JVC Monitor Calibration 2 User's Guide

Table of Contents

1. What is JVC Monitor Calibration 2?

JVC Monitor Calibration 2 software is a dedicated for the GD-X1 series monitor.

You can calibrate the Gamma value and White Balance for the X1 monitor, using this software with PC and photometer.

2. System Requirements

Operating Systems:	Windows XP (32 Bit), Vista (32 Bit)
Screen Resolutions:	1024 x 768 and up
Display Monitor:	JVC GD-42X1
Photometer:	X-Rite EyeOne Display 2
Monitor Interface:	Serial port or USB-to-Serial adapter for monitor communication
Photometer Interface:	USB port for EyeOne Display 2

3. Installation (JVC Monitor Calibration 2)

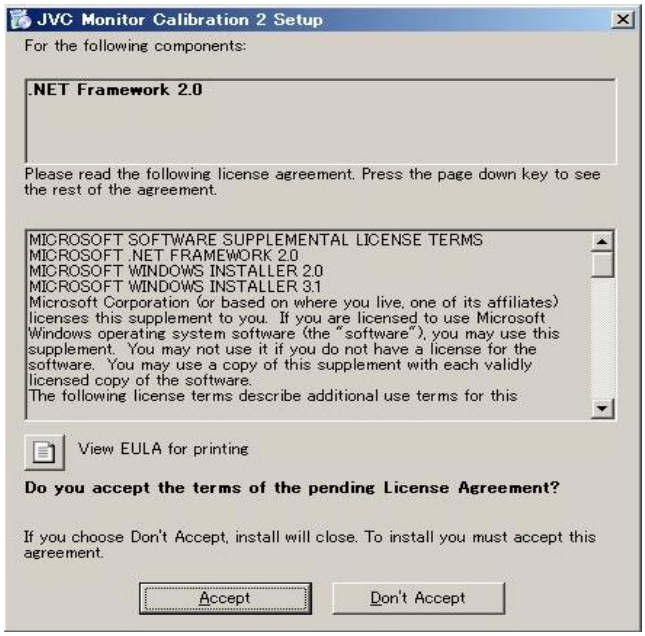
The installation procedure about JVC Monitor Calibration 2

3.1. "MonitorCalibration2.zip" Unzip, please make sure that the following files:

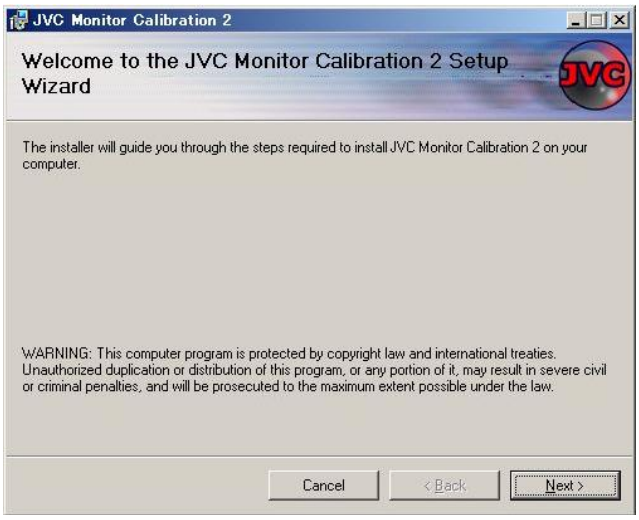
- Setup-MonitorCalibration2.msi
- setup.exe
- Readme.txt
- DotNetFX\dotnetfx.exe
- DotNetFX\instmsia.exe
- DotNetFX\WindowsInstaller-KB893803-v2-x86.exe

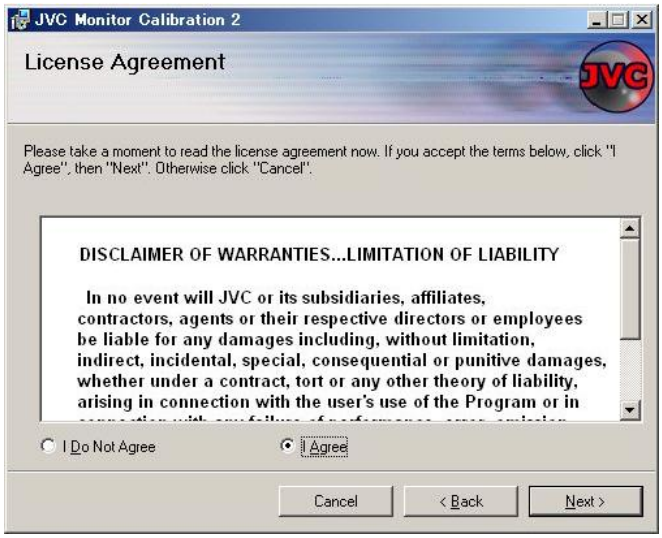
3.2. Run "setup.exe" or "Setup-MonitorCalibration2.msi"

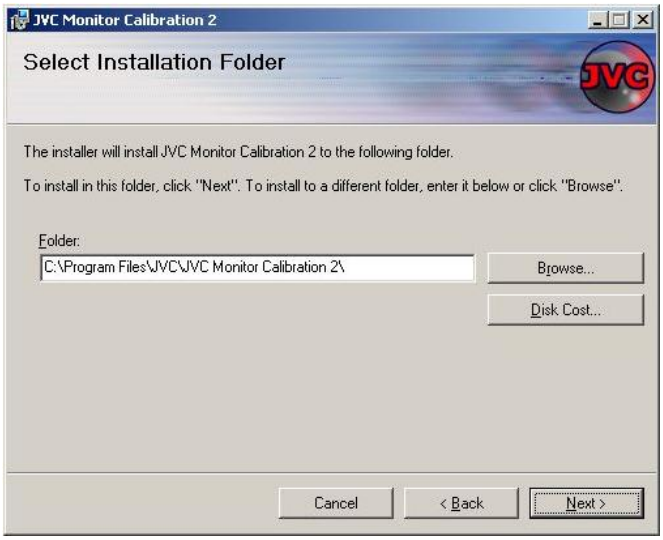
3.3. If you have not installed .net Framework2.0 and later in your PC,
you will install the .net Framework2.0 redistributable package.

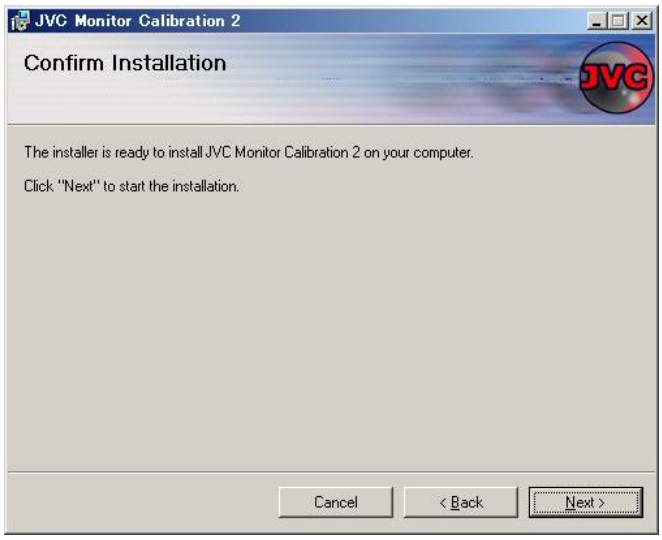


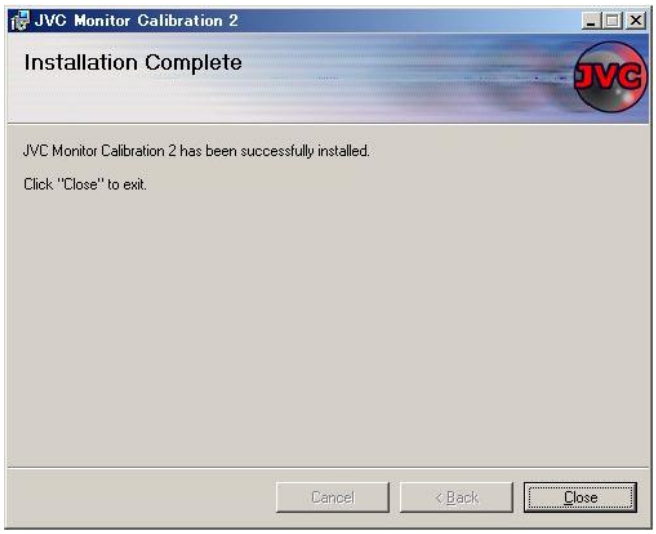
3.4. Follow the screen instructions (shown below) to complete the installation process.


JVC Monitor Calibration 2
Welcome to the JVC Monitor Calibration 2 Setup Wizard
The installer will guide you through the steps required to install JVC Monitor Calibration 2 on your computer.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel
< Back
Next >


JVC Monitor Calibration 2
License Agreement
Please take a moment to read the license agreement now. If you accept the terms below, click "I Agree", then "Next". Otherwise click "Cancel".
DISCLAIMER OF WARRANTIES...LIMITATION OF LIABILITY
In no event will JVC or its subsidiaries, affiliates, contractors, agents or their respective directors or employees be liable for any damages including, without limitation, indirect, incidental, special, consequential or punitive damages, whether under a contract, tort or any other theory of liability, arising in connection with the user's use of the Program or in
I Do Not Agree
I Agree
Cancel
< Back
Next >


JVC Monitor Calibration 2
Select Installation Folder
The installer will install JVC Monitor Calibration 2 to the following folder.
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
Folder:
C:\Program Files\JVC\JVC Monitor Calibration 2\
Browse...
Disk Cost...
Cancel
< Back
Next >





3.5. Run the application:

Double click the "Monitor Calibration" shortcut on the desktop;
or, select the "Monitor Calibration" on the program menu.

Note;
The operation of this software, EyeOne Display 2 is connected, you must install the driver.
EyeOne Display 2 installation instructions please see the installation instructions.

4. Uninstall

JVC Monitor Calibration 2 uninstall repair procedure

4.1. Run "setup.exe" or "Setup-MonitorCalibration2.msi" of JVC Monitor Calibration 2.
4.2. Setup dialogue appears, to repair the 'Repair JVC Monitor Calibration 2', if you uninstall 'Remove JVC Monitor Calibration 2' and select 'finish' button.

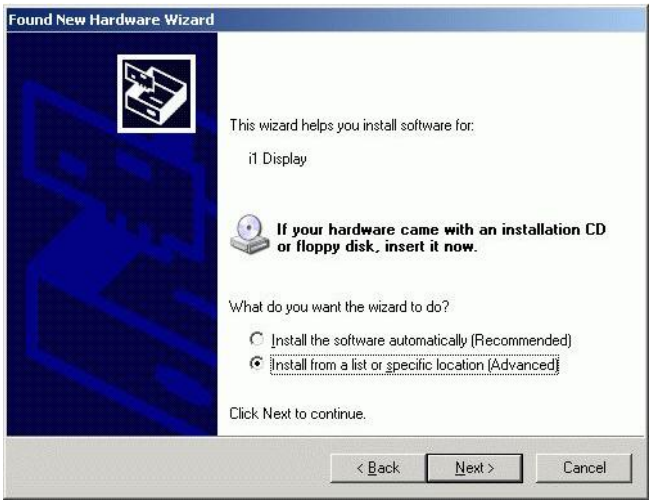
Note; When you run the uninstall process, EyeOne Display 2 driver "EyeOne.dll" and "EyeOneCtrl.dll" is not removed.

5. Installation (EyeOne Display 2 Device Driver)

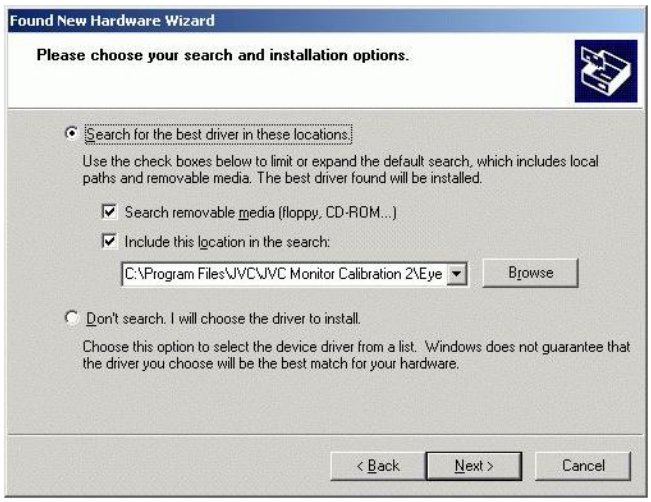
EyeOne Display 2 device driver installation procedure

Connect the 'EyeOne Display 2' to the USB port on your PC.
Then ‘Found New Hardware Wizard’ appears.
Select "No, not this time".

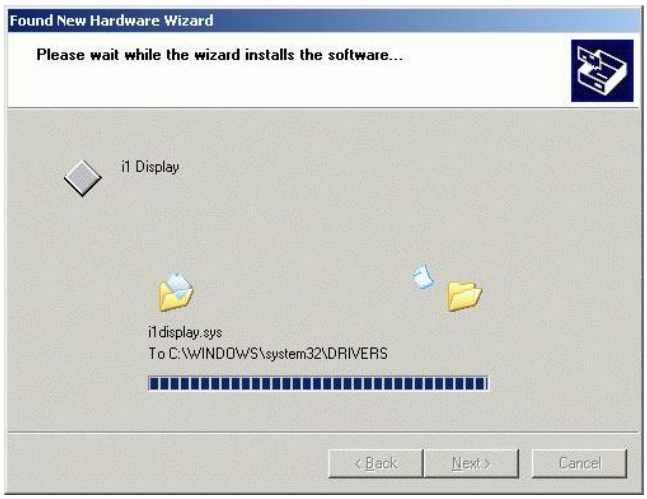
Click “Next” button.



Select "Install from a list or specific location [Advanced]".
Click ‘Next’ button.



Select "Search for the best driver in these locations".
Check "Search removable media …"
Insert EyeOne Display install media, or check "Include this location ..."
Input the folder name "C:\Program Files\JVC\JVC Monitor Calibration 2\EyeOne USB Driver"
Click ‘Next’ button to start installation.




Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
i1 Display
Click Finish to close the wizard.
< Back
Finish
Cancel

6. Getting Started

Important Notice;

This software “JVC Monitor Calibration 2” correspond to the X1 Monitor.

To calibrate the color temperature is the following.

X1 ‘Color temperature’ menu	Monitor Calibration2 ‘White Balance’ menu
Mode 3	9300K
Mode 5	6500K

Other color temperature mode will be calculated from both 9300K and 6500K calibration.

You should calibrate the both for the proper result.

For better calibration results:

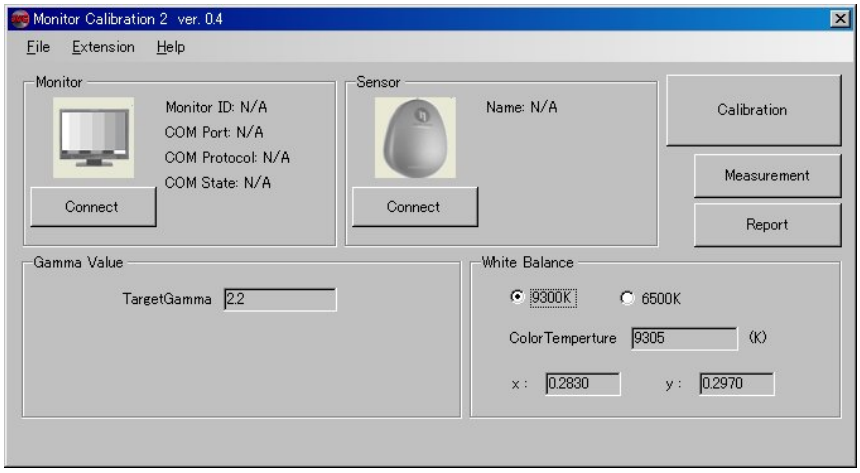
- **Warm up the monitor for 30 minutes before starting the calibration.**
- **Place the photometer on the rectangular window at the center of the monitor and lightly press against the monitor screen.**
- **Carry out the calibration in a dark room or with a thick black cloth covering the monitor and photometer to shield them from the ambient light.**

If you do not have stable measurements, adjust the backlight to brighten again.

6.1. Run the application

Double click the "Monitor Calibration 2" shortcut on the host PC's desktop;
or, select the "Monitor Calibration 2" in the program menu.

The following application window will show up.



6.2 Connect a display monitor to the host PC

Set up a display monitor and turn the monitor on.

Connect a crossover serial cable or through the USB-to-Serial cable from the host PC to the subject monitor.

Click "Connect" button, which is situated under the monitor icons.

If the connectivity has been going on for awhile and not yet successful, the user should check if the cable is connected properly. Exit the calibration program and turn the monitor off for a number of seconds and then back on, that would usually solve the problem when the application program was previously terminated abnormally.

- After successful connection icon changes.

6.3. Connect a photometer to the host PC

Set up a photometer (X-Rite EyeOne Display 2) and turn the photometer on.

If you have not installed install the device driver.

Click "Connect" button, which is situated under the photometer icon.

Dialog encourages the calibration of the photometer.

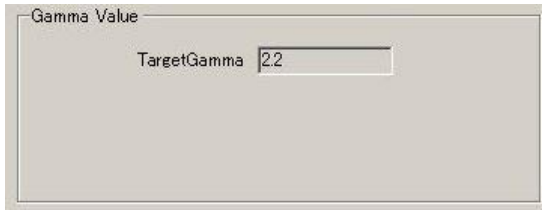
Block the light entering the photometer.
Click the “OK” button.

After successful connection icon changes.

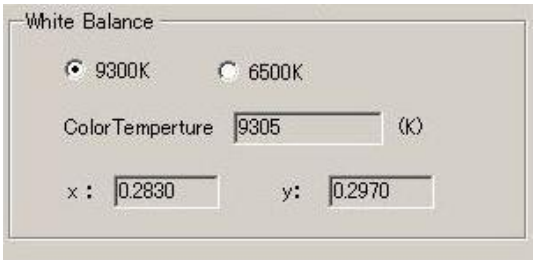
If the connectivity has been going on for awhile and not yet successful, the user should check if the cable is connected properly and if the device is listed on the USB icon (in the Windows system tray). If the device is not listed on the USB icon, most likely the device driver is not installed properly. In such case, please reinstall the device driver and try again.

6.4. Set the calibration parameters

"Gamma" is a fixed value of 2.2.



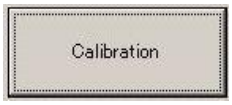
Select the Color Temperature within the "White Balance" group.



- Default is "9300K".
- "9300K" and "6500K" are available.

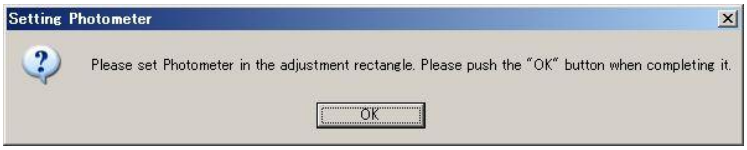
6.5. Start calibration

Click the "Calibrate" button to start the calibration process.



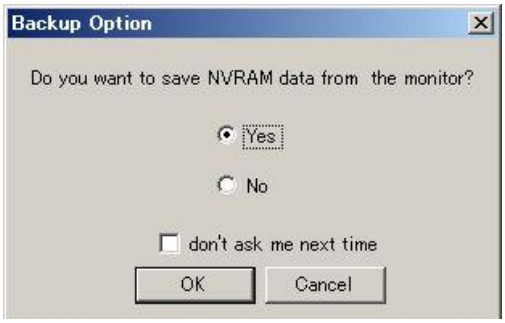
If the monitor or/and photometer have not yet been connected, the connecting process will be initiated for the monitor and then for the photometer after a successful connection to the monitor.

The following dialog will pop up to prompt for the setting place of photometer.



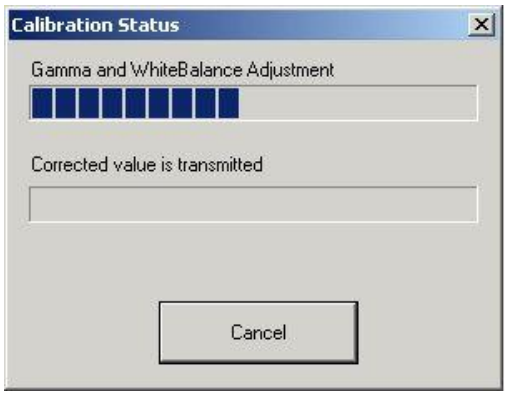
Place the photometer on the rectangular window at the center of the monitor and lightly press against the monitor screen.

A dialog will prompt if to save the current NVRAM to a file, if it is selected 'Please ask at the beginning of calibration' at the "Backup Option".



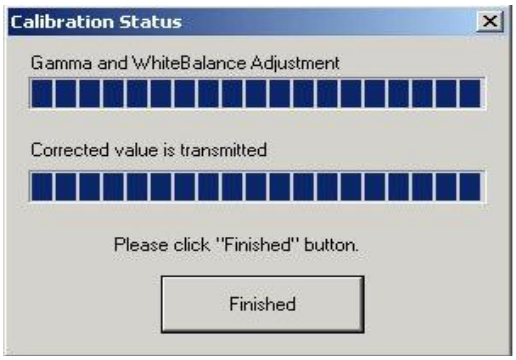
Choose 'Yes' to back up the data or 'No' to proceed directly to the calibration process. The calibration process will start.

The following status window will pop up;



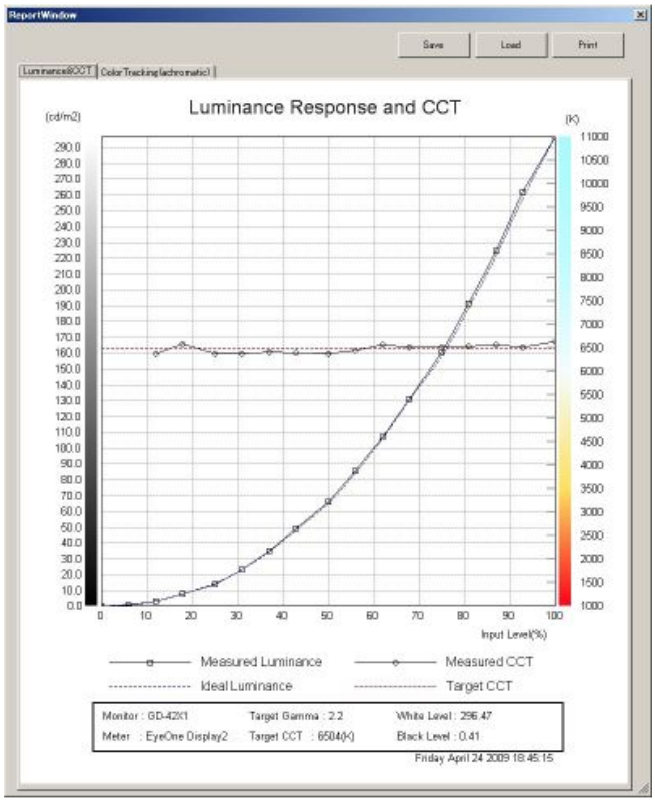
If the 'Cancel' button is clicked during calibration, then it will stop.

When all of the steps are completed, the following dialog will show up.



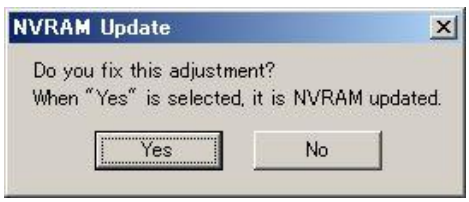
Click “Finished” button, the report window will pop up.

6.6. Display Calibration results of the report, save, print



- After the calibration run, or when you click the 'Report' button ‘Report window’ will be displayed.
- If after running the calibration, the graph displays the results.
- After the calibration run, click the “Save” button, then the calibration results will be saved as a CSV file.
- Click “Load” button, then will load a stored CSV file and display a graph.
- Click “Print” button, then will print a graph currently displayed to a printer, image file, or PDF.

6.7. Update NVRAM



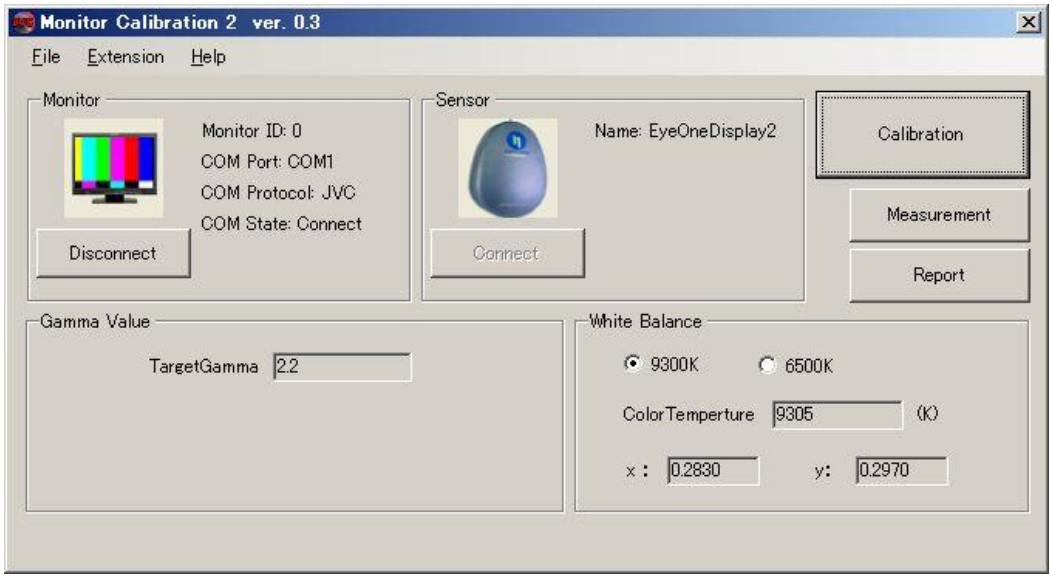
- After the calibration run, and close the ‘report window‘, NVRAM update dialogue will pop up.
- Click “Yes” button, then will save the calibration result. Calibrated to reflect the content.
- Click “No” button, then it will abort the calibration result.

6.8. Exiting the program

The menu bar "File" → 'Exit' in the main window, or 'Close Box' ('X' button) Click to close this application.

7. GUI Control

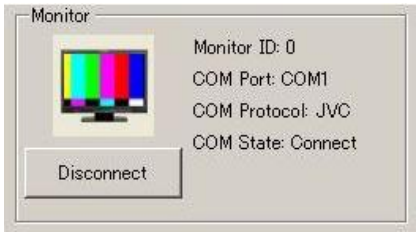
GUI layout of this application software;



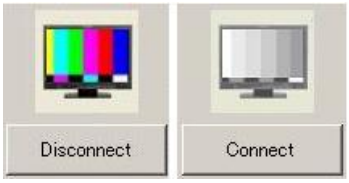
7.1. Monitor control

"Monitor"

"Monitor" to display the connection status of the monitor



Icon color when connected, you see black and white when not connected.
When the connection button 'Disconnect', when not connected to the 'Connect' to display.
You can not operate during the connection process.



In each, when connected to a corresponding status, yet when the connection is' N / A 'to display.

'Monitor ID'

The monitor displays the connection ID. ID range is 0 to 127.

'COM Port'

Displays the COM port connection. Range of ports is COM0-COM16.

'COM Protocol'

Displays the protocols used in communication. 'JVC' or 'Beacon' will appear.

'COM State'

Displays the connection status. When connecting the 'Connect', during the connection process is 'Connecting' to display.

7.2. Sensor control

"Sensor"

"Sensor" to display the connection status of the photometer.

Icon color when connected, will be displayed in black and white when not connected. Button when not connected to the 'Connect' to see, you will not be able to manipulate the connection. Lost communication with the end application.

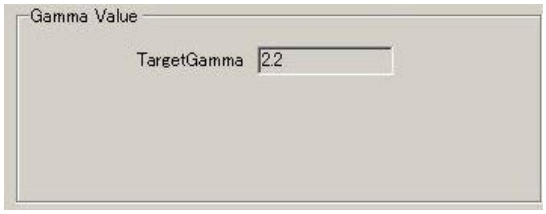
'Name'

Displays the name photometer. When the connection is 'EyeOneDisplay2' view, when not connected to the ' N/A ' to display.

7.3. Gamma

"Gamma"

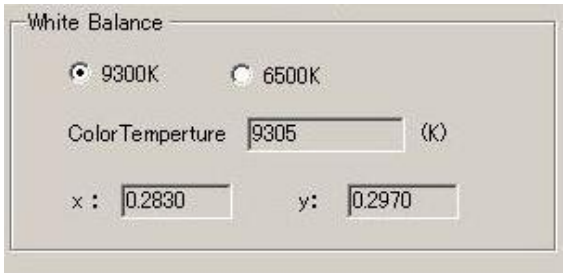
"Gamma", gamma adjustment to see the target. This software is fixed in 2.2 can not be changed.



7.4. White Balance

"White Balance"

"White Balance" So, 9300K and 6500K from the two select a single color temperature, you can make adjustments.



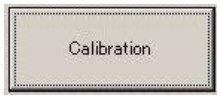
This software “JVC Monitor Calibration 2” correspond to the X1 Monitor.
To calibrate the color temperature is the following.

X1 ‘Color temperature’ menu	Monitor Calibration2 ‘White Balance’ menu
Mode 3	9300K
Mode 5	6500K

Other color temperature mode will be calculated from both 9300K and 6500K calibration.
You should calibrate the both for the proper result.

7.5. Calibration button

'Calibration' and click the button to start the calibration.



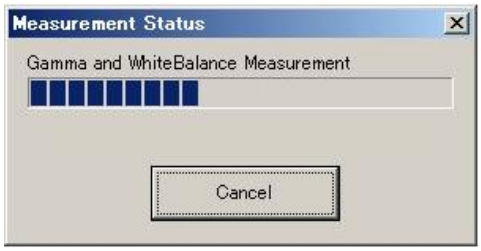
For more work, "Getting Started" of '5. To start the calibration' please refer to.

7.6. Measurement button

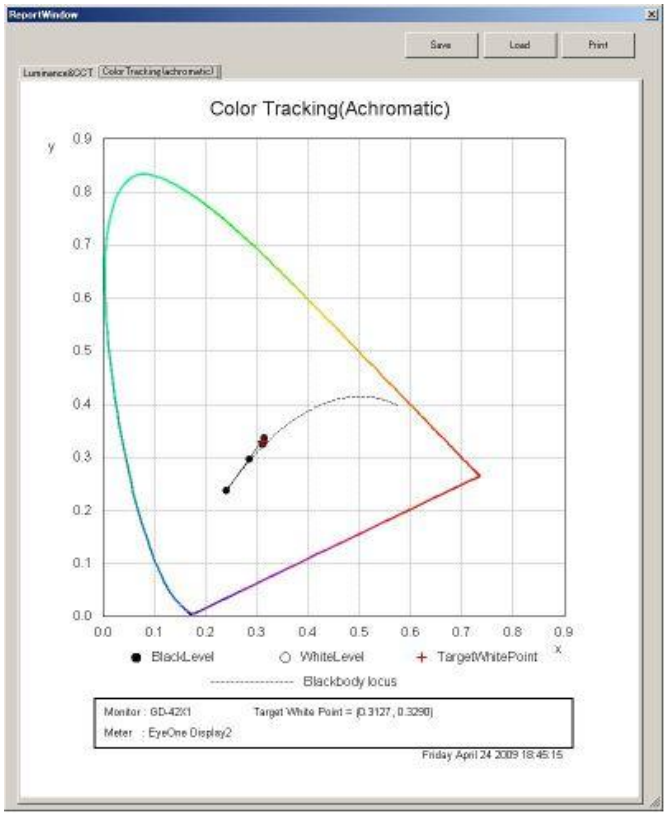
Users 'Measurement' by press the button, it is possible to measure the color temperature and luminance of the monitor.

If the monitor or/and photometer have not yet been connected, the connecting process will be initiated for the monitor and then for the photometer after a successful connection to the monitor.

In measuring the progress in the status bar.



Measured after 'OK' and click, displays the results with the graphs as 'Calibration' like.

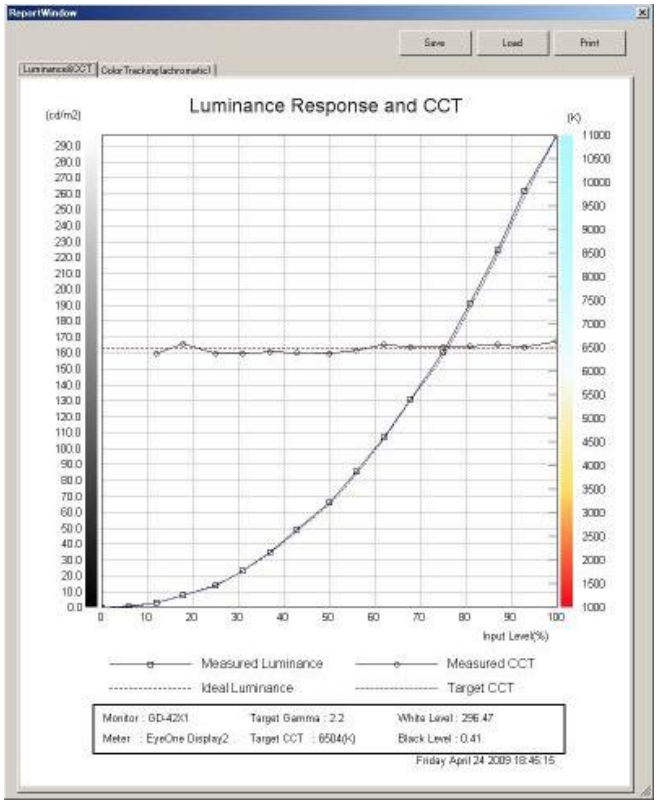


The graph is 'Report Window ' Please refer to.

7.7. Report Button

'Report' and click the button to show the report window.

If you run the previous calibration graph to display the background only if the calibration run, and then re-display the results.



More work on 'Report Window' Please refer to.

7.8. File Menu

"File"

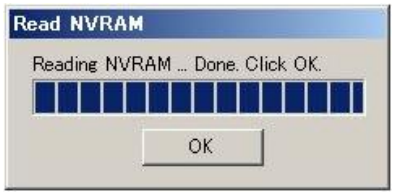
"File" menu in the 'Write NVRAM', 'Read NVRAM', 'Exit', there are three sub-menus.

'Write NVRAM'

Specified binary data (.dat) to send the Monitor, RAM and flash writes to a color temperature. Display a progress bar while writing.

'Read NVRAM'

Read from the monitor color temperature information, the received binary data (. dat) then save as. Loading will display a progress bar.



'Exit'

Quit the software.

7.9. Extension Menu

"Extension"

"Extension" in the menu, 'Monitor' and 'Backup Option', there are two sub-menus.

'Monitor'

'Monitor' is a set of communication with the monitor. Choose from the pull-down menu items, OK to reflect.

'Monitor ID'

Communication unit to be used to monitor individual ID code set.
'AUTO' if you are looking for the ID that can communicate and connect.
'0 '-'127' If you select one of the selected ID in the communication process.
AUTO may take time to connect and select.

'Port'

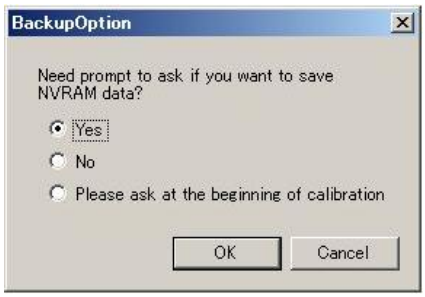
Set the COM port to connect. 'AUTO' if the communication is possible to find the COM port connection.
'COM0'-'COM16' if you select one, the selected COM port and communication.
AUTO may take time to connect and select.

'Protocol'

Select the protocol to connect to. Communication with the monitor mode 'JVC' or 'Beacon' Please select either.

'Backup Option'

When you start the calibration, the current NVRAM to save the data processing (in the menu bar 'Read NVRAM' similar process) to either set.



7.10. Help Menu

“Help"

"Help" menu, 'Help' and 'About' There are two sub-menu.

'Help'

Displays the software's help documentation.

'About'

'About' dialog is displayed when you click the software name, description, copyright, and then display the version.

8. Report Window

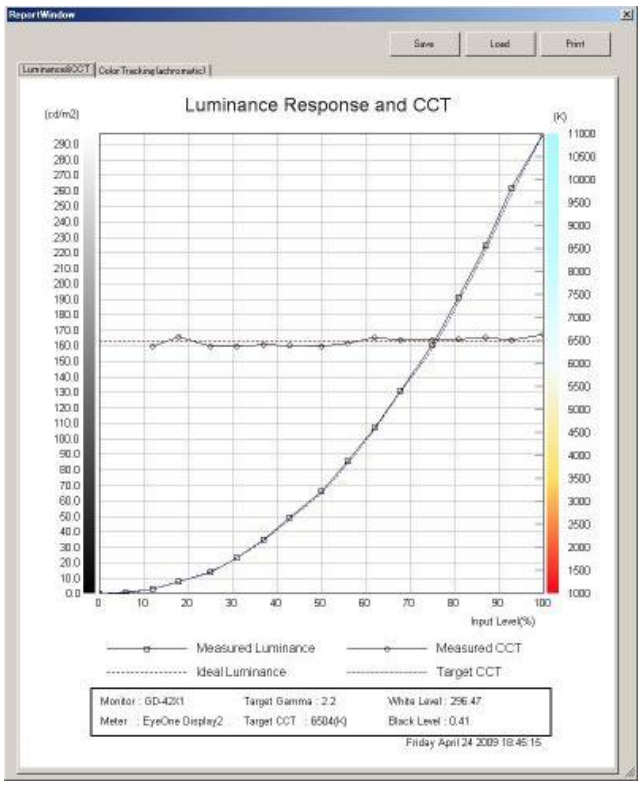
Type of graph

Report window, you can see by the chart below to switch tab.

- Luminance & CCT
- Achromatic color tracking

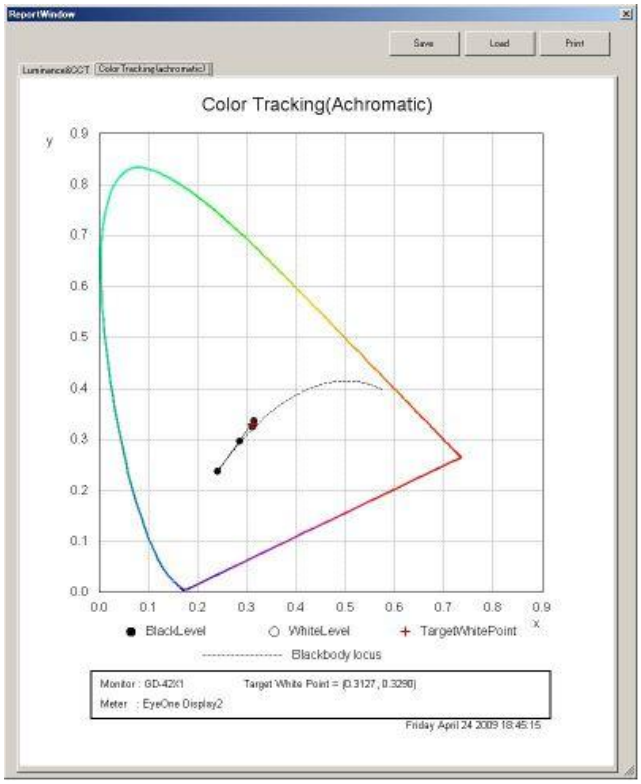
Luminance & CCT

Graphs show the luminance and color temperature.



Achromatic color tracking

CIE coordinates of the graph to display the Diagram is represented by a color coordinate system.

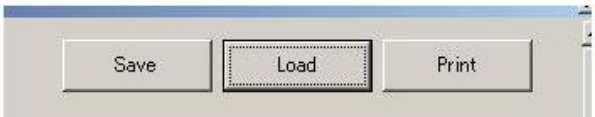


Work on graph

When you click the left mouse in the graph area to determine the starting point of the expansion area of the graph.
By left-clicking the mouse again to the state, left-click at the beginning of the coordinates, and then enlarge the range of coordinates for the second time you click on the left. When you right-click to enlarge, zoom is reset.

Button operation

Window exists on the report button below.



1. Save
2. Load
3. Print

Save

Graph data as a report file that you're currently in the report window, then save.
Report file will be saved "*.rpt" extension that is stored. Basically, it assumes the load on the report window.

Load

Save the file saved reports and view its content.
Readable files are saved by window reports "*.rpt" files only.

Print

The reporting window, you can print the current graph is displayed.
"Luminance & CCT", "Color tracking (Achromatic)" displays a graph of the currently selected one.

9.Troubleshooting

Troubleshooting

1. Why the monitor fails to connect?
    - Check if the power cord is plugged in and the power switch is on.
    - Check if the serial cable is the crossover type.
    - Check if the monitor is a supported model.
    - Check if the computer operating system is supported.
    - If USB-to-Serial interface is used, please check if the interface is listed on the USB icon in the system tray. Also if necessary, please update its driver.

    If all the above items are checked and correct, and especially if the monitor has been connected before with the same setup, please turn off the monitor and unplug its power cord. Wait for a few seconds, and then reconnect the power cord to the monitor and turn the monitor on. This will solve the connection problem if the application program was terminated abnormally at the previous time when it was run.

2. Why the photometer fails to connect?
    - Check if the cable is plugged into both the photometer and the host PC.
    - Check if the photometer is a supported model.
    - Check for the latest photometer driver, download and install the driver if necessary.
    - Check if the interface is listed on the USB icon in the system tray. Often a check for loose cable or a device driver update would solve the problem.
3. Why the NVRAM data cannot be loaded?
    - Check if the monitor is a supported model.
    - Check if the monitor is connected.
    - The NVRAM data can only be loaded onto the same monitor model as when the NVRAM data was previously saved.
    - The NVRAM data has possibly been corrupted
4. Why would the color temperature not match exactly to the user specified values?
    - Photometer has its physical limitations in precision, resolution, and repeatability.
    - It is especially difficult to match the color temperature at the lower luminance levels due to the physical limitations of photometer and the back light leakage of monitor.

- Conversion error when converting from CCT to CIExy and then back from CIExy to CCT due to the imperfection in the conversion equations at the higher color temperatures.
- Numerical round off errors in the computation process.