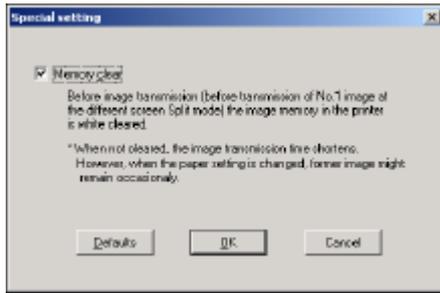
< (512 * 384) : Portrait >



< (512 * 384) : Landscape >

- 4) Full page print
In case of turning on, when you printed the plural page image at different screen Split mode, even if the split position has been neither 4 after transmitting the last page, the printout can be executed.
- 5) Overwrite front panel setting
Front panel setting is overwritten by the driver settings.
- 6) Front panel setting
Front panel setting dialog appears. (Refer to 5. Front panel setting dialog)
- 7) Special...
The Special setting dialog appears. (Refer to 4. Special setting dialog)
- 8) Defaults
The command of default.
Defaults
Sharpness : Normal
Image mode : Monochrome (K)
Split position : 1
Full page print : OFF
Overwrite front panel setting : OFF
Memory clear : ON

4. Special setting dialog



<Fig.15. The dialog of 'Special setting'>

1) Memory clear

Before image transmission (before transmission of No.1 image at the different screen Split mode) the image memory in the printer is white cleared.

*When not cleared, the image transmission time shortens.

However, when image size is changed in the paper setting menu, former image might remain occasionally.

*When background print, the memory might not be able to clear due to the application.

2) Defaults

Memory clear: ON

5. Front panel setting dialog



<Fig.16. The dialog of 'Front panel setting'>

1) Paper type

Standard paper / High density or High glossy paper
Paper type is selected.

2) Printer gamma

Gamma=1-5
Gamma curve is selected.

3) Paper saving

Paper saving mode is selected.

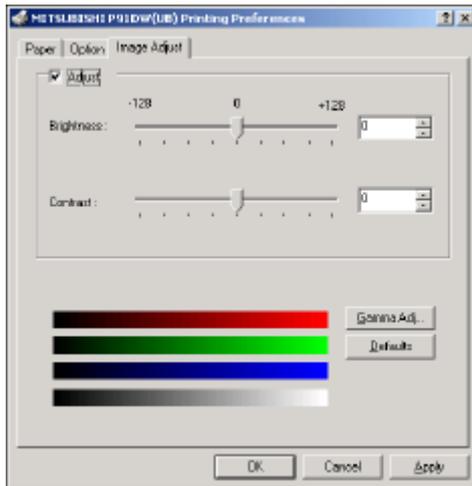
4) Printer setting

Select whether printer conditions will be printing or not.

5) Buzzer sounds

Select whether the buzzer will sound or not.

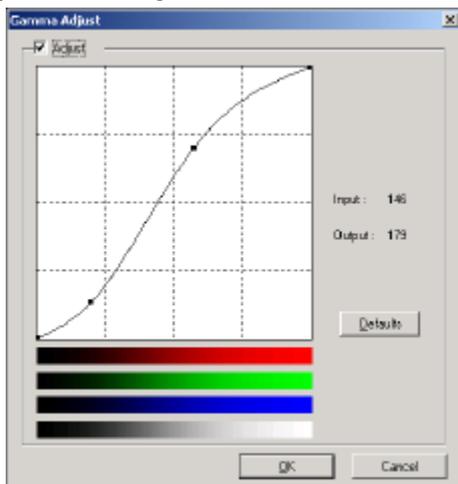
6. Image adjust dialog



< Fig.17. The dialog of 'Image adjust' >

- 1) This function adjusts the image.
In case of no check, processing speed goes up because of the operation processing omission.
- 2) The brightness is adjusted.
Adjusted value (-128--+128)
 $K'(x) = K(x) + \text{Brightness}$
- 3) The contrast image is adjusted.
Adjusted value (-128--+128)
Contrast ≥ 0
 $K'(x) = K(x) + (\text{Contrast}/128) * x$
Contrast < 0
 $K'(x) = K(x) + (\text{Contrast}/128) * (x/2)$
- 4) Gamma...
The more minute image adjustment is carried out by the Gamma adjustment tone curve.
*The operation for the adjustment is carried out in above order.
- 5) Defaults
All adjustable values in the image adjustment dialog including the Gamma adjustment become 0.

7. Gamma adjustment dialog



< Fig.18. The dialog of 'Gamma adjustment' >

- 1) Adjustment
In case of no check, processing speed goes up because of the operation processing omission.
- 2) I/O value display
The input (gradation value before adjustment) and output (gradation value after adjustment) of the adjustment point are displayed.
- 3) Defaults
All the tone curves become a linear straight line of the range (0, 0) - (255, 255).

5. Error indication

No.	Error dialog message and button	Remedy operation	Result
(1)	“Paper empty. After removing Error, print will restart.” and <input type="button" value="Cancel"/> button.	Install a new paper roll.	Printer will restart the print job.
		Click the <input type="button" value="Cancel"/> button.	The print job is canceled.
(2)	“Door is opened. After removing Error, printer will restart.” and <input type="button" value="Cancel"/> button.	Close the door.	Printer will restart the print job.
		Click the <input type="button" value="Cancel"/> button.	The print job is canceled.
(3)	“Printer power is Off or cable is not connected. Make sure the printer cable correctly connected. Turn the printer power Off and On.” and <input type="button" value="OK"/> button.	Make sure the printer cable correctly connected. and / or Turn the printer power Off and On.	Printer will restart the print job.
		Click the <input type="button" value="OK"/> button.	The error indications disappear. The print job remains in the printer spooler.
(4)	“Gear lock error. Turn the printer power Off and On.” and <input type="button" value="Cancel"/> button.	Turn the printer power Off and On.	Printer will retry the print job.
		Click the <input type="button" value="Cancel"/> button.	The print job is canceled.

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) Print test of the printer with small paper size
A part of the image is cut by printing the test page at installing.
In this case, print after adjusting the enlargement scale smaller after installing.
- 3) Operation of the P91DW(UB)
Refer to the operation manual of the P91DW(UB).
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.
- 4) Applicability of the image adjustment
The image adjustment is applied the entire printing range including the background.
- 5) 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, please select "Spool print documents ..." for printing.
PD91UN0: the "details" page of PD91UN0's property sheet
- 6) About "Continuous print"
When you stop "Continuous print", push the COPY button on the printer.
- 7) About connection of a computer and a printer
Only one printer should be connected to a single computer.
Do not disconnect the interface cable during data transfer.
- 8) System requirements for USB interface
Use the computers equipped with USB interface listed below.
Computers pre-installed with Windows2000/XP.
Computers installed with Windows2000/XP that are USB-guaranteed by the manufacturer.
- 9) Connection of USB cable
When you take out and insert a USB cable after installation of a printer driver, wait 5 seconds or more after extracting a cable.
If the cable is reinserted without leaving an interval, the printer may not operate normally.
- 10) About the Spool Settings of USB
Do not select "Disable bi-directional support for this printer" in the printer's property settings.
- 11) Even if the USB port is properly installed, it may be displayed on the printer property as "MPUSB1:unknown device."
In this case, printing is performed properly from the printer.
- 12) When you print and it is displayed as 'Parameter's value is invalid.', perform the following operations.
 - a) The printer is set as 'Stand-by.'
 - b) Select 'Device Manager' from 'Hardware' tab of 'System Properties.'
 - c) Select "Scan for hardware changes."

Operating directions for customer's purpose

1. When you want to shorten transmission and print time

1) When you continuously print the same size image

Remove the check on "The memory is cleared" of special setting dialogs.

As a result, the transmission time will be shortened.

2) In case a small image file is expanded and printed

When a small image file is expanded and printed, do not operate the enlargement scale of the application side or the paper dialog, but use "Image size" of the user definition paper dialog setting. As a result, the transmission time will be shortened.

Example)

When you print the file of the image of 640*480 pixels, if making the setting of the paper dialog

"150% (640 * 480)" and printing at the printer enlargement 960*720pixels, the transmission time will be shortened.

2. When you want to adjust the image of the print out.

If you make following setting, the effects are invalid on the display.

1) When you want the density of entire print picture to be thick (dark), decrease the value of "Brightness" of the image adjustment dialog.

2) When the focus of the print picture is loose (The contrast is weak), increase the value of "Contrast" of the image adjustment dialog.

The contrast becomes stronger.

3) 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 will be adjusted to the arbitrary Gamma curve.

The density becomes high (dark) when decrease the output value to the input value.

The density becomes low (bright) when enlarging the output value to the input value.

Prohibition matter

We prohibit Reverse Engineering, decompiling or reversely assembling to 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.