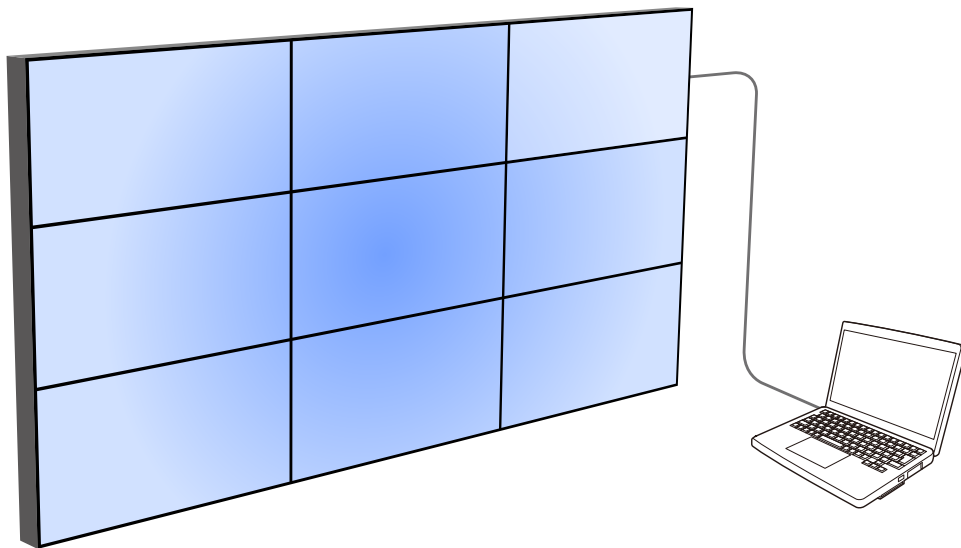


Operating Instructions Video Wall Adjustment & Calibration Software

Video Wall Manager Ver. 1.15

Windows



Thank you for purchasing this Panasonic product.

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

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Precautions and Disclaimers

- Precautions regarding security

When using the Video Wall Adjustment & Calibration Software, security breaches of the type described below are conceivable.

- Leakage of your private information via this software
- Illegal operation of this software by a malicious third-party
- Harm to or cessation of operation of this software by a malicious third-party

Be sure to implement sufficient security measures.

- Make sure the password is as hard to guess as possible.
- Change the password periodically.
- Panasonic Projector & Display Corporation and its affiliated companies never directly ask customers for their password. Do not give out your password even if directly asked by a third-party representing themselves as Panasonic Projector & Display Corporation.
- Always use on a network that has safety protection such as a firewall implemented.
- Set the password for the computer you are using in order to set limits on user accessibility.

- This software makes use of the following software.

A portion of this software is based in part on the work of the Independent JPEG Group.

- “Video Wall” and “Multi Screen Display” refer to large screen displays consisting of multiple screens.
- The illustrations and display examples used in this manual may differ from the actual product.
- Panasonic Projector & Display Corporation cannot be held liable for damages arising from data corruption or loss as a result of using this display.

What You Can Do with Video Wall Manager

With this software you can use a single computer to manage multiple displays individually or simultaneously without switching the cable connection.

■ Picture Adjustment

You can adjust picture color, density, and white balance.

■ Calibration

Using a color sensor, you can adjust the display color, brightness, and gamma.

Note

- Use a color sensor when calibrating the display.

■ Auto Display Adjustment (AUTO ADJUST)

Using an externally-connected camera, you can automatically adjust the color and brightness across multiple displays that make a Multi Screen Display.

Note

- In order to use the Auto Display Adjustment function, you must first activate this software, and apply the "Auto Display Adjustment Upgrade Kit (TY-VUK10)".
- To use the Auto Display Adjustment function, prepare a camera.

■ Other functions

Some of the display's menu operations can be carried out on a computer screen.

Check Your Computer

System requirements

The computer must meet the following requirements in order to use the supplied software.

- OS : Microsoft Windows 11 Windows 11 Pro 64bit
Windows 10 Windows 10 32/64bit, Windows 10 Pro 32/64bit
Compatible with English, Japanese or Chinese language versions of the above operating systems.
• For a 64bit OS, this application runs on WOW64.
- CPU: Clock speed of 1 GHz or higher
- Memory: 32bit OS: 2 GB or more
64bit OS: 4 GB or more
- Available disk space:
16 GB or greater (Further available space is necessary to save display information)
- Others: A display with a resolution of 1 024 × 768 pixel or higher using High Color (16 bit) or higher
LAN port for a wired LAN (10Base-T/100Base-TX/1000Base-T) or a serial port (RS-232C compliant)
USB2.0-compatible port or higher (when using the calibration and Auto Display Adjustment function)

Note

- Please understand that operation is not guaranteed if this software application is used in a system environment other than that specified above or on a home-built computer.
- The software will not operate properly when a “Guest” account is used. Use a “Standard User” or “Administrator” account.
- For details on the operating systems supported by the color sensor that will perform calibration, consult the manufacturer of the color sensor.

Proper operation cannot be guaranteed for all computers even if they satisfy the above requirements.

Necessary Environment for Computers to be Connected

Be sure to check the following settings when connecting the display to the computer.

When using a LAN cable

Computer with a built-in LAN function

- Is your LAN switched on?

Computer without a built-in LAN function

- Is your LAN adapter properly recognized?

Please install the LAN adapter driver beforehand.

For details on how to install the driver, please refer to instructions accompanying the LAN adapter.

- Is your LAN adapter switched on?

Note

- It may not be possible to establish a connection with the display if security (firewall) software or utility software for LAN adapter are installed.
 - ☞ “Frequently Asked Questions” (Page 63)
- Operation is not guaranteed for all LAN adapters and built-in LAN adapters in the computers.
- An Internet connection is required to activate a display.

When using a serial (RS-232C) cable

Computer equipped with a serial (RS-232C) port

- Is your serial (RS-232C) function switched on?

Computer not equipped with a serial (RS-232C) port

- Use a USB-RS-232C converter.

Please install the USB-RS-232C converter driver beforehand.

For details on how to install the driver, please refer to instructions accompanying the USB-RS-232C converter.

Installing/Uninstalling Software

Installation

Quit any applications running in Windows before starting installation. Failure to do so may result in improper installation.

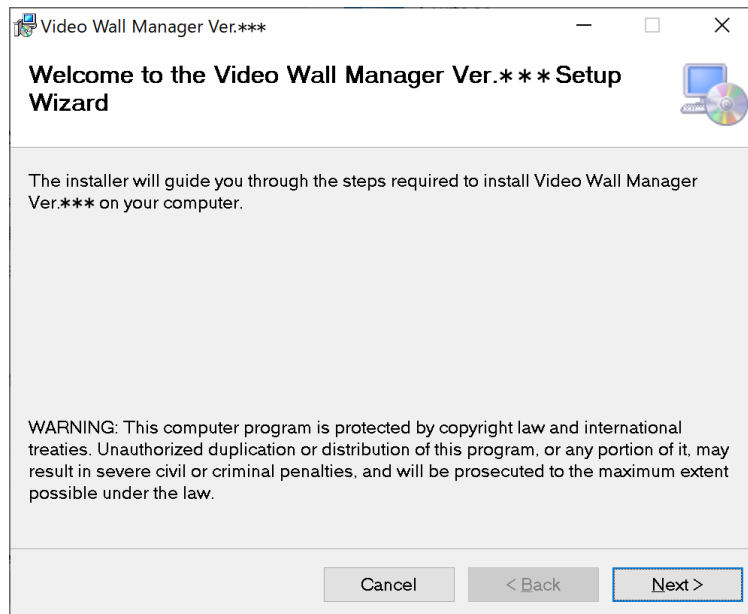
1 Download this software (Video Wall Adjustment & Calibration Software).

Log in to PASS*1 on the website (<https://docs.connect.panasonic.com/prodisplays/pass>), click [Software Download], and follow the on-screen instructions to download the software.

*1: PASS: Panasonic Professional Display and Projector Technical Support Website

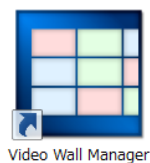
2 Extract the file downloaded from PASS.

3 After the folder has been extracted, double-click "Setup.exe".



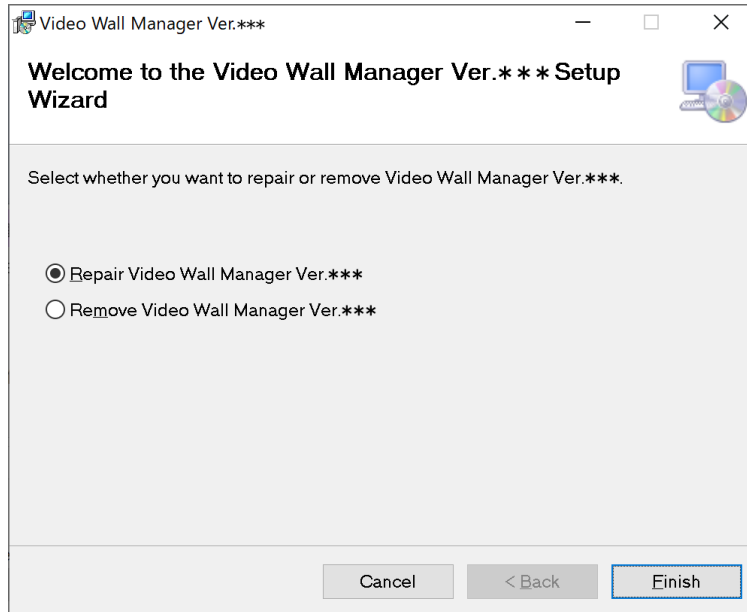
4 Follow the on-screen instructions to install the application.

As soon as the installation process is completed, a shortcut icon is created on the desktop.



Note

- If the same version of the software is already installed, the following screen appears.



To repair defects in the software, select "Repair Video Wall Manager" and click [Finish].

To uninstall the software before installing it again, select "Remove Video Wall Manager" and click [Finish].

- If you selected "Repair Video Wall Manager" and the "Insert disk" message is displayed, uninstall the application, and then reinstall it.

Software Uninstall

Enter and select “Apps & features” in the search box in the taskbar, select [Video Wall Manager], and click [Uninstall].

Preparation

■ Displays supported

For details on models compatible with the Video Wall Adjustment & Calibration Software, check the information found on the software download page after logging in to PASS on the website (<https://docs.connect.panasonic.com/prodisplays/pass>).

Note

- No guarantees are made for the operations when the computer is connected to a non-supported display.

■ Connecting the display to a computer

One uses a LAN connection and the other uses a serial connection.

Displays with a LAN connection and serial connection cannot be managed simultaneously.

LAN connection

- Use a LAN cable to connect the display to the computer.
Up to 100 displays can be connected. When using the Auto Display Adjustment function, up to 25 of these displays can be adjusted at the same time (up to 5 horizontal, up to 5 vertical).
- If a DIGITAL LINK OUT terminal is available on the displays and a LAN connection is used with the DIGITAL LINK OUT terminal, multiple displays can be connected in sequence to a display that is connected to a single computer (daisy chain connection).

Note

- This software does not support LAN connection with TH-55LFV9, TH-55LFV8, TH-49LFV8, TH-55LFV50, TH-55LFV5, and TH-47LFV5.
- When using a hub to connect, whether or not a straight cable or crossing cable or both can be used depends on the system configuration. Please consult your network administrator for details.
- The number of connected units will be limited when creating a daisy chain connection using a DIGITAL LINK OUT terminal. For details on how to handle control when using a daisy chain connection, check display and twisted pair cable transmitter user manuals.

Serial (RS-232C) connection

- Using a serial cable, connect multiple displays to a display connected to a single computer (daisy chain connection).
Up to 100 displays can be connected. When using the Auto Display Adjustment function, up to 25 of these displays can be adjusted at the same time (up to 5 horizontal, up to 5 vertical).

Note

- Use a cable complying with the RS-232C standard as the serial cable. Refer to operating instructions of the display for details on which type of cable can be used.
- When using models TH-55LFV50, TH-55LFV5, or TH-47LFV5, up to 25 displays can be connected.
- For details how to connect when controlling using a daisy chain connection, refer to the operating instructions of the display.
- Specify values between 1 and 100 when configuring the display ID setting. Displays specified as 101 or above will not be recognized.
- A display without a SERIAL OUT terminal cannot be connected in a daisy chain.

Preparation

■ Setting the Computer

Network settings for a LAN connection

- See the following when using displays other than TH-55LFV9, TH-55LFV8, TH-49LFV8, TH-55LFV50, TH-55LFV5, and TH-47LFV5.
 - Set the IP ADDRESS, SUBNET MASK and DEFAULT GATEWAY according to the operating environment. (Please consult your network administrator for details.)

Port settings for a serial (RS-232C) connection

- Because communication is automatic, communication speed settings do not need to be adjusted.

■ Setting the Display

Network settings for a LAN connection

- When using a LAN connection, display settings must be adjusted to match the network environment.

Note

- This software does not support LAN connection with TH-55LFV9, TH-55LFV8, TH-49LFV8, TH-55LFV50, TH-55LFV5, and TH-47LFV5.
- Refer to operating instructions of the display for method on configuring the display.
- This software identifies the display using the configured IP address. If DHCP is set to ON in the display network setting in a network environment that uses a DHCP server etc., the DHCP server may change the IP address allocated to the display, making it impossible to connect using this software.

Port settings for a serial (RS-232C) connection

- When using a serial (RS-232C) connection, the serial port control settings must be adjusted.

Note

- Refer to operating instructions of the display for method on configuring the display.

■ Connecting to a Color Sensor

Use a color sensor when calibrating the display.

Use a USB cable to connect a computer and color sensor.

Use the USB cable included with the color sensor or the manufacturer recommended USB cable for your color sensor.

For information on compatible color sensors, see "Calibration Screen" (page 47).

■ Camera connection

To use the Auto Display Adjustment function, prepare a camera.

Use a USB cable to connect a computer and camera.

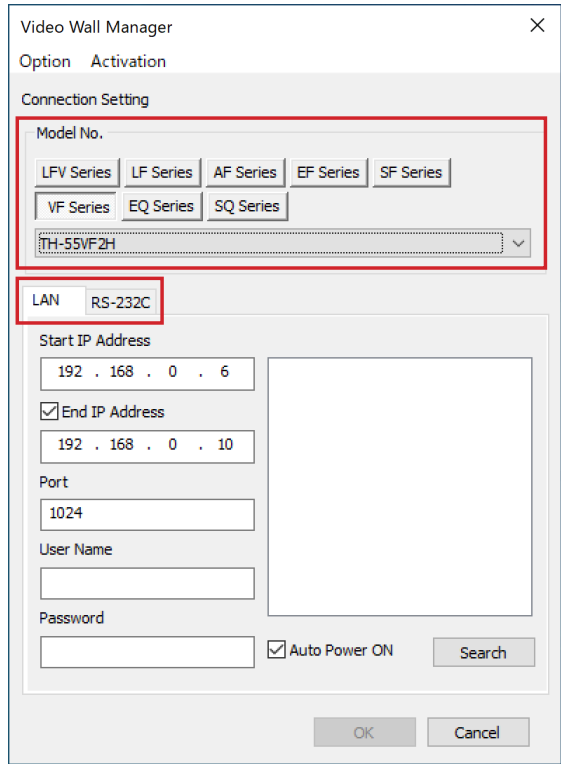
Use the USB cable included with the camera or the manufacturer recommended USB cable for your camera.

For details on compatible cameras and lenses, check the information found on the software download page after logging in to PASS on the website (<https://docs.connect.panasonic.com/prodisplays/pass>).

Starting and Exiting the Application

Starting the application

Double-click the shortcut icon on the desktop.
When the application starts, the [Connection Setting] screen appears.
Select the display model and connection method.



■ Model No.

Select the display to be connected from the display list in the tab or pull-down menu.

Note

- Displays of different series cannot be connected simultaneously.
- Even if displays are in the same series, they cannot be connected simultaneously if they are different models (SF1H and SF2H, etc.).
- If you are using the LFV or EF series, displays of different sizes cannot be connected simultaneously.

■ LAN / RS-232C

Select the display and computer connection method.

To use a LAN connection for the display and computer, select the [LAN] tab; alternatively, to use a serial (RS-232C) connection, select the [RS-232C] tab.

Note

- This software does not support LAN connection with TH-55LFV9, TH-55LFV8, TH-49LFV8, TH-55LFV50, TH-55LFV5, and TH-47LFV5.

Starting and Exiting the Application

[LAN]

To use a LAN connection, select the [LAN] tab and adjust the following settings.

① Start IP Address

Input here the IP address of the display to be connected.

To search for a connected display, enter an IP address to start searching.

The default value is the smallest host address in the same network as the IP address configured for the network card of the computer on which the software is installed.

Ex.: When the computer IP address is 192.168.0.10, the default value is 192.168.0.1.

The last value used the previous time will be used each time the software is launched.

② End IP Address

To search for a connected display, select the check box and enter an IP address to end searching.

Note

- Specify the same network address for the “Start IP Address” and “End IP Address”.

Ex.: If 192.168.0.6 is entered in “Start IP Address”, in “End IP Address”, enter an IP address that is the same as “Start IP Address” up until 192.168.0.

③ Port

Set here the number of the port that is to be connected to the display.

The default value is 1024.

④ User Name, Password

Enter a user name with administrator privileges to connect with the display and its password.

Under the factory default settings of the display, the user name is “dispadmin” (or “admin1”) and the password is “@Panasonic” (or “panasonic”).

The user name and password differ depending on the display model so please check the operating instructions for your display.

Starting and Exiting the Application

⑤ Auto Power ON

To search for a connected display, select the check box. When the check box is selected, [Auto Power ON] is enabled, and if you click [Search], the power for all displays in the search area will be set to “On”.

Note

- If the main power for the display is not on, the power for the display cannot be set to “On” using [Auto Power ON].
- The specified displays will be connected when you click [OK], however, if the display power is not set to “On”, you will not be able to connect.
- If [Auto Power ON] is enabled and displays available for connection are detected using the search function, the power will be set to “On” even if you do not specify a display for connection.

⑥ [Search]

Use this to search for displays available for connection. Click to begin searching.

Note

- Before carrying out a search, make sure that the main power is on for the applicable displays. If the main power is not on, the displays will not be available for searching.
- If the model selected in [Model No.] differs than the display or projector on the same network it will be detected, but connection will not be possible.

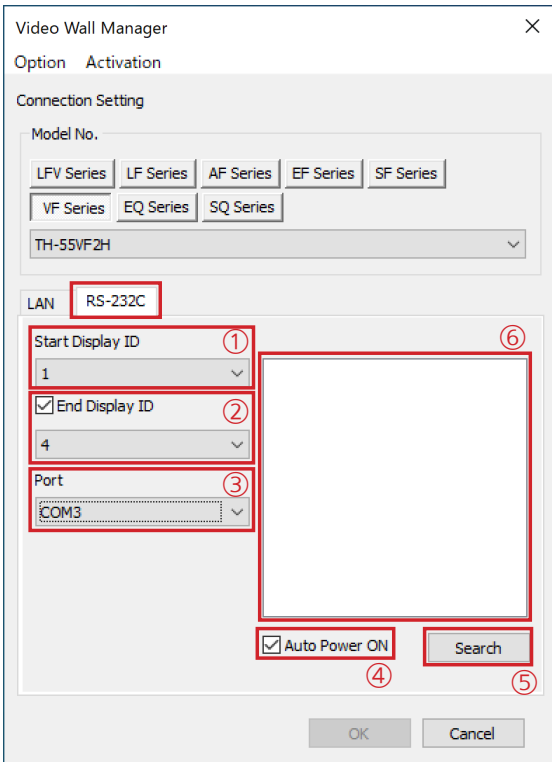
⑦ Display connection list

The IP address list for displays detected during a search appears highlighted in blue.

Click the displays you will not connect to to remove the highlight.

[RS-232C]

To use a serial (RS-232C) connection, select the [RS-232C] tab and adjust the following settings.



① Start Display ID

Specify the display ID for connection.

To search for a connected display, specify the display ID to start searching.

The default value is 1 or the last value used the previous time.

Note

- Search will not be performed if the display ID is set to "0".
Configure a display ID number from 1 to 100 for the display beforehand.

② End Display ID

To search for a connected display, select the check box and specify the display ID to end searching.

③ Port

Specify here the number of the RS-232C port that is to be connected to the display.

The computer COM port is automatically detected and available options only are displayed.

Select a COM port from the pull-down menu.

The default value is the smallest detected COM port.

The selected COM port is stored in memory.

Note

- If a COM port is not displayed, COM ports are disabled.
Check to make sure the serial (RS-232C) port on your computer is enabled.

④ Auto Power ON

To search for a connected display, select the check box.

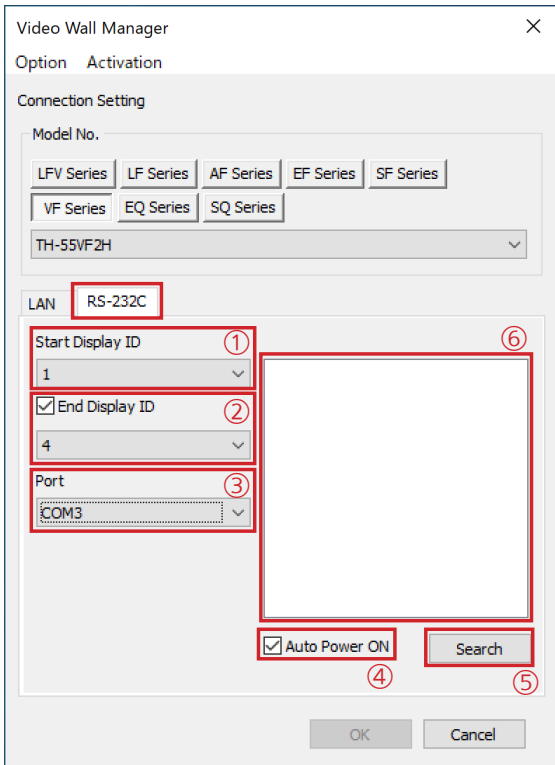
When the check box is selected, [Auto Power ON] is enabled,

and if you click [Search], the power for all displays in the search area will be set to "On".

Note

- If the main power for the display is not on, the power for the display cannot be set to "On" using [Auto Power ON].
- The specified displays will be connected when you click [OK], however, if the display power is not set to "On", you will not be able to connect.
- When using a TH-55LFV9, TH-55LFV8 or TH-49LFV8, [Eco Mode] must be set to [Normal] for the display to allow its power to be turned "On" via the [Auto Power ON] function.
- If [Auto Power ON] is enabled and displays available for connection are detected using the search function, the power will be set to "On" even if you do not specify a display for connection.

Starting and Exiting the Application



⑤ [Search]

Use this to search for displays available for connection. Click to begin searching.

Note

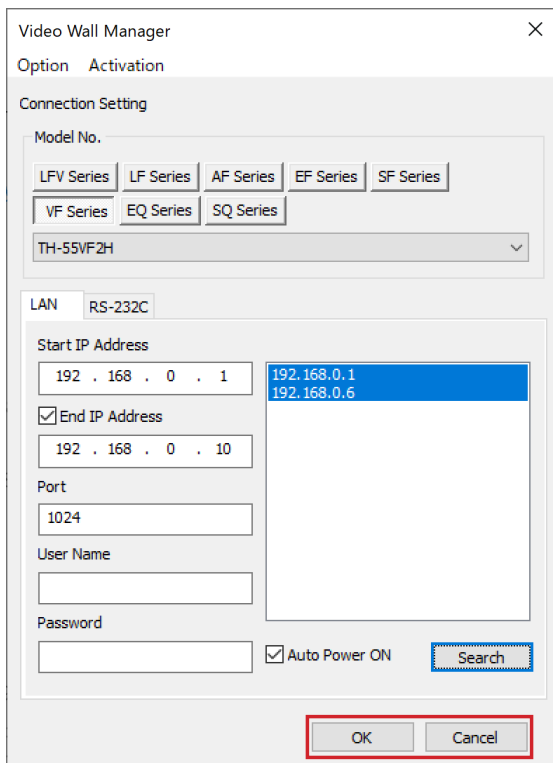
- Before carrying out a search, make sure that the main power is on for the applicable displays. If the main power is not on, the displays will not be available for searching.

⑥ Display connection list

The ID list for displays detected during a search appears highlighted in blue.

Click the displays you will not connect to to remove the highlight.

■ OK / Cancel



Click [OK] to connect to the specified displays and display the main screen.

When [Cancel] is clicked, the application is exited without establishing a connection.

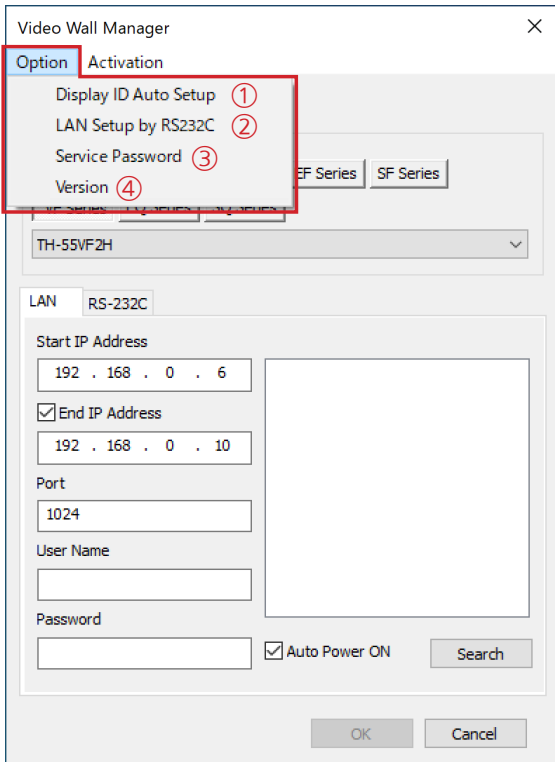
Note

- Before clicking [OK], make sure that the power for the applicable displays are set to “On”. Connection is not possible when the power is not set to “On”.

Starting and Exiting the Application

■ [Option] menu

The following items can be set in the [Option] menu at the top left of the screen.



① [Display ID Auto Setup]

ID assignment to individual displays for control can be carried out automatically.

The first display and computer connection in the daisy chain can use a LAN connection or serial (RS-232C) connection.

☞ “[Display ID Auto Setup] - [LAN]” (page 18)

☞ “[Display ID Auto Setup] - [RS-232C]” (page 19)

Note

- This function may not be available on some models.
- Refer to operating manual of the display for details on how to use the automatic ID assignment function for displays.

② [LAN Setup by RS232C]

Configure LAN settings for displays using a serial (RS-232C) connection.

☞ “LAN Setup by RS232C” (page 20)

Note

- When TH-47LFV5, TH-55LFV5, TH-55LFV50, TH-49LFV8, TH-55LFV8, TH-55LFV9, TH-42AF1, TH-49AF1, or TH-55AF1 displays are selected, the menu is grayed out and cannot be selected.

③ [Service Password]

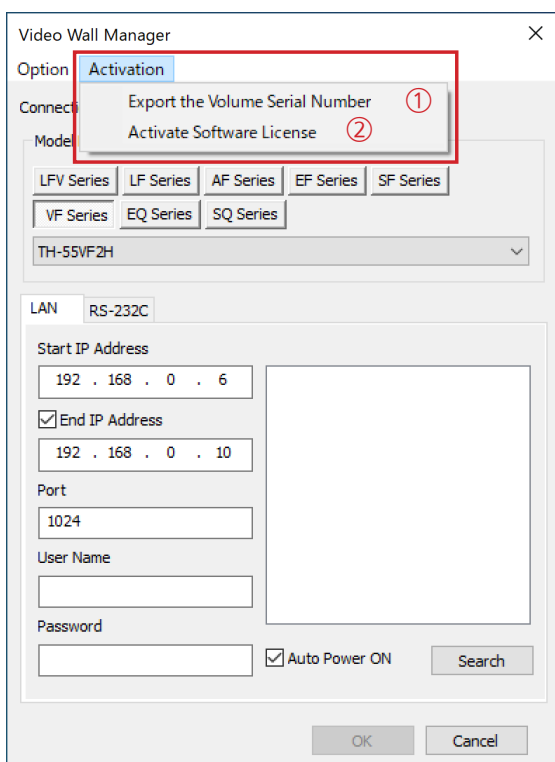
This menu is used to support maintenance. It is not normally used.

④ [Version]

This is where the application’s version information can be checked. The activation status is also displayed.

☞ “Activation” (page 22)

■ [Activation] menu



① [Export the Volume Serial Number]

This creates a Volume Serial file (file registered to PASS). This file is required to acquire the activation code file.

☞ “Activation” (page 22)

② [Activate Software License]

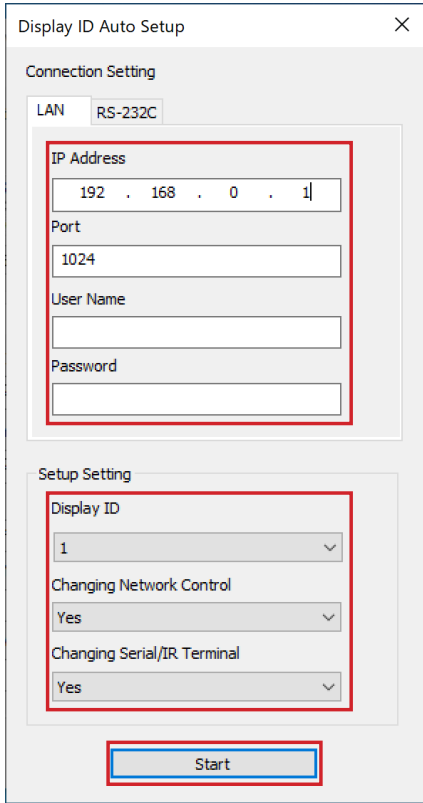
This activates the software.

- An activate code file or activation code are required.

☞ “Activation” (page 22)

Display ID Auto Setup - [LAN]

Select the [LAN] tab and adjust settings for the displays connected via LAN.



IP Address

Input here the IP address of the display to be connected. The default value is the smallest host address in the same network as the IP address configured for the network card of the computer on which the software is installed.

Ex.: When the computer IP address is 192.168.0.10, the default value is 192.168.0.1.

The value stored in memory will be used each time the software is launched.

Port

Set here the number of the port that is to be connected to the display.

The default value is 1024.

User Name, Password

Enter a user name with administrator privileges to connect with the display and its password.

Under the factory default settings of the display, the user name is "dispadmin" (or "admin1") and the password is "@Panasonic" (or "panasonic").

The user name and password differ depending on the display model so please check the operating instructions for your display.

Display ID

Select from the pull-down menu to assign an ID to a display. You can select from 1 to 100.

Note

- When using a daisy chain connection to control displays, the display ID is assigned to the first unit in the daisy chain.

Changing Network Control

Select whether or not you want to change network control. Default setting is "Yes".

Changing Serial/IR Terminal

Select whether to change settings for serial or remote control via DIGITAL LINK.

Default setting is "Yes".

Note

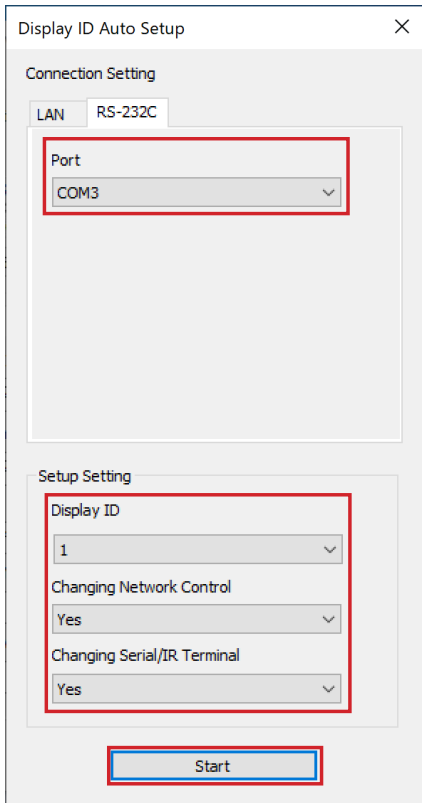
- This appears when using TH-55LFV70, TH-55VF1H, TH-55VF2H or TH-55VF2 displays.

[Start]

When this is clicked, the display ID is automatically assigned.

Display ID Auto Setup - [RS-232C]

Adjust settings for displays with a serial (RS-232C) connection.



Port

Specify here the number of the RS-232C port that is to be connected to the display.

The computer COM port is automatically detected and available options only are displayed.

Select a COM port from the pull-down menu.

The default value is the smallest detected COM port.

The selected COM port is stored in memory.

Note

- If a COM port is not displayed, COM ports are disabled. Check to make sure the serial (RS-232C) port on your computer is enabled.

Display ID

Select from the pull-down menu to assign an ID to a display.

You can select from 1 to 100.

Note

- When using a daisy chain connection to control displays, the display ID is assigned to the first unit in the daisy chain.

Changing Network Control

Select whether or not you want to change network control.

Default setting is "Yes".

Changing Serial/IR Terminal

Select whether to change settings for serial or remote control via DIGITAL LINK.

Default setting is "Yes".

Note

- This appears when using TH-55LFV70, TH-55VF1H, TH-55VF2H or TH-55VF2 displays.

[Start]

When this is clicked, the display ID is automatically assigned.

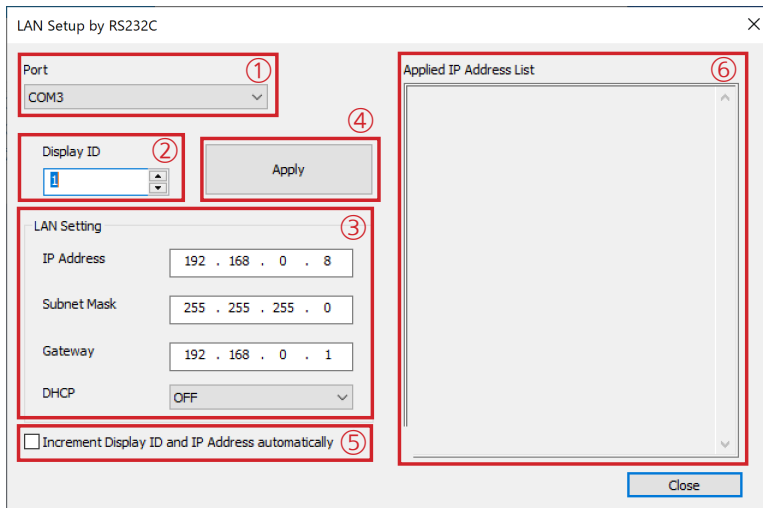
Starting and Exiting the Application

LAN Setup by RS232C

Configure LAN settings for displays using a serial (RS-232C) connection.

Note

- When TH-47LFV5, TH-55LFV5, TH-55LFV50, TH-49LFV8, TH-55LFV8, TH-55LFV9, TH-42AF1, TH-49AF1, or TH-55AF1 displays are selected, the menu is grayed out and cannot be selected.



① Port

Select the serial (RS-232C) connection port.

The default setting is the COM port number selected in the connection dialog box.

② Display ID

Specify the Display ID to configure.

You can specify a value from 1 to 100.

The default setting is 1. On subsequent startups, the default setting will be the previously specified value.

③ LAN Setting

Specify the IP Address, Subnet Mask, Gateway, and DHCP settings.

The default settings are as follows.

IP Address: 192.168.0.8

Subnet Mask: 255.255.255.0

Gateway: 192.168.0.1

DHCP: OFF

On subsequent startups, the default settings will be the previously specified values.

You can specify a value from 0 to 255 for the address.

④ Apply

Applies the configured LAN settings to the specified Display ID.

If application of the settings fails, an error message will appear. Follow the instructions on the screens in such cases.

⑤ Increment Display ID and IP Address automatically

When this check box is selected, the Display ID and IP Address settings increase in increments of 1 each time Apply is executed successfully.

Example: Display ID increments: 1 → 2, 2 → 3 ... 100 → 1

IP Address increments: 192.168.0.8 → 192.168.0.9 ... 192.168.0.254 → 192.168.0.2

Note

- Only the fourth octet of the IP Address increases incrementally.
- The IP Address increments will not change the values to 0, 1, or 255.

Starting and Exiting the Application

⑥ Applied IP Address List

Lists the IDs and IP Addresses that were configured successfully after executing Apply.

Example: ID:001 IP:192.168.000.010

If the settings were configured with DHCP set to ON, the display will be as follows.

ID:001 DHCP:ON

Note

- The displayed list is stored for only as long as the screen is displayed.

Exiting the application

To exit the main screen, either select [Exit] from [File] menu or click the button at the top right of the window.

To exit the [Connection Settings] screen, either click the [Cancel] button or click the button at the top right of the window.

- When clicked, a confirmation message appears. Proceed with operation as instructed in the message.

Activation

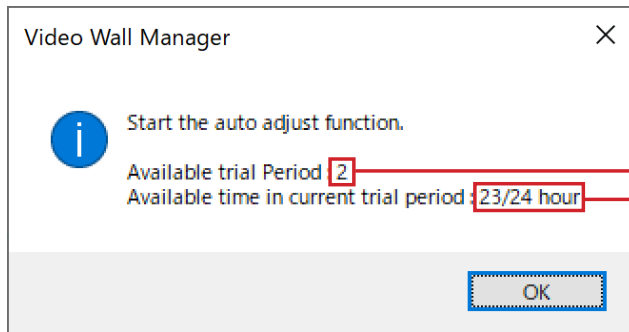
By activating this software, its functions are expanded, you can use externally-connected cameras, and automatically adjust the color and brightness across multiple displays that make a Multi Screen Display.

Note

- Auto Display Adjustment Upgrade Kit (TY-VUK10) is required for activation. For details on compatible display models, check the information found on the activation page by logging in to PASS on the website (<https://docs.connect.panasonic.com/prodisplays/pass>).
- There are two trial periods (24 hours each) for using the Auto Display Adjustment function of the software after installing the software. If you click the [AUTO ADJUST] button during a trial period, a message will appear*1.
After the trial periods have ended, purchase the Auto Display Adjustment Upgrade Kit (TY-VUK10) and activate this software.

*1: The 24 hour count begins once you click [OK] on the confirmation screen for starting the trial period.

If you click the [AUTO ADJUST] button during a trial period, the following screen appears.

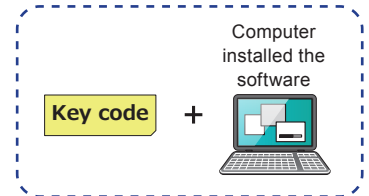


This appears as "2" during the first trial period and as "1" during the second trial period.
The remaining time is displayed.

Perform the display activation

1 Have the key code ready.

Have the key code label ready for the Auto Display Adjustment Upgrade Kit (TY-VUK10).

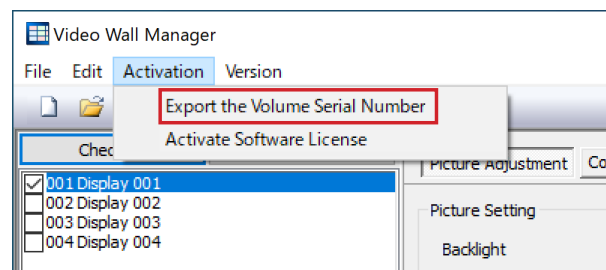
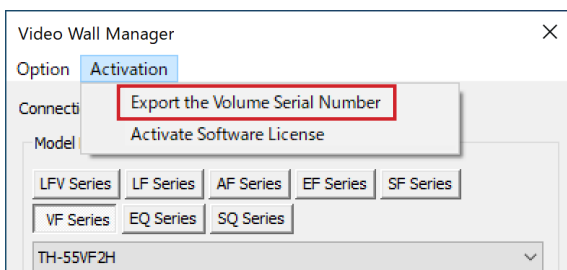


2 Start the software application, and display the [Connection Setting] screen or the main screen.

☞ "Starting the application" (page 12)

☞ "Main Screen" (page 27)

3 From the [Activation] menu, select [Export the Volume Serial Number].



The [Input Key Code] screen will appear.

Activation

4 In the [Input Key Code] screen, enter the key code shown on the key code label.

The key code is a 25 character single-byte alphanumeric code. All letters should be capitalized, and 5 characters should be entered for each box.

Input Key Code

_____ - _____ - _____ - _____ - _____

OK Cancel

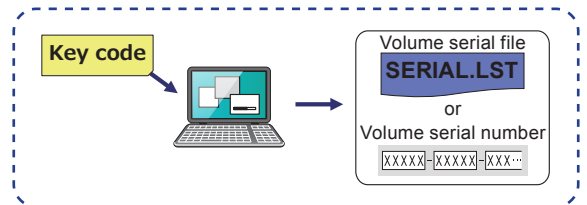
Your Volume Serial Number

_____ - _____ - _____ - _____

* Log in the PASS(Refer to the instruction manual for URL) web site, and visit "activation" page.
* Then follow the procedures, upload the exported Volume Serial Number
* (SERIAL.LST) file OR enter your Volume Serial Number manually on to PASS.

Click [OK] to display the file save screen.

5 Save the Volume Serial file ("SERIAL.LST") to any location.



You can change the file name, however, the file extension (.LST) should not be changed.

To return to the [Input Key Code] screen, click [Cancel].

When file saving is complete, the [Input key Code] screen closes.

Save As

Save in: VideoWallManager_folder

Name Date modified Type

No items match your search.

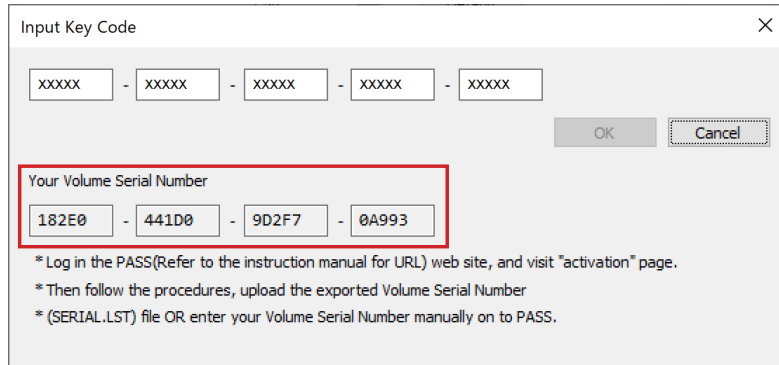
File name: SERIAL.LST Save

Save as type: Serial List File (*.LST) Cancel

Activation

Once the file has been saved, the Volume Serial Number (20 single-byte alphanumeric characters) will appear in the [Input Key Code] screen.

For further steps, if you manually enter the Volume Serial Number and download the activation code file, write down the code and keep it until activation is complete.



Input Key Code

XXXXX - XXXXX - XXXXX - XXXXX - XXXXX

OK Cancel

Your Volume Serial Number

182E0 - 441D0 - 9D2F7 - 0A993

* Log in the PASS(Refer to the instruction manual for URL) web site, and visit "activation" page.
* Then follow the procedures, upload the exported Volume Serial Number
* (SERIAL.LST) file OR enter your Volume Serial Number manually on to PASS.

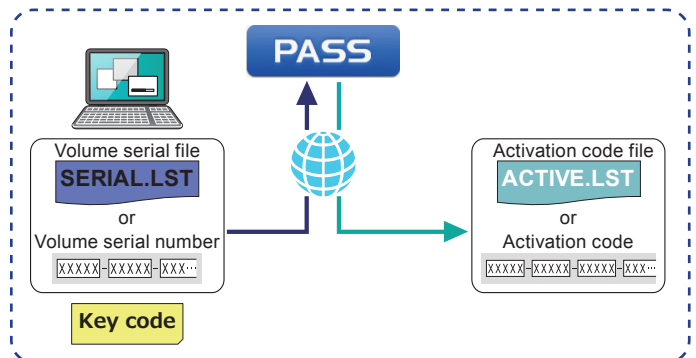
Note

- Always use the most recent versions of the Volume Serial file and Volume Serial Number used to download the activation code file.

6 Launch a web browser, log in to PASS on the website (<https://docs.connect.panasonic.com/prodisplays/pass>), and click the [Activation] button on the side of the member top page.

7 Download the activation code file.

Download the activation code file ("ACTIVE.LST") using one of the following two methods.



When using a Volume Serial file (default name: SERIAL.LST)

Follow the on-screen instructions to upload the Volume Serial file to PASS, and enter the key code to download the activation code file ("ACTIVE.LST") to any location.

- The activation code file name can be changed, however, the file extension (.LST) should not be changed.
- After downloading the activation code file, the activation code (30 character single-byte alphanumeric code) appears, however, when using the activation code file to activate the software, the activation code is not used. If you enter the activation code manually when activating the software, write down the code and keep it until activation is complete.

When manually entering the Volume Serial Number

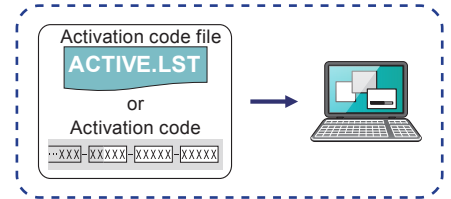
Follow the on-screen instructions to register the Volume Serial Number to PASS, and enter the key code to download the activation code file ("ACTIVE.LST").

- The Volume Serial Number is a 20 character single-byte alphanumeric code. All letters should be capitalized, and 5 characters should be entered for each box.
- The activation code file name can be changed, however, the file extension (.LST) should not be changed.
- After downloading the activation code file, the activation code (30 character single-byte alphanumeric code) appears. For further steps, if you enter the activation code manually when activating the software, write down the code and keep it until activation is complete. When using the activation code file to activate the software, the activation code is not used.

Activation

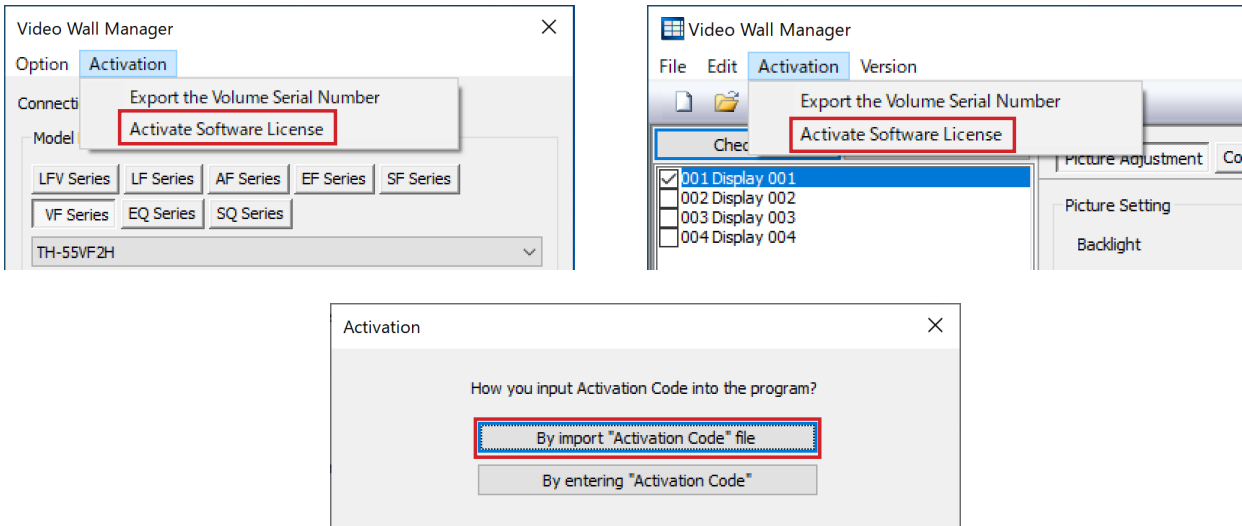
8 Perform the display activation.

Activate the software (“ACTIVE.LST”) using one of the following two methods.



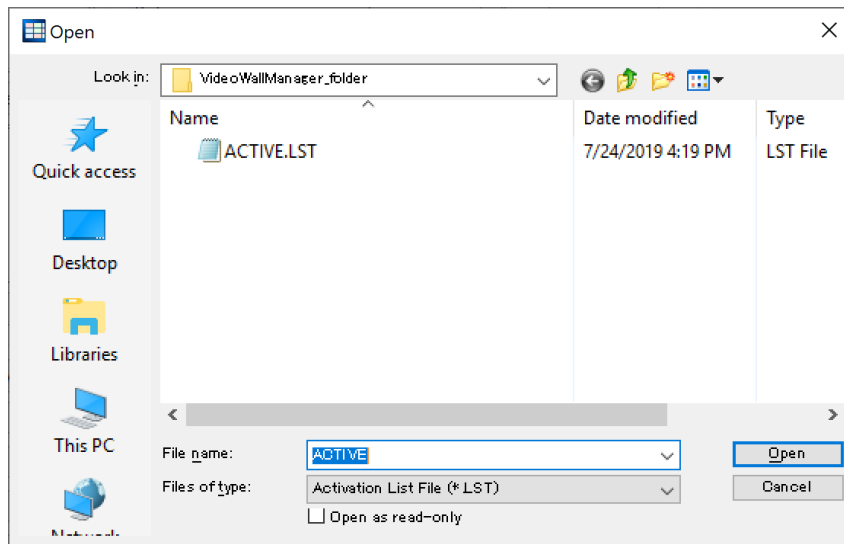
When using the activation code file (default name: ACTIVE.LST)

1) From the [Activation] menu of the [Connection Setting] screen or the main screen, select [Activate Software License] and click the [By import “Activation Code” file] button.



2) Select the activation code file (default name: ACTIVE.LST) downloaded from PASS and click [Open].

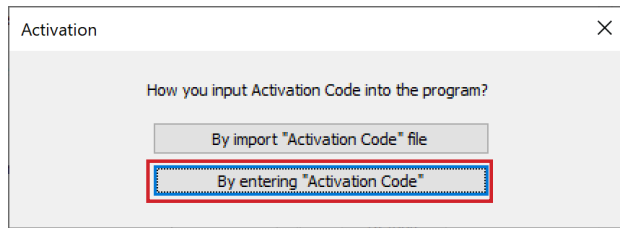
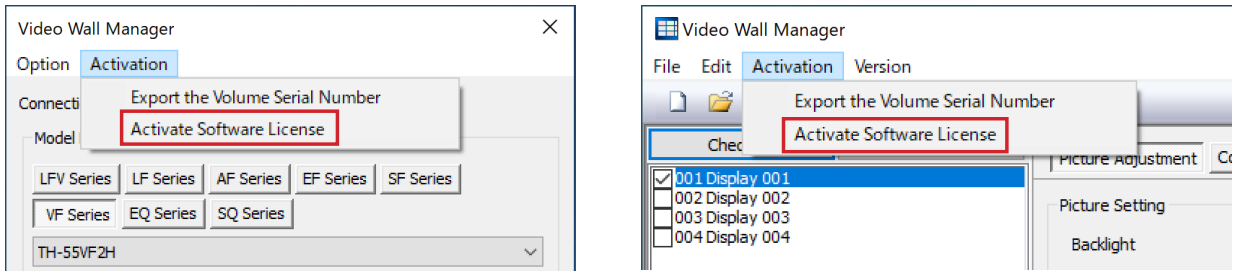
- To return to the previous screen, click [Cancel].



Activation

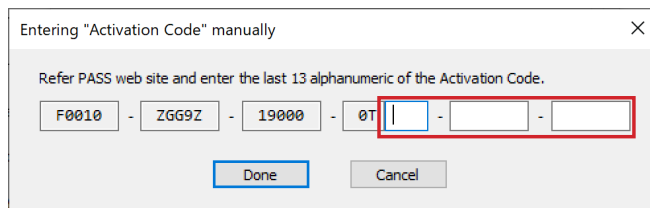
When manually entering the activation code

1) From the [Activation] menu of the [Connection Setting] screen or the main screen, select [Activate Software License] and click the [By entering "Activation Code"] button.



2) After downloading the activation code file, enter the final 13 characters in the displayed activation code.

- The activation code consists of 30 single-byte alphanumeric characters. All letters should be capitalized, 3 characters should be entered for the first box of the last 13 characters, and 5 characters for the remaining boxes.



9 When activation (authentication) is complete, the activation code is registered to the software.

When the confirmation message appears, click [OK] to close it.

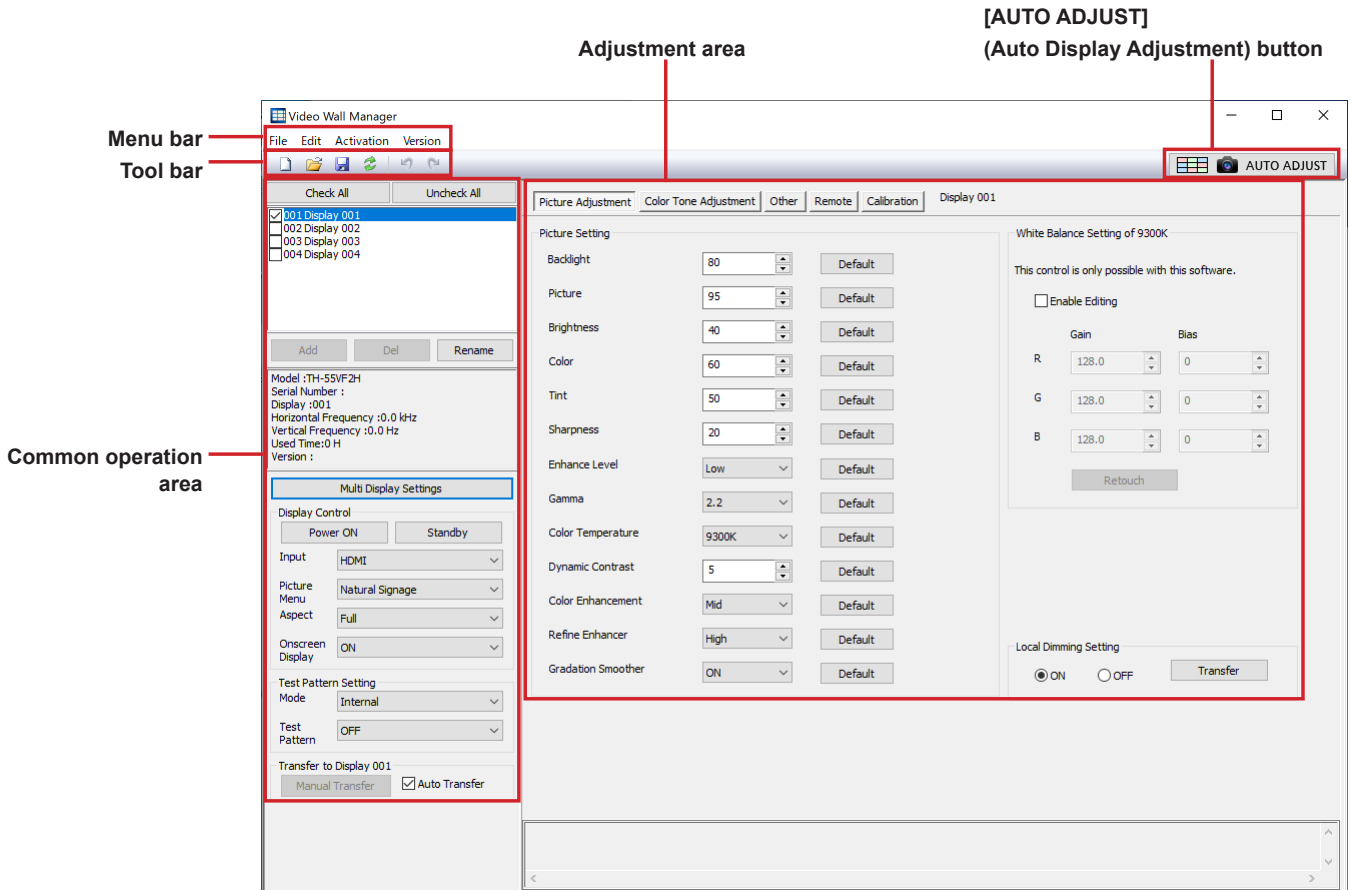
Note

- If activation fails, check the following items.
 - Does the key code entered in the [Input Key Code] screen in step 4 match the key codes entered when the Volume Serial file (default name: SERIAL.LST) was uploaded to PASS or when the Volume Serial Number was registered to PASS?
 - Does the Volume Serial file and Volume Serial Number created in step 5 match the Volume Serial file uploaded to PASS when creating the activation code or the Volume Serial Number entered when registering to PASS?
- Once activation is complete, the [AUTO ADJUST] (Auto Display Adjustment) button on the upper right of the Video Wall Adjustment & Calibration Software (Video Wall Manager) main screen is enabled. The [AUTO ADJUST] (Auto Display Adjustment) button is enabled during the trial period.

Adjustment and Settings

Main screen

The main screen consists of the menu bar, tool bar, common operation area, adjustment area, and [AUTO ADJUST] (auto display adjustment) button.



Note

- When using this application, keep the main power of the display in the “on” setting.
- When the display is in standby, only the “Display Control” [Power ON] will function.
- If the display settings have been changed using a remote control, for instance, while using this software, the software and display settings may not match.
- You can click the tabs in the adjustment area to switch between screens and perform various adjustments and operations. The screens that appear when you click the tabs are referred to as “editing mode.”
- When using a model equipped with the [Schedule play function] for the USB media player, set the function to [Disable]. Proper adjustment may not be possible if this is set to [Enable].
- When you are using a TH-55LFV9, TH-55LFV8 or TH-49LFV8 and want to view a setting via the display’s OSD, display the OSD after changing the settings with the software. If you displayed the OSD while you were changing the settings with the software, turn the OSD off before redisplaying the OSD you want to view.

Menu bar

The following main menus are displayed in the menu bar.

■ [File] menu

[Reset to Factory Adjustment Picture Setting]

This returns all values set in the [Picture Adjustment] screen to the factory default settings for the display.

- When this is clicked, a confirmation message appears. Proceed with operation as instructed in the message.

Note

- This is not displayed when using TH-55LFV9, TH-55LFV8, TH-49LFV8, TH-55LFV50, TH-55LFV5, or TH-47LFV5.

[Load Adjustment Data]

This loads setting files saved to the computer (file extension: dsi).

[Save Adjustment Data]

This saves entered settings or picture menu data to the computer.

The file name is automatically generated from the computer time stamp.

If only a single display has been selected, the display serial number is included at the beginning of the file name.

If multiple displays have been selected, file names begin with "vw".

The adjustment data for all displays where auto display adjustment was used, along with IP addresses, user names and passwords, are saved.

[Reload]

This cancels the settings currently being edited using the application, and loads the current settings from the display.

- When this is clicked, a confirmation message appears. Proceed with operation as instructed in the message.

[Exit]

Exits the software.

- When this is clicked, a confirmation message may appear. In this case, proceed with operation as instructed in the message.

■ [Edit] menu

[Undo]

This discards the software application and display settings currently being edited.

It returns these settings to the status before the setting data is sent.

[Redo]

This returns the settings to the ones before the Undo operation is performed.

Note

- Undo and Redo can be used up to 8 times to redo settings adjusted in each adjustment area (☞ page 38) editing mode.
- The Undo and Redo logs are cleared if you switch to another editing mode or display.

■ [Activation] menu

This performs the same operation as the [Activation] menu of the [Connection Setting] screen.

[Export the Volume Serial Number]

This creates a Volume Serial file (file registered to PASS). This file is required to acquire the activation code file.

☞ "Activation" (page 22)

[Activate Software License]

This activates the software.

- An activate code file or activation code are required.

☞ "Activation" (page 22)

■ [Version] menu

[Version]

This displays the version information for this software (Video Wall Adjustment & Calibration Software).

The activation status is also displayed.

Tool bar

Common icons used in each editing mode appear in the tool bar.

For details on the icons used in each editing mode, refer to the description of the mode concerned.



Reset to Factory Adjustment Picture Setting

This performs the same operation as [Reset to Factory Adjustment Picture Setting] on the [File] menu.



Load Adjustment Data

This performs the same operation as [Load Adjustment Data] on the [File] menu.



Save Adjustment Data

This performs the same operation as [Save Adjustment Data] on the [File] menu.



Reload

This performs the same operation as [Reload] on the [File] menu.



Undo

This performs the same operation as [Undo] on the [Edit] menu.

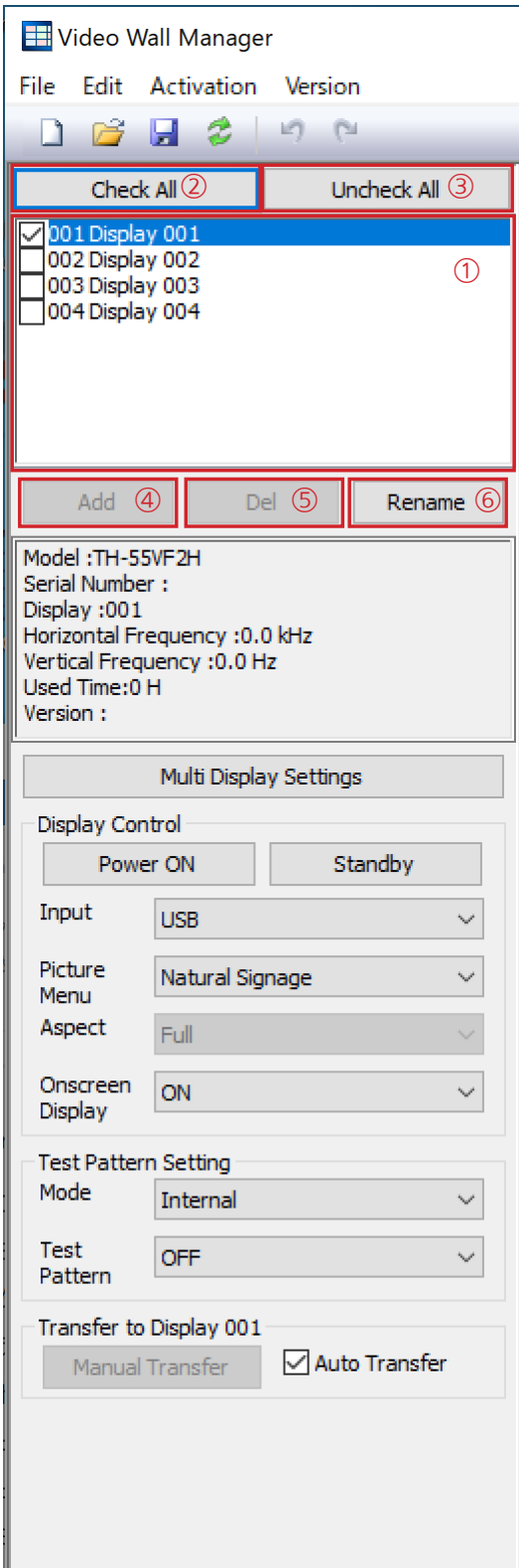


Redo

This performs the same operation as [Redo] on the [Edit] menu.

Common operation area

The common operation area houses the operations which can be used in all the editing modes.



① **Display connection list**

Connected display IDs (first three digits) and names appear in a list.

Displays that appear reversed in blue text can be operated.

The names of displays that currently can be operated appear on the right side of the editing mode tab in the display area.

Note

- Multiple displays can be selected for operating simultaneously. In this case, select the check box on the left for the name of the display you want to operate. However, selecting multiple displays for operation is limited to “Display Control” and “Test Pattern Setting” options.

② **[CHECK ALL]**

This selects the check box on the left for all display names.

③ **[UNCHECK ALL]**

This deselects the check box on the left for all display names. However, the check box of the display highlighted in blue will remain selected.

④ **[Add]**

When this is clicked, the [Connection Setting] screen appears and a new display can be added.

☞ “[Connection Setting] screen that appears when [Add] is clicked” (page 34)

⑤ **[Del]**

This disconnects the selected display and removes it from the display connection list.

This cannot be selected when only a single display is running.

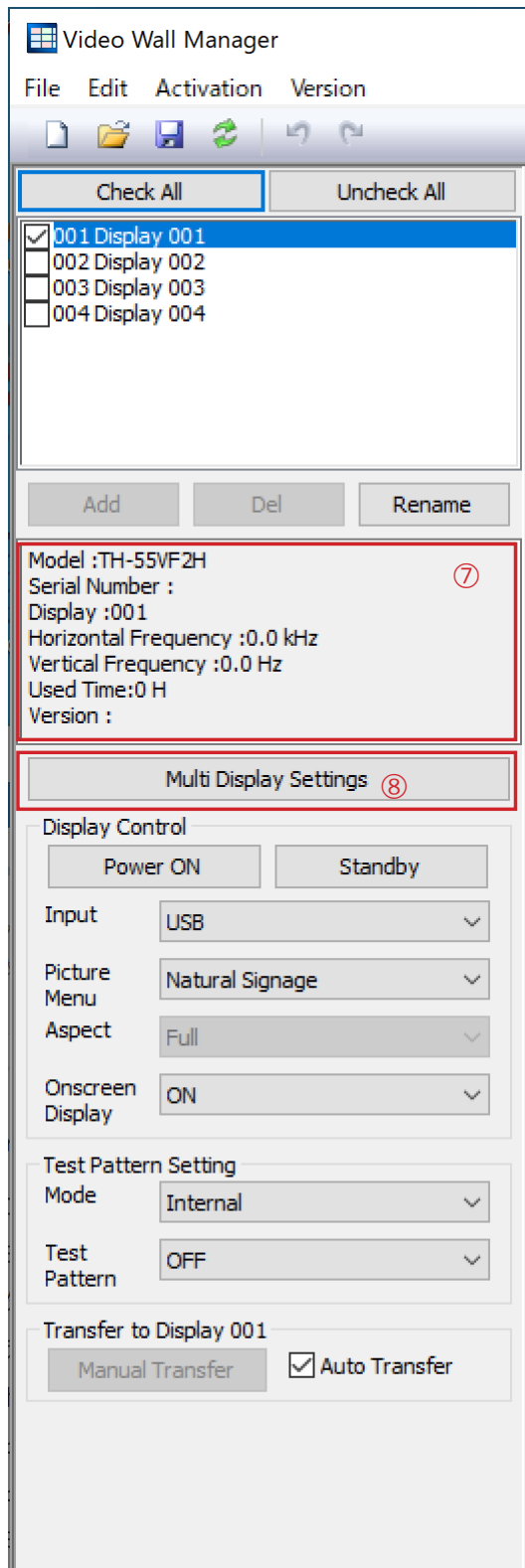
⑥ **[Rename]**

This allows you to change the name of the selected display.

A name can consist of a maximum of 8 characters including letters (upper-case), numbers, hyphens and periods.

Note

- Up to 12 characters can be entered when using models TH-55LFV9, TH-55LFV8, TH-49LFV8, TH-55LFV50, TH-55LFV5, or TH-47LFV5. However, because these models are not equipped with a name setting function, changed names will only appear in this software.
- The software cannot be used to configure the name settings on TH-42AF1, TH-49AF1, or TH-55AF1 displays. Changed names will only appear in this software.



⑦ Status display

The status of the selected display is shown.

Model

This shows the model name.

Serial Number

This shows the serial number for the selected display.

Display

This shows the set ID for the selected display.

Note

- This does not appear for LAN connections.

Horizontal Frequency

This shows the horizontal frequency for the currently displayed signal.

Vertical Frequency

This shows the vertical frequency for the currently displayed signal.

Used Time

This shows the time used for the display.

Version

This shows the firmware version of the display unit.

⑧ [Multi Display Settings] (or [Tiling])

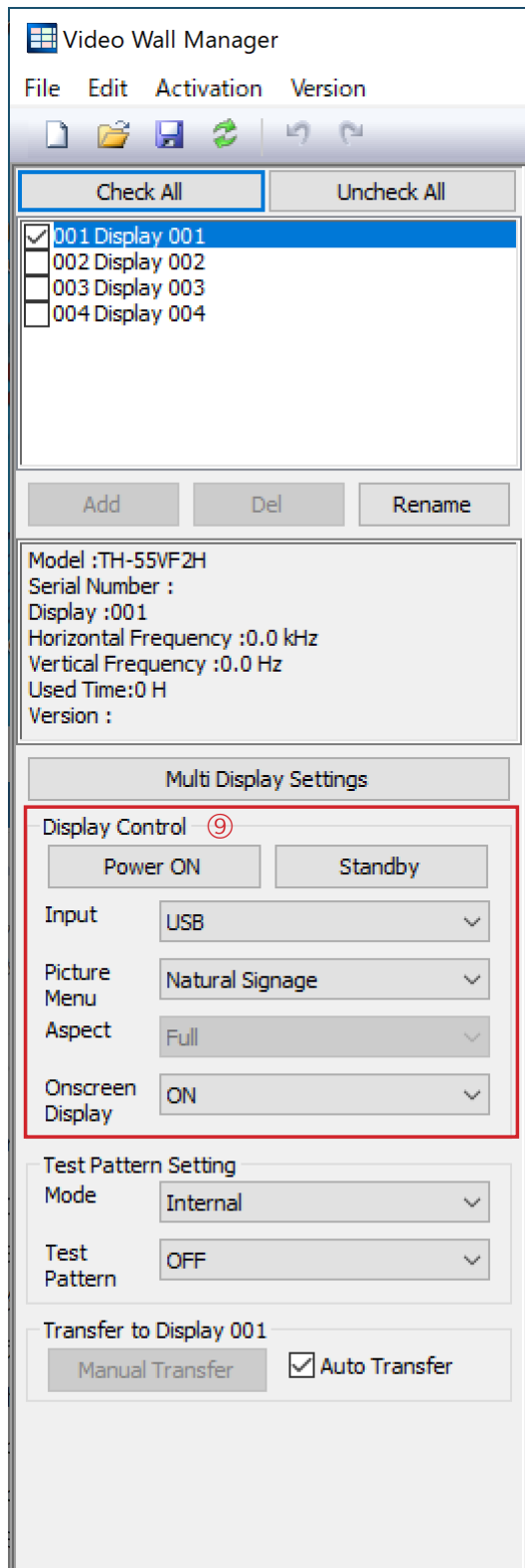
This shows the Multi Display Setting screen (or the Tiling screen) to allow you to set the Multi Screen Display or Multi Input Display layout and other settings.

Main screen operations can be performed even while the screen is displayed.

☞ “Multi Display Settings screen (or Tiling screen)” (page 35)

Note

- The screen title differs depending on the connected display model, and may appear as “Multi Display Settings” or “Tiling”.
- If the display unit does not support Multi Input Display, the setting items for Multi Input Display are not displayed.



⑨ Display Control

You can carry out basic display operations.

Note

- This item lets you select multiple displays for operating simultaneously. In this case, select the check box on the left for the name of the display you want to operate.

[Power ON]

When this is clicked, the power for all selected displays is set to "On".

Note

- If the main power for the display is not on, the power for the display cannot be set to "On" using this operation.

[Standby]

When this is clicked, all selected displays are switched to standby.

Note

- If the main power for the display is not on, the displays cannot be switched to standby using this operation.

Input

Select Input from a pull-down menu.

Note

- When the input is set to [Memory Viewer], [Calibration], [Color Tone Adjustment], and [AUTO ADJUST] cannot be used.
- If [Multi Input] is selected in Multi Display Settings, this item cannot be selected.

Picture Menu (or Picture Mode or Picture Style)

Select a picture menu from a pull-down menu.

Note

- When you are using a TH-55LFV9, TH-55LFV8 or TH-49LFV8 and a PC signal is input to the DVI input connector, PC input connector, or other connector on the display, [Picture Style] cannot be selected. In addition, the adjustment values displayed in the adjustment area will be those for "PC" input.

Aspect

Select a picture size from a pull-down menu.

Note

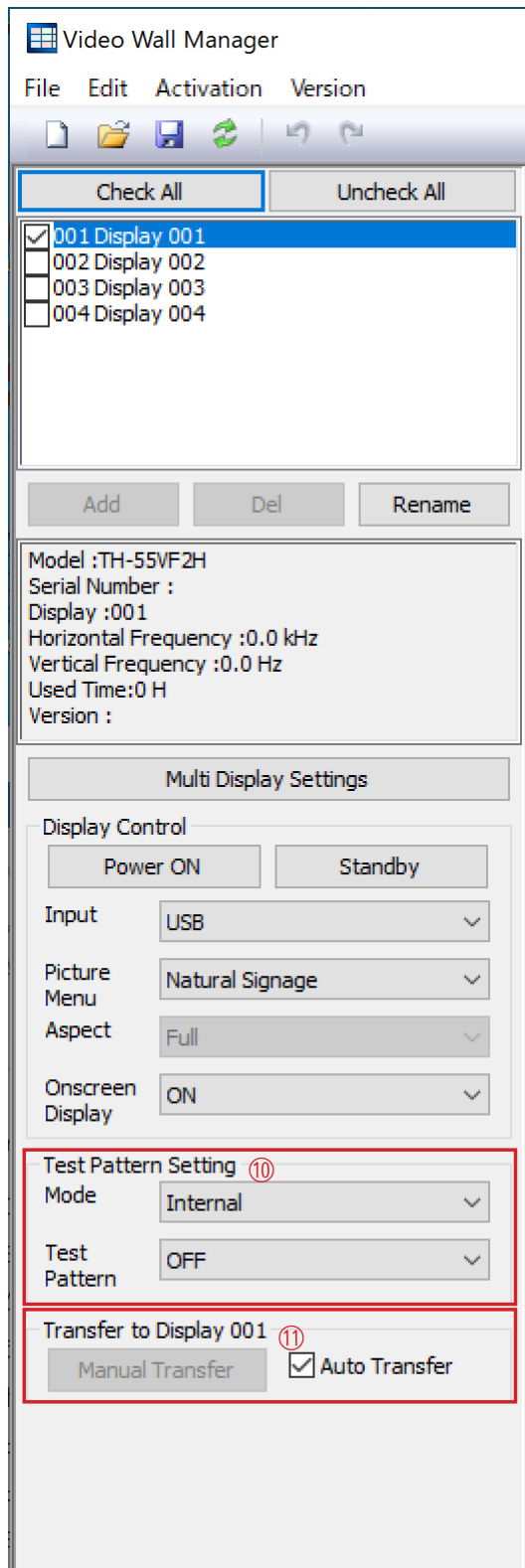
- This is not displayed when using TH-55LFV9, TH-55LFV8, TH-49LFV8, TH-55LFV50, TH-55LFV5, or TH-47LFV5.

Onscreen Display

Enables or disables the display's onscreen display.

Note

- This is not displayed when using TH-55LFV9, TH-55LFV8, TH-49LFV8, TH-55LFV50, TH-55LFV5, or TH-47LFV5.



⑩ Test Pattern Setting

Set a test pattern for showing on the display.

Note

- This item lets you select multiple displays for operating simultaneously. In this case, select the check box on the left for the name of the display you want to operate.

When [Internal] is selected, the test pattern from the display is used.

Available test patterns are as follows.

OFF, White, Red, Green, Blue, Cyan, Magenta, Yellow

The default value is OFF.

When [External] is selected, the test pattern from this software is used.

Available test patterns are as follows.

OFF, White, Red, Green, Blue, Cyan, Magenta, Yellow, Color Bar (Vertical), Color Bar (Horizontal), Gray Scale (Vertical), Gray Scale (Horizontal), Cross Hatch1, Cross Hatch2

The default setting is OFF.

Note

- A test pattern selected with this operation is used on the display even if the check box for Auto Transfer is not selected.
- When [Internal] is selected, the Cyan, Magenta, and Yellow test patterns may not be available depending on the model.
- To enable display of the computer screen on all of the displays when using the [External] test pattern, the displays and computer must be connected using video cables.

⑪ Transfer to *****

The parameter changed in the adjustment area is transferred to the display that appears reversed in blue text in the display connection list.

When the Auto Transfer check box is selected, parameters are automatically transferred to displays each time they are changed. A check mark is entered as the default setting.

When the Auto Transfer check box is deselected, the [Manual Transfer] button is enabled, and each time it is clicked, parameters are transferred to displays.

[Connection Setting] screen that appears when [Add] is clicked

When the [LAN] tab is selected, enter the IP address of the display to which you will connect.

When searching for connected displays, enter the IP address to start the search and IP address to end the search, select the [Auto Power ON] check box, and click the [Search] button.

When the [RS-232C] tab is selected, enter the display ID of the display to which you will connect.

When searching for connected displays, enter the display ID to start the search and display ID to end the search, select the [Auto Power ON] check box, and click the [Search] button.

The image shows two side-by-side screenshots of the 'Video Wall Manager' dialog box, specifically the 'Connection Setting' section. Both windows have 'Option' and 'Activation' tabs at the top. The 'Model No.' section is identical in both, showing a list of series (LFPV, LF, AF, EF, SF, VF, EQ, SQ) and a dropdown menu currently set to 'TH-55VF2H'. The left window has the 'LAN' tab selected, with 'Start IP Address' set to '192 . 168 . 0 . 1', 'End IP Address' checked and set to '192 . 168 . 0 . 10', and 'Port' set to '1024'. The right window has the 'RS-232C' tab selected, with 'Start Display ID' set to '1', 'End Display ID' checked and set to '4', and 'Port' set to 'COM3'. Both windows have an 'Auto Power ON' checkbox checked and a 'Search' button. At the bottom, there are 'OK' and 'Cancel' buttons.

When you click [OK], displays are added to the display connection list on the main screen.

Note

- [Option] cannot be used. Also, the settings for connected displays in the the Model No., [LAN]/[RS-232C] tabs are selected and cannot be changed.
- Added displays available for connection appear after clicking [Add] to display the [Connection Setting] screen and carrying out a display search .

Multi Display Settings screen (or Tiling screen)

You can set the Multi Screen Display or Multi Input Display layout and other settings.

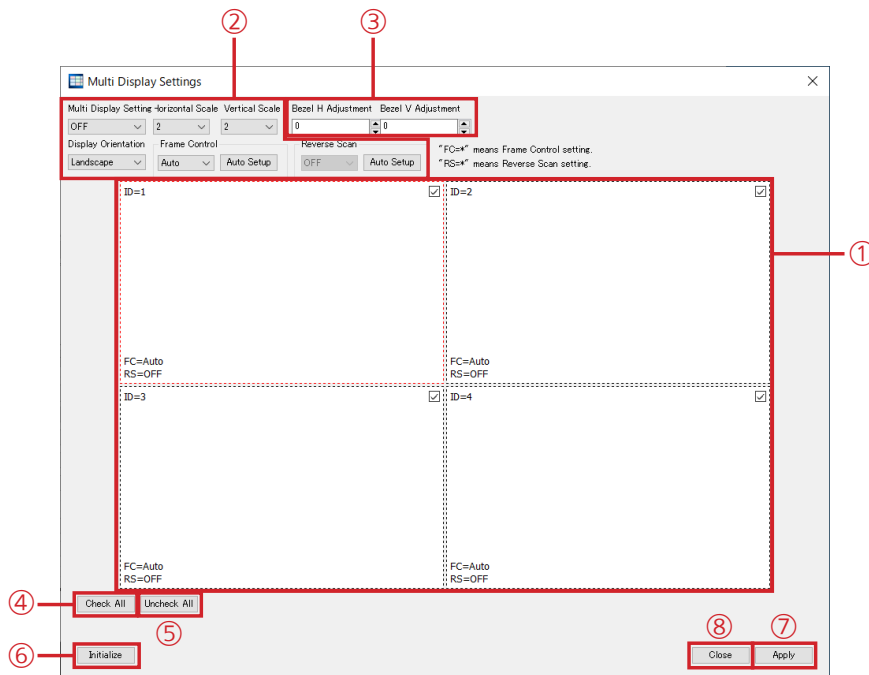
- ☞ “Multi Screen Display” (below)
- ☞ “Multi Input Display” (page 38)

Note

- The selection items of Multi Screen Display and Multi Input Display are displayed only when they are supported by the connected displays.
- Multi Screen Display and Multi Input Display cannot be used simultaneously.

Multi Screen Display

You can set the Multi Screen Display layout and other settings. The following screen illustration shows an example of when 4 displays are connected.



① Selection area

This shows the Multi Screen Display layout.

You can switch the display to operate by clicking the square representing each display. The frame of the selected display is indicated in red.

The display ID is shown at the top left of each square.

The check box at the top right is linked with the display connection list check box in the common operation area. You can only calibrate and adjust the picture for displays with a selected check box.

You can change the layout using a mouse. If you drag the square representing a display, it is switched with the display in the location you drop it.

② Configure the layout of the Multi Screen Display.

Note

- The items displayed may vary depending on the display model you are using.

Multi Display Setting

Select whether to configure the Multi Screen Display settings. The default setting is [OFF].

Horizontal Scale (or H Displays)

Select the number of horizontal displays from the pull-down menu.

The default value is the number of displays selected in the check box of the display connection list.

Vertical Scale (or V Displays)

Select the number of vertical displays from the pull-down menu.

Display Orientation

Select the display orientation from the pull-down menu.

Landscape

This sets a landscape orientation.

Portrait

This sets a portrait orientation.

- The orientation of the display's OSD menu will be linked to this setting, depending on the model of the connected display.

Frame Control

Configure the frame control function setting.

The setting value of each display will appear at the bottom left of the squares representing each display in the selection area.

The default setting is [Auto].

Auto: FC=Auto

1: FC=1

2: FC=2

3: FC=3

When you click AutoSetup, the setting is set automatically as follows for each row. Auto setup is not used for row 7 and above. One horizontal row will have the same setting.

Displays on 1st row: FC=Auto

Displays on 2nd row: FC=1

Displays on 3rd row: FC=2

Displays on 4th row: FC=3

Displays on 5th row: FC=4

Displays on 6th row: FC=5

Reverse Scan

Configure the reverse scan function setting.

The setting value of each display will appear at the bottom left of the squares representing each display in the selection area.

The default setting is [OFF].

OFF: RS=OFF

ON: RS=ON

When you click AutoSetup, ON and OFF are repeatedly set automatically as follows for each row. One horizontal row will have the same setting.

Displays on 1st row: RS=OFF

Displays on 2nd row: RS=ON

Displays on 3rd row: RS=OFF

Displays on 4th row: RS=ON

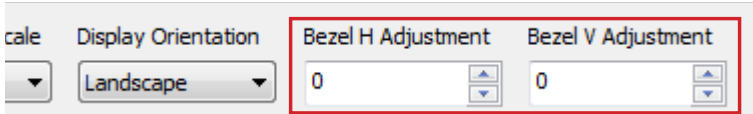
Note

- When [Frame Control] is set to [Auto], the reverse scan function will be disabled.

③ You can adjust the width of the vertical and horizontal bezel.

The items displayed will differ depending on the model of the display.

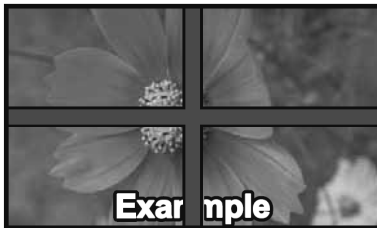
Bezel H Adjustment, Bezel V Adjustment



This adjusts the hidden image area in the junction between displays. Setting values are available from 0 to 100.

“Bezel H Adjustment” adjusts the area in the horizontal direction, and “Bezel V Adjustment” adjusts the area in the vertical direction.

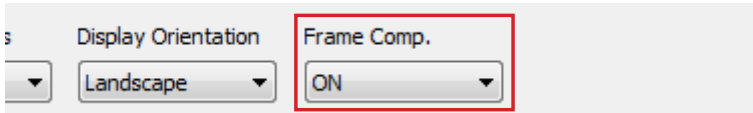
Ex.: When the value is set to 0



When the value is set to 100



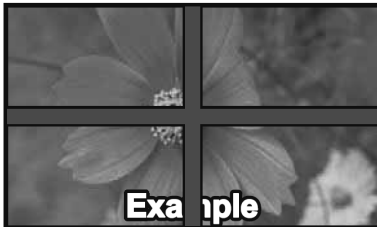
Frame Comp.



You can select [ON] and [OFF] for the frame compensation function.

When [ON] is selected the bezel width of the display is compensated and appears in the following way.

Ex.: [ON]



④ [CHECK ALL]

This selects all the check boxes at the bottom right of the squares representing each display.

⑤ [UNCHECK ALL]

This deselects all the check boxes at the bottom right of the squares representing each display. However, the check box for the display around which the red frame is displayed will not be deselected.

Note

- [CHECK ALL] and [UNCHECK ALL] are linked to the [CHECK ALL] and [UNCHECK ALL] buttons of the common operation area.

⑥ [Initialize]

This returns the Multi Screen Display layout settings and other settings adjusted in the Multi Display Settings screen (or Tiling screen) to the default settings of this software.

⑦ [Apply]

This applies the Multi Screen Display layout settings and other settings adjusted in the Multi Display Settings screen (or Tiling screen) to the display.

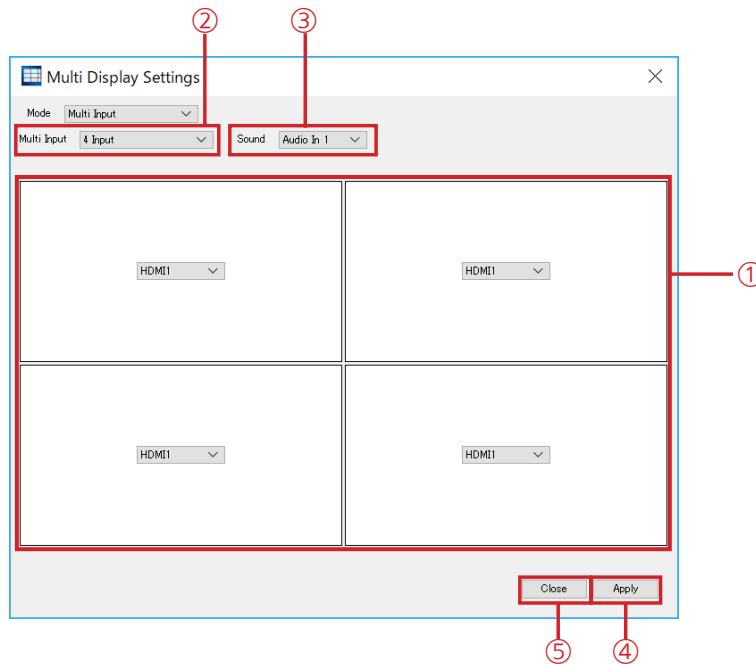
⑧ [Close]

This closes the screen without applying the Multi Screen Display layout settings and other settings adjusted in the Multi Display Settings screen (or Tiling screen) to the display.

Multi Input Display

You can set the layout and other settings for Multi Input Display.

The following screen illustration shows an example of when displaying the video of 4 input terminals.



① **Selection area**

This shows the Multi Input Display layout.

You can select the input terminal from the pull-down menu in each display.

② **[Multi Input]**

This allows you to select the display mode for Multi Input Display from the pull-down menu.

③ **[Sound]**

This sets the sound output terminal to use with Multi Input Display.

④ **[Apply]**

This applies the Multi Input Display layout and other settings to the display.

⑤ **[Close]**

This closes the screen without applying the Multi Input Display layout and other settings to the display.

Adjustment area

Some of the operations using the display OSD menu can be performed using this software.

Note

- The items that can be adjusted, setting details, and setting ranges vary depending on the display model. For details, refer to the operating instructions of the displays.

You can click the tabs in the adjustment area to switch between screens and perform various adjustments and operations.

The screens that appear when you click the tabs are referred to as “editing mode.”

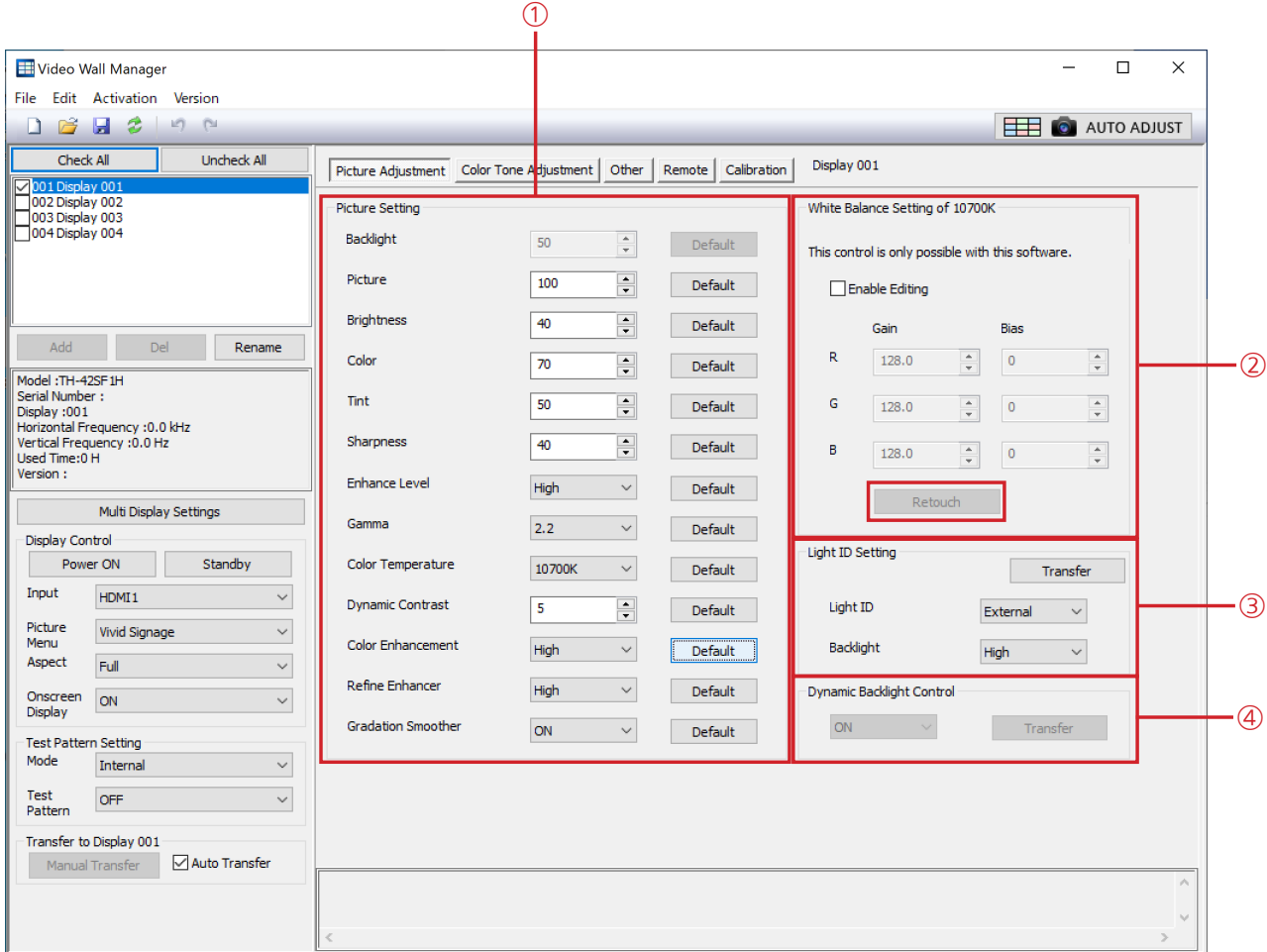
☞ “Picture Adjustment screen” (page 39), “Color Tone Adjustment screen” (page 42), “Other screen” (page 43), “Remote screen” (page 46), “Calibration screen” (page 47)

Picture Adjustment screen

You can carry out menu operations for picture adjustment.

Note

- The items that can be adjusted, setting details, and setting ranges vary depending on the display model.



1 Picture Setting

You can adjust settings such as LCD panel backlight brightness, and picture color and density.

If you click the [Default] button, the settings for that item are returned to factory default settings.

The [Transfer] button is displayed when Color Temperature is set to User1 or User2. If you click the [Transfer] button, the same settings are applied to all selected displays. In this case, from the display connection list, select the check boxes on the left of the names of the displays you want to operate.

Note

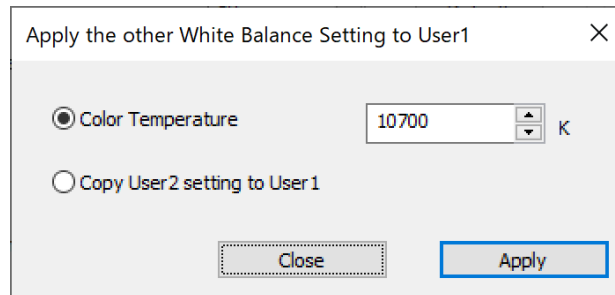
- The [Default] button is not available when using the TH-55LFV9, TH-55LFV8, TH-49LFV8, TH-55LFV50, TH-55LFV5, or TH-47LFV5 model.
- When you are using a TH-55LFV9, TH-55LFV8 or TH-49LFV8 and the display recognizes the input signal as "PC", [Sharpness] cannot be adjusted.
- The [Transfer] button may not be displayed depending on the display model.

② White Balance Setting of *****

You can adjust the white balance of the picture.

The [Apply the other White Balance Setting] button and [Transfer] button are displayed when Color Temperature is set to User1 or User2. Clicking the [Apply the other White Balance Setting] button displays the [Apply the other White Balance Setting to User1] (“User2” when User2 is selected) screen.

If you click the [Transfer] button, the same settings are applied to all selected displays. In this case, from the display connection list, select the check boxes on the left of the names of the displays you want to operate.



Color Temperature

Allows you to specify a different Color Temperature.

You can also enter a value directly. The setting range varies depending on the display model.

Copy to User2 setting to User1 or Copy to User1 setting to User2

Allows you to copy the setting values of the other User (e.g., the setting values of User2 when User1 is selected).

Click the [Apply] button to apply the settings. To close the screen without applying the settings, click the [Close] button.

③ Light ID Setting

Configure the light ID settings.

Light ID

Configure the transmission setting for the light ID. The default value is [External].

Backlight

Configure the backlight setting when the transmission setting for the light ID is set to [Internal] or External]. The default value is [High].

④ Dynamic Backlight Control

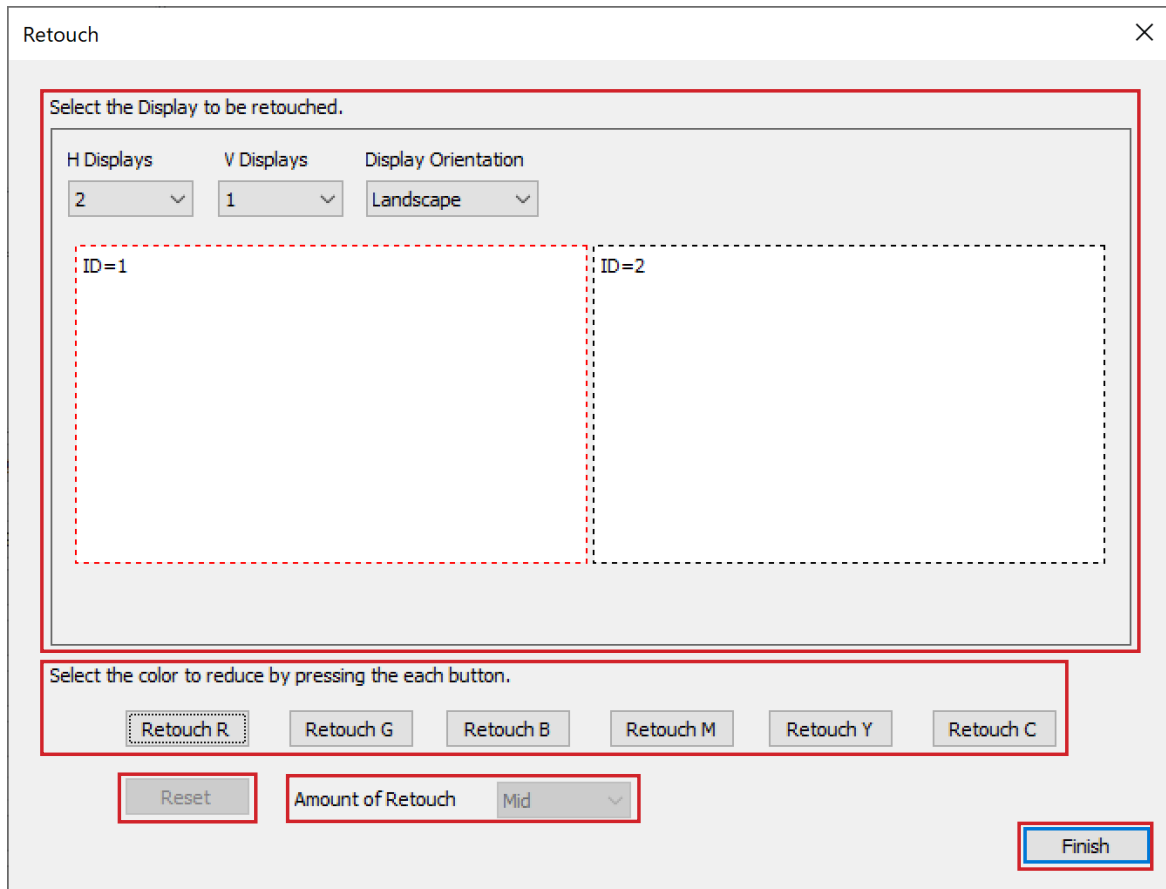
Configure the dynamic backlight control setting. The default value is [ON].

Note

- The [Transfer] button may not be displayed depending on the display model.
- [Light ID Setting] and [Dynamic Backlight Control] may not appear depending on the display model.
- [Dynamic Backlight Control] cannot be configured when the transmission setting for the light ID is set to [Internal] or [External].

[Retouch]

You can perform fine white balance adjustment without having to specify each of the values for [White Balance Setting].

**Select the Display to be retouched.**

Select the display layout and the target display for fine adjustment.

For details on the [H Displays], [V Displays], and [Display Orientation] settings, see “Multi Display settings screen” (page 35).

Select the Best Retouch by pressing the each button.

Different fine adjustment preset values are assigned to [Retouch1] to [Retouch6]. When you click a button, the preset values are applied to the selected display.

[Reset]

Reset the applied fine adjustment values.

Amount of Retouch

Select the amount of retouch fine adjustment.

You can select from [High], [Mid], or [Low].

[Finish]

Finish the retouch operation.

Note

- While the [Retouch] window is open, only one of the [Retouch1] to [Retouch6] buttons can be applied for each display.

Note

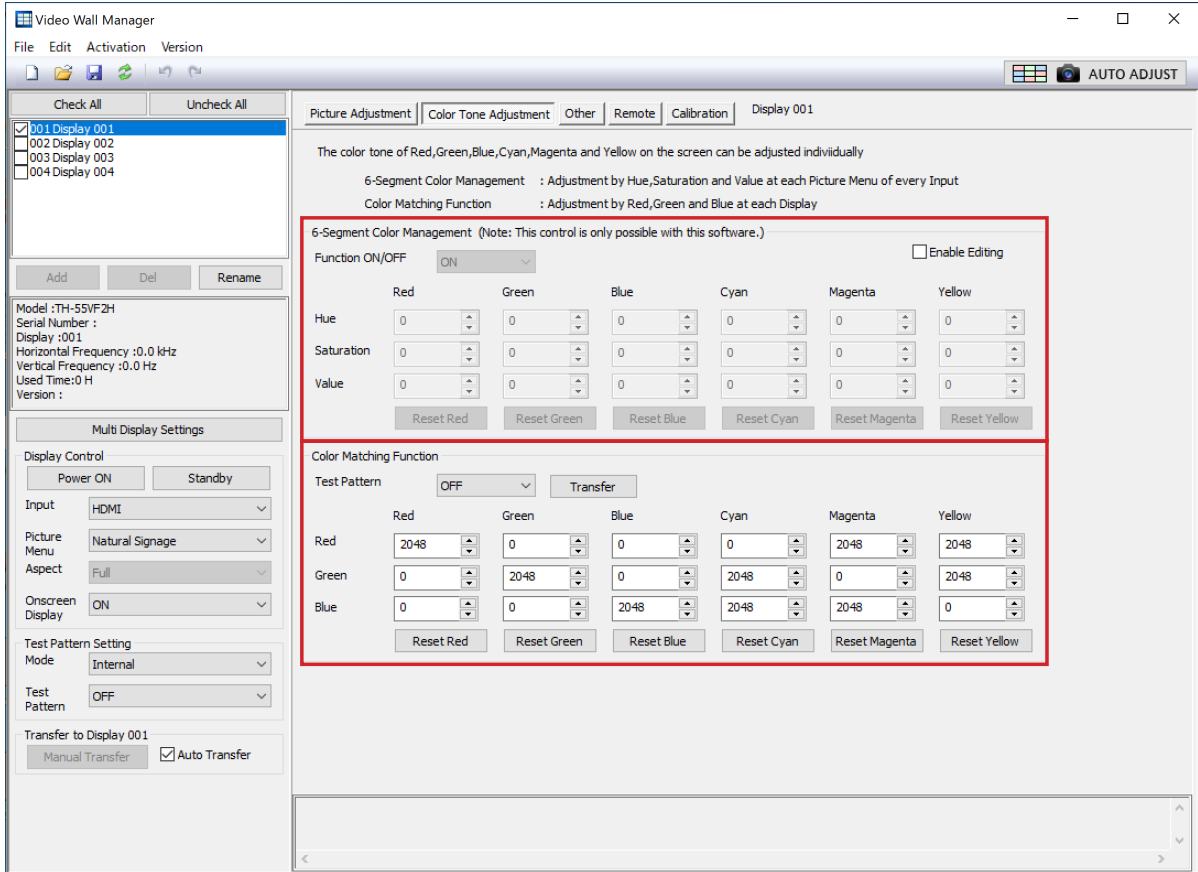
- “White Balance Setting” can be controlled with the software, however, control on the display itself may not be possible depending on the display model.

■ Color Tone Adjustment screen

You can perform detailed color adjustment for the displays.

Note

- This may not appear depending on the display model. Furthermore, some displayed items may be different.



Color Management

Configure the color management settings.

ON (6-Segment)

Select 6-Segment to enable 6-segment color management.

You can adjust the [Hue], [Saturation], and [Value] (brightness) for each color (red, yellow, green, cyan, blue, magenta). The default value is 0.

You can reset settings to their default values for each color.

ON (12-Segment)

Select 12-Segment to enable 12-segment color management.

You can adjust Red, Yellow, Green, Cyan, Blue, and Magenta and their intermediate colors. The default value is 0.

Color Matching Function

Configure color matching settings.

You can configure the red, green, and blue components for each color (red, green, blue, cyan, magenta, yellow).

You can reset settings to their default values for each color.

Note

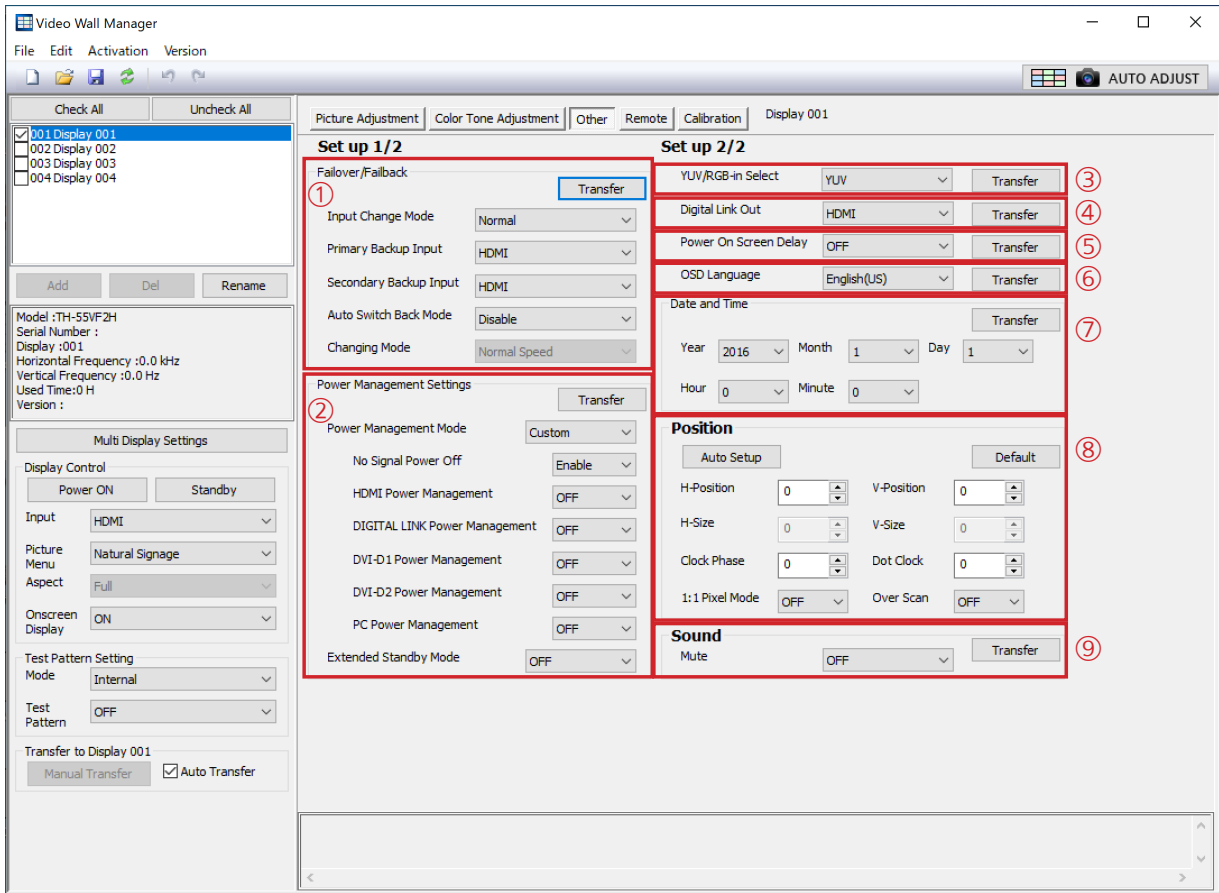
- “Color Management” and “Color Matching Function” can be controlled with the software, however, this may not be possible on the display itself depending on the display model. Settings that cannot be controlled on the display itself can be configured using the software when the [Enable Editing] check box is selected.
- 12-Segment is not displayed if it is not supported by your display model. For whether a display supports 12-Segment, refer to the operating instructions for your display.
- The [Enable Editing] check box will be located under [6-Segment Color Management] or [Color Matching Function] depending on the display model.

Other screen

You can carry out some menu operations except for picture adjustment.

Note

- The items displayed and items that can be adjusted, setting details, and setting ranges vary depending on the display model.



Note

- Items with a [Transfer] button let you select multiple displays for operating simultaneously. In this case, from the display connection list, select the check box on the left for the name of the display you want to operate. If you click the [Transfer] button, the same settings are applied to all selected displays. Settings are applied to each single item from ① to ⑧ in the figure above.

- ① **Failover/Failback**
You can adjust backup input settings.
- ② **Power Management Settings**
You can adjust ECO mode settings.
- ③ **YUV/RGB-in Select**
You can switch between the YUV/RGB signal mode.
- ④ **Digital Link Out**
You can select a signal to output from the DIGITAL LINK OUT terminal.
- ⑤ **Power On Screen Delay**
You can set the delay control for power on operation.
- ⑥ **OSD Language**
You can switch the on-screen menu display language.
- ⑦ **Date and Time**
You can set the current time and the current day or date.

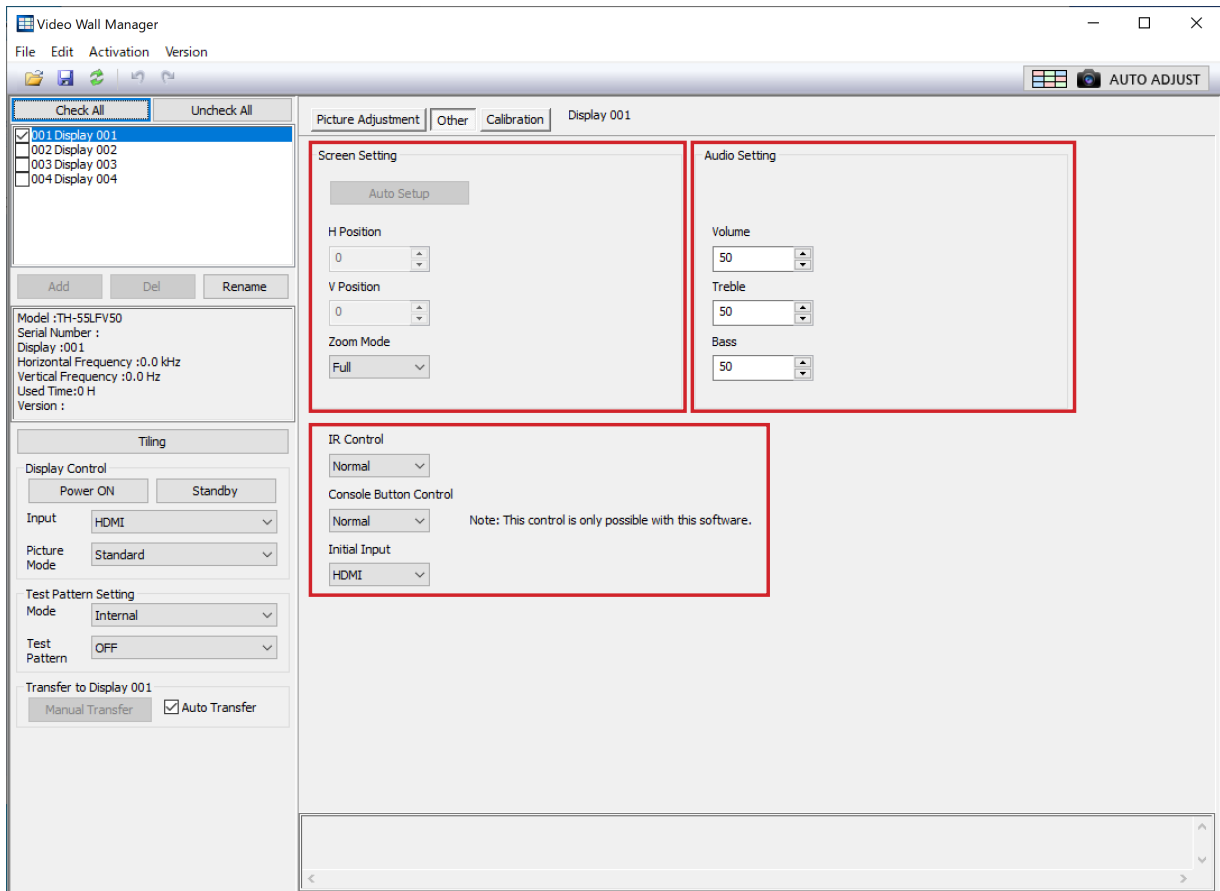
⑧ **Position**

You can adjust the screen position.

⑨ **Sound**

You can switch between ON (enabled) and OFF (disabled) for the mute function.

When using TH-55LFV50, TH-55LFV5, or TH-47LFV5

**Screen Setting**

You can adjust screen settings.

Audio Setting

You can adjust the audio.

IR Control

You can select remote control operation mode.

Console Button Control

When you select “Normal” buttons can be operated on the display itself, however, if “Lock” is selected, buttons on the display cannot be operated.

Note

- This setting item is not available on the display.

Initial Input

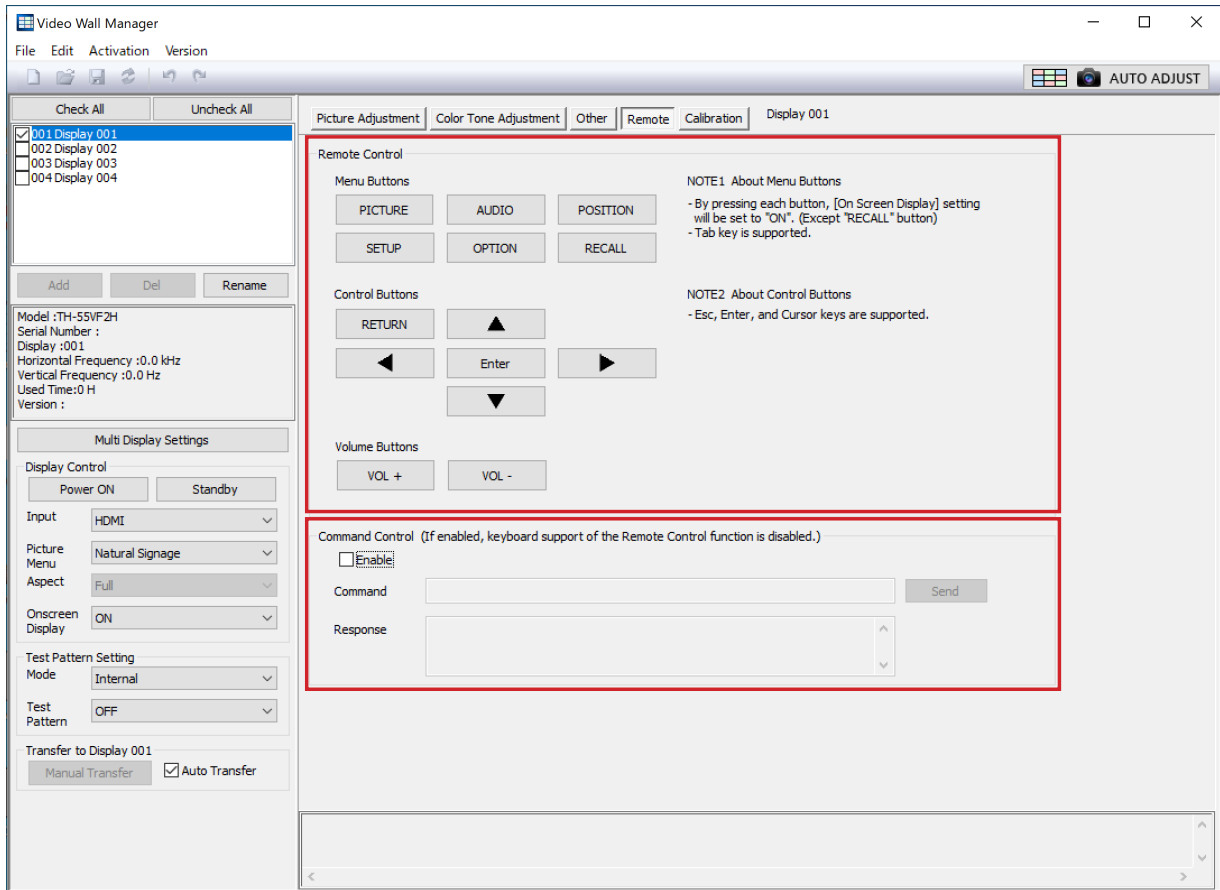
You can set the input terminal for when the power is set to “ON”.

Remote screen

You can perform remote control and command control operations with the software.

Note

- This setting item may not be displayed depending on the display model.



Remote Control

You can control OSD operations for the displays using the buttons on the software.

Command Control

You can control the displays using command inputs.

When [Enable] is selected, command input is enabled.

You can enter commands directly into the [Command] field using the keyboard. The command is sent to the display when you click [Send].

The response from the display appears in the [Response] field.

■ Calibration screen

Using a color sensor, you can adjust the gamma and white balance of the display in this screen.

Note

- This setting item may not be displayed depending on the display model.
- When using the TH-55LFV50, TH-55LFV5, or TH-47LFV5 model, the display and computer must be connected using a video cable to enable display of the computer screen on the Multi Screen Display.
- Use a color sensor when calibrating the display.
- Before connecting a color sensor, drivers or software for the color sensor must be installed on the computer where the Video Wall Adjustment & Calibration Software is installed. Refer to the color sensor user guide during installation.
- No guarantees are made for the operations when the computer is connected to a non-supported color sensor.

Supported color sensors are as follows.

Spyder4, Spyder5 and SpyderX

This color sensor is manufactured by Datacolor.

CA-210, CA-310 and CA-410

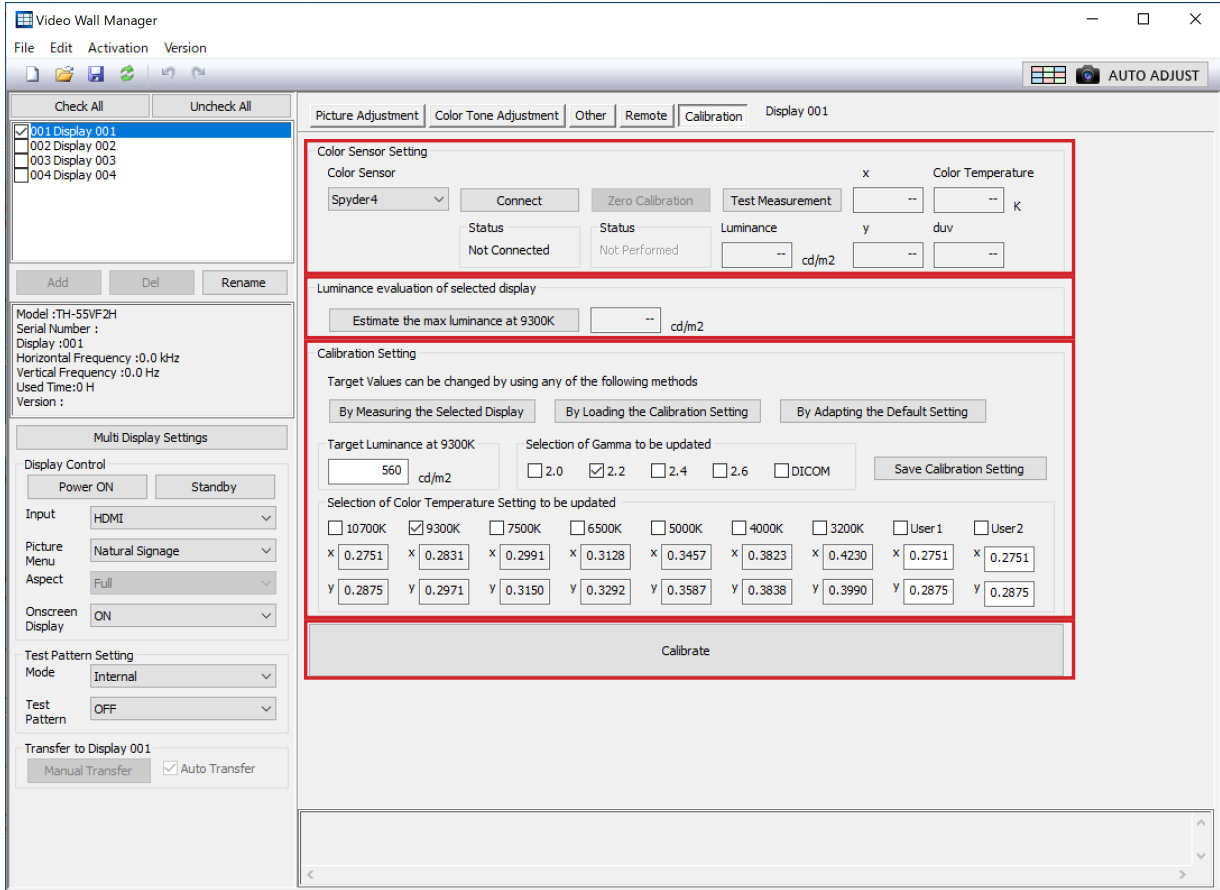
This color sensor/analyzer is manufactured by Konica Minolta.

i1-Pro2

This color sensor is manufactured by X-Rite.

Note

- When using the Spyder4, Spyder5 or SpyderX color sensor, do not launch the software supplied with the Spyder4, Spyder5 or SpyderX while using the Video Wall Adjustment & Calibration Software. If it is running, shut it down.



Color Sensor Setting

You can adjust color sensor settings.

[Color Sensor]

Select the color sensor from the pull-down menu.

Note

- For details on color sensor handling, refer to the color sensor user guide.
- Calibration cannot be performed on display models equipped with the light ID function for which [Light ID Setting] is set to [External] or [Internal]. Be sure to set [Light ID Setting] to [OFF].

[Connect]

Click this to check the color sensor connection.
 You can check the color sensor connection status in the Status field.
 Connected: The color sensor is connected.
 Not Connected: The color sensor is not connected.

[Zero Calibration]

Click this to zero (all black) the color sensor calibration.
 Before clicking this button, ensure light is not entering the color sensor.
 The zeroing (all black) calibration status appears in the Status field.
 Performed: Zeroing (all black) calibration is complete.
 Not Performed: Zeroing (all black) calibration is incomplete.

Note

- Because the Spyder4, Spyder5 or SpyderX color sensor does not have a zeroing (all black) calibration function, this button is disabled.

[Test Measurement]

When you click this, a separate window opens, and the color sensor performs measurement in sequence.
 Measurement parameters are as follows.
 Luminance, chromaticity: x, y, duv, and color temperature

Note

- Operations in the main screen are disabled during test measurement.

Luminance evaluation of selected display**Note**

- This is not displayed when using the TH-55LFV50, TH-55LFV5, or TH-47LFV5.

This evaluates the brightness of the selected display.

Displays in the connected display list that are highlighted in blue can be operated.

[Estimate the max luminance at 9300K]

Estimate the maximum luminance for when the color temperature is 9300K. When this is clicked, follow the steps in the window that appears to take a measurement.

The measurement results are displayed in the right window.

Measured results are retained for each display until you exit the software.

Calibration Setting

This is used to set the calibration reference value.

[By Measuring the Selected Display]

This is used to set a specific display as a standard.

When this is clicked, follow the steps in the window that appears to take a measurement.

Click [Save Calibration Setting] to save the measured value.

[By Loading the Calibration Setting]

Use this to apply the reference value saved to the computer.

When this is clicked, a file selection screen appears. Select the reference value for the specific display obtained in the above procedure (file extension: ".dsc").

[By Adapting the Default Setting]

This sets the software's default values.

[Save Calibration Setting]

This saves the Calibration Setting.

Target Luminance at 9300K

This sets the target luminance. Enter a numerical value.

The default setting varies depending on the model.

Selection of Gamma to be updated

Select a gamma setting for calibration.

The selected setting will be used for calibration.

The available gamma settings vary depending on the model.

Note

- Multiple selections are possible, however, 2.2 is always selected and cannot be deselected.

Selection of Color Temperature Setting to be updated

Select a color temperature setting for calibration.

The selected setting will be used for calibration.

User1 and User2 can configure any color coordinate by entering coordinates.

Note

- Multiple selections are possible, however, 9300K is always selected and cannot be deselected.
- For TH-55LFV50, TH-55LFV5, or TH-47LFV5 displays, settings cannot be configured via coordinate entry by User1 and User2.
- Generally, you can enter coordinates that are within the 2000 to 20000 k, $duv=\pm 0.02$ color temperature range.
- A confirmation message may appear. In such cases, follow the instructions in the message.

[Calibrate]

When this is clicked, calibration is carried out with the specified conditions.
Proceed with operation as instructed in the message.

Note

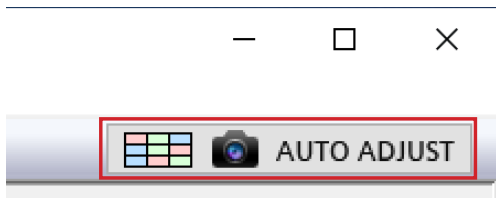
- When using the TH-55LFV50, TH-55LFV5, or TH-47LFV5 model and “Picture Mode” is not set to [Standard], or when the input is “PC”, “DVD/HD”, or “Video”, the [Calibration] button is disabled and calibration cannot be performed.
- If the OSD menu does not appear after adjustment, set [Onscreen Display] to [ON] again in the common operation area.

AUTO ADJUST (Auto Display Adjustment) button**[AUTO ADJUST] button**

Click the button to display the Auto Display Adjustment screen.

Using a camera and simple procedures, you can automatically adjust the color and brightness across multiple displays that make a Multi Screen Display.

☞ “Auto Display Adjustment” (page 51)

**Note**

- The [AUTO ADJUST] (Auto Display Adjustment) button is enabled during the trial period.
After installing the software, two trial periods (24 hours each) are available for using the Auto Display Adjustment function of the software. If you click the [AUTO ADJUST] button during a trial period, a message will appear.
After the trial periods have ended, purchase the Auto Display Adjustment Upgrade Kit (TY-VUK10) and activate this software.
☞ “Activation” (page 22)

Auto Display Adjustment

Using an externally-connected camera, you can automatically adjust the color and brightness across multiple displays that make a Multi Screen Display.

Note

- In order to use the Auto Display Adjustment function, you must first activate this software, and apply the “Auto Display Adjustment Upgrade Kit (TY-VUK10)”.
☞ “Activation” (page 22)
In the [Version] menu, you can check the application status of the Auto Display Adjustment Upgrade Kit (TY-VUK10).
- To use the Auto Display Adjustment function, prepare a camera.
- When using Auto Display Adjustment, two or more displays for controlling with the software must be connected.
- When using Multi Input Display, Auto Display Adjustment cannot be used.

Auto Display Adjustment Preparations

■ Connecting to the display

Use a LAN cable or serial (RS-232C) cable to connect the display and computer.

☞ “LAN connection” (page 10) ☞ “Serial (RS-232C) connection” (page 10)

Note

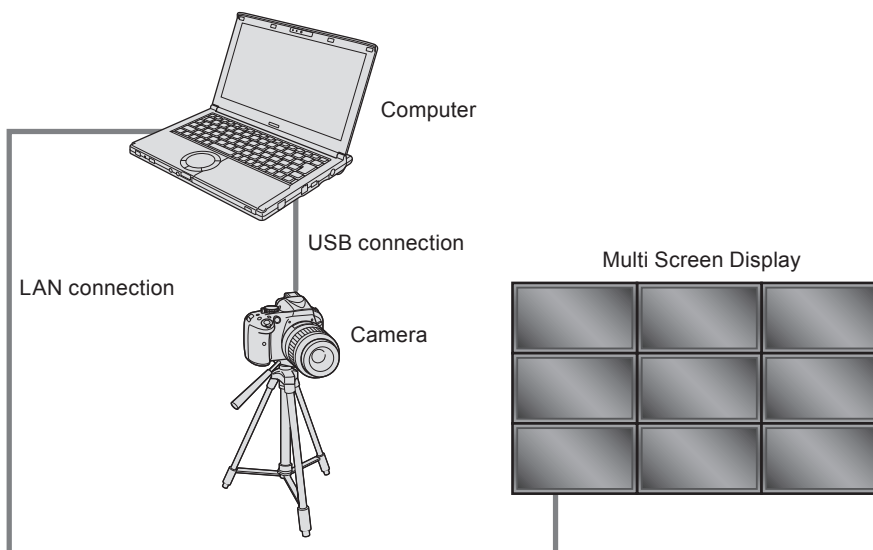
- When using the TH-55LFV9, TH-55LFV8, TH-49LFV8, TH-55LFV50, TH-55LFV5, or TH-47LFV5 model, the display and computer must be connected using a video cable to enable display of the computer screen on the Multi Screen Display.
- Connection across displays that make a Multi Screen Display differ depending on the installation. For details, check with the vendor who carried out the installation.

■ Camera connection

Use a USB cable to connect a computer and camera.

For details on compatible cameras and lenses, check the information found on the software download page after logging in to PASS on the website (<https://docs.connect.panasonic.com/prodisplays/pass>).

■ Connection example



Note

- To obtain optimal adjustment results, the camera should be placed face to face with the Multi Screen Display when using Auto Display Adjustment. Adjustment is possible when the camera is facing the Multi Screen Display at an angle but may fail if the angle is too large.

Display Placement

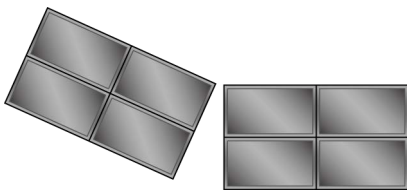
When using the Auto Display Adjustment function, up to 25 displays (up to 5 horizontal, up to 5 vertical) can be adjusted at a time.

Adjustment is possible for both landscape and portrait orientation. Adjustment is also possible when the installation mixes landscape and portrait orientation.

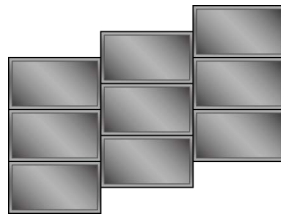
Note

- Even if the actual display installation mixes landscape and portrait orientation, set all displays as either landscape or portrait for operating on the software screen, regardless of their actual orientation.
- If the relative positional relationship of the displays and placement on the software screen differ, proper adjustment will not be possible.
- If displays are not placed in parallel, it may not be possible to adjust them correctly.
- If the angle of the displays are not aligned, or part of a Multi Screen Display is missing, proper adjustment will not be possible.
- Proper adjustment may not be possible due to the surrounding environment, camera placement, and color luminance distribution unique to the display. If adjustment is not performed properly, perform adjustments manually.

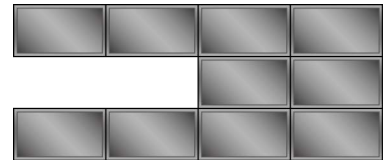
Examples of display placements not supported by the Auto Display Adjustment function



Displays are not placed side-to-side.



The corners of the displays do not align.

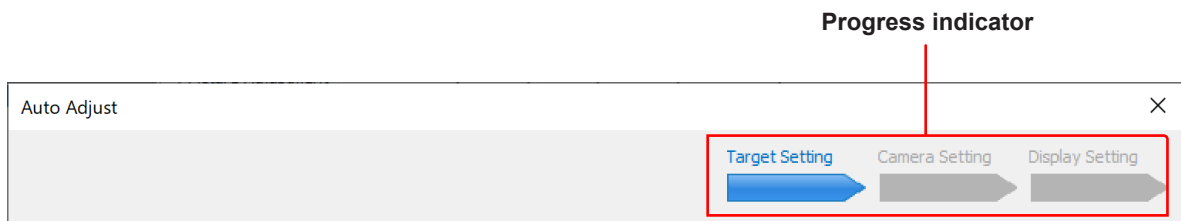


A part of a Multi Screen Display is missing.

Auto Display Adjustment Procedures

Settings for Auto Display Adjustment are configured in a wizard format.

While performing Auto Display Adjustment, a progress indicator will appear at the top right of each screen, allowing you to check which step you are currently performing.

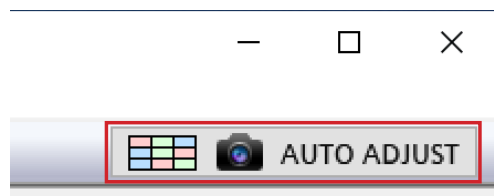


Starting Auto Display Adjustment

Note

- When using Auto Display Adjustment, make sure the power for all displays to be adjusted is on before starting. Proper adjustment is not possible if some displays are not turned on or are in standby mode.
- Make sure to use this function in an environment where you can minimize the effect of ambient light. If you can clearly see reflections in the displays when looking from the camera position, proper adjustment may not be possible.
- Auto display adjustment cannot be performed on displays for which "Picture Mode" is set to [DICOM]. To perform the operation, switch to a different picture mode.
- Auto Display Adjustment may not be available, depending on your model.

- 1 Click the [AUTO ADJUST] button in the main screen.



The display selection screen is displayed.

Note

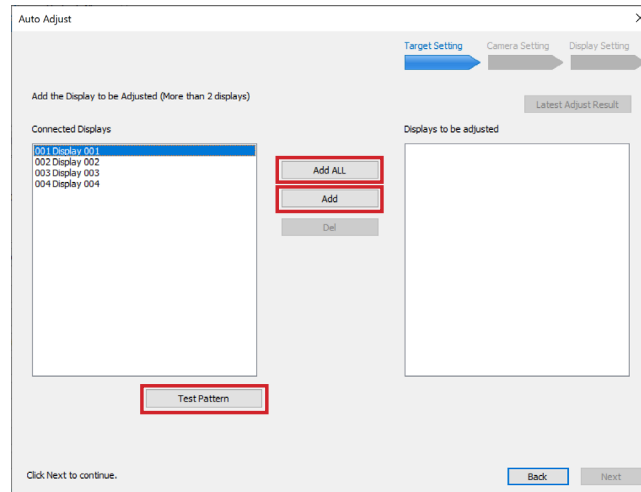
- After installing the software, two trial periods (24 hours each) are available for using the Auto Display Adjustment function of the software. If you click the [AUTO ADJUST] button during a trial period, a message will appear. After the trial periods have ended, purchase the Auto Display Adjustment Upgrade Kit (TY-VUK10) and activate this software.
☞ "Activation" (page 22)

Selecting Display

1 In the display selection screen, select displays to adjust.

Select the display to adjust from the frame on the left and click [Add] button.

The selected display appears in the frame on the right and becomes a target for adjustment.



Display selection screen

- Click the [Add ALL] button to adjust all connected displays.
- Click the [Test Pattern] button to display a test pattern on the displays selected in the left frame.
- To remove a display as a target for adjustment, select the display in the frame on the right and click the [Del] button.
- Click [Next] to proceed to the next step.
Click [Back] to close the display selection screen.

2 Click [Next].

Multi Screen Display Layout and Settings

You can set the Multi Screen Display layout and adjust other settings.

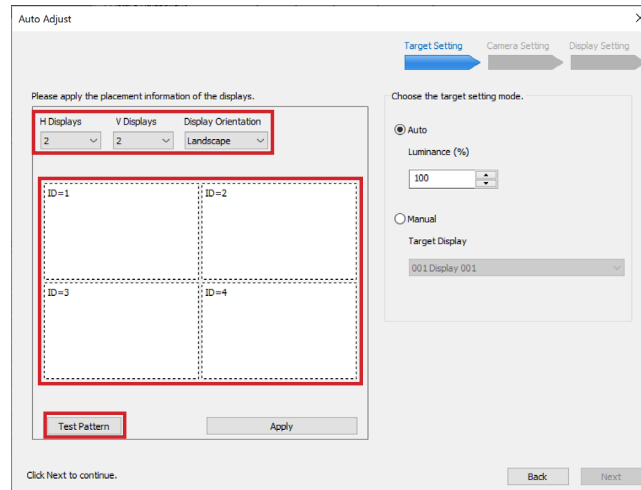
Note

- Although the Multi Screen Display layout and settings configured in the main screen are applied to the Multi Screen Display settings screen that appears in this auto display adjustment procedure, the layout and settings configured in this procedure are not applied to the Multi Screen Display settings screen of the main screen. (i.e., Multi Screen Display layout and settings are stored separately.)

1 Select the number and orientation of displays that make a Multi Screen Display.

You can set up to 25 displays (up to 5 horizontal, up to 5 vertical).

From the Horizontal Scale (or H Displays) pull-down menu select the number of horizontal displays, and from the Vertical Scale (or V Displays) pull-down menu select the number of vertical displays, then from the Display Orientation pull-down menu select [Landscape] or [Portrait].



Multi Screen Display setting screen

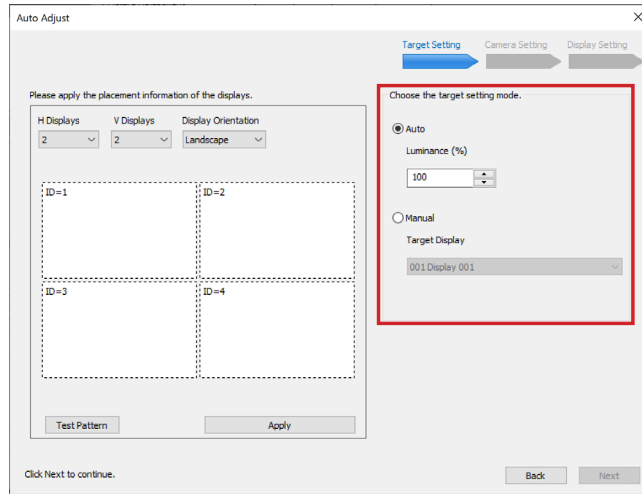
- Click the [Test Pattern] button to check if a test pattern appears on all displays.
- You can switch the display to operate by clicking the square representing each display. The frame of the selected display is indicated in red. The display ID is shown at the top left of each square.
- You can change the layout using a mouse. If you drag the square representing a display, it is switched with the display in the location you drop it.
- Main screen operations can be performed even while the Multi Screen Display setting screen is displayed.

Note

- When [Portrait] is selected, the orientation of the display's OSD menu will be linked to this setting, depending on the model of the connected display.
- Displays where a test pattern does not appear are either turned off or in standby mode, and cannot be automatically adjusted.

2 Select whether or not you want to adjust the display based on a specific display as a reference.

If you select [Auto] in “Choose the target setting mode”, adjustment is carried out without setting a specific display. If you select [Manual], the display is adjusted based on a specific display as a reference.



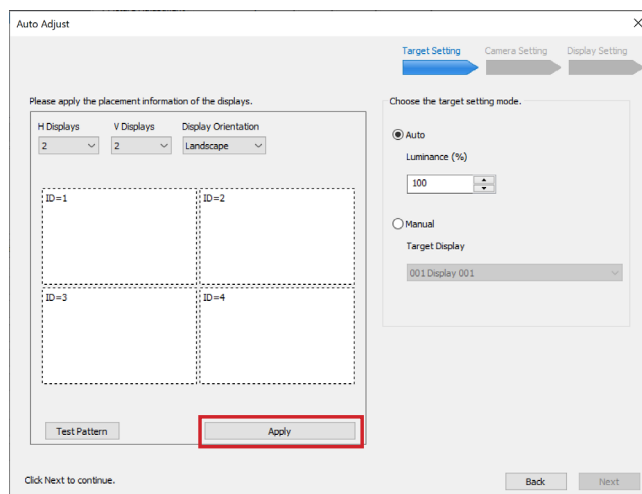
Multi Screen Display setting screen

- When [Auto] is selected, the display is adjusted using “10700K” as a target.
- You can configure the general brightness after adjustment by changing the [Luminance] setting.

Note

- The setting range for the [Luminance] setting is 30% to 100%.
- When using the TH-55LFV50, TH-55LFV5, or TH-47LFV5 model, the display is adjusted using “9300K” as a target.
- When using TH-55LFV50, TH-55LFV5, or TH-47LFV5 displays and the “Color Temperature” configured in the [Picture Adjustment] screen for the display targeted for [Manual] is 3000K, auto display adjustment cannot be performed.
- When using a TH-55LFV9, TH-55LFV8 or TH-49LFV8, the display is adjusted using “Normal” as a target.
- When [Manual] is selected for using a specified display as a reference, select the reference display from the pull-down menu.

3 Click [Apply].



Multi Screen Display setting screen

- The settings in the Multi Screen Display setting screen are confirmed.

Auto Display Adjustment

4 Click [Next].

To return to the previous screen, click [Back].

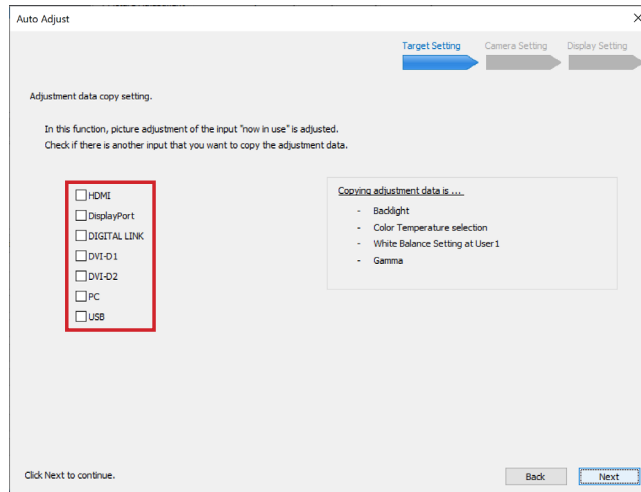
Note

- If you click [Apply] in the Multi Screen Display setting screen to confirm settings, they will be saved even if you click [Back].

5 Select the input for applying Auto Display Adjustment results.

Select the check box of the desired input.

You can make multiple selections.



Input selection screen

Note

- When using the TH-55LFV9, TH-55LFV8, TH-49LFV8, TH-55LFV50, TH-55LFV5, or TH-47LFV5 model, the DVI check box is always selected and cannot be cleared.

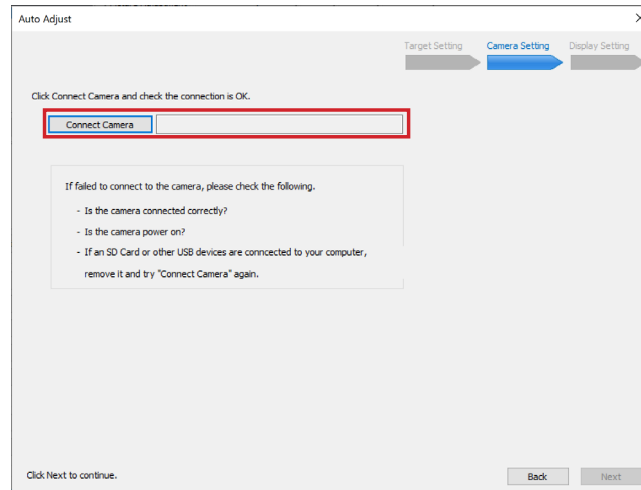
6 Click [Next].

To return to the previous screen, click [Back].

Camera Setting

1 Check the camera connection.

When you click the [Connect Camera] button, the model name of the camera for which connection is verified appears.



Camera connection screen

Note

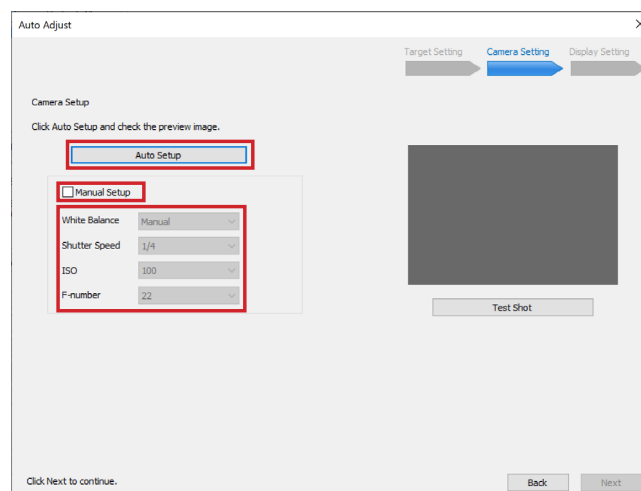
- An error message appears if connection fails.
Check the following, and click the [Connect Camera] button again.
 - The camera is properly connected.
 - The camera is turned on.

2 Click [Next].

To return to the previous screen, click [Back].

3 Adjust camera settings.

Adjust the camera white balance, shutter speed, ISO, and F-number.



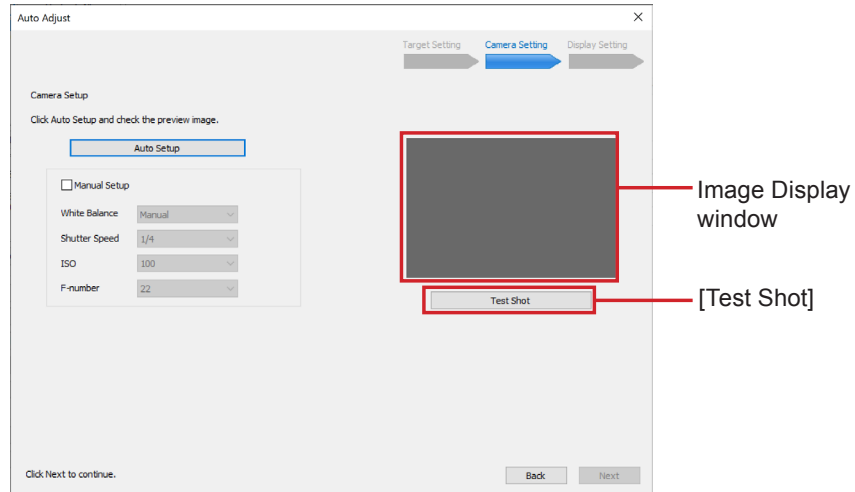
Camera setting screen

- Click the [Auto Setup] button to automatically display a test pattern in the display and adjust settings.
If you select the [Manual Setup] check box, you can manually change the white balance, shutter speed, ISO, and F-number. Select options from the pull-down menus.

4 Capture a test shot.

A test shot is captured when you click the [Test Shot] button, and the captured image appears in the image display window.

Verify that the entire Multi Screen Display to adjust fits within the image display window.



Camera setting screen

- To obtain optimal results, adjust the camera's position and zoom so that the entire Multi Screen Display to be adjusted fills as much of the image display window as possible.

Note

- If the entire Multi Screen Display to be adjusted does not fit properly within the image display window, adjustment will not be performed properly.
- An error message appears if camera configuration fails. In such cases, check the content of the message, click [OK], and configure settings again.
- If the area is too bright or there is a strong light present, overexposure may occur and adjustment may fail.

5 Click [Next].

To return to the previous screen, click [Back].

Note

- When you click [Next], the display settings will change to those displayed on this screen.

Auto Display Adjustment

1 Check the setting conditions for calibrating the gamma, etc.

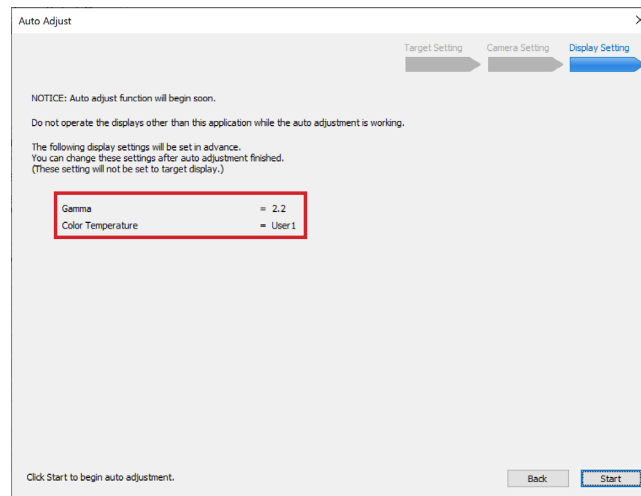
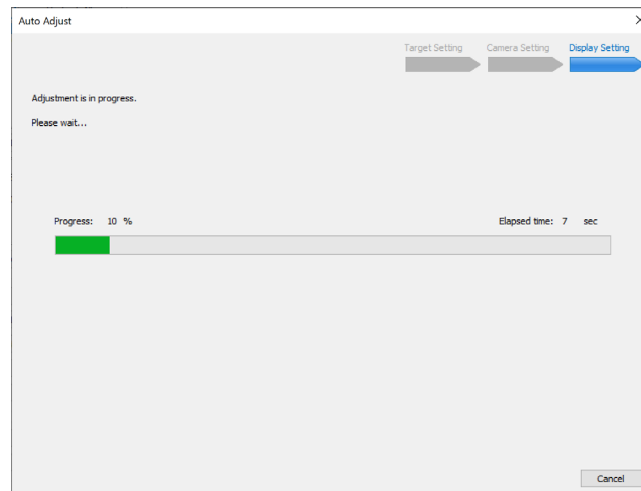


Image setting confirmation screen

- To return to the previous screen, click [Back].

2 Click [Start].

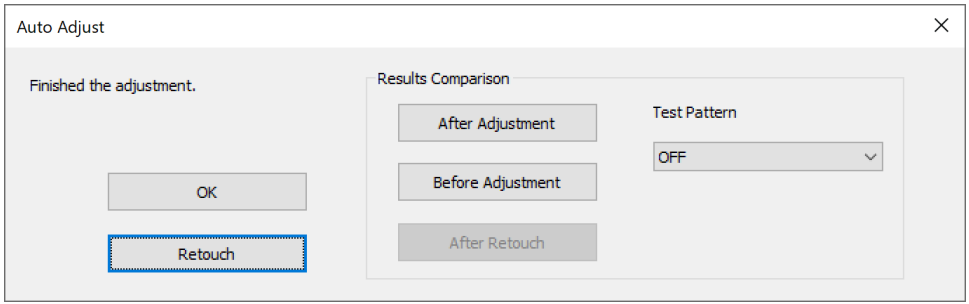
A progress bar appears, and Auto Display Adjustment starts.



Note

- To stop Auto Display Adjustment, click [Cancel] or click the button at the upper right of the screen. When the button is clicked, a confirmation screen appears. Click [OK] to end Auto Display Adjustment and click [Cancel] to return to the original screen.

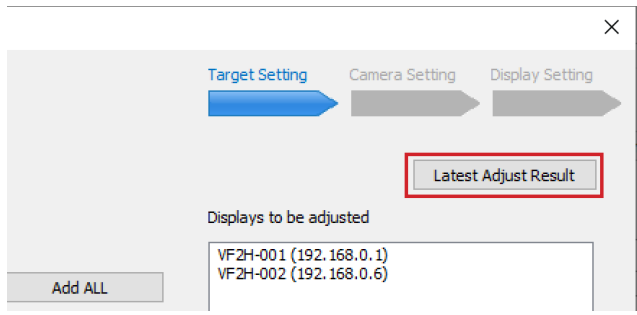
3 A message indicating that Auto Display Adjustment is complete appears.



- To exit Auto Display Adjustment, click [OK].
The adjustment results are applied to [Color Temperature] “User 1” (or “User”) in the [Picture Adjustment] screen.
- When you click [After Retouch], the conditions from after fine adjustment are restored.
- If Auto Display Adjustment could not be completed and must be performed again, an error message or error code will appear. If the [Retry] button is available, click it to perform Auto Display Adjustment again.
Click [Finish] to exit Auto Display Adjustment.
For details on error messages and error codes, see “Error Messages and Codes” (page 62).
- When you click the [Retouch] button, you can perform detailed white balance adjustments (page 40).
- To reset the Multi Screen Display settings to their pre-adjustment state, click [Before Adjustment].
When you click [Before Adjustment], the pre-adjustment state is displayed in the Multi Screen Display. Click [OK] and follow the on-screen instructions.
If you click [After Adjustment] after clicking [Before Adjustment], the conditions from after auto display adjustment are restored. When you click [After Retouch], the conditions from after fine adjustment are restored.

Note

- [Before Adjustment] and [After Adjustment] may take several tens of seconds for each display when using serial (RS-232C) connections.
- To adjust advanced settings after using Auto Display Adjustment, manually adjust each setting in the main screen.
- The test pattern will be displayed as [External] when using the TH-55LFV50, TH-55LFV5, or TH-47LFV5 model, and as [Internal] when using any other model.
- After using Auto Display Adjustment, it is recommended that you click [Check ALL] in the main screen common operation area, then click [File] and [Save Adjustment Data] in the main menu to save the adjustment data for all displays where Auto Display Adjustment was used.
- If you manually adjust settings after adjustment is complete, click the [Latest Adjust Result] button in the display selection screen and select [Before Adjustment] to check the state displays were in before automatic adjustment was carried out.



Auto Display Adjustment

Error Messages and Codes

If Auto Display Adjustment could not be completed and must be performed again, an error message or error code will appear.

Check the following if an error message appears.

| Cause | Solution |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The brightness of the targeted display is too high. | Click [Retry] to perform auto adjustment again. Alternatively, click [Finish] to exit auto adjustment, manually adjust the brightness of the target display, and then perform auto adjustment again. <ul style="list-style-type: none"> ● When you click [Retry], adjustment is performed again after lowering the brightness of the target display. |
| The brightness of the targeted display is too low. | Manually raise the brightness of the target display, and perform auto adjustment again. |
| The color temperature adjustments do not converge. | Click [Retry] to perform auto adjustment again. Alternatively, click [Finish] to exit auto adjustment, manually adjust the color temperature, and then perform auto adjustment again. <ul style="list-style-type: none"> ● When you click [Retry], adjustment is performed again while continuing the convergence calculation. |
| The light emission cannot be measured correctly. | Check the auto adjustment environment, and perform auto adjustment again. <ul style="list-style-type: none"> - Are all the displays to be adjusted displaying test patterns? - Are there strong reflections that intrude intermittently? - Is there an obstruction between the camera and the displays? |

Check the following if an error code appears.

| Error code | Cause / solution |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 107 | An extremely bright light source exists within the shooting area of the camera. <ul style="list-style-type: none"> ● Remove the light source. |
| 118 | The display area cannot be detected. <ul style="list-style-type: none"> ● Remove any source of reflections. ● Check that the entire Multi Screen Display to be adjusted fits within the image display window. |
| 119 | Image capture on the camera failed. <ul style="list-style-type: none"> ● Remove any obstructions between the camera and the displays. ● Do not manually change the focus, exposure, etc. during image capture. |
| 121 | Exposure adjustment on the camera failed. <ul style="list-style-type: none"> ● Select the [Manual Setup] check box and reconfigure the F-number, ISO, and shutter speed settings in the camera settings procedure. |
| 125 | Saving of the processing file failed. <ul style="list-style-type: none"> ● Check the remaining capacity of the hard disk and the access privileges. |
| 126 | Communication with the display failed. <ul style="list-style-type: none"> ● Check the connection between the display and the computer. |
| 128 | An error occurred on the camera. <ul style="list-style-type: none"> ● Check the connection between the camera and the computer. You can also try restarting the camera to reset camera operations. |

Frequently Asked Questions

Check the following points once more before requesting repair.

Display is not recognized.

- Has the display's power been turned on?
- Is the display supported by the software application? ☞ "Displays supported" (page 10)
- Have the units been connected properly? ☞ "Preparation" (page 10)
- Has the display's network been set up correctly? ☞ "Setting the Display" (page 11)
- Has an attempt been made to connect 101 or more displays?
- Is the display ID set to "0"?
- Is the same display ID used for more than one display?

No connection can be made between my display and my computer

- Has a Windows Firewall or other firewall been detected?

If a Windows Firewall has been detected

Press [X] while holding down the [Windows logo] key on the keyboard and click [Control Panel] → [System and Security] → [Windows Firewall] → [Allow an app or feature through Windows Firewall] to see if this program is on the list. Add the software to [Allow an app or feature through Windows Firewall].

Adding procedure

1. Press [X] while holding down the [Windows logo] key on the keyboard and click [Control Panel].
2. When the <Control Panel> appears, click [System and Security] → [Allow an app through Windows Firewall].
3. When <Allow apps to communicate through Windows Firewall> appears, click [Change settings] → [Allow another app...].
4. When the <Add an app> dialog box appears, select [Video Wall Manager] and click [Add].
5. [Video Wall Manager] appears in the [Allowed apps and features] column.
6. Select the [Private] or [Public] network you want to allow connection to and click to select the check box.
7. Click [OK] in the <Allow apps to communicate through Windows Firewall>.
8. This software will now be added to the Windows firewall's exception list.

When non-Windows firewall has been detected

Are any firewall-containing applications installed?

If any applications which contain firewalls are installed, the installation may not complete.

(The firewall function may activate without launch of the application if the application has already been installed.)

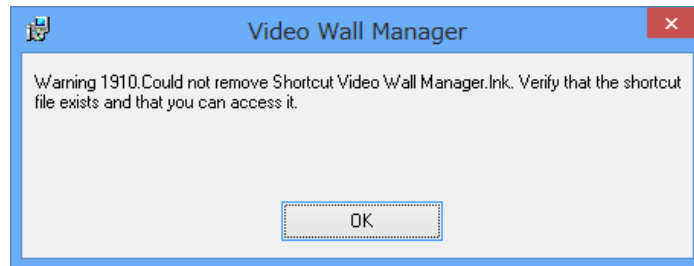
If this occurs, firewall settings must be changed in order to allow connection to the network.

See the User's Manuals for all applications containing firewalls to perform these settings.

Frequently Asked Questions

Messages that appear when an attempt to uninstall or update the software is made

- Is the “Warning 1910. Could not ...” message displayed?
If an NVIDIA driver is installed on the computer, the following message may appear.



Click [OK] and continue the uninstallation or update procedures.

Although uninstalling the software will also temporarily remove the desktop shortcut icons, they will be regenerated when you start up the computer next time. Manually delete the shortcut icons.

Files cannot be saved.

- Has an attempt been made to save a file that includes values that exceed the range which can be set in the display?
- Is there enough free memory on the hard disk?
- Do you have the authority to access the folder in which the file is to be saved?

Part of the screen does not appear.

- Depending on computer settings, part of the screen display may not work.
In this case, change the computer display settings to the display settings.

Picture adjustment cannot be performed.

- Has an attempt been made to send display settings that includes values that exceed the range which can be set in the display?
- Has the display's power been turned on?
Some items cannot be set if the display's power is not on.
- Are the display's input connectors set correctly, and have the correct signals been input?
Some items cannot be set depending on the input connector settings, the types of signals input and whether or not signals are present.

Cannot connect to the camera (Auto Display Adjustment).

- Is the camera turned on?
- Is the camera connected to the computer properly?
- Is there a large number of data files stored on the SD card inserted in the camera?
If camera connection fails, try removing the SD card and performing the camera connection settings again.

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