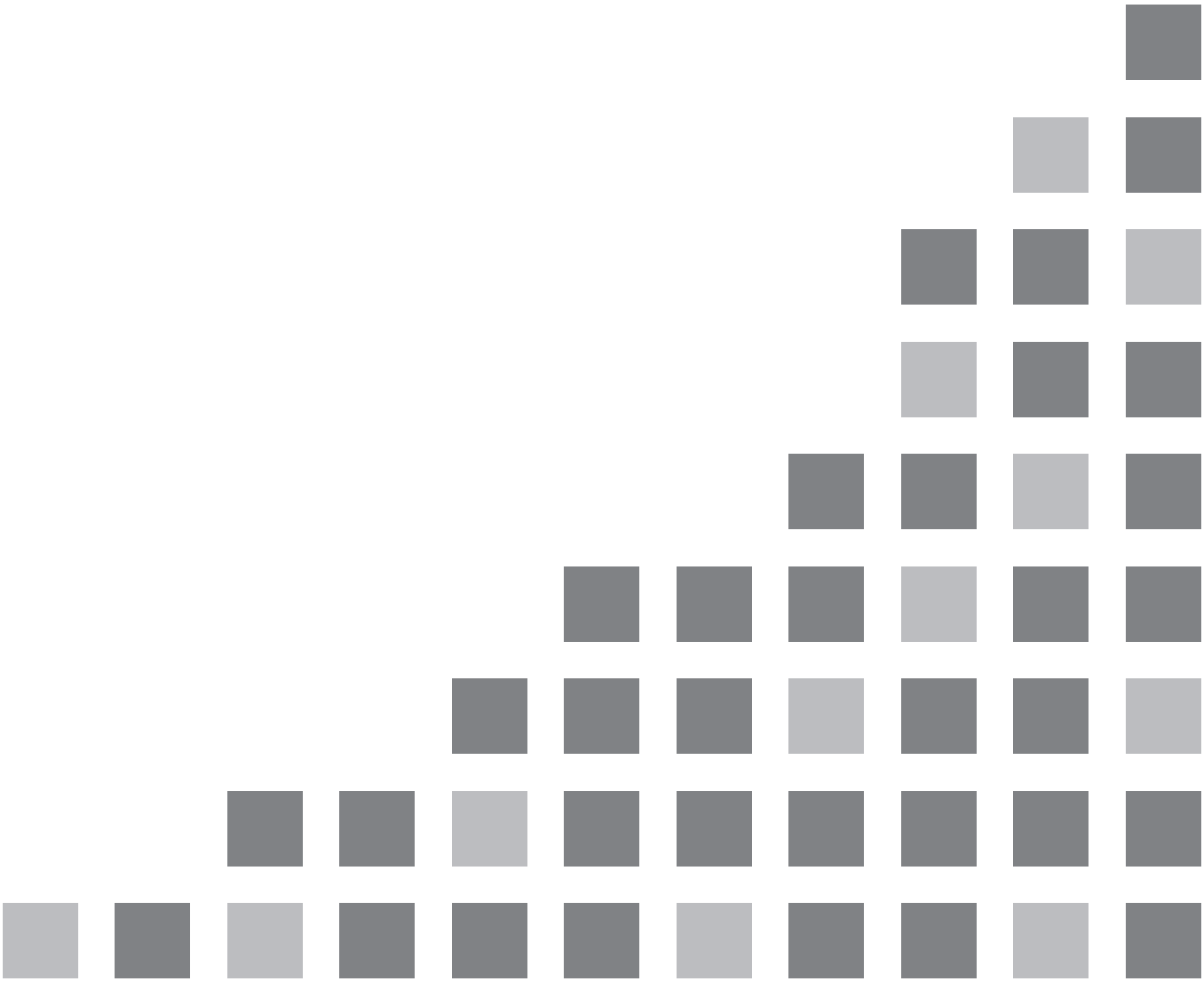
Panasonic

Operating Instructions

LCD Monitor Utility Software for BT-4LH310

Windows



Thank you for purchasing this Panasonic product.

■ Before using this software, please read the instructions carefully.

TQBH0347(E)

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Introduction

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Conventions Used in this Document

Screen illustrations

Screen size and appearance may differ from the illustrations in the operating instructions depending on the operating system and computer that is used.

Conventions

• Names of menus, tabs, buttons and strings in screens are given in square brackets ([ ]).

Note

• “Device” is used in the operating instructions and the software to refer to the Panasonic monitor.

Request

• For details on operations for Windows and computers, see the operating instructions of your computer.

Software Installation

System Requirements

OS

Microsoft Windows XP	Professional (32-bit), Home Edition (32-bit)
Microsoft Windows 7	Ultimate (32-bit), Professional (32-bit), Home Premium (32-bit)

- Supported languages: Japanese, English, Simplified Chinese, German, Spanish, French, Italian
- Incompatible with 64-bit versions of Windows (x 64).
- Compatible with Microsoft Windows XP SP3.
- Compatible with Microsoft Windows 7 SP1.
- Resolution: 1024 × 768 or more

Other requirements

- Make sure the Microsoft OS system requirements are met.
- An RS-232C connector is required.

Operation is not guaranteed for all computers that meet the above conditions.

- Images used in this software manual may be subject to change without notice.
- For details on analyzer operations, refer to the documents supplied with the analyzer.

<< Compatible analyzers >>
Konica Minolta: CA-210 / CA-310
X-Rite: i1 Pro
PHOTO RESEARCH: PR-655

Installation

1. Download the file from the following website onto the hard drive of the computer.

Downloading website: http://panasonic.net/prodisplays/4LH310/

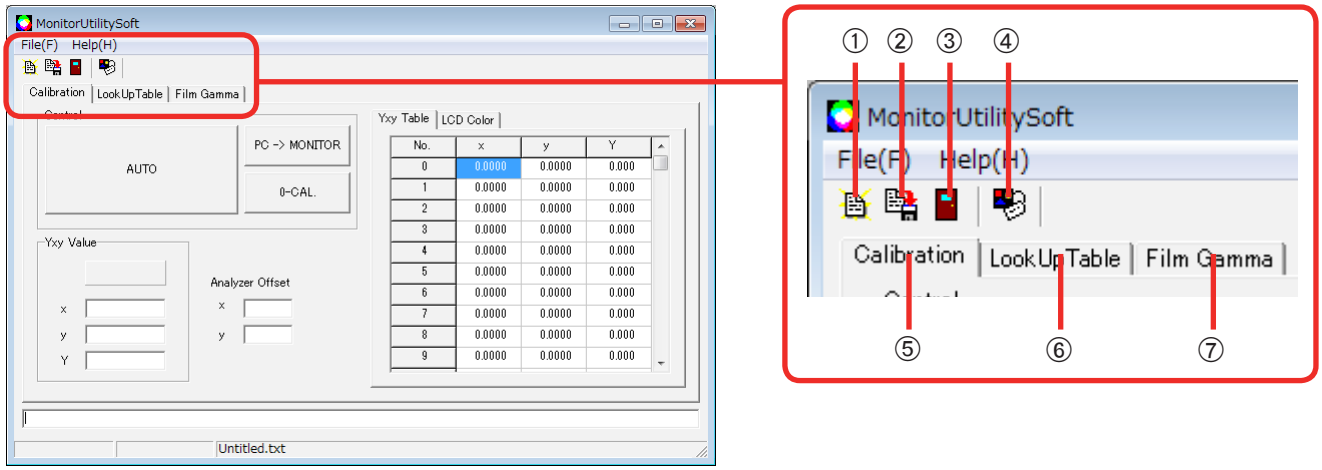
2. Extract the downloaded file.

“Monitor Utility Software (MonitorUtilitySoft .exe)” is created in the extraction destination.

Starting the Software

Double-click [MonitorUtilitySoft .exe].

• The software starts.



① **[Open]**

Open a file.

This performs the same operation as [File] - [Open] in the menu bar.

② **[Save]**

Save a file.

This performs the same operation as [File] - [Save] in the menu bar.

③ **[Exit]**

Quit the software.

This performs the same operation as [File] - [Exit] in the menu bar.

④ **[Property]**

Open the [Property] screen.

This performs the same operation as [File] - [Property] in the menu bar.

⑤ **[Calibration] tab**

Switch to the calibration screen. (See page 11)

⑥ **[Look Up Table] tab**

Switch to the lookup table upload screen. (See page 14)

⑦ **[Film Gamma] tab**

Switch to the film gamma upload screen. (See page 18)

Connecting the Device

Connect the device to the host computer via an RS-232C cable (optional accessory).

Connecting via RS-232C

Preparation

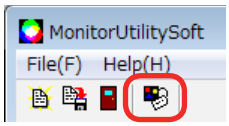
Connect the RS-232C connectors on the computer and the device via an RS-232C cable (9-pin D-sub).

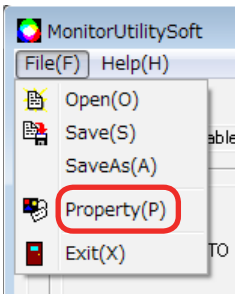
Note

• Use an RS-232C straight cable.

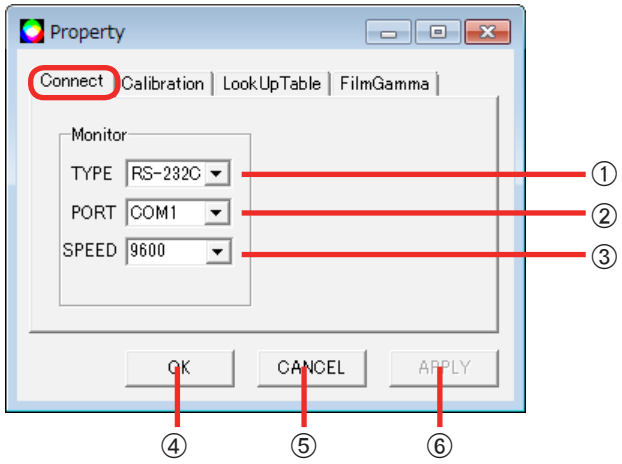
Settings

1. Click [Property] (or select [File] - [Property]) to open the [Property] screen.





2. Switch to the [Connect] tab, and configure the COM port and baud rate of the computer.



①**[TYPE] (connection setting)**

Select the connection type used between the device and computer.

- The connection type is fixed at [RS-232C].

②**[PORT]**

Select the COM port on the computer that is being used to connect the device.

③**[SPEED] (communication speed)**

Select the communication speed for the RS-232C connection.

The communication speed on the device side switches automatically.

④**[OK] button**

Connect to the device using the specified configurations.

⑤**[CANCEL] button**

Cancel the connection configurations, and close the [Property] screen.

⑥**[APPLY] button**

Connect to the device using the specified configurations.

3. Click [OK].

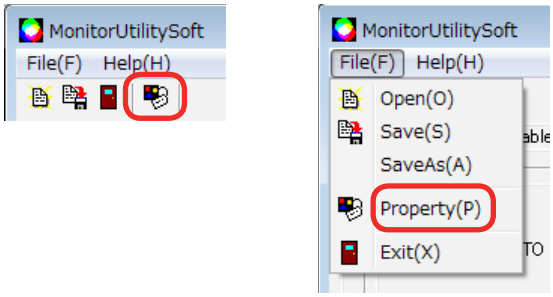
Connection to the device is established using the specified configurations.

- To cancel configurations and close the screen, click [CANCEL].

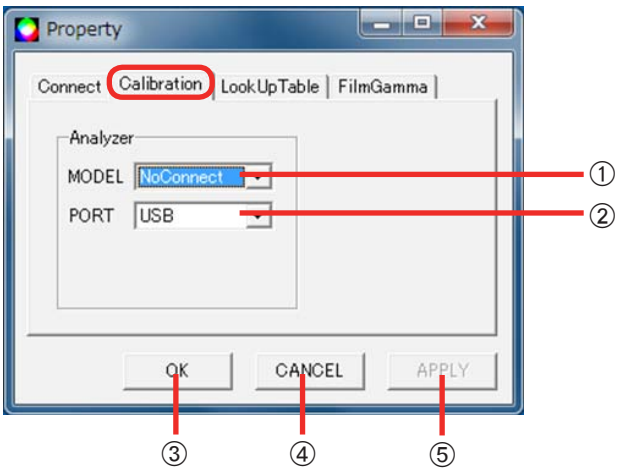
Calibration Function

Connecting the Analyzer

1. **Click [Property] (or select [File] - [Property]) to open the [Property] screen.**



2. **Click the [Calibration] tab to switch the screen, and configure the [Analyzer] settings.**



①[MODEL] (analyzer selection)

Select the analyzer.

CA-210 / CA-310

Analyzer manufactured by Konica Minolta. A driver is required for this analyzer. Obtain the driver from the CD-ROM supplied with your purchased CA-210 / CA-310 or from the Konica Minolta website, and refer to the installation manual to configure settings. Calibration of the analyzer is required when using a CA-210. Contact your device's dealer for details.

i1 Pro

Analyzer manufactured by X-Rite. A driver is required for this analyzer. Refer to the installation manual on the CD-ROM supplied with your analyzer to configure settings.

Note

Verify that the “EyeOne.dll” file is stored in the “C:¥WINDOWS¥system32” folder.
If the file does not exist, copy it from the installation source.

PR-655

Analyzer manufactured by PHOTO RESEARCH. A driver is required for this analyzer. Refer to the installation manual on the CD-ROM supplied with your analyzer to configure settings.

Note

Verify that the “prusb.inf” file is stored in the “C:¥WINDOWS¥system32¥drivers” folder.
If the file does not exist, copy it from the installation source.

②**[PORT]**

Select the COM port on the computer that is being used to connect the analyzer.
(Setting values: COM1 to COM6 / USB)

③**[OK] button**

Connect to the computer using the specified configurations.

④**[CANCEL] button**

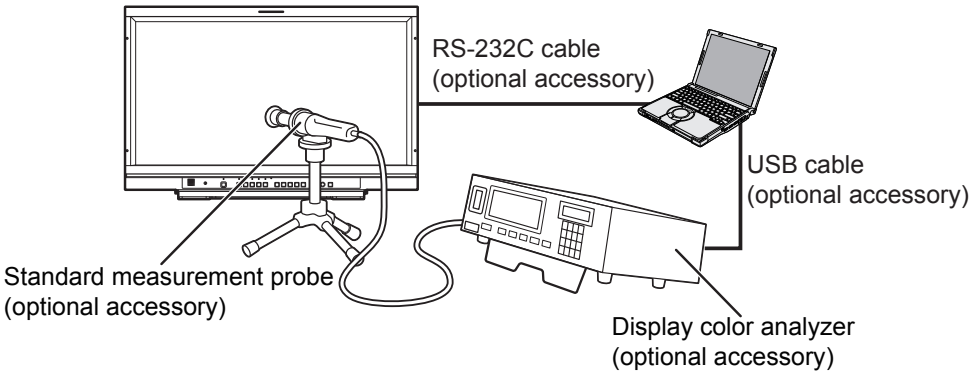
Cancel the connection configurations, and close the [Property] screen.

⑤**[APPLY] button**

Connect to the computer using the specified configurations.

Connection example

The following example depicts a connection between the computer and the analyzer (CA-310) via a USB cable.

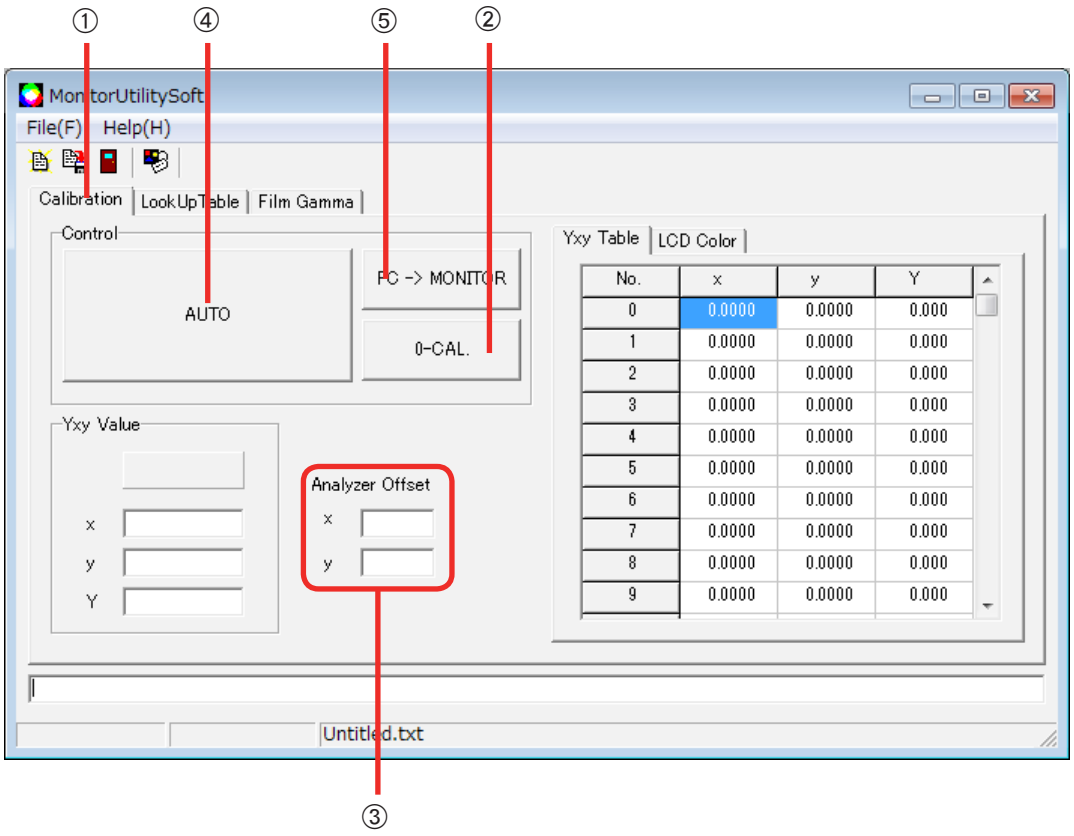


- Connections for the CA-210, i1 Pro, and PR-655 are identical.
- Turn on the analyzer before starting the Monitor Utility Software.
- Make the room dark so that no external light can enter the standard measurement probe before starting the calibration. If external light enters the probe, the low brightness characteristics may not be calibrated correctly.

Notes

- You can restore factory default settings in the [RESET] submenu of the [SYSTEM CONFIG] - [CALIBRATION] monitor menu. For details, refer to the operating instructions for the device.
- Before performing calibration, be sure to perform sufficient aging (approx. 2 hours) on the device and analyzer.
- Do not perform the following during measurement. Doing so may result in malfunctions on the device.
  - Forcibly shutting down the software
  - Disconnecting the cables
  - Turning off the power

Calibration Screen



①**[Calibration] (calibration selection)**

Click this to switch to the [Calibration] screen. The above screen appears.

②**[O-CAL] (analyzer initialization) button**

Perform initialization for the analyzer.
Click [0-CAL].

Note

- The method of configuration differs depending on the analyzer.

CA-310 / CA-210

Before clicking [0-CAL], set the probe to “0-CAL.”

i1 Pro

Configuration is performed via the “④ [AUTO] button” operation. You do not have to perform configuration here.

PR-655

There is no configuration on the analyzer itself.

③**[Analyzer Offset] (analyzer offset value)**

Enter an offset value for the analyzer.
The setting range is between -0.0999 to 0.0999.
Enter a value if offset is required due to your operating environment.

④**[AUTO] button**

For details, see “Performing Calibration” (page 12).

⑤**[PC -> MONITOR] (data transfer) button**

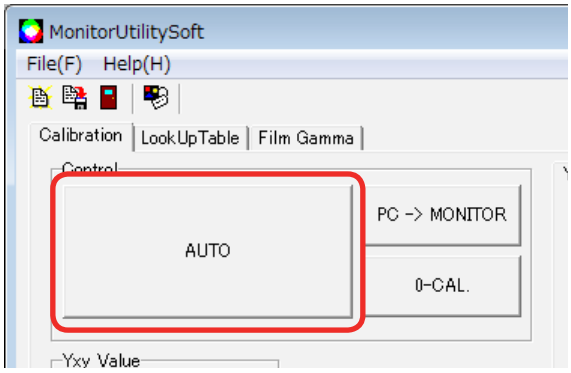
Transfer previously measured data to the device.
To load data, click [Open] (or select [File] - [Open]). Values are displayed under [Yxy Table].
Restart the device after the data is transferred.

Note

- This operation is not necessary if you performed calibration using the [AUTO] button. Data is transferred to the device during the [AUTO] process.

Performing Calibration

1. Click the [AUTO] button.



The file name entry screen appears.

Notes

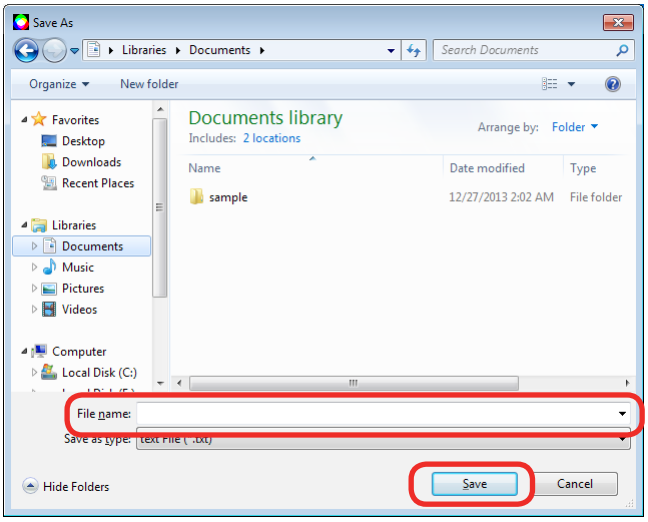
CA-310 / CA-210

Initialize the analyzer with the [0-CAL] setting (page 11), and then place the analyzer in front of the device.

PR-655

Press the MEASURE button on the analyzer to enter measurement mode, and then place the analyzer in front of the device.

2. Enter a file name in [File name], select a save destination, and then click [Save].



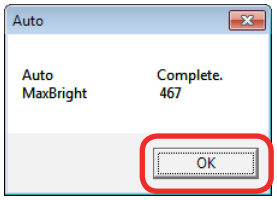
Measurement starts.

Note

i1 Pro

The analyzer must be initialized after measurement starts.
Click the [AUTO] button to display the initialization procedure, and place the analyzer on the calibration plate. When initialization is complete, additional steps appear. Place the analyzer in front of the device, and continue with the measurement procedure.

3. When the following screen appears after measurement is complete, click [OK].

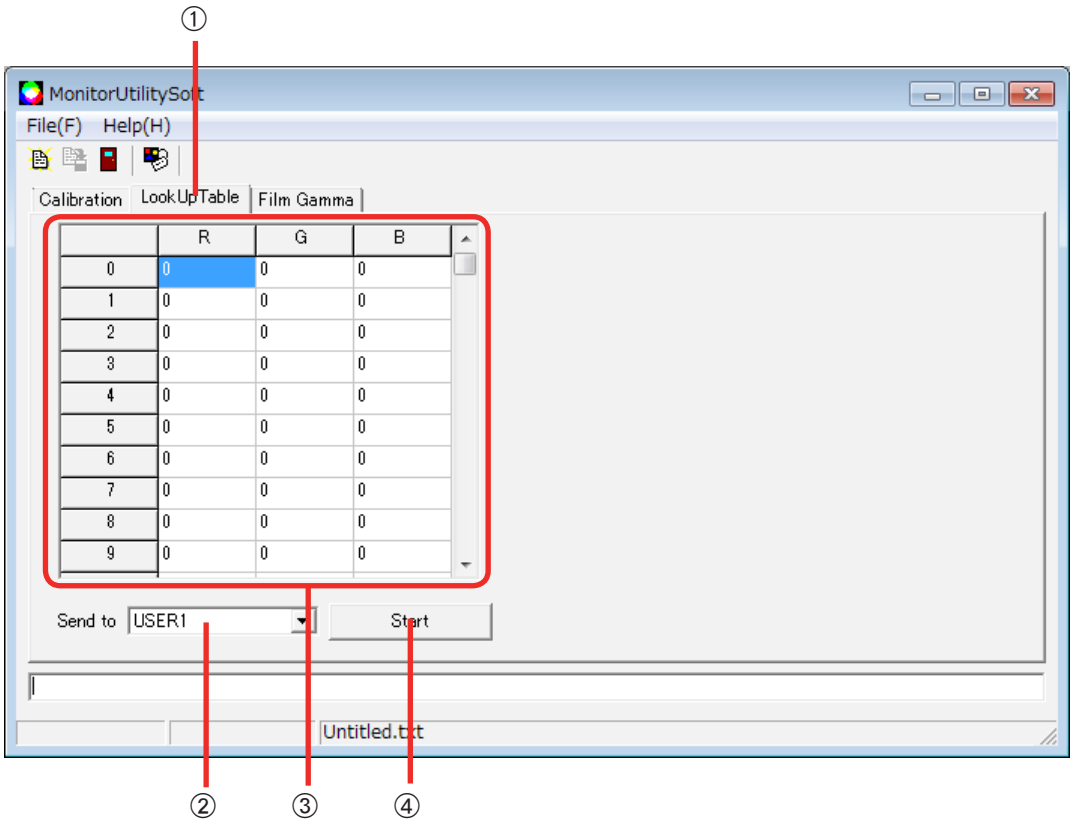


The measurement data is saved under the file name specified in step 2.

After measurement is complete, restart the device.

Look Up Table (LUT) Upload Function

Look Up Table Upload Screen



①**[Look Up Table] (Look Up Table selection)**

Click this to switch to the [Look Up Table] screen. The above screen appears.

②**[Send to] (USER selection)**

Select the USER number to which to upload (i.e., the area to which to transfer the file).

③**Data table**

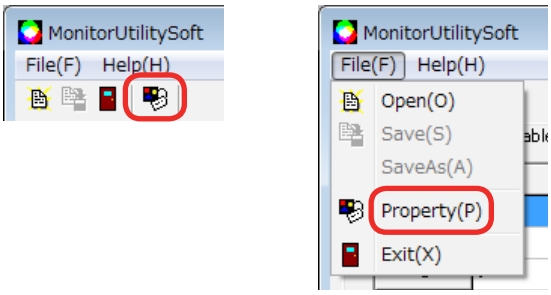
Displays the data of the file loaded by clicking [Open] (or selecting [File] - [Open]).

④**[Start] button**

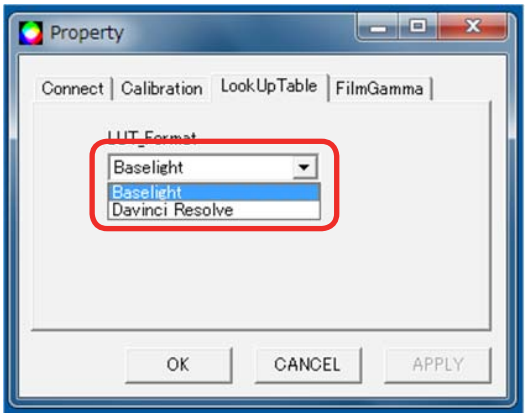
Starts upload to the device.

Uploading Look Up Tables

1. **Click [Property] (or select [File] - [Property]) to open the [Property] screen.**



2. **Click the [Look Up Table] tab to switch the screen, and select the [LUT Format].**



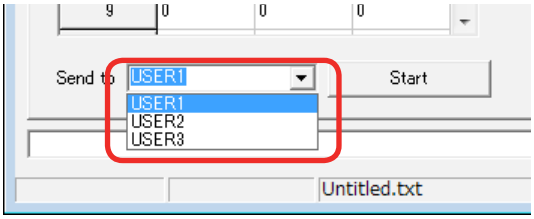
Note

- The selectable formats are [Baselight] and [Davinci Resolve].

3. **Click [OK].**

- To leave configurations unchanged and close the screen, click [CANCEL].

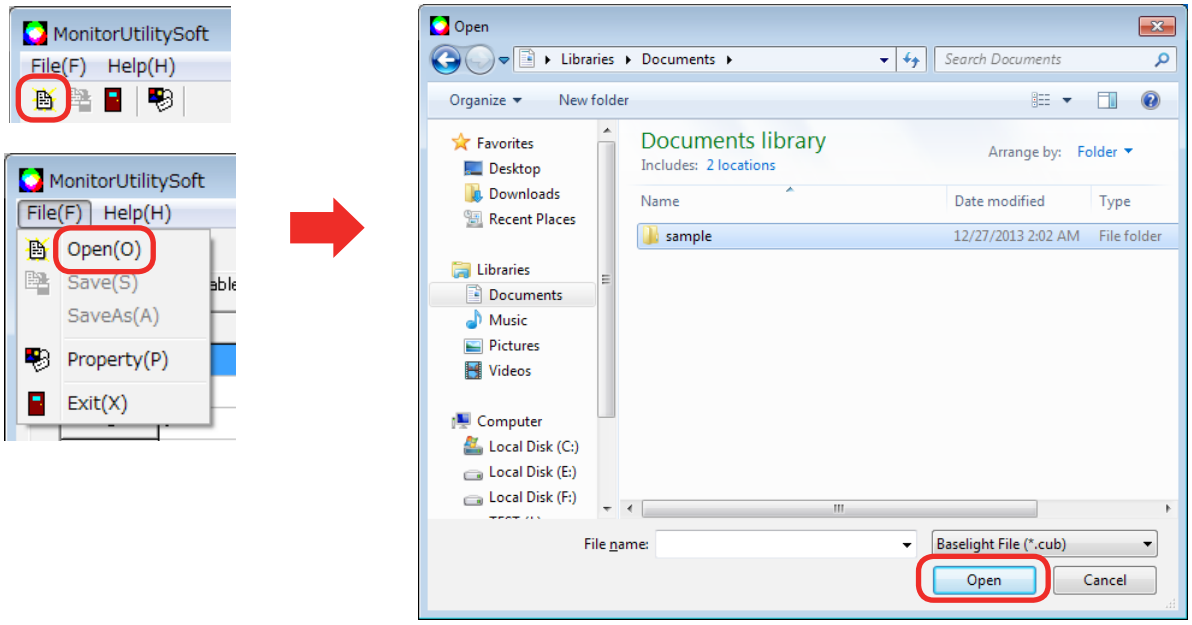
4. **Select the area to which to send the file in [Send to].**



Note

- This operation is equivalent to the [VIDEO CONFIG] - [LUT] monitor menu setting.

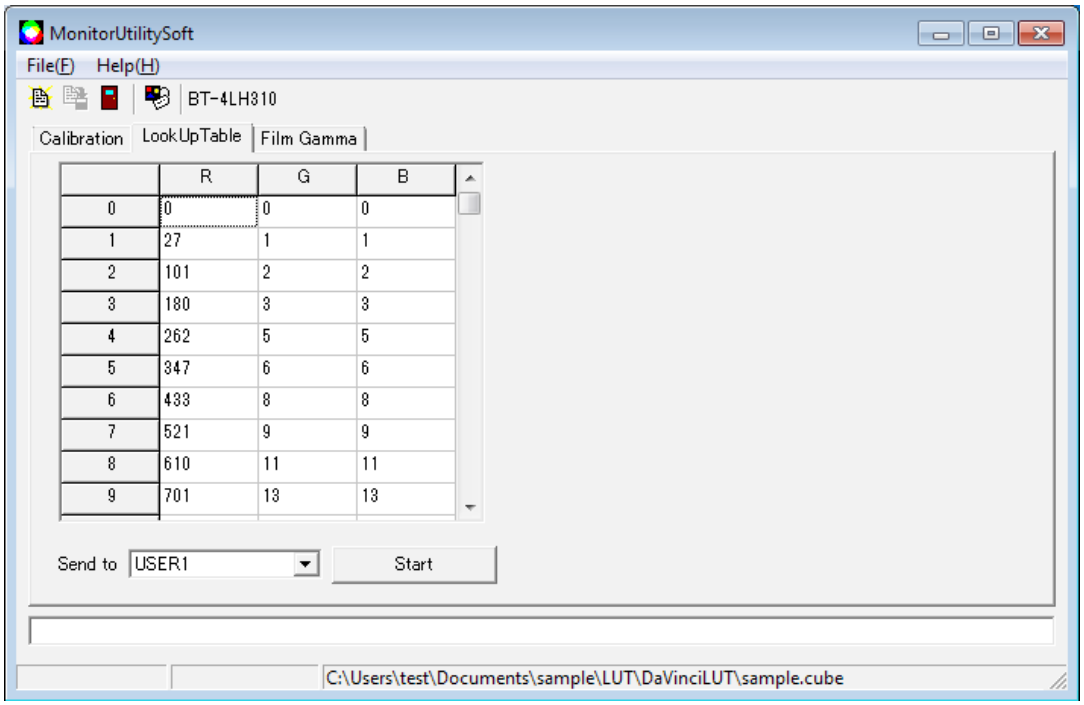
5. **Click [Open] (or select [File] – [Open]), select the file to upload, and then click [Open] to load the file.**



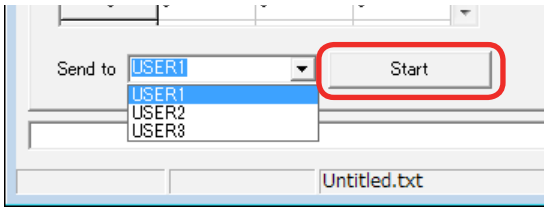
Note

- The extension of the files that can be loaded is ".cub" for [Baselight] and ".cube" [Davinci Resolve].

The loaded file is converted and displayed as a LUT for the monitor (16 × 16 × 16).

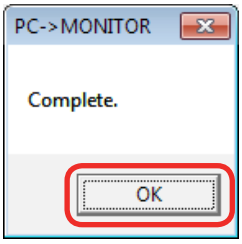


6. Click the [Start] button.



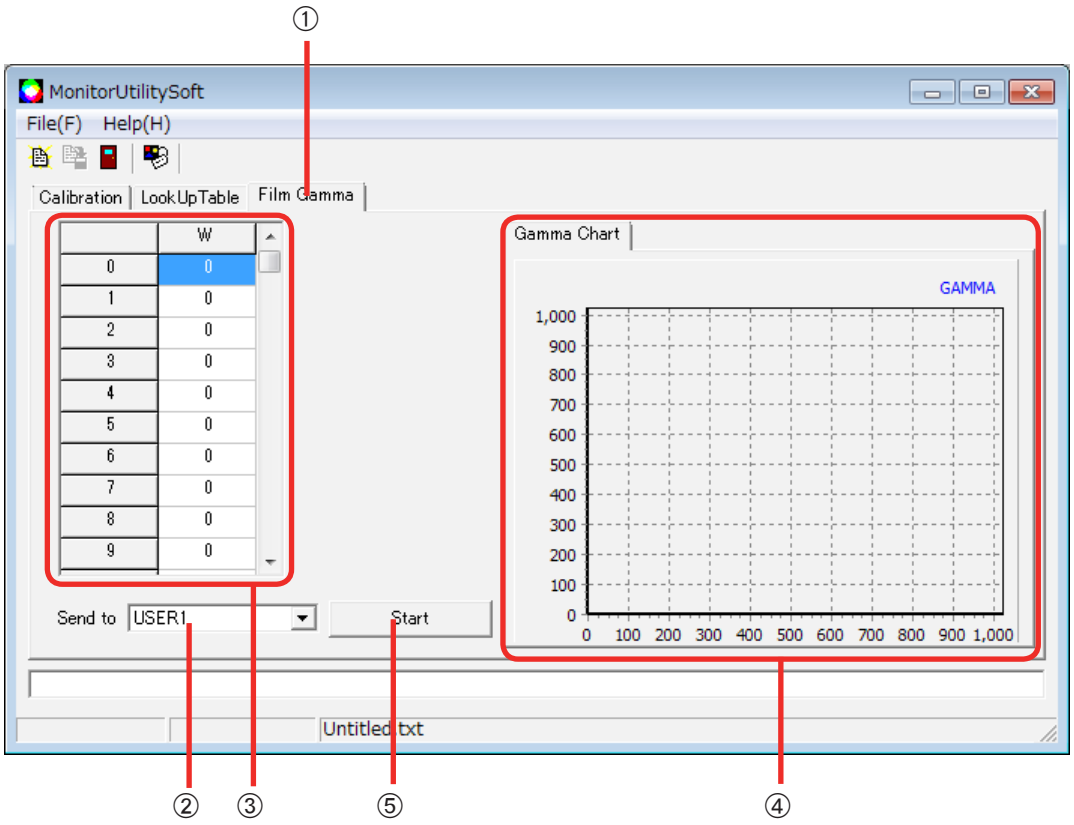
Transfer starts.

7. When the following screen appears after transfer is complete, click [OK].



Film Gamma Upload Function

Film Gamma Upload Screen



① **[Film Gamma] (film gamma selection)**

Click this to switch to the [Film Gamma] screen. The above screen appears.

② **[Send to] (USER selection)**

Select the USER number to which to upload (i.e., the area to which to transfer the file).

③ **Data table**

Displays the data of the file loaded by clicking [Open] (or selecting [File] - [Open]).

④ **[Gamma Chart] (data graph)**

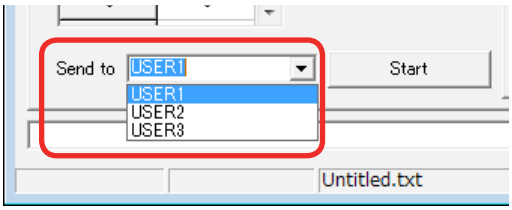
Displays a graph of the loaded data.

⑤ **[Start] button**

Starts upload to the device.

Uploading Film Gamma

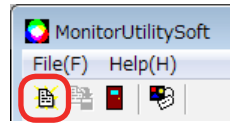
1. Select the area to which to send the file in [Send to].

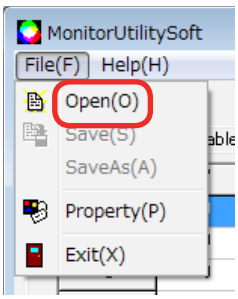


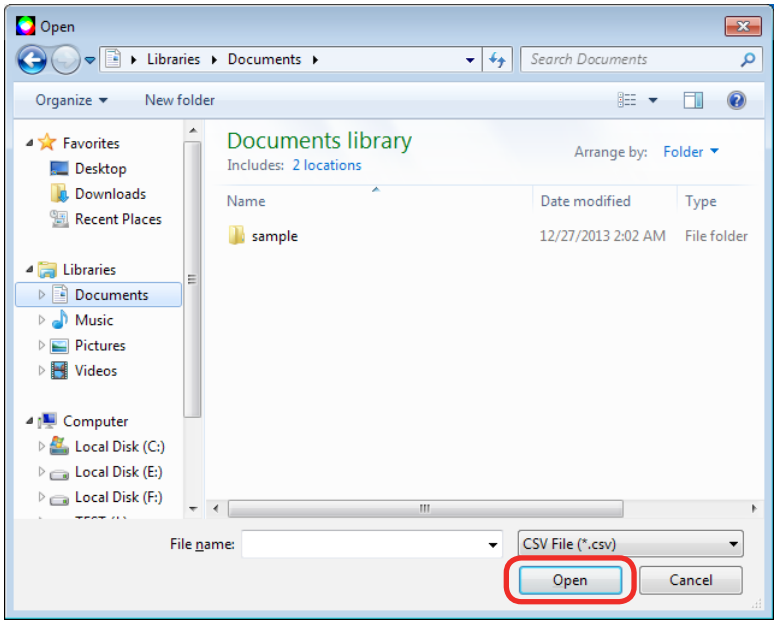
Note

- This operation is equivalent to the [VIDEO CONFIG] - [FILM GAMMA] monitor menu setting.

2. Click [Open] (or select [File] – [Open]), select the file to upload, and then click [Open] to load the file.



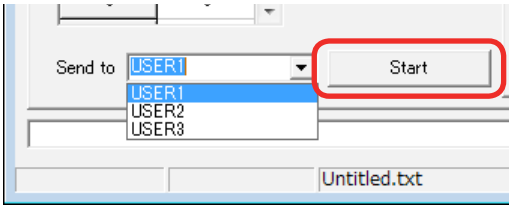




Note

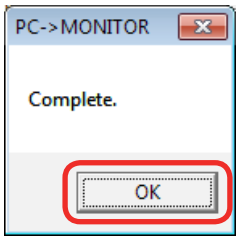
- The extension of the files that can be loaded is ".csv."

3. Click the [Start] button.



Transfer starts.

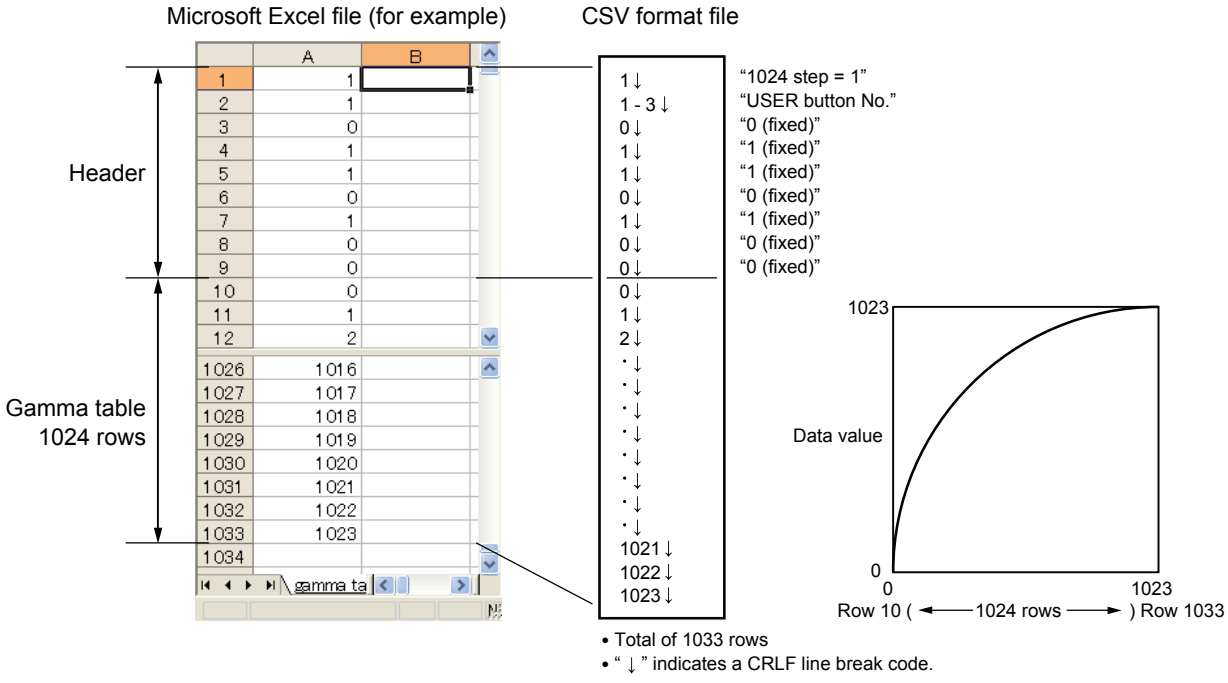
4. When the following screen appears after transfer is complete, click [OK].



Note

- Normally, a gamma characteristic of 1/2.2 is added to the video signal captured by a camera, and the monitor assumes this gamma characteristic when reproducing luminance gradation. The gamma characteristic may not be 1/2.2, depending on the camera. In such cases, luminance gradation cannot be reproduced correctly.
  By configuring the gamma characteristic in the following data format to create a gamma table and uploading it to the monitor, you can properly reproduce the gradation intended by the camera's manufacturer.

Uploadable data format and gamma characteristics



Error Messages

The error messages of the software and the appropriate responses to the messages are as follows.

Error message	monitor : Communication Error
Meaning	Communication cannot be established between the device and computer.
Response	Check the following. 1. Make sure the computer and the device are properly connected. 2. Make sure the serial settings of the computer and the device match.

Error message	Analyzer : (null)
Meaning	The analyzer is not connected.
Response	Connect the analyzer.

Error message	Input value ERROR!
Meaning	An invalid value has been input.
Response	Input a value that is within the valid range.

● Calibration

When a CA-310 / CA-210 is connected

Error message	Analyzer : ∗∗∗∗
Meaning	Refer to the operating instructions for the analyzer.
Response	Refer to the operating instructions for the analyzer.

When a PR-655 is connected

Error message	Analyzer : ∗∗∗∗
Meaning	Refer to the operating instructions for the analyzer.
Response	Refer to the operating instructions for the analyzer.

When an i1 Pro is connected

Error message	Analyzer : MeasureSingle failed.
Meaning	Proper measurement cannot be performed.
Response	Check the connection to the analyzer.

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