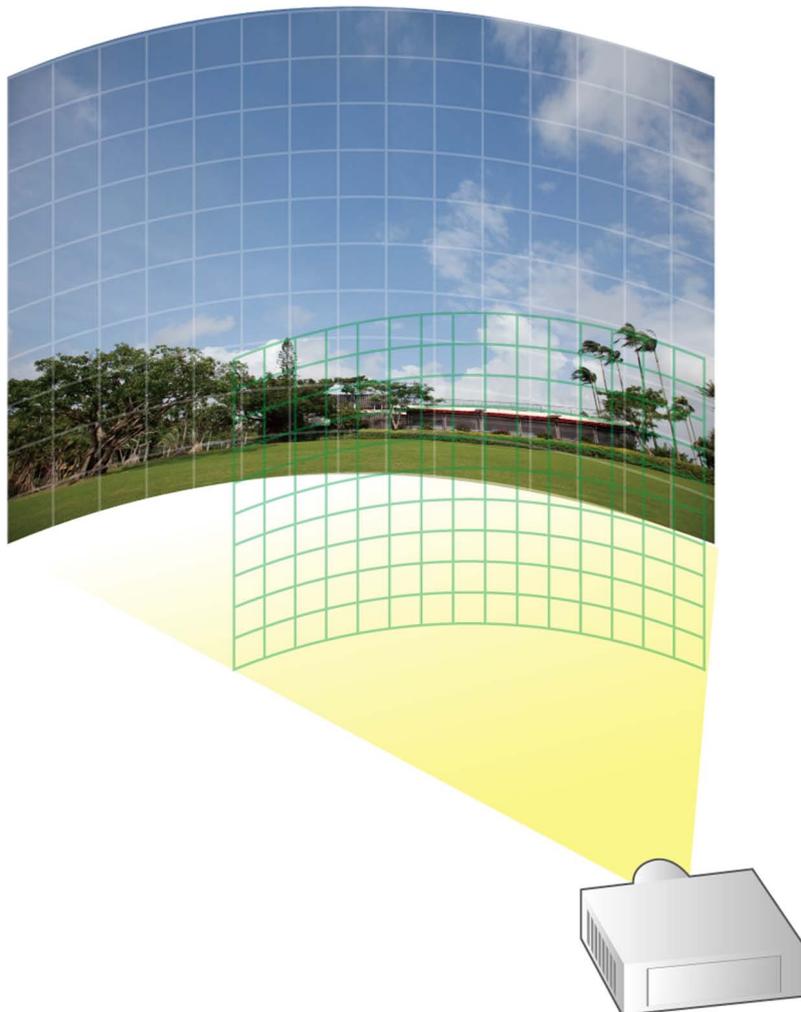


Operating Instructions Geometric & Setup Management Software

Geometry Manager Pro Ver. 2.1

Windows



Thank you for purchasing this Panasonic product.

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

Contents

Precautions and Disclaimers	4
What You Can Do with Geometry Manager Pro.....	5
Check Your Computer.....	6
System requirements	6
Necessary Environment for Computers to be Connected.....	6
Installing/Uninstalling Software.....	7
Installation	7
Installing Geometric & Setup Management Software (Geometry Manager Pro)	7
Installing the Auto Screen Adjustment plug-in software	8
Software Uninstall.....	9
Preparation	10
Activation	12
Perform the projector activation.....	12
Functions which are expanded as a result of activation.....	15
Starting and Exiting the Application	16
Starting the application.....	16
Exiting the application	17
Adjustment and Settings	18
Main screen.....	18
Adjustment area	18
Main menu.....	19
Icon menu.....	22
Common operation area	24
AUTO ADJUST (Auto Screen Adjustment) button.....	29
Status bar	29
Lens Settings.....	30
Lens setting screen	30
Geometry Correction.....	32
Selecting the control points.....	32
Geometry screen.....	33
Free Grid (Free-form correction).....	35
4 Corner (4-corner correction)	37
Keystone (keystone shape correction).....	38
Cylindrical screen (cylindrical shape correction)	39
Elliptical screen (elliptical shape correction).....	41
Spherical screen (spherical correction)	44
Rotation (rotation correction).....	45
S-shape screen (S-shaped correction).....	46
Edge Blending	47
Edge Blending screen	47

Contents

User-defined curve setting screen	50
Uniformity	52
Correction procedure	53
Uniformity screen	54
Brightness Control	57
Brightness Control screen.....	57
Color Matching	60
Color Matching screen	60
Masking	62
Masking screen	62
Line Masking	65
Bitmap Masking.....	66
Input Signal Adjustments	67
Input Signal screen	67
Projector Menu Settings	71
Other screen.....	71
Auto Screen Adjustment	77
Preparing Auto Screen Adjustment.....	77
Compatible screens for Auto Screen Adjustment	78
Operation flow for Auto Screen Adjustment	78
Auto Screen Adjustment procedure	79
Starting Auto Screen Adjustment and selecting the adjustment item.....	79
Projector Layout	80
Camera Setting	82
Projection Setting.....	83
Frequently Asked Questions.....	89
Trademarks	91

Precautions and Disclaimers

- Precautions regarding security

When using the Geometric & Setup Management Software (Geometry Manager Pro), 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 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 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.
 - The illustrations and display examples used in this manual may differ from the actual product.
 - Panasonic cannot be held liable for damages arising from data corruption or loss as a result of using this projector.

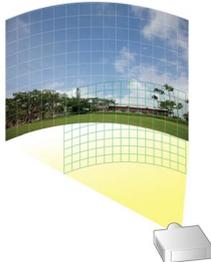
What You Can Do with Geometry Manager Pro

Using this software allows you to perform real-time geometric compensation and other fine adjustments and corrections that cannot be handled on the projector side.

Even when using this software, however, some functions and expanded functions may not be available unless the projector is activated.

☞ “Activation” (page 12)

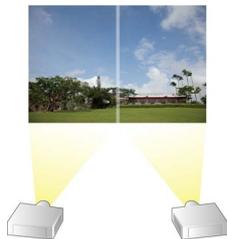
☞ “Functions which are expanded as a result of activation” (page 15)



■ Geometry correction

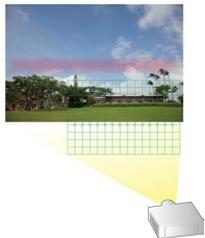
When projecting images onto a screen surface that is not perfectly flat (such as the wall of a building) or projecting them onto a screen surface at an angle, the images become distorted.

When projecting images in these kinds of special environments, the geometry correction function serves to correct the images to counter the shape of the screen surface.



■ Edge blending

This function serves to correct the brightness and makes the joins between the images less visible when the images projected from a multiple number of projectors are combined to form a single image.



■ Uniformity

This function makes it possible to correct color irregularities in projected images – for example, those resulting from irregularities in the screen surface or from surrounding light and shade.



■ Masking

This function makes it possible to mask certain parts of the projected images, projecting only the required parts.

■ Auto Screen Adjustment (AUTO ADJUST)

This allows simple automatic adjustment of geometry correction, edge blending, color, and brightness according to the shape of the screen through use of a camera.

Note

- Both Geometry Manager Pro and the Geometry Manager Pro - Auto Screen Adjustment plug-in software must be installed to use the Auto Screen Adjustment function.
- To use the Auto Screen Adjustment function, prepare a camera separately. ☞ “Camera connection” (page 77)

■ Other functions

The lens, color matching and input signal can all be adjusted.

Some of the projector’s menu operations can also 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 7 Ultimate 32/64bit, Professional 32/64bit
Home Premium 32/64bit
Windows 8 Windows 8 32/64bit, Windows 8 Pro 32/64bit
Windows 8.1 Windows 8.1 32/64bit, Windows 8.1 Pro 32/64bit
Compatible with English, Japanese or Chinese language versions of the above operating systems.

- Compatible with Windows 7 up to SP1.
- For a 64bit OS, this application runs on WOW64.

CPU: Clock speed of 1 GHz or higher

Memory: 2 GB or more

Available disk space:

16 GB or greater (Further available space is necessary to save projector information)

Other requirements:

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 Auto Screen Adjustment function)

Note

- A LAN connector is required to use the Auto Screen Adjustment function.
- 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.

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 projectors to the computer via a wired LAN connection.

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 projector if security (firewall) software or utility software for LAN adapter are installed.
☞ “Frequently Asked Questions” (page 89)
- Operation is not guaranteed for all LAN adapters and built-in LAN adapters in the computers.
- An Internet connection is required to activate a projector.

Installing/Uninstalling Software

Installation

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

Installing Geometric & Setup Management Software (Geometry Manager Pro)

1 Download the software.

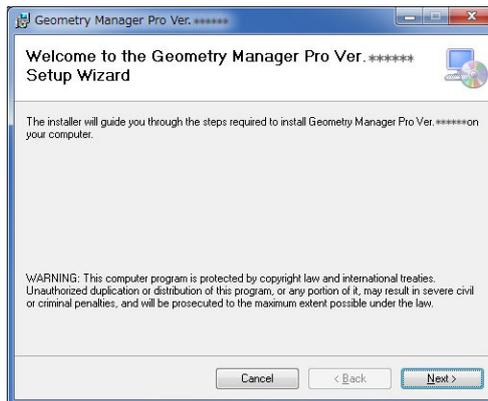
- Download Geometry Manager Pro.
Click [Software Download] on the top page of the Panasonic website (<http://panasonic.net/avc/projector/pass/>), and follow the on-screen instructions to download the software.

Note

- To download this software, you must be a registered PASS*1 member and log into the PASS server (<http://panasonic.net/avc/projector/pass/>).
*1 PASS stands for "Projector Asset Support System."
The system will be referred to by this abbreviation in this manual.
- To enable use of the Auto Screen Adjustment function, download the Auto Screen Adjustment plug-in software as well.
☞ "Installing the Auto Screen Adjustment plug-in software" (page 8)

2 The installer starts up.

Double-click the downloaded "Installer.exe" file.



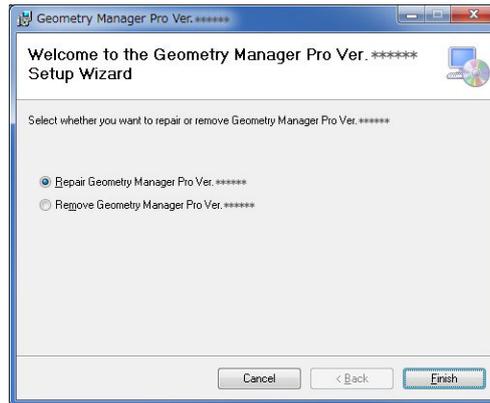
Follow the on-screen instructions to install the application.

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



Note

If an identical version of the software is already installed, the following screen for selecting whether to repair or remove the existing version appears.



- ◆ To repair defects in the software, select “Repair Geometry Manager Pro”, and click [Finish]. To uninstall the existing version before installing the software again, select [Remove Geometry Manager Pro], and click [Finish].
- ◆ If you selected [Repair Geometry Manager Pro] and the “Insert disk” message is displayed, uninstall the application, and then reinstall it.

Installing the Auto Screen Adjustment plug-in software

1 Download the Auto Screen Adjustment plug-in software.

- Both Geometry Manager Pro and the Geometry Manager Pro - Auto Screen Adjustment plug-in software are necessary to use the Auto Screen Adjustment function. Click [Software Download] on the top page of the Panasonic website (<http://panasonic.net/avc/projector/pass/>), and follow the on-screen instructions to download the Auto Screen Adjustment plug-in software.

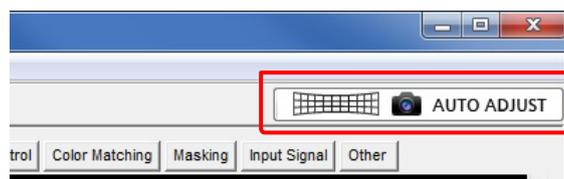
2 The installer starts up.

Double-click the downloaded “AusInstaller.exe” file, and follow the on-screen instructions to install the application.

Note

The compatible combination of versions for the Auto Screen Adjustment plug-in software and the Geometry Manager Pro software is predetermined. Therefore, an error message will appear if you attempt to install an incompatible version of the Auto Screen Adjustment plug-in software. In such cases, check whether the version of Geometry Manager Pro that appears in the error message matches the software version found on the above website. If the versions match, download and install only Geometry Manager Pro from the website. If the versions do not match, download and install both Geometry Manager Pro and the Auto Screen Adjustment plug-in software.

3 When installation is complete, the [AUTO ADJUST] (Auto Screen Adjustment) button at the top right of the Geometry Manager Pro main screen will be enabled.



Software Uninstall

Windows 7

Select [Geometry Manager Pro] from [Start] → [Control Panel] → [Uninstall a program], and click [Uninstall].

Windows 8 / Windows 8.1

Press [X] while holding down the [Windows logo] key on the keyboard. Select [Geometry Manager Pro] from [Control Panel] → [Uninstall a program], and click [Uninstall].

Note

Uninstalling Geometry Manager Pro will not uninstall the Auto Screen Adjustment plug-in software. Perform the same procedure as the above to uninstall the Auto Screen Adjustment plug-in software (Geometry Manager Pro - Auto Screen Adjustment plug-in).

Preparation

There are two ways to connect the computer to the projector. One uses a LAN connection and the other uses a serial connection.

Projectors connected via a LAN connection and projectors connected via a serial connection cannot be corrected or adjusted at the same time.

■ Projectors supported

For details on models compatible with Geometry Manager Pro, check the information found on software download page of the Panasonic website (<http://panasonic.net/avc/projector/pass/>).

Note

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

■ LAN connection

Connect the projector and computer using a LAN cable.

Up to 64 projectors can be connected. When using the Auto Screen Adjustment function, up to 48 of these projectors can be adjusted at the same time.

■ Serial (RS-232C) connection

Connect the projector to the computer on a 1:1 basis using a serial cable.

Use a cable complying with the RS-232C standard as the serial cable.

Note

- For the types of cables that can be used, refer to the operating instructions of the projector.
- Use a LAN connection when using the Auto Screen Adjustment function.
Auto Screen Adjustment cannot be performed via a serial (RS-232C) connection.
☞ “Auto Screen Adjustment” (page 77)

■ Setting the Computer

1 Please use a crossing cable to connect the computer and projector when it is directly connected to the LAN.
When connecting via a hub, for example, use a straight cable.

2 Network Setup

- Set the IP ADDRESS, SUBNET MASK and DEFAULT GATEWAY according to the operating environment.
(Please consult your network administrator for details.)
- If “use of automatic script” is checked for your web browser, please uncheck.
- If “Use of Proxy server in LAN” is checked for your web browser, please uncheck, or set the projector IP address to “Exceptions” in the detailed proxy settings.

Note

Depending on the system configuration, whether it is straight, cross, or both to be used, will differ.

Please consult your network administrator for details.

■ Setting the Projector

Network Setup

Set the PROJECTOR NAME (HOST NAME), IP ADDRESS, SUBNET MASK, and DEFAULT GATEWAY according to the operating environment. (Please consult your network administrator for details.)

Set DHCP to OFF and set a fixed IP address, making sure that the entered IP address is not used by any other device on the LAN.

If the entered IP address is used by another device, the projector cannot be registered.

- For models that can be set, enable both WEB Control and Command Control.
- For models in which the Web port number can be set, set the port number to “80”.

Note

- Refer to operating manual of the projector for method on configuring the projector.
- This software identifies the projector using the configured IP address. If DHCP is set to ON in the projector network setting in a network environment that uses a DHCP server etc. the DHCP server may change the IP address allocated to the projector, making it impossible to connect using this software.

Please ensure the server does not change the IP address by, for example, setting the DHCP server so as to fix the IP address allocated to the projector. (Please consult your network administrator for details.)

■ Activation

Activating a projector enables and expands certain functions.

The upgrade kit (ET-UK20) and Auto Screen Adjustment upgrade kit (ET-CUK10) are required for activation. For details on compatible projector models, check the information found on the activation page of the Panasonic website (<http://panasonic.net/avc/projector/pass/>).

☞ “Functions which are expanded as a result of activation” (page 15)

Note

The Auto Screen Adjustment plug-in software must be installed and the Auto Screen Adjustment upgrade kit (ET-CUK10) must be applied on the projector to enable the Auto Screen Adjustment function.

■ Camera connection

To use the Auto Screen Adjustment function, prepare a camera separately.

For details on supported cameras and lenses and how to connect the camera to the computer, refer to “Auto Screen Adjustment” (page 77).

Activation

Activating a projector enables and expands certain functions.

The upgrade kit (ET-UK20) and Auto Screen Adjustment upgrade kit (ET-CUK10) are required for activation. For details on compatible projector models, check the information found on the activation page of the Panasonic website (<http://panasonic.net/avc/projector/pass/>).

☞ “Functions which are expanded as a result of activation” (page 15)

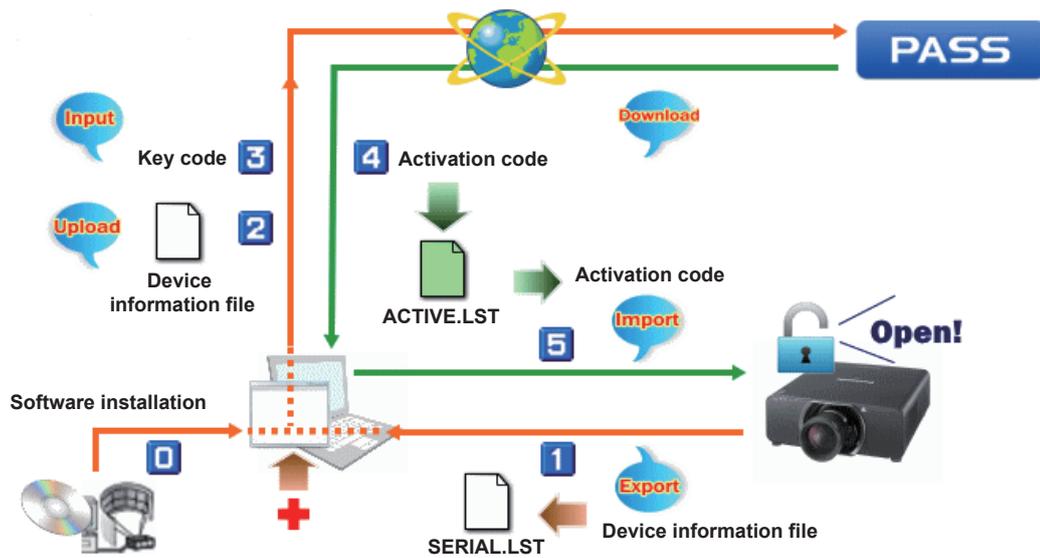
Note

Both Geometry Manager Pro and the Auto Screen Adjustment plug-in software must be installed to use the Auto Screen Adjustment function.

Perform the projector activation

The flow of operations from installation to activation is as follows.

This section describes the activation procedure.



1 Have the key code ready.

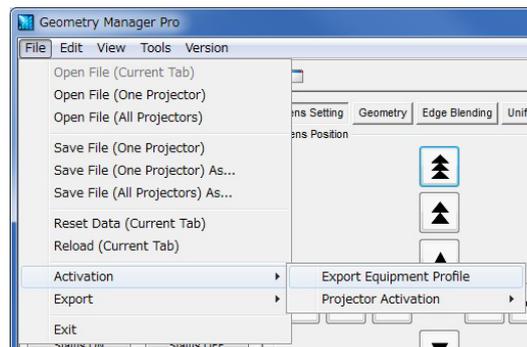
The key code is indicated on the key code label of the upgrade kit (ET-UK20) or the Auto Screen Adjustment upgrade kit (ET-CUK10).

2 Start the software application, and display the main screen.

☞ “Adjustment and Settings – Main screen” (page 18)

3 On the [File] menu, select [Activation] – [Export Equipment Profile].

- All the projectors to which the upgrade kit (ET-UK20) or the Auto Screen Adjustment upgrade kit (ET-CUK10) is not applied will be targets for operation.
- All connected projectors will be displayed in the common operation area. However, the operation cannot be performed while two or more of these projectors are selected.
- In the common operation area, an asterisk (*) appears to the left of projector names for which the upgrade kit (ET-UK20) has not been applied. You can check whether the upgrade kit (ET-CUK10) is applied when using the Auto Screen Adjustment function.

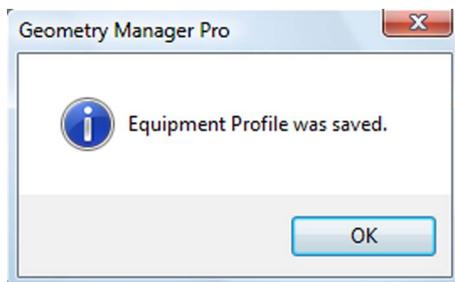


The file save screen is displayed.

4 Specify the save destination, name the file, and save.

- The default file name is “SERIAL.LST.”

When the confirmation screen for saving the file appears, click [OK].



5 Start the web browser, and log into the PASS server (<http://panasonic.net/avc/projector/pass/>).

6 Click the activation button in the side menu of the top page, and follow the on-screen instructions to perform key code registration, etc.

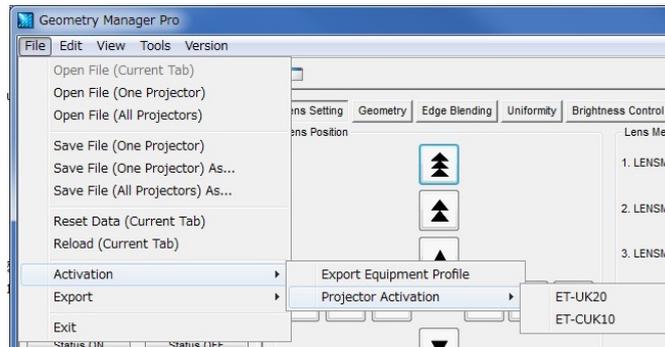
Register the key code readied in step 1 and the file (default file name: SERIAL.LST) saved in step 4 to the PASS server to acquire the activation code file (default file name: ACTIVE.LST).

- The activation codes for the upgrade kit (ET-UK20) and the Auto Screen Adjustment upgrade kit (ET-CUK10) must be acquired separately.

7 Close the web browser.

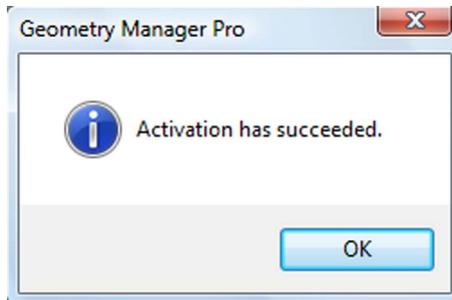
8 On the File submenu, select [ET-UK20] or [ET-CUK10] under [Activation] - [Projector Activation].

The file selection screen is displayed.



9 Select the activation code file (default file name: ACTIVE.LST) acquired in step 6.

When activation is complete and the confirmation screen appears, click [OK].



Functions which are expanded as a result of activation

Listed below are the functions which are expanded when the activation process has been completed.

■ Upgrade kit (ET-UK20)

Function		Activation not completed	Activation completed	
Grid pattern	When the resolution of the projector is 1920x1200 dots	2x2 to 11x11	2x2 to 41x26	
	When the resolution of the projector is 1400x1050 dots	2x2 to 11x11	2x2 to 29x22	
Geometry Correction	Adjustment ranges	Vertical keystone correction	±40°	
		Horizontal keystone correction	±15°	
		Vertical arcs	±50	
		Horizontal arcs	±50	
	Rotational correction		–	√
	Flip Vertical Flip Horizontal		–	√
Uniformity	Flexible Correction		–	√
	Flip Vertical Flip Horizontal		–	√
	Masking		–	√

√ : Can be used.
 – : Cannot be used.

■ Auto Screen Adjustment upgrade kit (ET-CUK10)

This allows simple automatic adjustment of geometry correction, edge blending, color, and brightness according to the shape of the screen through use of a camera.

Note

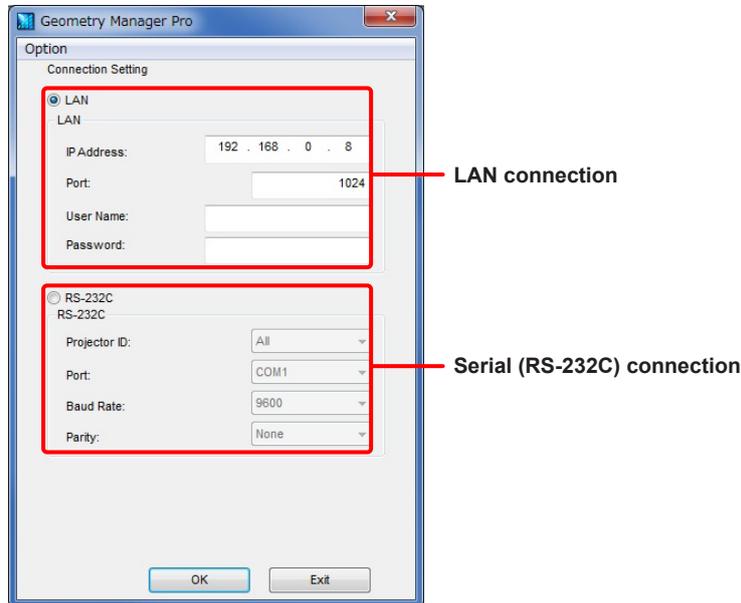
- Both Geometry Manager Pro and the Auto Screen Adjustment plug-in software must be installed to use the Auto Screen Adjustment function.
- To use the Auto Screen Adjustment function, prepare a camera separately. 📷 “Camera connection” (page 77)

Starting and Exiting the Application

Starting the application

Double-click the shortcut icon on the desktop.

When the application starts, the connection settings screen appears.



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

The following items can be selected from the [Option] menu at the top left of the connection settings screen.

Service Password

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

Version

This is where the application's version information can be checked.

■ LAN connection

Place a check mark in [LAN], and perform the following settings.

IP Address

Input the IP address of the projector to be connected to the computer.

Port

Set the number of port on the computer for connecting with the projector.

User Name

Input the user name used for WEB control of the connected projector.

Password

Input the password used for WEB control of the connected projector.

After performing the settings, click [OK] to display the main screen.  "Adjustment and Settings – Main screen" (page 18)
When [Exit] is clicked, the application is exited without establishing a connection.

■ Serial (RS-232C) connection

Place a check mark in [ RS-232C], and perform the following settings.

Projector ID

Select [All] or [1] to [64].

If [All] has been selected, all the projectors with [All] set for [Projector ID] and [On] set for [Response (ID All)] can be used.

When a number from [1] to [64] has been selected, the projectors set to the same ID ([1] to [64]) can be used.

For the [Projector ID] and [Response (ID All)] settings, refer to the Operation Manual of the projector.

Port

The ports which can be used on the computer are displayed here.

Baud Rate

Set the baud rate from the speeds given below:

- 9600 bps
- 19200 bps
- 38400 bps

Parity

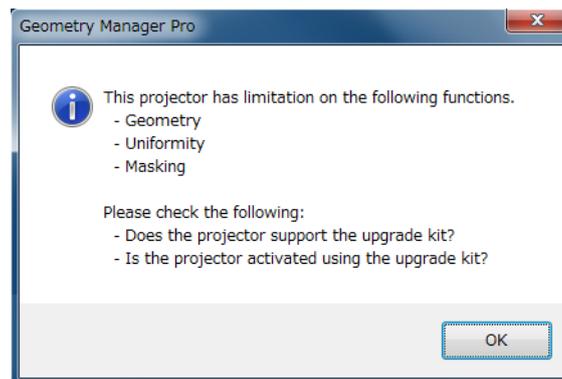
Set the parity used for the parity check here:

- NONE: No parity
- ODD: Odd parity
- EVEN: Even parity

After performing the settings, click [OK] to display the main screen.  “Adjustment and Settings – Main screen” (page 18)
When [Exit] is clicked, the application is exited without establishing a connection.

Note

The following screen appears when you connect to a projector for which the upgrade kit (ET-UK20) has not been applied.



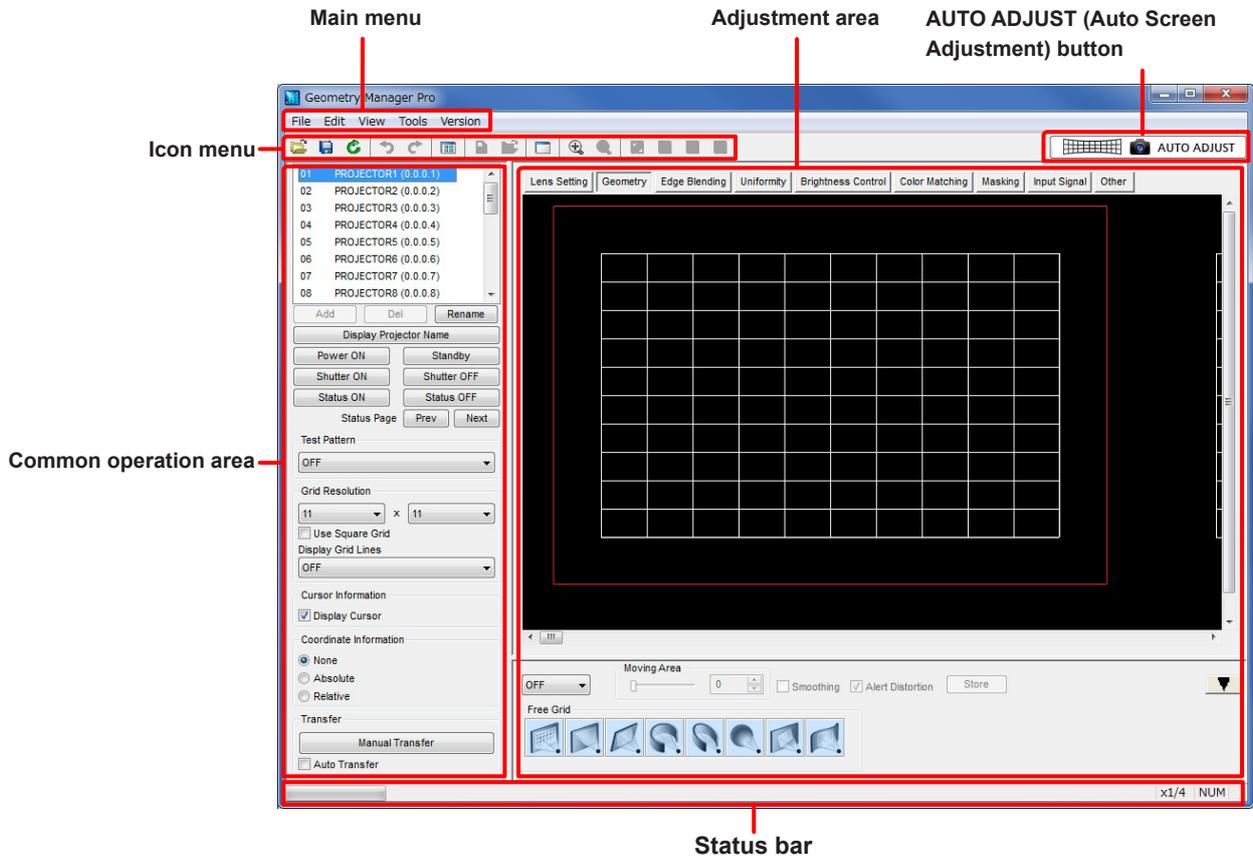
Exiting the application

To exit the connection main screen, either select [File] and then [Exit] or click the  button at the top right of the window.
To exit the connection settings screen, either click the [Exit] button or click the  button at the top right of the window.

Adjustment and Settings

Main screen

The main screen consists of the following five general areas and the AUTO ADJUST (Auto Screen Adjustment) button.



Note

- When using this application, keep the main power of the projector in the "on" setting. If the standby mode is set to [Normal], the [Power ON] operation is enabled even when the projector is in standby mode. However, if the standby mode is set to [ECO], all operations including [Power ON] will be disabled. When using this application and performing the [Power ON] operation, set the projector's standby mode to [Normal]. Operations other than [Power ON] are not guaranteed, when the standby mode is set to [Normal].
- If the projector settings have been changed using a remote control, for instance, rather than the software application, the software application displays and projector settings may not match.

Adjustment area

You can click the tabs in the adjustment area to switch between screens and perform various adjustments and operations. The modes in which these adjustments and operations are performed are called "editing modes."

Main menu

■ File submenu

Open File (Current Tab)

This loads only the setting data of the current editing mode from a setting file (with .prj extension) saved on the computer.

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

Open File (One Projector)

This loads all the editing mode settings from the setting file (with .prj extension) saved on the computer into the selected projector.

When this menu item is selected, the loaded settings are reflected in the target projector even if **Auto Transfer** (at the bottom of the common operation area) has not been checked.

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

Note

When the setting file is loaded, the settings may not be reflected correctly if the selected input signal is not the same as the one when the setting file was saved.

Open File (All Projectors)

This loads a file saved with [Save File (All Projectors) As...].

When this item is selected, the loaded settings are reflected in all the target projectors that are connected even if

Auto Transfer (at the bottom of the common operation area) is not checked.

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

Note

- When the file is loaded, an error message is displayed if the target projector is not connected to the network. When the connection of the target projector to the network is recognized, the connection is established and the loaded settings are reflected automatically.

- This function cannot be used for a serial (RS-232C) connection.

Save File (One Projector)

This saves the settings being edited, overwriting the previous settings in the current setting file (with .prj extension).

When the file is saved for the first time, a message appears prompting the user to provide a filename.

Save File (One Projector) As...

This saves the settings now being edited in a file under the filename (with .prj extension) provided.

Save File (All Projectors) As...

This saves the setting information of all the currently connected projectors as a single All Project File (with .prjs extension) on the computer.

The layout information, IP addresses, user names, and passwords of the projectors are also encrypted and saved in the All Project File.

Note

This function cannot be used for a serial (RS-232C) connection.

Reset Data (Current Tab)

This sets the current editing mode settings to the initial statuses.

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

Reload (Current Tab)

This cancels the settings currently being edited using the application, and loads the same settings again from the projector.

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

Activation

Export Equipment Profile

Creates a file to be registered in the PASS server. This file is required to acquire the activation code file.

☞ “Activation” (page 12)

Projector Activation (ET-UK20 / ET-CUK10)

Select [ET-UK20] or [ET-CUK10], and perform projector activation.

☞ “Functions which are expanded as a result of activation” (page 15)

- The activation code file is required.
 - ☞ “Activation” (page 12)
- If the Auto Screen Adjustment plug-in software is not installed, [ET-CUK10] cannot be selected.
 - ☞ “Installing the Auto Screen Adjustment plug-in software” (page 8)

Export

Multi Projector Monitoring and Control Software

This saves the data in the file format (with .ugk extension) used for the “Multi Projector Monitoring & Control Software”.

The file is for registering the data of the projectors already registered in the software application in the “Multi Projector Monitoring & Control Software” for monitoring and control purposes.

For details, refer to the operation manual of the “Multi Projector Monitoring & Control Software”.

Note

This function cannot be used for a serial (RS-232C) connection.

Exit

Exits the software.

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

■ Edit submenu

Undo

This discards the software application and projector 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 during a single setting process (for each editing mode).
- The Undo and Redo logs are cleared if you switch to another editing mode or projector.

The following Edit submenu items are enabled only in certain editing modes. For details, refer to the respective reference pages.

Lock

☞ “Adjustment and Settings – Geometry Correction” (page 32)

Unlock

☞ “Adjustment and Settings – Geometry Correction” (page 32)

Free

☞ “Adjustment and Settings – Geometry Correction” (page 32)

Reset

☞ “Adjustment and Settings – Geometry Correction” (page 32), “Adjustment and Settings – Uniformity” (page 52), “Adjustment and Settings – Masking” (page 62)

Flip Vertical

☞ “Adjustment and Settings – Geometry Correction” (page 32), “Adjustment and Settings – Uniformity” (page 52), “Adjustment and Settings – Masking” (page 62)

Flip Horizontal

☞ “Adjustment and Settings – Geometry Correction” (page 32), “Adjustment and Settings – Uniformity” (page 52), “Adjustment and Settings – Masking” (page 62)

Area Select

☞ “Adjustment and Settings – Uniformity” (page 52)

Point Select

☞ “Adjustment and Settings – Uniformity” (page 52)

■ View submenu**Tool Bar****Status Bar****Sub Window****Layout Window**

Enter a check mark, and select whether the items are to be displayed.
In the initial status, [Tool Bar] and [Status Bar] are displayed.

Auto Transfer

When a check mark is entered for this and then settings are changed, the changed settings are reflected in the projector as soon as they are changed.

Line Color**White / Red / Green / Blue**

These perform the same operations as the icon menu [White], [Red], [Green] and [Blue] on the Geometry screen.

☞ “Adjustment and Settings - Geometry Correction - Geometry screen” (page 33)

Coordinate Information**None / Absolute / Relative**

These select the mode in which the coordinates of the control points are displayed.

☞ “Adjustment and Settings - Main screen - Coordinate Information” (page 28)

Grid Resolution**Use Square Grid / X / Y**

These select the mode in which the coordinates of the control points are displayed.

 “Adjustment and Settings - Geometry Correction - Geometry screen” (page 33)

Zoom**x1/4 / x1/2 / x1 / x2 / x3 / x4 / x5 / x6 / x7 / x8**

The editing area is zoomed in or out.

Masking Marker**Red / Green / Blue / Orange**

These select whether to display the control points.

 “Adjustment and Settings - Masking Masking screen” (page 62)

■ Tools submenu**Auto Screen Adjustment**

This displays the Auto Screen Adjustment screen.

This performs the same operation as the [AUTO ADJUST] (Auto Screen Adjustment) button.

 “AUTO ADJUST (Auto Screen Adjustment) button” (page 29)

Note

This cannot be selected if the Auto Screen Adjustment plug-in software is not installed.

■ Version submenu**About Geometry...**

This displays version information for Geometry Manager Pro.

Icon menu

This icon menu is used in all the editing modes.

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

**Open File (One Projector)**

This performs the same operation as [Open File (One Projector)] on the File submenu.

**Save File (One Projector)**

This performs the same operation as [Save File (One Projector)] on the File submenu.

**Reload (Current Tab)**

This performs the same operation as [Reload (Current Tab)] on the File submenu.

**Undo**

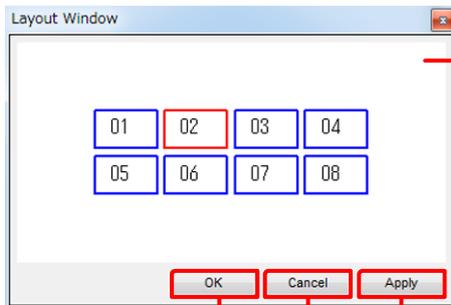
This performs the same operation as [Undo] on the Edit submenu.

**Redo**

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

Layout Window

Each time this is clicked, the Layout Window screen is switched between displayed and cleared. On the Layout Window, the positions of the projectors can be changed by means of mouse operations. When a projector position is moved, the overall layout is automatically corrected based on the projector which was moved. Main screen operations can be performed even while the Layout Window is displayed. The Layout Window screen can be displayed also by selecting [Layout Window] on the View submenu. The Layout Window screen below is an example when eight projectors are connected.



Selection area

The projector layout is displayed. Changing the layout or double-clicking the frame of a different projector causes that projector to be selected. The frame of the selected projector is indicated in red.

Apply

Click to apply the layout displayed in the selection area. The screen is not closed.

Cancel

Click to close the screen without applying the layout displayed in the selection area.

OK

Click to apply the layout displayed in the selection area and close the screen.

Reset Data (Current Tab)

This performs the same operation as [Reset Data (Current Tab)] on the File submenu.

Open File (Current Tab)

This performs the same operation as [Open File (Current Tab)] on the File submenu.

Common operation area

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

Projector list

This list displays the projector numbers, projector names and IP addresses (with the LAN connection) or COM port numbers (with serial RS-232C connection) in the sequence in which the projectors were connected.

The projector currently selected is the one whose data is being edited. Any projector on the list can be selected to switch the projector whose data is to be edited.

Note

- Multiple projectors can be selected as targets for operations by holding the Ctrl key while clicking. In that case, the following functions can be operated. Power ON/Standby, Shutter ON/Shutter OFF, Status ON/Status OFF, Status Page, Test Pattern, Display Projector Name, Grid Resolution, Display Grid Lines
- When a projector for which the upgrade kit (ET-UK20) has not been applied is connected, an asterisk (*) appears to the left of that projector name. An error message will appear if you connect to this projector and attempt to use the extended functions. ☞ "Activation" (page 12)
- When a projector on the list is selected and then double-clicked, the WEB control screen opens. For details on the WEB control screen, refer to the operating instructions of the projector.
- When the mouse pointer is placed over a projector on the list, a tooltip appears and shows the model number and resolution of that projector..

Del

Click to remove the selected projector from the operating targets. When all the projectors are removed, the software is exited. This cannot be selected if the serial connection is used for the projectors.

Rename

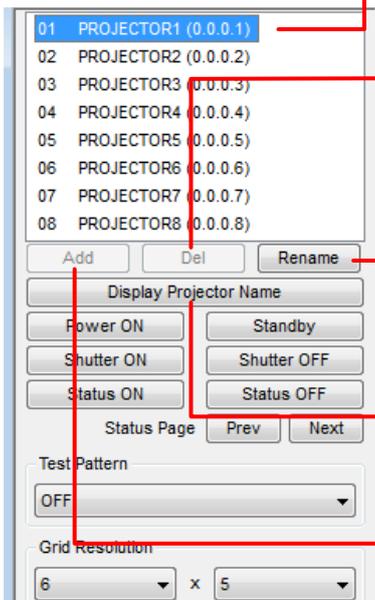
Click to change the name of the currently selected projector. A name can consist of a maximum of 12 characters including letters (upper-case), numbers, hyphens and periods.

Display Projector Name

Click to display the name and number of the currently selected projector on the image projected by the projector.

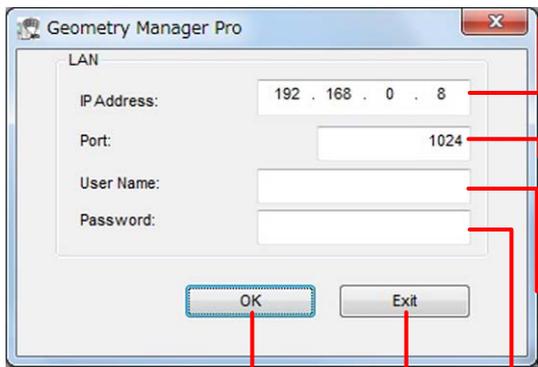
Add

- Click to display the LAN connection destination selection screen and add a new projector.
- ☞ "Adjustment and Settings – Main screen – LAN connection destination selection screen"(page 25)
 - It cannot be selected if the serial connection is used for the projectors.



LAN connection destination selection screen

When **Add** is clicked, the LAN connection destination selection screen is displayed.
A projector that is going to be connected now be set.



IP Address

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

Port

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

User Name

Input here the user name of the projector to be connected.

Password

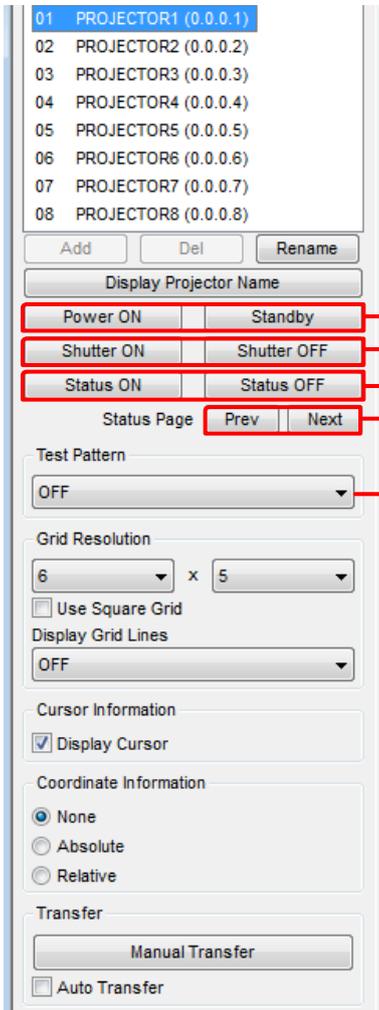
Input here the password of the projector to be connected.

Exit

Click to cancel the connection with the projector and close the LAN connection destination selection screen.

OK

Click to make the connection with the projector using the data which has been input.
When the projector is connected successfully, the LAN connection destination selection screen is closed.



Power ON/Standby

Click the left button to set the power of the selected projector to the “On” state or click the right button to set it to the standby state.

The setting is reflected in the projector even when a check mark has not been entered in

Auto Transfer.

Note

When the projector is in the standby state, no guarantees are made for any operations except [Power ON].

Shutter ON/Shutter OFF

Click the left button to set the shutter of the selected projector to the “On” state or click the right button to set it to the “Off” state.

The setting is reflected in the projector even when a check mark has not been entered in

Auto Transfer.

Status ON/Status OFF

Click these to select to display (ON) or not display (OFF) the status (information) on the images of the selected projector.

The setting is reflected in the projector even when a check mark has not been entered in

Auto Transfer.

Status Page

Click these to select the previous or next page of the status screen when the status is displayed on the projector’s image.

The setting is reflected in the projector even when a check mark has not been entered in

Auto Transfer.

Test Pattern

Click to switch the image projected from the projector to the test pattern.

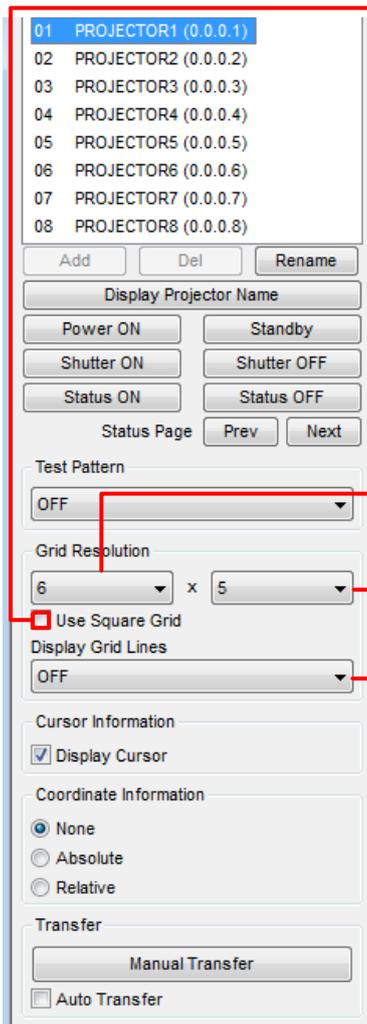
Any of the following test patterns can be selected.

OFF, White, Black, Red, Green, Blue, Cyan, Magenta, Yellow, Window, Window (Inversion), Color Bars (Vertical), Color Bars (Horizontal), 16:9 / 4:3, Focus (White), Focus (Red), Focus (Green), Focus (Blue), Focus (Cyan), Focus (Magenta), Focus (Yellow)

Default value: OFF

The setting is reflected in the projector even when a check mark has not been entered in

Auto Transfer.



When a check mark is entered for **Use Square Grid** , the two grid resolutions (horizontal and vertical) become one, and the button for selecting the combination of the number of grids whose horizontal and vertical intervals are identical is selected. Any of the following numbers of square grids can be selected.

If the projector resolution is WUXGA:
41×26*, 33×21*, 25×16*, 17×11*, 9×6

If the projector resolution is SXGA+:
29×22*, 21×16*, 9×7, 5×4

* Selectable if the upgrade kit (ET-UK20) has been applied to the projector.
☞ “Activation” (page 12)

Grid Resolution (horizontal)

The number of grids in the horizontal direction is selected here.

Grid Resolution (vertical)

The number of grids in the vertical direction is selected here. Any of the numbers of grids listed below can be selected.

If the projector resolution is WUXGA:
Horizontal: 2 to 41*¹ (2 ~ 11)*² (default value: 11)
Vertical: 2 to 26*¹ (2 ~ 11)*² (default value: 11)

If the projector resolution is SXGA+:
Horizontal: 2 to 29*¹ (2 ~ 11)*² (default value: 11)
Vertical: 2 to 22*¹ (2 ~ 11)*² (default value: 11)

*¹ Selectable values if the upgrade kit (ET-UK20) has been applied to the selected projector.

*² Selectable values if the upgrade kit (ET-UK20) has not been applied to the selected projector.

☞ “Activation” (page 12)

Display Grid Lines

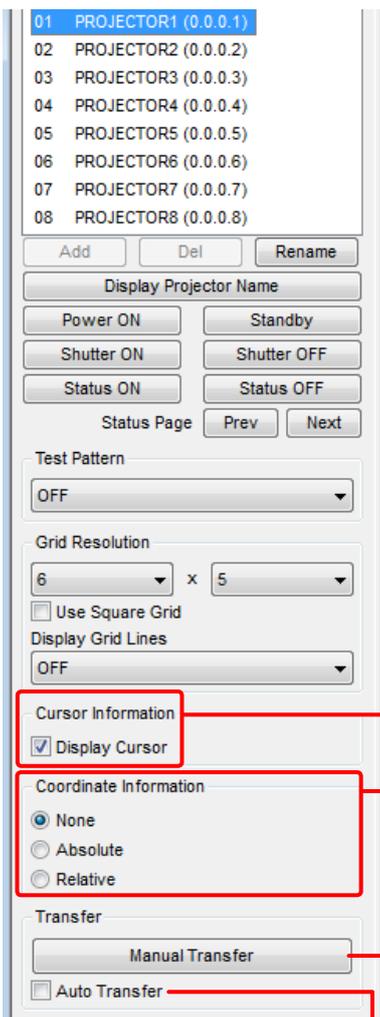
The color of the grids to be projected is selected here.

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

Default value: OFF

The setting is reflected in the projector even when a check mark has not been entered in

Auto Transfer.



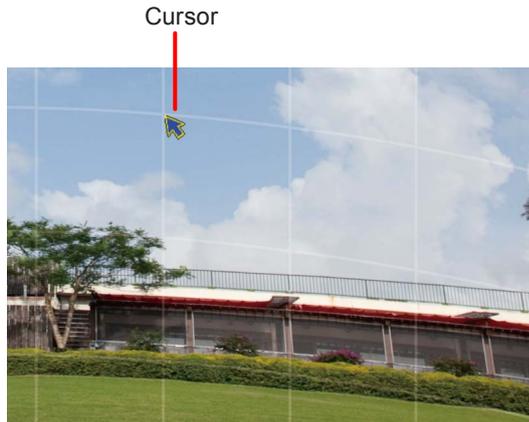
Cursor Information

When a check mark is entered for **Display Cursor** , the cursor indicating the position of the control point can be displayed on the projected image.

Note

The cursor appears only at the top left when the control point has been selected using a line or area.

If a multiple number of control points have been selected, the cursor will be displayed only at the control point selected last.



Coordinate Information

The mode in which to display the control point coordinates is selected here when grids have been set in one of the editing modes.

- None: The coordinates are not displayed.
- Absolute: The coordinates with the top left control point used as the origin point are displayed alongside the control points.
- Relative: The coordinates with the initial position of the control point in the selected grid used as the origin point are displayed alongside the control points.

Note

However, if the grid intervals are narrow, the coordinates may not be displayed even when Absolute or Relative has been selected.

Manual Transfer

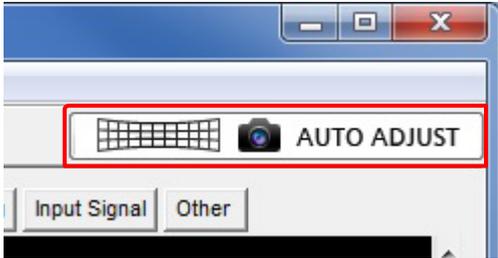
When this button is clicked, the edited settings are reflected in the projector.

When a check mark is entered in **Auto Transfer** , as soon as a setting is changed, that setting is reflected in the projector.

AUTO ADJUST (Auto Screen Adjustment) button

This allows automatic adjustment of geometry correction, edge blending, color, and brightness according to the shape of the screen through use of an externally connected camera.

☞ “Auto Screen Adjustment” (page 77)



[AUTO ADJUST] button

Click the button to display the Auto Screen Adjustment screen.

Note

If the Auto Screen Adjustment plug-in software has not been installed, the [AUTO ADJUST] button will be disabled.

☞ “Installing the Auto Screen Adjustment plug-in software” (page 8)

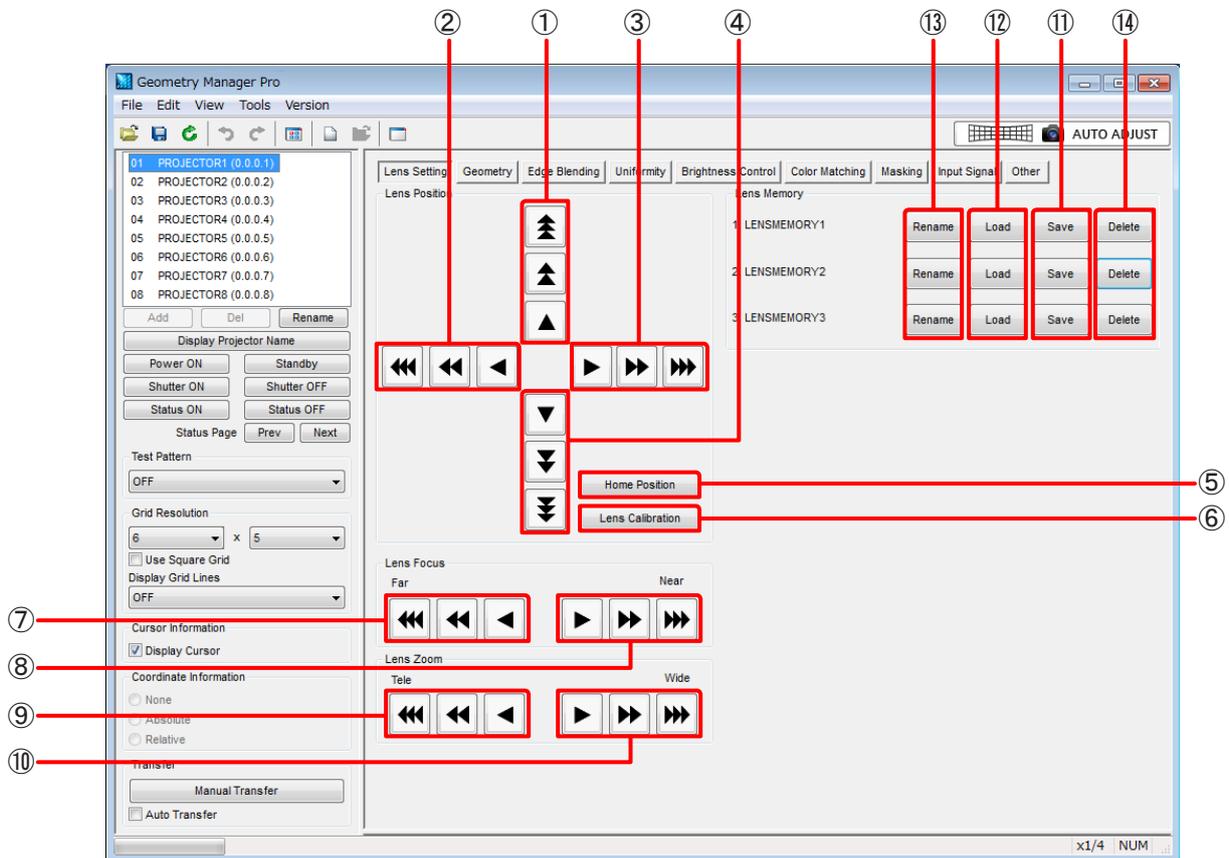
Status bar

This is where the progress made in the data transfer, error messages and expansion ratio of the editing area are displayed.

Lens Settings

Lens setting screen

The lens settings are selected on this screen.



- ① **Upward**
Use this to move the projected image upward.
The image moves in small steps using , in larger steps using  and in even larger steps using .
- ② **Leftward**
Use this to move the projected image toward the left.
The image moves in small steps using , in larger steps using  and in even larger steps using .
- ③ **Rightward**
Use this to move the projected image toward the right.
The image moves in small steps using , in larger steps using  and in even larger steps using .
- ④ **Downward**
Use this to move the projected image downward.
The image moves in small steps using , in larger steps using  and in even larger steps using .
- ⑤ **Home Position**
Click to move the lens position to the home position.
- ⑥ **Lens Calibration**
Click to automatically set the limit to which the lens is to be moved and the home position of the lens.

⑦ Lens Focus (Far)

Click these buttons to adjust the focus to “far”.

The further toward the left the button is located, the further the focus will move.

⑧ Lens Focus (Near)

Click these buttons to adjust the focus to “near”.

The further toward the right the button is located, the closer the focus will move.

⑨ Lens Zoom (Tele)

Click these buttons to reduce the size of the projected image (zoom out).

The image is reduced in progressively larger steps by clicking the buttons progressively further toward the left.

⑩ Lens Zoom (Wide)

Click these buttons to enlarge the size of the projected image (zoom in).

The image is enlarged in progressively larger steps by clicking the buttons progressively further toward the right.

⑪ Lens Memory Save

Click these buttons to save the focus position, shift position and zoom position of the adjusted lens in the projector.

There are three lens memories in which the settings can be saved (default names: LENSMEMORY1, LENSMEMORY2 and LENSMEMORY3).

Even if a check mark has not been entered for **Auto Transfer**, the settings are saved in the lens memory when the [Save] button is clicked.

This function can be used only for projectors that have this function.

⑫ Lens Memory Load

Click these buttons to select and load the lens memory whose settings are saved in the projector.

The lens will move automatically to the saved focus position, zoom position and shift position.

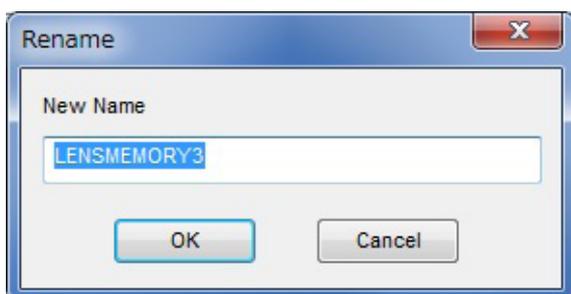
Even if a check mark has not been entered for **Auto Transfer**, the settings are loaded from the lens memory when the [Load] button is clicked.

This function can be used only for projectors that have this function.

⑬ Lens Memory Rename

Click these buttons to rename the lens memory settings.

When one of the buttons is clicked, the [Rename] screen is displayed.



When a new name is input and the [OK] button is clicked, the [Rename] screen is closed, and the name of the projector's lens memory settings is changed.

If the [Cancel] button is pressed instead, the [Rename] screen is closed without renaming the lens memory settings.

This function can be used only for projectors that have this function.

⑭ Lens Memory Delete

Click these buttons to delete the settings saved in the lens memory of the projector.

Even if **Auto Transfer** Transfer is not checked, the settings are deleted from the lens memory when the [Delete] button is clicked.

This function can be used only for projectors that have this function.

Geometry Correction

Test patterns or grids are projected onto the screen and those parts of the image that look unnatural are corrected.

By adjusting the number of grids or number of control points, the images can be made to look more natural.

Use the mouse to make coarse corrections, and use the cursor keys on the keyboard or input numerical values to make fine corrections.

- Drag the control point with the mouse while holding down the Shift key to move it in either the horizontal or vertical direction.
- Select the control point and then press the cursor key while holding down the Ctrl key to move it in increments of 0.2 pixel.

Note

When the number of grids displayed during ongoing adjustments is reduced, the corrected grid information may be lost.

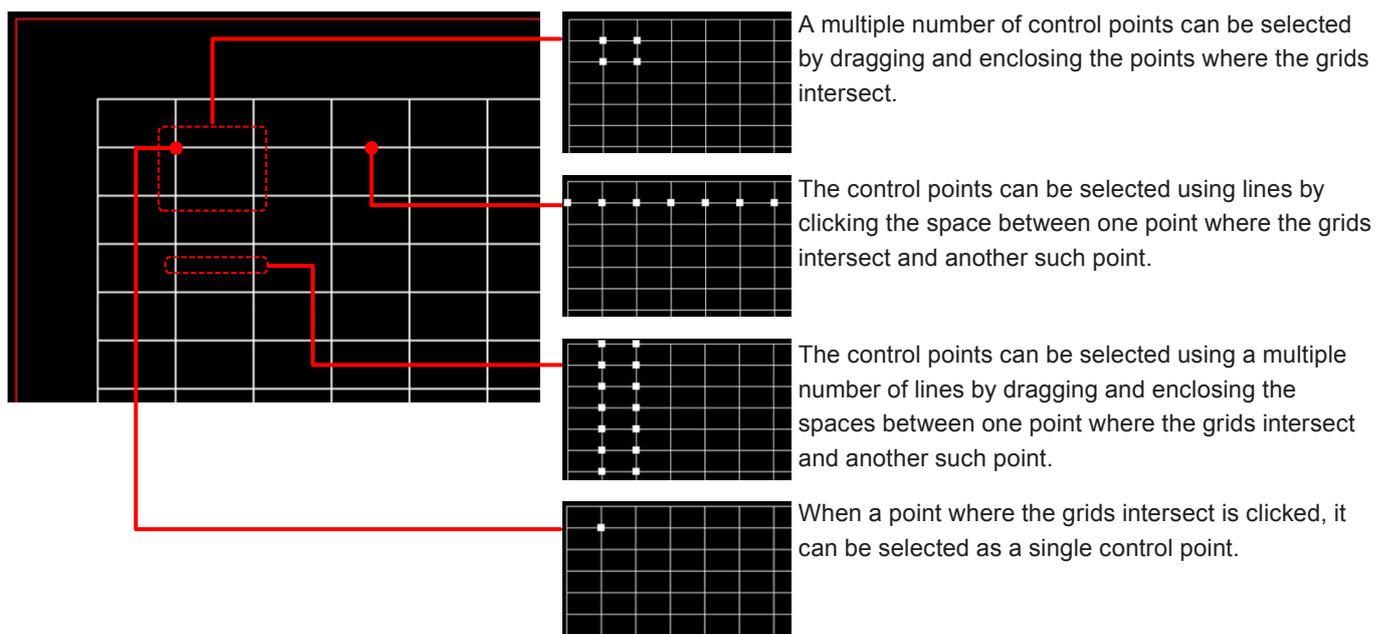
It is recommended that a small number of grids be displayed first to make coarse adjustments and then a larger number of grids be displayed to make fine adjustments.

Selecting the control points

Select the Geometry screen and switch the mode to other than OFF. The control points can now be selected.

☞ “Free Grid (Free-form correction)” (page 35)

Drag the control points to move them. The control points cannot be moved by selecting the lines.



By clicking (or dragging) while holding down the Ctrl key, another control point can be selected while the currently selected control point keeps selected.

To move the selection to the adjacent control point, press the Tab key or Shift + Tab keys while one control point is selected, or press the cursor key while holding down the Shift key.

To cancel the selection of the control point, click anywhere other than the grid with the mouse or select [Free] in the Edit submenu displayed by right-clicking.

Right-clicking

The menu with the items described below is displayed when a grid control point is selected and the right button of the mouse is clicked.

All of the operations from the the [Edit] menu are available.

☞ “Edit submenu” (page 33).

Lock, Unlock, Free, Reset, Flip Vertical, Flip Horizontal

Geometry screen

The following menu items can be used on the Geometry screen.

■ Edit submenu

Lock

Locks the control points of the grids selected.

Note

A locked control point will not move even if the correction pattern has been changed.

The lock will not be released even if the number of grids has been changed.

Unlock

Unlocks the control points that have been selected.

Free

Click to release the control point selection.

Reset

Click to return the selected control points to the initial status.

Flip Vertical

Click to flip vertically the correction status of the entire image.

Flip Horizontal

Click to flip horizontally the correction status of the entire image.

■ View submenu

Grid Resolution

Use Square Grid

This makes it possible to select the combination of the number of grids which can be selected when a check mark has been entered for Use Square Grid in the common operation area.

X

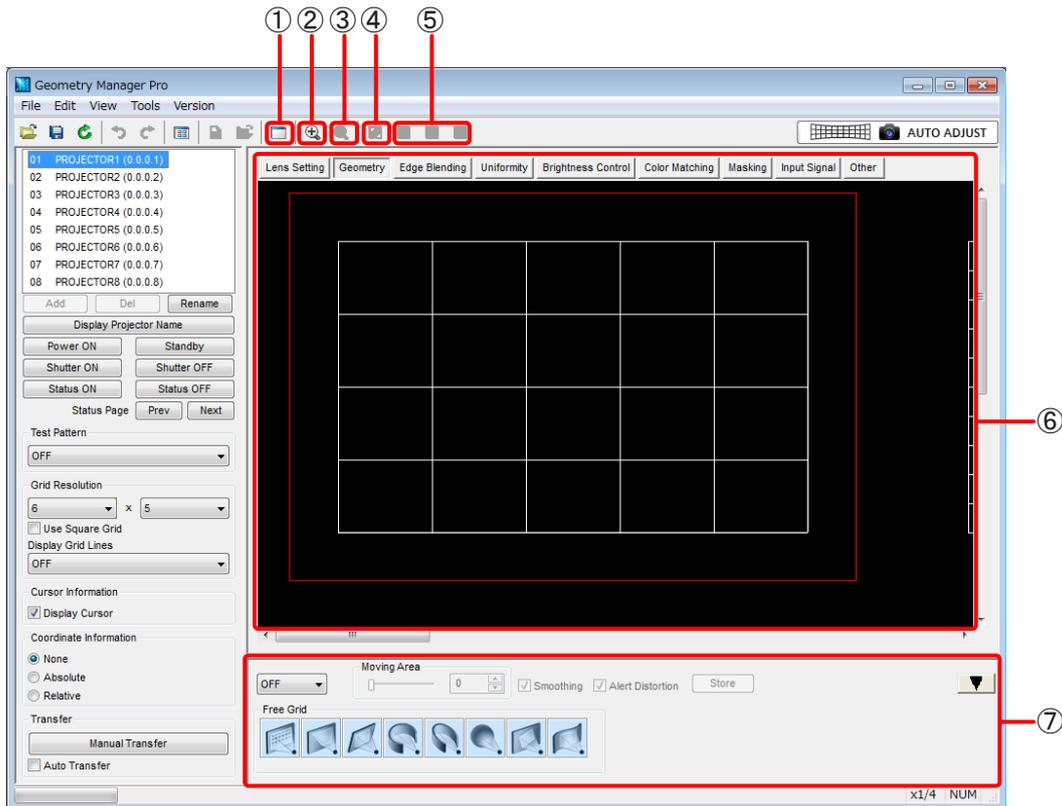
The number of grids in the horizontal direction is selected here.

This performs the same operation as Grid Resolution (horizontal) in the common operation area.

Y

The number of grids in the vertical direction is selected here.

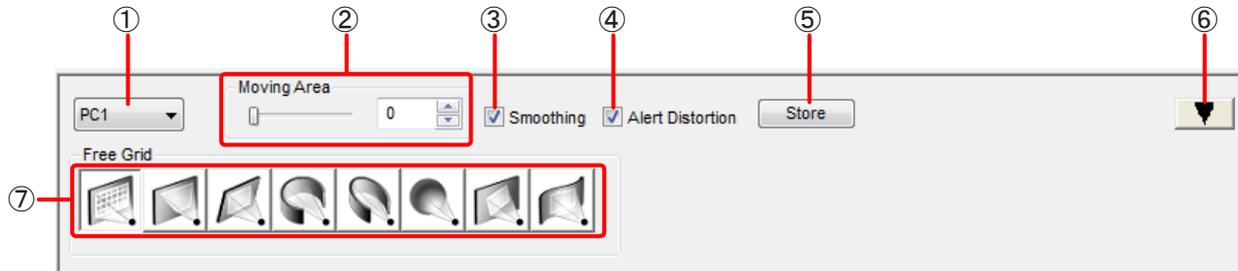
This performs the same operation as Grid Resolution (vertical) in the common operation area.



- ① **Sub Window**
Each time this is clicked, the Sub Window screen is switched between displayed and cleared.
An image of the entire projection area is displayed on Sub Window.
 - This performs the same operation as [Sub Window] of the View submenu.
 - The red frame around the Sub Window indicates the display range in the editing area.
- ② **Zoom In**
Zooms in to the editing area.
- ③ **Zoom Out**
Zooms out the editing area.
- ④ **White**
This corrects the RGB color components together.
- ⑤ **Red, Green, Blue**
These correct only the component of the selected color.
- ⑥ **Editing Area**
The image can be corrected by selecting the grid using the mouse.
The settings established in the operation area are also reflected in this area.
The outermost red frame indicates the maximum area which can be projected.
- ⑦ **Operation Area**
This is where the buttons, slide bars, etc. used by geometry correction are displayed.
The operations that they perform differ depending on which correction pattern has been selected.

Free Grid (Free-form correction)

The Free Grid operation area is where the operations for all the correction patterns are selected. The corrections made with Free Grid are also reflected in the editing area of the other correction patterns.



① Mode Switching

OFF: Disables geometry correction.

PC1 / PC2 / PC3: Enables geometry correction.

Note

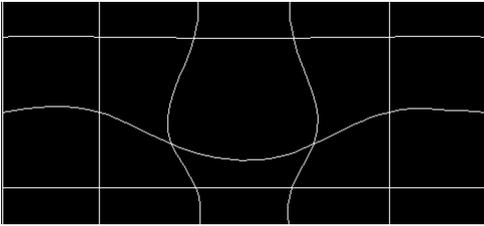
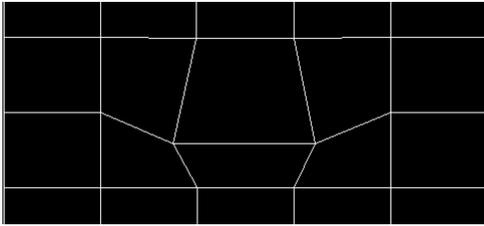
When geometry correction is enabled, only one piece of data (PC) can be saved for some models.

② Moving Area

Set here the range of the effects exerted on the grids around the control points that have been dragged and moved.

③ Smoothing

Correction using curves can be performed when a check mark is entered in Smoothing.

Example when the check mark is entered	Example when the check mark is not entered
	

④ Alert Distortion

If a setting exceeding the geometric distortion limit is sent to the projector when Alert Distortion has been checked, an error message will be displayed on the dialog screen. The error message will be displayed on the status bar if a check

mark has been entered in Auto Transfer.

A check mark is entered as the default setting.

When a check mark is not entered for Alert Distortion, even settings exceeding the geometry correction limits can be sent to the projector. Bear in mind, however, that in such cases the projected images may lose their shape.

5 Store

Click this button to save the current settings inside the projector after they have been reflected in the projector.

Note

A screen for selecting the save folder inside the projector may appear for some models.

6 Display Switching

Click  to minimize the operation area; conversely, click  to maximize it.

7 Correction Patterns

Any of the following correction patterns can be selected.

- Free Grid (free-form correction)
- 4 Corner (4-corner correction)
- Keystone (keystone shape correction)
- Cylindrical screen (cylindrical shape correction)
- Elliptical screen (elliptical shape correction)
- Spherical screen (spherical shape correction)
- Rotation (rotational correction)

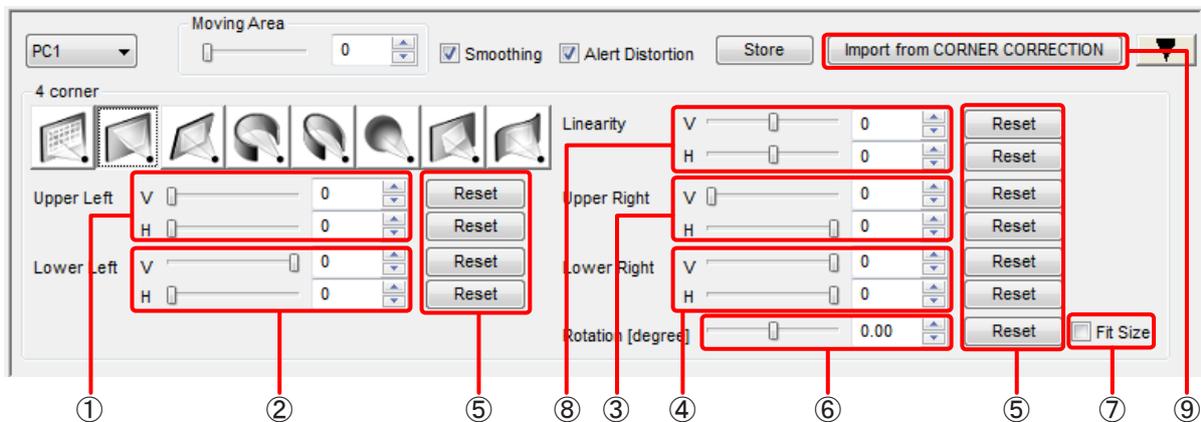
The Upgrade Kit (ET-UK20) must be applied on the selected projector to enable the Auto Screen Adjustment function.

 "Activation" (page 12)

- S-shape screen (S-shaped correction)

4 Corner (4-corner correction)

The positions of the four corners of the image are set with this type of correction.



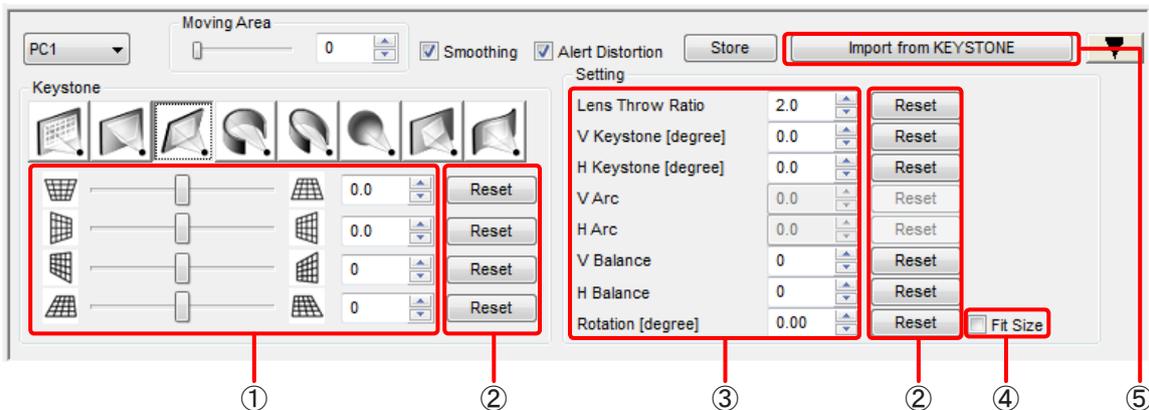
- ① **Upper Left**
Set the horizontal and vertical positions of the upper left.
Setting ranges V (vertical position): 0 to 600 and H (horizontal position): 0 to 600
- ② **Lower Left**
Set the horizontal and vertical positions of the lower left.
Setting ranges V (vertical position): -600 to 0 and H (horizontal position): 0 to 600
- ③ **Upper Right**
Set the horizontal and vertical positions of the upper right.
Setting ranges V (vertical position): 0 to 600 and H (horizontal position): -600 to 0
- ④ **Lower Right**
Set the horizontal and vertical positions of the lower right.
Setting ranges V (vertical position): -600 to 0 and H (horizontal position): -600 to 0
- ⑤ **Reset**
Click these to reset the respective settings which have been changed.
- ⑥ **Rotation [degree]***
Set the rotational angle of the image here.
Setting range: Enter a setting from -10.0 to 10.0.
- ⑦ **Fit Size***
Projected images sometimes protrude beyond the projection area when they are rotated.
When a check mark is entered for **Fit Size**, the image is reduced to a size in which it can be projected when it exceeds the projection area.
The image will not be reduced if a check mark is not entered.
- ⑧ **Linearity**
Set the linearity in the horizontal and vertical directions.
This function can be used only for projectors that have this function.
Setting range: -127 to 127
- ⑨ **Import from CORNER CORRECTION**
Reflect the correction results of [CORNER CORRECTION] in the OSD menu of the projector.
This function is available only for models that have the corner correction function in the projector.

* This item can only be configured if the upgrade kit (ET-UK20) has been applied to the selected projector.

☞ "Activation" (page 12)

Keystone (keystone shape correction)

Images are corrected using the keystone shape as the reference with this type of correction.



① Correction pattern adjustment area

The following settings are selected here:

- Vertical: -45.0 to 45.0^{*1} (-40.0 to 40.0)*²
- Horizontal: -40.0 to 40.0^{*1} (-15.0 to 15.0)*²
- Vertical balance: -60 to 60
- Horizontal balance: -30 to 30

The numbers in parentheses serve as the setting ranges if the selected projector has not been activated.

*1 Selectable values if the upgrade kit (ET-UK20) has been applied to the selected projector.

*2 Selectable values if the upgrade kit (ET-UK20) has not been applied to the selected projector.

☞ "Activation" (page 12)

② Reset

Use these to reset the settings that have been changed.

③ Setting

The following settings are selected here:

- Lens Throw Ratio: 0.7 to 16.5
- V Keystone [degree]: -45.0 to 45.0^{*1} (-40.0 to 40.0)*²
- H Keystone [degree]: -40.0 to 40.0^{*1} (-15.0 to 15.0)*²
- V Balance: -60 to 60
- H Balance: -30 to 30
- Rotation [degree]*: -10.0 to 10.0

*1 Selectable values if the upgrade kit (ET-UK20) has been applied to the selected projector.

*2 Selectable values if the upgrade kit (ET-UK20) has not been applied to the selected projector.

☞ "Activation" (page 12)

④ Fit Size*

Projected images sometimes protrude beyond the projection area when they are rotated.

When a check mark is entered for Fit Size, the image is reduced to a size in which it can be projected when it exceeds the projection area.

The image will not be reduced if a check mark is not entered.

⑤ Import from KEYSTONE

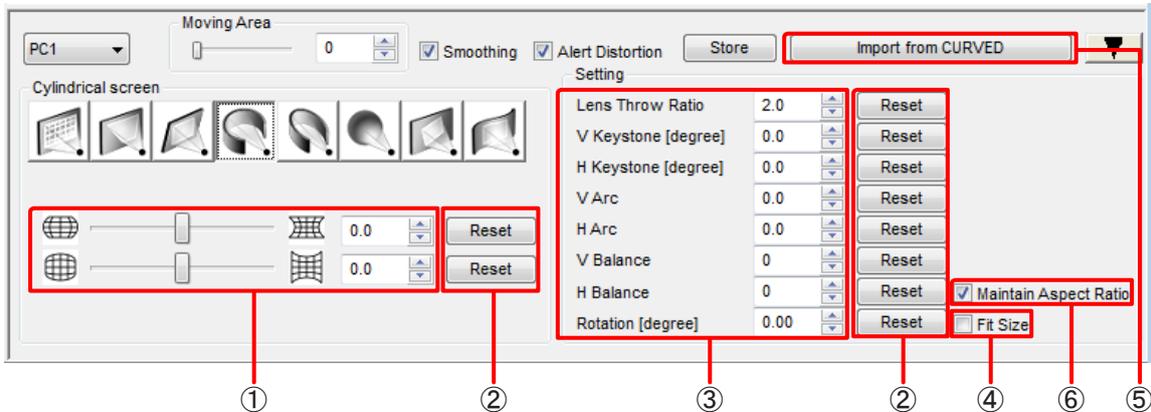
Reflect the correction results of [KEYSTONE] in the OSD menu of the projector.

* This item can only be configured if the upgrade kit (ET-UK20) has been applied to the selected projector.

☞ "Activation" (page 12)

Cylindrical screen (cylindrical shape correction)

Images are corrected using the cylindrical shape as the reference with this type of correction.



① Correction pattern adjustment area

The following settings are selected here:

- Vertical arc: -100 to 100^{*1} (-50 to 50)^{*2}
- Horizontal arc: -100 to 100^{*1} (-50 to 50)^{*2}

*1 Selectable values if the upgrade kit (ET-UK20) has been applied to the selected projector.

*2 Selectable values if the upgrade kit (ET-UK20) has not been applied to the selected projector.

☞ "Activation" (page 12)

② Reset

Use these to reset the settings that have been changed.

③ Setting

The following settings are selected here:

- Lens Throw Ratio: 0.7 to 16.5
- V Keystone [degree]: -45.0 to 45.0^{*1} (-40.0 to 40.0)^{*2}
- H Keystone [degree]: -40.0 to 40.0^{*1} (-15.0 to 15.0)^{*2}
- V Arc: -100 to 100^{*1} (-50 to 50)^{*2}
- H Arc: -100 to 100^{*1} (-50 to 50)^{*2}
- V Balance: -60 to 60
- H Balance: -30 to 30
- Rotation [degree]*: -10.0 to 10.0

*1 Selectable values if the upgrade kit (ET-UK20) has been applied to the selected projector.

*2 Selectable values if the upgrade kit (ET-UK20) has not been applied to the selected projector.

☞ "Activation" (page 12)

④ Fit Size*

Projected images sometimes protrude beyond the projection area when they are rotated.

When a check mark is entered for **Fit Size**, the image is reduced to a size in which it can be projected when it exceeds the projection area.

The image will not be reduced if a check mark is not entered.

* This item can only be configured if the upgrade kit (ET-UK20) has been applied to the selected projector.

☞ "Activation" (page 12)

⑤ Import from CURVED

Reflect the correction results of [CURVED] in the OSD menu of the projector.

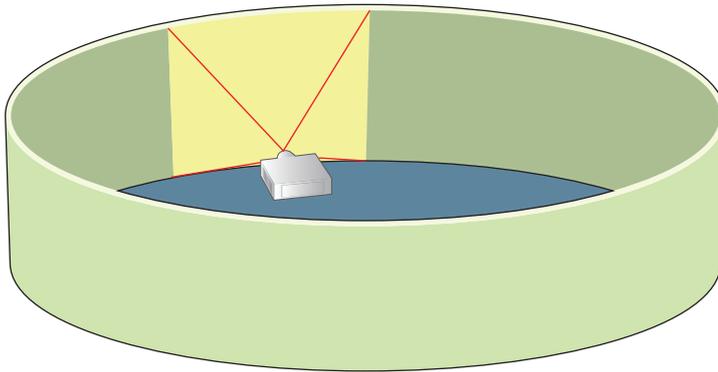
⑥ Maintain Aspect Ratio

When a check mark is entered for **Maintain Aspect Ratio** , correction is made so that the aspect ratio of the projected image is maintained.

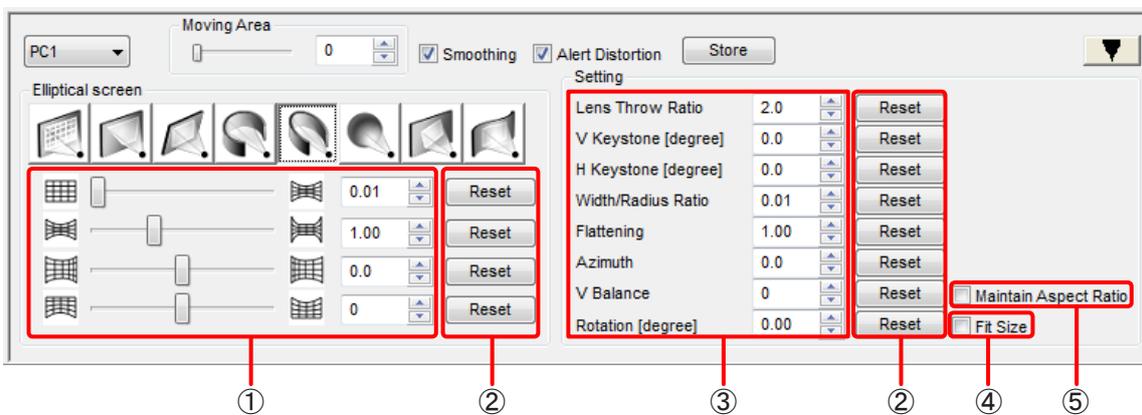
If a check mark is not entered, the aspect ratio is not maintained and correction is made using the entire surface of the display device.

This function can be used only for projectors that have this function.

Elliptical screen (elliptical shape correction)



Images are corrected to fit a screen whose shape is elliptical when viewed from above.



① **Correction pattern adjustment area**
The following settings are selected here:

- Width/Radius Ratio: 0.01 to 1.20
- Flattening: 0.50 to 2.00
- Azimuth: -45.0 to 45.0
- Vertical balance: -60 to 60

② **Reset**
Use these to reset the settings that have been changed.

③ Setting

The following settings are selected here:

- Lens Throw Ratio: 0.7 to 16.5
- V Keystone [degree] (Vertical keystone correction): -45.0 to 45.0^{*1} (-40.0 to 40.0^{*2})
- H Keystone [degree] (Horizontal keystone correction): -40.0 to 40.0^{*1} (-15.0 to 15.0^{*2})
- Width/Radius Ratio: 0.01 to 1.20
- Flattening: 0.50 to 2.00
- Azimuth: -45.0 to 45.0
- V Balance: -60 to 60
- Rotation [degree]*: -10.0 to 10.0

It may not be possible to correct the images depending on how the settings are used in combination, such as a small lens throw ratio (lens with a short focus) and keystone correction with a wide angle.

*1 Selectable values if the upgrade kit (ET-UK20) has been applied to the selected projector.

*2 Selectable values if the upgrade kit (ET-UK20) has not been applied to the selected projector.

 "Activation" (page 12)

④ Fit Size*

Projected images sometimes protrude beyond the projection area when they are rotated.

When a check mark is entered for **Fit Size**, the image is reduced to a size in which it can be projected when it exceeds the projection area.

The image will not be reduced if a check mark is not entered.

⑤ Maintain Aspect Ratio

When a check mark is entered for **Maintain Aspect Ratio** Aspect Ratio, correction is made so that the aspect ratio of the projected image is maintained.

If a check mark is not entered, the aspect ratio is not maintained and correction is made using the entire surface of the display device.

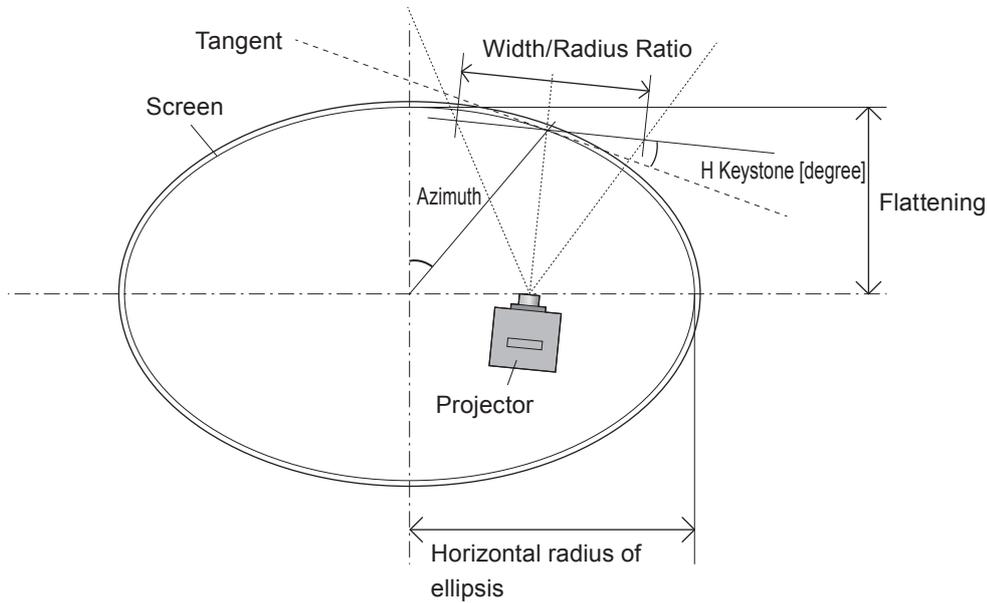
This function can be used only for projectors that have this function.

* This item can only be configured if the upgrade kit (ET-UK20) has been applied to the selected projector.

 "Activation" (page 12)

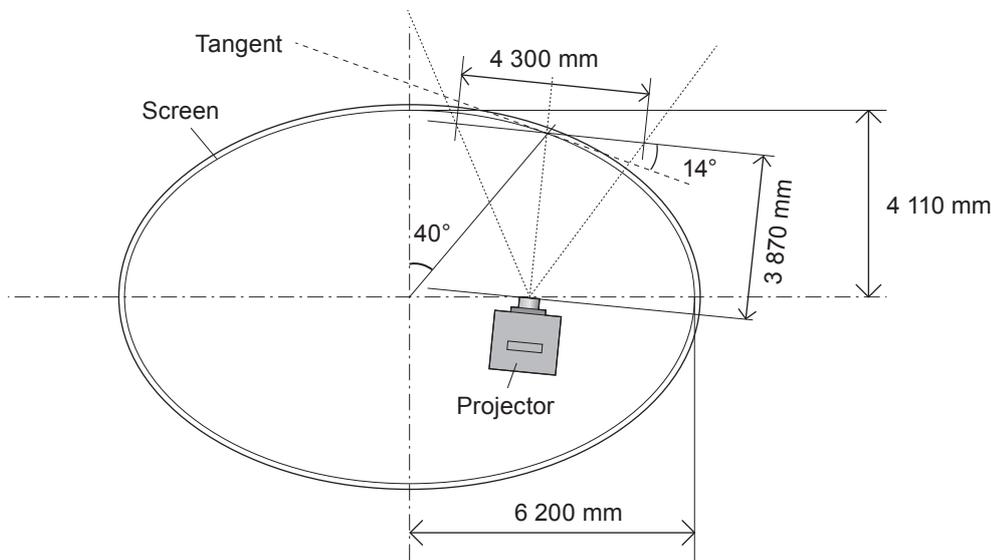
■ Description of elliptical screen (elliptical shape correction) parameters

View of projector as seen from above



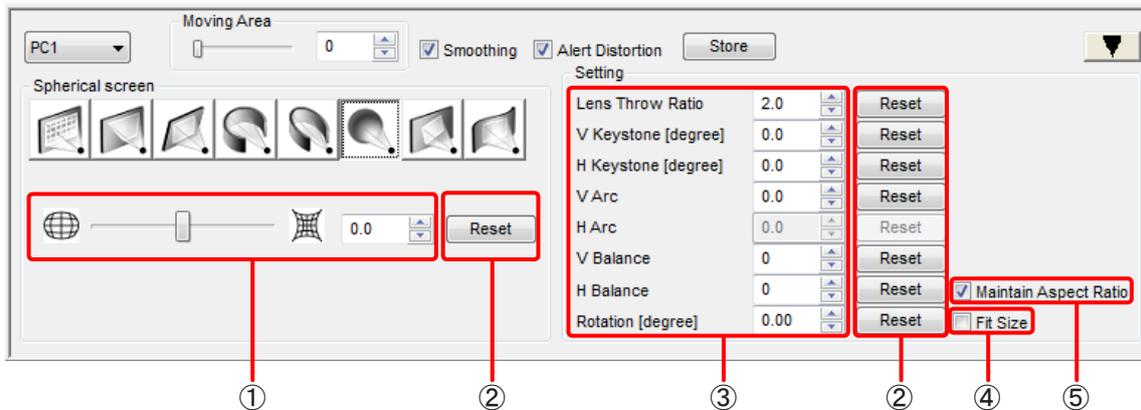
Example of settings

Setting item	Calculation method	Setting
Lens Throw Ratio	Projection distance ÷ width of image on flat screen = 3 870 mm ÷ 4 300 mm	0.9
H Keystone [degree]	Angle formed with tangent of projection center	14.0
Width/Radius Ratio	Width of image on flat screen ÷ radius in horizontal direction of ellipsis = 4 300 mm ÷ 6 200 mm	0.69
Flattening	Radius in vertical direction of ellipsis ÷ radius in horizontal direction of ellipsis = 4 110 mm ÷ 6 200 mm	0.66
Azimuth	Position of projected image center on ellipsis	40.0



Spherical screen (spherical correction)

Images are corrected using the spherical shape as the reference with this type of correction.



① Correction pattern adjustment area

The following settings are selected here:

- Vertical arc and horizontal arc: -100 to 100^{*1} (-50 to $50)^{*2}$

*1 Selectable values if the upgrade kit (ET-UK20) has been applied to the selected projector.

*2 Selectable values if the upgrade kit (ET-UK20) has not been applied to the selected projector.

☞ "Activation" (page 12)

② Reset

Use these to reset the settings that have been changed.

③ Setting

The following settings are selected here:

- Lens Throw Ratio: 0.7 to 16.5
- V Keystone [degree]: -45.0 to 45.0^{*1} (-40.0 to $40.0)^{*2}$
- H Keystone [degree]: -40.0 to 40.0^{*1} (-15.0 to $15.0)^{*2}$
- V Arc: -100 to 100^{*1} (-50 to $50)^{*2}$
- V Balance: -60 to 60
- H Balance: -30 to 30
- Rotation [degree]*: -10.0 to 10.0

*1 Selectable values if the upgrade kit (ET-UK20) has been applied to the selected projector.

*2 Selectable values if the upgrade kit (ET-UK20) has not been applied to the selected projector.

☞ "Activation" (page 12)

④ Fit Size*

Projected images sometimes protrude beyond the projection area when they are rotated.

When a check mark is entered for **Fit Size**, the image is reduced to a size in which it can be projected when it exceeds the projection area.

The image will not be reduced if a check mark is not entered.

⑤ Maintain Aspect Ratio

When a check mark is entered for **Maintain Aspect Ratio**, correction is made so that the aspect ratio of the projected image is maintained.

If a check mark is not entered, the aspect ratio is not maintained and correction is made using the entire surface of the display device.

This function can be used only for projectors that have this function.

* This item can only be configured if the upgrade kit (ET-UK20) has been applied to the selected projector.

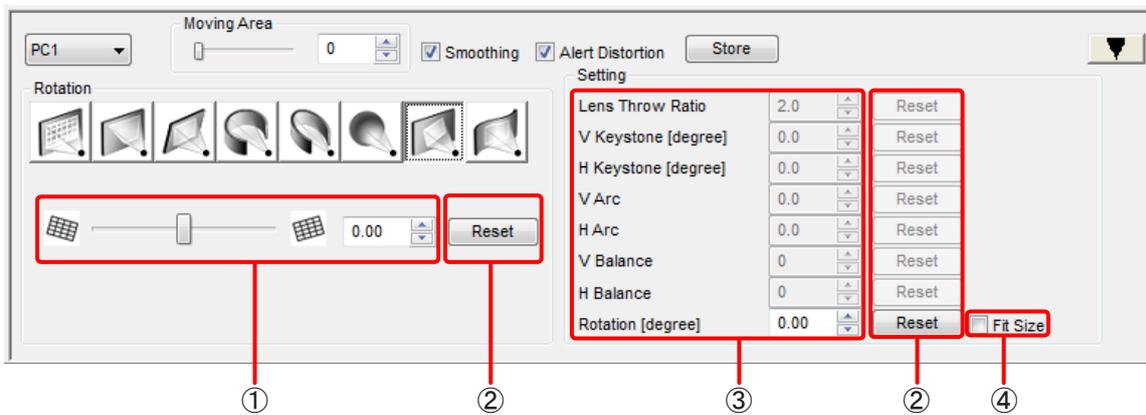
☞ "Activation" (page 12)

Rotation (rotation correction)

Images are rotated with this type of correction.

To use this function, the upgrade kit (ET-UK20) must be applied on the selected projector.

☞ “Activation” (page 12)



① Correction pattern adjustment area

The following settings are selected here:

- Gradient: -10.0 to 10.0

② Reset

Use these to reset the settings that have been changed.

③ Setting

The following settings are selected here:

- Rotation [degree]: -10.0 to 10.0

④ Fit Size

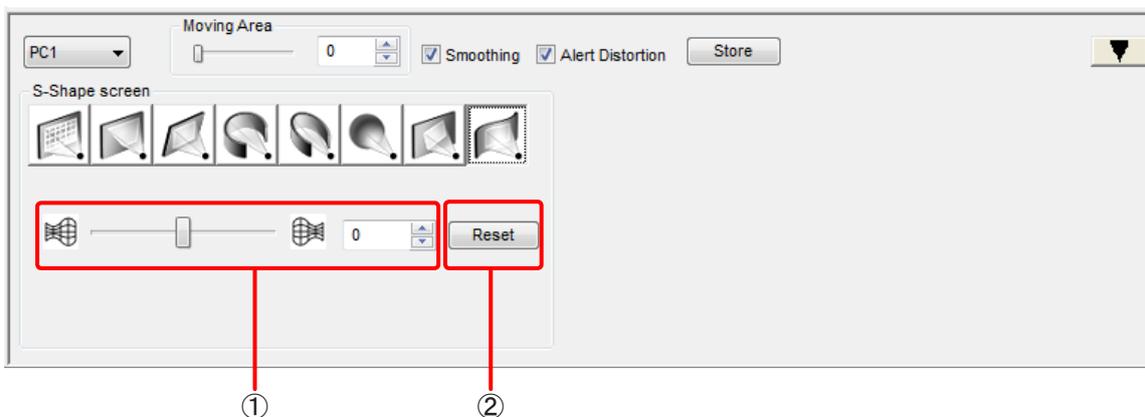
Projected images sometimes protrude beyond the projection area when they are rotated.

When a check mark is entered for **Fit Size**, the image is reduced to a size in which it can be projected when it exceeds the projection area.

The image will not be reduced if a check mark is not entered.

S-shape screen (S-shaped correction)

Images are corrected using an S-shape as the reference with this type of correction.



① **Correction pattern adjustment area**

The following settings are selected here:

- S-shaped correction: -127 to 127

② **Reset**

Use these to reset the settings that have been changed.

Edge Blending

Edge Blending screen

In addition to the menu items described in “Main menu” (page 19), the following menu items can be used on the Edge Blending screen.

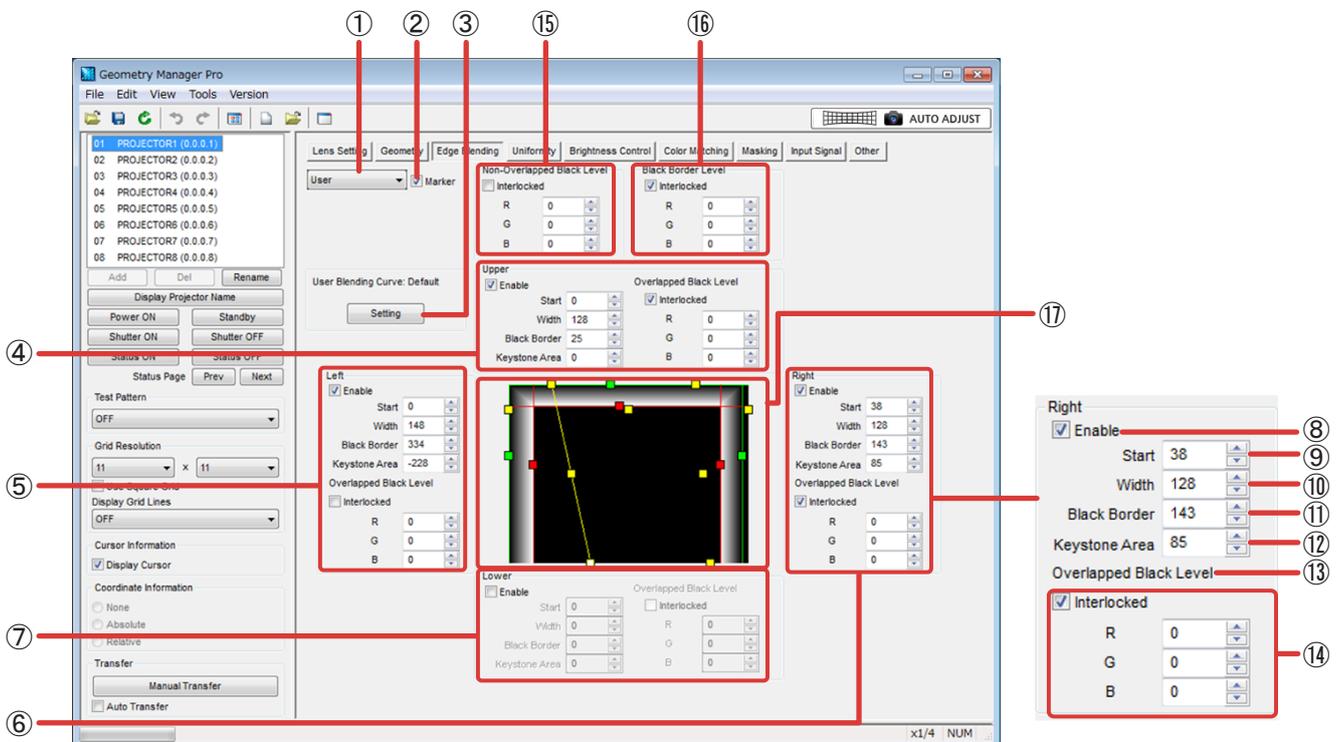
■ Edit submenu

Flip Vertical:

Click to flip vertically the correction status of the entire image.

Flip Horizontal:

Click to flip horizontally the correction status of the entire image.



① Mode Switching

OFF:

The edge blending settings are canceled.

ON:

Makes the edge blending settings effective.

User:

Adjusts settings for edge blending using the user-defined curve.

② Marker

When a check mark is entered in **Marker** , markers are displayed in the editing area and on the images projected from projector.

The line at which the edge blending adjustment starts is displayed in yellowish-green, the line for the edge blending width is displayed in red, and the line for the black level border width is displayed in yellow.

③ Setting

Click this button to display the user-defined curve setting screen.

 “User-defined curve setting screen” (page 50)

④ Upper

The upper side settings of the projected image are set here.

⑤ Left

The left side settings of the projected image are set here.

⑥ Right

The right side settings of the projected image are set here.

⑦ Lower

The lower side settings of the projected image are set here.

⑧ Enable

Put a check mark is entered in **Enable** to create blending settings for that edge. Only the edge blending settings for those items with a check mark entered in **Enable** take effect.

⑨ Start

The line at which the edge blending adjustment starts is set here.

⑩ Width

The width of the edge blending is set here.

⑪ Black Border (Outside Area)

Set the border width of the black level.

[Outside Area] may be displayed in place of [Black Border] for some models.

⑫ Keystone Area

Set the slope of the black level border when using the edge blending at the same time as the keystone correction.

This function can be used only for projectors that have this function.

⑬ Overlapped Black Level (Bright Blending)

The Red, Green and Blue values are adjusted here to set the brightness of the areas subject to edge blending.

These settings are applied to the edge blending width. The higher the numerical value, the brighter the colors.

Setting range: 0 to 255

[Bright Blending] may be displayed in place of [Overlapped Black Level] for some models.

⑭ Interlocked

When a check mark is entered for **Interlocked** , Overlapped Black Level can be set with the Red, Green and Blue values all linked together.

Note

When the input signal of the projector has been changed, it may be necessary to re-set the edge blending mode and the Upper, Lower, Left and Right Enable boxes.

⑮ **Non-Overlapped Black Level (Bright Inside)**

The black level inside the area where the images are to be superimposed is set here.

When a check mark is removed from **Interlocked**, the Red, Green and Blue values can be set separately. [Non-Overlapped Black Level] may be displayed in place of [Bright Inside] for some models.

⑯ **Black Border Level (Bright Outside)**

Set the black level of the parts where images are superimposed.

When a check mark is removed from **Interlocked**, the Red, Green and Blue values can be set separately. [Black Border Level] may be displayed in place of [Bright Outside] for some models.

⑰ **Editing Area**

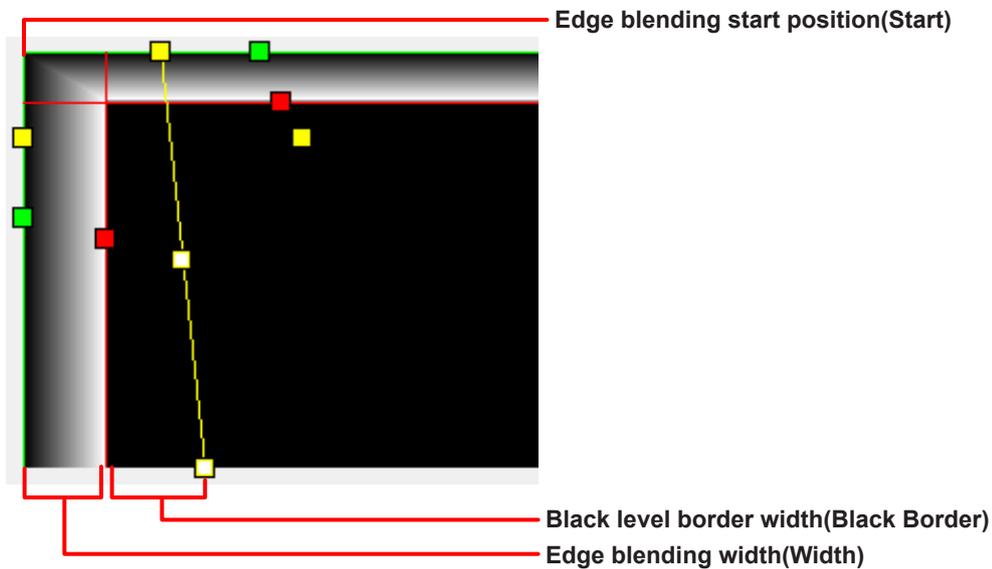
The edge blending setting status is displayed here.

By dragging these markers, the start position of the edge blending (green), edge blending width (red), and black level border width (yellow) can be set.

The settings established with Upper, Left, Right and Lower are also reflected in this area.

Note

The line for the black level border width is displayed only when the mouse cursor is positioned on the yellow marker.

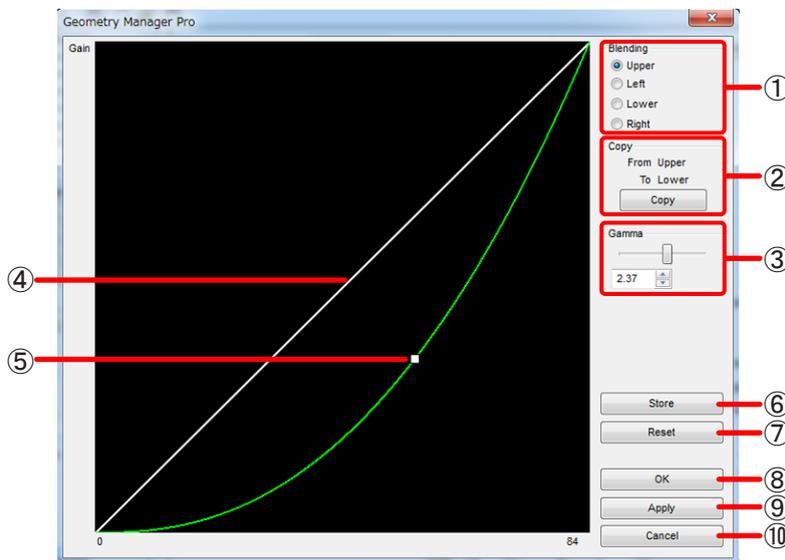


User-defined curve setting screen

When [Setting] is clicked, the user-defined curve setting screen is displayed.

The gradient (brightness gradient) at which edge blending is performed is set using a gamma curve.

When a user-defined curve setting is changed from the initial curve, the display above [Setting] changes from [User Blending Curve: Default] to [User Blending Curve: Changed].



① Blending

The position where the user-defined curve is to be set is selected here.

② Copy

Click this to copy the current user-defined curve setting.

The setting is copied from top to bottom (or vice versa) or from left to right (or vice versa).

③ Gamma

The user-defined curve is set here.

For numerical value input: Enter a setting from 0.25 to 4.00 (in 0.01 steps).

④ Initial Curve

The initial setting of the user-defined curve is displayed here.

⑤ Correction Curve

The operation point in the center can be dragged to change the user-defined curve setting (shape of the gamma curve).

⑥ Store

Click this to reflect the currently displayed user-defined curve setting in the projector and save the setting in the projector. The setting remains saved even when the main power of the projector has been set to "off".

⑦ Reset

Click this to reset the currently displayed user-defined curve setting and return it to the initial value.

- ⑧ **OK**
Click this to reflect the user-defined curve setting in the projector and close the user-defined curve screen.
This operation is reflected in the projector even when a check mark has not been entered in **Auto Transfer**.
- ⑨ **Apply**
Click this to reflect the user-defined curve setting in the editing area.
This operation is reflected in the projector even if a check mark has not been entered for **Auto Transfer**.
- ⑩ **Cancel**
Click this to cancel the setting and close the user-defined curve screen.

Uniformity

Two correction methods can be used for uniformity.

■ Gradient Correction

This corrects the entire image in the vertical or horizontal direction.

The image is corrected by toning down (removing) the selected colors and using a display with gradations.

■ Flexible Correction

Flexible Correction is enabled by entering a check mark in **Enable**.

Part of the image is specified, and corrected.

- From this point onward, the specified area will be referred to as the “target area” and the points where the grids intersect in the target area as the “target points”.

The target area and target point can be selected using the same method as for the geometry correction grid.

☞ “Selecting the control points” (page 32)

A multiple number of target areas can be selected.

Where the target areas overlap, correction will be applied by multiplying the respective settings.

As with the Gradient Correction method, the image is corrected by toning down (removing) the selected colors and displaying it using gradations.

To use this function, the upgrade kit (ET-UK20) must be applied on the selected projector.

☞ “Activation” (page 12)

Correction procedure

1 Click or drag the mouse to select a target point (reference position where the image will be corrected).

The target area is displayed with a red frame around the target point.

2 Adjust the parameter, and establish the settings.

The image is corrected inside the target area centered around the target point.

3 Right-click and select [Area Select], and display the operation points (green) in the target area.

Using the mouse, drag the operation points to enlarge or reduce the size of the target area.

If the mouse cursor is placed between the target area and the target points and then dragged, the target area and target points can be moved.

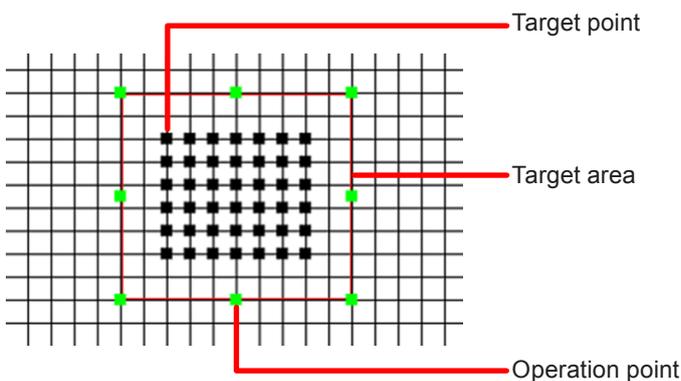
- [Area Select] can also be selected on the Edit submenu.

4 Right-click to select [Point Select], and release the operation point display.

- [Point Select] can also be selected on the Edit submenu.

5 When correcting an image in a multiple number of areas, repeat the above steps.

Images cannot be corrected by placing one target point on top of another. It is possible to place one target area on top of another.



Note

[Point Select] and [Area Select] can be toggled by pressing the space key.

Uniformity screen

In addition to the menu items described in “Main menu” (page 19), the following menu items can be used on the Uniformity screen. However, these menu items are valid only when the Flexible Correction method is used for correction.

■ Edit submenu

Reset

Returns the setting to its default value.

This item cannot be selected when [Area Select] has been selected.

Neither can it be selected when the target area has not been set.

Flip Vertical

Click to flip vertically the correction status of the entire image.

This item cannot be selected when [Area Select] has been selected.

Flip Horizontal

Click to flip horizontally the correction status of the entire image.

This item cannot be selected when [Area Select] has been selected.

Area Select

Selects the mode in which the target area is to be moved.

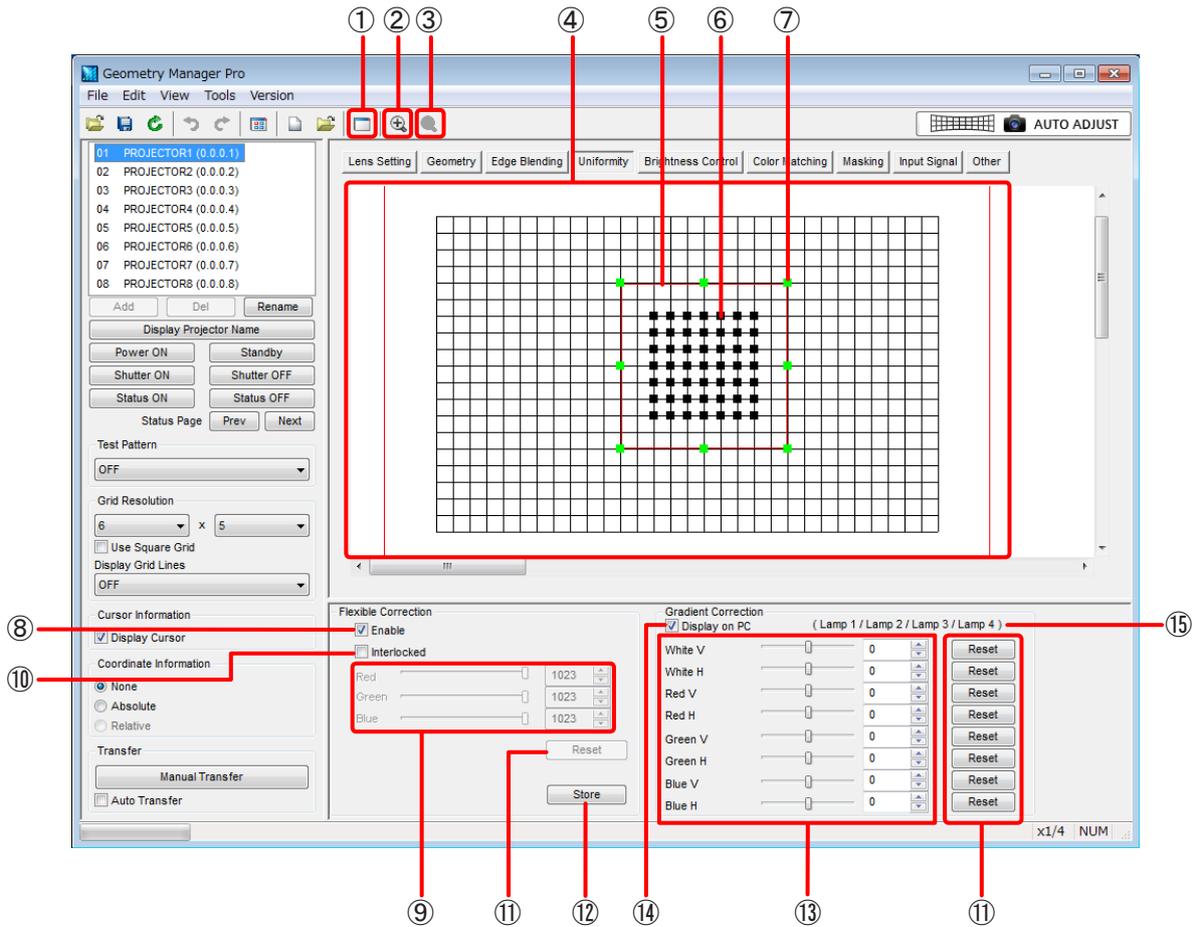
In addition, the target area range can be expanded or reduced while keeping the target points in their original positions.

- [Area Select] cannot be selected concurrently with Point Select.

Point Select

Selects the mode in which the target area and target points are selected.

- [Point Select] cannot be selected concurrently with Area Select.



- ① **Sub Window**
Each time this is clicked, the Sub Window screen is switched between displayed and cleared.
An image of the entire projection area is displayed on Sub Window.
 - This performs the same operation as [Sub Window] of the View submenu.
- ② **Zoom In**
Zooms in to the editing area.
The center of the target area is zoomed in when the target area has been selected in the editing area.
- ③ **Zoom Out**
Zooms out the editing area.
- ④ **Editing Area**
The target points and target area are selected here, and the color unevenness of the image can be corrected.
- ⑤ **Target Area**
In this area, the colors are corrected using the target points as the reference.
- ⑥ **Target Point**
These points serve as the reference used for correction.
- ⑦ **Operation Point**
Drag these points using the mouse to expand or reduce the target area.

⑧ Enable*

When a check mark is entered in **Enable** , the Flexible Correction settings are enabled.

⑨ Gradations

With the target point set to the center, the Red, Green and Blue values are set here.
Setting range: Enter settings from 512 to 1023.

⑩ Interlocked

When a check mark is entered in **Interlocked** , the gradations are set in synchronization with the Red, Green and Blue settings.

⑪ Reset

Returns the gradation settings to the default values.

⑫ Store

Reflects the gradation settings in the projector and saves them in the projector.
The settings remain saved even when the main power of the projector has been set to “off”.

⑬ Vertical and Horizontal Gradations

The gradations are set here in the vertical (V) direction or horizontal (H) direction for the entire image.
The gradations are set using the Red, Green, Blue and White colors.

For numerical value input: Enter settings from –127 to 127.
Vertical (V) direction: Adjusts the slope of the gradation in the vertical direction.
Horizontal (H) direction: Adjusts the slope of the gradation in the horizontal direction.

How the vertical (V) and horizontal (H) gradation slopes varies depending on the model. For details, refer to the operating instructions of the projector.

⑭ Display on PC

When a check mark is entered in **Display on PC** , the vertical and horizontal gradation settings are reflected in the editing area.

The gradation status will not appear in the editing area when there is no check mark entered in **Display on PC**. The settings will still be reflected in the projector, however. If the Flexible Correction appears in the same area, removing the check mark from **Display on PC** will make the editing area easier to see.

⑮ Lamp Statuses

These indicate the lamps that are currently lit on the selected projectors. (Only for projectors that use a lamps as a light source.) [None] is displayed if none of the lamps is lighted.

Right-clicking

If the mouse is right-clicked in the editing area when a check mark has been entered in **Enable**, the following menu items are displayed. The functions of these items are the same as with the Edit submenu items.

☞ “Edit submenu” (page 54)

Reset

Flip Vertical

Flip Horizontal

Area Select

Point Select

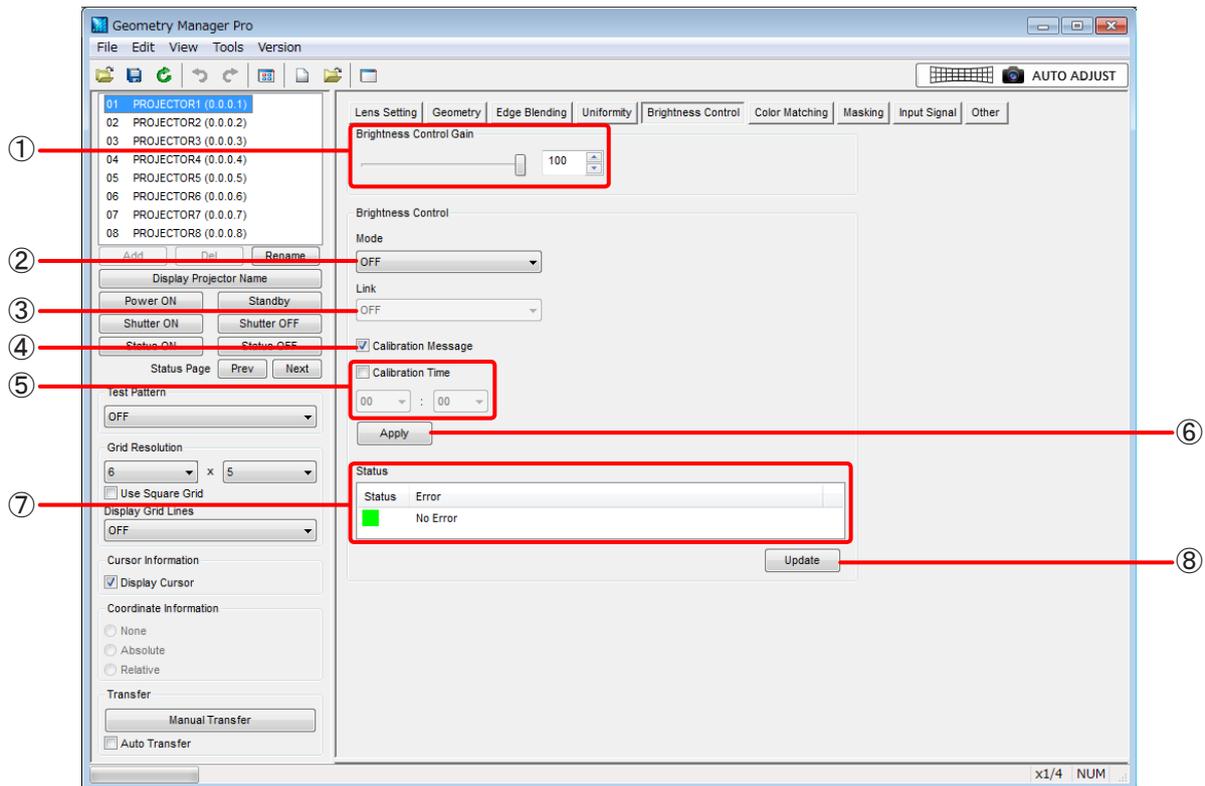
* This item can only be configured if the upgrade kit (ET-UK20) has been applied to the selected projector.

☞ “Activation” (page 12)

Brightness Control

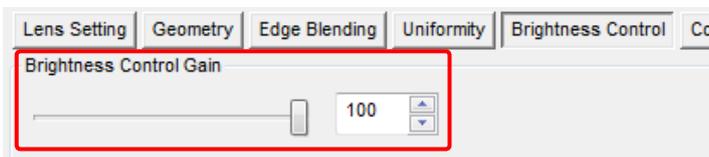
When a single image is configured using a multiple number of projectors, the brightness levels of the images projected from the projectors may not be consistent. If this is the case, adjust the projectors so that the brightness levels are made consistent. The brightness correction can also be done automatically at periodic intervals.

Brightness Control screen



① The items displayed will vary depending on the projector you are using.

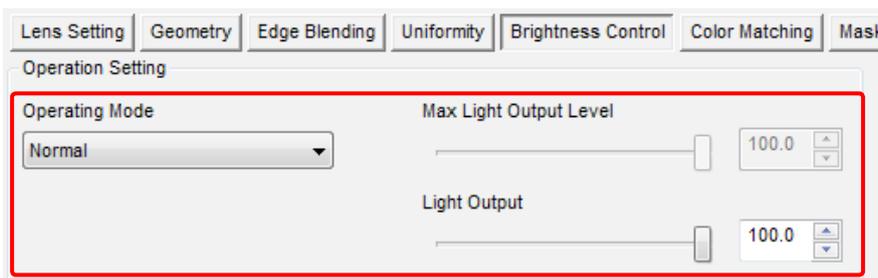
Brightness Control Gain



This is where the projector brightness is set.

The brightness of the image projected from the projectors is set according to the numerical value that is set here.

Operating Mode



This is where the operating mode of the projector is set.

Normal:

Select this when a high level of brightness is required.

Eco:

This mode produces a lower brightness than in [Normal] mode, but extends the life of the light source.

Long Life1/Long Life2/Long Life3:

These modes produce a lower brightness than in [Eco] mode, but extend the life of the light source.

User1/User2/User3:

These modes allow you to configure separate [Max Light Output Level] and [Light Output] settings.

Max Light Output Level:

This allows you to adjust the upper limit for brightness correction of the screen based on the change in brightness of the light source.

Light Output:

This allows you to adjust the brightness of the light source.

For details, refer to the operating instructions of the projector.

② Mode

This is where the brightness correction mode is selected.

OFF:

The brightness is not corrected.

Auto:

The brightness levels of the images projected from the projectors are corrected by the brightness sensors of the projectors.

For details, refer to the operating instructions of the projectors concerned.

PC:

The brightness levels of the images projected from the projectors are corrected using the "Multi Projector Monitoring & Control Software".

For details, refer to the Operating Instructions of "Multi Projector Monitoring & Control Software."

③ Link

This is where the link mode is set.

The mode is enabled when [Auto] has been selected as the Mode setting.

OFF:

The brightness level of the selected projector is corrected.

Group A/Group B/Group C/Group D:

The brightness levels of the projectors in the respective group are corrected.

The groups are set using the network function of the projectors.

For details, refer to the operating instructions of the projectors.

④ Calibration Message

When a check mark is entered for Calibration Message , a message is displayed while measuring the brightness levels for correcting the brightness.

⑤ Calibration Time

The time at which to start measuring the brightness levels for correcting the brightness is selected here.

The time can be set when a check mark is entered for Calibration Time .

⑥ Apply

Click this to reflect the brightness control setting in the projector.

⑦ Status

Brightness correction-related errors are displayed here.

Status	Error	Description
Red	Brightness sensor error	Something is wrong with the brightness sensor (projector).
	The brightness cannot be measured. Please check the status of the projector.	The brightness cannot be corrected due to a factor that is not related to the brightness sensor.
Yellow	The brightness can no longer be corrected by a significant margin.	The brightness that can be corrected by the projector is reaching its limit.
Green	No Error	Normal condition.

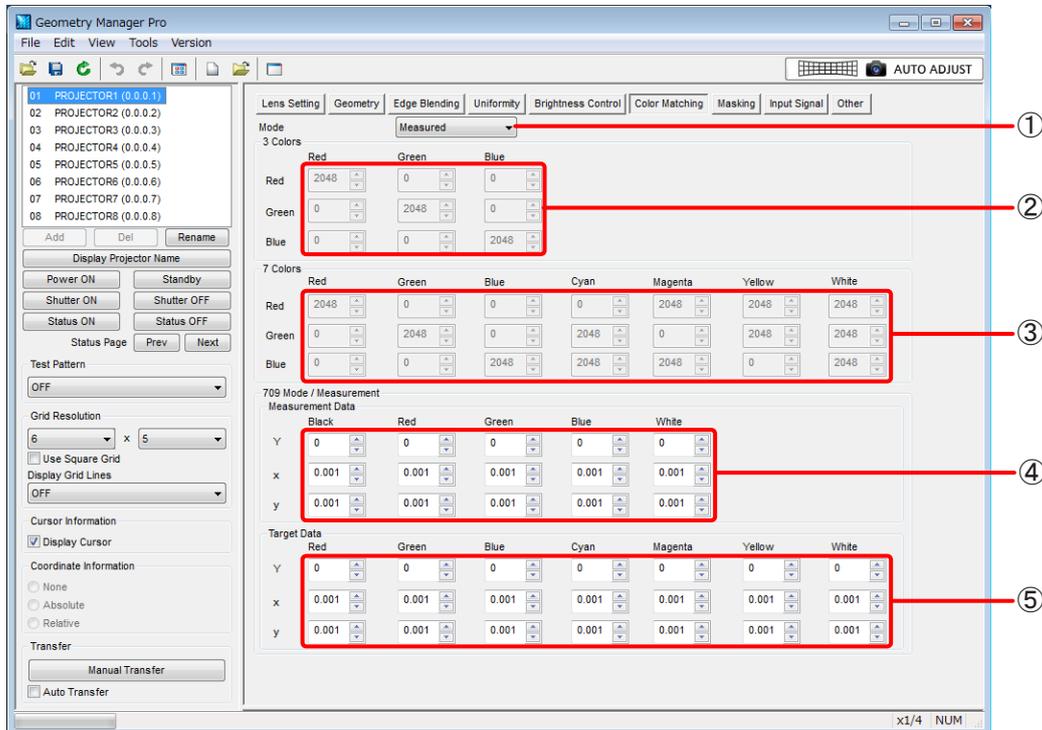
⑧ Update

Click this button to check the projectors and update the Status displays.

Color Matching

When configuring a single image using a multiple number of projectors, the coloring of the image projected from the various projectors may not be consistent. If this is the case, adjust the projectors to match the coloring.

Color Matching screen



Note

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

① Mode

The color matching mode is selected here.

OFF

Color matching is not performed.

3 Colors

The inconsistencies in the colors are corrected by adjusting three colors (Red, Green and Blue).

7 Colors

The inconsistencies in the colors are corrected by adjusting seven colors (Red, Green, Blue, Cyan, Magenta, Yellow and White).

709 Mode

The brightness (Y) and chrominance coordinate (x, y) values are adjusted here based on the values obtained using a coloring chromoscope capable of measuring chrominance coordinates and brightness levels.

The Target Data values are fixed.

709 Mode cannot be selected for some models. For details, refer to the Operating Instructions of the projector.

Measured

The brightness (Y) and chrominance coordinate (x, y) values are adjusted here based on the values obtained using a coloring chromoscope capable of measuring chrominance coordinates and brightness levels.

The Target Data values can be adjusted.

For details, refer to the Operating Instructions of the projector.

② 3 Colors

The Red, Green and Blue values are set here.

The settings take effect when [3 Colors] has been selected as the Mode setting.

The White value can be set in addition to the Red, Green and Blue values for some models.

③ 7 Colors

The Red, Green, Blue, Cyan, Magenta, Yellow and White values are set here.

The settings take effect when [7 Colors] has been selected as the Mode setting.

④ Measurement Data

The Black, Red, Green, Blue and White values are set here.

The settings take effect when [709 Mode] or [Measured] has been selected as the Mode setting.

⑤ Target Data

The Red, Green, Blue, Cyan, Magenta, Yellow and White values are set here.

The settings take effect when [Measured] has been selected as the Mode setting.

Masking

Two kinds of masking are available.

To use this function, the upgrade kit (ET-UK20) must be applied on the selected projector.

☞ “Activation” (page 12)

■ Line Masking

The shape to be masked is set by moving the operation points on the four sides—top, bottom, left and right—of the projected image.

The area to be masked can also be inverted between positive and negative.

■ Bitmap Masking

The bitmap in the 1-bit monochrome format is loaded and set as the masking data.

The position and size of the masking can be changed.

Bitmaps from 8 × 8 to 1 920 × 1 200 pixels are supported.

The *.bmp and *.dib file extensions are supported.

The area to be masked can also be inverted between positive and negative.

Note

The Line Masking and Bitmap Masking settings can be used simultaneously. In that case, masking applies to the each area set in the settings.

Masking screen

In addition to the menu items described in “Main menu” (page 19), the following menu items can be used on the Masking screen.

■ Edit submenu

Reset

When Line Masking has been performed, the positions of the operation points are returned to their initial statuses.

Returns to the status established when the bitmap has been loaded when Bitmap Masking is executed.

Flip Vertical

Click to flip vertically the correction status of the entire image.

Flip Horizontal

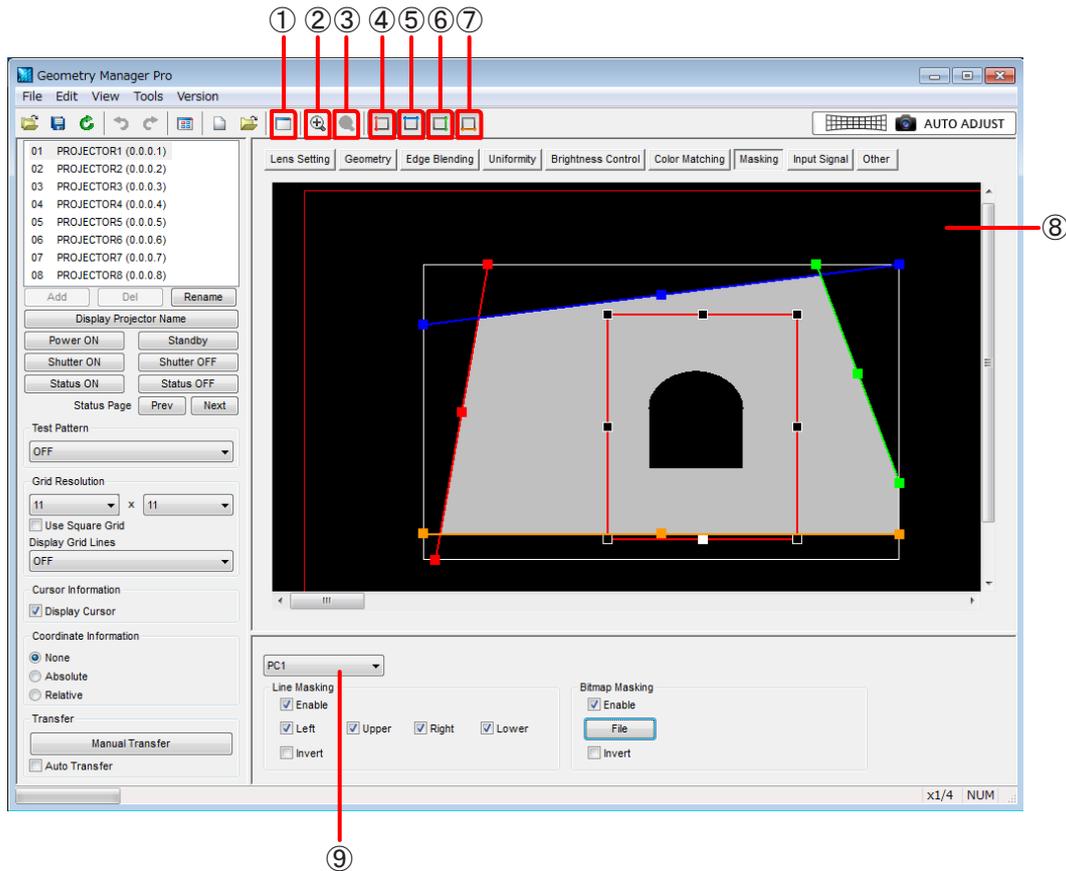
Click to flip horizontally the correction status of the entire image.

■ View submenu

Mask Marker (Red, Green, Blue, Orange)

Selects whether the operation points are to be displayed or not displayed.

The non-displayed operation points are fixed at the positions when the selection was made not to display them.



- ① **Sub Window**
 Each time this is clicked, the Sub Window screen is switched between displayed and cleared.
 An image of the entire projection area is displayed on Sub Window.
 - This performs the same operation as [Sub Window] of the View submenu.
- ② **Zoom In**
 Zooms in to the editing area.
- ③ **Zoom Out**
 Zooms out the editing area.
- ④ **Red**
 Selects whether the operation points on the left side of the projected image are to be displayed or not displayed.
 - This performs the same operation as [Mask Marker] – [Red] on the View submenu.
- ⑤ **Blue**
 Selects whether the operation points at the top of the projected image are to be displayed or not displayed.
 - This performs the same operation as [Mask Marker] – [Blue] on the View submenu.
- ⑥ **Green**
 Selects whether the operation points on the right side of the projected image are to be displayed or not displayed.
 - This performs the same operation as [Mask Marker] – [Green] on the View submenu.
- ⑦ **Orange**
 Selects whether the operation points at the bottom of the projected image are to be displayed or not displayed.
 - This performs the same operation as [Mask Marker] – [Orange] on the View submenu.

8 Editing Area

Click the operation points to select them, and then drag them to form the shape that is to be masked.

9 Mode Switching

OFF: Masking is not performed.

PC1 / PC2 / PC3: Masking is enabled.

Note

When masking is enabled, only one piece of data (PC) can be saved for some models.

Note

When the input signal of the projector is changed, retransmission to the projector may be required.

Right-clicking

Clicking the right-mouse button in the editing area displays a menu with following items. The menu functions are the same as with the Edit submenu.

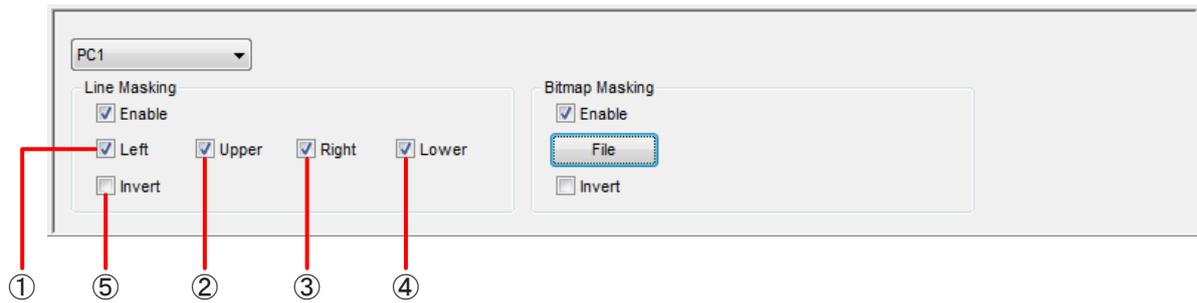
☞ “Edit submenu” (page 62)

Reset

Flip Vertical

Flip Horizontal

Line Masking



① Left

When a check mark is entered for **Left**, masking based on the operation point on the left side of the projected image is enabled.

② Upper

When a check mark is entered for **Upper**, masking based on the operation point at the top of the projected image is enabled.

③ Right

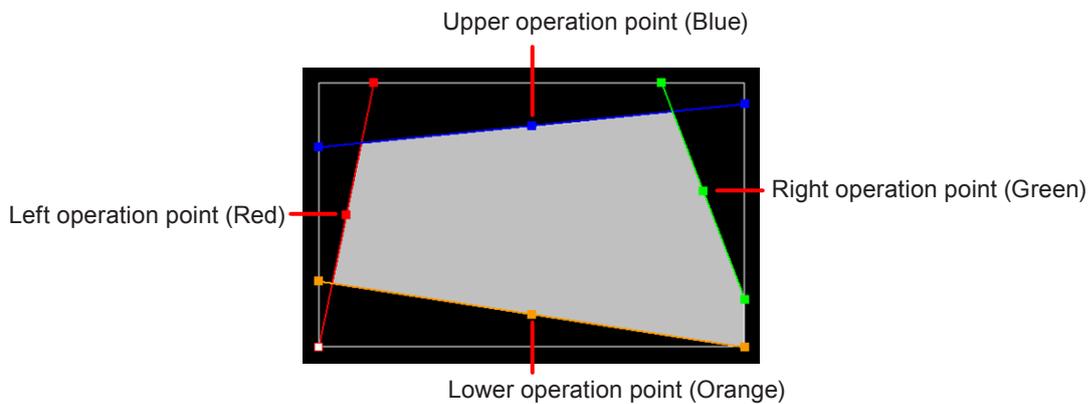
When a check mark is entered for **Right**, masking based on the operation point on the right side of the projected image is enabled.

④ Lower

When a check mark is entered for **Lower**, masking based on the operation point at the bottom of the projected image is enabled.

⑤ Invert

When a check mark is entered for **Invert**, the Line Masking area can be inverted between positive and negative.

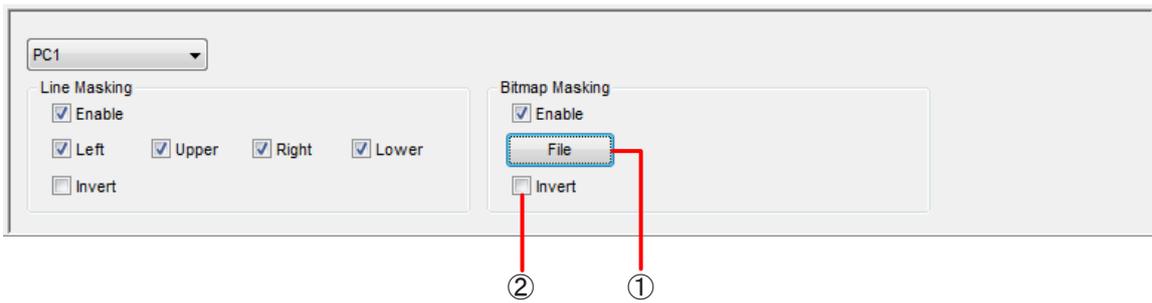


The operation points at both ends of a side can be moved around the outer circumference (along the four sides) of the image.

When an operation point at the center of a side is moved, it can be moved without changing the angle of the straight line that connects the operation points at both ends of the side.

When the operation points have been selected, they can also be moved by operating the cursor keys on the keyboard.

Bitmap Masking



① File

Click this button to open the screen on which to select the bitmap data used for masking.

Using the bitmap data which has been loaded, mouse operations can be used to move, enlarge or reduce the masking area.

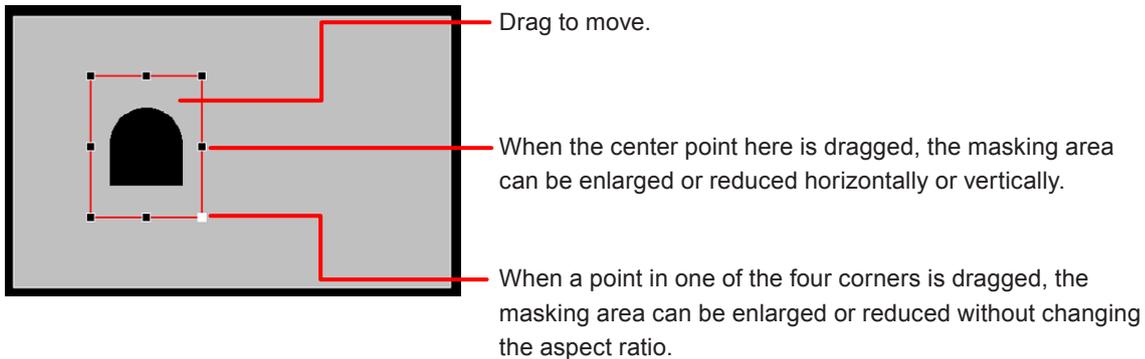
The bitmap data can be moved, enlarged, or reduced in the display area with a resolution of 2 880 × 1 800 pixels.

If [File] is clicked when the bitmap data for masking has already been loaded, the previously loaded bitmap data is discarded and the new loaded bitmap data is set for masking.

② Invert

When a check mark is entered for **Invert** , the Bitmap Masking area can be inverted between positive and negative.

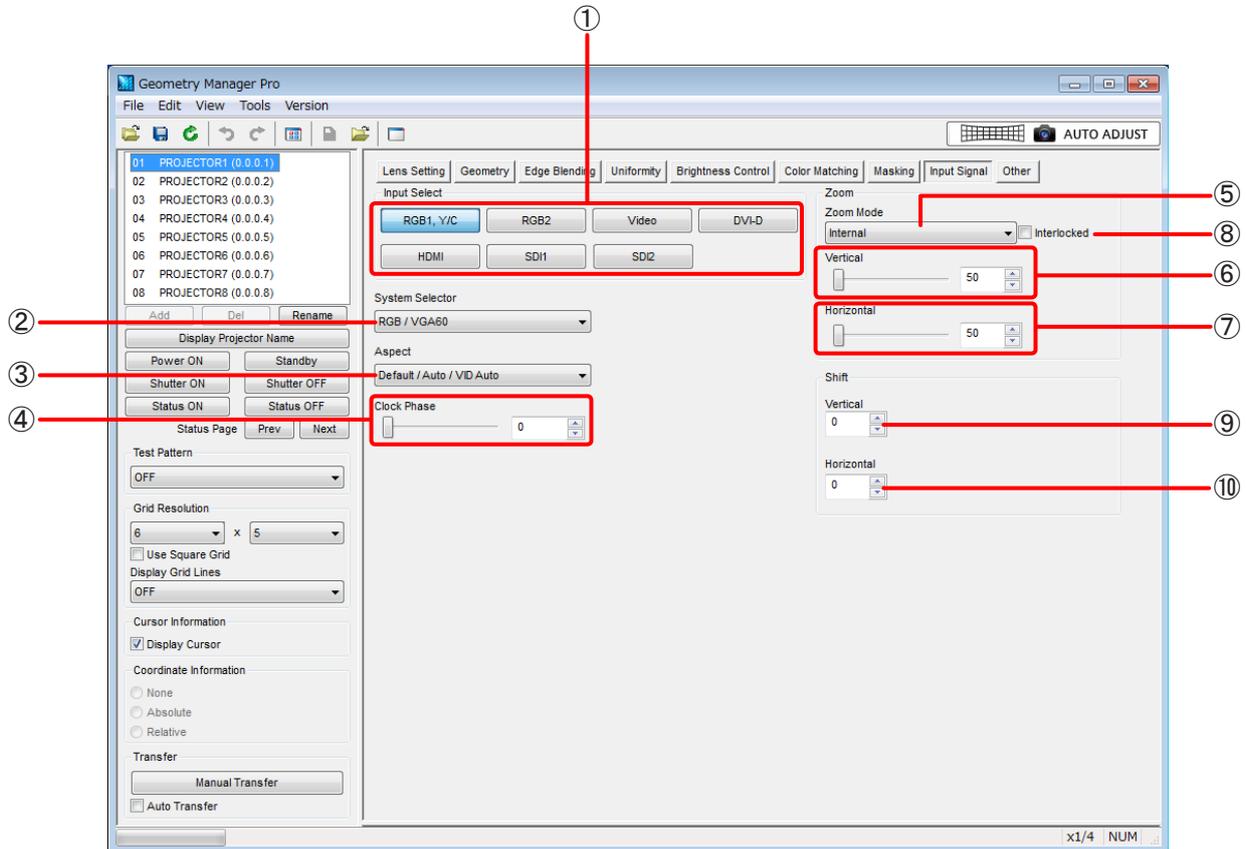
Bitmap data (example)



Input Signal Adjustments

Projectors normally identify the input signals automatically, but if unstable signals are to be input, this software application allows the format matching the input signals to be selected, position adjustments to be made, and so on by manual means.

Input Signal screen



① Input Select

These are used to select the input.

Click the input (selector) button of the signals to be projected.

The inputs that can be selected vary depending on the model.

This operation is reflected in the projector even if a check mark has not been entered for Auto Transfer.

② System Selector

The system format which matches the input signals is selected here.

The formats which can be selected differ depending on the input signals.

Input Select	System Selector	
RGB1, Y/C or RGB1, Y/C, Video	When the signals use the [RGB/YPbPr] format	When the signals use the [Y/C] or [Video] format
	RGB / VGA60 YCbCr / YPbPr / 480p YCbCr 480p RGB	Auto NTSC NTSC4.43 PAL PAL-M PAL-N SECAM PAL60
RGB2	RGB / VGA60 YCbCr / YPbPr / 480p YCbCr 480p RGB	
Video	Auto NTSC NTSC4.43 PAL PAL-M PAL-N SECAM PAL60	
DVI-D	RGB YCbCr / YPbPr	
HDMI	Auto RGB YCbCr / YPbPr	
Digital Link	Auto RGB YCbCr / YPbPr	
SDI1	When the signals use the [Single Link] format	When the signals use the [Dual Link] format
	Auto 480i YCbCr 576i YCbCr 720/50p YPbPr 720/60p YPbPr 1035/60i YPbPr 1080/24p YPbPr 1080/24sF YPbPr 1080/25p YPbPr 1080/30p YPbPr 1080/50i YPbPr 1080/60i YPbPr 1080/50p YPbPr 1080/60p YPbPr 1080/24p RGB 1080/24sF RGB 1080/25p RGB 1080/30p RGB 1080/50i RGB 1080/60i RGB	Auto 1080/24p RGB 2K/24p RGB 2K/24p XYZ 1080/24sF RGB 2K/24sF RGB 2K/24sF XYZ 1080/25p RGB 1080/30p RGB 1080/50i RGB 1080/60i RGB

Input Select	System Selector	
SDI2	When the signals use the [Single Link] format	When the signals use the [Dual Link] format
	Auto 480i YCbCr 576i YCbCr 720/50p YPbPr 720/60p YPbPr 1035/60i YPbPr 1080/24p YPbPr 1080/24sF YPbPr 1080/25p YPbPr 1080/30p YPbPr 1080/50i YPbPr 1080/60i YPbPr	Auto 1080/24p RGB 2K/24p RGB 2K/24p XYZ 1080/24sF RGB 2K/24sF RGB 2K/24sF XYZ 1080/25p RGB 1080/30p RGB 1080/50i RGB 1080/60i RGB

Note

- When [Y/C] or [Video] is selected as the RGB 1 Input Setting for RGB In on the Display Option screen, the [RGB1, Y/C] and [RGB1, Y/C, Video] system formats will be the same as when [Video] is selected.
- When [Single Link] has been selected as the SDI Link setting for RGB In on the Display Option screen, different [SDI1] and [SDI2] systems are set from when [Dual Link] has been selected.
- For models that do not support dual link HD-SDI signals, the system format for SDI input is the same as the one for [Single Link].

③ Aspect

The aspect ratio of the images is selected here.
 The aspect ratios that can be selected are listed below:

- **Default / Auto / VID Auto**
- **Through**
- **16:9**
- **4:3**
- **H FIT**
- **V FIT**
- **HV FIT**

For details, refer to the operating instructions of the projectors.

④ Clock Phase

Image flickering and contour blurring are adjusted here.
 However, they cannot be adjusted when Y/C signals have been selected as the input signals.
 Input range: 0 to 31

For details, refer to the operating instructions of the projectors.

⑤ Zoom Mode

The zoom mode is selected here.
 The setting is enabled when [Default / Auto / VID Auto] has been selected as the Aspect setting.
 The modes that can be selected are listed below:

- **Internal**
- **Full**

For details, refer to the operating instructions of the projectors.

⑥ Vertical (Zoom)

The zoom magnification in the vertical direction is set here.
Input range: 50 to 999

⑦ Horizontal (Zoom)

The zoom magnification in the horizontal direction is set here.
Input range: 50 to 999

⑧ Interlocked

When a check mark is entered for **Interlocked**, the zoom magnification is set with the magnification in both the horizontal and vertical directions linked together.

⑨ Vertical (Shift)

The vertical position of the projected image is set here.
Input range: 0 to 4094

⑩ Horizontal (Shift)

The horizontal position of the projected image is set here.
Input range: 0 to 2046

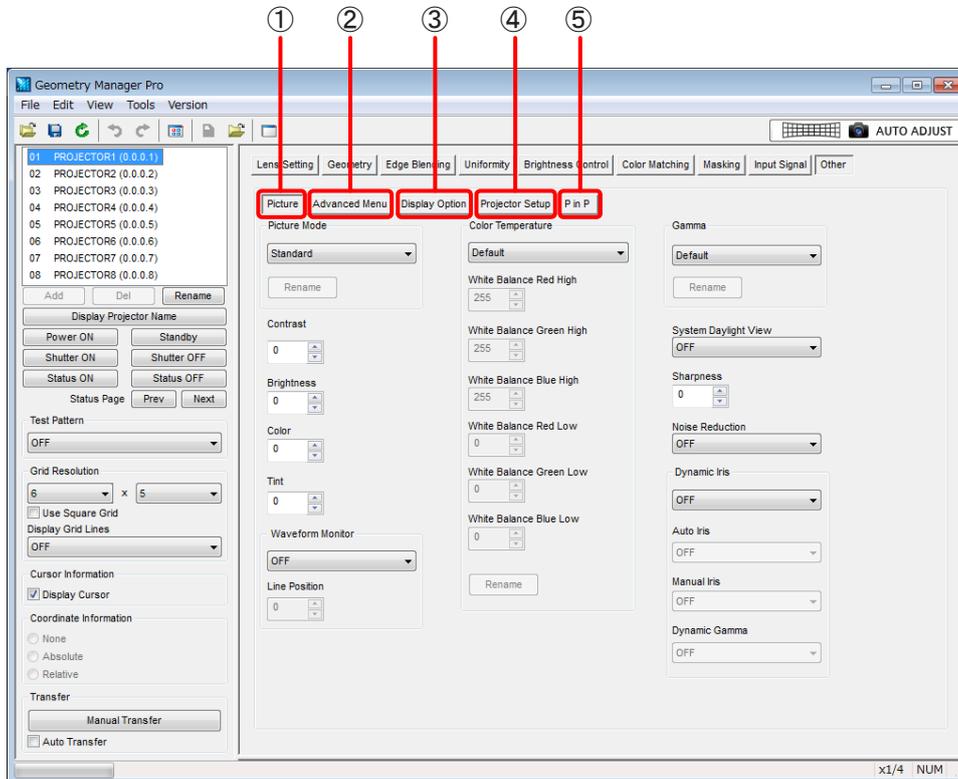
Note

The Input Signal screen items cannot be reset with the [Reset Data (Current Tab)] command on the File submenu and icon menu.

Projector Menu Settings

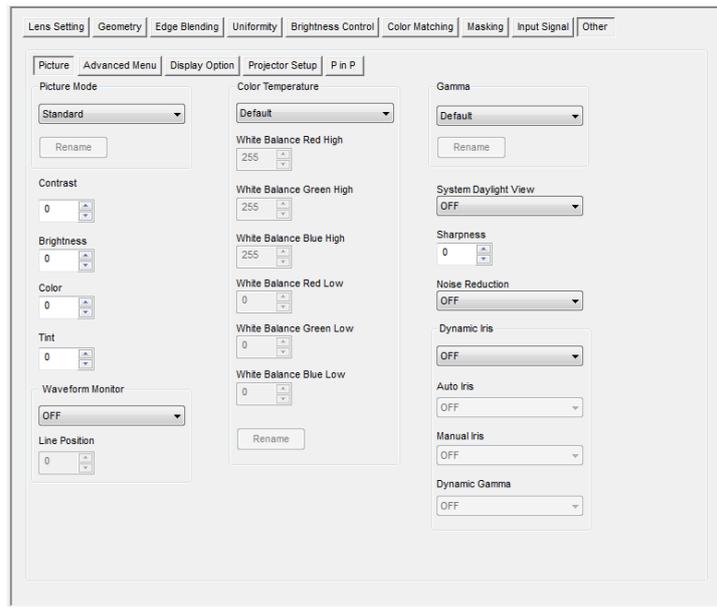
Some of the operations using the projector's menus can be performed using this software application.

Other screen



- ① **Picture**
Click to display the Picture screen.
The video mode, black level and other settings related to the image adjustments can be selected.
- ② **Advanced Menu**
Click to display the Advanced Menu screen.
The blanking width, input resolution and other settings can be selected.
- ③ **Display Option**
Click to display the Display Option screen.
The color correction, aspect ratio and other settings related to the image display used for large screens can be selected.
- ④ **Projector Setup**
Click to display the Projector Setup screen.
This enables the projector's installation position, lamp selection and other hardware settings to be established.
- ⑤ **P in P**
Click to display the P in P screen.
The positions and sequence of priority for the main screen and sub screens as well as other P in P functions can be set.

■ Picture



The following items can be set:

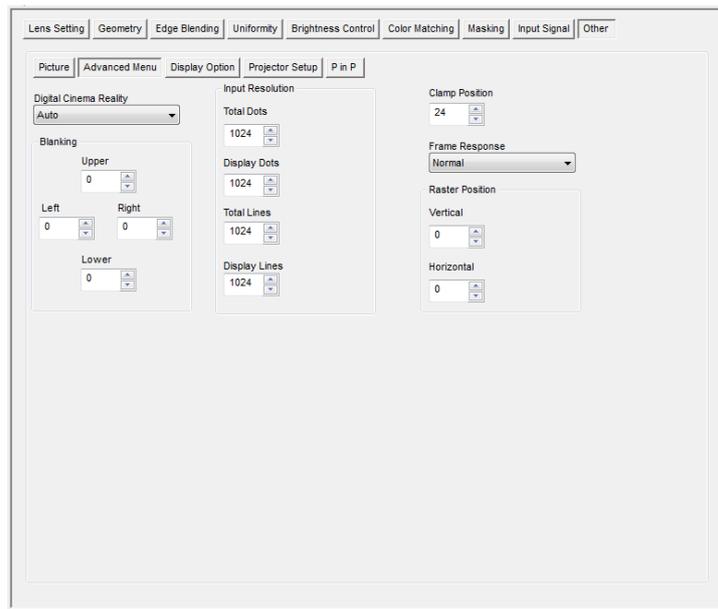
<p>Picture Mode</p> <p>Note These items' settings are reflected in the projector even if a check mark has not been entered for <input type="checkbox"/> Auto Transfer.</p> <p>Contrast Brightness Color Tint Waveform Monitor Line Position Color Temperature White Balance Red High White Balance Green High White Balance Blue High White Balance Red Low White Balance Green Low White Balance Blue Low</p>	<p>Gamma System Daylight View Sharpness Noise Reduction Dynamic Iris Auto Iris Manual Iris Dynamic Gamma Dynamic Contrast Auto Contrast Manual Intensity Dynamic Gamma</p>
--	--

The items that can be adjusted, setting details, and setting ranges vary depending on the projector model. Refer to the operating instructions of the projector.

Note

The Picture screen items cannot be reset using the [Reset Data (Current Tab)] command on the File submenu and icon menu.

■ Advanced Menu



The following items can be set:

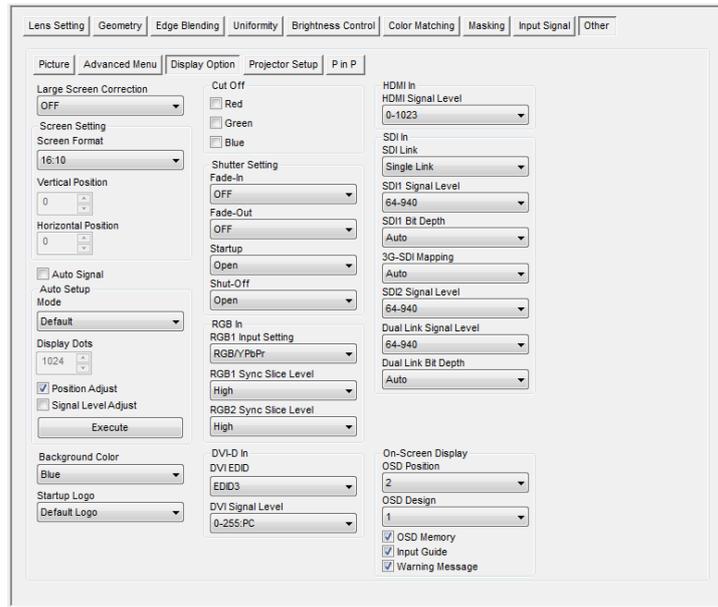
Digital Cinema Reality
Blanking
Upper
Left
Right
Lower
Input Resolution
Total Dots
Display Dots
Total Lines
Display Lines
Clamp Position
Frame Response
Raster Position
Vertical
Horizontal

The items that can be adjusted, setting details, and setting ranges vary depending on the projector model. Refer to the operating instructions of the projector.

Note

The Advanced Menu screen items cannot be reset using the [Reset Data (Current Tab)] command on the File submenu and icon menu.

■ Display Option



The settings of the items listed below can be established and operated.

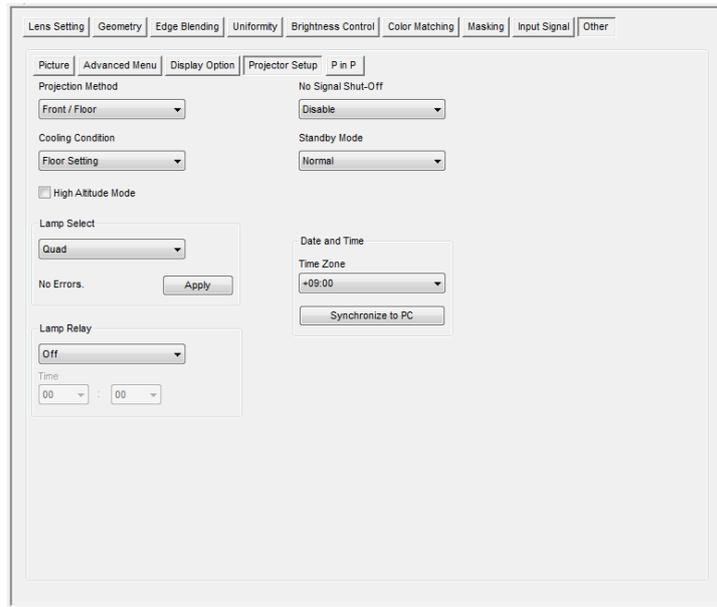
<p>Large Screen Correction</p> <p>Screen Setting</p> <p> Screen Format</p> <p> Vertical Position *</p> <p> Horizontal Position *</p> <p>Auto Signal</p> <p>Auto Setup</p> <p> Mode</p> <p> Display Dots *</p> <p> Position Adjust</p> <p> Signal Level Adjust</p> <p> Execute</p> <p>Background Color</p> <p>Startup Logo</p> <p>Cut Off</p> <p> Red</p> <p> Green</p> <p> Blue</p> <p>Shutter Setting</p> <p> Fade-In</p> <p> Fade-Out</p> <p> Startup</p> <p> Shut-Off</p>	<p>RGB In</p> <p> RGB1 Input Setting</p> <p> RGB1 Sync Slice Level</p> <p> RGB2 Sync Slice Level</p> <p> RGB2 EDID Mode</p> <p> RGB2 EDID Resolution</p> <p> RGB2 EDID V Freq. Scan</p> <p>DVI-D In</p> <p> DVI EDID</p> <p> DVI Signal Level</p> <p> DVI EDID Mode</p> <p> DVI EDID Resolution</p> <p> DVI EDID V Freq. Scan</p> <p>HDMI In</p> <p> HDMI Signal Level</p> <p> HDMI EDID Mode</p> <p> HDMI EDID Resolution</p> <p> HDMI EDID V Freq. Scan</p> <p>Digital Link In</p> <p> Digital Link Signal Level</p> <p> Digital Link EDID Mode</p> <p> Digital Link EDID Resolution</p> <p> Digital Link EDID V Freq. Scan</p> <p>Image Rotation</p>	<p>Backup Input Setting</p> <p> Backup Input Mode</p> <p> Automatic Switching</p> <p>Color Correction</p> <p> Red</p> <p> Green</p> <p> Blue</p> <p> Cyan</p> <p> Magenta</p> <p> Yellow</p> <p>SDI In</p> <p> SDI Link</p> <p> SDI1 Signal Level</p> <p> SDI1 Bit Depth</p> <p> 3G-SDI Mapping</p> <p> SDI2 Signal Level</p> <p> Dual Link Signal Level</p> <p> Dual Link Bit Depth</p> <p>On-Screen Display</p> <p> OSD Position</p> <p> OSD Rotation</p> <p> OSD Design</p> <p> OSD Memory</p> <p> Input Guide</p> <p> Warning Message</p>
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The items that can be adjusted, setting details, and setting ranges vary depending on the projector model. Refer to the operating instructions of the projector.

Note

Items marked with an asterisk (*) cannot be reset using the [Reset Data (Current Tab)] command on the File submenu and icon menu.

■ Projector Setup



The settings of the items listed below can be established and operated.

Projection Method
Cooling Condition
High Altitude Mode
Lamp Select *
Apply
Lamp Relay
Time
No Signal Shut-Off
Standby Mode
Startup Input Select
Date and Time
Time Zone *
Synchronize to PC

Note

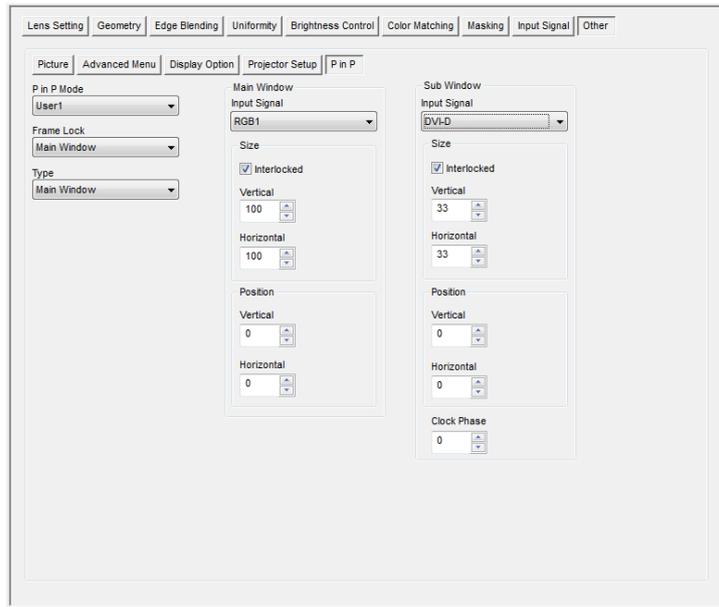
These items' settings are reflected in the projector even if a check mark has not been entered for **Auto Transfer**.

The items that can be adjusted, setting details, and setting ranges vary depending on the projector model. Refer to the operating instructions of the projector.

Note

Items marked with an asterisk (*) cannot be reset using the [New All Data] and [New Data (For Current Window)] commands on the File submenu and icon menu.

■ P in P



The following items can be set:

<p>P in P Mode</p> <p>Note These items' settings are reflected in the projector even if a check mark has not been entered for <input type="checkbox"/> Auto Transfer.</p> <p>Frame Lock</p> <p>Type</p> <p>Main Window</p> <p>Input Signal</p> <p>Size</p> <p style="padding-left: 20px;">Interlocked</p> <p style="padding-left: 20px;">Vertical</p> <p style="padding-left: 20px;">Horizontal</p> <p>Position</p> <p style="padding-left: 20px;">Vertical</p> <p style="padding-left: 20px;">Horizontal</p>	<p>Sub Window</p> <p>Input Signal</p> <p>Size</p> <p style="padding-left: 20px;">Interlocked</p> <p style="padding-left: 20px;">Vertical</p> <p style="padding-left: 20px;">Horizontal</p> <p>Position</p> <p style="padding-left: 20px;">Vertical</p> <p style="padding-left: 20px;">Horizontal</p> <p>Clock Phase</p>
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The items that can be adjusted, setting details, and setting ranges vary depending on the projector model. Refer to the operating instructions of the projector.

Note

The P in P screen items cannot be reset using the [Reset Data (Current Tab)] command on the File submenu and icon menu.

Auto Screen Adjustment

Applying the ET-CUK10 Auto Screen Adjustment upgrade kit to the projector expands the functions of Geometry Manager Pro, and allows automatic adjustment of geometry correction, edge blending, color, and brightness according to the shape of the screen through use of an externally connected camera.

After performing Auto Screen Adjustment, you can perform further detailed adjustment and correction manually.

Note

- The Auto Screen Adjustment upgrade kit (ET-CUK10) must be applied on the selected projector to enable the Auto Screen Adjustment function.
☞ “Activation” (page 12)
- You can check the activation status of the Auto Screen Adjustment plug-in software in [About Geometry...] of the Version submenu.
- To use the Auto Screen Adjustment function, prepare a camera separately.
- Use a LAN connection when using the Auto Screen Adjustment function.

Preparing Auto Screen Adjustment

■ Projector connection

Use a LAN cable to connect the projector to the computer.

Note

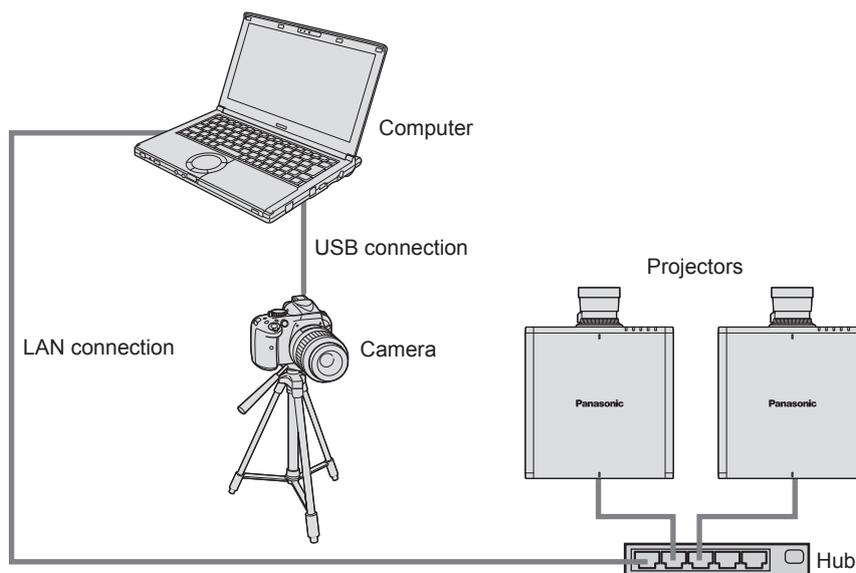
Auto Screen Adjustment cannot be performed via a serial (RS-232C) connection.

■ Camera connection

Use a USB cable to connect the camera to the computer.

For details on supported cameras, check the information found on software download page of the Panasonic website (<http://panasonic.net/avc/projector/pass/>).

■ Connection example

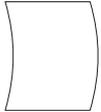
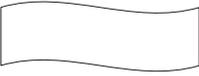
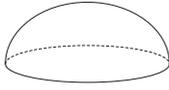
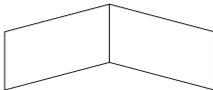


Note

- If the projector is installed in a portrait orientation, the camera must also be rotated 90 degrees in the same direction as the image.
- Positioning the camera so that it faces the screen directly and performing adjustments will obtain more optimal adjustment results. Adjustment is possible when the camera is facing the screen at an angle but may fail if the angle is too large.

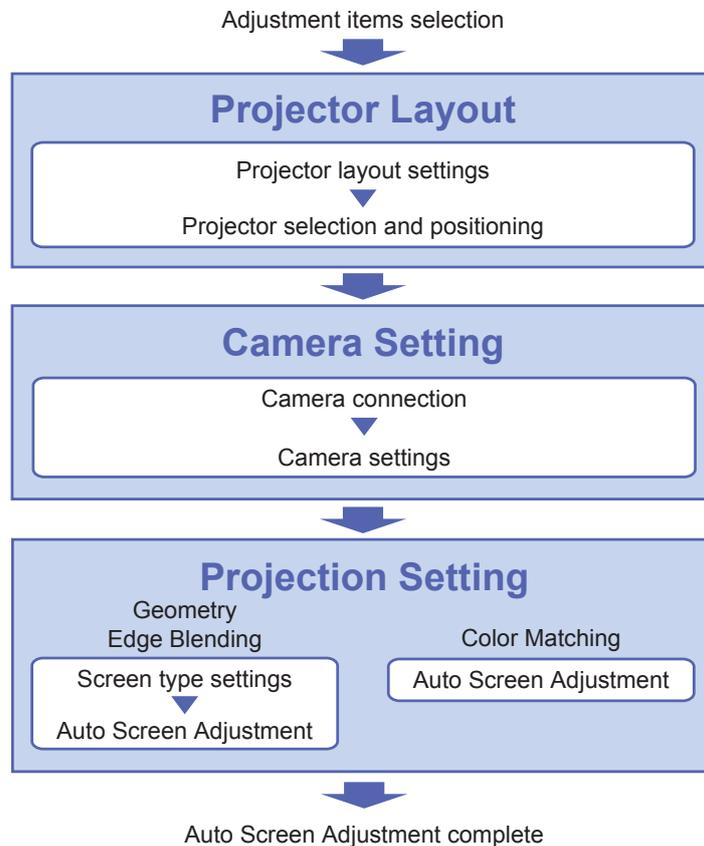
Compatible screens for Auto Screen Adjustment

Auto Screen Adjustment may not be performed properly depending on the shape of the screen. If adjustment is not performed properly, perform adjustments manually.

Compatible screens	Non-compatible screens
<ul style="list-style-type: none"> ● Flat  ● Curved in one direction <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  Horizontal direction </div> <div style="text-align: center;">  Vertical direction </div> </div> ● Curve changes smoothly in one direction <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  S-curve </div> <div style="text-align: center;">  Variable curve type </div> </div> 	<ul style="list-style-type: none"> ● Curved in two directions  Dome type ● Folded  Folded screen type Individual adjustments for each side are possible.

Operation flow for Auto Screen Adjustment

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



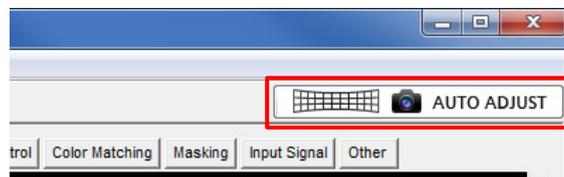
Auto Screen Adjustment procedure

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

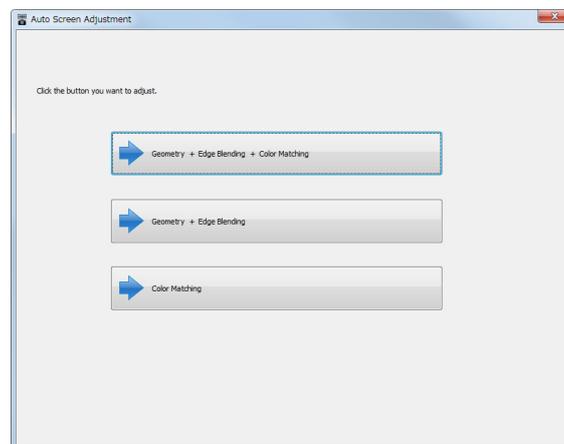


Starting Auto Screen Adjustment and selecting the adjustment item

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



2 Click the items you want to adjust.



Adjustment items selection screen

You can select from three options: [Geometry + Edge Blending + Color Matching], [Geometry + Edge Blending], or [Color Matching].

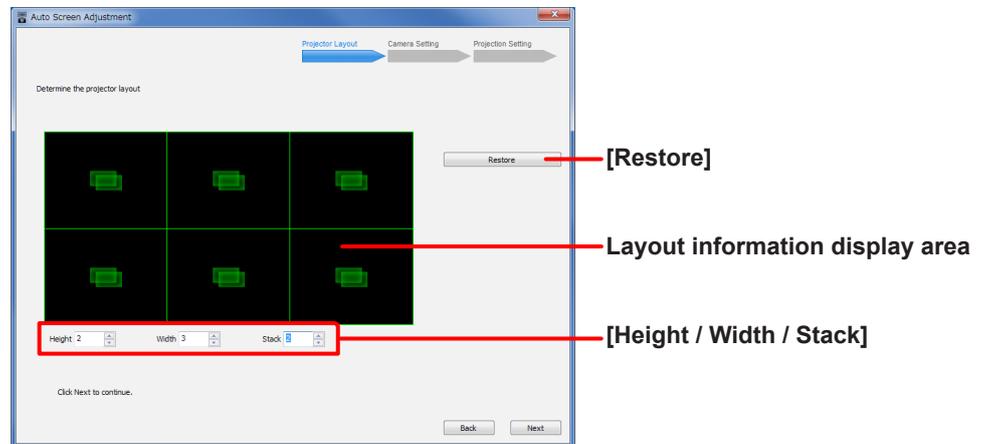
- The subsequent steps and screens that appear in the procedure will vary depending on the selected items.

Note

- Make sure the projector is turned on before starting Auto Screen Adjustment. Proper correction will not be possible if the projector is in the standby state.
- When performing color matching (color and brightness correction), do so in an environment where impact from external lighting will be low.

Projector Layout

1 Specify the projector configuration in the projector layout setting screen.



Projector layout setting screen

- 1) When you click the [Restore] button and layout information from previously configured projectors exists, the layout information is loaded and applied to the layout information display area.
- 2) Enter the height, width, and stack layout for the projectors in the [Height / Width / Stack] fields.
 - Up to 48 projectors (4 horizontal × 4 vertical × 3 stack) can be configured.

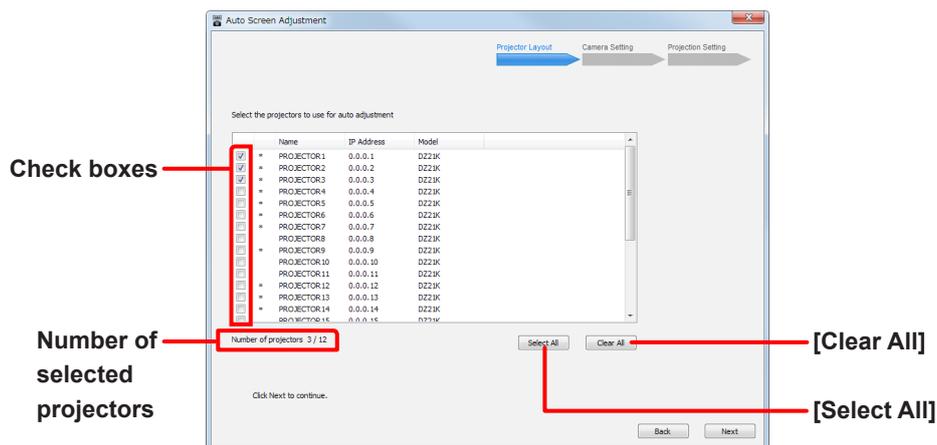
Note

- You cannot configure a layout that includes more projectors than the total number of connected projectors.
- If [Geometry + Edge Blending +Color Matching] or [Color Matching] is selected in the adjustment items selection screen, configure the layout so that one of height or width is more than one projector.

2 Click [Next].

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

3 Select the projectors for which to perform correction in the projector selection screen.



Projector selection screen

Select the check boxes of the projectors for which you want to perform correction in the connected projectors list.

- You can select all the projectors by clicking the [Select All] button, or clear selection of all the projectors by clicking the [Clear All] button.
- If you clicked the [Restore] button in step 1 to load previous layout information, the check boxes for the configured projectors will be selected.

Note

- If the projector configuration includes projectors of different models, Auto Screen Adjustment cannot be performed. Be sure to select projectors of the same model.
- When a projector for which the Auto Screen Adjustment upgrade kit (ET-CUK10) has not been applied is connected, an asterisk (*) appears to the left of that projector name. You cannot select such projectors for Auto Screen Adjustment. Perform activation.
 ⚙️ “Activation” (page 12)

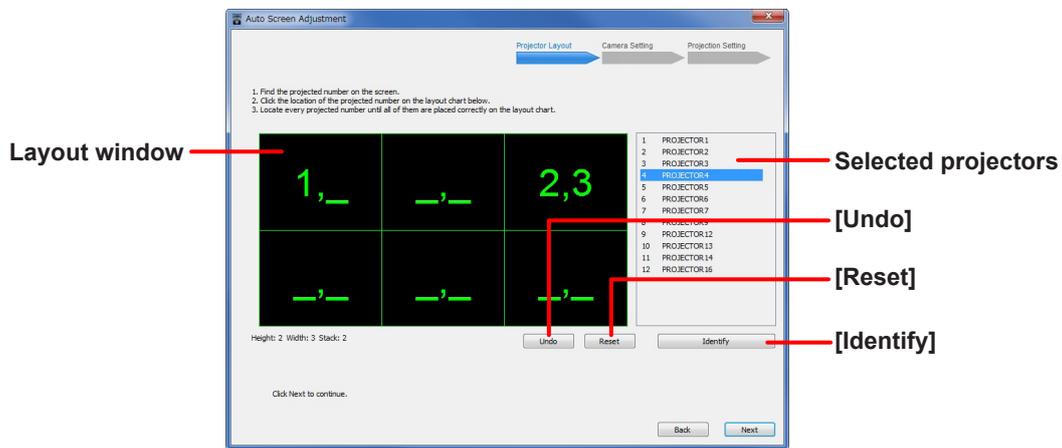
4 Click [Next].

- To return to the previous screen, click [Back].
- A warning message will appear if projectors of identical resolutions but different models coexist. Click [Next] to continue the process, or click [Cancel] to reselect projectors.
- An error message will appear in the following cases.
 In such cases, click [OK] and select the projectors again.
 - Projectors of different resolutions coexist.
 - The number of selected projectors does not match the number of projectors configured in the projector layout setting screen in step 1.
 - A projector on which the Auto Screen Adjustment upgrade kit (ET-CUK10) has not been applied is selected.

Note

When you click [Next], the geometry correction, edge blending, color, and brightness correction settings of the projectors will be initialized.

5 Confirm projector positioning in the projector positioning screen.



Projector positioning screen

Click the layout window to position the projectors.

- Configure the projectors in order, starting with the first projector in the list of selected projectors. Each number will be projected on the screen. Position the projectors in the layout window so that their numbers match the projected numbers.
- Click the [Identify] button to verify the actual projector positions on the projection screen. Each projector will project their numbers on the screen when you click the [Identify] button.
- You can cancel the positioning of the projector currently being configured by clicking the [Undo] button, or cancel positioning for all projectors by clicking the [Reset] button.

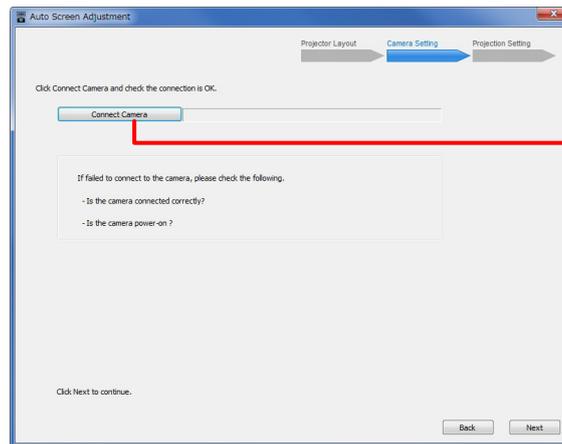
6 Click [Next].

The projector positioning information is saved.

- To return to the previous screen, click [Back].
- An error message will appear if positioning of all the projectors is not complete. Configure settings again.

Camera Setting

1 Verify camera connection in the camera connection screen.



Camera connection screen

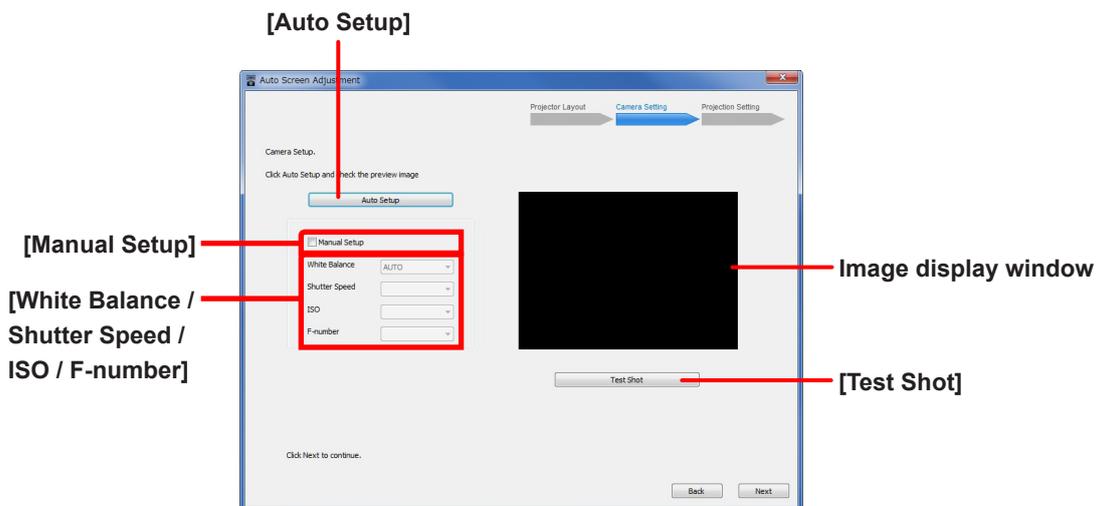
When you click the [Connect Camera] button, the model name of the camera for which connection is verified appears.

- An error message appears if connection fails.
In such cases, click [OK] and check the following.
 - The camera is properly connected.
 - The camera is turned on.

2 Click [Next].

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

3 Configure the camera you will use in the camera setting screen.



Camera setting screen

- 1) Click the [Auto Setup] button.
 - A test pattern appears on the screen, and camera configuration starts automatically.

- The setting values configured in step 1) appear in the [White Balance / Shutter Speed / ISO / F-number] fields. You can select the [Manual Setup] check box to configure the setting values manually.
- 2) 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 screen fits within the image display window.

Note

- To obtain the optimal adjustment results, make sure that the entire screen fills as much of the image display window as possible.
- Adjustment may fail if the entire screen does not fit properly within the image display window.
- 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 screen is too bright or there is a strong light present, overexposure may occur and adjustment may fail.

4 Click [Next].

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

Projection Setting

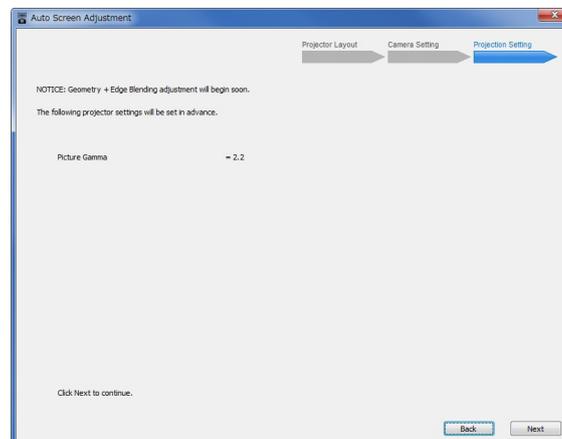
☞ If you selected [Color Matching] in “Starting Auto Screen Adjustment and selecting the adjustment items,” skip to step 5 (page 86).

1 Click [Next] in the setting initialization confirmation screen (geometry correction and edge blending).

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

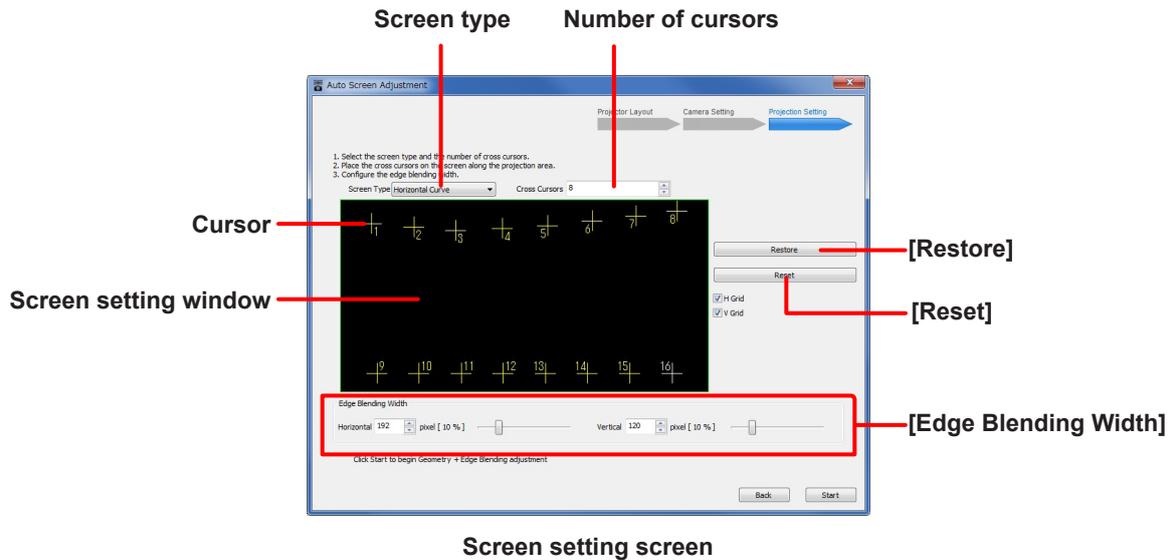
Note

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



**Setting initialization confirmation screen
(geometry correction and edge blending)**

2 Configure the screen type and overlap areas in the screen setting screen.



Screen setting screen

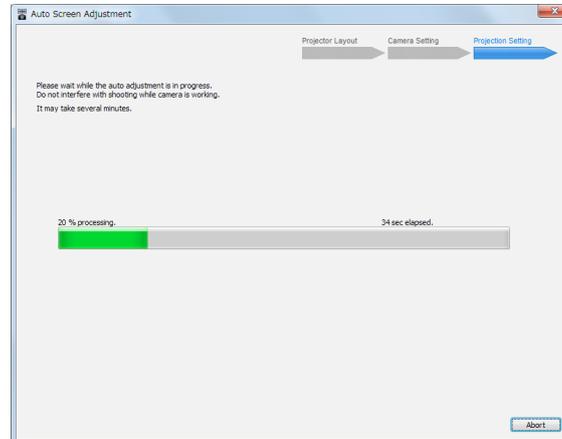
- 1) Specify the screen type and number of cursors.
 - Select the screen type that matches the shape of the screen. If [Horizontal Curve] or [Vertical Curve] is selected, specify the number of cursors according to the curvature of the screen.
 - [Flat]:** Flat screen
 - [Horizontal Curve]:** Screen that is curved in the horizontal direction
 - [Vertical Curve]:** Screen that is curved in the vertical direction
 - When [Cylindrical-H] or [Cylindrical-V] is selected, you can specify 3 to 32 cursors for each side.
- 2) While viewing the actual screen, position the cursors in the screen setting window according to the outline of the screen.
 - Position each cursor by dragging them or by using the arrow keys on the keyboard. When using the keyboard, pressing an arrow key while a cursor is selected moves the cursor 8 dots, pressing an arrow key while holding the Ctrl key moves the cursor 1 dot, and pressing an arrow key while holding the Alt key moves the cursor 64 dots.
 - You can select the next cursor by pressing the Tab key, or the previous cursor by pressing the Tab key while holding the Shift key.
 - You can also select cursors using the number keys on the keyboard.
 - If a cursor layout that differs from the current one was previously configured, clicking the [Restore] button will restore that layout.
 - To return all cursors to their original positions, click [Reset].
- 3) To configure the horizontal and vertical overlap areas, enter the values in the [Edge Blending Width] fields.
 - You can also use the sliders to specify values.
 - A percentage value that corresponds to the configured pixel count appears in the percent display.

3 Click [Start].

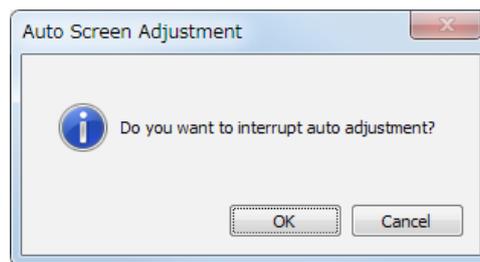
The projector positioning information is saved.

A progress bar appears, and Auto Screen Adjustment for geometry correction and edge blending starts.

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

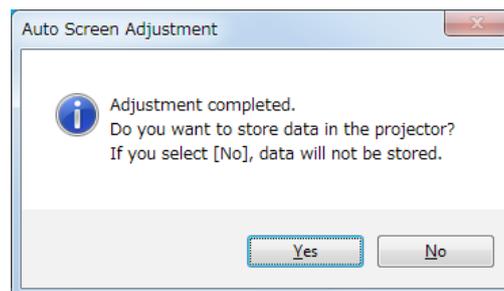


- To cancel Auto Screen Adjustment, click [Abort].
In such cases, click [OK] when the following screen appears.

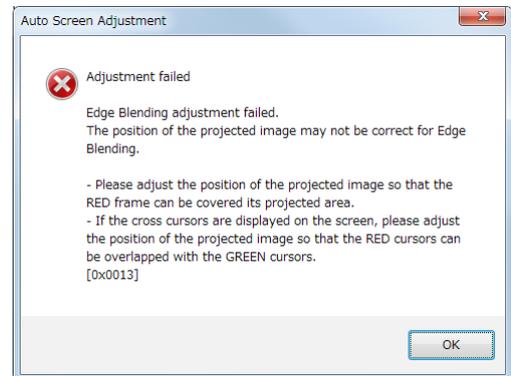
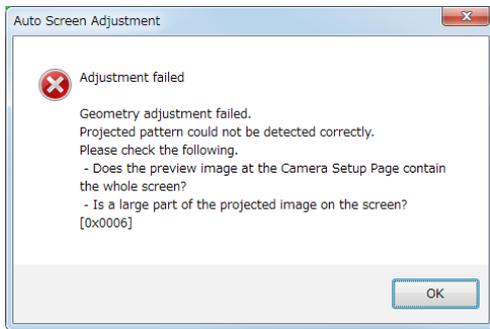


4 A message indicating that Auto Screen Adjustment is complete appears.

Select [Yes] to save adjustment results to the projectors or [No] to not save.



- A message appears if Auto Screen Adjustment fails. In such cases, check the content of the message, click [OK], and configure settings again.
To return to the screen from step 2 (page 84), click [OK].



- Capture a test shot, and verify that the entire screen fits within the image display window. (☞ page 83)
- Verify that a large portion of the projected image to be adjusted fits within the screen.
- Check that the camera and screen are as close as possible to directly facing each other.
- Check the position of the image that is projected on the screen.

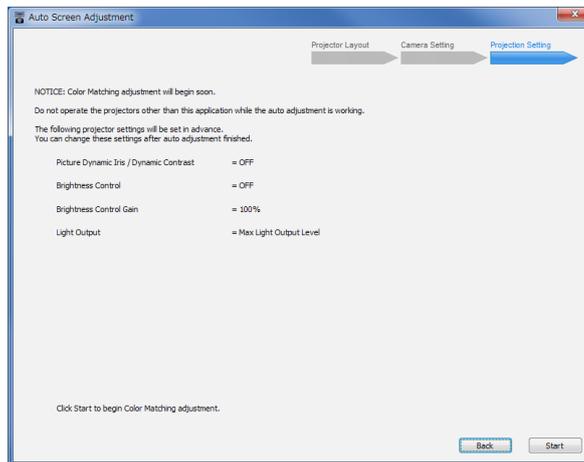
☞ If you selected [Geometry + Edge Blending] in step 2 of “Starting Auto Screen Adjustment and selecting the adjustment items” (page 79), Auto Screen Adjustment is complete.

5 Click [Start] in the setting initialization confirmation screen (color and brightness adjustment).

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

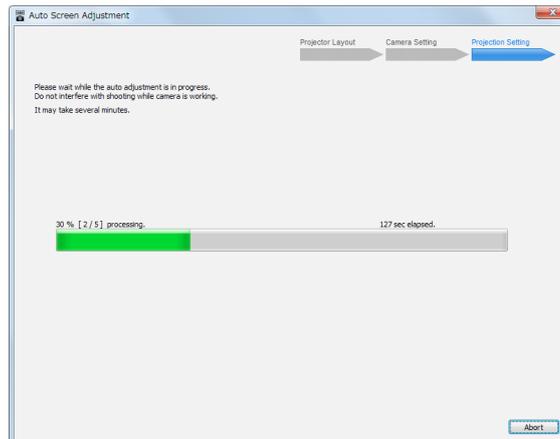
Note

When you click [Start], the projector settings will change to those displayed on this screen.

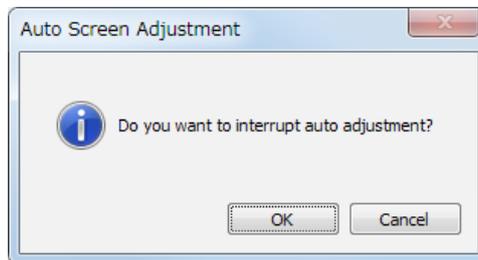


Setting initialization confirmation screen (color and brightness adjustment)

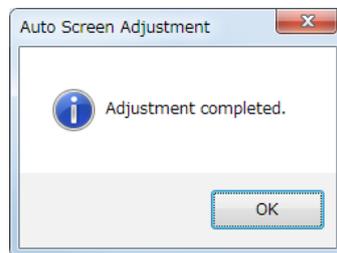
A progress bar appears, and Auto Screen Adjustment for color and brightness adjustment starts.



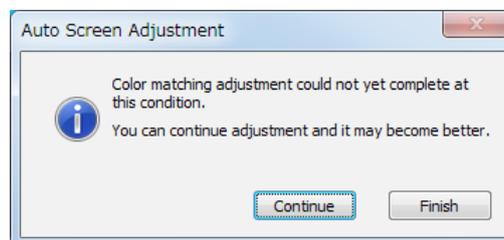
- To cancel Auto Screen Adjustment, click [Abort].
In such cases, click [OK] when the following screen appears.



- 6** A message indicating that Auto Screen Adjustment is complete appears. Click [OK] to complete Auto Screen Adjustment.



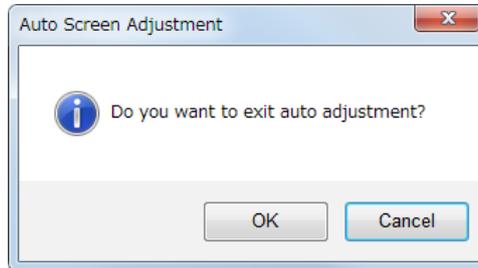
- The following message appears if Auto Screen Adjustment could not be completed and must be performed again. To perform Auto Screen Adjustment for color and brightness correction again, click [Continue]. To exit Auto Screen Adjustment, click [Finish].



- A message appears if Auto Screen Adjustment fails due to overexposure. If the screen is too bright or there is a strong light present, overexposure may occur. In such cases, click [OK] and configure settings again.

Note

- When you click the  button at the top right of the screen, a confirmation screen for canceling Auto Screen Adjustment appears.
To exit Auto Screen Adjustment, click [OK]. To return to the previous screen, click [Cancel].



- The projector layout and cursor layout information configured during Auto Screen Adjustment is stored until the next time you configure the settings.
- To perform detailed adjustment after using Auto Screen Adjustment, perform adjustments manually in the main screen of Geometry Manager Pro.
 - ☞ “Adjustment and Settings – Geometry Correction” (page 32)
 - ☞ “Adjustment and Settings – Edge Blending” (page 47)
 - ☞ “Adjustment and Settings – Brightness Control” (page 57)
 - ☞ “Adjustment and Settings – Color Matching” (page 60)

Frequently Asked Questions

Check the following points once more before requesting repair.

Projector is not recognized.

- Has the projector's power been turned on?
- Is the projector supported by the software application? ☞ "Projectors supported" (page 10)
- Have the units been connected properly? ☞ "Preparation" (page 10)
- Has the projector's network been set up correctly? ☞ "Setting the Projector" (page 11)
- Has an attempt been made to connect 65 or more projectors?

No connection can be made between my projector and my computer

- When Windows Firewall has been detected

Windows 7

Is this software registered in [Start] → [Control Panel] → [System and Security] → [Windows Firewall] → [Allowed programs and features] tab?

Please register the programs and functions that are approved by firewall in this software.

● How to set up

1. Click [Start] → [Control Panel].
2. When the <Control Panel> appears, click [System and Security] → [Allow a program through Windows Firewall].
3. When <Allow programs to communicate through Windows Firewall> appears, click [Change settings] → [Allow another program...].
4. When the <Add a Program> dialog box appears, select [Geometry Manager Pro] and click [Add].
If [Geometry Manager Pro] is not on the list, click [Browse], select [GeometryGUI.exe] and click [Open]. [Geometry Manager Pro] appears in the [Program] column
5. [Geometry Manager Pro] appears in the [Allowed programs and features] column.
6. Select the network from [Home/Work (Private)], [Public] you want to allow connection to and click to select the check box.
7. Click [OK] in the <Allow programs to communicate through Windows Firewall>.
8. This software will now be added to the Windows firewall's exception list.

Windows 8 / Windows 8.1

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 [Geometry Manager Pro] and click [Add].
If [Geometry Manager Pro] is not on the list, click [Browse...], select [GeometryGUI.exe] and click [Open]. [Geometry Manager Pro] appears in the [App] column
5. [Geometry Manager Pro] 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 another 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
<p><Is the "Warning 1910. Could not remove ..." message displayed?> If an NVIDIA driver is installed on the computer, the following message may appear.</p> <div data-bbox="504 344 1206 589" data-label="Image"></div> <p>Click [OK] to continue an uninstall or update procedure. Although uninstalling the software will also remove the desktop shortcut icons, they will be regenerated when you start up the computer next time. Manually delete the shortcut icons.</p>
Files cannot be saved.
<ul style="list-style-type: none">● Has an attempt been made to save a file that includes values that exceed the range which can be set in the projector?● 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?
Image correction cannot be performed.
<ul style="list-style-type: none">● Have settings been sent to the projector that exceed the range which can be set in the projector?● Has the projector's power been turned on? Some items cannot be set if the projector's power is not on.● Are the projector'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.
The bitmap used for masking purposes cannot be loaded.
<ul style="list-style-type: none">● Has an attempt been made to load bitmap data which is not in the 1-bit monochrome format?● Does the bitmap have the appropriate size? Bitmaps with a resolution of smaller than 8 × 8 pixels or larger than 1 920 × 1 200 pixels cannot be used for masking.
Cannot connect to the camera (Auto Screen Adjustment).
<ul style="list-style-type: none">● Is the camera turned on?● Is the camera connected to the computer properly?
The image does not fit exactly on flat screens (Auto Screen Adjustment).
<ul style="list-style-type: none">● The projected image may not match the edges of the screen exactly if the screen is sagging. If the top and bottom edges are off: In the screen setting screen, set the screen type to [Horizontal Curve], and specify at least 3 cursors according to the shape of the screen. If the left and right edges are off: In the screen setting screen, set the screen type to [Vertical Curve], and specify at least 3 cursors according to the shape of the screen.
Geometry correction results in an images that appears curved (Auto Screen Adjustment).
<ul style="list-style-type: none">● This occurs on soft curved screens and on screens with heavy sag. Correction is performed so that the image appears straight from the point of view of the camera. Position to the camera so that it is as close as possible to directly facing the screen.

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