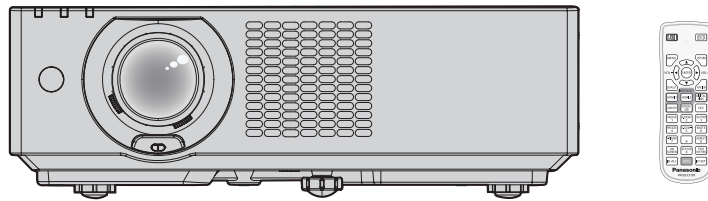


# Panasonic®

## Operating Instructions Functional Manual

LCD Projector Commercial Use

Model No. **PT-VMZ82**  
**PT-VMZ72**  
**PT-VMZ62**



Thank you for purchasing this Panasonic product.

- This manual is common to all the models regardless of suffixes of the Model No.
  - for India  
D: White model
  - for Taiwan  
T: White model
  - for other countries or regions  
With B: Black model                      Without B: White model
- Before operating this product, please read the instructions carefully, and save this manual for future use.
- Before using your projector, be sure to read “Read this first!” (➔ pages 5 to 15).



**HDMI™**  
HIGH-DEFINITION MULTIMEDIA INTERFACE



ENGLISH

DPQP1556YA/X1

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# Read this first!

**WARNING:** THIS APPARATUS MUST BE EARTHED.

**WARNING:** To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or moisture.  
This device is not intended for use in the direct field of view at visual display workplaces. To avoid incommoding reflections at visual display workplaces this device must not be placed in the direct field of view.  
The equipment is not intended for used at a video workstation in compliance BildscharbV.  
The sound pressure level at the operator position is equal or less than 70 dB (A) according to ISO 7779.

**WARNING:**

1. Remove the plug from the mains socket when this unit is not in use for a prolonged period of time.
2. To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
3. Do not remove the earthing pin on the mains plug. This apparatus is equipped with a three prong earthing-type mains plug. This plug will only fit an earthing-type mains socket. This is a safety feature. If you are unable to insert the plug into the mains socket, contact an electrician. Do not defeat the purpose of the earthing plug.

**WARNING:**

This equipment is compliant with Class A of CISPR32.  
In a residential environment this equipment may cause radio interference.

**(for Taiwan)**

**WARNING:**

This equipment complies with the Class A standard of CNS15936.  
To avoid radio frequency interference, this equipment should not be installed or used in a residential environment.

**CAUTION:**

To assure continued compliance, follow the attached installation instructions. This includes using the provided power cord and shielded interface cables when connecting to computer or peripheral devices. Also, any unauthorized changes or modifications to this equipment could void the user's authority to operate this device.

This is a device to project images onto a screen, etc., and is not intended for use as indoor lighting in a domestic environment.

Directive 2009/125/EC

**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

**WARNING:** RISK OF ELECTRIC SHOCK. DO NOT OPEN.



Indicated on the projector



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

## Read this first!

**WARNING:** Do not look at the light emitted from the lens while the projector is being used. As with any bright source, do not stare into the direct beam, RG2 IEC 62471-5:2015.



Indicated on the projector

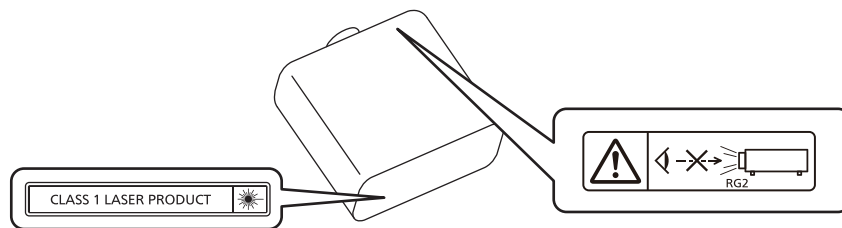
**WARNING:** Do not place objects in front of the lens while the projector is being used.



Indicated on the projector

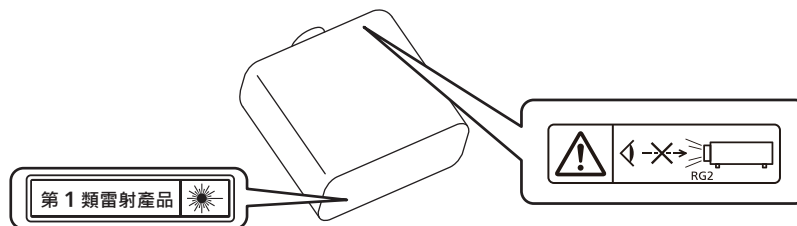
### Notice on laser

This projector is the Class 1 laser product that complies with IEC 60825-1:2014.



### Notice on laser (for Taiwan)

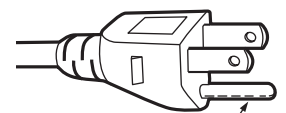
This projector is the Class 1 laser product that complies with IEC 60825-1:2014.



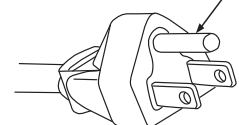
**CAUTION:** Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### CAUTION (North/Middle/South America/Taiwan)

This equipment is equipped with a three-pin grounding-type power plug. Do not remove the grounding pin on the power plug. This plug will only fit a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician. Do not defeat the purpose of the grounding plug.



Do not remove



## WARNING (USA and Canada)

- Not for use in a computer room as defined in the Standard for the Protection of Electronic Computer/Data Processing Equipment, ANSI/NFPA 75.
- For permanently connected equipment, a readily accessible disconnect device shall be incorporated in the building installation wiring.
- For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.

## NOTIFICATION (Canada)

This class A digital apparatus complies with Canadian ICES-003.

## For USA-California Only

This product contains a CR Coin Cell Lithium Battery which contains Perchlorate Material – special handling may apply.  
See [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate)

## EU Only



This CE mark covers the battery(ies) supplied with the product and indicates that the battery(ies) comply with the requirements of the Battery Regulation (EU) 2023/1542.

## WARNING

### THIS PRODUCT CONTAINS A COIN BATTERY



- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **DEATH** or serious injury can occur in 2 hours or less if swallowed or placed inside any part of the body.
- The battery is hazardous, **KEEP** new and used batteries **OUT OF REACH** of **CHILDREN**
- Seek immediate medical attention if a battery is suspected to be swallowed or inserted inside any part of the body.

## FCC NOTICE (USA)

### Supplier's Declaration of Conformity

Model Number: PT-VMZ82, PT-VMZ82B, PT-VMZ72, PT-VMZ72B, PT-VMZ62, PT-VMZ62B  
Trade Name: Panasonic  
Responsible Party: Panasonic Corporation of North America  
Address: Two Riverfront Plaza, Newark, NJ 07102-5490  
General Contact: <http://www.panasonic.com/support>  
Projector Contact: 855-772-8324 or [projectorsupport@us.panasonic.com](mailto:projectorsupport@us.panasonic.com)

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### Caution:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### FCC Warning:

To assure continued compliance, follow the attached installation instructions. This includes using the provided power cord and shielded interface cables when connecting to computer or peripheral devices. Also, any unauthorized changes or modifications to this equipment could void the user's authority to operate this device.



## IMPORTANT: THE MOLDED PLUG

FOR YOUR SAFETY, PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This appliance is supplied with a molded three pin mains plug for your safety and convenience. A 13 amp fuse is fitted in this plug. Should the fuse need to be replaced, please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover, you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover, the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from an Authorized Service Center.

**If the fitted molded plug is unsuitable for the mains socket in your home, then the fuse should be removed and the plug cut off and disposed of safely. There is a danger of severe electrical shock if the cut off plug is inserted into any 13 amp socket.**


If a new plug is to be fitted, please observe the wiring code as shown below.  
If in any doubt, please consult a qualified electrician.

**WARNING:** THIS APPLIANCE MUST BE EARTHED.

**IMPORTANT:** The wires in this mains lead are colored in accordance with the following code:

Green - and - Yellow: Earth  
Blue: Neutral  
Brown: Live

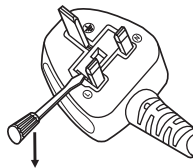
As the colors of the wire in the mains lead of this appliance may not correspond with the colored markings identifying the terminals in your plug, proceed as follows.

The wire which is colored GREEN - AND - YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol  or colored GREEN or GREEN - AND - YELLOW.

The wire which is colored BLUE must be connected to the terminal in the plug which is marked with the letter N or colored BLACK.

The wire which is colored BROWN must be connected to the terminal in the plug which is marked with the letter L or colored RED.

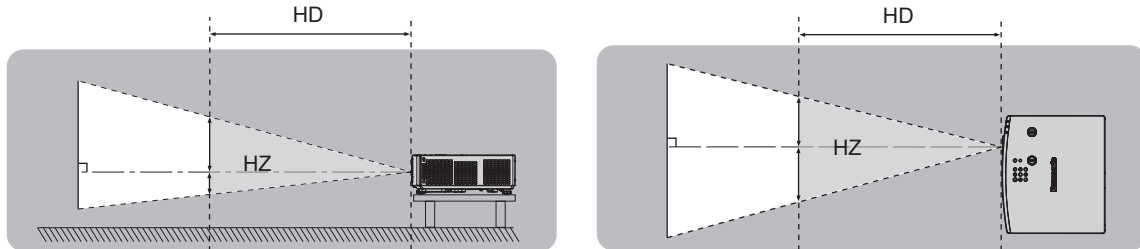
How to replace the fuse: Open the fuse compartment with a screwdriver and replace the fuse.



### ■ Hazard distance (IEC 62471-5:2015)

The distance from the projection lens surface, at which the emission reaches the Accessible Emission Limit (AEL) of risk group 2, is known as the hazard distance (HD) or safety distance. The area where the emission exceeds the Accessible Emission Limit of risk group 2 is called the hazard zone (HZ).

Within the hazard zone, never look into the light projected from the projector. The eyes may be damaged by direct irradiation even if you look at the light just for a moment. If you are outside the hazard zone, it is considered to be safe in all circumstances except deliberately staring into the light projected from the projector.



### ■ Risk group

The projector is categorized as the risk group 2 when the hazard distance is 1 m (39-3/8") or less. It is categorized as the risk group 3 when the hazard distance exceeds 1 m (39-3/8"), and it will be for professional use instead of consumer use.

In the case of risk group 3, there is a possibility of damaging the eyes by direct irradiation when looking into the projection light from inside the hazard zone even for a moment.

In the case of risk group 2, safe use without damaging the eyes is possible in all circumstances except deliberately staring into the light projected from the projector.

This projector is categorized as risk group 2.

## **WARNING:**

### **■ POWER**

**The wall outlet or the circuit breaker shall be installed near the equipment and shall be easily accessible when problems occur. If the following problems occur, cut off the power supply immediately.**

Continued use of the projector in these conditions will result in fire or electric shock, or will cause visual impairment.

- If foreign objects or water get inside the projector, cut off the power supply.
  - If the projector is dropped or the cabinet is broken, cut off the power supply.
  - If you notice smoke, strange smells or noise coming from the projector, cut off the power supply.
- Please contact an Authorized Service Center for repairs, and do not attempt to repair the projector yourself.

**During a thunderstorm, do not touch the projector or the cable.**

Electric shocks can result.

**Do not do anything that might damage the power cord or the power plug.**

If the power cord is used while damaged, electric shocks, short-circuits or fire will result.

- Do not damage the power cord, make any modifications to it, place it near any hot objects, bend it excessively, twist it, pull it, place heavy objects on top of it or wrap it into a bundle.

Ask an Authorized Service Center to carry out any repairs to the power cord that might be necessary.

**Do not use anything other than the provided power cord.**

Failure to observe this will result in electric shocks or fire. Please note that if you do not use the provided power cord to ground the device on the side of the outlet, this may result in electric shocks.

**Completely insert the power plug into the wall outlet and the power connector into the projector terminal.**

If the plug is not inserted correctly, electric shocks or overheating will result.

- Do not use plugs which are damaged or wall outlets which are coming loose from the wall.

**Do not handle the power plug and power connector with wet hands.**

Failure to observe this will result in electric shocks.

**Do not overload the wall outlet.**

If the power supply is overloaded (ex., by using too many adapters), overheating may occur and fire will result.

**Clean the power plug regularly to prevent it from becoming covered in dust.**

Failure to observe this will cause a fire.

- If dust builds up on the power plug, the resulting humidity can damage the insulation.
- If not using the projector for an extended period of time, pull the power plug out from the wall outlet.

Pull the power plug out from the wall outlet and wipe it with a dry cloth regularly.

### **■ ON USE/INSTALLATION**

**Do not place the projector on soft materials such as carpets or sponge mats.**

Doing so will cause the projector to overheat, which can cause burns, fire or damage to the projector.

**Do not set up the projector in humid or dusty places or in places where the projector may come into contact with oily smoke or steam.**

Using the projector under such conditions will result in fire, electric shocks or deterioration of components. Oil may also cause deterioration of plastics and the projector installed to the ceiling etc. could fall.

**Do not install this projector in a place which is not strong enough to take the full weight of the projector or on top of a surface which is sloped or unstable.**

Failure to observe this will cause projector to fall down or tip over the projector, and severe injury or damage could result.

**Do not install the projector in a location where people pass through.**

People may bump into the projector or trip on the power cord, which may result in fire, electric shock, or injury.

**Install the projector in a location sufficiently away from surrounding walls and objects so that air ventilation is not obstructed.**

Failure to observe this will cause the projector to overheat, which can cause fire or damage to the projector.

- Do not place the projector in narrow, badly ventilated places.  
For details, refer to "Cautions when setting up the projectors" (➔ page 20).
- Do not place the projector on cloth or papers, as these materials could be drawn into the intake vent.

## **WARNING:**

**Do not look at or place your skin into the light emitted from the lens while the projector is being used. Do not enter the projection luminous flux using an optical device (such as magnifier or mirror).**

Doing so can cause burns or loss of sight.

- Strong light is emitted from the projector's lens. Do not look at or place your hands directly into this light.
- Be especially careful not to let young children look into the lens. In addition, turn off the power and disconnect the power plug when you are away from the projector.

**Never attempt to remodel or disassemble the projector.**

High voltages can cause fire or electric shocks.

- For any inspection, adjustment and repair work, please contact an Authorized Service Center.

**Do not allow metal objects, flammable objects, or liquids to enter inside of the projector. Do not allow the projector to get wet.**

Doing so may cause short circuits or overheating, and result in fire, electric shock, or malfunction of the projector.

- Do not place containers of liquid or metal objects near the projector.
- If liquid enters inside of the projector, consult your dealer.
- Particular attention must be paid to children.

**Use the ceiling mount bracket specified by Panasonic Projector & Display Corporation.**

Using the ceiling mount bracket other than the specified one will result in falling accidents.

- Attach the supplied safety cable to the ceiling mount bracket to prevent the projector from falling down.

**Installation work such as mounting the projector on the ceiling should only be carried out by a qualified technician.**

If installation is not carried out and secured correctly, it can cause injury or accidents, such as electric shocks.

## **■ ACCESSORIES**

**Do not use or handle the batteries improperly, and refer to the following.**

Failure to observe this will cause burns, batteries to leak, overheat, explode or catch fire.

- Do not use unspecified batteries.
- Do not charge dry cell batteries.
- Do not disassemble dry cell batteries.
- Do not heat the batteries or place them into water or fire.
- Do not allow the + and – terminals of the batteries to come into contact with metallic objects such as necklaces or hairpins.
- Do not store or carry batteries together with metallic objects.
- Store the batteries in a plastic bag and keep them away from metallic objects.
- Make sure the polarities (+ and –) are correct when inserting the batteries.
- Do not use a new battery together with an old battery or mix different types of batteries.
- Do not use batteries with the outer cover peeling away or removed.

**If the battery fluid leaks, do not touch it with bare hands, and take the following measures if necessary.**

- Battery fluid on your skin or clothing could result in skin inflammation or injury.  
Rinse with clean water and seek medical advice immediately.
- Battery fluid coming in contact with your eyes could result in loss of sight.  
In this case, do not rub your eyes. Rinse with clean water and seek medical advice immediately.

**Do not allow children to reach the batteries.**

Accidentally swallowing them can cause physical harm.

- If swallowed, seek medical advice immediately.

**Remove the depleted batteries from the remote control promptly.**

- Leaving them in the unit may result in fluid leakage, overheating, or explosion of the batteries.

## CAUTION:

### ■ POWER

**When disconnecting the power cord, be sure to hold the power plug and power connector.**

If the power cord itself is pulled, the lead will become damaged, and fire, short-circuits or serious electric shocks will result.

**When not using the projector for an extended period of time, disconnect the power plug from the wall outlet.**

Failure to do so may result in fire or electric shock.

**Disconnect the power plug from the wall outlet before carrying out any cleaning and replacing the unit.**

Failure to do so may result in electric shock.

### ■ ON USE/INSTALLATION

**Do not place heavy objects on top of the projector.**

Failure to observe this will cause the projector to become unbalanced and fall, which could result in damage or injury. The projector will be damaged or deformed.

**Do not put your weight on this projector.**

You could fall or the projector could break, and injury will result.

- Be especially careful not to let young children stand or sit on the projector.

**Do not place the projector in extremely hot locations.**

Doing so will cause the outer casing or internal components to deteriorate, or result in fire.

- Take particular care in locations exposed to direct sunlight or near heaters.

**Do not install the projector in a location where salt pollution or corrosive gas may occur.**

Doing so may result in falling due to corrosion. Also, it may result in malfunctions.

**Do not stand in front of the lens while the projector is being used.**

Doing so can cause damage and burns to clothing.

- Strong light is emitted from the projector's lens.

**Do not place objects in front of the lens while the projector is being used.**

**Do not block the projection by placing an object in front of the projection lens.**

Doing so can cause fire, damage to an object, or malfunction of the projector.

- Strong light is emitted from the projector's lens.

**Always disconnect all cables before moving the projector.**

Moving the projector with cables still attached can damage the cables, which will cause fire or electric shocks to occur.

**Never plug headphones and earphones into <AUDIO OUT> terminal.**

Excessive sound pressure from headphones and earphones can cause hearing loss.

**When mounting the projector on the ceiling, keep mounting screws and power cord from contact with metal parts inside the ceiling.**

Contact with metal parts inside the ceiling can cause electric shocks.

### ■ ACCESSORIES

**When not using the projector for an extended period of time, remove the batteries from the remote control.**

Failure to observe this will cause the batteries to leak, overheat, catch fire or explode, which may result in fire or contamination of surrounding area.

### ■ MAINTENANCE

**Do not attach the air filter unit while it is wet.**

Doing so may result in electric shock or malfunctions.

- After you clean the air filter units, dry them thoroughly before reattaching them.

**Ask your dealer about cleaning inside the projector every 20 000 hours of usage as an estimated duration.**

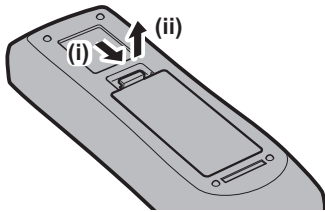
Continuous use while dust is accumulated inside the projector may result in fire.

- For cleaning fee, ask your dealer.

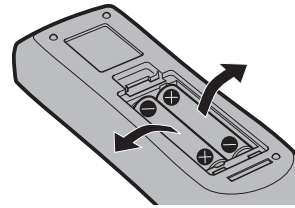
## To remove the battery

### Remote Control Battery

1. Press the guide and lift the cover.



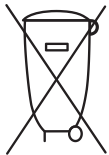
2. Remove the batteries.



## Brazil Only

### Brasil Apenas

#### ■ Manuseio de baterias usadas

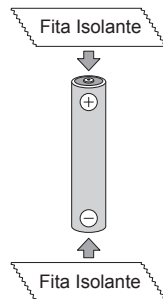


#### BRASIL

Após o uso, as pilhas e/ou baterias deverão ser entregues ao estabelecimento comercial ou rede de assistência técnica autorizada.

Cobrir os terminais positivo (+) e negativo (-) com uma fita isolante adesiva, antes de depositar numa caixa destinada para o recolhimento. O contato entre partes metálicas pode causar vazamentos, gerar calor, romper a blindagem e produzir fogo. (Fig. 1)

Fig. 1  
Como isolar os terminais

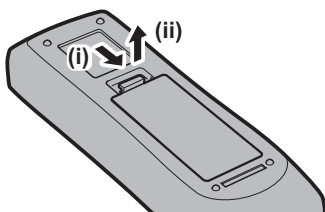


Não desmonte, não remova o invólucro, nem amasse a bateria. O gás liberado pela bateria pode irritar a garganta, danificar o lacre do invólucro ou o vazamento provocar calor, ruptura da blindagem e produzir fogo devido ao curto circuito dos terminais. Não incinere nem aqueça as baterias, elas não podem ficar expostas a temperaturas superiores a 100 °C (212 °F). O gás liberado pela bateria pode irritar a garganta, danificar o lacre do invólucro ou o vazamento provocar calor, ruptura da blindagem e produzir fogo devido ao curto circuito dos terminais provocado internamente.

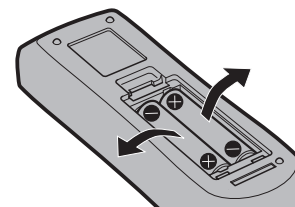
Evite o contato com o líquido que vazar das baterias. Caso isto ocorra, lave bem a parte afetada com bastante água. Caso haja irritação, consulte um médico.

#### ■ Remoção das baterias

1. Pressione a guia e levante a tampa.



2. Remova as baterias.



**Disposal of Old Equipment and Batteries**  
**Only for European Union and countries with recycling systems**



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries must not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points in accordance with your national legislation.



By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.

For more information about collection and recycling, please contact your local authority.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



**Note for the battery symbol (bottom symbol)**

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

**Product Information (for Turkey only)**

AEEE Yönetmeliğine Uygundur

**For India Only**

Information on hazardous constituents as specified in the E-Waste (Management) Rules in electrical and electronic equipment. Declaration of Conformity with the requirements of the E-Waste (Management) Rules limits with respect to Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls, Polybrominated diphenyl ethers. The content of hazardous substance with the exemption of the applications listed in the E-Waste (Management) Rules:

1. Lead (Pb) – not over 0.1% by weight.
2. Cadmium (Cd) – not over 0.01% by weight.
3. Mercury (Hg) – not over 0.1% by weight.
4. Hexavalent chromium (Cr6+) – not over 0.1% by weight.
5. Polybrominated biphenyls (PBBs) – not over 0.1% by weight.
6. Polybrominated diphenyl ethers (PBDEs) – not over 0.1% by weight.

For the purpose of recycling to facilitate effective utilization of resources, please return this product to a nearby authorized collection center, registered dismantler or recycler, or Panasonic service center when disposing of this product.

Customer care number (Toll free): 080-6984-1333

Please see the Panasonic website for further information on collection centers, etc. or call the customer care toll-free number.

<https://www.panasonic.com/in/corporate/e-waste-management.html>

**Do's & Don'ts**

No.	Do's	Don'ts
1	All electrical and electronic products are required to be handed over only to the Authorized recycler.	The product should not be opened by the user himself / herself, but only by authorized service personnel.
2	The product should be handed over only to authorized recycler for disposal.	The product is not meant for re-sale to any unauthorized agencies / scrap dealers / kabariwalas.
3	Keep the product in an isolated area, after it becomes non-functional / unrepairable so as to prevent its accidental breakage.	The product is not meant for mixing into household waste stream.
4	Refer to Operating Instructions for handling of end of life products	Do not keep any replaced spare part(s) from the product in an exposed area.
5	Always dispose of products that have reached end of life at Panasonic Life Solutions India Authorized Service Centre.	Do not donate old electronic items to anybody. Do not dispose of your product in garbage bins along with municipal waste that ultimately reaches landfill.
6	Wherever possible or as instructed, separate the packaging material according to responsible waste disposal options and sorting for recycling.	Do not give e-waste to informal and unorganized sectors like Local Scrap Dealers / Rag Pickers.

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## ■ Trademarks

- SOLID SHINE is a trademark of Panasonic Projector & Display Corporation.
- The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI Trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.
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- Mac, macOS, iPadOS, iPad, iPhone, iPod touch and Safari are trademarks of Apple Inc., registered in the United States and other countries.
- IOS is a trademark or registered trademark of Cisco in the U.S. and other countries and is used under license.
- Android and Google Chrome are trademarks of Google LLC.
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- Some of the fonts used in the on-screen menu are Ricoh bitmap fonts, which are manufactured and sold by Ricoh Company, Ltd.
- All other names, company names, and product names mentioned in this manual are trademarks or registered trademarks of their respective owners.  
Please note that the ® and ™ symbols are not specified in this manual.

## ■ Software information regarding this product

This product incorporates the following software:

- (1) the software developed independently by or for Panasonic Projector & Display Corporation,
- (2) the software owned by third party and licensed to Panasonic Projector & Display Corporation,
- (3) Crestron Connected software owned by Crestron and licensed to Panasonic Projector & Display Corporation, and is compatible with the Crestron XiO Cloud Service,
- (4) the software licensed under the GNU General Public License, Version 2.0 (GPL V2.0),
- (5) the software licensed under the GNU LESSER General Public License, Version 2.1 (LGPL V2.1), and/or
- (6) open source software other than the software licensed under the GPL V2.0 and/or LGPL V2.1.

The software categorized as (4) - (6) are distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY, without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. Please refer to the license terms and conditions of each open source software. The open source software license is stored in the firmware of this product and can be downloaded by accessing the projector using a web browser. For details, please refer to "Using the web control function" (➡ page 139).

At least three (3) years from delivery of this product, Panasonic Projector & Display Corporation will give to any third party who contacts us at the contact information provided below, for a charge no more than our cost of physically performing source code distribution, a complete machine-readable copy of the corresponding source code covered under GPL V2.0, LGPL V2.1 or the other licenses with the obligation to do so, as well as the respective copyright notice thereof.

Contact Information: [oss-cd-request@gg.jp.panasonic.com](mailto:oss-cd-request@gg.jp.panasonic.com)

Presenter Light uses the following software programs.

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

## ■ Illustrations in these operating instructions

- Illustrations of the projector, menu screen (OSD), and other parts may vary from the actual product.
- Illustrations displayed on the computer screen may differ depending on the types of the computer, operating system, and the web browser.
- Illustrations of the projector with the power cord attached are only examples. The shape of the supplied power cords varies depending on the country where you purchased the product.

## ■ Page references

- Reference pages in this manual are indicated as : (➡ page 00).

## ■ Term

- In this manual, the "Wireless remote control unit" accessory is referred to as the "Remote control".



## Features of the Projector

### Flexible installation

- ▶ High brightness\*<sup>1</sup> for a compact body and light weight\*<sup>2</sup>.
- ▶ Wide aspect (21:9) enriches the application scenario.
- ▶ Second generation Crestron Connected enhances the system compatibility.
- ▶ In addition to the 1.6x zoom lens and the horizontal/vertical lens shift, Digital Zoom Extender and 6-Point Correction functions are adopted, making it possible for installation in a limited space, projection from a longer distance or projection onto a corner.

\*1 PT-VMZ82: 8 000 lm  
PT-VMZ72: 7 300 lm  
PT-VMZ62: 6 500 lm

\*2 PT-VMZ82: 7.4 kg  
PT-VMZ72: 7.0 kg  
PT-VMZ62: 6.9 kg

### Easy setting & use

- ▶ Fine adjustment of screen distortion is available with the grid adjustment method.
- ▶ Installation labor saved thanks to the data cloning function via LAN or USB.
- ▶ Firmware update via USB is available for users.
- ▶ New functions such as SCHEDULE and AUTO POWER ON streamline the daily use.

### Eco-friendly design

- ▶ High-efficiency optical design and multiple power save functions such as the new IMAGE DETECTION function save the power consumption.
- ▶ Recycled material is used to minimize environmental impact.

## Quick Steps

For details, refer to the corresponding pages.

1. **Set up your projector.**  
(⇒ page 34)



2. **Connect with external devices.**  
(⇒ page 39)



3. **Connect the power cord.**  
(⇒ page 44)



4. **Power on.**  
(⇒ page 46)



5. **Make initial settings.**  
(⇒ page 46)

- Take this step when you power on for the first time after purchasing the projector.



6. **Select the input signal.**  
(⇒ page 53)



7. **Adjust the image.**  
(⇒ page 55)

# Chapter 1 Preparation

---

This chapter describes things you need to know or check before using the projector.

# Precautions for use

## Intended use of the product

The product is intended to project still/moving image signals from video equipment and computers onto a screen.

## Cautions when transporting

- When transporting the projector, hold it securely by its bottom and avoid excessive vibration and impacts. Doing so may damage the internal parts and result in malfunctions.
- Do not transport the projector with the adjustable feet extended. Doing so may damage the adjustable feet.
- Do not move or transport the projector with the wireless module (Model No.: AJ-WM50 Series) of the optional accessories attached. Doing so may damage the wireless module.

## Cautions when installing

### ■ Do not set up the projector outdoors.

The projector is designed for indoor use only.

### ■ Do not use under the following conditions.

- Places where vibration and impacts occur such as in a car or vehicle: Doing so may damage the internal parts and result in malfunctions.
- Location close to sea or where corrosive gas may occur: the projector may fall due to corrosion. Also, failure to do so may shorten the life of the components and result in malfunction.
- Near the exhaust of an air conditioner: Depending on the conditions of use, the screen may fluctuate in rare cases due to the heated air from the exhaust vent or the hot or cooled air. Make sure that the exhaust from the projector or other equipment, or the air from the air conditioner does not blow toward the front of the projector.
- Places with sharp temperature fluctuations such as near lights (studio lamps): Doing so may shorten the life of the light source, or result in deformation of the outer case due to heat, which may cause malfunction. Make sure to observe the operating temperature range of the projector.
- Near high-voltage power lines or near motors: Doing so may interfere with the operation of the projector.

### ■ Ask a qualified technician or your dealer for the installation work such as installing to a ceiling.

To ensure projector performance and safety, ask a qualified technician or your dealer when installing to a ceiling or in a high place.

### ■ Ask a qualified technician or your dealer to install the cable wiring for DIGITAL LINK connection.

Image and sound may be disrupted if cable transmission characteristics cannot be obtained due to inadequate installation.

### ■ The projector may not work properly due to strong radio wave from the broadcast station or the radio.

If there is any facility or equipment which outputs strong radio waves near the installation location, install the projector at a location sufficiently far from the source of the radio waves. Or, wrap the LAN cable connected to the <DIGITAL LINK/LAN> terminal using a piece of metal foil or a metal pipe which is grounded at both ends.

### ■ Image adjustment after installation

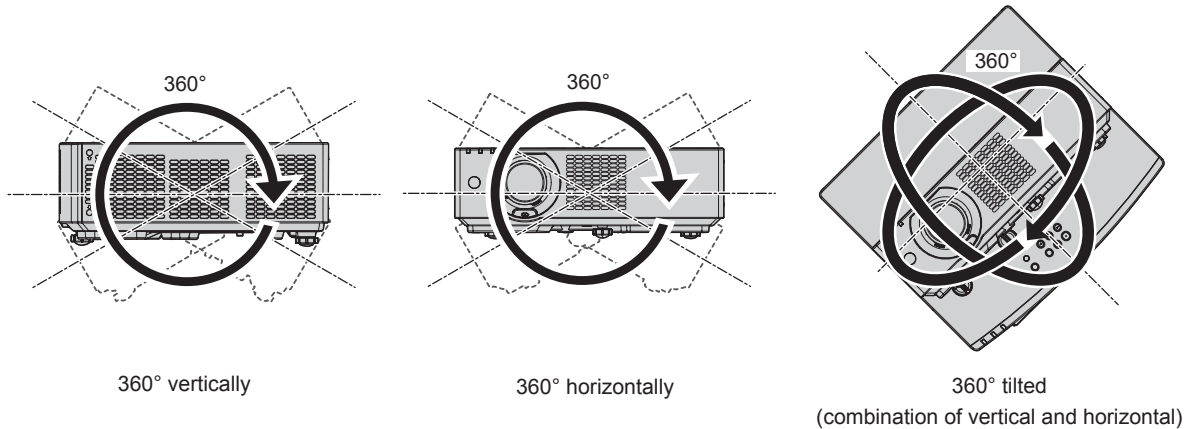
Projected image of the projector is affected by the ambient temperature around the projector or the increased internal temperature caused by the light from its light source, and it will be unstable especially right after the projection has started. It is recommended that images be projected continuously for at least 30 minutes before the focus is adjusted.

- Do not install the projector at elevations of 2 700 m (8 858') or higher above sea level.
- Do not use the projector in a location that the ambient temperature exceeds 45 °C (113 °F).

Using the projector in a location that the altitude is too high or the ambient temperature is too high may shorten the life of the components or result in malfunctions.

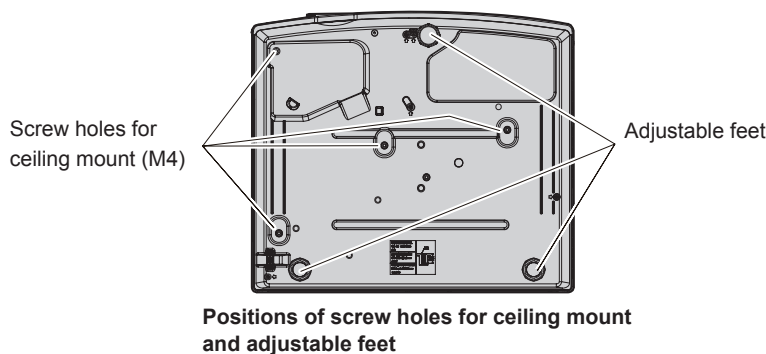
When the optional wireless module (Model No.: AJ-WM50 Series) is attached, do not use the projector in a location that the ambient temperature exceeds 40 °C (104 °F).

- Projection in all 360° direction is possible.

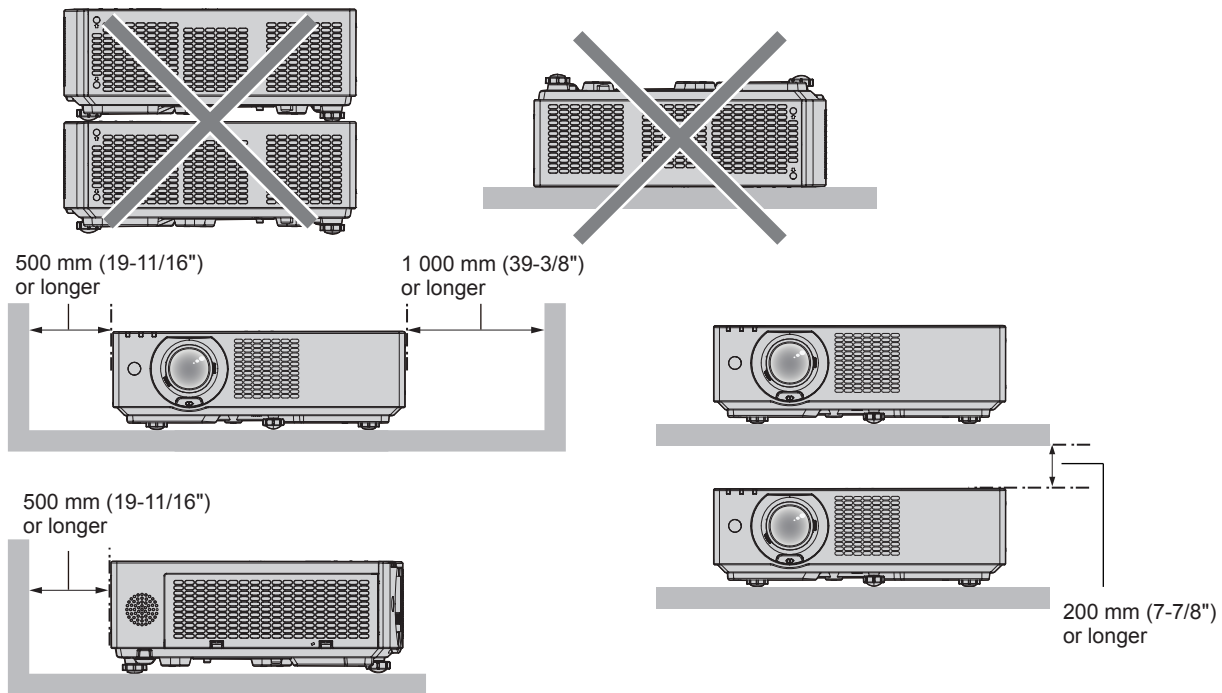


## Cautions when setting up the projectors

- Use the adjustable feet only for the floor standing installation and for adjusting the angle. Using them for other purposes may damage the projector.
- When installing the projector with a method other than the floor installation using the adjustable feet or the ceiling installation using the ceiling mount bracket, use the four screw holes for ceiling mount (as shown in the figure) to fix the projector.  
In such case, make sure that there is no clearance between the screw holes for ceiling mount on the projector bottom and the setting surface by inserting spacers (metallic) between them.
- Use a torque screwdriver or Allen torque wrench to tighten the fixing screws to their specified tightening torques. Do not use electric screwdrivers or impact screwdrivers.  
(Screw diameter: M4, tapping depth inside the projector: 8 mm (5/16"), torque: 1.25 ± 0.2 N·m)



- Do not stack the projectors.
- Do not use the projector supported by its top.
- Do not block the intake and exhaust vents of the projector.
- Avoid heating and cooling air from the air conditioning system directly blow to the intake and exhaust vents of the projector.



- Do not install the projector in a confined space.  
When placing the projector in a confined space, a ventilation and/or air conditioning system is required. Exhaust heat may accumulate when the ventilation is not enough, triggering the protection circuit of the projector.
- Panasonic Projector & Display Corporation takes no responsibility for any damage to the product caused by an inappropriate choice of location for installing the projector, even if the warranty period of the product has not expired.

## Security

When using this product, take safety measures against the following incidents.

- Personal information being leaked via this product
- Unauthorized operation of this product by a malicious third party
- Interfering or stopping of this product by a malicious third party

Take sufficient security measures.

- Make your password as difficult to guess as possible.
- Change your password periodically.
- Panasonic Projector & Display Corporation or its affiliate company never inquires a password directly to a customer. Do not tell your password in case you receive such an inquiry.
- The connecting network must be secured by firewall or others.

### ■ Security when using the wireless LAN product

The advantage of a wireless LAN is that information can be exchanged between a computer or other such equipment and a wireless access point using radio waves, instead of using a LAN cable, as long as you are within range for radio transmissions.

On the other hand, because the radio wave can travel through an obstacle (such as a wall) and is accessible from anywhere within a given range, following problems may occur if security setting is insufficient.

- Transmitted data may be intercepted  
A malicious third party may intentionally intercept radio waves and monitor the following transmitted data.
  - Personal information such as your ID, password, credit card number
  - Content of an Email
- Illegally accessed  
A malicious third party may access your personal or corporate network without authorization and engage in the following types of behavior.
  - Retrieve personal and/or secret information (information leak)
  - Spread false information by impersonating a particular person (spoofing)
  - Overwrite intercepted communications and issue false data (tampering)
  - Spread harmful software such as a computer virus and crash your data and/or system (system crash)

Since most wireless LAN adapters or access points are equipped with security features to take care of these problems, you can reduce the possibility of these problems occurring when using this product by making the appropriate security settings for the wireless LAN device.

Some wireless LAN devices may not be set for security immediately after purchase. To decrease the possibility of occurrence of security problems, be sure to make all security related settings according to the operation instructions supplied with each wireless LAN device before using a wireless LAN device.

Depending on the specifications of the wireless LAN, a malicious third party may be able to break security settings by special means.

Panasonic Projector & Display Corporation asks customers to thoroughly understand the risk of using this product without making security settings, and recommends that the customers make security settings at their own discretion and responsibility.

### **Notes regarding the wireless LAN**

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Wireless connection function of the projector uses radio waves in the 2.4 GHz band.

A radio station license is not required, but be sure to read and fully understand the following items before use.

The wireless module (Model No.: AJ-WM50 Series) of optional accessories must be installed when you want to use the wireless LAN function of the projector.

#### **■ Do not use near other wireless equipment.**

The following equipment may use radio waves in the same band as the projector.

When the projector is used near these devices, radio wave interference may make communication impossible, or the communication speed may become slower.

- Microwave ovens, etc.
- Industrial, chemical and medical equipment, etc.
- In-plant radio stations for identifying moving objects such as those used in factory manufacturing lines, etc.
- Designated low-power radio stations

#### **■ Do not use cell phone, television, or radio as much as possible close to the projector.**

Cell phone, television, or radio is using radio wave with different bandwidth from the projector, so there is no effect on the wireless LAN communication or the send/receive on these devices. However, noise may occur in the audio or video due to the radio wave from the projector.

#### **■ Wireless communication radio waves cannot penetrate steel reinforcements, metal, concrete, etc.**

Communication is possible through walls and floors made from materials such as wood and glass (except glass containing wire mesh), but not through walls and floors made from steel reinforcements, metal, concrete, etc.

#### **■ Avoid using the projector in locations prone to static electricity.**

If the projector is used in a location prone to static electricity, the wireless LAN or wired LAN connection may be lost.

If the static electricity or noise make it impossible to establish a connection with the LAN, disconnect the power plug from the outlet after turning off the projector power, eliminate the source of static electricity or noise, then turn on the projector.

### **DIGITAL LINK**

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“DIGITAL LINK” is a technology that uses a twisted-pair-cable to transmit video, audio, Ethernet, and serial control signals. It is developed based on the communication standard of HDBaseT™ established by HDBaseT Alliance and added with other features of Panasonic Projector & Display Corporation.

This projector supports the DIGITAL LINK output compatible device (Model No.: ET-YFB100G, ET-YFB200G) and peripheral devices by other manufacturers (twisted-pair-cable transmitters such as the “XTP transmitter” of Extron Electronics) that use the same HDBaseT™ standard. For the devices of other manufacturers that the operation has been verified with this projector, visit the website (<https://docs.connect.panasonic.com/projector>). Note that the verification for devices of other manufacturers has been made for the items set by Panasonic Projector & Display Corporation, and not all the operations have been verified. For operation or performance problems caused by the devices of other manufacturers, contact the respective manufacturers.

## Application software supported by the projector

The projector supports the following application software.

- Multi Monitoring & Control Software
- Presenter Light Software
- Wireless Projector
- Projector Network Setup Software

For details or downloading of “Multi Monitoring & Control Software”, “Presenter Light Software” and “Wireless Projector”, visit the following website.

<https://docs.connect.panasonic.com/projector>

For details or downloading of “Projector Network Setup Software”, visit the following “Panasonic Professional Display and Projector Technical Support Website”.

<https://docs.connect.panasonic.com/projector/pass>

It is necessary to register and login to PASS\*1 to view details and download from “Panasonic Professional Display and Projector Technical Support Website”.

Application software and its functions supported by the projector may be added or changed without prior notice.

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

## Storage

When storing the projector, keep it in a dry room.

## Disposal

To dispose of the product, ask your local authorities or dealer for correct methods of disposal. Also, dispose of the product without disassembling.

## Cautions on use

### ■ To get a good picture quality

In order to view a beautiful image in higher contrast, prepare an appropriate environment. Draw curtains or blinds over windows and turn off any lights near the screen to prevent outside light or light from indoor lamps from shining onto the screen.

### ■ Projection Lens

- Do not touch the surface of the projector lens with your bare hands.

If the surface of the lens becomes dirty from fingerprints or anything else, this will be magnified and projected onto the screen.

- Do not wipe the lens during operation.

Cleaning the lens during operation may cause foreign objects adhering to the lens or bring damage to the lens surface.



Indicated on the projector

### ■ LCD panel

The LCD panel is precision-made. Note that in rare cases, pixels could be missing or always lit. Note that such phenomena do not indicate malfunction.

Also, a residual image may remain in the image of the LCD panel when a still image is projected for long time, and in such case, project the all white test pattern for 1 hour or longer. Note that the residual image may not be completely erased.

For details of the test pattern, refer to “[TEST PATTERN]” (➔ page 105).

### ■ Optical parts

When the operating environment temperature is high or in environments where lots of dust, cigarette smoke, etc. is present, the replacement cycle of the LCD panel, polarizing plate and other optical parts may be shorter even if used for less than one year. Consult your dealer for details.

### ■ Do not move the projector or subject it to vibration or impact while it is operating.

Doing so may shorten the life of internal components or result in malfunctions.

### ■ Light source

The light source of the projector uses laser diode, and has the following characteristics.

- Depending on the operating environment temperature, the luminance of the light source will decrease. The higher the temperature becomes, the more the luminance of the light source decreases.
- The luminance of the light source will decrease by duration of usage. If brightness is noticeably reduced and the light source does not turn on, ask your dealer to clean inside the projector or replace the light source unit.

### ■ Computer and external device connections

When connecting a computer or an external device, read this manual carefully regarding the use of power cords and shielded cables as well.



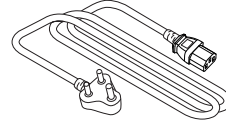
## Accessories

Make sure the following accessories are provided with your projector. Numbers enclosed < > show the number of accessories.

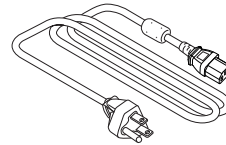
**Wireless remote control unit <1>**  
(N2QAYA000259)



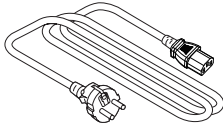
For India  
(K2CZ3YY00092)



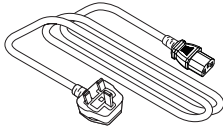
For Taiwan  
(K2CG3YY00145)



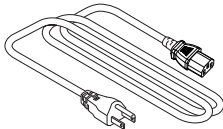
**Power cord**  
(K2CM3YY00027)



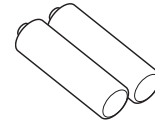
(K2CT3YY00052)



(K2CG3YY00247)



**AAA/R03 or AAA/LR03 battery <2>**



(for remote control unit)

## Attention

- After unpacking the projector, discard the power cord cap and packaging material properly.
- Do not use the supplied power cord for devices other than this projector.
- For lost accessories, consult your dealer.
- Store small parts in an appropriate manner, and keep them away from young children.

## Note

- The type and number of the supplied power cords vary depending on the country or region where you purchased the product.
- The part numbers of accessories are subject to change without prior notice.

## Optional accessories

Options	Model No.
Ceiling Mount Bracket	ET-PKL100H (for high ceilings), ET-PKL100S (for low ceilings), ET-PKV400B (Projector Mount Bracket)
Replacement Filter Unit	ET-RFV500
Wireless Module <sup>*1</sup>	AJ-WM50 Series <sup>*2</sup>

\*1 The availability of this product varies depending on the country. For details, contact your dealer.

\*2 The suffix of the Model No. differs depending on the country.

Example of the Model No. with suffix for AJ-WM50 Series

AJ-WM50E, AJ-WM50G1, AJ-WM50G2, AJ-WM50GAN, AJ-WM50GPX, AJ-WM50P

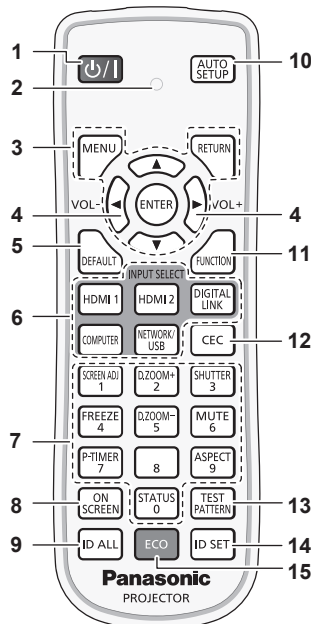
### Note

- Use the Wireless Module (Model No.: AJ-WM50 Series) in an environment of 0 °C (32 °F) to 40 °C (104 °F), including when it is attached to the projector.
- The DIGITAL LINK Switcher (Model No.: ET-YFB200G) and the Digital Interface Box (Model No.: ET-YFB100G) are also usable.
- The model numbers of optional accessories are subject to change without prior notice.
- The optional accessories compatible with the projector may be added or changed without prior notice.  
For the latest information, visit the website (<https://docs.connect.panasonic.com/projector>).

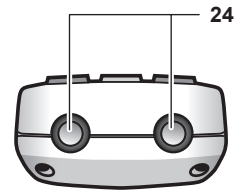
# About your projector

## Remote control

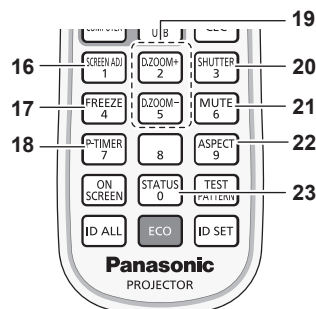
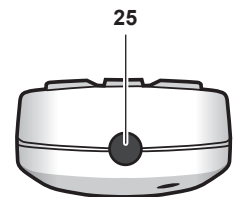
### ■ Front



### ■ Top



### ■ Bottom



#### 1 Power <⏻/⏻> button

(⏻: Standby, ⏻: Power on)

Sets the projector to the state where the projector is switched off (standby mode). Also starts projection when the power is switched off (standby mode).

#### 2 Remote control indicator

Blinks if any button in the remote control is pressed.

#### 3 <MENU> button/<RETURN> button / <ENTER> button/ ▲▼◀▶ buttons

Used to navigate through the menu screen. (➔ page 65)

▲▼◀▶ buttons are also used to enter the password in [SECURITY] or enter characters.

#### 4 <VOL-> button/<VOL+> button

Adjusts the volume of the built-in speaker or audio output. (➔ page 58)

#### 5 <DEFAULT> button

Resets the content of the sub-menu to the factory default. (➔ page 66)

#### 6 Input selection buttons (<HDMI1>, <HDMI2>, <DIGITAL LINK>, <COMPUTER>, <NETWORK/USB>)

Switches the input signal to project. (➔ page 53)

#### 7 Number (<0> ~ <9>) buttons

Used for entering a password or an ID number in a multi-projector environment.

#### 8 <ON SCREEN> button

Switches on (display)/off (hide) the on-screen display function. (➔ page 59)

#### 9 <ID ALL> button

Used to simultaneously control all the projectors with a single remote control in a multi-projector environment. (➔ page 63)

#### 10 <AUTO SETUP> button

Used to automatically adjust with auto setup function while projecting the image. (➔ page 59)

#### 11 <FUNCTION> button

Assigns a frequently used operation as a shortcut button. (➔ page 62)

#### 12 <CEC> button

Displays the HDMI CEC operation screen. (➔ page 108)

#### 13 <TEST PATTERN> button

Displays the test pattern. (➔ page 62)

#### 14 <ID SET> button

Sets the ID number of the remote control in a multi-projector environment. (➔ page 63)

#### 15 <ECO> button

Displays the setting screen relating to ECO management. (➔ page 63)

#### 16 <SCREEN ADJ> button

Used when using the Digital Zoom Extender function or correcting image distortions. (➔ page 60)

#### 17 <FREEZE> button

Used when pausing the image and turning off the audio. (➔ page 59)

#### 18 <P-TIMER> button

Operates the presentation timer function. (➔ page 61)

#### 19 <D.ZOOM +> button / <D.ZOOM -> button

Zoom in and out the images. (➔ page 60)

#### 20 <SHUTTER> button

Used to turn off the audio and video temporarily. (➔ page 58)

#### 21 <MUTE> button

Used to temporarily mute the projector. (➔ page 58)

#### 22 <ASPECT> button

Switches the aspect ratio of the image. (➔ page 61)

#### 23 <STATUS> button

Displays the projector information. (➔ page 62)

#### 24 Remote control signal transmitter

#### 25 Not available with this projector

## Attention

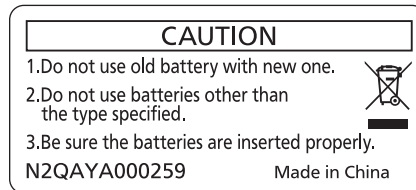
- Do not drop the remote control.

## Chapter 1 Preparation - About your projector

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- Avoid contact with liquids or moisture.
- Do not attempt to modify or disassemble the remote control.
- Please observe the following contents that are described on the back of the remote control unit (see the picture below).
  - Do not use a new battery together with an old battery.
  - Do not use unspecified batteries.
  - Make sure the polarities (+ and -) are correct when inserting the batteries.

In addition, please read the contents that are related to batteries in the "Read this first!".



Caution label at the back of the remote control

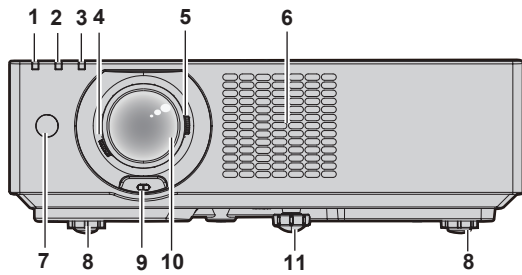
### Note

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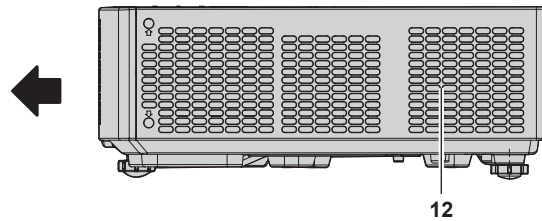
- The remote control can be used within a distance of about 30 m (98'5") if pointed directly at the remote control signal receiver. The remote control can control at angles of up to  $\pm 30^\circ$  vertically and  $\pm 30^\circ$  horizontally, but the effective control range may be reduced.
- If there are any obstacles between the remote control and the remote control signal receiver, the remote control may not operate correctly.
- You can operate the projector by reflecting the remote control signal on the screen. The operating range may differ due to the loss of light caused by the properties of the screen.
- When the remote control signal receiver is lit with a fluorescent light or other strong light source, the projector may become inoperative. Set the projector as far from the luminous source as possible.
- The power indicator <ON (G)/STANDBY (R)> will blink if the projector receives a remote control signal. However, the power indicator <ON (G)/STANDBY (R)> will not blink in following cases.
  - When [PROJECTOR SETUP] menu  $\rightarrow$  [ECO MANAGEMENT]  $\rightarrow$  [STANDBY MODE] is set to [ECO] and the projector is in standby mode

## Projector body

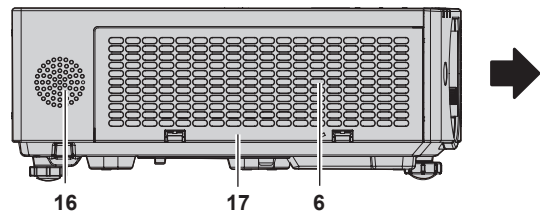
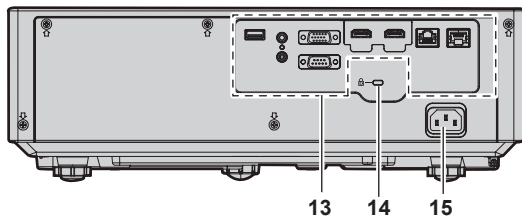
### ■ Front



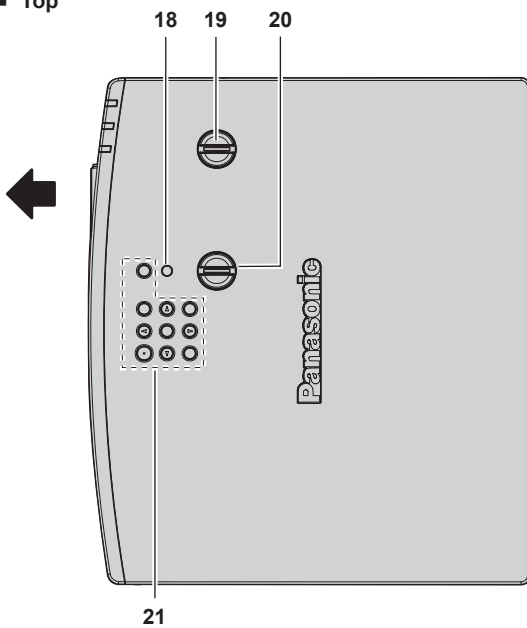
### ■ Side



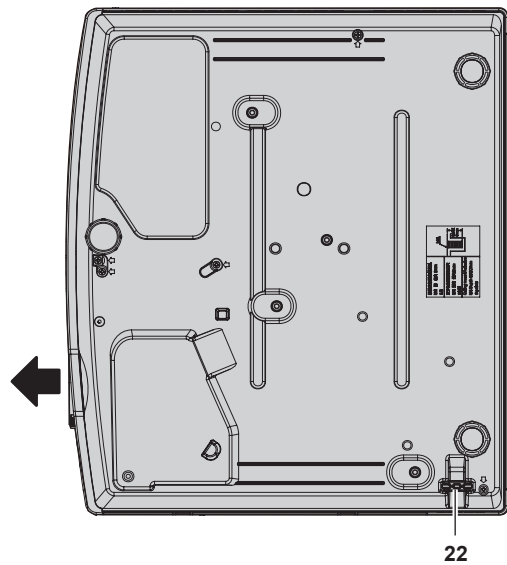
### ■ Rear



### ■ Top



### ■ Bottom



← : Projection direction

- 1 Power indicator <ON (G)/STANDBY (R)>**  
Indicates the status of the power.
- 2 Light source indicator <LIGHT>**  
Indicates the status of the light source.
- 3 Temperature indicator <TEMP>**  
Indicates the internal temperature status.
- 4 Focus Lever**  
Adjusts the focus.
- 5 Zoom Lever**  
Adjusts the zoom.
- 6 Intake vent**
- 7 Remote control signal receiver**
- 8 Rear adjustable feet**  
Adjusts the projection angle.
- 9 Lens block detection sensor (➔ page 103)**

- 10 Projection Lens**
- 11 Front adjustable foot**  
Adjusts the projection angle.
- 12 Exhaust vent**
- 13 Connecting terminals (➔ page 30)**
- 14 Security slot**  
This security slot is compatible with the Kensington security cables.
- 15 <AC IN> terminal**  
Connects the supplied power cord.
- 16 Speaker**
- 17 Air filter cover**  
The air filter unit is inside.
- 18 Ambient luminance sensor**

### 19 Vertical lens shift dial

Adjusts the projecting position in the vertical direction (vertical shift).

### 20 Horizontal lens shift dial

Adjusts the projecting position in the horizontal direction (horizontal shift).

### 21 Control panel (➔ page 30)

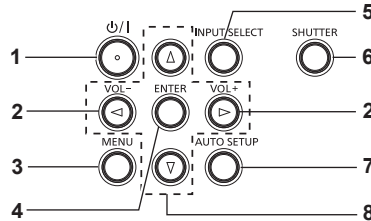
### 22 Burglar hook port

Attaches a burglar prevention cable, etc.

## Attention

- Do not block the intake and exhaust vents of the projector.  
The components may deteriorate faster if cooling inside the projector is inhibited.

## Control panel



#### 1 Power <⏻/⏻> button

(⏻: Standby, ⏻: Power on)

Sets the projector to the state where the projector is switched off (standby mode). Also starts projection when the power is switched off (standby mode).

#### 2 <VOL-> button / <VOL+> button

Adjusts the volume of the built-in speaker or audio output. (➔ page 58)

#### 3 <MENU> button

Displays or hides the main menu. (➔ page 65)

When the sub menu is displayed, pressing it will return to the previous screen.

#### 4 <ENTER> button

Determines and executes an item in the menu screen.

#### 5 <INPUT SELECT> button

Switches the input signal to project. (➔ page 53)

#### 6 <SHUTTER> button

Used to turn off the audio and video temporarily. (➔ page 58)

#### 7 <AUTO SETUP> button

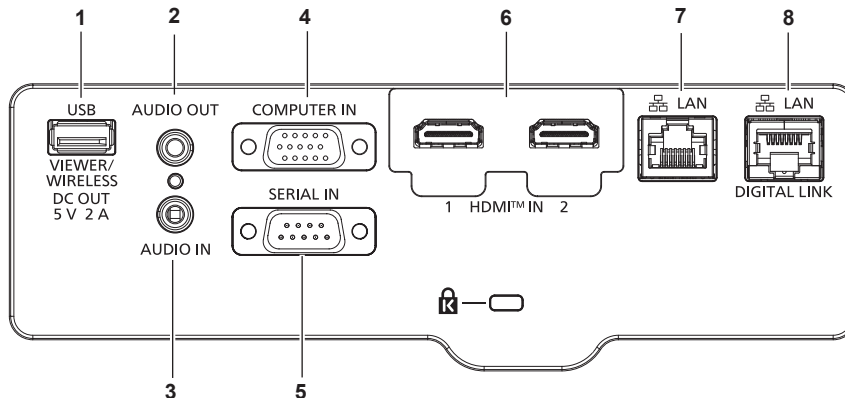
Used to automatically adjust with auto setup function while projecting the image. (➔ page 59)

#### 8 ▲▼◀▶ buttons

Used to select the menu screen items, switch the setting or adjust the level.

Also used to enter a password in the [SECURITY] menu or enter characters.

## Connecting terminals



#### 1 <USB (VIEWER/WIRELESS/DC OUT)> terminal

This is a terminal to connect the USB memory when registering the user image, or when using the Memory Viewer function, data cloning function or user update function. (➔ pages 111, 129, 176, 182)

This is also the terminal to connect the optional Wireless Module (Model No.: AJ-WM50 Series) when the projector is connected via wireless LAN. (➔ page 134)

This terminal is also used for power supply (DC 5 V, 2 A).

#### 2 <AUDIO OUT> terminal

This is the terminal to output the input audio signal.

#### 3 <AUDIO IN> terminal

This is the terminal to input audio signals.

#### 4 <COMPUTER IN> terminal

This is the terminal to input RGB signals or YC<sub>B</sub>C<sub>R</sub>/YP<sub>B</sub>P<sub>R</sub> signals.

#### 5 <SERIAL IN> terminal

This is the RS-232C compatible terminal to externally control the projector by connecting a computer.

#### 6 <HDMI IN 1> terminal / <HDMI IN 2> terminal

These are the terminals to input HDMI signal.

#### 7 <LAN> terminal

This is the LAN terminal to connect to the network.

This also supports the image transfer from the image transfer application software. (➔ page 132)

#### 8 <DIGITAL LINK/LAN> terminal

This is a terminal to connect a device that transfer image signal or audio signal. Also, this is the LAN terminal to connect to the network.

### Attention

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- When the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE] is set to [NORMAL], the <USB (VIEWER/WIRELESS/DC OUT)> terminal can supply power even in standby state. If set to [ECO], the <USB (VIEWER/WIRELESS/DC OUT)> terminal can not supply power in standby state.
- When an external device exceeding the rating (DC 5 V, maximum 2 A) is connected to the <USB (VIEWER/WIRELESS/DC OUT)> terminal, an error is detected and the power supply will be stopped. At this time, disconnect the external device, cut off the power of the projector and then reconnect the power plug to the outlet.
- When a LAN cable is directly connected to the projector, the network connection must be made indoors. The signal may deteriorate due to the effect of noise or cable length.
- To transmit the Ethernet and serial control signals using the <DIGITAL LINK/LAN> terminal, set the [NETWORK] menu → [ETHERNET TYPE] to [DIGITAL LINK] or [LAN & DIGITAL LINK].
- To transmit the Ethernet signal using the <LAN> terminal, set the [NETWORK] menu → [ETHERNET TYPE] to [LAN] or [LAN & DIGITAL LINK].
- The <DIGITAL LINK/LAN> terminal and the <LAN> terminal are connected inside of the projector when the [NETWORK] menu → [ETHERNET TYPE] is set to [LAN & DIGITAL LINK]. Do not directly connect the <DIGITAL LINK/LAN> terminal and the <LAN> terminal using a LAN cable. Construct the system so that it is not connected to the same network via the peripherals such as the switching hub or the twisted-pair cable transmitter.

# Preparing the remote control

## Inserting and removing batteries

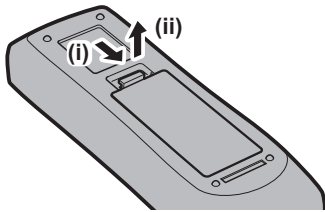


Fig. 1

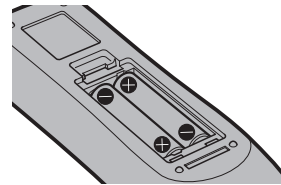


Fig. 2

- 1) Open the cover. (Fig. 1)
- 2) Insert batteries and close the cover (insert the "⊖" side first). (Fig. 2)
  - When removing the batteries, perform the steps in reverse order.

## When using the system with multiple projectors

When you use the system with multiple projectors, you can operate all the projectors simultaneously or each projector individually by using single remote control, if a unique ID number is assigned to each projector.

When you want to set the ID number, at first you need to complete the Initial setting, and then after setting the ID number of the projector, set the ID number on the remote control. About Initial setting, please refer to "When the initial setting screen is displayed" (➡ page 46).

The factory default ID number of the unit (the projector and the remote control) is set to [ALL], you can control with this setting. If necessary, please set the ID number to the remote control and the projector. About how to set the ID number of the remote control, please refer to "Setting the ID number on the remote control" (➡ page 63).

### Note

- Set the ID number of the projector from the [PROJECTOR SETUP] menu → [PROJECTOR ID] (➡ page 96).



# Chapter 2 **Getting Started**

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This chapter describes things you need to do before using the projector such as the setup and connections.

# Setting up

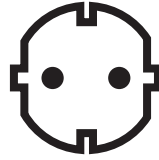
## Usable outlet

This projector supports AC 100 V to AC 240 V (AC 110 V for Taiwan) as the power supply. A grounded outlet supporting 15 A is required with either voltage.

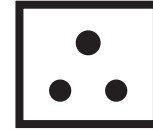
The shape of the usable outlet differs depending on the power supply. Following illustrations are examples.



2P/3W 16 A 250 V



2P/3W 16 A 250 V



2P/3W 15 A 250 V



2P/3W 15 A 250 V



2P/3W 15 A 125 V

## Attention

- Use the supplied power cord and ground at the outlet.
- Use the power cord matching the used power supply voltage and outlet shape.

## Note

- The supplied power cords vary depending on the country or region where you purchased the product.

## Installation mode

There are four ways to set up the projector. Set the [PROJECTOR SETUP] menu → [PROJECTION METHOD] (➔ page 97) depending on the installation mode.

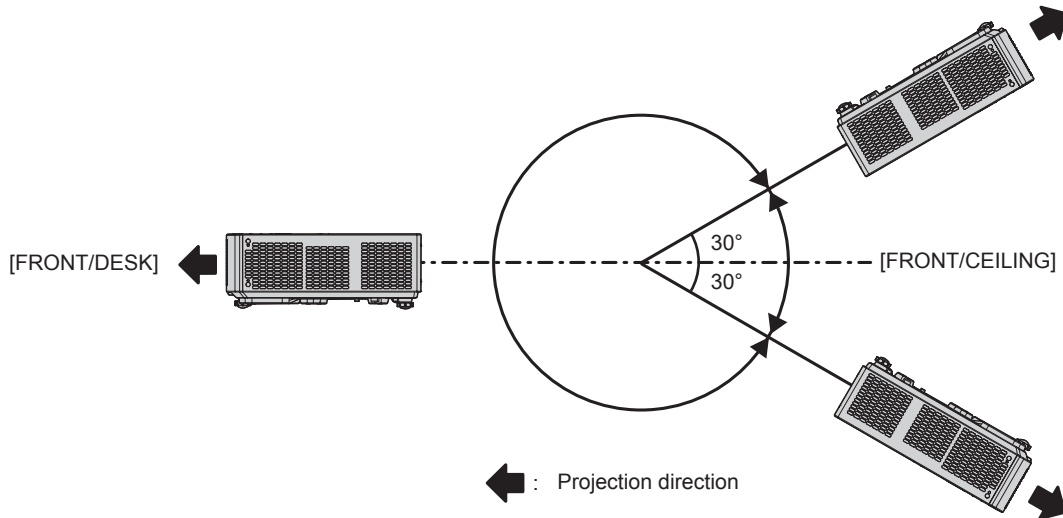
Setting on a desk/floor and projecting forward		Setting on a desk/floor and projecting from rear (Using the translucent screen)	
Menu item	Method	Menu item	Method
[PROJECTION METHOD]	[AUTO] or [FRONT/DESK]	[PROJECTION METHOD]	[REAR/DESK]
Mounting on the ceiling and projecting forward		Mounting on the ceiling and projecting from rear (Using the translucent screen)	
Menu item	Method	Menu item	Method
[PROJECTION METHOD]	[AUTO] or [FRONT/CEILING]	[PROJECTION METHOD]	[REAR/CEILING]

**Note**

- The projector has a built-in angle sensor. The attitude of the projector is automatically detected by setting the [PROJECTOR SETUP] menu → [PROJECTION METHOD] to [AUTO]. For rear projection, set the [PROJECTION METHOD] to [REAR/DESK] or [REAR/CEILING].

**■ Angle sensor**

The range of installation posture detected by the projector's built-in angle sensor is as follows.



**Parts for ceiling mount (optional)**

This requires an optional ceiling mount bracket. Be sure to use the Projector Mount Bracket together with the ceiling mount bracket for high ceilings or low ceilings.

**Model No.: ET-PKL100H (for high ceilings), ET-PKL100S (for low ceilings), ET-PKV400B (Projector Mount Bracket)**

- Use only the ceiling mount brackets specified for this projector.
- Refer to the Installation Instructions for the ceiling mount bracket when you install the bracket and the projector.

**Attention**

- To ensure projector performance and security, installation of the ceiling mount bracket must be carried out by your dealer or a qualified technician.

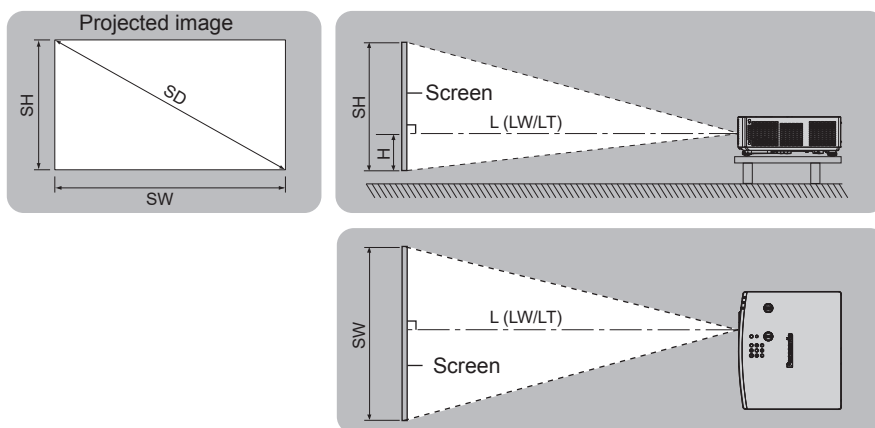
**Projected image and throw distance**

Install the projector referring to the projected image size, projection distance, etc.

**Attention**

- Before setting up, read "Precautions for use" (➔ page 19).

**Figure of projected image and throw distance**



**Note**

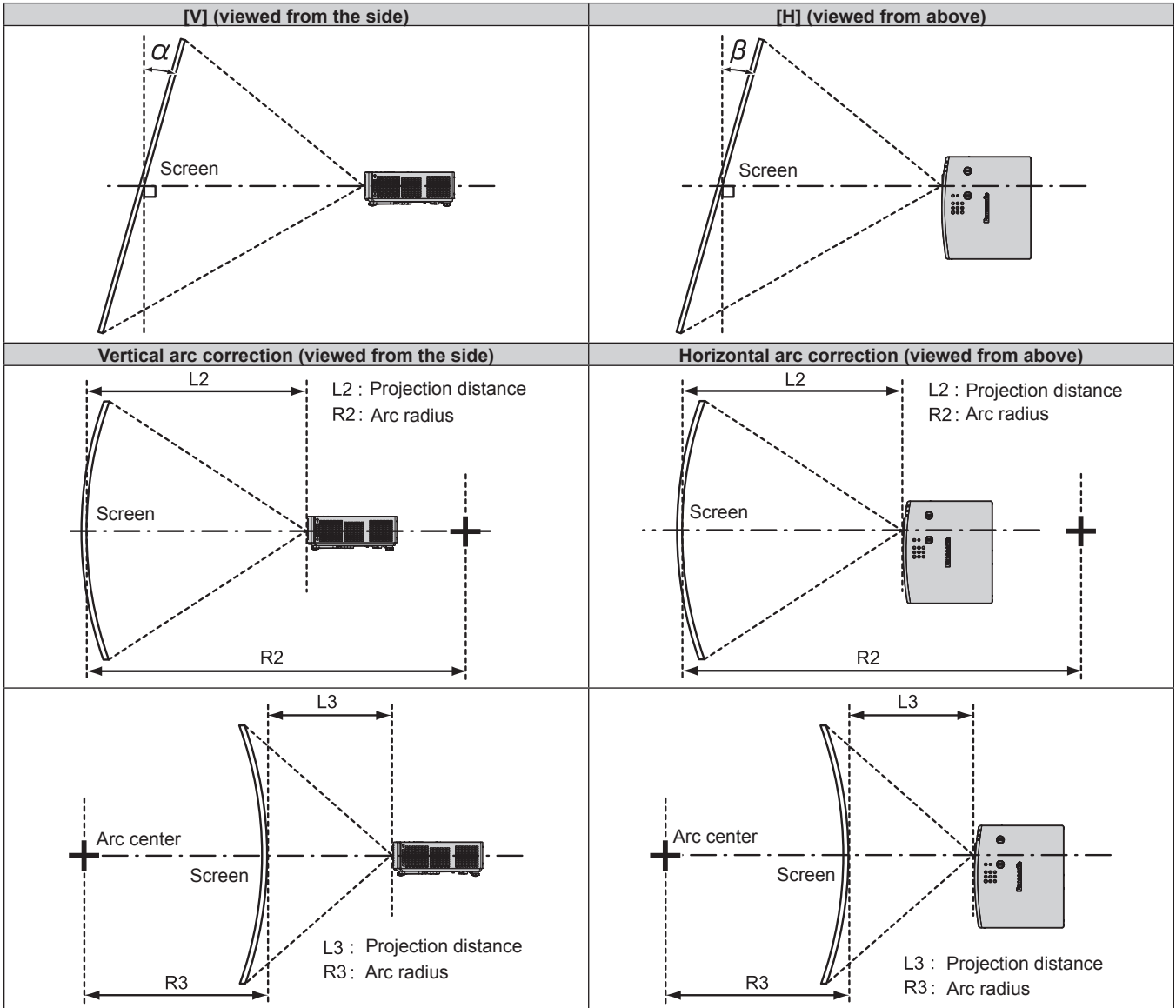
- This illustration is prepared on the assumption that the projected image size and position have been aligned to fit full in the screen.
- This illustration is not in accurate scale.

L (LW/LT) *1*2	Projection distance
SH	Image height
SW	Image width
H	Distance from the center of lens to the image lower end
SD	Projected image size

\*1 For details about calculating the projection distance, refer to "Projection distance formulas" (▶ page 38).

\*2 LW : Minimum distance  
LT : Maximum distance

**[SCREEN ADJUSTMENT] projection range**



[KEYSTONE]		[CURVED CORRECTION]	
Vertical keystone correction angle $\alpha$ (°)	Horizontal keystone correction angle $\beta$ (°)	Min. value of R2/L2	Min. value of R3/L3
±25	±35	0.6	0.7

**Note**

- When [SCREEN ADJUSTMENT] is used, the focus may not be able to match the whole screen as correction increases.
- The curved screen should be in the shape of a circular arc part of a perfect circle.

## Projection distance

An error of  $\pm 5\%$  may occur to the projection distance as described.

Also, it is corrected to become smaller than the specified image size when [SCREEN ADJUSTMENT] is used.

### Note

- The display resolution may decrease when the Digital Zoom Extender function is used. For details on Digital Zoom Extender function, refer to the [POSITION] menu → [SCREEN ADJUSTMENT] → [DIGITAL ZOOM EXTENDER] (▶ page 76).

### ■ When the screen aspect ratio is 16:10

(Unit: m)

Throw ratio	Optical zoom 1.09-1.77:1		Digital Zoom Extender 1.09-2.21:1 <sup>*1</sup> (converted value)	Distance from the lens center to the image lower end (H) <sup>*3</sup>
	Screen diagonal (SD)	Minimum distance (LW)	Maximum distance (LT)	
0.76 (30")	0.68	1.12	1.40	0.022 ~ 0.201
1.02 (40")	0.93	1.51	1.89	0.030 ~ 0.270
1.27 (50")	1.16	1.89	2.37	0.037 ~ 0.337
1.52 (60")	1.39	2.26	2.84	0.045 ~ 0.403
1.78 (70")	1.64	2.66	3.33	0.052 ~ 0.472
2.03 (80")	1.87	3.03	3.80	0.060 ~ 0.538
2.29 (90")	2.12	3.43	4.29	0.067 ~ 0.607
2.54 (100")	2.35	3.80	4.76	0.075 ~ 0.673
3.05 (120")	2.83	4.57	5.73	0.090 ~ 0.808
3.81 (150")	3.54	5.72	7.16	0.112 ~ 1.010
5.08 (200")	4.73	7.64	9.56	0.150 ~ 1.346
6.35 (250")	5.92	9.56	11.96	0.187 ~ 1.683
7.62 (300")	7.11	11.48	14.35	0.224 ~ 2.019

\*1 When optical zoom and Digital Zoom Extender are used together.

\*2 When [EXTENDER RATIO] is set to [80%].

\*3 Only for optical zoom

### ■ When the screen aspect ratio is 16:9

(Unit: m)

Throw ratio	Optical zoom 1.09-1.77:1		Digital Zoom Extender 1.09-2.21:1 <sup>*1</sup> (converted value)	Distance from the lens center to the image lower end (H) <sup>*3</sup>
	Screen diagonal (SD)	Minimum distance (LW)	Maximum distance (LT)	
0.76 (30")	0.70	1.15	1.44	0.002 ~ 0.186
1.02 (40")	0.95	1.55	1.95	0.003 ~ 0.250
1.27 (50")	1.19	1.94	2.43	0.004 ~ 0.311
1.52 (60")	1.43	2.33	2.92	0.005 ~ 0.372
1.78 (70")	1.69	2.73	3.42	0.005 ~ 0.436
2.03 (80")	1.93	3.12	3.91	0.006 ~ 0.497
2.29 (90")	2.18	3.52	4.41	0.007 ~ 0.561
2.54 (100")	2.42	3.91	4.90	0.008 ~ 0.622
3.05 (120")	2.91	4.70	5.89	0.009 ~ 0.747
3.81 (150")	3.64	5.88	7.36	0.012 ~ 0.933
5.08 (200")	4.86	7.85	9.83	0.015 ~ 1.245
6.35 (250")	6.09	9.83	12.29	0.019 ~ 1.556
7.62 (300")	7.31	11.80	14.75	0.023 ~ 1.867

\*1 When optical zoom and Digital Zoom Extender are used together.

\*2 When [EXTENDER RATIO] is set to [80%].

\*3 Only for optical zoom

### ■ When the screen aspect ratio is 4:3

(Unit: m)

Throw ratio	Optical zoom 1.31-2.12:1		Digital Zoom Extender 1.31-2.66:1 <sup>*1</sup> (converted value)	Distance from the lens center to the image lower end (H) <sup>*3</sup>
	Screen diagonal (SD)	Minimum distance (LW)	Maximum distance (LT)	
0.76 (30")	0.78	1.27	1.59	0.025 ~ 0.228

## Chapter 2 Getting Started - Setting up

Throw ratio	Optical zoom 1.31-2.12:1		Digital Zoom Extender 1.31-2.66:1 <sup>*1</sup> (converted value)	Distance from the lens center to the image lower end (H) <sup>*3</sup>
	Minimum distance (LW)	Maximum distance (LT)	Maximum distance (LT) <sup>*2</sup>	
1.02 (40")	1.05	1.71	2.15	0.034 ~ 0.306
1.27 (50")	1.32	2.14	2.68	0.042 ~ 0.381
1.52 (60")	1.58	2.57	3.22	0.051 ~ 0.456
1.78 (70")	1.86	3.01	3.77	0.059 ~ 0.534
2.03 (80")	2.12	3.44	4.31	0.068 ~ 0.609
2.29 (90")	2.40	3.88	4.86	0.076 ~ 0.687
2.54 (100")	2.67	4.31	5.40	0.085 ~ 0.762
3.05 (120")	3.21	5.18	6.49	0.102 ~ 0.915
3.81 (150")	4.01	6.48	8.11	0.127 ~ 1.143
5.08 (200")	5.36	8.65	10.83	0.169 ~ 1.524
6.35 (250")	6.71	10.83	13.54	0.212 ~ 1.905
7.62 (300")	8.05	13.00	16.25	0.254 ~ 2.286

\*1 When optical zoom and Digital Zoom Extender are used together.

\*2 When [EXTENDER RATIO] is set to [80%].

\*3 Only for optical zoom

### ■ When the screen aspect ratio is 21:9

(Unit: m)

Throw ratio	Optical zoom 1.09-1.77:1		Digital Zoom Extender 1.09-2.21:1 <sup>*1</sup> (converted value)	Distance from the lens center to the image lower end (H) <sup>*3</sup>
	Minimum distance (LW)	Maximum distance (LT)	Maximum distance (LT) <sup>*2</sup>	
0.76 (30")	0.74	1.22	1.53	-0.047 ~ 0.148
1.02 (40")	1.01	1.64	2.06	-0.063 ~ 0.198
1.27 (50")	1.26	2.05	2.57	-0.078 ~ 0.247
1.52 (60")	1.52	2.46	3.09	-0.094 ~ 0.295
1.78 (70")	1.78	2.89	3.62	-0.110 ~ 0.346
2.03 (80")	2.04	3.30	4.13	-0.125 ~ 0.395
2.29 (90")	2.30	3.73	4.67	-0.141 ~ 0.445
2.54 (100")	2.56	4.14	5.18	-0.156 ~ 0.494
3.05 (120")	3.08	4.97	6.22	-0.188 ~ 0.593
3.81 (150")	3.85	6.22	7.78	-0.235 ~ 0.740
5.08 (200")	5.14	8.30	10.39	-0.313 ~ 0.987
6.35 (250")	6.44	10.39	12.99	-0.391 ~ 1.234
7.62 (300")	7.73	12.47	15.60	-0.469 ~ 1.481

\*1 When optical zoom and Digital Zoom Extender are used together.

\*2 When [EXTENDER RATIO] is set to [80%].

\*3 Only for optical zoom

### Projection distance formulas

To use a projected image size not listed in this manual, check the projected image size SD (m) and use the respective formula to calculate the value.

The unit of all the formulae is m. (Values obtained by the following calculation formulae contain a slight error.)

When calculating the value using image size designation (value in inches), multiply the value in inches by 0.0254 and substitute it into SD in the formula.

Aspect ratio		16:10	16:9	4:3	21:9	
Projection distance (L) <sup>*1</sup>	Optical zoom	Minimum (LW)	$= 0.9371 \times SD - 0.0294$	$= 0.9632 \times SD - 0.0294$	$= 1.0609 \times SD - 0.0294$	$= 1.0182 \times SD - 0.0294$
		Maximum (LT)	$= 1.5103 \times SD - 0.0319$	$= 1.5523 \times SD - 0.0319$	$= 1.7098 \times SD - 0.0319$	$= 1.6410 \times SD - 0.0319$
	Digital Zoom Extender	Minimum (LW)	$= 0.9371 \times SD / X - 0.0294$	$= 0.9632 \times SD / X - 0.0294$	$= 1.0609 \times SD / X - 0.0294$	$= 1.0182 \times SD / X - 0.0294$
		Maximum (LT)	$= 1.5103 \times SD / X - 0.0319$	$= 1.5523 \times SD / X - 0.0319$	$= 1.7098 \times SD / X - 0.0319$	$= 1.6410 \times SD / X - 0.0319$

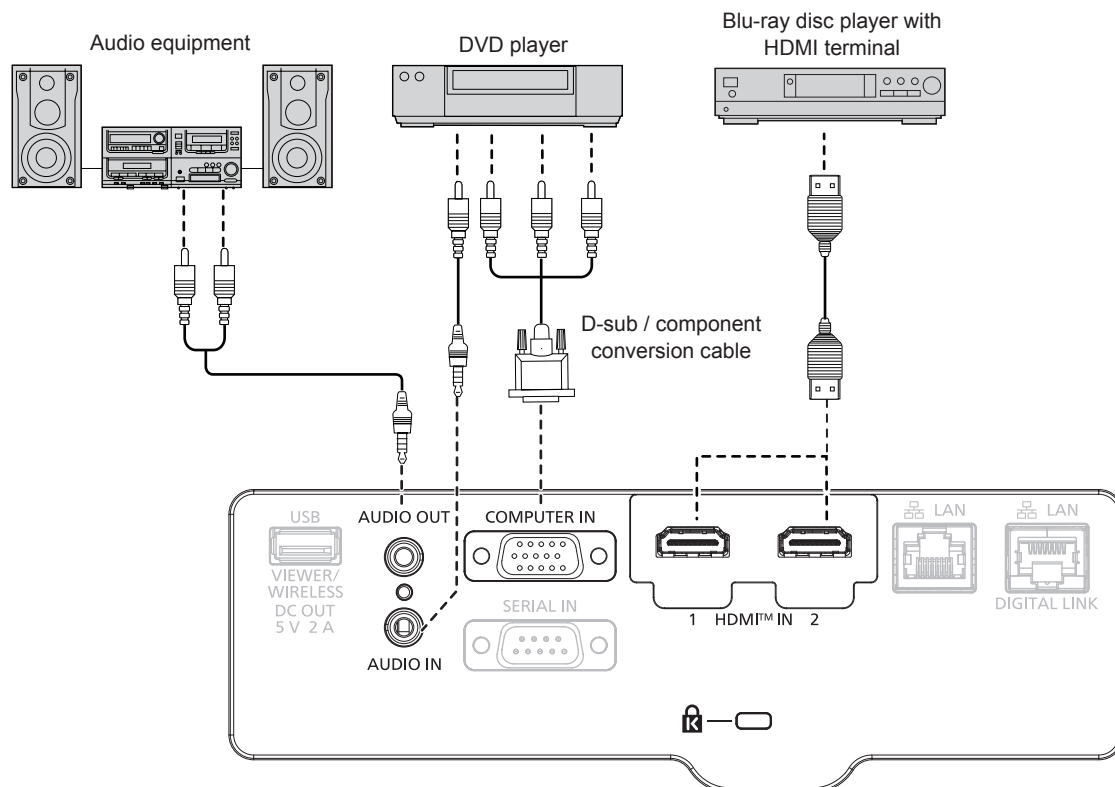
\*1 X in the formulas represents the setting value of [EXTENDER RATIO] (100%=1.00, 99%=0.99, ...).

# Connecting

## Before connecting

- Before connecting, carefully read the operating instructions for the external device to be connected.
- Turn off the power switch of the devices before connecting cables.
- Connect cables taking care of the following descriptions. Failure to do so may result in malfunctions.
  - When connecting a cable to the projector or an external device connected to the projector, touch any nearby metallic objects to eliminate static electricity from your body before performing work.
  - Do not use unnecessarily long cables to connect to the projector or a device connected to the projector. The longer the cable, the more it is susceptible to noise. Since using a cable while it is wound makes it act like an antenna, it is more susceptible to noise.
  - When connecting cables, connect GND first, then insert the connecting terminal of the connecting device straightly.
- If any connection cable is not supplied with the device, or if no optional cable is available for connection of the device, prepare a necessary system connection cable to suit the device.
- Image signals from the video devices containing too much jitter may cause the images on the screen to randomly wobble or wafture. In this case, a time base corrector (TBC) must be connected.
- Some computer models or graphics cards are not compatible with the projector.
- Connect using an extension device, etc., when installing the projector away from the video equipment. The projector may not display the image properly when it is connected directly using a long cable.
- For details on what image signals the projector supports, refer to “List of compatible signals” (➡ page 212).

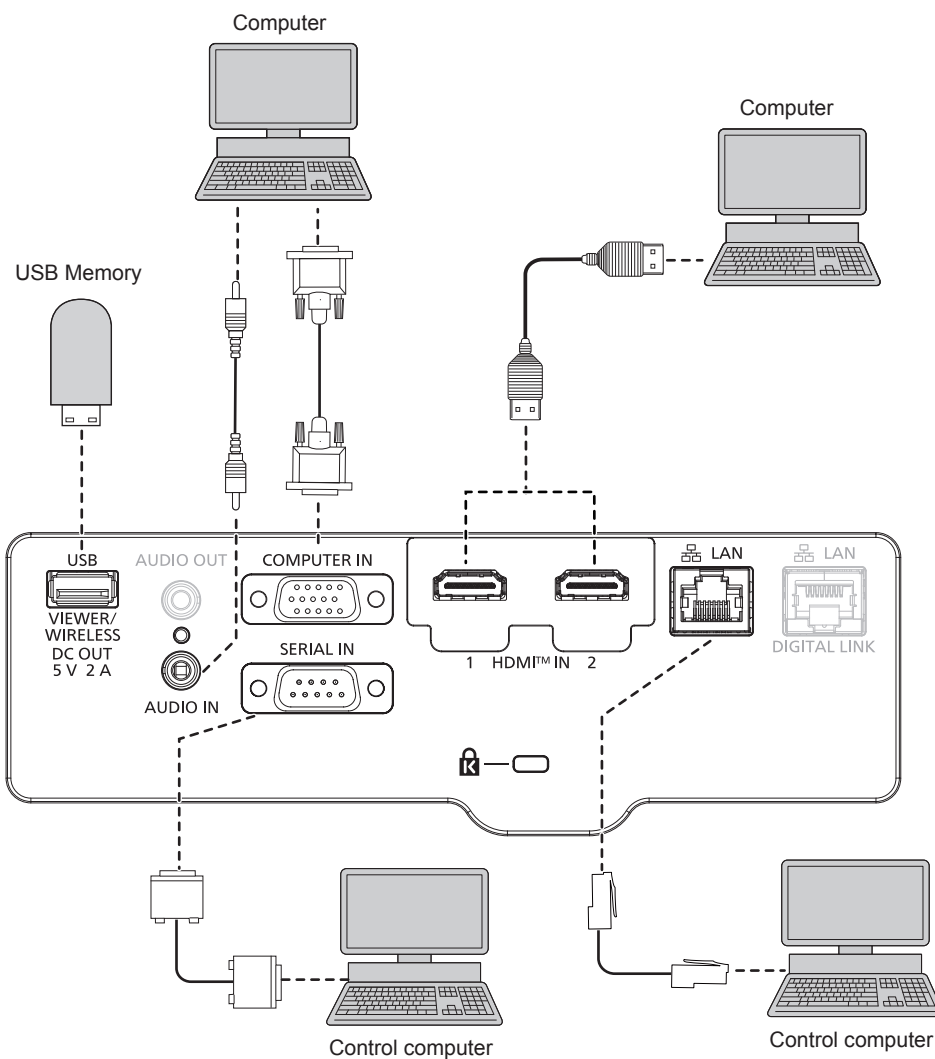
## Connecting example: AV equipment



### Note

- For an HDMI cable, use an HDMI High Speed cable that conforms to HDMI standards. In addition, when 4K image signal is to be input, please use HDMI cable that is compatible with 4K image signal. Images may be disrupted or may not be projected when an image signal exceeding the supported transmission speed of the HDMI cable is input.
- The <HDMI IN 1> terminal /<HDMI IN 2> terminal can be connected to an external device with the DVI-D terminal by using an HDMI/DVI conversion cable. However, this may not function properly for some external devices, and image may not be projected.
- To output audio, properly set the [PROJECTOR SETUP] menu → [AUDIO SETTING] → [AUDIO IN SELECT].
- When the <AUDIO OUT> terminal is connected with cable, the sound will not be output from the built-in speaker.

## Connecting example: Computers



### Attention

- When connecting the projector to a computer or an external device, use the power cord supplied with each device and commercially available shielded cables.

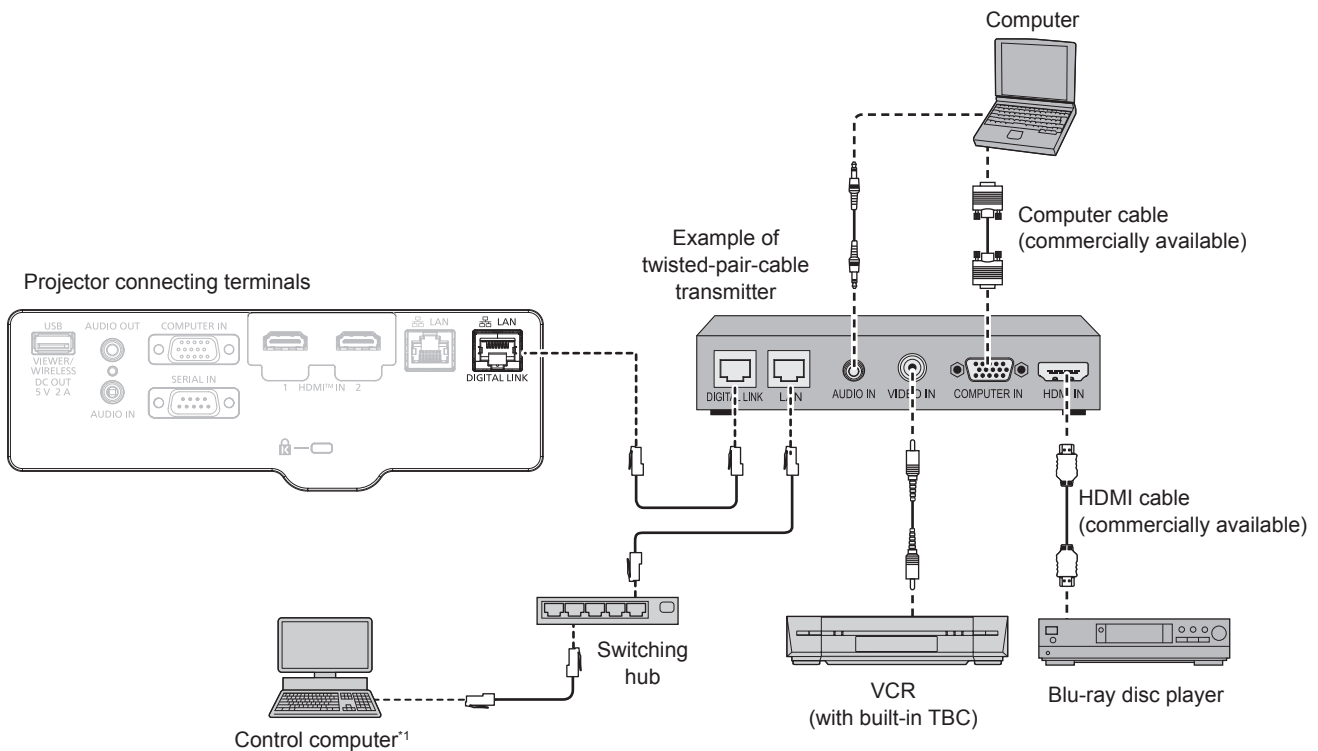
### Note

- For the HDMI cable, use an HDMI High Speed cable that conforms to the HDMI standards. In addition, when 4K image signal is to be input, please use HDMI cable that is compatible with 4K image signal. Images may be disrupted or may not be projected when an image signal exceeding the supported transmission speed of the HDMI cable is input.
- The <HDMI IN 1> terminal /<HDMI IN 2> terminal can be connected to an external device with the DVI-D terminal by using an HDMI/DVI conversion cable. However, this may not function properly for some external devices, and image may not be projected.
- If you operate the projector using the computer with the resume feature (last memory), you may have to reset the resume feature to operate the projector.



## Connecting example: Using DIGITAL LINK

Twisted-pair-cable transmitter based on the communication standard HDBaseT™ such as the DIGITAL LINK output supported device (Model No.: ET-YFB100G, ET-YFB200G) uses the twisted pair cable to transmit input images, audio, Ethernet, and serial control signal, and the projector can input such digital signal to the <DIGITAL LINK/LAN> terminal.



\*1 Control target is the projector or the twisted-pair-cable transmitter. The control itself may not be possible depending on the twisted-pair-cable transmitter. Check the operating instructions of the device to be connected.

### Attention

- Always use one of the following when connecting a VCR.
  - A VCR with built-in time base corrector (TBC)
  - A time base corrector (TBC) between the projector and the VCR
- If nonstandard burst signals are connected, the image may be distorted. In such case, connect the time base corrector (TBC) between the projector and the external devices.
- Ask a qualified technician or your dealer to install the cable wiring for a twisted-pair-cable transmitter and the projector. The image may be disrupted if cable transmission characteristics cannot be obtained due to inadequate installation.
- For the LAN cable between a twisted-pair-cable transmitter and the projector, use a cable that meets the following criteria:
  - Compatible with CAT5e or higher
  - Shielded type (including connectors)
  - Straight-through
  - Single wire
  - Diameter of the cable core is same or larger than AWG24 (AWG24, AWG23, etc.)
- When laying cables between a twisted-pair-cable transmitter and the projector, check that cable characteristics are compatible with CAT5e or higher using tools such as a cable tester or cable analyzer.
  - When using a relay connector midway, include it in the measurement.
- Do not use a switching hub between a twisted-pair-cable transmitter and the projector.
- When connecting to the projector using a twisted-pair-cable transmitter (receiver) of other manufacturer, do not place another twisted-pair-cable transmitter between the twisted-pair-cable transmitter of other manufacturer and the projector. This may cause image and sound to be disrupted.
- To transmit the Ethernet and serial control signals using the <DIGITAL LINK/LAN> terminal, set the [NETWORK] menu → [ETHERNET TYPE] to [DIGITAL LINK] or [LAN & DIGITAL LINK].
- To transmit the Ethernet signal using the <LAN> terminal, set the [NETWORK] menu → [ETHERNET TYPE] to [LAN] or [LAN & DIGITAL LINK].
- The <DIGITAL LINK/LAN> terminal and the <LAN> terminal are connected inside of the projector when the [NETWORK] menu → [ETHERNET TYPE] is set to [LAN & DIGITAL LINK]. Do not directly connect the <DIGITAL LINK/LAN> terminal and the <LAN> terminal using a LAN cable. Construct the system so that it is not connected to the same network via the peripherals such as the switching hub or the twisted-pair-cable transmitter.
- Do not pull cables forcefully. Also, do not bend or fold cables unnecessarily.
- To reduce the effects of noise as much as possible, stretch out the cables between the twisted-pair-cable transmitter and the projector without any loops.
- Lay the cables between a twisted-pair-cable transmitter and the projector away from other cables, particularly power cables.
- When installing multiple cables, run them side by side along the shortest distance possible without bundling them together.
- After laying the cable, confirm that the value of [SIGNAL QUALITY] in the [NETWORK] menu → [DIGITAL LINK] → [DIGITAL LINK STATUS] is displayed in green, which indicates a normal quality. (➔ page 117)

### Note

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- For an HDMI cable, use an HDMI High Speed cable that conforms to HDMI standards. If a cable that does not conform to HDMI standards is used, images may be interrupted or may not be displayed.
- The Digital Interface Box (Model No.: ET-YFB100G) and the DIGITAL LINK Switcher (Model No.: ET-YFB200G) do not support the input and output of the 4K image signal.
- The maximum transmission distance between the twisted-pair-cable transmitter and the projector is 100 m (328'1") for the signal with resolution of 1 920 x 1 200 dots or less. For the signal with the resolution exceeding 1 920 x 1 200 dots, the maximum transmission distance is 50 m (164'1"). It is possible to transmit up to 150 m (492'2") if the twisted-pair-cable transmitter supports the long-reach communication method. However, the signal that the projector can receive is only up to 1080/60p (1 920 x 1 080 dots, dot clock frequency 148.5 MHz) for the long-reach communication method. If these distances are exceeded, image may be disrupted or a malfunction may occur in LAN communication. Please note that Panasonic Projector & Display Corporation does not support the use of the projector outside the maximum transmission distance. When connecting with the long reach, image signal or distance that can be transmitted may be restricted, depending on the specification of the twisted-pair-cable transmitter.
- For twisted-pair-cable transmitter of other manufacturers of which the operation has been verified with the DIGITAL LINK compatible projector, refer to website (<https://docs.connect.panasonic.com/projector>). Note that the verification for devices of other manufacturers has been made for the items set by Panasonic Projector & Display Corporation, and not all the operations have been verified. For operation or performance problems caused by the devices of other manufacturers, contact the respective manufacturers.

# Chapter 3    **Basic Operations**

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This chapter describes basic operations to start with.

# Switching on/off the projector

## Connecting the power cord

Make sure that the supplied power cord is securely fixed to the projector body to prevent it from being removed easily.

Use the power cord matching with the power supply voltage and the shape of the outlet.

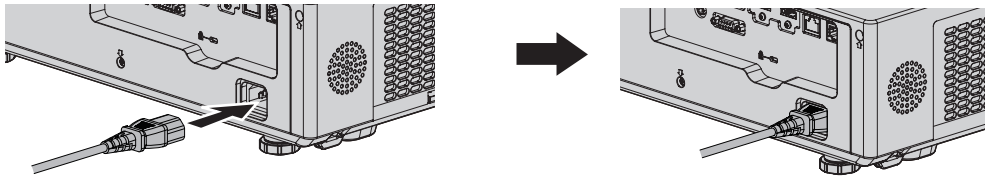
For details of power cord handling, refer to "Read this first!" (➔ page 5).

For the shape of the outlet, refer to "Usable outlet" (➔ page 34).

### Note

- The supplied power cords vary depending on the country or region where you purchased the product.

## Attaching the power cord



- 1) Check the shapes of the <AC IN> terminal on the back of the projector and the power cord connector, then insert the connector completely in the correct direction.

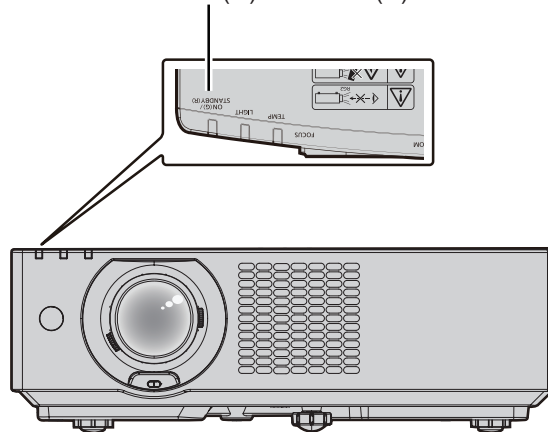
## Removing the power cord

- 1) Confirm that the projector is in standby mode, and remove the power plug from the outlet.
- 2) Remove the power cord connector from the <AC IN> terminal.

## Power indicator

Displays the status of the power. Check the <ON(G)/STANDBY(R)> status of the power indicator before operating the projector.

Power indicator <ON(G)/STANDBY(R)>



## Chapter 3 Basic Operations - Switching on/off the projector

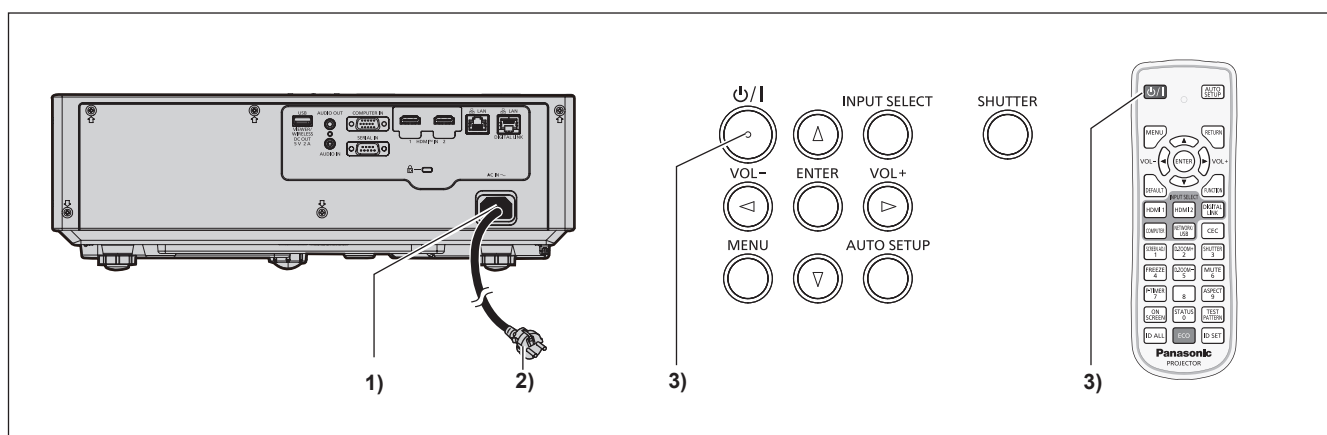
Indicator status		Projector status
Off		The power plug is not connected to the outlet.
Red	Lit	The power is switched off (in standby mode). Projection will start when the power <⏻/⏻> button is pressed. <ul style="list-style-type: none"> <li>When the light source indicator &lt;LIGHT&gt; or the temperature indicator &lt;TEMP&gt; is blinking, the projection will not start even if the power &lt;⏻/⏻&gt; button is pressed. (➔ page 190)</li> </ul>
Green	Lit	Projecting.
Orange	Lit	The projector is preparing to be switched off. The power will be switched off after a while. (Changes to the standby mode.)

### Note

- While the power indicator <ON (G)/STANDBY (R)> lights orange, the fan is running to cool the projector.
- For approximately five seconds after the projector is turned off, the projector does not light up even if you try to turn on the projector. Turn on the power again after the power indicator <ON (G)/STANDBY (R)> lights red.
- The projector consumes power even in standby mode (power indicator <ON (G)/STANDBY (R)> lights red). Refer to “Standby mode power consumption” (➔ page 210) for the power consumption.
- When the projector receives the signal from the remote control, the power indicator <ON (G)/STANDBY (R)> will blink in the following color according to the status of the projector.
  - When the projector is in projection mode: Green
  - When the projector is in standby mode: Orange
 However, if the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE] is set to [ECO], the indicator will stay lit red and will not blink if the projector is in standby mode.
- The power indicator <ON (G)/STANDBY (R)> will blink green slowly in the following cases.
  - While the shutter function is in use (shutter: closed).
  - The [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [POWER MANAGEMENT] is set to [READY].

## Switching on the projector

Before switching on the projector, make sure all the other devices are correctly connected (➔ page 39).



- 1) **Connect the power cord to the projector.**
- 2) **Connect the power plug to an outlet.**
  - The power indicator <ON(G)/STANDBY(R)> lights red, and the projector will enter the standby mode.
- 3) **Press the power <⏻/|> button.**
  - A beep sound will be heard when the power <⏻/|> button is pressed.
  - The power indicator <ON(G)/STANDBY(R)> lights green and the image is soon projected on the screen.

### Note

- To enable/disable the power beep, refer to “Setting the power beep”. (➔ page 104).
- When the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE] is set to [ECO], it takes longer for the projection to start after the power is turned on, compared to when set to [NORMAL].
- When the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [QUICK STARTUP] is set to [ON], and the power is turned on before the specified time elapses after the projector enters the standby mode, an image will be projected approximately one second after the power is turned on.  
The specified time is a time set in the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [QUICK STARTUP] → [VALID PERIOD].

## When the initial setting screen is displayed

When the projector is switched on for the first time after purchase, the **[INITIAL SETTING]** screen and the **[ADMINISTRATOR ACCOUNT]** screen are displayed in order after the projection starts. When the [PROJECTOR SETUP] menu → [INITIALIZE ALL] is executed, the **[INITIAL SETTING]** screen is displayed after the projection starts. When the [NETWORK] menu → [INITIALIZE] is executed, the **[ADMINISTRATOR ACCOUNT]** screen is displayed after the projection starts next time. Set them in accordance with circumstances.

In other occasions, you can change the settings by menu operations.

When the **[INITIAL SETTING]** screen is displayed, you can return to the previous screen by pressing the <MENU> button or <RETURN> button.

### Note

- When the projector is used for the first time, in order to clearly display the menu screen, it may be necessary to adjust the focus lever and the zoom lever in the projection lens area of the projector (➔ page 29). For details, refer to “Adjusting the focus, zoom, and lens shift” (➔ page 55).

## Initial setting (display language)

Select the language to show on the screen.

After the initial setting, you can change the display language from the [LANGUAGE] menu.

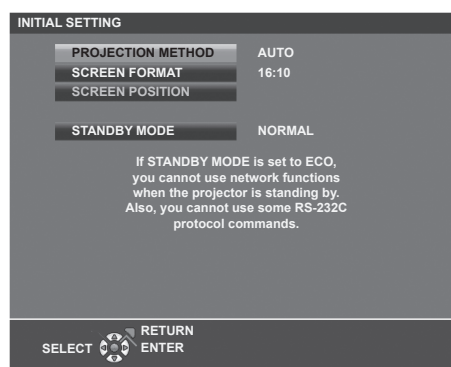
- 1) **Press ▲▼◀▶ to select the display language.**



2) Press the <ENTER> button to proceed to the following initial setting.

### Initial setting (projector setup)

If necessary, change the setting of each item.



1) Press ▲▼ to select an item.

Item	Description
[PROJECTION METHOD]	Set [PROJECTION METHOD] depending on the installation mode.
[SCREEN FORMAT]	Set the aspect ratio of the screen.
[SCREEN POSITION]	Set the display position of the screen.
[STANDBY MODE]	Set the operation mode during standby.

2) Press ◀▶ to switch the setting.

- When all settings are completed, proceed to Step 3).

3) Press the <ENTER> button.

- Confirm the setting value and complete the initial setting.

### Setting [PROJECTION METHOD]

If the screen display is upside down or is reversed, please change the settings, refer to “Installation mode” (➔ page 34). After initialization, you can change the settings from the [PROJECTOR SETUP] menu → [PROJECTION METHOD].

1) Press ▲▼ to select the [PROJECTION METHOD].

2) Press ◀▶ to switch the settings.

- When set to [AUTO], the built-in angle sensor detects the orientation of the projector and automatically switches to [FRONT/DESK] or [FRONT/CEILING]. Normally, set to [AUTO].
- To project from the rear of the screen, select [REAR/DESK] or [REAR/CEILING] (using a translucent screen).

### Setting [SCREEN FORMAT] and [SCREEN POSITION]

Set the screen aspect ratio and display position according to the screen being used. When the initial setting is complete, you can change the setting from the [DISPLAY OPTION] menu → [SCREEN SETTING] → [SCREEN FORMAT]/[SCREEN POSITION].

- 1) Press ▲▼ to select the [SCREEN FORMAT].
- 2) Press ◀▶ to select the aspect ratio.
- 3) Press ▲▼ to select the [SCREEN POSITION].
  - When [SCREEN FORMAT] is set to [16:10], the [SCREEN POSITION] cannot be changed.
- 4) Press ◀▶ to select the image position.
  - Select from [CENTER]/[HIGH]/[LOW] or [CENTER]/[LEFT]/[RIGHT].

### Setting [STANDBY MODE]

Set the operating mode at standby. When the initial setting is complete, you can change the setting from the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE].

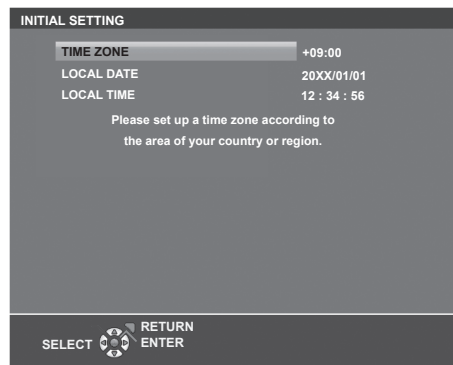
- 1) Press ▲▼ to select [STANDBY MODE].
- 2) Press ◀▶ to select the operation mode.
  - The factory default setting is [NORMAL], which enables the network function even in standby mode.
  - To lower the power consumption level during standby, set to [ECO].

### Initial setting (time zone)

Set [TIME ZONE] in accordance with the country or region where you use the projector.

After completed the initial setting, you can change the setting from the [PROJECTOR SETUP] menu → [DATE AND TIME]. The current settings are displayed in [LOCAL DATE] and [LOCAL TIME].

- 1) Press ◀▶ to switch the setting.



- 2) Press the <ENTER> button to proceed to the initial setting.

#### Note

- In the factory default setting, the time zone of the projector is set to +09:00 (Japan and Korea Standard Time). Change the setting of the [PROJECTOR SETUP] menu → [DATE AND TIME] → [TIME ZONE] to the time zone of the region where you use the projector.

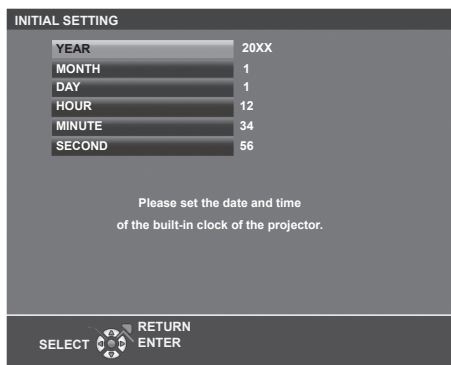
### Initial setting (date and time)

Set the local date and time. After completed the initial setting, you can change the setting from the [PROJECTOR SETUP] menu → [DATE AND TIME].

To set the date and time automatically, refer to “Setting the date and time automatically” (➡ page 108).

- 1) Press ▲▼ to select an item.



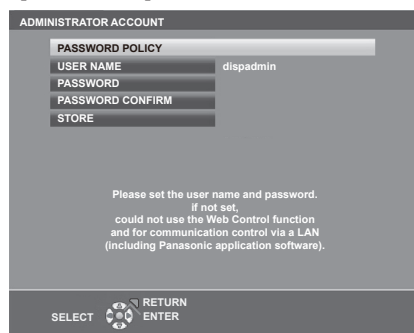


- 2) Press ◀▶ to switch the setting.
- 3) Press the <ENTER> button.
  - Confirm the setting value and complete the initial setting.

### When the administrator account setting screen is displayed

When the projector is switched on for the first time after purchase, the [INITIAL SETTING] screen and the [ADMINISTRATOR ACCOUNT] screen are displayed in order after the projection starts. When the [PROJECTOR SETUP] menu → [INITIALIZE ALL] is executed, the [INITIAL SETTING] screen is displayed after the projection starts. When the [NETWORK] menu → [INITIALIZE] is executed, the [ADMINISTRATOR ACCOUNT] screen is displayed after the projection starts next time.

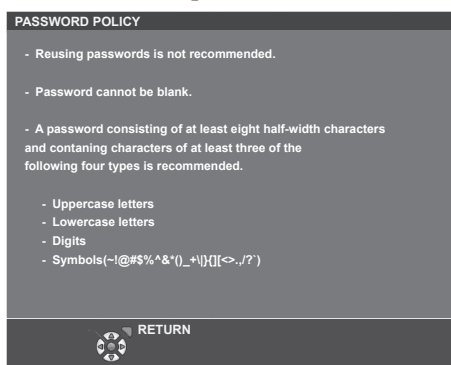
To use the network function of this projector, set the user name and password of the administrator account. You can also set it later from the [NETWORK] menu → [ADMINISTRATOR ACCOUNT].



### [PASSWORD POLICY]

Displays the policies about the password for the administrator account.

- 1) Press ▲▼ to select [PASSWORD POLICY], and press the <ENTER> button.
  - The [PASSWORD POLICY] screen is displayed.
  - Pressing the <MENU> button can return to the [ADMINISTRATOR ACCOUNT] screen.



### Setting the administrator account

Set the user name and password of the administrator account.

- 1) Press ▲▼ to select [USER NAME], and press the <ENTER> button.

- The **[USER NAME]** screen is displayed.
  - The factory default setting of user name is "dispadmin".
- 2) Press **▲▼◀▶** to select a character, and press the **<ENTER>** button.
    - Up to 16 characters can be entered.
  - 3) After entering the user name, press **▲▼◀▶** to select **[OK]**, and press the **<ENTER>** button.
    - The **[ADMINISTRATOR ACCOUNT]** screen is displayed.
  - 4) Press **▲▼** to select **[PASSWORD]**, and press the **<ENTER>** button.
    - The **[PASSWORD]** screen is displayed.
  - 5) Press **▲▼◀▶** to select a character, and press the **<ENTER>** button.
    - Up to 16 characters can be entered.
    - The password cannot be blank.
  - 6) After entering the password, press **▲▼◀▶** to select **[OK]**, and press the **<ENTER>** button.
    - The **[ADMINISTRATOR ACCOUNT]** screen is displayed.
  - 7) Press **▲▼** to select **[PASSWORD CONFIRM]**, and press the **<ENTER>** button.
    - The **[PASSWORD CONFIRM]** screen is displayed.
  - 8) Enter the password entered in Step 5).
  - 9) After entering the password, press **▲▼◀▶** to select **[OK]**, and press the **<ENTER>** button.
    - The **[ADMINISTRATOR ACCOUNT]** screen is displayed.
  - 10) Press **▲▼** to select **[STORE]**, and press the **<ENTER>** button.
    - The confirmation screen is displayed.
  - 11) Press **◀▶** to select **[OK]**, and press the **<ENTER>** button.

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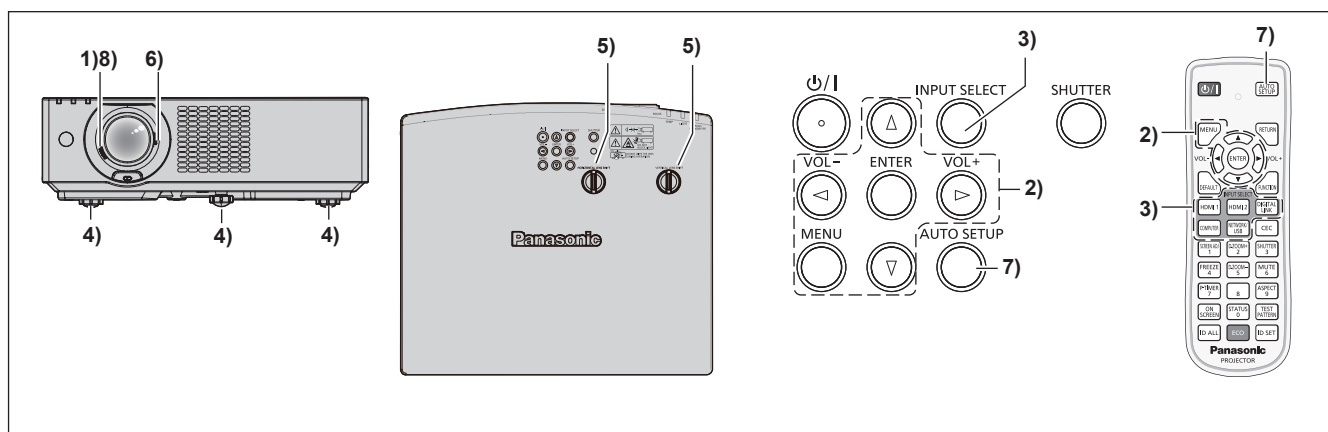
### Note

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- For restrictions on character strings that can be set for password, refer to **[PASSWORD POLICY]** (➔ page 49).
- By pressing the **<MENU>** button while the **[ADMINISTRATOR ACCOUNT]** screen is displayed, you can proceed to the next operation without setting an administrator account password, but the network function of this projector cannot be used. To use the web control function or the communication control (including operation with application software) via LAN, set a password.
- If you press the **<MENU>** button while the **[ADMINISTRATOR ACCOUNT]** screen is displayed, the **[ADMINISTRATOR ACCOUNT]** screen will not be displayed the next time the power is turned on. To use the network function, set a password in the **[NETWORK]** menu → **[ADMINISTRATOR ACCOUNT]**.
- The user name and password of the administrator account can also be changed in "[Account set up] (when accessed by administrator account)" (➔ page 143) of the web control screen.
- The user name and password of the standard user account without administrator rights can be set in "[Account set up] (when accessed by administrator account)" (➔ page 143) of the web control screen.

## Making adjustments and selections

It is recommended that images are projected continuously for at least 30 minutes before the focus is adjusted.

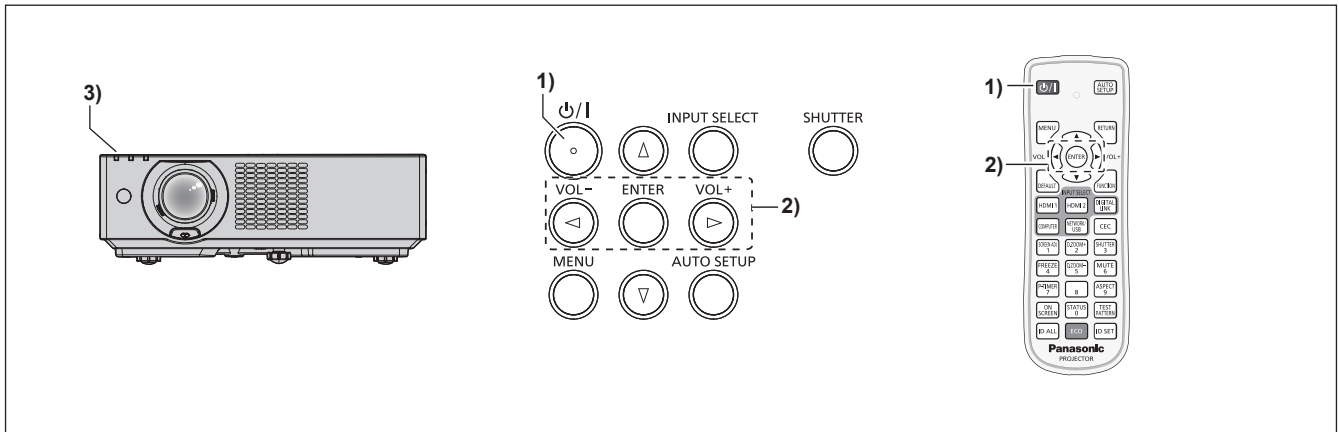


- 1) Roughly adjust the focus of the image with the focus lever. (➔ page 55)
- 2) Change the settings of the [PROJECTOR SETUP] menu → [PROJECTION METHOD] depending on the installation mode. (➔ page 34)
  - Refer to “Navigating through the menu” (➔ page 65) for the operation of the menu screen.
- 3) Press the input selection buttons on the remote control or the <INPUT SELECT> button on the control panel to select the input signal.
  - The buttons that can be used on the remote control are as follows.  
 <HDMI 1> button, <HDMI 2> button, <DIGITAL LINK> button, <COMPUTER> button, <NETWORK/USB> button
- 4) Adjust the front, back and sideways tilt of the projector with the adjustable feet. (➔ page 55)
- 5) Adjust the horizontal / vertical projection position with the horizontal / vertical lens shift dial. (➔ page 55)
- 6) Adjust the size of the image to match the screen with the zoom lever. (➔ page 55)
- 7) If the input signal is an analog RGB signal, press the <AUTO SETUP> button.
- 8) Adjust the focus again with the focus lever.

### Note

- The image size and position may be adjusted with [DIGITAL ZOOM EXTENDER]. For details, refer to “Using the Digital Zoom Extender function” (➔ page 76). However, the image quality will deteriorate as the image size is reduced using the Digital Zoom Extender function.
- When the projector is switched on for the first time after purchase, the [INITIAL SETTING] screen and the [ADMINISTRATOR ACCOUNT] screen are displayed in order after the projection starts. When the [PROJECTOR SETUP] menu → [INITIALIZE ALL] is executed, the [INITIAL SETTING] screen is displayed after the projection starts. When the [NETWORK] menu → [INITIALIZE] is executed, the [ADMINISTRATOR ACCOUNT] screen is displayed after the projection starts next time. For details, refer to “When the initial setting screen is displayed” (➔ page 46) and “When the administrator account setting screen is displayed” (➔ page 49).

## Switching off the projector



- 1) **Press the power <⏻/|> button.**
  - The [POWER OFF] confirmation screen is displayed.
- 2) **Press ◀▶ to select [OK], and press the <ENTER> button.**  
**(Or press the power <⏻/|> button again.)**
  - The projector stops projection and beeps twice. The power indicator <ON(G)/STANDBY(R)> on the projector lights orange. (The fans keep running.)
- 3) **Wait until the power indicator <ON(G)/STANDBY(R)> on the projector lights red.**
  - The projector enters standby mode when the power indicator <ON(G)/STANDBY(R)> lights red.
- 4) **Disconnect the plug of the power cord from the outlet.**

### Note

- To enable/disable the power beep, refer to “Setting the power beep”. (➡ page 104).
- For approximately five seconds after the projector is turned off, the projector does not light up even if you try to turn on the projector.
- **Even if the power is turned off by pressing the power <⏻/|> button, the projector consumes power if the power plug is connected to the outlet.**  
 When the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE] is set to [ECO], use of some functions is restricted, but the power consumption during standby can be conserved.
- The projector supports direct power off function. You can cut off the power supply during projection by disconnecting the power cord from the outlet or by switching off the circuit breaker in case of ceiling mount. However, the settings or adjustments performed right before the power is turned off may not be reflected.

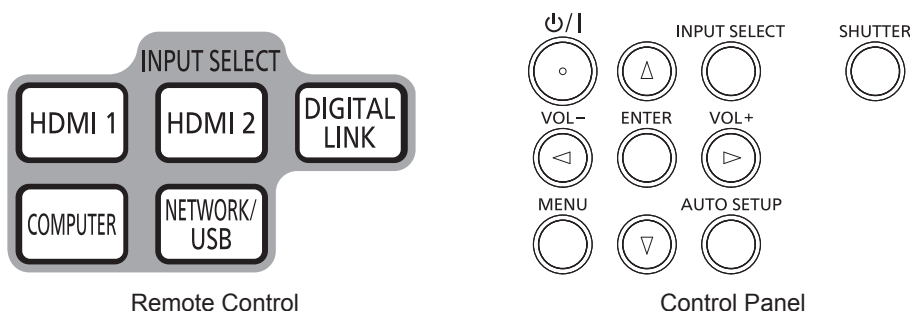
# Projecting

Check the connections of the external devices (➔ page 39) and connection of the power cord (➔ page 44) and then power on the projector (➔ page 46) to start projecting. Select the image and adjust the state of the image.

## Selecting the image input for projection

Switch the image input for projection. Method to switch the input is as follows.

- Press the input selection buttons on the remote control and directly specify the input to project.
- Press the <INPUT SELECT> button on the control panel to display the input guide and select the input to be projected.



## Switching the input directly with the remote control

The input for projection can be switched by directly specifying it with the input selection button on the remote control.

- 1) Press the input selection buttons (<HDMI 1>, <HDMI 2>, <DIGITAL LINK>, <COMPUTER>, <NETWORK/USB>).

Remote control buttons	Input	Usage
<HDMI 1>	HDMI 1	Switches the input to HDMI 1. Displays the image signals input via the <HDMI IN 1> terminal.
<HDMI 2>	HDMI 2	Switches the input to HDMI 2. Displays the image signals input via the <HDMI IN 2> terminal.
<DIGITAL LINK>	DIGITAL LINK	Switches the input to DIGITAL LINK. Displays the image signals input via the <DIGITAL LINK/LAN> terminal.
<COMPUTER>	COMPUTER	Switches the input to COMPUTER. Displays the image signals input via the <COMPUTER IN> terminal.
<NETWORK/USB>	MEMORY VIEWER	Switches the input to MEMORY VIEWER or NETWORK. If one input has been selected already, the input will be switched every time the button is pressed. <ul style="list-style-type: none"> <li>• MEMORY VIEWER: Displays the still images in the USB memory with the Memory Viewer function. (➔ page 129)</li> <li>• NETWORK: Displays images transmitted from a terminal over wireless LAN / wired LAN by using the image transfer application software. (➔ page 131)</li> </ul>
	NETWORK	

- When switching inputs, the input guide for detailed or simple display is temporarily displayed. For the input guide, refer to “Switching the input with the control panel” (➔ page 54) or the [DISPLAY OPTION] menu → [ON-SCREEN DISPLAY] → [INPUT GUIDE].

### Attention

- Images may not be projected properly depending on the external device, or the Blu-ray disc or DVD disc, to be played back. Set the following menu items according to the input signal.
  - [PICTURE] menu → [RGB/YC<sub>B</sub>C<sub>R</sub>]
  - [PICTURE] menu → [RGB/YP<sub>B</sub>P<sub>R</sub>]
  - [PICTURE] menu → [RGB-SYSTEM]
- Confirm the aspect ratio of the projection screen and the image, and switch to an optimum aspect ratio from the [POSITION] menu → [ASPECT].

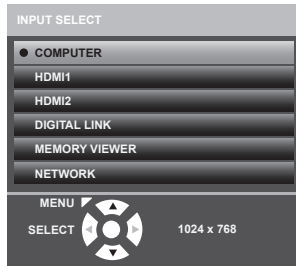
### Note

- If NETWORK input is selected, the image from a computer (including iPad / iPhone / iPod touch and Android device) can be transferred via wireless LAN/wired LAN to the projector by using the Panasonic image transfer application software.  
For details about the image transfer application software "Presenter Light" and "Wireless Projector", refer to the website (<https://docs.connect.panasonic.com/projector>).
- When the DIGITAL LINK output supported device (Model No.: ET-YFB100G, ET-YFB200G) is connected to the <DIGITAL LINK/LAN> terminal, the input on the DIGITAL LINK output supported device changes each time the <DIGITAL LINK> button is pressed. The input can also be changed using the RS-232C control command.  
For twisted-pair-cable transmitters of other manufacturers, switch the input on the projector to DIGITAL LINK, and then switch the input on the twisted-pair-cable transmitter.  
For details of the RS-232C operation command, refer to "<SERIAL IN> terminal" (▶ page 204).

### Switching the input with the control panel

The input can be switched with the <INPUT SELECT> button on the control panel

After pressing the <INPUT SELECT> button, the detailed or simple input guide is displayed.



Detailed input guide example



Simple input guide example

**1) Press the <INPUT SELECT> button on the control panel.**

- The input guide is displayed.

**2) Press the <INPUT SELECT> button again.**

- The input is switched every time you press the <INPUT SELECT> button.
- When the detailed input guide is displayed, you can select the input with the ▲▼ buttons on the control panel or on the remote control.

### Note

- You can switch the detailed/simple input guide by setting the [DISPLAY OPTION] menu → [ON-SCREEN DISPLAY] → [INPUT GUIDE].
- When the [DISPLAY OPTION] menu → [ON-SCREEN DISPLAY] → [INPUT GUIDE] is set to [OFF], the input guide is not displayed.

## Adjusting the focus, zoom, and lens shift

Adjust the focus, zoom, and lens shift if the image projected to the screen or its position is shifted even if the projector and the screen are set up in the correct positions.

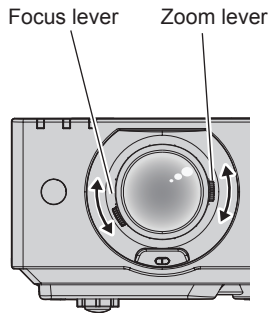


Fig. 1

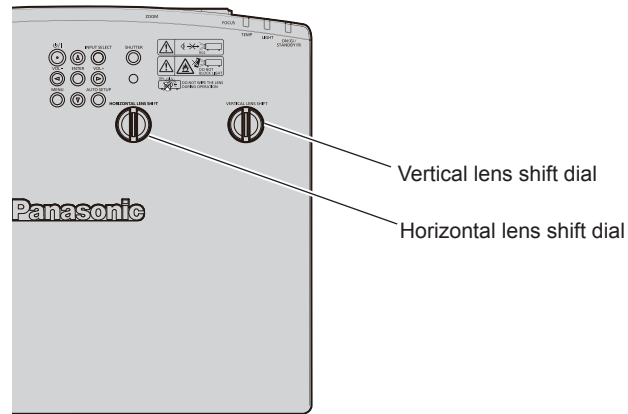


Fig. 2

### 1) Adjust the zoom and the focus. (Fig. 1)

- Operate the focus lever to adjust the focus.
- Operate the zoom lever to adjust the projected image size to fit the screen.

### 2) Adjust the lens shift. (Fig. 2)

- Turn the horizontal and vertical lens shift dial and adjust the horizontal and vertical projection position on the screen. For details, refer to "About lens shift adjustment range" (➔ page 56).

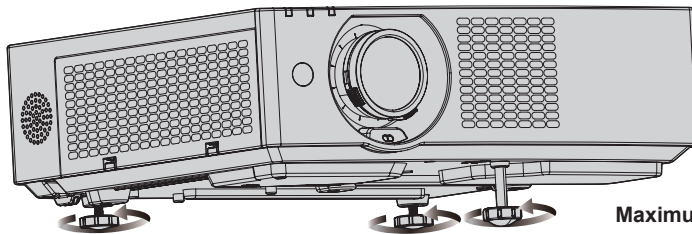
### Note

- It is recommended that the images are projected continuously for at least 30 minutes before the focus is adjusted.
- When the focus is adjusted, the projection screen size also changes slightly. Depending on the image projection situation, repeat Steps 1) to 2) to adjust to the best projection condition.
- Adjust from the [POSITION] menu → [SCREEN ADJUSTMENT] when the projected image is distorted.
- When adjusting with the focus lever/zoom lever, the projector's light output may be reduced if the lens is blocked by the hand and will return to normal once your hand stops blocking the lens. For details, refer to the [PROJECTOR SETUP] menu → [LENS BLOCK DETECTION] (➔ page 103).

## Adjusting adjustable feet

Install the projector on a flat surface so that the front of the projector is parallel to the screen surface and the projection screen is rectangular.

If the screen tilts upward or downward, extend the front adjustable foot and rear adjustable feet to adjust the projection screen to be rectangular. If the screen tilts in the horizontal direction, adjust the rear adjustable feet to make the screen level. Adjustable feet can be extended by turning them as shown in the figure. Turning them in the opposite direction will return them to the original position.



### Maximum adjustable range

Front adjustable foot : 37 mm (1-15/32")

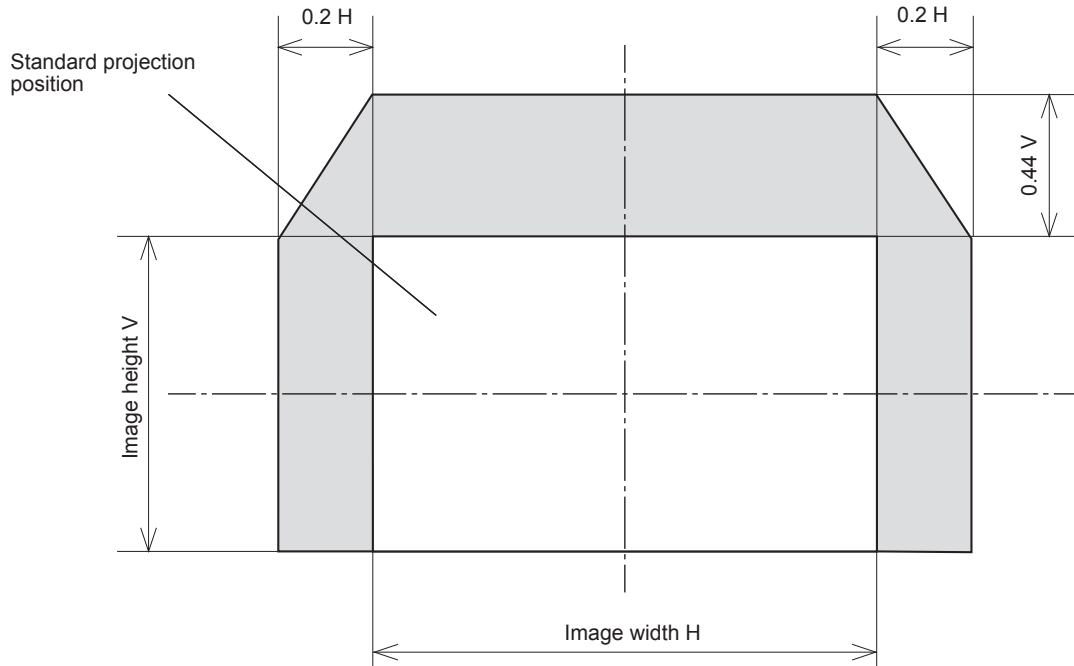
Rear adjustable feet : 7.5 mm (9/32") each

### Attention

- Be careful not to block the intake/exhaust vents with your hands or any objects when adjusting the adjustable feet while the light source is on. (➔ page 29)

## About lens shift adjustment range

The projector supports lens shift in horizontal and vertical direction. The following figure shows the lens shift adjustable range in horizontal and vertical direction with reference to the standard projection position. Following illustration indicates the lens shift range when the projector is installed on desk/floor.



### Note

- The standard projection position indicates the projection screen position in the state without lens shift adjustment.



## Using the USB memory

This projector supports the attachment of the USB memory. Attach the USB memory to the <USB (VIEWER/WIRELESS/DC OUT)> terminal when registering a user image or when using the Memory Viewer function, the data cloning function or the user update function, etc.

### Note

- For registering the user image, refer to “Registering the user image” (➔ page 111).
- For the Memory Viewer function, refer to “Projecting with MEMORY VIEWER input” (➔ page 129).
- For the user update function, refer to the [PROJECTOR SETUP] menu → [USER UPDATE] (➔ page 112).
- For the data cloning function, refer to the [PROJECTOR SETUP] menu → [DATA CLONING] (➔ page 112).

### Notes on use

Observe the following.

- Do not disassemble or modify the USB memory.
- Do not apply strong impact on the USB memory.
- Do not pour liquid such as water or get it wet.
- Do not place foreign object into the terminal section.
- Do not touch the metal terminal with hand or metal.
- Do not leave the USB memory in a place with high humidity or dust.
- Do not leave the USB memory in a place where static electricity or electromagnetic radiation is generated.
- Store the USB memory appropriately in a location that small children cannot reach.
- Immediately remove the USB memory from the projector when smoke or odor is noticed, and contact the manufacturer.
- Do not remove the USB memory from the projector while reading or writing the data.

### USB memory that can be used with the projector

This projector supports the commercially available USB 2.0 compatible USB memory formatted in FAT16 or FAT32.

- Only the single partition structure is supported.

### Attaching the USB memory

- 1) Insert the USB memory all the way in to the <USB (VIEWER/WIRELESS/DC OUT)> terminal.

#### Attention

- Take care of the orientation of the terminal when inserting the USB memory so that it will not get damaged.
- Do not use a USB extension cable or a USB hub, and directly insert the USB memory into the <USB (VIEWER/WIRELESS/DC OUT)> terminal of the projector.

#### Note

- The USB memory can be attached even when the projector is turned on.

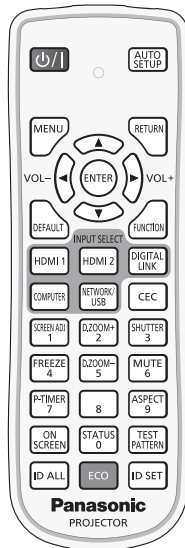
### Removing the USB memory

- 1) Remove the USB memory after confirming that the indicator on the USB memory is not blinking.

#### Attention

- The blinking of the indicator of the USB memory attached to the projector is indicating that the projector is accessing (reading or writing) the USB memory. Do not remove the USB memory from the projector when the indicator is blinking.
- The access status to the USB memory cannot be confirmed when a USB memory without the monitoring function such as indicator is used. In such case, remove the USB memory after confirming one of the following.
  - The projector is turned off.
  - When the Memory Viewer function is terminated.
  - When the registration of the user image is performed, confirm that the registration is completed in the menu screen.
  - When using the data cloning function, confirm that the saving or loading of the data to/from the USB memory is completed in the menu screen.
  - When using the user update function, wait until the projector automatically goes into standby after the update has started.

# Operating with the remote control



## Using the shutter function

If the projector is not used for a certain period of time during the meeting intermission, for example, it is possible to turn off the image and audio temporarily.



- 1) **Press the <SHUTTER> button.**
  - The image and audio disappear.
  - This operation can be also performed by pressing the <SHUTTER> button on the control panel.
- 2) **Press the <SHUTTER> button again.**
  - The image and audio reappear.

### Note

- The power indicator <ON (G)/STANDBY (R)> will blink green slowly while the shutter function is in use (shutter: closed).
- Even when the shutter function is in use (shutter: closed), the power <P/|> button and input select (<HDMI 1>, <HDMI 2>, <DIGITAL LINK>, <COMPUTER>, <NETWORK / USB>) buttons can be operated.
- The light source may be lit dimly due to warm up when the shutter function is used in the operating environment temperature of around 0 °C (32 °F).

## Using the mute function

This button allows you to turn off the audio output temporarily.



- 1) **Press the <MUTE> button.**
  - The audio turns off.
- 2) **Press the <MUTE> button again.**
  - The audio turns on.

## Adjusting the volume

You can control the volume of the built-in speaker and audio output.



1) Press the <VOL -> button / <VOL +> button.

<VOL +>	Increases the volume.
<VOL ->	Decreases the volume.

**Note**

- You can also operate with the <VOL -> button and <VOL +> button on the control panel.

**Using the freeze function**

You can freeze the projected image and mute the sound temporarily, regardless of the playback status of the external device.



- 1) Press the <FREEZE> button.
  - The image is paused and the audio is muted.
- 2) Press the <FREEZE> button again.
  - The image resumes and the audio is output.

**Note**

- [FREEZE] is displayed at the lower left of the projection screen in freeze status.
- When freezing of the moving image is canceled, the image may disappear or be disrupted temporarily.

**Using the on-screen display function**

Turn off the on-screen display function (no display) when you do not wish the viewers to see the on-screen display, such as the menu or the input name.



- 1) Press the <ON SCREEN> button.
  - The on-screen display disappears.
- 2) Press the <ON SCREEN> button again.
  - The on-screen display appears.

**Note**

- If you press the <MENU> button on the control panel for at least three seconds while the on-screen display is off (hidden), the on-screen display is turned on.

**Using the auto setup function**

The dot clock, clock phase and image position can be adjusted automatically when the analog RGB still image signal is input. (Analog RGB signal is a signal structured with dots just like the computer signal.)

It is recommended to input an image with bright white borders at the edges and high-contrast black and white characters when the automatic adjustment is being performed.

Avoid using images that include halftones or gradation, such as photographs and computer graphics.



1) Press the <AUTO SETUP> button.

**Note**

- You can also use this function with the <AUTO SETUP> button on the control panel.

- The clock phase may shift even if the automatic adjustment is performed. In such a case, adjust the [POSITION] menu → [CLOCK PHASE]. (➔ page 82)
- When the input signal is a blurred-edge image or a dark image, it may not be able to be adjusted correctly even if the automatic adjustment is performed. In this case, adjust the following settings.
  - [POSITION] menu → [DOT CLOCK] (➔ page 81)
  - [POSITION] menu → [CLOCK PHASE] (➔ page 82)
  - [POSITION] menu → [SHIFT] (➔ page 81)
- Automatic adjustment may not be performed depending on the computer model and input signal.
- Images may be disrupted for a few seconds during automatic adjustment, but it is not a malfunction.
- Automatic adjustment can be canceled by pressing any button on the remote control during the automatic adjustment operation.
- If the automatic setup function is used while moving images are being input, the adjustment may not be performed properly even for a signal that can use automatic setup.

## Using the screen adjustment function

You can correct various types of distortion in a projected image. Unique image processing technology enables projection of a square image on a special screen shape.

Also, you can reduce the image size and shift the image position using the Digital Zoom Extender function. Use this function when projecting from a longer distance than usual due to the installation environment.



button

- 1) Press the <SCREEN ADJ> button.
  - The [SCREEN ADJUSTMENT] screen is displayed.
- 2) Press ◀▶ to switch the item.

[KEystone]	Adjusts when the trapezoid of the projected image is distorted.
[DIGITAL ZOOM EXTENDER]	Select this item when using the Digital Zoom Extender function to reduce the projected image size and to adjust the image position. You can also perform corner correction within this function.
[CORNER CORRECTION]	Adjusts when the four corners of the projected image are distorted.
[CURVED CORRECTION]	Adjusts any curved distortion in the projected image.
[6POINT CORRECTION]	Corrects the distortion that occurs when projecting on a horizontal corner surface, such as a wall corner or a square pillar.

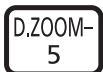
- 3) Press <ENTER> button.
  - The [KEystone] screen, [DIGITAL ZOOM EXTENDER] screen, [CORNER CORRECTION] screen, [CURVED CORRECTION] screen or the [6POINT CORRECTION] screen is displayed.

### Note

- For more details, refer to the [POSITION] menu → [SCREEN ADJUSTMENT]. (➔ page 75)

## Using the digital zoom function

You can enlarge images. You can also change the location of the images to be enlarged.



buttons

- 1) Press the <D.ZOOM -> button/<D.ZOOM +> button.
  - The moving screen is displayed.
- 2) Press the following buttons to move the location of the image or adjust the magnification.
  - The digital zoom function is canceled if the <D.ZOOM -> button/<D.ZOOM +> button is pressed for three seconds or more.

Operation menu/Buttons	Operation	Adjustment
	Press the ▲ button.	Moves the image to the bottom.
	Press the ▼ button.	Moves the image to the top.
	Press the ◀ button.	Moves the image to the right.
	Press the ▶ button.	Moves the image to the left.
	Press the <MENU> button.	Moves the image to the upper left.
	Press the <RETURN> button.	Moves the image to the upper right.
	Press the <ENTER> button.	Moves the image to the center.
	Press the <DEFAULT> button.	Moves the image to the lower left.
	Press the <FUNCTION> button.	Moves the image to the lower right.
	Press the <D.ZOOM +> button.	Increases magnification.
Press the <D.ZOOM -> button.	Decreases magnification.	

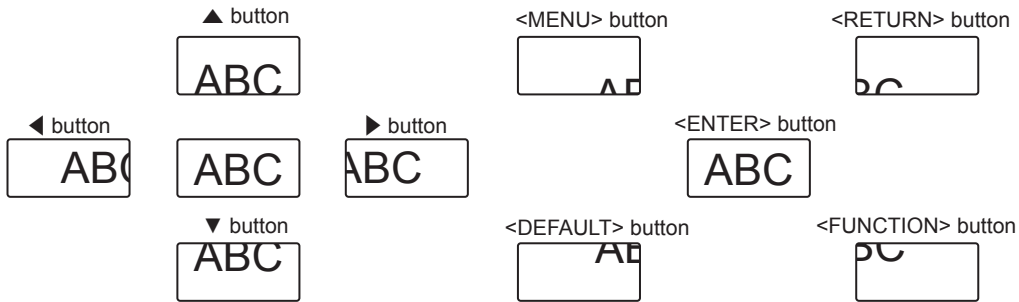


Fig. 1 Screen display position after the button operation

**Note**

- The magnification is not displayed in the moving screen.
- The digital zoom function is canceled if the input signal changes during a digital zoom.
- During a digital zoom, the freeze function is disabled.
- The digital zoom function may not work properly for some computer signals.
- The digital zoom function can also be used by menu operation. For details, refer to [DISPLAY OPTION] menu → [OTHER FUNCTIONS] → [DIGITAL ZOOM]. (➡ page 94)

**Switching the image aspect ratio**

Switch the image aspect ratio according to the input.



1) Press the <ASPECT> button.

- The setting will change each time you press ◀▶ button.

**Note**

- Refer to the [POSITION] menu → [ASPECT] (➡ page 82) for details.

**Using the presentation timer function**

The presentation timer can be operated.

The presentation can be performed while confirming the elapsed time or remaining time against the specified time.



1) Press the <P-TIMER> button.

- The count is started.

2) Press the <P-TIMER> button again.

- The count is stopped.

**Note**

- The elapsed time or the remaining time is displayed at the lower right of the projected image when using the presentation timer function.

- The count will be resumed from interruption when the <P-TIMER> button is pressed.
- The presentation timer function will be terminated by pressing the <P-TIMER> button for over three seconds.
- For details about the setting of the presentation timer function, refer to the [DISPLAY OPTION] menu → [P-TIMER]. (➔ page 90)

### Using the FUNCTION button

Some frequently used menu items can be assigned to the <FUNCTION> button on the remote control so that it can be used as an shortcut button.



- 1) Press the <FUNCTION> button.

### Assigning functions to the <FUNCTION> button

- 1) Press the <MENU> button to display the menu items (main menu, sub menu, or details menu) to be assigned.
  - Refer to “Navigating through the menu” (➔ page 65) for the operation of the menu.
- 2) Press and hold the <FUNCTION> button for three seconds or more.

#### Note

- After the setting, the assigned menu items will be displayed as [ASSIGNED FUNCTION] in the operation guide under the menu.
- To cancel the function assignment, use the [PROJECTOR SETUP] menu → [FUNCTION BUTTON]. (➔ page 103)

### Displaying internal test pattern

To confirm the status of the projector, the internal test patterns can be displayed. To display test patterns, perform the following steps.



- 1) Press the <TEST PATTERN> button.
- 2) Press ◀▶ to select the test pattern.

#### Note

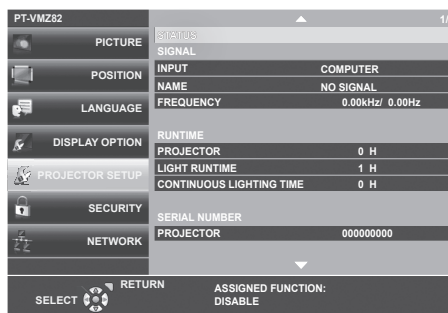
- Setting is also available from the [PROJECTOR SETUP] menu → [TEST PATTERN]. (➔ page 105)
- Settings of position, size, and other factors will not be reflected in test patterns. Make sure to display the input signal before performing various adjustments.

### Using the status function

Display the status of the projector.



- 1) Press the <STATUS> button.
  - The [STATUS] screen is displayed.



### Note

---

- The projector status can also be displayed using the menu operation. Refer to the [PROJECTOR SETUP] menu → [STATUS] (➔ page 95) for details.

## Using the ECO management function

---

Display the setting screen relating to ECO management.



- 1) Press the <ECO> button.

### Note

---

- Refer to the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] (➔ page 97) for details.

## Using the HDMI CEC function

---

Display the HDMI CEC operation screen.



- 1) Press the <CEC> button.
  - The HDMI CEC operation screen is displayed.

### Note

---

- Refer to [PROJECTOR SETUP] menu → [HDMI CEC] (➔ page 108) for details.

## Setting the ID number on the remote control

---

When you use the multiple projectors together, you can operate all the projectors simultaneously or each projector individually using a single remote control, if a unique ID number is assigned to each projector.

After setting the ID number of the projector, set the same ID number to the remote control.

**The factory default ID number of the projector is set to [ALL]. When using a single projector, press the <ID ALL> button on the remote control. Also, you can control a projector by pressing the <ID ALL> button on the remote control even if you do not know the projector ID.**



- 1) Press the <ID SET> button on the remote control.
- 2) Within five seconds, press and set the one-digit or two-digit ID number set on the projector body using the number (<0> - <9>) buttons.
  - If you press the <ID ALL> button, you can control the projectors regardless of the ID number setting of the projector.

### Attention

---

- Since the ID number of the remote control can be set without the projector, do not press the <ID SET> button on the remote control carelessly. If the <ID SET> button is pressed and no number (<0> - <9>) buttons are pressed within five seconds, the ID number returns to its original value before the <ID SET> button was pressed.
- The ID number set on the remote control will be stored unless it is set again. However, it will be erased if the remote control is left with dead batteries. Set the same ID number again when the batteries are replaced.

### Note

---

- When the ID number of the remote control is set to [0], the projectors can be controlled regardless of the ID number setting on the projector, same as when set to [ALL].
- Set the ID number of the projector from the [PROJECTOR SETUP] menu → [PROJECTOR ID]. (➔ page 96)

# Chapter 4 Settings

---

This chapter describes the settings and adjustments you can make using the on-screen menu.



# On-screen menu

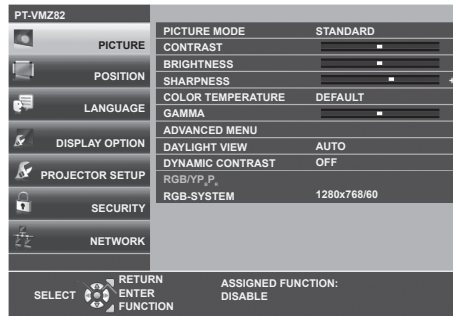
The on-screen menu (menu screen) is used to perform various settings and adjustments of the projector.

## Navigating through the menu

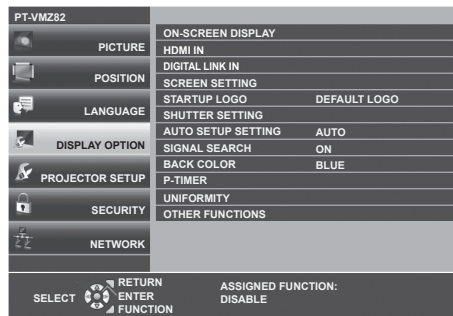
### Operating procedure



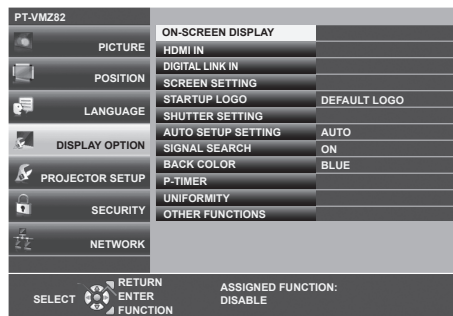
- 1) Press the <MENU> button on the remote control or the control panel.
  - The main menu screen appears.



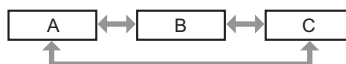
- 2) Press ▲▼ to select an item from the main menu.
  - The selected item is highlighted in yellow.



- 3) Press the <ENTER> button.
  - You can operate the sub-menus of the selected main menu.



- 4) Press ▲▼ to select the desired sub-menu item, press ◀▶ or the <ENTER> button to switch or adjust settings.
  - Depending on the item, each time you press the ◀▶ button, items are switched in order as shown below.



- Depending on the item, by pressing the ◀▶ button, the individual adjustment screen with a bar scale is displayed as shown below.



### Note

- Pressing the <MENU> button while the menu screen is displayed will return to the previous menu. You can operate in the same way by pressing the <RETURN> button.
- Some items or functions may not be adjusted or used depending on the signals input to the projector. When the items cannot be adjusted or used, the items in the menu screen are shown in gray characters, and they cannot be adjusted or set.  
If the item in the menu screen is displayed in gray characters and the item cannot be adjusted or set, the factor causing it is displayed by pressing the <ENTER> button while the corresponding menu is selected.
- Some items can be adjusted even if signals are not input.
- Individual adjustment screen disappears automatically if no operation is performed within approximately five seconds.
- For menu items, refer to “Main menu” (➔ page 66) and “Sub menu” (➔ page 67).

### Resetting adjustment values to the factory default

If the <DEFAULT> button on the remote control is pressed, the values adjusted in the menu items are restored to the factory default settings.



**button**

- 1) Press the <DEFAULT> button on the remote control.








### Note

- You cannot reset all the settings to the factory default at a time.
- To reset all the settings adjusted in the sub-menu item to the factory default at a time, execute the [PROJECTOR SETUP] menu → [INITIALIZE ALL].
- Some items cannot be reset by pressing the <DEFAULT> button on the remote control. Adjust these items individually.

### Main menu

The main menu consists of the following seven menu items.

When a main menu item is selected, the cursor moves to its sub menu.

	Main-menu item	Page
	[PICTURE]	69
	[POSITION]	75
	[LANGUAGE]	85
	[DISPLAY OPTION]	86
	[PROJECTOR SETUP]	95
	[SECURITY]	113
	[NETWORK]	116

## Sub menu

You can set and adjust the items in each submenu.

### [PICTURE]

Sub-menu item	Factory default	Page
[PICTURE MODE]	[STANDARD]	69
[CONTRAST]	[0]	69
[BRIGHTNESS]	[0]	69
[COLOR]	[0]	70
[TINT]	[0]	70
[SHARPNESS]	[9]	70
[COLOR TEMPERATURE]	[DEFAULT]	70
[GAMMA]	[0]	70
[ADVANCED MENU]	—	71
[DAYLIGHT VIEW]	[AUTO]	71
[DIGITAL CINEMA REALITY]	[ON]	72
[DYNAMIC CONTRAST]	[OFF]	72
[RGB/Y <sub>B</sub> P <sub>R</sub> ] / [RGB/Y <sub>B</sub> C <sub>R</sub> ]	[AUTO]	73
[RGB-SYSTEM]	[1280x768/60]*1	73

\*1 It depends on the input signal.

### [POSITION]

Sub-menu item	Factory default	Page
[REALTIME KEYSTONE]	[ON]	75
[SCREEN ADJUSTMENT]	[KEYSTONE]	75
[SHIFT]	—	81
[DOT CLOCK]	[0]	81
[CLOCK PHASE]	[0]	82
[OVER SCAN]	[0]*1	82
[ASPECT]	[NORMAL]*1	82
[FRAME LOCK]	[ON]	83
[CLAMP POSITION]	[24]*1	83
[ZOOM]	—	83

\*1 It depends on the input signal.

### [LANGUAGE]

Details (→ page 85)

### [DISPLAY OPTION]

Sub-menu item	Factory default	Page
[ON-SCREEN DISPLAY]	—	86
[HDMI IN]	—	87
[DIGITAL LINK IN]	—	88
[SCREEN SETTING]	—	88
[STARTUP LOGO]	[DEFAULT LOGO]	89
[SHUTTER SETTING]	—	89
[AUTO SETUP SETTING]	[AUTO]	89
[SIGNAL SEARCH]	[ON]	90
[BACK COLOR]	[BLUE]	90
[P-TIMER]	—	90
[UNIFORMITY]	—	91
[OTHER FUNCTIONS]	—	93

**[PROJECTOR SETUP]** 

Sub-menu item	Factory default	Page
[STATUS]	—	95
[PROJECTOR ID]	[ALL]	96
[INITIAL START UP]	[LAST MEMORY]	96
[PROJECTION METHOD]	[AUTO]	97
[ECO MANAGEMENT]	—	97
[RS-232C]	—	101
[LENS BLOCK DETECTION]	[ON]	103
[FUNCTION BUTTON]	—	103
[AUDIO SETTING]	—	103
[TEST PATTERN]	—	105
[FILTER COUNTER]	—	105
[SCHEDULE]	[OFF]	106
[DATE AND TIME]	—	108
[HDMI CEC]	[ON]	108
[USER IMAGE]	—	111
[USER UPDATE]	—	112
[DATA CLONING]	—	112
[INITIALIZE ALL]	—	112

**[SECURITY]** 

Sub-menu item	Factory default	Page
[PASSWORD]	[OFF]	113
[PASSWORD CHANGE]	—	113
[TEXT DISPLAY]	[OFF]	113
[TEXT CHANGE]	—	114
[CONTROL DEVICE SETUP]	—	114
[CONTROL DEVICE PASSWORD CHANGE]	—	115

**[NETWORK]** 

Sub-menu item	Factory default	Page
[ETHERNET TYPE]	[LAN]	116
[DIGITAL LINK]	—	116
[WIRED LAN]	—	118
[PROJECTOR NAME]	—	119
[NETWORK STATUS]	—	119
[ADMINISTRATOR ACCOUNT]	—	120
[NETWORK SECURITY]	—	123
[NETWORK CONTROL]	—	123
[PJLink]	—	124
[MEMORY VIEWER]	—	125
[INITIALIZE]	—	127

**Note**

- Some items may not be adjusted or used for certain signal formats to be input to the projector.  
When the items cannot be adjusted or used, the items in the menu screen are shown in gray characters, and they cannot be adjusted or set.
- Sub-menu items and factory default settings differ depending on the selected input.

## [PICTURE] menu

On the menu screen, select [PICTURE] from the main menu, and select an item from the submenu. Refer to “Navigating through the menu” (⇒ page 65) for the operation of the menu screen.

### [PICTURE MODE]

You can switch to the desired picture mode most suitable for the image source and the environment in which the projector is used.

- 1) Press ▲▼ to select [PICTURE MODE].
- 2) Press ◀▶ or the <ENTER> button.
  - The [PICTURE MODE] individual adjustment screen is displayed.
- 3) Press ◀▶ to switch the items.
  - The items will switch each time you press the button.

[STANDARD]	The picture becomes suitable for video images in general.
[DYNAMIC]	The picture becomes suitable for use in bright areas.
[DICOM SIM.]	The image becomes similar to that of DICOM Part 14 Grayscale Standard.
[VIVID GREEN]	The picture becomes suitable for green field.
[WHITE BOARD]	The picture becomes suitable for projecting on a white board.
[CINEMA]	The picture becomes suitable for movie contents.
[NATURAL]	The picture becomes suitable for using in a relatively dark environment.

#### Note

- DICOM is an abbreviation of “Digital Imaging and Communication in Medicine” and is a standard for medical imaging devices. Although the DICOM name is used, the projector is not a medical device, and should not be used for purposes such as diagnosis of display images.

### [CONTRAST]

You can adjust the contrast of the colors.

- 1) Press ▲▼ to select [CONTRAST].
- 2) Press ◀▶ or the <ENTER> button.
  - The [CONTRAST] individual adjustment screen is displayed.
- 3) Press ◀▶ to adjust the level.

Operation	Adjustment	Adjustment range
Press the ▶ button.	The screen becomes brighter.	-32 ~ +32
Press the ◀ button.	The screen becomes darker.	

#### Attention

- Adjust [BRIGHTNESS] first when you need to adjust [BRIGHTNESS] and [CONTRAST].

### [BRIGHTNESS]

You can adjust the dark (black) part of the projected image.

- 1) Press ▲▼ to select [BRIGHTNESS].
- 2) Press ◀▶ or the <ENTER> button.
  - The [BRIGHTNESS] individual adjustment screen is displayed.
- 3) Press ◀▶ to adjust the level.

Operation	Adjustment	Adjustment range
Press the ▶ button.	Increases the brightness of the dark (black) parts of the screen.	-32 ~ +32
Press the ◀ button.	Reduces the brightness of the dark (black) parts of the screen.	

## [COLOR]

You can adjust the color saturation of the projected image.

- 1) Press ▲▼ to select [COLOR].
- 2) Press ◀▶ or the <ENTER> button.
  - The [COLOR] individual adjustment screen is displayed.
- 3) Press ◀▶ to adjust the level.

Operation	Adjustment	Adjustment range
Press the ▶ button.	Deepens colors.	-32 ~ +32
Press the ◀ button.	Weakens colors.	

## [TINT]

You can adjust the skin tone in the projected image.

- 1) Press ▲▼ to select [TINT].
- 2) Press ◀▶ or the <ENTER> button.
  - The [TINT] individual adjustment screen is displayed.
- 3) Press ◀▶ to adjust the level.

Operation	Adjustment	Adjustment range
Press the ▶ button.	Adjusts skin tone toward greenish color.	-32 ~ +32
Press the ◀ button.	Adjusts skin tone toward reddish purple.	

## [SHARPNESS]

You can adjust the sharpness of the projected image.

- 1) Press ▲▼ to select [SHARPNESS].
- 2) Press ◀▶ or the <ENTER> button.
  - The [SHARPNESS] individual adjustment screen is displayed.
- 3) Press ◀▶ to adjust the level.

Operation	Adjustment	Adjustment range
Press the ▶ button.	Contours become sharper.	0 ~ +15
Press the ◀ button.	Contours become softer.	

## [COLOR TEMPERATURE]

You can switch the color temperature if the white areas of the projected image are bluish or reddish.

- 1) Press ▲▼ to select [COLOR TEMPERATURE].
- 2) Press ◀▶ or the <ENTER> button.
  - The [COLOR TEMPERATURE] individual adjustment screen is displayed.
- 3) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[DEFAULT]	Factory default setting.
[HIGH]	Becomes a bluish image. Select this when the white areas of the projected image are reddish.
[LOW]	Becomes a reddish image. Select this when the white areas of the projected image are bluish.

## [GAMMA]

You can adjust contrast balance.

- 1) Press ▲▼ to select [GAMMA].
- 2) Press ◀▶ or the <ENTER> button.

- The [GAMMA] individual adjustment screen is displayed.

3) Press ◀▶ to adjust the level.

Operation	Adjustment	Adjustment range
Press the ▶ button.	The midtones become brighter.	-8 ~ +7
Press the ◀ button.	The midtones become darker.	

## [ADVANCED MENU]

You can perform more advanced image adjustment.

- 1) Press ▲▼ to select [ADVANCED MENU].
- 2) Press the <ENTER> button.
  - The [ADVANCED MENU] screen is displayed.
- 3) Press ▲▼ to select one item among [CONTRAST R] ~ [BRIGHTNESS B].
- 4) Press ◀▶ or the <ENTER> button.
  - The individual adjustment screen of items are displayed.
- 5) Press ◀▶ to adjust the value.

Items	Operation	Adjustment	Adjustment range
[CONTRAST R]	Press the ▶ button.	Emphasizes red in highlight areas.	-32 ~ +32
	Press the ◀ button.	Deemphasizes red in highlight areas.	
[CONTRAST G]	Press the ▶ button.	Emphasizes green in highlight areas.	-32 ~ +32
	Press the ◀ button.	Deemphasizes green in highlight areas.	
[CONTRAST B]	Press the ▶ button.	Emphasizes blue in highlight areas.	-32 ~ +32
	Press the ◀ button.	Deemphasizes blue in highlight areas.	
[BRIGHTNESS R]	Press the ▶ button.	Emphasizes red in shadow areas.	-32 ~ +32
	Press the ◀ button.	Deemphasizes red in shadow areas.	
[BRIGHTNESS G]	Press the ▶ button.	Emphasizes green in shadow areas.	-32 ~ +32
	Press the ◀ button.	Deemphasizes green in shadow areas.	
[BRIGHTNESS B]	Press the ▶ button.	Emphasizes blue in shadow areas.	-32 ~ +32
	Press the ◀ button.	Deemphasizes blue in shadow areas.	

## [DAYLIGHT VIEW]

You can correct the image to the optimal vividness even if it is projected under a bright light.

- 1) Press ▲▼ to select [DAYLIGHT VIEW].
- 2) Press ◀▶ or the <ENTER> button.
  - The [DAYLIGHT VIEW] individual adjustment screen is displayed.
- 3) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[OFF]	No correction.
[1]	Corrects the image to weaken vividness.
[2]	Corrects the image to medium vividness.
[3]	Corrects the image to high vividness.
[AUTO]	Detects the brightness of the installed environment by the luminance sensor, and automatically corrects the vividness of the image.

### Note

- [DAYLIGHT VIEW] cannot be set to [AUTO] when the [PROJECTOR SETUP] menu → [PROJECTION METHOD] is set to [REAR/DESK] or [REAR/CEILING].
- The luminance may not be detected correctly when an object is placed on top of the projector, blocking the luminance sensor. In such a case, this function may not operate properly even if it is set to [AUTO].

## [DIGITAL CINEMA REALITY]

When inputting the following signals, it performs cinema processing to improve the vertical resolution and the image quality.

480/60i, 576/50i, 1080/60i, 1080/50i signals

- 1) Press ▲▼ to select [DIGITAL CINEMA REALITY].
- 2) Press ◀▶ or the <ENTER> button.
  - The [DIGITAL CINEMA REALITY] individual adjustment screen is displayed.
- 3) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[OFF]	Performs no cinema processing.
[ON]	Performs cinema processing.

## [DYNAMIC CONTRAST]

Light adjustment of the light source and signal compensation are performed automatically according to the image to make the contrast optimum for the image.

- 1) Press ▲▼ to select [DYNAMIC CONTRAST].
- 2) Press ◀▶ or the <ENTER> button.
  - The [DYNAMIC CONTRAST] individual adjustment screen is displayed.
- 3) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[OFF]	Disables the dynamic contrast function.
[1]	Adjusts the light source and compensates signals to a small extent.
[2]	Adjusts the light source and compensates signals to a large extent.
[USER]	The light source can be set to turn off when the brightness level of the input image signal falls below a certain value. Refer to "Setting the light off condition of the light source" (➔ page 72) for details.

### Note

- [DYNAMIC CONTRAST] settings are effective only when no on-screen display such as menu screen (OSD), a test pattern, or a warning message is displayed.

## Setting the light off condition of the light source

- 1) Press ▲▼ to select [DYNAMIC CONTRAST].
- 2) Press ◀▶ or the <ENTER> button.
  - The [DYNAMIC CONTRAST] individual adjustment screen is displayed.
- 3) Press ◀▶ to select [USER].
- 4) Press the <ENTER> button.
  - The [DYNAMIC CONTRAST] screen is displayed.
- 5) Press ▲▼ to select the item to set.
  - The items in the detailed setting will switch each time you press ◀▶.

Setting item		Details
[LIGHTS OUT TIMER] (Setting of the waiting time before turning off the light)	[DISABLE]	Does not turn off the light source.
	[0.5s] ~ [10.0s]	Turns off the light source when the brightness level of the image signal being input goes under the value set in [LIGHTS OUT SIGNAL LEVEL]. Select an item from [0.5s] - [4.0s], [5.0s], [7.0s], or [10.0s]. [0.5s] - [4.0s] can be selected in increments of 0.5.
[LIGHTS OUT SIGNAL LEVEL] (Setting of the brightness level of the signal to turn off the light)	[0%] ~ [5%]	Sets the level of the brightness of the image signal to turn off the light source with [LIGHTS OUT TIMER]. Can be set in increments of 1%. (Factory setting: 0%)



**Note**

- [LIGHTS OUT SIGNAL LEVEL] cannot be set when [LIGHTS OUT TIMER] is set to [DISABLE].
- When [LIGHTS OUT TIMER] is set to anything other than [DISABLE], the following are the conditions to turn the light source back on again from the state that the light source has turned off by this function.
  - When the brightness level of the image signal being input has exceeded the value set in [LIGHTS OUT SIGNAL LEVEL]
  - When the input signal is gone
  - When on-screen display such as menu screen (OSD), a test pattern, or a warning message is displayed
- When the image of analog signal is projected, the image may be affected by the signal noise while the brightness level of the image signal is detected. In such case, it is determined that the signal has not fallen below even when the brightness level of the image falls below the value set in [LIGHTS OUT SIGNAL LEVEL].

**[RGB/YC<sub>B</sub>C<sub>R</sub>] / [RGB/YP<sub>B</sub>P<sub>R</sub>]**

The projector will automatically detect the input signal, but you can set the system format manually when an unstable signal is input. Set the system format matching the input signal.

- 1) Press ▲▼ to select [RGB/YC<sub>B</sub>C<sub>R</sub>] or [RGB/YP<sub>B</sub>P<sub>R</sub>].
- 2) Press ◀▶ or the <ENTER> button.
  - The [RGB/YC<sub>B</sub>C<sub>R</sub>] or [RGB/YP<sub>B</sub>P<sub>R</sub>] individual adjustment screen is displayed.
- 3) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.
  - Normally it is set to [AUTO]. If it cannot project properly with [AUTO], set it to [RGB], [YC<sub>B</sub>C<sub>R</sub>] or [YP<sub>B</sub>P<sub>R</sub>] according to the input signal.

Terminal	System format	
<COMPUTER IN> terminal	480/60i, 576/50i, 480/60p, 576/50p	Select [AUTO], [RGB] or [YC <sub>B</sub> C <sub>R</sub> ]
	Other video signals	Select [AUTO], [RGB] or [YP <sub>B</sub> P <sub>R</sub> ]
<HDMI IN 1> terminal / <HDMI IN 2> terminal / <DIGITAL LINK/LAN> terminal	480/60i, 576/50i, 480/60p, 576/50p	Select [AUTO], [RGB] or [YC <sub>B</sub> C <sub>R</sub> ]
	Other image signals	Select [AUTO], [RGB] or [YP <sub>B</sub> P <sub>R</sub> ]

**Note**

- For details of the image signals that can be used with the projector, refer to “List of compatible signals” (➔ page 212).
- This may not operate properly for some connected external devices.

**[RGB-SYSTEM]**

(Only for analog RGB signal input)

The projector automatically detects the input signal, but the images may not be displayed properly depending on the input signal. In that case, select the item according to the input signal.

- 1) Press ▲▼ to select [RGB-SYSTEM].
- 2) Press the <ENTER> button.
  - The [RGB-SYSTEM] screen is displayed.
- 3) Press ▲▼ to select the signal and press the <ENTER> button.
  - The selectable items differ depending on the input signal.

Items	Resolution (dots)	Scanning frequency		Dot clock frequency (MHz)
		Horizontal (kHz)	Vertical (Hz)	
[1280x768/60]	1 280 x 768	47.7	60.0	80.1
[1366x768/60]	1 366 x 768	47.7	60.0	84.7
[1400x1050/60]	1 400 x 1 050	65.2	60.0	122.6
[1680x1050/60]	1 680 x 1 050	65.2	60.0	147.1
[1440x900/50]	1 440 x 900	46.3	50.0	87.4
[1600x900/50]	1 600 x 900	46.3	50.0	97.0
[1440x900/60]	1 440 x 900	55.9	60.0	106.5
[1600x900/60]	1 600 x 900	55.9	60.0	119.0
[1024x768/50]	1 024 x 768	39.6	50.0	51.9
[1280x768/50]	1 280 x 768	39.6	50.0	65.2
[1366x768/50]	1 366 x 768	39.6	50.0	69.9
[1400x1050/50]	1 400 x 1 050	54.1	50.0	99.9
[1680x1050/50]	1 680 x 1 050	54.1	50.0	120.2

## Chapter 4 Settings - [PICTURE] menu

Items	Resolution (dots)	Scanning frequency		Dot clock frequency (MHz)
		Horizontal (kHz)	Vertical (Hz)	
[1280x1024/60]	1 280 x 1 024	64.0	60.0	108.0
[1400x1050/60]	1 400 x 1 050	64.0	60.0	108.0

### Note

- It may not work properly for some connected external devices.

## [POSITION] menu

On the menu screen, select [POSITION] from the main menu, and select an item from the submenu. Refer to “Navigating through the menu” (➔ page 65) for the operation of the menu screen.

### Note

- When the DIGITAL LINK output supported device (Model No.: ET-YFB100G, ET-YFB200G) is connected to the <DIGITAL LINK/LAN> terminal, adjust the shift and aspect from the menu of DIGITAL LINK output supported device first.

## [REALTIME KEYSTONE]

The projector can correct the vertical trapezoidal distortion automatically when the projector is installed tilted.

- 1) Press ▲▼ to select [REALTIME KEYSTONE].
- 2) Press ◀▶ or the <ENTER> button.
  - The [REALTIME KEYSTONE] individual adjustment screen is displayed.
- 3) Press ◀▶ to switch the item.

[ON]	Enables the automatic realtime keystone correction.
[OFF]	Disables the automatic realtime keystone correction.

### Note

- Depending on the installation situation, the trapezoidal distortion may not be able to fully corrected. In this case, perform the adjustment in the [POSITION] menu → [SCREEN ADJUSTMENT].
- [REALTIME KEYSTONE] cannot be set in following cases.
  - When the [PROJECTOR SETUP] menu → [PROJECTION METHOD] is set to [FRONT/CEILING] or [REAR/CEILING]
  - When the [PROJECTOR SETUP] menu → [PROJECTION METHOD] → [AUTO], and the actual installation status is ceiling mount

## [SCREEN ADJUSTMENT]

You can correct various types of distortion in a projected image. Unique image processing technology enables projection of a square image on a special screen shape.

Also, you can reduce the image size and shift the image position using the Digital Zoom Extender function. Use this function when projecting from a longer distance than usual due to the installation environment.

- 1) Press ▲▼ to select [SCREEN ADJUSTMENT].
- 2) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[KEYSTONE]	Adjusts when the projected image is distorted as trapezoid.
[DIGITAL ZOOM EXTENDER]	Select this item when using the Digital Zoom Extender function to reduce the projected image size and to adjust the image position. You can also perform corner correction within this function.
[CORNER CORRECTION]	Adjusts when the four corners of the projected image are distorted.
[CURVED CORRECTION]	Adjusts when the projected image is curved distortion.
[6POINT CORRECTION]	Corrects the distortion that occurs when projecting on a horizontal corner surface, such as a wall corner or a square pillar.

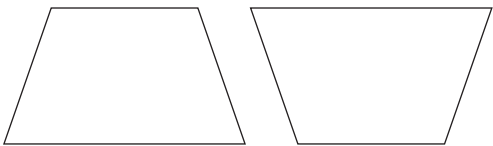
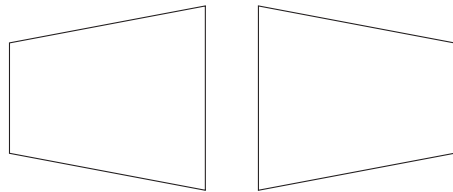
### Note

- Only one item of [KEYSTONE], [DIGITAL ZOOM EXTENDER], [CORNER CORRECTION], [CURVED CORRECTION] and [6POINT CORRECTION] can be enabled.
- The image quality will deteriorate when the projected image size is reduced or the distortion correction amount increases. It is recommended to install the projector so that correction of the projected image is as small as possible.
- When image correction is performed with [SCREEN ADJUSTMENT], the image size also changes.

## Adjusting with [KEYSTONE]

- 1) Press ▲▼ to select [SCREEN ADJUSTMENT].
- 2) Press ◀▶ to select [KEYSTONE].
- 3) Press the <ENTER> button.
  - The [KEYSTONE] screen is displayed.

4) Press ▲▼◀▶ to adjust.

Operation	Adjustment	
Press the ▲ button.	Upper will be smaller.	
Press the ▼ button.	Lower will be smaller.	
Press the ◀ button.	Left side will be smaller.	
Press the ▶ button.	Right side will be smaller.	

**Note**

- The image quality may degrade and it becomes difficult to focus as the amount of correction increases. When installing the projector, try to ensure that the amount of correction required is minimal.

**Using the Digital Zoom Extender function**

When projecting from a longer distance than usual due to the installation environment, you can reduce the projected image size and shift the image position so that it can fit the screen. In addition, you can perform the corner correction together with the Digital Zoom Extender function.

- 1) Press ▲▼ to select [SCREEN ADJUSTMENT].
- 2) Press ◀▶ to select [DIGITAL ZOOM EXTENDER].
- 3) Press the <ENTER> button.
  - The [DIGITAL ZOOM EXTENDER] screen is displayed.
- 4) Press ▲▼ to select [EXTENDER RATIO].
- 5) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[OFF]	Disables the extender ratio setting.
[100%] ~ [80%]	Sets the projected image size. The value will be switched by 1% each time you press the button.

- Proceed to Step 6) when set to anything other than [OFF] and [100%].

- 6) Press ▲▼ to select [DIGITAL IMAGE SHIFT].
- 7) Press the <ENTER> button.
  - The [DIGITAL IMAGE SHIFT] adjustment screen is displayed.
- 8) Press ▲▼◀▶ to adjust the position.

Operation	Adjustment
Press the ▶ button.	The image position moves to the right.
Press the ◀ button.	The image position moves to the left.
Press the ▲ button.	The image position moves up.
Press the ▼ button.	The image position moves down.

- Pressing the <ENTER> button will return to the [EXTENDER RATIO] adjustment screen.

**Note**

- When [EXTENDER RATIO] is selected and set to anything other than [OFF] and [100%], you can also enter the [DIGITAL IMAGE SHIFT] adjustment screen by pressing ▲▼ button to select [DIGITAL IMAGE SHIFT] and pressing the <ENTER> button.
- The image quality will deteriorate when the projected image size is reduced using the Digital Zoom Extender function.

**Adjusting with [CORNER]**

- 1) Press ▲▼ to select [CORNER].
- 2) Press the <ENTER> button.
  - The corner correction screen is displayed. For details, refer to “Adjusting with [CORNER CORRECTION]” (➡ page 77).

**Note**

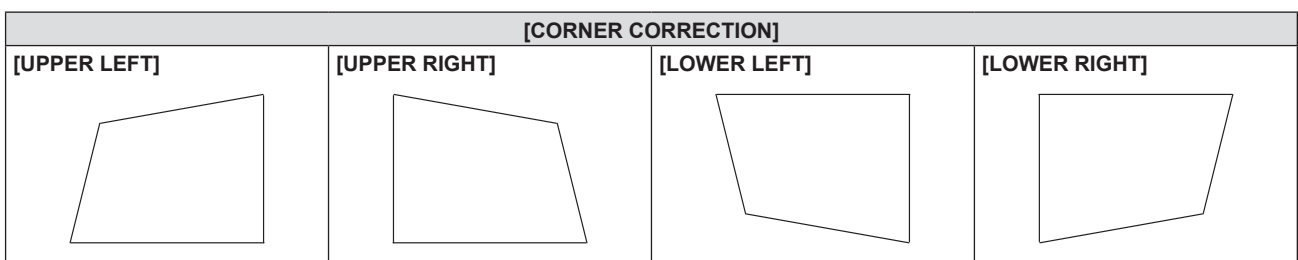
- The corner adjustment range may be reduced depending on the [EXTENDER RATIO] setting.
- [EXTENDER RATIO] will automatically switch to [OFF] if [CORNER] adjustment is performed.

**Adjusting with [CORNER CORRECTION]**

- 1) Press ▲▼ to select [SCREEN ADJUSTMENT].
- 2) Press ◀▶ to select [CORNER CORRECTION].
- 3) Press the <ENTER> button.
  - The [CORNER CORRECTION] screen is displayed.
- 4) Press ▲▼ to select the item to adjust.

[CORNER]	Adjusts when the four corners of the projected image are distorted.
[GRID]	Finer adjustment is possible by selecting the lines to be corrected.

- When [CORNER] is selected, proceed to Step 5).
  - When [GRID] is selected, refer to “Adjusting with [GRID]” (➡ page 77).
- 5) Press the <ENTER> button.
    - The corner correction screen is displayed.
  - 6) Press the number buttons (<1>, <2>, <3>, <4>) to select the corner to adjust.
    - You can also switch the corner to adjust by pressing the <ENTER> button.
  - 7) Press ▲▼◀▶ to adjust.



**Note**

- Depending on the correction amount, the image aspect ratio may change.

**Adjusting with [GRID]**

- 1) Press ▲▼ to select [GRID].
- 2) Press ◀▶ to select an item.
  - The items will switch each time you press the button.

[OFF]	Disables the adjustment to be performed with [GRID].
[ON]	Enables the adjustment to be performed with [GRID].

- Proceed to Step 3) when [ON] is selected.

- 3) Press the <ENTER> button.
  - The [GRID] screen is displayed.
- 4) Press ▲▼ to select [CONTROL POINTS].
- 5) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[HORIZONTAL LINE]	Select this item when selecting all the intersections on one horizontal grid line, and adjusting them simultaneously.
[VERTICAL LINE]	Select this item when selecting all the intersections on one vertical grid line, and adjusting them simultaneously.

- 6) Press ▲▼ to select [GRID WIDTH].
- 7) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[1] - [10]	Select the width of the grid line. It can be set between 1 line to 10 lines. Factory default setting: [2]
------------	--

- 8) Press ▲▼ to select [GRID COLOR].
- 9) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[WHITE]	Displays the pattern of the selected color. (Factory default setting: [RED])
[BLACK]	
[RED]	
[GREEN]	
[BLUE]	
[CYAN]	
[MAGENTA]	
[YELLOW]	
[OFF]	Does not display the pattern.

- 10) Press ▲▼ to select [CONTROL POINTS COLOR].
- 11) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[WHITE]	Select the color of the marker that indicates the control point. The marker that indicates the control point is displayed in the control point selection mode and adjustment mode. (Factory default setting: [WHITE])
[BLACK]	
[RED]	
[GREEN]	
[BLUE]	
[CYAN]	
[MAGENTA]	
[YELLOW]	

- 12) Press ▲▼ to select [EXECUTE].
- 13) Press the <ENTER> button.
  - The screen switches to the control point selection mode.
- 14) Press ▲▼◀▶ to select the control point.
  - Move the marker over the intersection of the grid lines to adjust.
  - When [HORIZONTAL LINE] is selected in Step 5), press ▲▼ to select the control point.
  - When [VERTICAL LINE] is selected in Step 5), press ◀▶ to select the control point.
- 15) Press the <ENTER> button.
  - The control point is confirmed, and the screen switches to the adjustment mode.

**16) Press ▲▼◀▶ to adjust the position of the control point.**

- By adjusting the position of the control point, the range to the neighboring intersections will be corrected.
- To continuously adjust the position of the other intersection, press the <MENU> button or the <ENTER> button to return to Step 14).
- Pressing the <MENU> button twice allows to reselect [CONTROL POINTS], [GRID WIDTH], [GRID COLOR], and [CONTROL POINTS COLOR].

**Note**

- The contents adjusted in [GRID] are saved as individual correction data for [CORNER CORRECTION] and [CURVED CORRECTION].
- Even if [CONTROL POINTS] is reselected, the correction data adjusted before the reselection is maintained.
- The image is not displayed correctly when the position of the control point exceeds the neighboring intersections.
- The settings of [CONTROL POINTS], [GRID WIDTH], [GRID COLOR], and [CONTROL POINTS COLOR] are synchronized with the setting items under each item of [CORNER CORRECTION] and [CURVED CORRECTION].

**■ Initializing adjustments for [GRID]**

Initialize the correction data adjusted with [GRID] and restore the factory default settings (the state where no correction is performed). Simultaneously the settings of [CONTROL POINTS], [GRID WIDTH], [GRID COLOR], and [CONTROL POINTS COLOR] are restored to the factory default settings.

- 1) Press ▲▼ to select [GRID].
- 2) Press ◀▶ to select [ON].
- 3) Press the <ENTER> button.
  - The [GRID] screen is displayed.
- 4) Press ▲▼ to select [INITIALIZE].
- 5) Press the <ENTER> button.
  - The confirmation screen is displayed.
- 6) Press ◀▶ to select [OK], and press the <ENTER> button.

**Note**

- The grid correction data for [CORNER CORRECTION] and [CURVED CORRECTION] cannot be initialized at once. To initialize the grid correction data for both, you need to perform [INITIALIZE] for grid correction of [CORNER CORRECTION] and [CURVED CORRECTION].
- When the projector is initialized by selecting the [PROJECTOR SETUP] menu → [INITIALIZE ALL], all data in [GRID] of [CORNER CORRECTION] and [CURVED CORRECTION] are initialized.

**Adjusting with [CURVED CORRECTION]**

- 1) Press ▲▼ to select [SCREEN ADJUSTMENT].
- 2) Press ◀▶ to select [CURVED CORRECTION].
- 3) Press the <ENTER> button.
  - The [CURVED CORRECTION] screen is displayed.
- 4) Press ▲▼ to select one item to adjust.

[CORNER]	Adjusts when the four corners of the projected image are distorted.
[ARC]	Adjusts when the radian of the projected image is distorted.
[GRID]	Finer adjustment is possible by selecting the lines to be corrected.

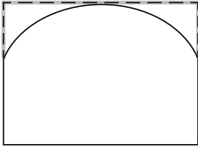
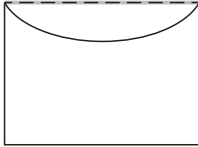
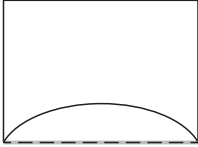

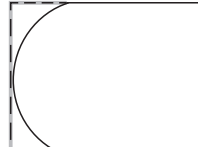
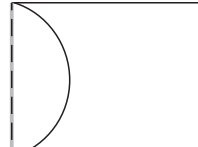
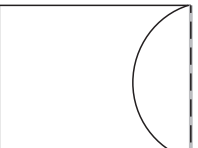
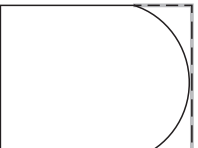
- When [CORNER] or [GRID] is selected, refer to “Adjusting with [CORNER CORRECTION]” (➡ page 77).

**Note**

- The curved screen should be in the shape of a circular arc part of a perfect circle. Note that even if image distortion caused by projecting onto a curved surface is corrected using [CURVED CORRECTION], part of the image will not be displayed in the aspect ratio of the image due to uneven stretching and shrinking of the image from the center to the border of the projection screen.

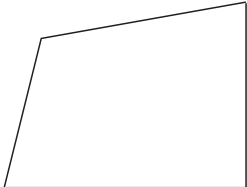
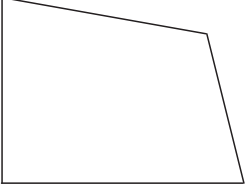
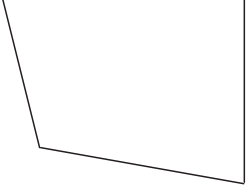
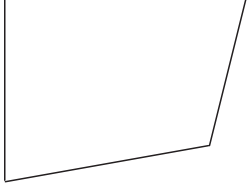
Adjusting [ARC]

- 1) Press ▲▼ to select [ARC].
- 2) Press the <ENTER> button.
  - The arc correction screen is displayed.
- 3) Press the number buttons (<1>, <2>, <3>, <4>) to select the edge to adjust.
  - You can also switch the edge to adjust by pressing the <ENTER> button.
- 4) Press ▲▼◀▶ to adjust.

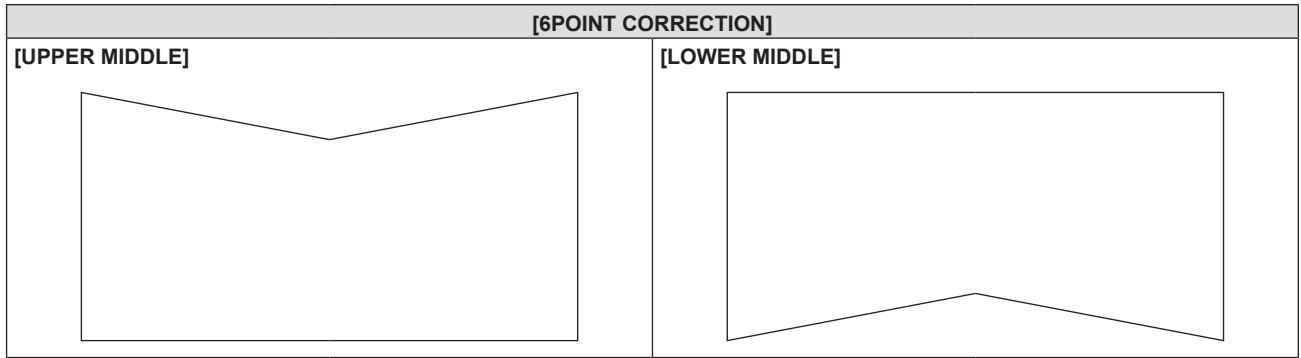
Items	Operation		Adjustment
[UPPER EDGE]	Press the ▲▼ button.	Adjusts the shape of the upper edge to bulge outwards or inwards.	 
[LOWER EDGE]	Press the ▲▼ button.	Adjusts the shape of the lower edge to bulge outwards or inwards.	 
[LEFT EDGE]	Press the ◀▶ button.	Adjusts the shape of the left edge to bulge outwards or inwards.	 
[RIGHT EDGE]	Press the ◀▶ button.	Adjusts the shape of the right edge to bulge outwards or inwards.	 

Adjusting with [6POINT CORRECTION]

- 1) Press ▲▼ to select [SCREEN ADJUSTMENT].
- 2) Press ◀▶ to select [6POINT CORRECTION].
- 3) Press the <ENTER> button.
  - The 6-point correction screen is displayed.
- 4) Press the number buttons (<1>, <2>, <3>, <4>, <5>, <6>) to select the point to adjust.
  - You can also switch the point to adjust by pressing the <ENTER> button.
- 5) Press ▲▼◀▶ to adjust.

[6POINT CORRECTION]			
[UPPER LEFT]	[UPPER RIGHT]	[LOWER LEFT]	[LOWER RIGHT]
			





## [SHIFT]

Move the image position vertically or horizontally if the image position projected on the screen is shifted even when the relative position of the projector and the screen is installed correctly.

- 1) Press ▲▼ to select [SHIFT].
- 2) Press the <ENTER> button.
  - The [SHIFT] screen is displayed.
- 3) Press ▲▼◀▶ to adjust the position.

Orientation	Operation	Adjustment	
Vertical (up and down) adjustment.	Press the ▲ button.	The image position moves up.	
	Press the ▼ button.	The image position moves down.	
Horizontal (right and left) adjustment.	Press the ► button.	The image position moves to the right.	
	Press the ◀ button.	The image position moves to the left.	

### Note

- Depending on the input signal, if the adjustment of [SHIFT] exceeds the effective adjustment range of the input signal, the position of the image cannot be changed. Adjust within the effective adjustment range.

## [DOT CLOCK]

(Only for COMPUTER input)

Adjust to reduce noise generated when projecting vertical stripes.

When projecting a striped pattern, periodic stripes (noise) may occur. In this case, adjust so that the noise is the least.

- 1) Press ▲▼ to select [DOT CLOCK].
- 2) Press ◀▶ or the <ENTER> button.
  - The [DOT CLOCK] individual adjustment screen is displayed.
- 3) Press ◀▶ to adjust.
  - The adjustment values are [-32] to [+32].

### Attention

- Set it before adjusting [CLOCK PHASE].

## [CLOCK PHASE]

(Only for COMPUTER input)

You can adjust to achieve an optimal image when there is a flickering image or smeared outlines.

- 1) Press ▲▼ to select [CLOCK PHASE].
- 2) Press ◀▶ or the <ENTER> button.
  - The [CLOCK PHASE] individual adjustment screen is displayed.
- 3) Press ◀▶ to adjust the value.
  - Adjustment value will change between [-16] and [+16]. Adjust so that the amount of interference is at a minimum.

### Note

- Certain signals may not be adjustable.
- Optimal value may not be achieved if the output from the input computer is unstable.
- To project an image signal with dot clock frequency with 162 MHz or higher, noise may not disappear even if [CLOCK PHASE] is adjusted.

## [OVER SCAN]

(Only for video signal input)

Use this function when characters or pictures are cropped near the periphery of the projected image.

- 1) Press ▲▼ to select [OVER SCAN].
- 2) Press ◀▶ or the <ENTER> button.
  - The [OVER SCAN] individual adjustment screen is displayed.
- 3) Press ◀▶ to adjust the level.
  - The adjustment values are [0] to [+3].

## [ASPECT]

You can switch the aspect ratio of the image.

The aspect ratio is switched within the screen range selected in the [DISPLAY OPTION] menu → [SCREEN SETTING] → [SCREEN FORMAT]. Set [SCREEN FORMAT] first. (➡ page 88)

- 1) Press ▲▼ to select [ASPECT].
- 2) Press ◀▶ or the <ENTER> button.
  - The [ASPECT] individual adjustment screen is displayed.
- 3) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[NORMAL]	Displays images without changing the aspect ratio of the input signals.
[WIDE]	Displays images with the aspect ratio converted to 16:9 when standard signals*1 are input. Display images without changing the aspect ratio of the input signal when wide-screen signals*2 are input.
[H FIT]	Displays images with the full width of the screen range selected in [SCREEN FORMAT]. When signals have the aspect ratio vertically greater than the screen aspect ratio selected in [SCREEN FORMAT], the images are displayed with the top and bottom parts cut off.
[V FIT]	Displays images with the full height of the screen range selected in [SCREEN FORMAT]. When signals have the aspect ratio horizontally greater than the screen aspect ratio selected in [SCREEN FORMAT], the images are displayed with the right and left parts cut off.
[FULL]	Displays images to the full screen range selected in [SCREEN FORMAT]. If the aspect ratio of the input signal is different from the aspect ratio of the screen range, it is converted to the screen aspect ratio selected in [SCREEN FORMAT] and displayed.
[NATIVE]	Displays images without changing the resolution of the input signals.

\*1 Standard signals are input signals with an aspect ratio of 4:3 or 5:4.

\*2 Wide-screen signals are input signals with an aspect ratio of 16:10, 16:9, 15:9 or 21:9.

### Note

- Some size modes are not available for certain types of input signals.
- If an aspect ratio which is different from the aspect ratio for the input signals is selected, the images will appear differently from the originals. Be careful of this when selecting the aspect ratio.

- If using the projector in places such as cafes or hotels to display programs for a commercial purpose or for public presentation, note that adjusting the aspect ratio or using the zoom function to change the screen images may be an infringement of the rights of the original copyright owner for that program under copyright protection laws. Take care when using a function of the projector such as the aspect ratio adjustment and zoom function.
- If conventional (normal) 4:3 images which are not wide-screen images are displayed on a wide screen, the edges of the images may not be visible or they may become distorted. Such images should be viewed as with an aspect ratio of 4:3 in the original format intended by the creator of the images.

## [FRAME LOCK]

(Only for computer signals input)

The frame lock function can be set for some signals.

- 1) Press ▲▼ to select [FRAME LOCK].
- 2) Press ◀▶ or the <ENTER> button.
  - The [FRAME LOCK] individual adjustment screen is displayed.
- 3) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[ON]	The frame is locked. Synchronizes the displayed image to the vertical scanning frequency of the input signal.
[OFF]	The frame lock function is turned off. Set to [OFF] if you are concerned about flickering.

## [CLAMP POSITION]

You can adjust the optimal point when the black part of the image is blunt or it has turned green.

- 1) Press ▲▼ to select [CLAMP POSITION].
- 2) Press ◀▶ to adjust.

Status	Rough guide for optimal value	Range of adjustment
The black part is blunt.	The point where bluntness of the black part improves the most is the optimal value.	1 ~ 255
The black part is green.	The point where the green part becomes black, and the bluntness has improved is the optimal value.	

### Note

- [CLAMP POSITION] can be adjusted only when a signal is input to the <COMPUTER IN> terminal.
- Some signals may not be adjusted.

## [ZOOM]

You can adjust the image size.

The adjustments in [ZOOM] will differ depending on the setting of the [POSITION] menu → [ASPECT].

### When [ASPECT] is set to other than [NORMAL] and [NATIVE]

- 1) Press ▲▼ to select [ZOOM].
- 2) Press the <ENTER> button.
  - The [ZOOM] screen is displayed.
- 3) Press ▲▼ to select [INTERLOCKED].
- 4) Press ◀▶ to switch the item.

[OFF]	Sets the [VERTICAL] and [HORIZONTAL] zoom ratio.
[ON]	Uses [BOTH] to set zoom ratio. Image can be enlarged or reduced vertically and horizontally at the same magnification.

- 5) Press ▲▼ to select [VERTICAL] or [HORIZONTAL].
  - If [ON] is selected, select [BOTH].
- 6) Press ◀▶ to adjust.

**Note**

- When the [POSITION] menu → [ASPECT] is set to [NATIVE], [ZOOM] cannot be adjusted.

**When [ASPECT] is set to [NORMAL]**

- 1) Press ▲▼ to select [ZOOM].
- 2) Press the <ENTER> button.
  - The [ZOOM] screen is displayed.
- 3) Press ▲▼ to select [MODE].
- 4) Press ◀▶ to switch the item.

[INTERNAL]	Enlarges the size within the aspect range set with [SCREEN FORMAT].
[FULL]	Enlarges or reduces the size using the entire display area set with [SCREEN FORMAT].

- 5) Press ▲▼ to select [INTERLOCKED].
- 6) Press ◀▶ to switch the item.

[OFF]	Sets the [VERTICAL] and [HORIZONTAL] zoom ratio.
[ON]	Uses [BOTH] to set zoom ratio. Image can be enlarged or reduced vertically and horizontally at the same magnification.

- 7) Press ▲▼ to select [VERTICAL] or [HORIZONTAL].
  - If [ON] is selected, select [BOTH].
- 8) Press ◀▶ to adjust.

**Note**

- When the [POSITION] menu → [ASPECT] is set to anything other than [NORMAL], [MODE] is not displayed.

**Moving the image position**

Move the image position vertically or horizontally if the image position projected on the screen is shifted when the image size is enlarged.

- 1) Press ▲▼ to select [ZOOM].
- 2) Press the <ENTER> button.
  - The [ZOOM] screen is displayed.
- 3) Press ▲▼ to select [ZOOM SHIFT].
- 4) Press the <ENTER> button.
  - The [ZOOM SHIFT] screen is displayed.
- 5) Press ▲▼◀▶ to adjust the position.

Items	Operation	Adjustment
[H]	Press the ▶ button.	The image position moves to the right.
	Press the ◀ button.	The image position moves to the left.
[V]	Press the ▲ button.	The image position moves up.
	Press the ▼ button.	The image position moves down.

**Note**

- The adjustment range of [ZOOM SHIFT] is restricted by the input signal and the enlargement amount. Adjust within the effective adjustment range.
- The position of the image cannot be changed without enlarging the image size.

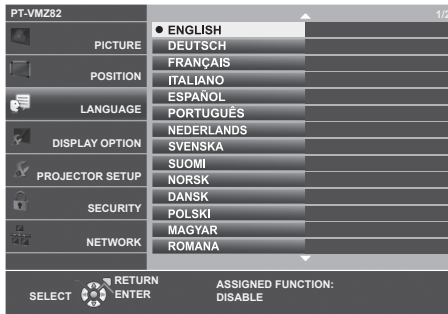
## [LANGUAGE] menu

On the menu screen, select [LANGUAGE] from the main menu, and select an item from the submenu. Refer to “Navigating through the menu” (➔ page 65) for the operation of the menu screen.

### Switching the display language

You can select the language of the on-screen display.

- 1) Press ▲▼ to select the display language, and press the <ENTER> button.



- Various menus, settings, adjustment screens, control button names, etc., are displayed in the selected language.
- The language can be changed to English, German, French, Italian, Spanish, Portuguese, Dutch, Swedish, Finnish, Norwegian, Danish, Polish, Hungarian, Romanian, Czech, Russian, Turkish, Arabic, Kazakh, Vietnamese, Korean, Simplified Chinese, Traditional Chinese, Japanese and Thai.

### Note

- The on-screen display language is set to English in the factory default setting as well as when the [PROJECTOR SETUP] menu → [INITIALIZE ALL] is executed.

## [DISPLAY OPTION] menu

On the menu screen, select [DISPLAY OPTION] from the main menu, and select an item from the submenu. Refer to “Navigating through the menu” (➔ page 65) for the operation of the menu screen.

### [ON-SCREEN DISPLAY]

Set the on-screen display.

#### Setting [INPUT GUIDE]

Set the input guide to be displayed when switching the input.

- 1) Press ▲▼ to select [ON-SCREEN DISPLAY].
- 2) Press the <ENTER> button.
  - The [ON-SCREEN DISPLAY] screen is displayed.
- 3) Press ▲▼ to select [INPUT GUIDE].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[DETAILED]	Displays the input name list as well as the signal resolution of the selected input.
[OFF]	Disables the input guide.
[SIMPLE]	Displays the name of selected input and the signal resolution.

#### Note

- When it is set to [DETAILED], you can select the input with ▲▼ on the control panel or the remote control while the input guide is displayed.

#### Setting [OSD POSITION]

Set the position of the menu screen (OSD). In conjunction with this setting, the display position of the individual adjustment screen also changes.

- 1) Press ▲▼ to select [ON-SCREEN DISPLAY].
- 2) Press the <ENTER> button.
  - The [ON-SCREEN DISPLAY] screen is displayed.
- 3) Press ▲▼ to select [OSD POSITION].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

Items	Menu screen (OSD)	Individual adjustment screen
[CENTER]	Sets it to the center of the screen.	It is displayed at the center of the screen.
[UPPER LEFT]	Sets it to the upper left of the screen.	It is displayed at the upper screen.
[UPPER RIGHT]	Sets it to the upper right of the screen.	It is displayed at the upper screen.
[LOWER LEFT]	Sets it to the lower left of the screen.	It is displayed at the lower screen.
[LOWER RIGHT]	Sets it to the lower right of the screen.	It is displayed at the lower screen.

#### Setting [OSD SIZE]

Set the size of the menu screen (OSD).

- 1) Press ▲▼ to select [ON-SCREEN DISPLAY].
- 2) Press the <ENTER> button.
  - The [ON-SCREEN DISPLAY] screen is displayed.
- 3) Press ▲▼ to select [OSD SIZE].
- 4) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[NORMAL]	Use this setting normally.
[DOUBLE]	The menu screen is displayed with the font size twice as much as set in [NORMAL]. The menu screen size is doubled both vertically and horizontally.

### Note

- The setting of [OSD SIZE] is fixed to [NORMAL] and cannot be changed if the [DISPLAY OPTION] menu → [SCREEN SETTING] → [SCREEN FORMAT] is set to [21:9].

### Setting [WARNING MESSAGE]

Set the display/hide of the warning message.

- 1) Press ▲▼ to select [ON-SCREEN DISPLAY].
- 2) Press the <ENTER> button.
  - The [ON-SCREEN DISPLAY] screen is displayed.
- 3) Press ▲▼ to select [WARNING MESSAGE].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[ON]	Displays the warning message.
[OFF]	Hides the warning message.

### Note

- When [WARNING MESSAGE] is set to [OFF], the warning message will not be displayed on the projected image even if a warning status such as "TEMPERATURE WARNING" is detected. The prompting message for filter replacement/maintenance will not be displayed either.

### [HDMI IN]

Set this item in accordance with the image signal input to the <HDMI IN 1> terminal or the <HDMI IN 2> terminal.

### Setting [SIGNAL LEVEL] in [HDMI IN]

- 1) Press ▲▼ to select [HDMI IN].
- 2) Press the <ENTER> button.
  - The [HDMI IN] screen is displayed.
- 3) Press ▲▼ to select [SIGNAL LEVEL] of [HDMI1] or [HDMI2].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[AUTO]	Sets the signal level automatically.
[64-940]	Select when the HDMI terminal of an external device (such as a blu-ray player) is connected to the <HDMI IN 1> terminal / <HDMI IN 2> terminal.
[0-1023]	Select when the DVI-D terminal output of an external device (such as a computer) is connected to the <HDMI IN 1> terminal / <HDMI IN 2> terminal via a conversion cable or similar cable. Select also when the HDMI terminal output of a computer or other device is connected to the <HDMI IN 1> terminal / <HDMI IN 2> terminal.

### Note

- The optimal setting varies depending on the output setting of the connected external device. Refer to the operation instruction of the external device regarding the output of the external device.
- The displayed signal level is assumed when the input is 30 bits.

### Setting [SCREEN FIT] in [HDMI IN]

- 1) Press ▲▼ to select [HDMI IN].
- 2) Press the <ENTER> button.
  - The [HDMI IN] screen is displayed.

- 3) Press ▲▼ to select [SCREEN FIT] of [HDMI1] or [HDMI2].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[ON]	The EDID preferred resolution changes according to the [SCREEN FORMAT] setting.
[OFF]	The EDID preferred resolution is fixed at 1 920 x 1 200.

## [DIGITAL LINK IN]

Set this item in accordance with the image signal input to the <DIGITAL LINK/LAN> terminal.

### Setting [SIGNAL LEVEL] in [DIGITAL LINK IN]

- 1) Press ▲▼ to select [DIGITAL LINK IN].
- 2) Press the <ENTER> button.
  - The [DIGITAL LINK IN] screen is displayed.
- 3) Press ▲▼ to select [SIGNAL LEVEL].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[AUTO]	Automatically sets the signal level.
[64-940]	Select when the HDMI terminal output of an external device (such as a Blu-ray disc player) is connected to the <DIGITAL LINK/LAN> terminal via a twisted-pair-cable transmitter.
[0-1023]	Select when the DVI-D terminal output or HDMI terminal output of an external device (such as a computer) is connected to the <DIGITAL LINK/LAN> terminal via a twisted-pair-cable transmitter.

### Note

- The optimal setting varies depending on the output setting of the connected external device. Refer to the operation instruction of the external device regarding the output of the external device.
- The displayed signal level is assumed when the input is 30 bits.

### Setting [SCREEN FIT] in [DIGITAL LINK IN]

- 1) Press ▲▼ to select [DIGITAL LINK IN].
- 2) Press the <ENTER> button.
  - The [DIGITAL LINK IN] screen is displayed.
- 3) Press ▲▼ to select [SCREEN FIT].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[ON]	The EDID preferred resolution changes according to the [SCREEN FORMAT] setting.
[OFF]	The EDID preferred resolution is fixed at 1 920 x 1 200.

## [SCREEN SETTING]

Set the screen size.

When changing the aspect of a projected image, correct to the optimum image position for the set screen. Set as necessary for the screen in use.

- 1) Press ▲▼ to select [SCREEN SETTING].
- 2) Press the <ENTER> button.
  - The [SCREEN SETTING] screen is displayed.
- 3) Press ▲▼ to select [SCREEN FORMAT].
- 4) Press ◀▶ to switch the [SCREEN FORMAT] item.
  - The items will switch each time you press the button.



[SCREEN FORMAT]	The available items to set when [SCREEN POSITION] is selected
[16:10]	Cannot be set.
[16:9], [21:9]	Three items of [CENTER], [HIGH] and [LOW] can be selected for vertical position.
[4:3]	Three items of [CENTER], [LEFT] and [RIGHT] can be selected for horizontal position.

- If [SCREEN FORMAT] is set to [16:10], the [SCREEN POSITION] cannot be set.

5) Press ▲▼ to select [SCREEN POSITION].

6) Press ◀▶ to set the screen position.

## [STARTUP LOGO]

Set the logo display when the power is turned on.

1) Press ▲▼ to select [STARTUP LOGO].

2) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[DEFAULT LOGO]	Displays the Panasonic logo.
[USER IMAGE]	Displays the image registered by the user. You can register or delete the user image following the instructions displayed on the screen by selecting [USER IMAGE] and pressing the <ENTER> button. For details, refer to "[USER IMAGE]" (➔ page 111).
[OFF]	Disables the startup logo display.

### Note

- When [USER IMAGE] is selected, the display of the startup logo will be kept for approximately 15 seconds.
- If the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [QUICK STARTUP] is set to [ON], the startup logo is not displayed when projection starts before the specified time elapses after the projector enters the standby mode.  
The specified time is a time set in the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [QUICK STARTUP] → [VALID PERIOD].
- For the procedure to set the startup logo from the web control screen, refer to "[Startup logo]" (➔ page 161).

## [SHUTTER SETTING]

Enable/disable the shutter function automatically (shutter: closed/open) when the power is turned on.

1) Press ▲▼ to select [SHUTTER SETTING].

2) Press the <ENTER> button.

- The [SHUTTER SETTING] screen is displayed.

3) Press ▲▼ to select [STARTUP].

4) Press ◀▶ to switch the item.

[OFF]	Starts projection with the shutter function disabled (shutter: open) when the power is turned on.
[ON]	Starts projection with the shutter function enabled (shutter: closed) when the power is turned on.

## [AUTO SETUP SETTING]

Set the automatic execution of AUTO SETUP.

Dot clock, clock phase and image position can be adjusted automatically without pressing the <AUTO SETUP> button each time when unregistered signals are input frequently at meetings, etc.

1) Press ▲▼ to select [AUTO SETUP SETTING].

2) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[AUTO]	If the image being projected changes to an unregistered signal, the auto setup is automatically performed.
[BUTTON]	Enables the auto setup function only when the <AUTO SETUP> button is pressed.

**[SIGNAL SEARCH]**

Set to enable/disable the signal search function.

If the signal search function is enabled, the input with input signal is automatically selected when the power is turned on and the projection is started. In addition, if the <AUTO SETUP> button is pressed when the currently selected input has no signal, it automatically switches to the input with input signal.

- 1) Press ▲▼ to select [SIGNAL SEARCH].
- 2) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[ON]	Enables the signal search function.
[OFF]	Disables the signal search function.

**Note**

- If no signal is detected during the signal search, the signal search function will be performed again automatically if no user operation is detected within 15 seconds.

**[BACK COLOR]**

Set the display of the projected screen when there is no signal input.

- 1) Press ▲▼ to select [BACK COLOR].
- 2) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[BLUE]	Displays the entire projection area in blue.
[BLACK]	Displays the entire projection area in black.
[DEFAULT LOGO]	Displays the Panasonic logo.
[USER IMAGE]	Displays the image registered by the user. You can register or delete the user image following the instructions displayed on the screen by selecting [USER IMAGE] and pressing the <ENTER> button. For details, refer to "[USER IMAGE]" (➔ page 111).

**Note**

- For the procedure to set the back color from the web control screen, refer to "[Back color]" (➔ page 162).

**[P-TIMER]**

Set and operate the presentation timer function.

**Setting the mode**

- 1) Press ▲▼ to select [P-TIMER].
- 2) Press the <ENTER> button.
  - The [P-TIMER] screen is displayed.
- 3) Press ▲▼ to select [MODE].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[COUNT UP]	Displays the elapsed time since the count was started.
[COUNT DOWN]	Displays the remaining time of the time set by [TIMER].

**Setting the countdown timer**

- 1) Press ▲▼ to select [P-TIMER].
- 2) Press the <ENTER> button.
  - The [P-TIMER] screen is displayed.
- 3) Press ▲▼ to select [TIMER].

4) Press ◀▶ to set the time.

- The time can be set in 1-minute increments from 1 to 180 minutes.
- The factory default value is 10 minutes.

**Note**

- [TIMER] can be set when [MODE] is set to [COUNT DOWN].

**Using the presentation timer**

1) Press ▲▼ to select [P-TIMER].

2) Press the <ENTER> button.

- The [P-TIMER] screen is displayed.

3) Press ▲▼ to select the item, and press the <ENTER> button.

[START]	The count is started.
[STOP]	The count is stopped.
[RESTART]	The count is resumed.
[RESET]	The count is reset.
[EXIT]	The presentation timer function is ended.

- When [START] or [RESTART] is selected, the elapsed time or the remaining time is displayed at the lower right of the projected image.
- When [STOP] is selected, the elapsed time or the remaining time when the count was stopped is displayed at the lower right of the projected image.

**Note**

- Presentation timer operations are also possible by the <P-TIMER> button on the remote control. (➔ page 61)
- The security message set in the [SECURITY] menu → [TEXT DISPLAY] (➔ page 113) is not displayed when the elapsed time or remaining time is displayed.
- The elapsed time or remaining time is not displayed when the menu screen is displayed.
- The start time becomes "000:00" when [MODE] is set to [COUNT UP].
- The start time becomes the value set at [TIMER] when [MODE] is set to [COUNT DOWN].
- The time gauge turns clockwise when [COUNT UP] is set, and turns counterclockwise when [COUNT DOWN] is set.

**[UNIFORMITY]**

Correct the brightness unevenness and color unevenness of the entire screen.

**Setting [USER CORRECTION]**

Correct the brightness unevenness and color unevenness of the entire screen as desired.

1) Press ▲▼ to select [UNIFORMITY].

2) Press the <ENTER> button.

- The [UNIFORMITY] screen is displayed.

3) Press ▲▼ to select [USER CORRECTION].

4) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[OFF]	Disables the user correction function.
[ON]	Enables the user correction function.

- Proceed to Step 5) if [ON] is selected.

5) Press the <ENTER> button.

- The [UNIFORMITY:USER CORRECTION] screen is displayed.

6) Press ▲▼ to select [ADJUSTMENT LEVEL].

7) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[1] - [8]	Select the signal level (target brightness to adjust). The entire screen becomes darker when the value gets larger.
-----------	--

- 8) Press ▲▼ to select [TEST PATTERN].
- 9) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[ON]	Displays the test pattern.
[OFF]	Does not display the test pattern.

- 10) Press ▲▼ to select the adjustment area ([UPPER LEFT], [UPPER RIGHT], [LOWER LEFT], [LOWER RIGHT], [UPPER], [LOWER], [LEFT], or [RIGHT]).
- 11) Press the <ENTER> button.
  - The adjustment screen of [RED], [GREEN], or [BLUE] for the item selected in Step 10) is displayed.
- 12) Press ▲▼ to select [RED], [GREEN], or [BLUE].
- 13) Press ◀▶ to adjust the level.

Item	Operation	Adjustment	Range of adjustment
[RED]	Press ▶	Red becomes darker.	-31 - +31 (Factory default setting: 0)
	Press ◀	Red becomes lighter.	
[GREEN]	Press ▶	Green becomes darker.	
	Press ◀	Green becomes lighter.	
[BLUE]	Press ▶	Blue becomes darker.	
	Press ◀	Blue becomes lighter.	

- To adjust the color unevenness for each adjustment level, repeat Steps 6) to 13).
- To adjust the color unevenness for each adjustment area, repeat Steps 10) to 13).

### Initializing adjustments for [USER CORRECTION]

Return the color unevenness settings of all adjustment areas in the specified [ADJUSTMENT LEVEL] to the factory default values.

- 1) Press ▲▼ to select [UNIFORMITY].
- 2) Press the <ENTER> button.
  - The [UNIFORMITY] screen is displayed.
- 3) Press ▲▼ to select [USER CORRECTION].
- 4) Press ◀▶ to select [ON], and press the <ENTER> button.
  - The [UNIFORMITY:USER CORRECTION] screen is displayed.
- 5) Press ▲▼ to select [ADJUSTMENT LEVEL].
- 6) Press ◀▶ to switch the [ADJUSTMENT LEVEL] to initialize.
- 7) Press ▲▼ to select [INITIALIZE].
- 8) Press the <ENTER> button.
  - The confirmation screen is displayed.
- 9) Press ◀▶ to select [OK], and press the <ENTER> button.

#### Note

- To initialize all settings in [USER CORRECTION] in one time, select [PROJECTOR SETUP] menu → [INITIALIZE ALL] and execute the initialization.
- [TEST PATTERN] is not initialized.

### Setting [ZOOM CORRECTION]

Color unevenness may change depending on the zoom position of the lens. Change the setting according to the zoom position so that color unevenness is minimized.

- 1) Press ▲▼ to select [UNIFORMITY].
- 2) Press the <ENTER> button.
  - The [UNIFORMITY] screen is displayed.
- 3) Press ▲▼ to select [ZOOM CORRECTION].
- 4) Press ◀▶ to adjust the zoom correction.
  - The items will switch each time you press the button.

[0]	Select [0] when the lens is at the wide end (W) for the best color unevenness correction.
[1] - [7]	Select from [1] to [7] for the best color unevenness correction.
[8]	Select [8] when the lens is at the tele end (T) for the best color unevenness correction.

### [OTHER FUNCTIONS]

The same function can be realized by operating the menu as an alternative of operating the remote control button.

#### Using the auto setup function

The dot clock, clock phase and image position can be adjusted automatically when the analog RGB still image signal is input.

- 1) Press ▲▼ to select [OTHER FUNCTIONS].
- 2) Press the <ENTER> button.
  - The [OTHER FUNCTIONS] screen is displayed.
- 3) Press ▲▼ to select [AUTO SETUP].
- 4) Press the <ENTER> button.

#### Using the freeze function

The projected image is paused temporarily and the sound is stopped regardless of the playback of the external equipment.

- 1) Press ▲▼ to select [OTHER FUNCTIONS].
- 2) Press the <ENTER> button.
  - The [OTHER FUNCTIONS] screen is displayed.
- 3) Press ▲▼ to select [FREEZE].
- 4) Press the <ENTER> button.
  - The image is paused and the sound is turned off.

#### Note

- Press the <FREEZE> button again in freeze status, the paused image is played and the sound is output.
- [FREEZE] is displayed at the lower left of the projection screen in freeze status.

#### Using the shutter function

Enable (shutter: closed) or disable (shutter: open) the shutter function.

- 1) Press ▲▼ to select [OTHER FUNCTIONS].
- 2) Press the <ENTER> button.
  - The [OTHER FUNCTIONS] screen is displayed.
- 3) Press ▲▼ to select [SHUTTER].
- 4) Press the <ENTER> button.
  - The image and the sound are turned off.

### Note

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- Even when the shutter function is in use (shutter: closed), the power <⏻/> button, input select buttons (<HDMI 1>, <HDMI 2>, <DIGITAL LINK>, <COMPUTER>, <NETWORK / USB>), and <INPUT SELECT> button can be operated.

### Using the digital zoom function

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This function can enlarge the projected image.

- 1) Press ▲▼ to select [OTHER FUNCTIONS].
- 2) Press the <ENTER> button.
  - The [OTHER FUNCTIONS] screen is displayed.
- 3) Press ▲▼ to select [DIGITAL ZOOM].
- 4) Press the <ENTER> button.
  - The image with the center part magnified 1.5 times is displayed, and the [DIGITAL ZOOM] individual adjustment screen is displayed.
- 5) Press ◀▶ to adjust the magnification.
  - The magnification can be adjusted from 1.0 to 3.0 times with increments of 0.1.
- 6) Press the <ENTER> button.
  - The operation guide is displayed at the lower left of the screen.
- 7) Move the enlarged part.
  - The image cannot be moved if the magnification is 1.0.

### Note

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- The digital zoom function is disabled when the freeze function is in use.
- Depending on the input signal, the digital zoom may not work.
- The digital zoom function is canceled if the input signal changes during a digital zoom.

## [PROJECTOR SETUP] menu

On the menu screen, select [PROJECTOR SETUP] from the main menu, and select an item from the submenu. Refer to “Navigating through the menu” (➔ page 65) for the operation of the menu screen.

### [STATUS]

Display the status of the projector.

- 1) Press ▲▼ to select [STATUS].
- 2) Press the <ENTER> button.
  - The [STATUS] screen is displayed.
- 3) Press ▲▼ to switch the pages.
  - The page will change each time you press the button.

[SIGNAL]	[INPUT]	Displays the input used for the projected image.
	[NAME]	Displays the name of input signal.
	[FREQUENCY]	Displays the scanning frequency of input signal.
[RUNTIME]	[PROJECTOR]	Displays the actual usage time of projector.
	[LIGHT RUNTIME]	Displays the runtime of the light source.
	[CONTINUOUS LIGHTING TIME]	Displays the elapsed time from when the light source is illuminated. The elapsed time is reset when the light source is temporarily turned off such as using the shutter function.
[SERIAL NUMBER]	[PROJECTOR]	Displays the serial number of the projector.
[VERSION]	[MAIN]	Displays the main version of the firmware of the projector.
	[SUB]	Displays the sub version of the firmware of the projector.
	[LD]	Displays the version of the light driver of the projector.
[ANGLE INFORMATION]	[ROLL ANGLE] <sup>*1</sup>	Displays the horizontal swing angle based on the detection result of the built-in angle sensor.
	[PITCH ANGLE] <sup>*1</sup>	Displays the vertical tilt angle based on the detection result of the built-in angle sensor.

\*1 The angle value displayed is relative to the benchmark (zero calibration reset state / zero calibration implementation state) selected on the [ANGLE MONITOR] screen.

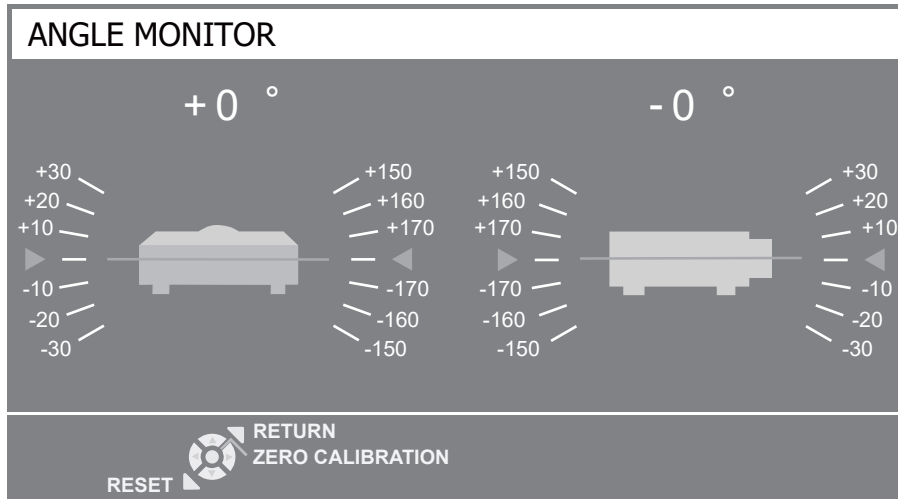
### Note

- For the network status, refer to the [NETWORK] menu → [NETWORK STATUS]. (➔ page 119)
- The values displayed in [ANGLE INFORMATION] are based on the results of the angle sensor detection and may differ from the actual tilt angle of the projector. The displayed values are for reference only and accuracy is not guaranteed.
- The relationship between the value displayed in [ROLL ANGLE] and the projector tilt status is shown as below. This is the case when [PITCH ANGLE] is [0°] and [ANGLE MONITOR] is set to zero calibration reset state.
  - [-1°] ~ [-30°]: The projector swings counterclockwise with the top surface facing upward and the screen set in front.
  - [0°]: The projector is horizontal with the top surface facing upward.
  - [+1°] ~ [+30°]: The projector swings clockwise with the top surface facing upward and the screen set in front.
  - [-179°] ~ [-150°]: The projector swings clockwise with the top surface facing downward and the screen set in front.
  - [+180°]: The projector is horizontal with the top surface facing downward.
  - [+179°] ~ [+150°]: The projector swings counterclockwise with the top surface facing downward and the screen set in front.
- The relationship between the value displayed in [PITCH ANGLE] and the installation attitude of the projector is shown as below. This is the case when [ROLL ANGLE] is [0°] in the zero calibration reset state.
  - [-1°] ~ [-30°]: The projector swings with the top surface facing upward and the projection lens side facing downward.
  - [0°]: The projector is horizontal with the top surface facing upward.
  - [+1°] ~ [+30°]: The projector swings with the top surface facing upward and the projection lens side facing upward.
  - [-179°] ~ [-150°]: The projector swings with the top surface facing downward and the projection lens side facing downward.
  - [+180°]: The projector is horizontal with the top surface facing downward.
  - [+179°] ~ [+150°]: The projector swings with the top surface facing downward and the projection lens side facing upward.
- If you press the <ENTER> button while displaying [ANGLE INFORMATION] page of the [STATUS] screen (page 3/3), the [ANGLE MONITOR] screen which graphically displays the tilt angle of the projector is displayed. For details, refer to “[ANGLE MONITOR] screen” (➔ page 95).

### [ANGLE MONITOR] screen

Displays the tilt angle of the projector graphically based on the angle information detected by the built-in angle sensor.

- 1) Press the <ENTER> button while 3/3 page of the [STATUS] screen is displayed.
  - The [ANGLE MONITOR] screen is displayed.



2) Press the <ENTER> button or the <DEFAULT> button.

- The angle benchmark will switch each time you press the button.

<ENTER> button	Displays the angle of the zero calibration state representing the current installation attitude of the projector.
<DEFAULT> button	Displays the angle of the zero calibration reset state. Resets the zero calibration and displays the detection result of the angle sensor as it is.

**Note**

- The illustration of the projector in the [ANGLE MONITOR] screen does not rotate and does not follow the attitude change of the projector.
- The illustration of the projector shows the monitor of the roll angle and the monitor of the pitch angle.
  - The rear view illustration of the projector (left side): indicates the roll angle
  - The side view illustration of the projector (right side): indicates the pitch angle
- The green line intersecting the illustration of the projector indicates the angle to the benchmark selected in step 2). Read the left and right gauges.
- The red ►◄ mark on the horizontal axis represents the benchmark surface (0°, +180°) selected in step 2).
- The values shown at the top of the roll angle monitor and the pitch angle monitor are common with the values displayed in [ROLL ANGLE] and [PITCH ANGLE] on the [STATUS] screen.
- The benchmark selected in step 2) remains unchanged even if the main power is turned off and on.

**[PROJECTOR ID]**

The projector has an ID number setting function that can be used when multiple projectors are used side by side to enable simultaneous control or individual control via a single remote control.

1) Press ▲▼ to select [PROJECTOR ID].

2) Press ◀▶ to select a projector ID.

- To select one item among [ALL] and [1] ~ [64].

[ALL]	Select when controlling projectors without specifying an ID number.
[1] ~ [64]	Select when specifying an ID number to control individual projector.

**Note**

- To specify an ID number for individual control, the ID number of a remote control must match the ID number of the projector.
- When the ID number is set to [ALL], the projector will operate regardless of the ID number specified during remote control or computer control.  
If multiple projectors are set up side by side with ID set to [ALL], you cannot control a projector separately by specifying a different ID number.
- Refer to "Setting the ID number on the remote control" (➔ page 63) for how to set the ID number on the remote control.

**[INITIAL START UP]**

Set the startup method when the projector is switched on after connecting the power plug to outlet .

1) Press ▲▼ to select [INITIAL START UP].

2) Press ◀▶ to switch the item.

- The items will switch each time you press the button.



[LAST MEMORY]	Starts up in the status that before removing the power plug from the outlet or turning off the circuit breaker.
[STANDBY]	Starts up in the standby mode.
[ON]	Starts the projection immediately.

## [PROJECTION METHOD]

Set the projection method in accordance with the installation status of the projector.

Change the projection method if the screen display is upside down or inverted.

- 1) Press ▲▼ to select [PROJECTION METHOD].
- 2) Press ◀▶ to switch the projection method.
  - The items will switch each time you press the button.

[AUTO]	Detects the projector's posture with built-in angle sensor, then switches to [FRONT/DESK] or [FRONT/CEILING]. Usually it is set to [AUTO] when projecting in front of the screen.
[FRONT/DESK]	When installing the projector on the desk, etc., in front of the screen.
[FRONT/CEILING]	When installing the projector in front of the screen with the Ceiling Mount Bracket (optional).
[REAR/DESK]	When installing the projector on the desk, etc., behind the screen (with a translucent screen).
[REAR/CEILING]	When installing the projector behind the screen (with a translucent screen) with the Ceiling Mount Bracket (optional).

### Note

- Refer to "Angle sensor" (➔ page 35) for details on the range of the installation attitude that can be detected by the built-in angle sensor.

## [ECO MANAGEMENT]

Set [ECO MANAGEMENT] to reduce the power consumption and enhance the life of the light source.

### Setting [AUTO POWER SAVE]

- 1) Press ▲▼ to select [ECO MANAGEMENT].
- 2) Press the <ENTER> button.
  - The [ECO MANAGEMENT] screen is displayed.
- 3) Press ▲▼ to select [AUTO POWER SAVE].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[ON]	Enables the energy conservation setting.
[OFF]	Disables the energy conservation setting.

- Proceed to Step 5) when [ON] is selected.

- 5) Press ▲▼ to select [AMBIENT LIGHT DETECTION] or [SIGNAL DETECTION].

[AMBIENT LIGHT DETECTION]	Perform the setting of the ambient light detection. When enabled, the power of the light source can be adjusted according to the ambient brightness of the installation location.
[SIGNAL DETECTION]	Perform the setting of the signal detection. When enabled, the power of the light source can be reduced when no signal is detected.
[IMAGE DETECTION]	Perform the setting of the image detection. When enabled, the power of light source can be saved when the projected image has not changed for a certain time.

- Proceed to Step 6) when [AMBIENT LIGHT DETECTION] or [SIGNAL DETECTION] is selected.
- When [IMAGE DETECTION] is selected, refer to "Setting [IMAGE DETECTION]" (➔ page 98).

- 6) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[ON]	Enables the selected function.
[OFF]	Disables the selected function.

**Note**

- When [AUTO POWER SAVE] is set to [OFF], settings of [AMBIENT LIGHT DETECTION], [SIGNAL DETECTION] and [IMAGE DETECTION] are unavailable.
- The luminance may not be detected correctly when an object is placed on top of the projector, blocking the luminance sensor. In such a case, it may not operate properly even if [AMBIENT LIGHT DETECTION] is set to [ON].

**Setting [IMAGE DETECTION]**

When the image detection function is enabled, if it is determined according to the [LEVEL] setting that the projected image has not changed during the time set in [TIMER], the image detection function will operate after the set time has elapsed to save the power consumption either by reducing the light power or turning off the light source.

- 1) Press ▲▼ to select [ECO MANAGEMENT].
- 2) Press the <ENTER> button.
  - The [ECO MANAGEMENT] screen is displayed.
- 3) Press ▲▼ to select [IMAGE DETECTION].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[OFF]	Disables the image detection function.
[ON (HALF LIGHT)]	Enables the image detection function. Select this item to reduce the light power to 50 % when the image detection function operates.
[ON (NO LIGHT)]	Enables the image detection function. Select this item to turn off the light source when the image detection function operates.

- Proceed to Step 5) when [ON (HALF LIGHT)] or [ON (NO LIGHT)] is selected.

- 5) Press the <ENTER> button.
  - The [IMAGE DETECTION] screen is displayed.
- 6) Press ▲▼ to select [TIMER].
- 7) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[1 MIN.] - [99 MIN.]	Set the time that the projected image has been determined as unchanged according to the [LEVEL] setting. Once the set time has elapsed, the image detection function will start operating. (factory default setting: [1 MIN.]) A 5 seconds countdown timer will be displayed at the bottom right corner when the set time is about to elapse.
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- 8) Press ▲▼ to select [LEVEL].
- 9) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[1] - [100]	Sets the threshold value used to determine whether the projected image has changed. The smaller the threshold value is set, the more likely the image is determined as changed due to pixel changes. (factory default setting: [1])
-------------	---

**Note**

- [IMAGE DETECTION] cannot be set in the following cases.
  - When the [PICTURE] menu → [DAYLIGHT VIEW] is set to [AUTO]
  - When the [PICTURE] menu → [DYNAMIC CONTRAST] is set to anything other than [OFF]
  - When the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [AUTO POWER SAVE] is set to [OFF]
  - When the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [LIGHT POWER] is set to anything other than [NORMAL]
  - When the test pattern set in the [PROJECTOR SETUP] menu → [TEST PATTERN] is displayed
  - When the input is set to COMPUTER
  - When there is no signal
- If any button is pressed or image change is detected during the image detection function operation, the function will be canceled temporarily and the time count will be reset.

**Setting [LIGHT POWER]**

- 1) Press ▲▼ to select [ECO MANAGEMENT].
- 2) Press the <ENTER> button.
  - The [ECO MANAGEMENT] screen is displayed.
- 3) Press ▲▼ to select [LIGHT POWER].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[NORMAL]	Select this item when high luminance is required. The light power is 100 % and the estimated runtime is approximately 20 000 hours*1.
[ECO]	The luminance will decrease compared to [NORMAL], but select this item to suppress the reduction in luminance against the runtime of the light source. The light power is 70 % and the estimated runtime is approximately 24 000 hours*1.
[QUIET1]	Select this item to prioritize the operation with low noise. The light power is 85 % and the estimated runtime is approximately 20 000 hours*1.
[QUIET2]	Select this item to prioritize the operation with low noise. The light power is 70 % and the estimated runtime is approximately 20 000 hours*1.
[USER]	Select the item to set the picture brightness as desired.

\*1 Estimated runtime is the time until the brightness decreases to approximately half of the time of delivery when the projector is used with the [PICTURE] menu → [DYNAMIC CONTRAST] set to [2] and under environment of 0.15 mg/m<sup>3</sup> dust. The value of runtime is just an estimate, and is not the warranty period.

- Proceed to Step 5) when [USER] is selected.

- 5) Press ▲▼ to select [LIGHT OUTPUT].

- 6) Press ◀▶ to adjust.

Operation	Adjustment		Range of adjustment
	Brightness	Runtime (estimate)	
Press ▶.	The screen becomes brighter.	The runtime becomes shorter.	50 %*1 - 100 %
Press ◀.	The screen becomes darker.	The runtime becomes longer.	

\*1 It should be noted that the picture quality tends to deteriorate as the light output decreases.

**Note**

- Under influences of characteristics of each light source, conditions of use, installation environment, etc., the runtime may be shorter than the estimation.
- Runtime is a time until the luminance of the light source to become about half when using the projector continuously. The runtime is just an estimate, and is not the warranty period.
- If the runtime exceeds 10 000 hours, replacement of the components inside the projector may be required. Consult your dealer for details.
- When the [PICTURE] menu → [PICTURE MODE] is set to [VIVID GREEN], [ECO] and [QUIET2] become unavailable.
- When [LIGHT POWER] is set to [ECO] or [QUIET2], If the [PICTURE] menu → [PICTURE MODE] has changed to [VIVID GREEN], the [LIGHT POWER] setting will automatically change to [QUIET1].
- When [LIGHT POWER] is set to [USER] and the [LIGHT OUTPUT] setting is below 85%, If the [PICTURE] menu → [PICTURE MODE] has changed to [VIVID GREEN], the [LIGHT OUTPUT] setting will automatically change to [85%].

**Setting [POWER MANAGEMENT]**

This is a function to set the power of the projector to standby state or ready state automatically when there is no input signal for specific time. Selection of standby state or the ready state, and the time for the power management function to operate can be set.

- 1) Press ▲▼ to select [ECO MANAGEMENT].
- 2) Press the <ENTER> button.
  - The [ECO MANAGEMENT] screen is displayed.
- 3) Press ▲▼ to select [POWER MANAGEMENT].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[SHUT DOWN]	The countdown timer is displayed when the signal input is not present for 30 seconds, and the light source is turned off, and goes into standby after cooling when the time set in [TIMER] has elapsed.
[OFF]	Disables the power management function.
[READY]	The countdown timer is displayed when the signal input is not present for 30 seconds, and the light source is turned off, and goes into ready state after cooling when the time set in [TIMER] has elapsed. The light source will turn on and starts projection when a signal is input or the button is operated while in ready state.

- Proceed to Step 5) when anything other than [OFF] is selected.

5) Press ▲▼ to select [TIMER].

6) Press ◀▶ to switch the time.

- The setting time will switch each time you press the button.
- The time for the power management function to operate can be set from 5 minutes to 120 minutes in five-minute interval.

#### Note

- The power management function also works under MEMORY VIEWER input. The condition to determine as no-signal input is as follows: no USB memory is attached to the <USB (VIEWER/WIRELESS/DC OUT)> terminal
- The power management function does not work under NETWORK input.

#### Setting [STANDBY MODE]

Set the power consumption during standby and whether to enable the [QUICK STARTUP] function.

1) Press ▲▼ to select [ECO MANAGEMENT].

2) Press the <ENTER> button.

- The [ECO MANAGEMENT] screen is displayed.

3) Press ▲▼ to select [STANDBY MODE].

4) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[NORMAL]	Select this item when using the network function during standby.
[ECO]	Select this item to reduce power consumption during standby.

- Proceed to Step 5) when [NORMAL] is selected.

5) Press ▲▼ to select [QUICK STARTUP].

6) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[OFF]	Disables the [QUICK STARTUP] function.
[ON]	Enables the [QUICK STARTUP] function until the specified time set in [VALID PERIOD] elapses after the projector enters the standby mode. The time until the projection starts after the power is turned on will be reduced during the period when the [QUICK STARTUP] function is valid.

- Proceed to Step 7) when [ON] is selected.

7) Press the <ENTER> button.

- The [QUICK STARTUP] screen is displayed.

8) Press ◀▶ to switch [VALID PERIOD].

- The items will switch each time you press the button.

[30 MIN.]	Sets the time until the [QUICK STARTUP] function is disabled after the projector enters the standby mode.
[60 MIN.]	
[90 MIN.]	

#### Note

- When [STANDBY MODE] is set to [NORMAL], the network function can be used during standby.
- When the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE] is set to [NORMAL], the <USB (VIEWER/

WIRELESS/DC OUT)> terminal can supply power even in standby state. If set to [ECO], the <USB (VIEWER/WIRELESS/DC OUT)> terminal can not supply power in standby state.

- When [STANDBY MODE] is set to [ECO], the network function and the audio output function cannot be used during standby. Also, some RS-232C commands cannot be used.
- When [STANDBY MODE] is set to [ECO], it takes longer for the projection to start after the power is turned on, compared to when set to [NORMAL].
- [QUICK STARTUP] cannot be set when [STANDBY MODE] is set to [ECO].
- When [QUICK STARTUP] is set to [ON], the power consumption during standby becomes high during the period when the [QUICK STARTUP] function is valid.
- If [QUICK STARTUP] is set to [ON], the [QUICK STARTUP] function is disabled when the time set in [VALID PERIOD] elapses after the projector enters the standby mode. The startup time and power consumption will be the same as when [QUICK STARTUP] is set to [OFF].
- When [QUICK STARTUP] is set to [ON], the standby period when the [QUICK STARTUP] function is valid will be added as the projector runtime.

### Setting [AUTO POWER ON]

Set the AUTO POWER ON function. This is a function to automatically turn on the projector and start projection when an image signal of the specified input is detected.

- 1) Press ▲▼ to select [ECO MANAGEMENT].
- 2) Press the <ENTER> button.
  - The [ECO MANAGEMENT] screen is displayed.
- 3) Press ▲▼ to select [AUTO POWER ON].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[OFF]	Disables the [AUTO POWER ON] function.
[COMPUTER]	The projector in standby status turns on automatically and starts projection if an input signal is detected from the <COMPUTER IN> terminal.
[HDMI1]	The projector in standby status turns on automatically and starts projection if an input signal is detected from the <HDMI IN 1> terminal.
[HDMI2]	The projector in standby status turns on automatically and starts projection if an input signal is detected from the <HDMI IN 2> terminal.

### Note

- [AUTO POWER ON] cannot be set in the following cases.
  - When [STANDBY MODE] is set to [ECO]
  - When the [AUDIO SETTING] menu → [IN STANDBY MODE] is set to [ON]

### [RS-232C]

Set the communication condition of the <SERIAL IN> terminal. Refer to “<SERIAL IN> terminal” (➔ page 204).

### Setting the communication condition of the <SERIAL IN> terminal

- 1) Press ▲▼ to select [RS-232C].
- 2) Press the <ENTER> button.
  - The [RS-232C] screen is displayed.
- 3) Press ▲▼ to select [INPUT SELECT].
- 4) Press ◀▶ to switch the item.

[PROJECTOR]	Performs the RS-232C communication with the <SERIAL IN> terminal of the projector.
[DIGITAL LINK]	Performs the RS-232C communication via the DIGITAL LINK output supported device (Model No.: ET-YFB100G, ET-YFB200G) and the <DIGITAL LINK/LAN> terminal.

- 5) Press ▲▼ to select [BAUDRATE].
- 6) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[9600]	Select the proper communication speed.
[19200]	
[38400]	

7) Press ▲▼ to select [PARITY].

8) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[NONE]	Select the parity condition.
[EVEN]	
[ODD]	

### Note

- When [INPUT SELECT] is set to [DIGITAL LINK], communication using that serial terminal is available only when the corresponding device (such as the DIGITAL LINK output supported device (Model No.: ET-YFB100G, ET-YFB200G)) is connected to the <DIGITAL LINK/LAN> terminal.
- When [INPUT SELECT] is set to [DIGITAL LINK], communication speed for input is fixed to 9 600 bps.

### Using the control command for the existing projector

Set this function when using the control command for previously purchased Panasonic projector to control this projector with a computer using the <SERIAL IN> terminal on the projector. The existing Panasonic projector control software, etc., can continually be used.

1) Press ▲▼ to select [RS-232C].

2) Press the <ENTER> button.

- The [RS-232C] screen is displayed.

3) Press ▲▼ to select [EMULATE].

4) Press the <ENTER> button.

- The [EMULATE] screen is displayed.

5) Press ▲▼ to select an item.

[OFF]	Does not use existing control command for the projector.
[D3500]	D3500 series
[D4000]	D4000 series
[D/W5k SERIES]	D5700 series, DW5100 series, D5600 series, DW5000 series, D5500 series
[D/WZ6k SERIES]	DZ870 series, DW830 series, DX100 series, DZ780 series, DW750 series, DX820 series, DZ770 series, DW740 series, DX810 series, DZ680 series, DW640 series, DX610 series, DW730 series, DX800 series, DZ6710 series, DZ6700 series, DW6300 series, D6000 series, D5000 series, DZ570 series, DW530 series, DX500 series, RZ970 series, RW930 series, RX110 series, RZ770 series, RZ660 series, RW730 series, RW620 series, RZ670 series, RW630 series, RZ575 series, RZ570 series
[L730 SERIES]	L730 series, L720 series, L520 series
[L780 SERIES]	L780 series, L750 series
[L735 SERIES]	L735 series
[L785 SERIES]	L785 series
[F/W SERIES]	FW430 series, FX400 series, FW300 series, F300 series, F200 series, FW100 series, F100 series
[LZ370]	LZ370 series
[LB/W SERIES]	LB3 series, LB2 series, LB1 series, ST10 series, LB90 series, LW80NT series, LB80 series, LB78 series, LB75 series
[VX500 SERIES]	VW435N series, VW440 series, VW430 series, VX505N series, VX510 series, VX500 series, VW330 series, VX400NT series, VX400 series, VX41 series
[EZ570 SERIES]	EZ570 series, EW630 series, EW530 series, EX600 series, EX500 series
[VW431D]	VW431D series

6) Press the <ENTER> button.

## [LENS BLOCK DETECTION]

Sets to enable/disable the lens block detection function.

The lens block detection function allows the projector to reduce the light output for safety concern when an obstacle in front of the lens is detected by the lens block detection sensor. Once the obstacle is removed, the light output will return to normal.

- 1) Press ▲▼ to select [LENS BLOCK DETECTION].
- 2) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[ON]	Enables the lens block detection function. The projector's light output is reduced and a warning message is displayed on the screen when an obstacle in front of the lens is detected.
[OFF]	Disables the lens block detection function. The projector's light output is maintained even the lens is blocked.

### Note

- The lens block detection function may be affected by other infrared devices in the usage environment. In this case, you can disable this function by setting [LENS BLOCK DETECTION] to [OFF].

## [FUNCTION BUTTON]

The function assigned to the <FUNCTION> button of the remote control is displayed. You can also release the assigned setting.

### Releasing assigned function to the <FUNCTION> button

- 1) Press ▲▼ to select [FUNCTION BUTTON].
- 2) Press the <ENTER> button.
  - The [FUNCTION BUTTON] screen is displayed.
- 3) Press the <ENTER> button.
- 4) When the confirmation screen is displayed, press ◀▶ to select [OK] and press the <ENTER> button.

### Note

- You can also cancel the assigned settings by displaying the on-screen menu, selecting the menu item to be canceled (main menu, submenu, or details menu), and then pressing the <FUNCTION> button for at least three seconds.

## [AUDIO SETTING]

You can perform detailed audio setting.

### Adjusting the volume

- 1) Press ▲▼ to select [AUDIO SETTING].
- 2) Press the <ENTER> button.
  - The [AUDIO SETTING] screen is displayed.
- 3) Press ▲▼ to select [VOLUME].
- 4) Press ◀▶ to adjust the level.

Operation	Adjustment	Range
Press the ▶ button.	Increases the volume.	0 ~ +63
Press the ◀ button.	Decreases the volume.	

### Setting the mute status

- 1) Press ▲▼ to select [AUDIO SETTING].
- 2) Press the <ENTER> button.
  - The [AUDIO SETTING] screen is displayed.

3) Press ▲▼ to select [MUTE].

4) Press ◀▶ to switch the item.

[OFF]	Audio is output.
[ON]	Audio is muted.

### Setting the audio output during standby

1) Press ▲▼ to select [AUDIO SETTING].

2) Press the <ENTER> button.

- The [AUDIO SETTING] screen is displayed.

3) Press ▲▼ to select [IN STANDBY MODE].

4) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[OFF]	Disables audio output in the standby mode.
[ON]	Enables audio output in the standby mode.

### Note

- When the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE] is set to [ECO], audio cannot be output during standby.
- When [IN STANDBY MODE] is set to [ON], you can adjust the volume with the <VOL-> button / <VOL+> button on the remote control or the control panel during standby.
- When [IN STANDBY MODE] is set to [ON], even [QUICK STARTUP] is set to [ON], the power indicator <ON (G)/STANDBY (R)> will not change to a red light when the specified time set in [VALID PERIOD] elapses.
- If the audio is output in standby state with [IN STANDBY MODE] being set to [ON] and [POWER BUTTON BEEP] being set to [ON], the audio output will be interrupted temporarily by the beep when the projector is turned on and will resume after the beep.

### Setting the power beep

Set to enable/disable the power beep when the projector is turned on or off.

1) Press ▲▼ to select [AUDIO SETTING].

2) Press the <ENTER> button.

- The [AUDIO SETTING] screen is displayed.

3) Press ▲▼ to select [POWER BUTTON BEEP].

4) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[ON]	Enables the power beep when the power of the projector is turned on or off.
[OFF]	Disables the power beep when the power of the projector is turned on or off.

### Note

- The power beep volume cannot be adjusted.

### Setting the audio input from the connected device

Choose the audio input terminal for each input signal.

1) Press ▲▼ to select [AUDIO SETTING].

2) Press the <ENTER> button.

- The [AUDIO SETTING] screen is displayed.

3) Press ▲▼ to select the items of [AUDIO IN SELECT] to set.

[COMPUTER]	Set the audio output for COMPUTER input.
[HDMI1]	Set the audio output for HDMI1 input.
[HDMI2]	Set the audio output for HDMI2 input.
[DIGITAL LINK]	Set the audio output for DIGITAL LINK input.
[MEMORY VIEWER]	Set the audio output for MEMORY VIEWER input.



[NETWORK]	Set the audio output for NETWORK input.
-----------	---

4) Press ◀▶ to switch the item.

- The sub items will switch each time you press the button.

[AUDIO IN]	Audio connected to the <AUDIO IN> terminal is output during projection of image from the set input terminal.
[HDMI1 AUDIO IN] <sup>*1</sup>	Audio input to HDMI1 is output.
[HDMI2 AUDIO IN] <sup>*2</sup>	Audio input to HDMI2 is output.
[DIGITAL LINK AUDIO IN] <sup>*3</sup>	Audio input to DIGITAL LINK is output.
[NETWORK AUDIO IN] <sup>*4</sup>	Audio input to NETWORK is output.

\*1 Only for HDMI1 input.

\*2 Only for HDMI2 input.

\*3 Only for DIGITAL LINK input.

\*4 Only for NETWORK input.

## [TEST PATTERN]

Displays the built-in test pattern of the projector.

The settings such as [CONTRAST] or [BRIGHTNESS] that can be set from the [PICTURE] menu will not be reflected in the test pattern. Make sure to perform various adjustments with input signals displayed.

1) Press ▲▼ to select [TEST PATTERN].

2) Press the <ENTER> button.

- The ALL WHITE test pattern is displayed.

3) Press ◀▶ to switch the test pattern.

- The test pattern will switch each time you press the button.

All white	The test pattern is displayed together with the operation guide of [PATTERN SELECT]. Select your desired test pattern.
Color bar (Vertical)	
Color bar (Horizontal)	
Cross	
Cross (Inversion)	
Cross hatch	
Screen aspect frame	

### Note

- If [TEST PATTERN] is assigned to the <FUNCTION> button on the remote control, the all white pattern will be displayed after pressing the <FUNCTION> button.

## [FILTER COUNTER]

This function is used to check the usage time of the air filter or set the cleaning/replacement cycle of the air filter. Also, you can reset the air filter usage time.

1) Press ▲▼ to select [FILTER COUNTER].

2) Press the <ENTER> button.

- The [FILTER COUNTER] screen is displayed.

[FILTER COUNTER]	Displays the usage time of the air filter.
[TIMER]	Sets the cleaning/replacement cycle of the air filter.
[FILTER COUNTER RESET]	Resets the air filter usage time.

### Setting [TIMER]

If you want to regularly clean/replace the air filter, set its cycle time. When the air filter usage time reaches the set time, a message of "FILTER COUNTER has reached the set time" prompting you to clean/replace the air filter is displayed on the projection screen.

1) Press ▲▼ to select [FILTER COUNTER].

2) Press the <ENTER> button.

- The [FILTER COUNTER] screen is displayed.

- 3) Press ▲▼ to select [TIMER].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[OFF]	Select not to display the message.
[1000H] - [20000H]	Select to display the message. You can set the cleaning/replacement cycle of the air filter.

### Setting [FILTER COUNTER RESET]

Resets the usage time of the air filter.

- 1) Press ▲▼ to select [FILTER COUNTER].
- 2) Press the <ENTER> button.
  - The [FILTER COUNTER] screen is displayed.
- 3) Press ▲▼ to select [FILTER COUNTER RESET].
- 4) Press the <ENTER> button.
- 5) When the confirmation screen is displayed, press ◀▶ to select [OK] and then press the <ENTER> button.
  - The display of [FILTER COUNTER] changes to "0H".

### [SCHEDULE]

Set the command execution schedule for each day of the week.

For the procedure to set the schedule from the web control screen, refer to [Schedule] (➡ page 160).

### Enabling/disabling the schedule function

- 1) Press ▲▼ to select [SCHEDULE].
- 2) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[OFF]	Disables the schedule function.
[ON]	Enables the schedule function. Refer to "How to assign a program" (➡ page 106) or "How to set a program" (➡ page 106) for how to set the schedule.

### Note

- The [STANDBY MODE] setting will be forced to [NORMAL] when the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE] is set to [ECO], and [SCHEDULE] is set to [ON]. Changing the setting to [ECO] is not available. The [STANDBY MODE] setting will not change back even when [SCHEDULE] is set to [OFF] in this condition.

### How to assign a program

- 1) Press ▲▼ to select [SCHEDULE].
- 2) Press ◀▶ to select [ON], and press the <ENTER> button.
  - The [SCHEDULE] screen is displayed.
- 3) Select and assign a program to each day of week.
  - Press ▲▼ to select the day of week, and press ◀▶ to select a program number.
  - You can set the program from No.1 to No.7. "- - -" indicates that the program number has not been set.

### How to set a program

Set up to 16 commands to each program.

- 1) Press ▲▼ to select [SCHEDULE].
- 2) Press ◀▶ to select [ON], and press the <ENTER> button.
  - The [SCHEDULE] screen is displayed.
- 3) Press ▲▼ to select [PROGRAM EDIT].

- 4) Press ◀▶ to select a program number, and press the <ENTER> button.
- 5) Press ▲▼ to select a command number, and press the <ENTER> button.
- 6) Press ▲▼ to select [TIME], and press the <ENTER> button.
  - The projector is in the adjustment mode (the time is blinking).
- 7) Press ◀▶ to select “hour” or “minute”, and press ▲▼ to set a time, and then press the <ENTER> button.
- 8) Press ▲▼ to select a [COMMAND].
  - For [COMMAND] which requires detailed settings, the items of the detailed settings will switch each time you press ◀▶.
  - When [INPUT] is selected, press the <ENTER> button, and then press ▲▼ to select the input to be set.

[COMMAND]	Detailed settings of [COMMAND]	Description
[POWER ON]	—	Switches on the projector.
[STANDBY]	—	Enters standby.
[QUICK STARTUP]	[ON]	Enables the function of the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [QUICK STARTUP].
	[OFF]	Disables the function of the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [QUICK STARTUP].
[SHUTTER]	[OPEN]	Disables the shutter function (shutter: open).
	[CLOSE]	Enables the shutter function (shutter: closed).
[INPUT]	[COMPUTER]	Switches the input to COMPUTER.
	[HDMI1]	Switches the input to HDMI1.
	[HDMI2]	Switches the input to HDMI2.
	[MEMORY VIEWER]	Switches the input to MEMORY VIEWER.
	[NETWORK]	Switches the input to NETWORK.
	[DIGITAL LINK]	Switches the input to DIGITAL LINK.
	[INPUT1] - [INPUT10] <sup>*1</sup>	Switches the input to DIGITAL LINK, and switches the input of the DIGITAL LINK output supported device to the specified input.
[LIGHT POWER]	[NORMAL]	Prioritizes luminance.
	[ECO]	Controls the power to increase the life of the light source although the luminance is lower than that of [NORMAL].
	[QUIET1]	Select this item to prioritize the operation with low noise. The light power is 85 % and the estimated runtime is approximately 20 000 hours.
	[QUIET2]	Select this item to prioritize the operation with low noise. The light power is 70 % and the estimated runtime is approximately 20 000 hours.
	[USER]	Controls the power according to settings in [USER].
[IN STANDBY MODE(AUDIO)]	[OFF]	Stops the audio output during standby.
	[ON]	Outputs the audio during standby.
[VOLUME]	[0] - [63]	Sets the volume.

\*1 When the DIGITAL LINK output supported device (Model No.: ET-YFB100G, ET-YFB200G) is connected to the projector, its input name is automatically reflected from [INPUT1] to [INPUT10]. When an item that does not reflect the input name is selected, it will be disabled.

- 9) Press the <ENTER> button.
  - The command is fixed and ● is displayed at the left of the selected command.
- 10) Press ▲▼ to select [STORE], and press the <ENTER> button.

### Note

- To delete a command that has been already set, press the <DEFAULT> button on the remote control while the screen in Step 5) is displayed, or select [DELETE] at the screen in Step 6) and press the <ENTER> button.
- If multiple commands have been set for the same time, they are executed in chronological order starting from the smallest command number.
- The operating time will be the local time. (➔ page 108)
- If an operation is executed with the remote control or control panel of the projector or with a control command before the command set in [SCHEDULE] is executed, the command set with the schedule function may not be executed.

## [DATE AND TIME]

Set the time zone, date, and time of the built-in clock of the projector.

### Setting the time zone

- 1) Press ▲▼ to select [DATE AND TIME].
- 2) Press the <ENTER> button.
  - The [DATE AND TIME] screen is displayed.
- 3) Press ▲▼ to select [TIME ZONE].
- 4) Press ◀▶ to switch [TIME ZONE].

### Setting the date and time manually

- 1) Press ▲▼ to select [DATE AND TIME].
- 2) Press the <ENTER> button.
  - The [DATE AND TIME] screen is displayed.
- 3) Press ▲▼ to select [ADJUST CLOCK].
- 4) Press the <ENTER> button.
  - The [ADJUST CLOCK] screen is displayed.
- 5) Press ▲▼ to select an item, and press ◀▶ to set the local date and time.
- 6) Press ▲▼ to select [OK], and press the <ENTER> button.
  - The setting of the date and time will be completed.

### Setting the date and time automatically

- 1) Press ▲▼ to select [DATE AND TIME].
- 2) Press the <ENTER> button.
  - The [DATE AND TIME] screen is displayed.
- 3) Press ▲▼ to select [ADJUST CLOCK].
- 4) Press the <ENTER> button.
  - The [ADJUST CLOCK] screen is displayed.
- 5) Press ▲▼ to select [NTP SYNCHRONIZATION], and press ◀▶ to change the setting to [ON].
- 6) Press ▲▼ to select [OK], and press the <ENTER> button.
  - The setting of the date and time will be completed.

### Note

- To set the date and time automatically, the projector must be connected to the network.
- If synchronization with the NTP server fails just after [NTP SYNCHRONIZATION] is set to [ON], [NTP SYNCHRONIZATION] will return to [OFF]. If [NTP SYNCHRONIZATION] is set to [ON] while the NTP server is not set, a message is displayed and [NTP SYNCHRONIZATION] will return to [OFF].
- Access the projector via a web browser to set the NTP server. Refer to "[Adjust clock]" (➡ page 165) for details.
- The [TIME ZONE] setting is reset to the factory default when the [PROJECTOR SETUP] menu → [INITIALIZE ALL] is executed. However, the date and time based on the local date and time setting (Coordinated Universal Time, UTC, Universal Time, Coordinated) will be maintained without being initialized.

## [HDMI CEC]

Sets the CEC (Consumer Electronics Control) function of HDMI.

CEC is a function that is realized by exchanging device control signals with external devices connected with an HDMI cable. Using the remote control of the projector, it is possible to operate the CEC-compatible external device (hereinafter referred to as "CEC-compatible device") and to control the power on/off link status between the projector and the CEC-compatible device.

For details on how to use the CEC function, refer to “Using HDMI CEC function” (➔ page 180).

- 1) Press ▲▼ to select [HDMI CEC].
- 2) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[ON]	Enables the CEC function.
[OFF]	Disables the CEC function.

### Operating a CEC-compatible device

Operate the CEC-compatible device connected to the <HDMI IN 1> terminal or <HDMI IN 2> terminal. [HDMI-CEC OPERATION] can be operated when HDMI1 input or HDMI2 input is selected. Switch to the input that is corresponding to the CEC-compatible device you want to operate in advance.

- 1) Press ▲▼ to select [HDMI CEC].
- 2) Press ◀▶ to select [ON].
- 3) Press the <ENTER> button.
  - The [HDMI CEC] screen is displayed.
- 4) Press ▲▼ to select [HDMI 1] or [HDMI 2].
  - Select the input corresponding to the CEC-compatible device you want to operate.
  - Proceed to Step 6) when the device to operate is displayed.
- 5) Press ◀▶ to switch the item.
  - The devices will switch when multiple CEC-compatible devices are connected to one input.
  - Select the device to operate.
- 6) Press ▲▼ to select [HDMI-CEC OPERATION].
- 7) Press the <ENTER> button.
  - The HDMI CEC operation screen is displayed.
- 8) Select the item displayed on the HDMI CEC operation screen to operate the device.
  - Refer to the “Using HDMI CEC function” (➔ page 180) for the operation details.

### Note

- If no CEC-compatible device is connected to <HDMI IN 1> or <HDMI IN 2> terminal, there is no device displayed at [HDMI 1] or [HDMI 2] and [---] is displayed.
- To exit the HDMI CEC operation screen, press the <RETURN> button or <MENU> button.

### Changing the menu code

The menu code that calls up the operation menu of the CEC-compatible device varies depending on the device manufacturer. If you cannot call up the operation menu of a CEC-compatible device from the HDMI CEC operation screen, change the menu code setting.

- 1) Press ▲▼ to select [HDMI CEC].
- 2) Press ◀▶ to select [ON].
- 3) Press the <ENTER> button.
  - The [HDMI CEC] screen is displayed.
- 4) Press ▲▼ to select [MENU CODE].
- 5) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.
  - Select the menu code from [1] to [6].

### Setting the power link

Make settings for the power link operations between the projector and CEC-compatible devices.

**[PROJECTOR -> DEVICE]**

Set the the power link operation from the projector to the CEC-compatible device.

- 1) Press ▲▼ to select [HDMI CEC].
- 2) Press ◀▶ to select [ON].
- 3) Press the <ENTER> button.
  - The [HDMI CEC] screen is displayed.
- 4) Press ▲▼ to select [PROJECTOR -> DEVICE].
- 5) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

<b>[DISABLE]</b>	Disables the power link operation. Select this if you do not want the power status of the CEC-compatible device to react to the power status of the projector.
<b>[POWER OFF]</b>	Enables power-off link operation. When you turn off the power of the projector and put it in standby mode, all CEC-compatible devices connected to the <HDMI IN 1> terminal and <HDMI IN 2> terminal will enter standby mode. Power-on link operation is disabled.
<b>[POWER ON/OFF]</b>	Enables power-on link operation and power-off link operation. If you turn on the projector and start projection, the CEC-compatible device connected to the <HDMI IN 1> terminal or <HDMI IN 2> terminal will turn on. When you turn off the projector and put it in standby mode, all CEC-compatible devices connected to the <HDMI IN 1> terminal and <HDMI IN 2> terminal will enter standby mode.

**[DEVICE -> PROJECTOR]**

Set the power link operation from the CEC-compatible device to the projector.

- 1) Press ▲▼ to select [HDMI CEC].
- 2) Press ◀▶ to select [ON].
- 3) Press the <ENTER> button.
  - The [HDMI CEC] screen is displayed.
- 4) Press ▲▼ to select [DEVICE -> PROJECTOR].
- 5) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

<b>[DISABLE]</b>	Disables the power link operation. Select this if you do not want the power status of the projector to react to the CEC-compatible device.
<b>[POWER ON]</b>	Enables power-on link operation. While the projector is in standby, if the CEC-compatible device connected to the <HDMI IN 1> terminal or <HDMI IN 2> terminal is turned on, the projector turns on, starts projection, and switches to the input that the linked CEC-compatible device is connected. While the projector is in standby, if the CEC-compatible device starts playing, the projector turns on, starts projection, and switches to the input that the linked CEC-compatible device is connected. While the projector is turned on, if the CEC-compatible device starts playing, the projector switches to the input that the CEC-compatible device is connected. Power-off link operation is disabled.
<b>[POWER ON/OFF]</b>	Enables power-on link operation and power-off link operation. While the projector is in standby, if the CEC-compatible device connected to the <HDMI IN 1> terminal or <HDMI IN 2> terminal is turned on, the projector turns on, starts projection, and switches to the input that the linked CEC-compatible device is connected. While the projector is in standby, if the CEC-compatible device starts playing, the projector turns on, starts projection, and switches to the input that the linked CEC-compatible device is connected. While the projector is turned on, if the CEC-compatible device starts playing, the projector switches to the input that the CEC-compatible device is connected. While the projector is turned on, if the CEC-compatible device connected to the <HDMI IN 1> terminal or <HDMI IN 2> terminal is turned off, the projector turns off and enters standby mode. The link operations are only available when the CEC-compatible device supports the respective operations.

**Note**

- The connected CEC-compatible device may not support the link operation described in the manual. Not all the operations of the CEC-compatible device are guaranteed.

**[USER IMAGE]**

Register your favorite image to the projector to use it as a back color (➔ page 90) or startup logo (➔ page 89).

**Image files available for registration**

The image file that can be registered in the projector is a still image data fulfilling following conditions.

Extension	Format	Limitation
.jpg/.jpeg/.jpe	JPEG	Number of pixels: Maximum 1 920 x 1 200  File format: supports Baseline and Progressive JPEG  YUV format: supports YUV444, YUV422 (horizontal downsampling) and YUV420  Color mode: RGB only
.bmp	Windows Bitmap	Number of pixels: Maximum 1 920 x 1 200  8/24 bits
.png	PNG	Number of pixels: Maximum 1 920 x 1 200  1/8/16/24/32/48/64 bits (However, $\alpha$ blending becomes invalid and the background image will not be transparent.)

**Registering the user image**

- 1) Save the image file to be registered to the projector on a USB memory.
- 2) Insert the USB memory into the <USB (VIEWER/WIRELESS/DC OUT)> terminal.
- 3) Press ▲▼ to select [USER IMAGE], and press the <ENTER> button.
  - The [USER IMAGE] screen is displayed.
- 4) Press ▲▼ to select [SAVE USER IMAGE], and press the <ENTER> button.
  - The [SAVE USER IMAGE] screen is displayed.
  - Proceed to Step 6) if the file for image to register is saved in the root directory of the USB memory.
- 5) Press ▲▼ to select the folder in which the file is saved, and press the <ENTER> button.
  - Repeat the folder selection operation until the file for the image to register is displayed.
- 6) Press ▲▼ to select the file, and press the <ENTER> button.
  - The confirmation screen is displayed.
- 7) Press ◀▶ to select [OK], and press the <ENTER> button.
  - Wait until the completion percentage becomes 100%.
- 8) Press the <ENTER> button.
  - The registration is completed.

**Note**

- For the USB memory that can be used with the projector and handling of the memory, refer to “Using the USB memory” (➔ page 57).
- When the projector is initialized by the [PROJECTOR SETUP] menu → [INITIALIZE ALL], the image registered in [USER IMAGE] will be deleted.

**Deleting the registered user image**

- 1) Press ▲▼ to select [USER IMAGE], and press the <ENTER> button.
  - The [USER IMAGE] screen is displayed.
- 2) Press ▲▼ to select [DELETE USER IMAGE], and press the <ENTER> button.
  - The [DELETE USER IMAGE] confirmation screen is displayed.
- 3) Press ◀▶ to select [OK], and press the <ENTER> button.
  - The user image is deleted.

### Note

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- When the following menu is set to [USER IMAGE], no content will be displayed if the user image is deleted.
  - The [DISPLAY OPTION] menu → [BACK COLOR]
  - The [DISPLAY OPTION] menu → [STARTUP LOGO]

### [USER UPDATE]

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Rewriting of the firmware is possible by using a USB memory.

For details of operation, refer to “Updating the firmware” (➔ page 182).

### [DATA CLONING]

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Perform the operation of the data cloning function. Data such as the settings and adjustment values of the projector can be copied to multiple projectors via LAN or using the USB memory.

For details of operation, refer to “Using the data cloning function” (➔ page 176).

### [INITIALIZE ALL]

---

Return various setting values to their factory default settings.

- 1) Press ▲▼ to select [INITIALIZE ALL].
- 2) Press the <ENTER> button.
- 3) When the [INITIALIZE ALL] screen is displayed, press ◀▶ to select [OK] and then press the <ENTER> button.
- 4) When the power off confirmation screen is displayed after a while, press the <ENTER> button.
  - The operations except for powering off are disabled.

### Note

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- When the [SECURITY] menu → [PASSWORD] is set to [ON], the [PASSWORD] screen will be displayed after selecting [INITIALIZE ALL] and pressing the <ENTER> button. Enter the security password set for the projector and continue your desired operation. The security password is the password set in the [SECURITY] menu → [PASSWORD CHANGE]. Initial password of the factory default setting: ▲▶▼◀▶▶◀
- The projector will enter the standby status to reflect the setting values when [INITIALIZE ALL] is executed.
- Even if [INITIALIZE ALL] is performed, the settings of the following items cannot be initialized.
  - [STANDBY MODE]
  - [RS-232C] → [EMULATE]
  - [FILTER COUNTER]
  - [NETWORK]
- To initialize the settings of [NETWORK], perform the [NETWORK] menu → [INITIALIZE].
- When [INITIALIZE ALL] is executed, the [INITIAL SETTING] screen is displayed when the projection starts next time.



## [SECURITY] menu

On the menu screen, select [SECURITY] from the main menu, and select an item from the submenu. Refer to “Navigating through the menu” (⇒ page 65) for the operation of the menu screen.

- When the projector is used for the first time  
Initial password: Press ▲▶▼◀▲▶▼◀ in order, and press the <ENTER> button.

### Attention

- When you select the [SECURITY] menu and press the <ENTER> button, entering a password is required. Enter the preset password and then continue operations of the [SECURITY] menu.
- When the password has been changed previously, enter the changed password, and press the <ENTER> button.

### Note

- The entered password is displayed with "\*" mark on the screen.
- An error message is displayed on the screen when the entered password is incorrect. Re-enter the correct password.

## [PASSWORD]

Sets the security password entry.

- 1) Press ▲▼ to select [PASSWORD].
- 2) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[OFF]	Disables the security password entry.
[ON]	Enables the security password entry.

### Note

- This item is set to [OFF] in the factory default setting or when the [PROJECTOR SETUP] menu → [INITIALIZE ALL] is executed. Set it to [ON] as necessary.
- Even if it is set to [ON], the security password entry setting will not be effective until you turn off the power and reconnect the power plug to the outlet. If the entered password is incorrect when the power is turned on, the operation will be restricted to the power <⏻/▶> button.

## [PASSWORD CHANGE]

Change the security password.

- 1) Press ▲▼ to select [PASSWORD CHANGE].
- 2) Press the <ENTER> button.
  - The [PASSWORD CHANGE] screen is displayed.
- 3) Press ▲▼◀▶ or number buttons (<0>-<9>) to set the password.
  - Up to eight button operations can be set.
- 4) Press the <ENTER> button.
- 5) Re-enter the password for the confirmation.
- 6) Press the <ENTER> button.

### Note

- The entered password is displayed with "\*" mark on the screen.
- Change the password periodically and make it hard to guess.
- If numbers have been used for the security password, the security password will need to be initialized again if the remote control is lost. Consult your dealer for the initialization method.

## [TEXT DISPLAY]

Overlap the security message (text) over the projecting image.

- 1) Press ▲▼ to select [TEXT DISPLAY].
- 2) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[OFF]	The security message will not be displayed.
[ON]	Displays the text set at the [SECURITY] menu → [TEXT CHANGE].

## [TEXT CHANGE]

Register or change the displayed text when [TEXT DISPLAY] is set to [ON].

- 1) Press ▲▼ to select [TEXT CHANGE].
- 2) Press the <ENTER> button.
  - The [TEXT CHANGE] screen is displayed.
- 3) Press ▲▼◀▶ to select the text, and press the <ENTER> button to enter the text.
- 4) Press ▲▼◀▶ to select [OK], and press the <ENTER> button.
  - The text is changed.
  - Up to 22 characters can be entered.

## [CONTROL DEVICE SETUP]

Enable/disable the button operations on the control panel and the remote control.

- 1) Press ▲▼ to select [CONTROL DEVICE SETUP].
- 2) Press the <ENTER> button.
  - The [CONTROL DEVICE SETUP] screen is displayed.
- 3) Press ▲▼ to select [CONTROL PANEL] or [REMOTE CONTROLLER].

[CONTROL PANEL]	Sets the limitation on the control from the control panel.
[REMOTE CONTROLLER]	Sets the limitation on the control from the remote control.

- 4) Press the <ENTER> button.
  - The [CONTROL PANEL] screen or the [REMOTE CONTROLLER] screen is displayed.
- 5) Press ▲▼ to select [CONTROL PANEL] or [REMOTE CONTROLLER].
- 6) Press ◀▶ to switch the item.
  - You can set the operation restriction from the control panel or the remote control.

[ENABLE]	Enables all button operations.
[DISABLE]	Disables all button operations.
[USER]	Operation of all buttons can be enabled/disabled separately. Refer to "Enabling/disabling any button" (➔ page 114) for details.

- 7) Press ▲▼ to select [STORE], and press the <ENTER> button.
  - The confirmation screen is displayed.
- 8) Press ◀▶ to select [OK], and press the <ENTER> button.

## Enabling/disabling any button

- 1) Press ▲▼ to select [CONTROL DEVICE SETUP].
- 2) Press the <ENTER> button.
  - The [CONTROL DEVICE SETUP] screen is displayed.
- 3) Press ▲▼ to select [CONTROL PANEL] or [REMOTE CONTROLLER].
- 4) Press the <ENTER> button.
  - The [CONTROL PANEL] screen or the [REMOTE CONTROLLER] screen is displayed.
- 5) Press ▲▼ to select [CONTROL PANEL] or [REMOTE CONTROLLER].
- 6) Press ◀▶ to switch [USER].

7) Press ▲▼ to select the button item to set.

- When [INPUT SELECT BUTTON] is selected in [REMOTE CONTROLLER], press the <ENTER> button, and then press ▲▼ to select the button to set.

	Buttons that can be set	
	[CONTROL PANEL]	[REMOTE CONTROLLER]
[POWER BUTTON]	Power <⏻/ >button	
[INPUT SELECT BUTTON]	<INPUT SELECT> button	<COMPUTER> button, <HDMI 1> button, <HDMI 2> button, <DIGITAL LINK> button
[MENU BUTTON]	<MENU> button	
[OTHER BUTTON]	▲▼◀▶, <ENTER> button, <AUTO SETUP> button, <SHUTTER> button	Buttons not listed above

8) Press ◀▶ to switch the item.

[ENABLE]	Enables button operations.
[DISABLE]	Disables button operations.

9) Press ▲▼ to select [STORE], and press the <ENTER> button.

- The confirmation screen is displayed.

10) Press ◀▶ to select [OK], and press the <ENTER> button.

**Note**

- When a button operation is performed on the device set to [DISABLE], the [CONTROL DEVICE PASSWORD] screen is displayed. Enter the control device password.
- The [CONTROL DEVICE PASSWORD] screen will disappear when there is no operation for approx. 10 seconds.
- Even when you set button operations on the remote control disabled, operations of the <ID SET> and <ID ALL> buttons on the remote control are kept enabled.

**[CONTROL DEVICE PASSWORD CHANGE]**

The control device password can be changed.

1) Press ▲▼ to select [CONTROL DEVICE PASSWORD CHANGE].

2) Press the <ENTER> button.

- The [CONTROL DEVICE PASSWORD CHANGE] screen is displayed.

3) Press ▲▼◀▶ to select the text, and press the <ENTER> button to enter the text.

4) Press ▲▼◀▶ to select [OK], and press the <ENTER> button.

- To cancel, select [CANCEL].

**Attention**

- The initial password is "AAAA" by the factory default setting, or after initialized with the [PROJECTOR SETUP] menu → [INITIALIZE ALL].
- Change the password periodically that is hard to guess.
- To initialize your password, consult your distributor.

## [NETWORK] menu

On the menu screen, select [NETWORK] from the main menu, and select an item from the submenu. Refer to “Navigating through the menu” (➔ page 65) for the operation of the menu screen.

- To use the wireless LAN function with the projector, it is necessary to attach the optional Wireless Module (Model No.: AJ-WM50 Series).

### [ETHERNET TYPE]

Set the path for transmitting the Ethernet signal.

- 1) Press ▲▼ to select [ETHERNET TYPE].
- 2) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[LAN]	Select this item when using only the <LAN> terminal to transmit the Ethernet signal.
[DIGITAL LINK]	Select this item when using only the <DIGITAL LINK/LAN> terminal to transmit the Ethernet signal.
[LAN & DIGITAL LINK]	Select this item when using the <DIGITAL LINK/LAN> terminal and the <LAN> terminal to transmit the Ethernet signal.

#### Note

- When [ETHERNET TYPE] is set to [LAN], the Ethernet and serial control signals cannot be transmitted via the DIGITAL LINK output supported device (Model No.: ET-YFB100G, ET-YFB200G) connected to the <DIGITAL LINK/LAN> terminal.
- When [ETHERNET TYPE] is set to [LAN & DIGITAL LINK], the <DIGITAL LINK/LAN> terminal and the <LAN> terminal are connected inside the projector. Do not directly connect the <DIGITAL LINK/LAN> terminal and the <LAN> terminal using a LAN cable. Construct the system so that it is not connected to the same network via the peripherals such as the switching hub or the twisted-pair-cable transmitter.

### [DIGITAL LINK]

Make settings and operations related to DIGITAL LINK.

#### [DIGITAL LINK MODE]

Switch the communication method of the <DIGITAL LINK/LAN> terminal of the projector.

- 1) Press ▲▼ to select [DIGITAL LINK].
- 2) Press the <ENTER> button.
  - The [DIGITAL LINK] screen is displayed.
- 3) Press ▲▼ to select [DIGITAL LINK MODE].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[AUTO]	Switches the communication method automatically to DIGITAL LINK, long reach or Ethernet.
[DIGITAL LINK]	Fixes the communication method to DIGITAL LINK.
[LONG REACH]	Fixes the communication method to long reach.
[ETHERNET]	Fixes the communication method to Ethernet.

#### Possible communication modes

✓: Communication possible

—: Communication not possible

Setting		Communication possibility			
		Image transfer (100 m (328'1"))	Image transfer (150 m (492'2"))	Ethernet	RS-232C
[AUTO]	For DIGITAL LINK	✓	—	✓	✓
	For long reach	—	✓	✓	✓
	For Ethernet	—	—	✓ <sup>1</sup>	—
[DIGITAL LINK]		✓	—	✓	✓
[LONG REACH]		—	✓	✓	✓

Setting	Communication possibility			
	Image transfer (100 m (328'1"))	Image transfer (150 m (492'2"))	Ethernet	RS-232C
[ETHERNET]	—	—	✓ <sup>1</sup>	—

\*1 Communication via a twisted-pair-cable transmitter is not available. Connect the projector to the network directly.

### Note

- The maximum transmission distance between the twisted-pair-cable transmitter and the projector is 100 m (328'1") for the signal with resolution of 1 920 x 1 200 dots or less. For the signal with the resolution exceeding 1 920 x 1 200 dots, the maximum transmission distance will be 50 m (164'1").
- The maximum transmission distance when connected with the long-reach communication method is 150 m (492'2"). In this case, the signal that the projector can receive is only up to 1080/60p (1 920 x 1 080 dots, dot clock frequency 148.5 MHz).
- When the communication method of the twist-pair-cable transmitter is set to long reach, the projector will connect with long-reach communication method when [DIGITAL LINK MODE] is set to [AUTO]. To connect with the DIGITAL LINK Switcher (Model No.: ET-YFB200G) with the long-reach communication method, set [DIGITAL LINK MODE] to [LONG REACH].
- Connection will not be made correctly if the twist-pair-cable transmitter does not support the long-reach communication method even if [DIGITAL LINK MODE] is set to [LONG REACH].

### [DIGITAL LINK STATUS]

Display the DIGITAL LINK connection environment.

- 1) Press **▲▼** to select [DIGITAL LINK].
- 2) Press the **<ENTER>** button.
  - The [DIGITAL LINK] screen is displayed.
- 3) Press **▲▼** to select [DIGITAL LINK STATUS].
- 4) Press the **<ENTER>** button.
  - The [DIGITAL LINK STATUS] screen is displayed.

<b>[LINK STATUS]</b>	The content of display is as follows. [DIGITAL LINK]: Communicating in the DIGITAL LINK method. [LONG REACH]: Communicating in the long reach method. [ETHERNET]: Communicating in the Ethernet method. [NO LINK]: Communication is not established.
<b>[HDCP STATUS]</b>	The content of display is as follows. [ON]: When protected with HDCP [OFF]: When not protected with HDCP [NO SIGNAL]: When there is no signal
<b>[SIGNAL QUALITY]</b>	[SIGNAL QUALITY] is a numerical value of the amount of error, and the display color changes to green, yellow, or red depending on that value. Check the signal quality level while receiving a signal from the twisted-pair-cable transmitter. <ul style="list-style-type: none"> <li>• [MAX]/[MIN]: Maximum/minimum value of the amount of error.</li> <li>• Green (–12 dB or lower) → Normal signal quality level.</li> <li>• Yellow (–11 to –8 dB) → Warning level where there is the possibility of noise introduced on the screen.</li> <li>• Red (–7 dB or higher) → Abnormal level where synchronization may be interrupted or a signal may not be received.</li> </ul>

### [DIGITAL LINK MENU]

When the DIGITAL LINK output supported device (Model No.: ET-YFB100G, ET-YFB200G) is connected to the <DIGITAL LINK/LAN> terminal, the main menu of the connected DIGITAL LINK output supported device is displayed. Refer to the Operating Instructions of the DIGITAL LINK output supported device for details.

### Note

- [DIGITAL LINK MENU] cannot be set when the [NETWORK] menu → [DIGITAL LINK] → [EXTRON XTP] is set to [ON].

### [EXTRON XTP]

Make connection setting for the "XTP transmitter" of Extron Electronics.

- 1) Press **▲▼** to select [DIGITAL LINK].
- 2) Press the **<ENTER>** button.

- The [DIGITAL LINK] screen is displayed.

3) Press ▲▼ to select [EXTRON XTP].

4) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[OFF]	Select this item when connecting the DIGITAL LINK output supported device (Model No.: ET-YFB100G, ET-YFB200G) to the <DIGITAL LINK/LAN> terminal.
[ON]	Select this item when connecting the "XTP transmitter" of Extron Electronics to the <DIGITAL LINK/LAN> terminal.

### Note

- For details of the "XTP transmitter", visit the website of Extron Electronics.  
<https://www.extron.com/>

## [WIRED LAN]

Perform the connection settings to use wired LAN.

1) Press ▲▼ to select [WIRED LAN].

2) Press the <ENTER> button.

- The [WIRED LAN] screen is displayed.

3) Press ▲▼ to select [IP VERSION].

4) Press the <ENTER> button.

- The [IP VERSION] screen is displayed.

5) Press ▲▼ to select an item, and press the <ENTER> button.

[IPv4]	Uses only the "IPv4" protocol.
[IPv6]	Uses only the "IPv6" protocol.
[IPv4 & IPv6]	Both the "IPv4" and the "IPv6" protocols can be used.

6) Press the <MENU> button.

- The [WIRED LAN] screen is displayed.
- Proceed to Step 10) when [IPv6] is selected.

7) Press ▲▼ to select [IPv4 SETTINGS], and press the <ENTER> button.

- The [IPv4 SETTINGS] screen is displayed.

8) Press ▲▼ to select an item, and change the setting according to the operation instructions of the menu.

[DHCP]	[ON]	Select this item when using the DHCP server that exists in the network to which the projector is to be connected. IPv4 address is automatically acquired.
	[OFF]	Select this item when setting the IPv4 address manually. Set [IP ADDRESS], [SUBNET MASK], [DEFAULT GATEWAY], [DNS1], and [DNS2].
[IP ADDRESS]	Enter the IP address.	
[SUBNET MASK]	Enter the subnet mask.	
[DEFAULT GATEWAY]	Enter the default gateway address.	
[DNS1]	Enter the preferred DNS server address.	
[DNS2]	Enter the alternate DNS server address.	

9) Press ▲▼ to select [OK], and press the <ENTER> button.

- Setting for the IPv4 address is saved and the [WIRED LAN] screen is displayed.

10) Press ▲▼ to select [IPv6 SETTINGS], and press the <ENTER> button.

- The [IPv6 SETTINGS] screen is displayed.

- 11) Press ▲▼ to select an item, and change the setting according to the operation instructions of the menu.

[AUTO CONFIGURATION]	[ON]	Select this item when assigning the IPv6 address automatically. Set [TEMPORARY ADDRESS].
	[OFF]	Select this item when setting the IPv6 address manually. Set [IP ADDRESS], [PREFIX LENGTH], [DEFAULT GATEWAY], [DNS1], and [DNS2].
[TEMPORARY ADDRESS]	[ON]	Select this item when the temporary IPv6 address is used.
	[OFF]	Select this item when the temporary IPv6 address is not used.
[IP ADDRESS]	Enter the IP address.	
[PREFIX LENGTH]	[1] - [128]	Select the prefix length. (factory default setting: [64])
[DEFAULT GATEWAY]	Enter the default gateway address.	
[DNS1]	Enter the preferred DNS server address.	
[DNS2]	Enter the alternate DNS server address.	

- 12) After the setting, select [OK] and press the <ENTER> button.

#### Note

- When using a DHCP server, confirm that the DHCP server is running.
- Consult your network administrator regarding the IP address, subnet mask, default gateway, and prefix length.
- [IPv6] in [IP VERSION] cannot be set in following cases.
  - When the [NETWORK] menu → [NETWORK CONTROL] → [Crestron Connected™] is set to [ON]
- The network setting is common for the <LAN> terminal and the <DIGITAL LINK/LAN> terminal.
- Wired LAN and wireless LAN cannot be used in the same segment.

### [PROJECTOR NAME]

You can change the projector name. Enter the host name if it is required to use a DHCP server.

- 1) Press ▲▼ to select [PROJECTOR NAME].
- 2) Press the <ENTER> button.
  - The [PROJECTOR NAME CHANGE] screen is displayed.
- 3) Select characters with the ▲▼◀▶ buttons and press the <ENTER> button to enter the projector name.
  - You can enter up to eight characters.
- 4) After entering the projector name, press ▲▼ to select [OK] and press the <ENTER> button.
  - To cancel, select [CANCEL].

#### Note

- The factory default setting of the projector name is "Namexxxx". xxxx is a fixed value assigned to each projector.

### [NETWORK STATUS]

Displays the network information of the projector.

- 1) Press ▲▼ to select [NETWORK STATUS].
- 2) Press the <ENTER> button.
  - The [NETWORK STATUS] screen is displayed.
- 3) Press ▲▼ to switch the the display screen.
  - The page will change each time you press the button.  
[WIRED LAN (IPv4)] (page 1/5), [WIRED LAN (IPv6)] (page 2/5 and 3/5), [WIRELESS LAN] (page 4/5), [Presenter Light] (5/5)

[WIRED LAN (IPv4)]	[DHCP]	Displays the [DHCP] setting.
	[IP ADDRESS]	Displays the [IP ADDRESS].
	[SUBNET MASK]	Displays the [SUBNET MASK].
	[DEFAULT GATEWAY]	Displays the [DEFAULT GATEWAY].
	[DNS1]	Displays the address of the preferred DNS server.
	[DNS2]	Displays the address of the alternate DNS server.
[WIRED LAN (IPv6)]	[MAC ADDRESS]	Displays the [MAC ADDRESS] of wired LAN.
	[AUTO CONFIGURATION]	Displays the [AUTO CONFIGURATION] setting.
	[LINK LOCAL ADDRESS]	Displays [LINK LOCAL ADDRESS] and [PREFIX LENGTH].
	[STATEFUL ADDRESS]	Displays [STATEFUL ADDRESS] and [PREFIX LENGTH].
	[STATELESS ADDRESS]	Displays [STATELESS ADDRESS] and [PREFIX LENGTH].
	[TEMPORARY ADDRESS]	Displays [TEMPORARY ADDRESS] and [PREFIX LENGTH].
	[IP ADDRESS]	Displays [IP ADDRESS] and [PREFIX LENGTH].
	[DEFAULT GATEWAY]	Displays the [DEFAULT GATEWAY].
	[DNS1]	Displays the address of the preferred DNS server.
[DNS2]	Displays the address of the alternate DNS server.	
[WIRED LAN (IPv4)]	[MAC ADDRESS]	Displays the [MAC ADDRESS] of wired LAN.
	[SSID]	Displays the character string of SSID.
[WIRED LAN (IPv6)]	[IP ADDRESS]	Displays the IP address.
[Presenter Light]	[LOGIN PASSWORD]	Displays the login password of Presenter Light.

### Note

- There are items that are displayed or not displayed in the [WIRED LAN(IPv6)] page, depending on the setting in the [NETWORK] menu → [WIRED LAN] → [IPv6 SETTINGS] → [AUTO CONFIGURATION].
- The [STATELESS ADDRESS] screen is displayed by pressing the <ENTER> button while [WIRED LAN(IPv6)] (page 2/5) is displayed, and details of the stateless address can be confirmed. Furthermore, the screen will be switched to the [TEMPORARY ADDRESS] screen by pressing ▲▼, and details of the temporary address can be confirmed.
- The [WIRED LAN(IPv4)] page in the [NETWORK STATUS] screen is not displayed when the [NETWORK] menu → [WIRED LAN] → [IP VERSION] is set to [IPv6].
- The [WIRED LAN(IPv6)] page in the [NETWORK STATUS] screen is not displayed when the [NETWORK] menu → [WIRED LAN] → [IP VERSION] is set to [IPv4].
- There is no network setting for the wireless LAN in the projector menu (menu screen). When you attach the optional wireless module (Model No.: AJ-WM50 Series), you can access the projector via the computer for wireless LAN setting. For details, see “Using the web control function” → [Network configs] → “For wireless LAN connection” (➡ page 164).
- The SSID, IP address (wireless) and QR code are not displayed in [WIRELESS LAN] (page 4/5) in following cases.
  - When the optional wireless module (Model No.: AJ-WM50 Series) is not attached to the <USB (VIEWER/WIRELESS/DC OUT)> terminal
- A QR code, which makes connection setting with a smartphone easier, is displayed in [WIRELESS LAN] (page 4/5). To directly connect a smartphone to the projector using the QR code, refer to “Using the QR code” (➡ page 135).

## [ADMINISTRATOR ACCOUNT]

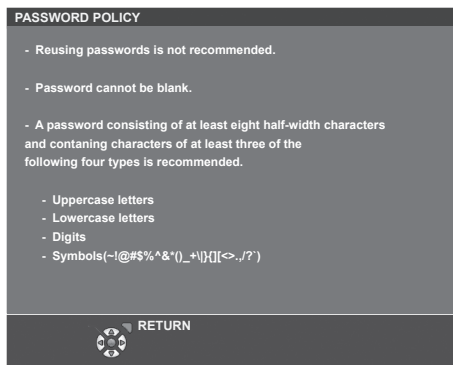
Set the user name and password of the administrator account.

### [PASSWORD POLICY]

Display the policies about the password for the administrator account.

- 1) Press ▲▼ to select [ADMINISTRATOR ACCOUNT].
- 2) Press the <ENTER> button.
  - The [ADMINISTRATOR ACCOUNT] screen is displayed.
- 3) Press ▲▼ to select [PASSWORD POLICY], and press the <ENTER> button.
  - The [PASSWORD POLICY] screen is displayed.





## Setting the administrator account for the first time

Set the user name and password of the administrator account.

- 1) Press ▲▼ to select [ADMINISTRATOR ACCOUNT].
- 2) Press the <ENTER> button.
  - The [ADMINISTRATOR ACCOUNT] screen is displayed.
- 3) Press ▲▼ to select [USER NAME], and press the <ENTER> button.
  - The [USER NAME] screen is displayed.
  - The factory default setting of user name is “dispadmin”.
- 4) Press ▲▼◀▶ to select a character, and press the <ENTER> button.
  - Up to 16 characters can be entered.
- 5) After entering the user name, press ▲▼◀▶ to select [OK], and press the <ENTER> button.
  - The [ADMINISTRATOR ACCOUNT] screen is displayed.
- 6) Press ▲▼ to select [PASSWORD], and press the <ENTER> button.
  - The [PASSWORD] screen is displayed.
- 7) Press ▲▼◀▶ to select a character, and press the <ENTER> button.
  - Up to 16 characters can be entered.
  - The password cannot be blank.
- 8) After entering the password, press ▲▼◀▶ to select [OK], and press the <ENTER> button.
  - The [ADMINISTRATOR ACCOUNT] screen is displayed.
- 9) Press ▲▼ to select [PASSWORD CONFIRM], and press the <ENTER> button.
  - The [PASSWORD CONFIRM] screen is displayed.
- 10) Enter the password entered in Step 7).
- 11) After entering the password, press ▲▼◀▶ to select [OK], and press the <ENTER> button.
  - The [ADMINISTRATOR ACCOUNT] screen is displayed.
- 12) Press ▲▼ to select [STORE], and press the <ENTER> button.
  - The confirmation screen is displayed.
- 13) Press ◀▶ to select [OK], and press the <ENTER> button.

### Note

- For restrictions on character strings that can be set for password, refer to [PASSWORD POLICY] (➡ page 120).
- When a password is not set for the administrator account (when blank), the network function of the projector cannot be used. When using the web control function or the communication control via LAN (including operation by application software), set a password.
- The user name and password of the standard user account without administrator rights can be set in “[Account set up] (when accessed by administrator account)” (➡ page 143) of the web control screen.

## Changing settings of the administrator account

Change the user name and password of the administrator account.

- 1) Press ▲▼ to select [ADMINISTRATOR ACCOUNT].
- 2) Press the <ENTER> button.
  - The [ADMINISTRATOR ACCOUNT] screen is displayed.
- 3) Press ▲▼ to select [USER NAME] under [CURRENT], and press the <ENTER> button.
  - The [USER NAME] screen is displayed.
- 4) Press ▲▼◀▶ to select a character, and press the <ENTER> button.
  - Enter the current user name.
- 5) After entering the user name, press ▲▼◀▶ to select [OK], and press the <ENTER> button.
  - The [ADMINISTRATOR ACCOUNT] screen is displayed.
- 6) Press ▲▼ to select [PASSWORD] under [CURRENT], and press the <ENTER> button.
  - The [PASSWORD] screen is displayed.
- 7) Press ▲▼◀▶ to select a character, and press the <ENTER> button.
  - Enter the current password.
- 8) After entering the password, press ▲▼◀▶ to select [OK], and press the <ENTER> button.
  - The [ADMINISTRATOR ACCOUNT] screen is displayed.
- 9) Press ▲▼ to select [USER NAME] under [NEW], and press the <ENTER> button.
  - The [USER NAME] screen is displayed.
- 10) Press ▲▼◀▶ to select a character, and press the <ENTER> button.
  - Enter a new user name.
  - Enter the current user name if you do not want to change it.
  - Up to 16 characters can be entered.
- 11) After entering the user name, press ▲▼◀▶ to select [OK], and press the <ENTER> button.
  - The [ADMINISTRATOR ACCOUNT] screen is displayed.
- 12) Press ▲▼ to select [PASSWORD] under [NEW], and press the <ENTER> button.
  - The [PASSWORD] screen is displayed.
- 13) Press ▲▼◀▶ to select a character, and press the <ENTER> button.
  - Enter a new password.
  - Up to 16 characters can be entered.
  - Enter the current password if you do not want to change it.
- 14) After entering the password, press ▲▼◀▶ to select [OK], and press the <ENTER> button.
  - The [ADMINISTRATOR ACCOUNT] screen is displayed.
- 15) Press ▲▼ to select [PASSWORD CONFIRM] under [NEW], and press the <ENTER> button.
  - The [PASSWORD CONFIRM] screen is displayed.
- 16) Enter the password entered in Step 13).
- 17) After entering the password, press ▲▼◀▶ to select [OK], and press the <ENTER> button.
  - The [ADMINISTRATOR ACCOUNT] screen is displayed.
- 18) Press ▲▼ to select [STORE], and press the <ENTER> button.
  - The confirmation screen is displayed.
- 19) Press ◀▶ to select [OK], and press the <ENTER> button.

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**Note**

- For restrictions on character strings that can be set for password, refer to [PASSWORD POLICY] (➔ page 120).
- The user name and password of the administrator account can also be changed in “[Account set up] (when accessed by administrator account)” (➔ page 143) of the web control screen.
- The user name and password of the standard user account without administrator rights can be set in “[Account set up] (when accessed by administrator account)” (➔ page 143) of the web control screen.

## [NETWORK SECURITY]

Make settings to protect the projector from external attacks via LAN and unauthorized use.

Setting the password of the administrator account (➔ page 120) is required for setting the [NETWORK SECURITY] menu.

## [COMMAND PROTECT]

Make settings for the connection authentication when using the command control function.

- 1) Press ▲▼ to select [NETWORK SECURITY].
- 2) Press the <ENTER> button.
  - The [NETWORK SECURITY] screen is displayed.
- 3) Press ◀▶ to switch the [COMMAND PROTECT] setting.

[ENABLE]	Connect to the projector in protected mode. The user name and password of the administrator account are required for the connection authentication.
[DISABLE]	Connect to the projector in non-protected mode. Connection authentication is not performed.

- The confirmation screen is displayed once the setting is switched.
- 4) Press ◀▶ to select [OK], and press the <ENTER> button.
    - The [COMMAND PROTECT] screen is displayed.
  - 5) Press ▲▼ to select [PASSWORD], and press the <ENTER> button.
    - The [PASSWORD] screen is displayed.
  - 6) Press ▲▼◀▶ to select a character, and press the <ENTER> button.
    - Enter the password of the administrator account.
  - 7) After entering the password, press ▲▼◀▶ to select [OK], and press the <ENTER> button.
    - The [COMMAND PROTECT] screen is displayed.
  - 8) Press ▲▼◀▶ to select [OK], and press the <ENTER> button.

### Note

- When [COMMAND PROTECT] is set to [DISABLE], connection authentication is not performed, making it vulnerable to threats on the network. Be aware of the risks before making settings.
- For details on how to use the command control function, refer to “Control commands via LAN”. (➔ page 201)

## [NETWORK CONTROL]

Set the network control of this projector.

Setting the password of the administrator account (➔ page 120) is required for using the network function of the projector.

- 1) Press ▲▼ to select [NETWORK CONTROL].
- 2) Press the <ENTER> button.
  - The [NETWORK CONTROL] screen is displayed.
- 3) Press ▲▼ to select an item and press ◀▶ to change the setting.

[WEB CONTROL]	Set to [ON] to control with the web browser.
[COMMAND CONTROL]	Set to [ON] to control with the <SERIAL IN> terminal control command format (➔ page 204). Refer to “Control commands via LAN” (➔ page 201).
[COMMAND PORT]	Set the port number used for command control.
[Crestron Connected™]	Set to [ON] to control with Crestron Connected of Crestron Electronics, Inc.
[AMX D. D.]	Set to [ON] to control with the controller of AMX Corporation. Setting this function to [ON] enables detection through “AMX Device Discovery”. For details, visit the website of AMX Corporation. <a href="https://www.amx.com/">https://www.amx.com/</a>

4) Press ▲▼ to select [OK] and press the <ENTER> button.

### Note

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- If the password of the administrator account has not been set, that is, if it is left blank, the network function of this projector cannot be used. Set a password before using the web control function or the communication control (including operation with application software) via LAN.
- [Crestron Connected™] cannot be set when the [NETWORK] menu → [WIRED LAN] → [IP VERSION] is set to [IPv6].

## [PJLink]

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Set the PJLink function to control and monitor the projector using the PJLink protocol.

Setting the password of the administrator account (➔ page 120) is required for using the PJLink function of the projector.

### Note

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- If the password of the administrator account has not been set, that is, if it is left blank, the network function of this projector cannot be used. Set a password before using the web control function or the communication control (including operation with application software) via LAN.

## [PJLink PASSWORD]

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Set the password for security authentication which is required when connecting to the projector.

- 1) Press ▲▼ to select [PJLink].
- 2) Press the <ENTER> button.
  - The [PJLink] screen is displayed.
- 3) Press ▲▼ to select [PJLink PASSWORD], and press the <ENTER> button.
  - The [PJLink PASSWORD] screen is displayed.
- 4) Press ▲▼ to select [PASSWORD] under [CURRENT], and press the <ENTER> button.
  - The [PASSWORD] screen is displayed.
- 5) Press ▲▼◀▶ to select a character, and press the <ENTER> button.
  - Enter the current password.
  - The factory default setting of password is blank.
- 6) After entering the password, press ▲▼◀▶ to select [OK], and press the <ENTER> button.
  - The [PJLink PASSWORD] screen is displayed.
- 7) Press ▲▼ to select [PASSWORD] under [NEW], and press the <ENTER> button.
  - The [PASSWORD] screen is displayed.
- 8) Press ▲▼◀▶ to select a character, and press the <ENTER> button.
  - Enter a new password.
  - Up to 32 alphanumeric characters can be entered.
- 9) After entering the password, press ▲▼◀▶ to select [OK], and press the <ENTER> button.
  - The [PJLink PASSWORD] screen is displayed.
- 10) Press ▲▼ to select [PASSWORD CONFIRM], and press the <ENTER> button.
  - The [PASSWORD CONFIRM] screen is displayed.
- 11) Enter the password entered in Step 8).
- 12) After entering the password, press ▲▼◀▶ to select [OK], and press the <ENTER> button.
  - The [PJLink PASSWORD] screen is displayed.
- 13) Press ▲▼ to select [STORE], and press the <ENTER> button.
  - The confirmation screen is displayed.
- 14) Press ◀▶ to select [OK], and press the <ENTER> button.

### Note

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- The PJLink password can also be changed in [PJLink setting] (➔ page 171) of the web control screen.

**[PJLink CONTROL]**

Set to enable or disable the PJLink protocol control function.

- 1) Press ▲▼ to select [PJLink].
- 2) Press the <ENTER> button.
  - The [PJLink] screen is displayed.
- 3) Press ▲▼ to select [PJLink CONTROL].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[ON]	Enables PJLink protocol control function.
[OFF]	Disables PJLink protocol control function.

**[PJLink NOTIFICATION]**

Set to enable or disable the PJLink notification function.

- 1) Press ▲▼ to select [PJLink].
- 2) Press the <ENTER> button.
  - The [PJLink] screen is displayed.
- 3) Press ▲▼ to select [PJLink NOTIFICATION].
- 4) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[OFF]	Disables the PJLink notification function.
[ON]	Enables the PJLink notification function.

- If [ON] is selected, proceed to Step 5).

- 5) Press ▲▼ to select [NOTIFIED IP ADDRESS 1], [NOTIFIED IP ADDRESS 2], [NOTIFIED IP ADDRESS 1(IPv6)], or [NOTIFIED IP ADDRESS 2(IPv6)], and press the <ENTER> button.
  - The [NOTIFIED IP ADDRESS 1] screen, the [NOTIFIED IP ADDRESS 2] screen, the [NOTIFIED IP ADDRESS 1(IPv6)] screen or the [NOTIFIED IP ADDRESS 2(IPv6)] screen is displayed.
  - Enter the IP address of the computer to notify the status of the projector.
- 6) After entering the IP address, press ▲▼◀▶ to select [OK], and press the <ENTER> button.

**[MEMORY VIEWER]**

Set the operations of the Memory Viewer function.

**Note**

- The [MEMORY VIEWER] menu can be operated and set only when MEMORY VIEWER input is selected.
- For details on how to use the memory viewer function, please refer to “Projecting with MEMORY VIEWER input” (➔ page 129).

**[SET SLIDE]**

Start the slideshow. For details on the slideshow, see “Executing the slide” (➔ page 130).

**[SLIDE TRANSITION EFFECT]**

Sets the transition effects when switching the slides playback.

- 1) Press ▲▼ to select [SLIDE TRANSITION EFFECT].
- 2) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[SLIDE RIGHT]	The slides switch from left to right.
[SLIDE DOWN]	The slides switch from top to bottom.

- 3) Press ▲▼ to select [APPLY].
- 4) Press the <ENTER> button.
  - The setting will be effective.

### [SORT ORDER]

Sets the order of images to be played in the slideshow.

- 1) Press ▲▼ to select [SORT ORDER].
- 2) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[NAME ORDER]	Displays the files or folders in ascending order of their names.
[TIME ORDER]	Displays the files or folders in the order of their modification date and time.
[SIZE ORDER]	Displays the files or folders in ascending order of their data size.
[EXTEND ORDER]	Displays the files in ascending order of their extensions.

- 3) Press ▲▼ to select [APPLY].
- 4) Press the <ENTER> button.
  - The setting will be effective.

### [ROTATE]

Sets the rotational direction of the images.

- 1) Press ▲▼ to select [ROTATE].
- 2) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[NO ROTATE]	Rotation is disabled.
[90 DEGREE]	Rotate 90 degrees clockwise.
[180 DEGREE]	Rotate 180 degrees clockwise.
[270 DEGREE]	Rotate 270 degrees clockwise (90 degrees counterclockwise).

- 3) Press ▲▼ to select [APPLY].
- 4) Press the <ENTER> button.
  - The setting will be effective.

### [BEST FIT]

Sets whether to fit the image to the projection screen.

- 1) Press ▲▼ to select [BEST FIT].
- 2) Press ◀▶ to switch the item.
  - The items will switch each time you press the button.

[OFF]	Displays the image in its original pixels.
[ON]	Displays the image according to the screen set in the [DISPLAY OPTION] menu → [SCREEN SETTING].

- 3) Press ▲▼ to select [APPLY].
- 4) Press the <ENTER> button.
  - The setting will be effective.

### [REPEAT]

Sets whether to loop the slideshow.

- 1) Press ▲▼ to select [REPEAT].

2) Press ◀▶ to switch the item.

- The items will switch each time you press the button.

[OFF]	After playing the last file, exit the slideshow and return to the thumbnail display.
[ON]	After playing the last file, return to the first file and repeat playback.

3) Press ▲▼ to select [APPLY].

4) Press the <ENTER> button.

- The setting will be effective.

## [INITIALIZE]

This function is used to return various setting values of [NETWORK] to the factory default value.

1) Press ▲▼ to select [INITIALIZE].

2) Press the <ENTER> button.

3) When the [INITIALIZE] screen is displayed, press ◀▶ to select [OK] and then press the <ENTER> button.

### Note

- If the [SECURITY] menu → [PASSWORD] is set to [ON], the [PASSWORD] screen will be displayed when [INITIALIZE] is selected and the <ENTER> button is pressed. Continue your operation after entering the security password set for the projector.  
The security password is the password set in the [SECURITY] menu → [PASSWORD CHANGE].  
Initial password of the factory default setting: ▲▶▼◀▲▶▼◀
- When [INITIALIZE] is executed, the [ADMINISTRATOR ACCOUNT] screen is displayed when the projection starts next time.

# Chapter 5    **Operation of Function**

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This chapter describes the operation methods of some functions.



# Projecting with MEMORY VIEWER input

The Memory Viewer function makes it possible to display the still images stored in the USB memory as projected images.

For the USB memory that can be used with the projector and handling of the memory, refer to “Using the USB memory” (➔ page 57).

## What you can project with the Memory Viewer function

Memory Viewer function supports the following image files.

	Extension	Format	Description
Picture	jpg/jpeg	Baseline coding 24 bits	Resolution : 8 x 8 ~ 10 000 x 10 000
		Progressive RGB 24 bits	Resolution : 8 x 8 ~ 1 920 x 1 200
	bmp	Palette-based 1, 4, 8 bits, RGB 24, 32 bits	The maximum resolution : 1 920 x 1 200
	png	True color 24 bits/48 bits	The maximum resolution : 1 920 x 1 200
	gif	Palette-based 1, 4, 8 bits,	Palette - 24 bits color spaces; The maximum resolution : 1 920 x 1 200
	tif / tiff	—	The maximum resolution : 1 920 x 1 200

### Note

- File size that can be played back is 2 GB at the maximum.
- The total number of folders/files that can be recognized on the projector is 1 000 at the maximum.
- Files protected by DRM (Digital Rights Management) cannot be played back.
- It maybe impossible to play even if the file is recorded in the supported format.

## Attaching the USB memory

- 1) **Attach the USB memory firmly into the <USB (VIEWER/WIRELESS/DC OUT)> terminal.**

### Attention

- Pay attention to the terminal direction to avoid damaging the terminal when attaching the USB memory.
- Attach the USB memory directly into the <USB (VIEWER/WIRELESS/DC OUT)> terminal of the projector. Do not use a USB extension cable or USB hub.

## Removing the USB memory

- 1) **Make sure that the indicator on the USB memory is not flashing, and remove it.**

### Attention

- Please note following points when removing the USB memory.
  - When the indicator of the USB memory attached to the projector is blinking, it indicates that the projector is reading the USB memory. Do not remove the USB memory from the projector while the indicator is blinking.
  - When using a USB memory that does not have a monitor function such as an indicator, you cannot check the access status to the USB memory. In this case, remove it from the projector after closing the Memory Viewer function or turning off the projector.
  - Do not attach and detach the USB memory in a short time. Wait at least 5 seconds after attaching and then remove the USB memory. If you want to reattach it, wait at least 5 seconds after removal. It takes about 5 seconds for the projector to recognize the USB memory.

## Displaying the Memory Viewer screen

- 1) **Press the <NETWORK/USB> button on the remote control to switch the input source to MEMORY VIEWER.**
  - You can also press the <INPUT SELECT> button on the control panel and select the input source in the Input menu.
- 2) **Attach the USB memory directly into the <USB (VIEWER/WIRELESS/DC OUT)> terminal.**
  - The standby screen “please press ENTER” is displayed while the USB memory icon is displayed at the lower left of the screen.
- 3) **Press the <ENTER> button on the remote control.**
  - The root directory of the USB memory will be displayed in thumbnail on the screen.

## Playing the pictures

- 1) **Press ▲▼◀▶ on the remote control to select a file you want to play on the memory viewer screen.**

- 2) **Press the <ENTER> button on the remote control.**
  - The picture will display on the full screen.
- 3) **Press ► to switch to the next picture, press ◀ to return to the previous picture.**
- 4) **Press the <ENTER> button on the remote control.**
  - Return to the thumbnail screen.

### Note

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- When the recorded number of pixels is smaller than 1 920 x 1 200, it will be displayed enlarged maintaining the aspect ratio.
- When the recorded number of pixels is larger than 1 920 x 1 200, it will be displayed reduced maintaining the aspect ratio.
- When the recorded number of pixels is 1 920 x 1 200, it will neither be enlarged nor reduced, so degradation of image quality can be reduced.

## Executing the slide

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All pictures in the same folder will play automatically according to the settings of [SORT ORDER], [SLIDE TRANSITION EFFECT] and so on of the [MEMORY VIEWER] menu.

- 1) **Press ▲▼◀▶ on the remote control to select a file.**
- 2) **Press the <MENU> button to select the [MEMORY VIEWER] → [SET SLIDE].**
- 3) **Press the <ENTER> button on the remote control.**
  - The slideshow will start.
  - Press the <ENTER> button to return to the thumbnail screen.

### Note


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- If you press the <MENU> button during playback in the slideshow, the playback will stop and the a menu displays. The playing will continue when the menu disappears.

## Termination of the Memory Viewer

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- 1) **Press ▲▼◀▶ to select the thumbnail  which is displayed on the upper left corner.**
- 2) **Press the <ENTER> button on the remote control.**
  - Return to the standby screen “please press ENTER”.  
Depending on file path length, you may need to repeat Step 1) and Step 2) before returning to the standby screen.

### Note

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- You can also exit the Memory Viewer by switching to the input other than MEMORY VIEWER.

## Projecting with NETWORK input

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Using the Panasonic application, the image sent from a device connected via LAN can be displayed as a projected image.

The wireless module (Model No.: AJ-WM50 Series) of the optional accessories is required if you want to use the network function through the wireless LAN.

### Application that can be used

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The image transfer application software used for NETWORK input are as follows.

- Presenter Light (for Windows)
- Wireless Projector for iOS, Wireless Projector for Android

#### Note

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- For details of the image transfer application software of Presenter Light and Wireless Projector, refer to the website: <https://docs.connect.panasonic.com/projector>.

### Connecting the device

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- 1) **Press the <NETWORK/USB> button to switch the input to NETWORK.**
  - Every time the <NETWORK/USB> button is pressed, the input will switch between MEMORY VIEWER and NETWORK.
  - The standby screen is displayed once the input is switched to NETWORK.
- 2) **Connect the device with the image transfer application software started to the projector.**
  - The image sent to the projector by the operation on the device is displayed as the projected image.

#### Note

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- For details of the connection method to the projector using the application software, refer to the Operation Instruction of each application software.
- For details of the NETWORK input idle screen, refer to "Connecting with wireless LAN" (➔ page 134).

### Ending the connection with the device

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- 1) **Perform disconnection process in the device side.**
  - Once the connection is disconnected, the standby screen is displayed.

#### Note

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- It may take some time for the standby screen to display when the connection is ended forcefully by turning off the device, etc., without performing an appropriate disconnection process.

# Network connection

This projector has network function that allows the following by connecting a computer.

- **Web control**

By accessing to the projector from a computer, you can perform setting, adjustment, status display, etc. of the projector. Refer to “Using the web control function” (➔ page 139) for details.

- **PJLink**

By using PJLink protocol, you can send inquiries about the operations or status of the projector from a computer. Refer to “Using the PJLink function” (➔ page 199) for details.

- **Command control**

Operation or status query of the projector can be performed from a computer with the control commands. Refer to “Control commands via LAN” (➔ page 201) for details.

- **Application software**

Application software performing communication via LAN can be used.

For information on application software supported by the projector, refer to “Application software supported by the projector” (➔ page 23).

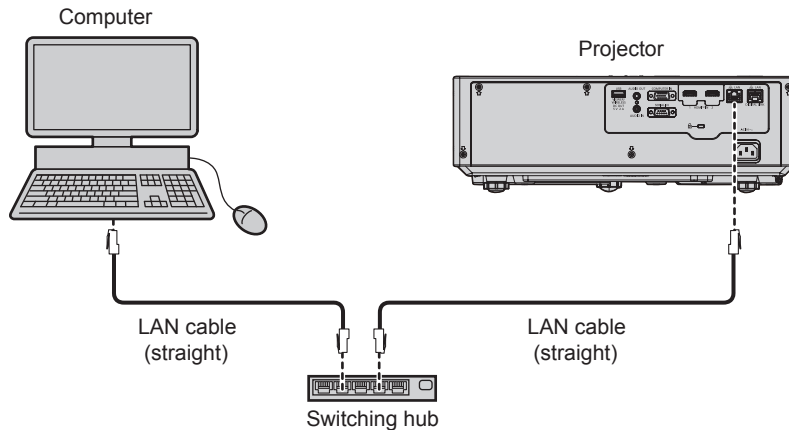
## Note

- Setting the password of the administrator account (➔ page 120) is required for using the network function of the projector. If the password of the administrator account has not been set, that is, if it is left blank, the network function of this projector cannot be used. Set a password before using the web control function or the communication control (including operation with application software) via LAN.

## Connecting via wired LAN

This projector can receive the Ethernet signal from the twisted-pair-cable transmitter via a LAN cable.

### Example of a general network connection



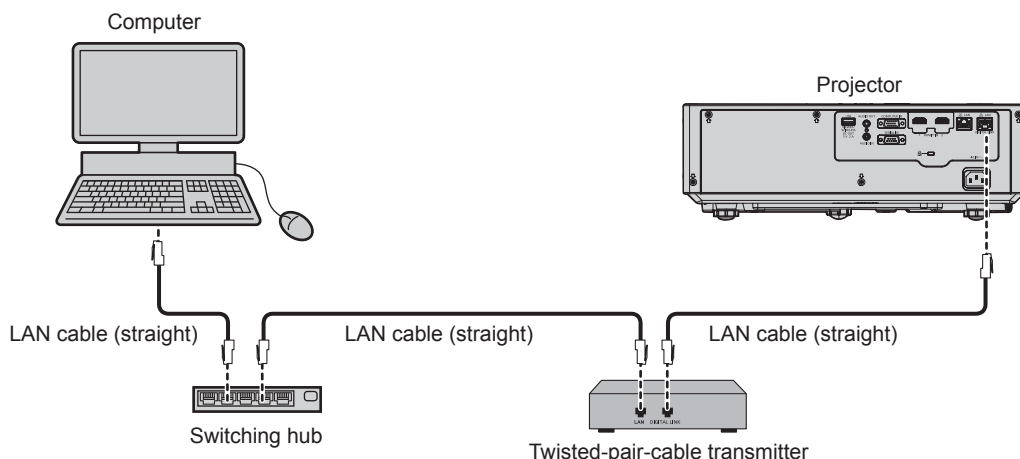
## Attention

- When a LAN cable is directly connected to the projector, cabling must be made indoors.

## Note

- A LAN cable is required to use the wired LAN function.
- Use a straight or crossover LAN cable that is compatible with CAT5 or higher. Either the straight or the crossover cable, or both cables can be used depending on the system configuration, check with your network administrator. The projector identifies the type of the cable (straight or crossover) automatically.
- Use a LAN cable of 100 m (328'1") or shorter.

**Example of network connections via a twisted-pair-cable transmitter**



**Attention**

- When a LAN cable is directly connected to the projector, cabling must be made indoors.

**Note**

- For the LAN cable between a twisted-pair-cable transmitter and the projector, use a cable that meets the following criteria:
  - Compatible with CAT5e or higher
  - Shielded type (including connectors)
  - Straight-through
  - Single wire
  - Diameter of the cable core is same or larger than AWG24 (AWG24, AWG23, etc.)
- The maximum transmission distance between the twisted-pair-cable transmitter and the projector is 100 m (328'1") for the signal with resolution of 1 920 x 1 200 dots or less. For the signal with the resolution exceeding 1 920 x 1 200 dots, the maximum transmission distance is 50 m (164'1"). It is possible to transmit up to 150 m (492'2") if the twisted-pair-cable transmitter supports the long-reach communication method. However, the signal that the projector can receive is only up to 1080/60p (1 920 x 1 080 dots, dot clock frequency 148.5 MHz) for the long-reach communication method. If these distances are exceeded, image may be disrupted or a malfunction may occur in LAN communication.
- When laying cables between a twisted-pair-cable transmitter and the projector, check that cable characteristics are compatible with CAT5e or higher using tools such as a cable tester or cable analyzer. When using a relay connector midway, include it in the measurement.
- Do not use a switching hub between a twisted-pair-cable transmitter and the projector.
- To transmit the Ethernet and serial control signals using the <DIGITAL LINK/LAN> terminal, set the [NETWORK] menu → [ETHERNET TYPE] to [DIGITAL LINK] or [LAN & DIGITAL LINK].
- To transmit the Ethernet signal using the <LAN> terminal, set the [NETWORK] menu → [ETHERNET TYPE] to [LAN] or [LAN & DIGITAL LINK].
- The <DIGITAL LINK/LAN> terminal and the <LAN> terminal are connected inside of the projector when the [NETWORK] menu → [ETHERNET TYPE] is set to [LAN & DIGITAL LINK]. Do not directly connect the <DIGITAL LINK/LAN> terminal and the <LAN> terminal using a LAN cable. Construct the system so that it is not connected to the same network via the peripherals such as the switching hub or the twisted-pair-cable transmitter.
- Do not pull cables forcefully. Also, do not bend or fold cables unnecessarily.
- To reduce the effects of noise as much as possible, stretch out the cables between the twisted-pair-cable transmitter and the projector without any loops.
- Lay the cables between a twisted-pair-cable transmitter and the projector away from other cables, particularly power cables.
- When installing multiple cables, run them side by side along the shortest distance possible without bundling them together.
- After laying the cable, confirm that the value of [SIGNAL QUALITY] in the [NETWORK] menu → [DIGITAL LINK] → [DIGITAL LINK STATUS] is displayed in green, which indicates a normal quality.
- For twisted-pair-cable transmitter of other manufacturers of which the operation has been verified with the DIGITAL LINK compatible projector, refer to website (<https://docs.connect.panasonic.com/projector>). Note that the verification for devices of other manufacturers has been made for the items set by Panasonic Projector & Display Corporation, and not all the operations have been verified. For operation or performance problems caused by the devices of other manufacturers, contact the respective manufacturers.

**Projector settings**

- 1) **Connect the projector to a computer using a LAN cable.**
- 2) **Turn on the power of the projector.**
- 3) **Select the [NETWORK] menu → [WIRED LAN] from the main menu and press the <ENTER> button.**
- 4) **Perform the detailed setting of [WIRED LAN].**
  - For details, Refer to "[WIRED LAN]" (➡ page 118).

**Note**

- To connect to an existing network, perform after consulting your network administrator.

**■ Factory default setting**

- Following setting has been made as a factory default.

[DHCP]	OFF
[IP ADDRESS]	192.168.10.100
[SUBNET MASK]	255.255.255.0
[DEFAULT GATEWAY]	192.168.10.1
[DNS1] / [DNS2]	None

**Operating the computer**

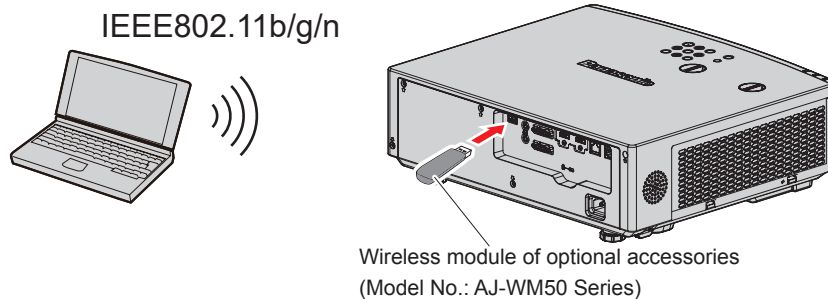
- 1) Turn on the power of the computer.
- 2) Perform the network setting following the instruction of your network administrator.
  - If the projector is in factory default setting, you can use it as it is if the network setting of the computer is as follows.

[IP ADDRESS]	192.168.10.101
[SUBNET MASK]	255.255.255.0
[DEFAULT GATEWAY]	192.168.10.1

**Connecting with wireless LAN**

The wireless module (Model No.: AJ-WM50 Series) of the optional accessories is required if you want to use the network function through the wireless LAN.

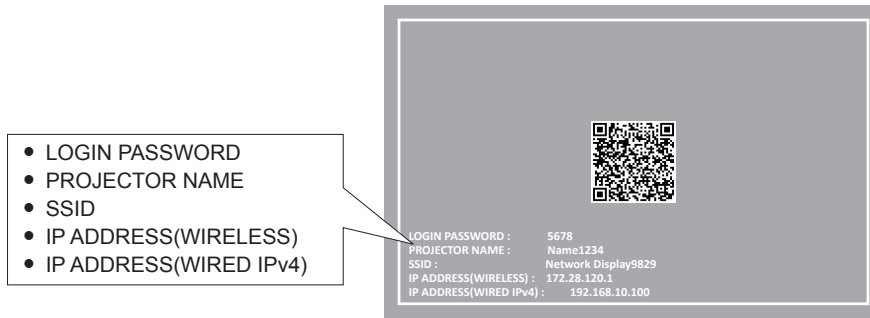
**Connection example**



**Preparation and confirmation of the projector**

- 1) Turn on the projector.
- 2) Attach the wireless module (Model No.: AJ-WM50 Series) of optional accessories firmly into the <USB (VIEWER/WIRELESS/DC OUT)> terminal.
- 3) Press the <NETWORK/USB> button to switch to NETWORK input.
  - The network input idle screen is displayed. The QR code, login password (a four-digit number that is automatically generated), PROJECTOR NAME, SSID, IP ADDRESS (WIRELESS) and IP ADDRESS (WIRED) will be displayed in the idle screen.
  - You can also press the <INPUT SELECT> button on the control panel and the input guide is displayed, then press ▲▼ to switch to NETWORK input.

Network input idle screen



**Attention**

- Please do not move or transport the projector while the wireless module is attached. Doing so may cause the wireless module to be damaged.
- The indicator of the wireless module will be off when the projector is in standby mode, it will light blue when the power is turned on and it will blink blue during wireless communication.  
Please do not remove the wireless module while the indicator is blinking.
- When the power of the projector is turned on and the indicator of the wireless module is not lighting/blinking, please insert the wireless module to the <USB (VIEWER/WIRELESS/DC OUT)> terminal again.
- After turning on the projector, please connect network to the projector after the IP ADDRESS (WIRELESS LAN) is displayed.

**Note**

- A QR code, which makes connection setting with a smartphone easier, is displayed in the network input idle screen. To directly connect a smartphone to the projector using the QR code, refer to “Using the QR code” (▶ page 135).
- The IPv4 address of wired LAN in network input idle screen is not displayed when the [NETWORK] menu → [WIRED LAN] → [IP VERSION] is set to [IPv6].
- Wireless LAN and wired LAN cannot be used in the same segment.
- The settings of the wireless module are as follows. You can access the projector from the web browser to set the [KEY] (▶ page 164).

[SSID]	Network Displayxxxx ( xxxx is a fixed value assigned to each projector.)
[CHANNEL]	1
[IP ADDRESS]	172.28.120.1
[SUBNET MASK]	255.255.255.0
[DEFAULT GATEWAY]	0.0.0.0
[ENCRYPTION]	WPA2-PSK(AES)
[KEY]	panasonic

**Computer setting**

- 1) Turn on the computer.
- 2) Make the network setting according to your system administrator.
  - Please make the network settings for the computer and the projector according to your system administrator.
- 3) Connect to the network that has been set in the projector.
  - If you use a computer, click the network icon on the taskbar (bottom right of the computer), select the same name as the [SSID] that has been set in the projector and enter the password for wireless connection.
  - The default factory password for wireless connection is “panasonic”.

**Note**

- If you use any wireless LAN connection utility that meets the OS standard, follow the operation instruction of the utility to connect it.

**Using the QR code**

A smartphone can be connected to the projector via wireless LAN just by reading the QR code that the projector displays with the camera on a smartphone.

**Compatible devices**

iPhone: iOS 16 or later

Android devices: Android 10.0 or later

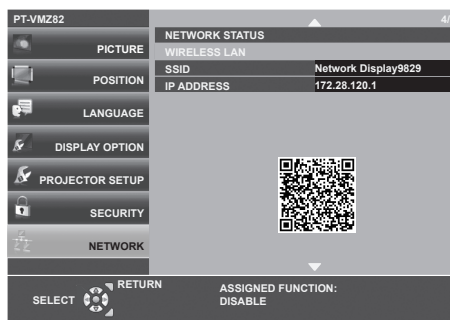
**Note**

- A device supporting reading of a QR code and application software of the camera supporting reading of a QR code are required.
- For the devices that the operation has been verified with this projector, visit the website (<https://docs.connect.panasonic.com/projector>). Note that the verification for devices of other manufacturers has been made for the items set by Panasonic Projector & Display Corporation, and not all the operations have been verified. For operation or performance problems caused by the devices of other manufacturers, contact the respective manufacturers.
- The QR code cannot be used for connecting the application software “Wireless Projector” to the projector.

**■ Displaying the QR code in OSD**

The following is the operation of the projector when reading the QR code displayed in the on-screen menu (OSD).

- 1) **Press the <MENU> button to open the [NETWORK] menu from the main menu.**
  - The [NETWORK] screen is displayed.
- 2) **Press ▲▼ to select [NETWORK STATUS], and press the <ENTER> button.**
  - The [NETWORK STATUS] screen is displayed.
- 3) **Press ▲▼ to switch the displayed screen and display [WIRELESS LAN] (page 4/5).**
  - The QR code is displayed.



**Note**

- The SSID, IP address (wireless) and QR code are not displayed in following cases.
  - When the optional wireless module (Model No.: AJ-WM50 Series) is not attached to the <USB (VIEWER/WIRELESS/DC OUT)> terminal

**■ Displaying the QR code in the network input idle screen**

The following is the operation of the projector when reading the QR code displayed in the network input idle screen.

- 1) **Press the <NETWORK/USB> button to switch to NETWORK input.**
  - You can also press the <INPUT SELECT> button on the control panel and the input guide is displayed, then press ▲▼ to switch to NETWORK input.
  - The QR code is displayed.



**Note**

- The SSID, IP address (wireless) and QR code are not displayed in following cases.
  - When the optional wireless module (Model No.: AJ-WM50 Series) is not attached to the <USB (VIEWER/WIRELESS/DC OUT)> terminal

**■ Operation of a smartphone**

- 1) **Start application software of the camera supporting reading of a QR code.**
- 2) **Read the QR code displayed in the OSD or the network input idle screen with the camera.**



- 3) **Tap the notification displayed on the smartphone screen.**
- Tap “Join” or “Connect” if a message to confirm the connection is displayed.
  - The smartphone will be connected to the projector via wireless LAN.

# About Presenter Light

The wireless module (Model No.: AJ-WM50 Series) of the optional accessories is required if you want to use the network function through the wireless LAN.

By using image transfer application software “Presenter Light Software” that supports Windows computers, you can transfer images and audio to the projector via the wired LAN or wireless LAN\*1.

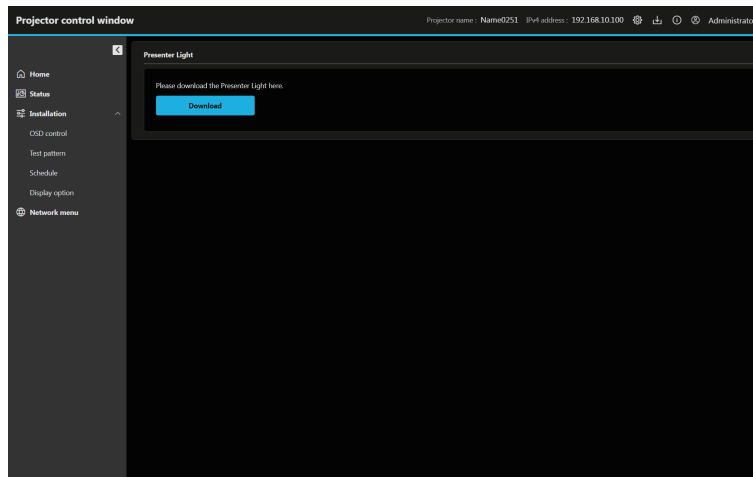
\*1 Sound interruption or noise may occur during image / sound transfer. In such a case, please select mute in the audio setting of the application software.

## Note

- For wired LAN connection, Presenter Light Software can not be used when [NETWORK] menu → [WIRED LAN] → [IP VERSION] is set to [IPv6].

## Download the “Presenter Light” to your computer

- 1) **Access the projector from the web browser on the computer.**
  - For information on accessing from the web browser, refer to “Accessing from the web browser” (➔ page 139).
- 2) **Click the Download (📄) button → [Presenter Light] on the upper right of the screen.**
  - The download screen of “Presenter Light” is displayed.



- 3) **Click [Download].**
  - The download confirmation screen of the compressed file “Presenter Light.zip” is displayed.
- 4) **Save and decompress “Presenter Light.zip”.**
  - After decompressing, a “Presenter Light” folder, which contains an executable file “Presenter Light.exe” and a “License” folder with the open source licenses used for the “Presenter Light” software, is generated.
  - Execute “Presenter Light.exe” directly when using the Presenter Light software. Please save this software or make a shortcut for convenient use. Installing the software on the computer is unnecessary.

## Note

- To learn more about how to use the “Presenter Light” software, or download the latest versions of the “Presenter Light” software, please visit the website (<https://docs.connect.panasonic.com/projector>)

# Using the web control function

Following operation is possible from a computer using the web control function.

- Setting and adjustment of the projector
- Displaying projector status
- Sending E-mail messages when there is a problem with the projector

The projector supports “Crestron Connected”, and the following application software of Crestron Electronics, Inc. can be used.

- Crestron Fusion

## Note

- Communication with an E-mail server is required to use the E-mail function. Confirm that the E-mail can be used beforehand.
- “Crestron Connected” is a system of Crestron Electronics, Inc. that collectively manages and controls devices on multiple systems connected to a network using a computer.
- For details of “Crestron Connected”, refer to the website of Crestron Electronics, Inc.  
<https://www.crestron.com>

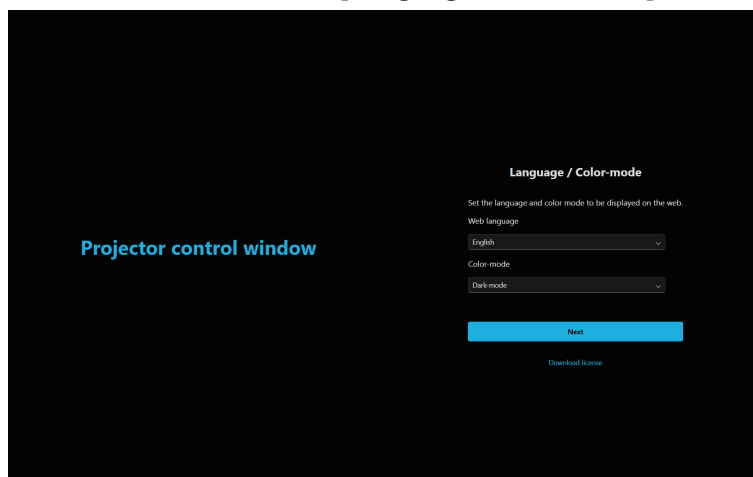
## Computer that can be used for setting

To use the web control function, a web browser is required. Confirm that the web browser can be used in advance.

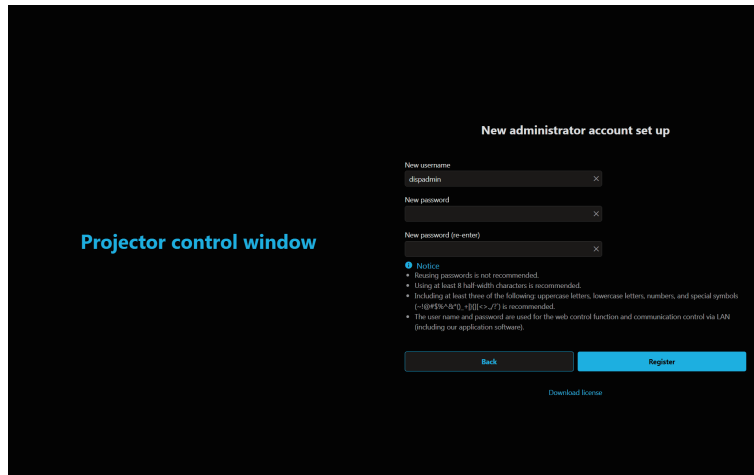
OS	Compatible web browser
Windows	Microsoft Edge
Mac OS	Safari 18.0
iOS	Safari (version equipped with iOS16, iOS17 or iOS18)
iPadOS	Safari (equipped with version iPadOS 18)
Android	Google Chrome (version equipped with Android 10.0/11.0/12.0/13.0/14.0/15.0)

## Accessing from the web browser

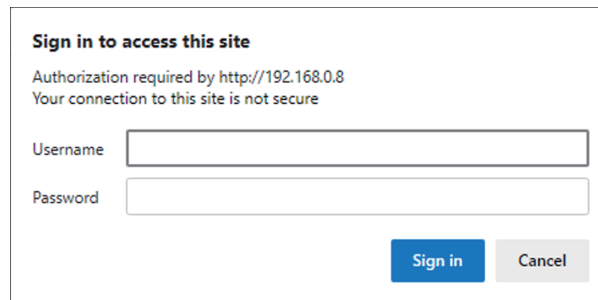
- 1) Start up the web browser on the computer.
- 2) Enter the IP address set on the projector into the URL entry field of the web browser.
  - If the user name and password of the administrator account have been set on the initial setting screen (➔ page 49) or in the [NETWORK] menu → [ADMINISTRATOR ACCOUNT] (➔ page 120), proceed to Step 8).
  - When the administrator account is not set, the [Language / Color-mode] screen is displayed.



- 3) Set the language and color-mode, and click [Next].
  - The [New administrator account set up] screen is displayed.



- 4) In [New username], enter the user name to be used as the administrator account.
  - The factory default setting of the user name for the administrator account is set to “dispadmin”.
- 5) In [New password], enter the password to be set for the administrator account.
  - A password cannot be blank.
  - A password consisting of at least eight half-width characters is recommended.
  - A password containing characters of at least three of the following four character types is recommended.
    - Uppercase letters
    - Lowercase letters
    - Digits
    - Symbols (~!@#\$%^&\*()\_+}|[<>./?`)
- 6) In [New password (re-enter)], enter the password entered in Step 5).
- 7) Click [Register].
  - The setting of the administrator account will be completed.
- 8) Enter the user name and password in the displayed login screen.




- Enter the user name and password of an account with administrator rights or the user name and password of a standard user account without administrator rights.
  - After logging in with the administrator account, set the user name and password of the standard user account in [Account]. For details, refer to “[Account set up] (when accessed by administrator account)” (➔ page 143).
- 9) Click [Sign in] or [OK].

### Attention

- The entry screen for the user name and password may be hidden by other window that is already opened. In such case, minimize the window in front to display the entry screen.

### Note




- If you use a web browser to control the projector, set the [NETWORK] menu → [NETWORK CONTROL] → [WEB CONTROL] to [ON].
- Do not perform setting or control simultaneously by starting up multiple web browsers. Do not set or control the projector from multiple computers.
- Access will be locked for few minutes when an incorrect password is entered three times consecutively.
- Some items on the projector setting page use the JavaScript function of the web browser. Correct control may not be possible when the web browser is set not to use this function.

- If the screen for the web control is not displayed, consult your network administrator.
- Click [Download license] to download the open source software license. You can also download the license by clicking the Web info  button in the upper right corner of the web control screen after logging in. (➔ page 154)
- Screenshot of a computer  
The size or the display of the screen may be different from this manual depending on the OS or the web browser, or the type of computer in use.

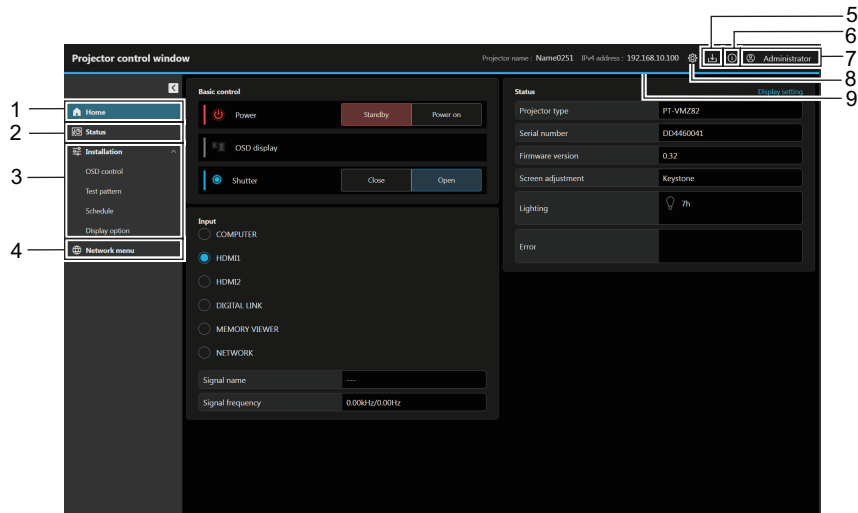
### Rights for each account

The administrator account can use all functions. The standard user account has limits on the functions it can use. Select the account to use depending on the purpose.

The function that has ✓ in the administrator / standard user column indicates that it can be operated with that account.

Item	Function	Administrator	Standard user	Page	
Web setting 	[Account]	[Administrator account]	✓	—	143
		[User account]	✓	✓	144
	[Web secure]	[Certificate]	✓	—	145
		[HTTPS]	✓	—	151
		[Access error log]	✓	—	152
	[Language / Color-mode]		✓	✓	152
	[Menu bar]		✓	✓	153
Download 	Presenter Light download page	✓	✓	153	
Web info 	License download page	✓	✓	154	
[Home]	[Basic control]	✓	✓	155	
	[Input]	✓	✓	155	
	[Status]	✓	✓	156	
[Status]	[Basic status]	✓	✓	158	
	[Lighting]	✓	✓	158	
	[Temperature]	✓	✓	158	
	[Network status]	✓	✓	158	
	[Projector status]	✓	✓	158	
	[Angle monitor]	✓	✓	158	
	[Input]	✓	✓	158	
	[Error]	✓	✓	158	
[Installation]	[OSD control]	✓	—	159	
	[Test pattern]	✓	—	159	
	[Schedule]	✓	—	160	
	[Display option]	✓	—	161	
[Network menu]	[Network configs]	✓	—	163	
	[Adjust clock]	✓	—	165	
	[Network secure]	✓	—	166	
	[Mail set up]	✓	—	167	
	[PJLink setting]	✓	—	171	
	[Crestron tools]	✓	—	172	

Descriptions of items

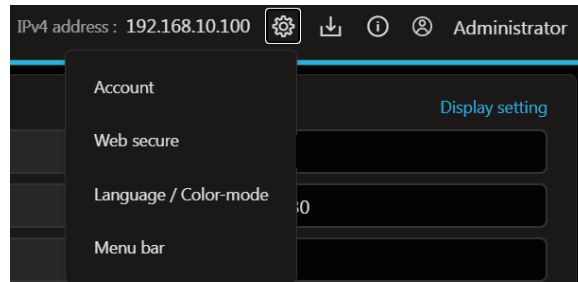


- 1 [Home]**  
Operate the basic control and check the basic status.
- 2 [Status]**  
Check the various status information of the projector.
- 3 [Installation]**  
Set and adjust various functions of the projector.
- 4 [Network menu]**  
Set the network functions of the projector.

- 5 Download (↓) button**  
Click to display the Presenter Light Software download page.
- 6 Web info (i) button**  
Click to display the Open Source Software License download page.
- 7 Account type**  
Display the type of the current login account (administrator account or standard user account).
- 8 Web setting (⚙) button**  
Click to configure the web account and web security settings and to customize the web interface.
- 9 Menu bar**

## Web setting

Click the Web setting (⚙️) button and select [Account](➡️ page 143), [Web secure](➡️ page 145), [Language / Color-mode](➡️ page 152) and [Menu bar](➡️ page 153) to display the setting screen.

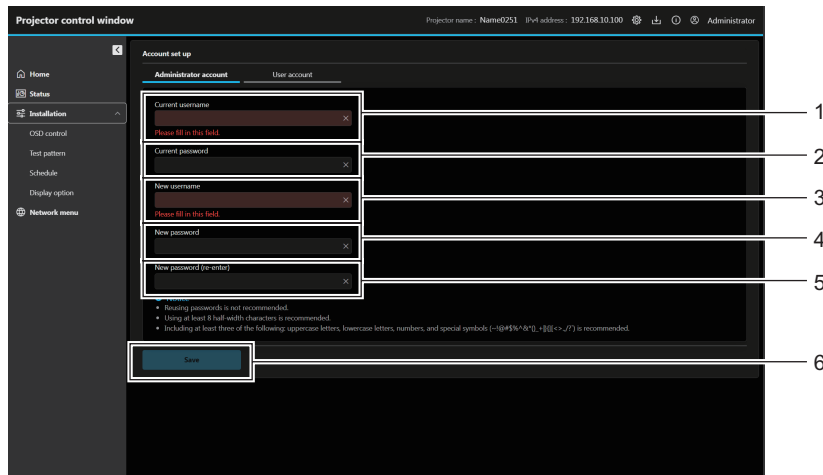


### [Account set up] (when accessed by administrator account)

#### [Administrator account]

Set the user name and password of the administrator account.

Click [Administrator account].

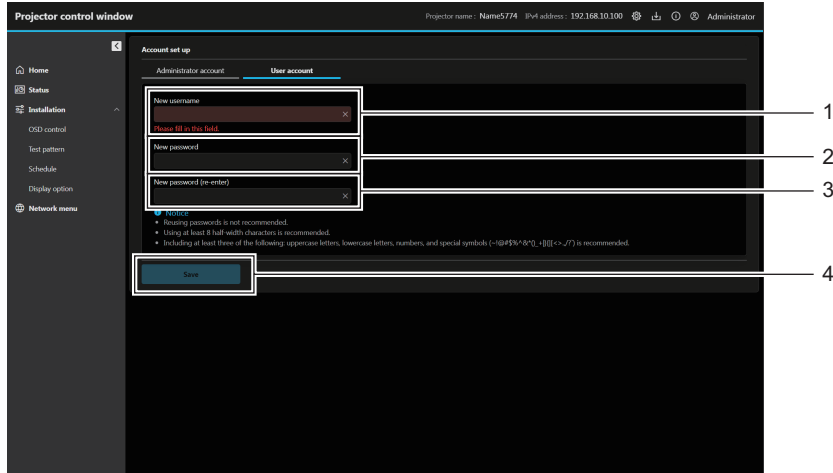


- |  |  |
|--|--|
| <p><b>1 [Current username]:</b><br/>Enter the current user name.</p> <p><b>2 [Current password]:</b><br/>Enter the current password.</p> <p><b>3 [New username]:</b><br/>Enter the desired new user name. (Up to 16 characters in single byte)</p> | <p><b>4 [New password]:</b><br/>Enter the desired new password. (Up to 16 characters in single byte)</p> <p><b>5 [New password (re-enter)]:</b><br/>Enter the desired new password again.</p> <p><b>6 [Save]</b><br/>Determines the change of administrator account.</p> |
|--|--|

### [User account]

Set the user name, password and the display setting of remote preview function of the standard user account without administrator rights.

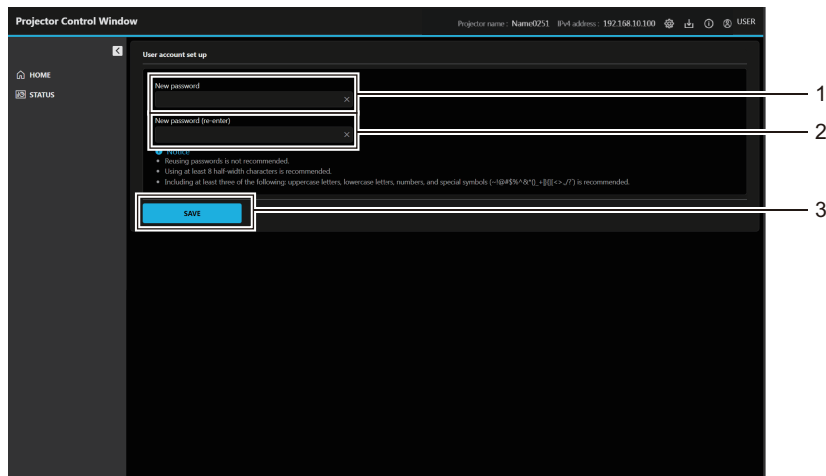
Click [User account].



- 1 [New username]:**  
Enter the desired new user name. (Up to 16 characters in single byte)
- 2 [New password]:**  
Enter the desired new password. (Up to 16 characters in single byte)
- 3 [New password (re-enter)]:**  
Enter the desired new password again.
- 4 [Save]**  
Determines the change of standard user account.

### [Account set up] (when accessed by standard user account)

Changes the password of the standard user account.

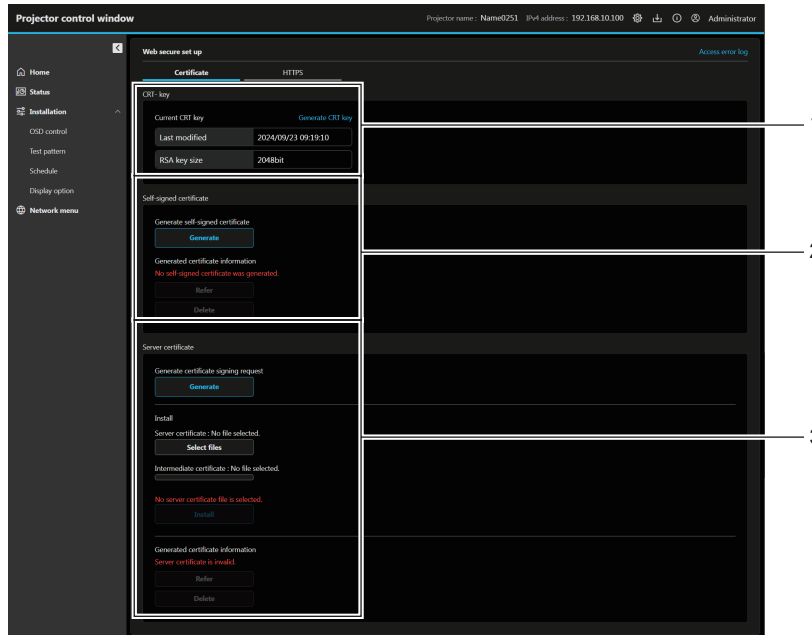


- 1 [New password]:**  
Enter the desired new password. (Up to 16 characters in single byte)
- 2 [New password (re-enter)]:**  
Enter the desired new password again.
- 3 [Save]**  
Determines the change of password.



**[Web secure] (Certificate)**

To perform the HTTPS communication or use the control system or application software of Crestron Electronics, Inc., it is necessary to install the certificate for authentication into the projector. Click [Certificate].



**1 [CRT- key]**

Generates the CRT (Certificate) key. The screen to generate the CRT key is displayed by clicking [Generate]. For details, refer to “Generating the new CRT key” (➡ page 146).

**2 [Self-signed certificate]**

**[Generate self-signed certificate]:** Generates the self-signed certificate by the projector. The screen to generate the self-signed certificate is displayed by clicking [Generate]. For details, refer to “Generating the self-signed certificate” (➡ page 150).  
**[Generated certificate information]:** Displays the status of the self-signed certificate. Information of the generated self-signed certificate is displayed by clicking [Refer]. The generated self-signed certificate can be deleted by clicking [Delete]. For details, refer to “Confirming the information of the self-signed certificate” (➡ page 151).

**3 [Server certificate]**

**[Generate certificate signing request]:** Generates signing request (Certificate Signing Request). The screen to generate the signing request is displayed by clicking [Generate]. For details, refer to “Generating the signing request” (➡ page 148).

**[Install]:** Installs the server certificate and the intermediate certificate. The certificate is installed into the projector by specifying the certificate file and clicking [Install]. For details, refer to “Installing the certificate” (➡ page 149).

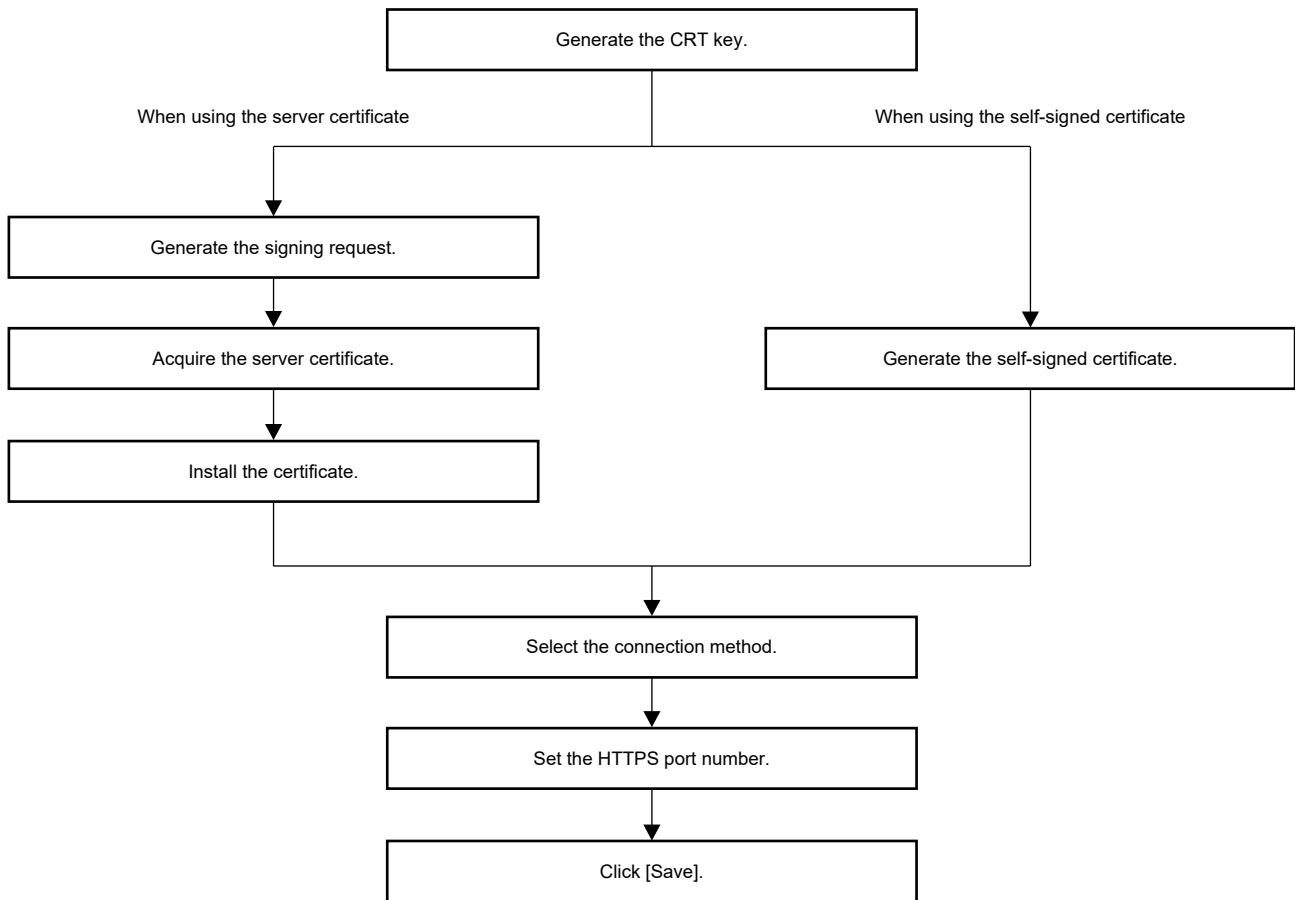
**[Generated certificate information]:** Displays the status of the server certificate. Information of the installed server certificate is displayed by clicking [Refer]. The installed server certificate and the intermediate certificate can be deleted by clicking [Delete]. For details, refer to “Confirming the information of the server certificate” (➡ page 149).

**Note**

- Installation operation of the certificate may not be possible depending on the computer or web browser in use.

■ Flow for setting

The flow for setting differs depending on which certificate is to be used as the security certificate, either the server certificate or the self-signed certificate.

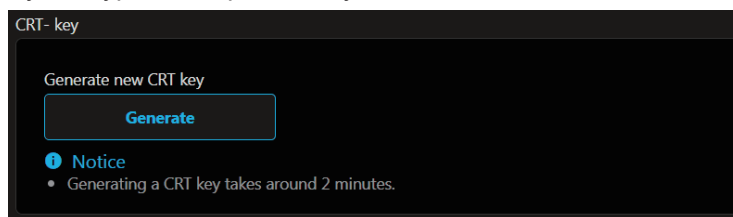


**Note**

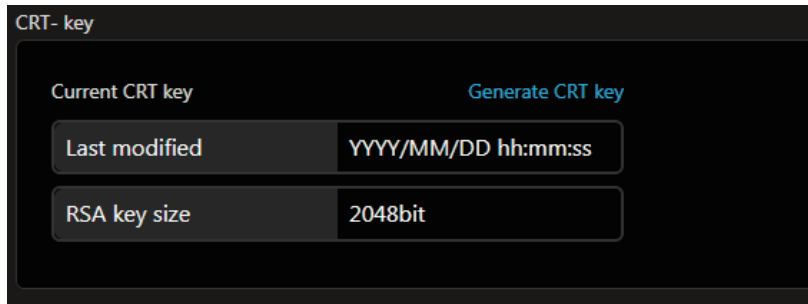
- When using the server certificate, the procedure from application to the certification organization to issuing of the server certificate is required to be performed between the customer and the certification organization. For the application method, etc., contact the certification organization.

**Generating the new CRT key**

Generate the CRT key used for encryption with the RSA (Rivest-Shamir-Adleman cryptosystem) public key encryption method. CRT key is a type of the private key.



- 1) Click [Certificate] → [CRT- key] → [Generate].
  - The following message is displayed.  
“The CRT key will be generated. Continue?”
- 2) Click [Perform].



- Confirm the key size and generation date and time of the current CRT key with the [Last modified] and [RSA key size] of [Current CRT key].
- When generating the CRT key for the second time or later, refer to “Regenerating the CRT key” (➔ page 147).

### Regenerating the CRT key

- 1) Click [Certificate] → [CRT- key] → [Generate CRT key].
  - The confirm screen to regenerate the CRT key is displayed. “Regenerate the CRT key?”
- 2) Click [Perform].
  - Confirm the key size and generation date and time of the current CRT key with the [Last modified] and [RSA key size] of [Current CRT key].
  - The previously generated CRT key will be moved to the history. To return to the previous CRT key, refer to “Generating the CRT key from history” (➔ page 147).

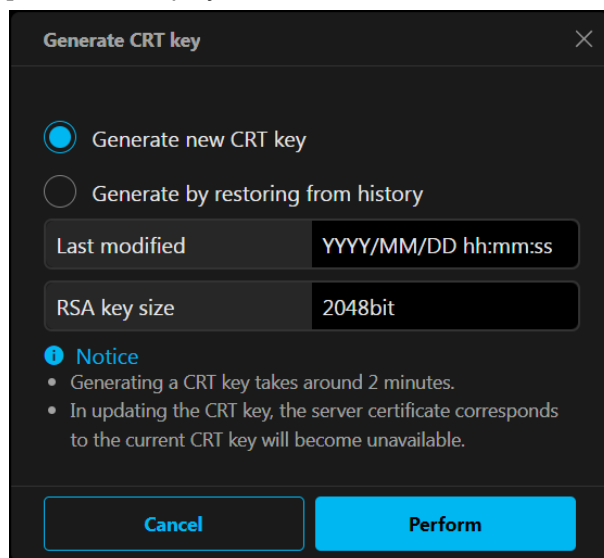
### Note

- [RSA key size] is fixed to [2048bit]. The server certificate may not be issued depending on the certification organization to apply if the key size is 2048-bit.
- Generation of the CRT key may take up to approximately two minutes.
- When the CRT key is updated, apply for the server certificate or generate the self-signed certificate again using that CRT key. A certificate linked to the CRT key is required.

### Generating the CRT key from history

It is possible to return to the previously generated CRT key only once even if the CRT key is updated.

- 1) Click [Certificate] → [CRT- key] → [Generate CRT key].
  - The [Generate CRT key] screen is displayed.



- 2) Select [Generate by restoring from history].
  - Confirm [Last modified] and [RSA key size] of the CRT key to restore.
- 3) Click [Perform].
  - Previously generated CRT key is reflected as the current CRT key.

**Note**

- When returned to the previously generated CRT key, a certificate linked to that CRT key is required.

**Generating the signing request**

When using the server certificate issued by the certification organization as a security certificate, generate a signing request necessary for application of issuing to the certification organization. Generate the signing request after generating the CRT key.

1) Click **[Certificate]** → **[Server certificate]** → **[Generate certificate signing request]** → **[Generate]**.

- The screen to generate the signing request is displayed.

2) Enter the information required for application.

- The details of each item are as follows. Enter the information following the requirement of the certification organization to apply.

Item	Details	Character length limit
<b>[Common name]</b>	Enter the projector name or the IP address set in the projector.	64 characters
<b>[Country]</b>	Enter the country code defined in ISO 3166-1 alpha-2 (two upper case alphabets).	—
<b>[State]</b>	Enter the State, etc.	128 characters
<b>[Locality]</b>	Enter the locality.	128 characters
<b>[Organization]</b>	Enter the organization name.	64 characters
<b>[Organization unit]</b>	Enter the organization unit name.	64 characters
<b>[CRT- key]</b>	<b>[Last modified]</b>	The generation date and time of the current CRT key is displayed.
	<b>[RSA key size]</b>	The key size of the current CRT key is displayed.

3) Click **[Perform]**.

- The signing request file is generated. Enter a file name and save the file in the desired folder.

4) Enter a file name and click **[Save]**.

- The file for signing request is saved in the specified folder.

**Note**

- The characters that can be input are as follows.
  - Single-byte numbers: 0 to 9
  - Single-byte alphabets: A to Z, a to z
  - Single-byte symbols: - . \_ , + / ( )
- The signing request generated by the projector is PEM format (file extension: pem).
- Apply issuing of the server certificate to the certification organization using the saved signing request file (PEM format).

**Installing the certificate**

Install the server certificate and the intermediate certificate issued by the certification organization into the projector.

- 1) Click **[Certificate]** → **[Server certificate]** → **[Install]** → **[Server certificate]** → **[Select files]**.
  - A dialog to select the file is displayed.
- 2) **Select the server certificate file and click [Open]**.
  - If the intermediate certificate is issued from the certification organization together with the server certificate, proceed to Step 3).
  - If only the server certificate is issued from the certification organization, proceed to Step 5).
- 3) Click **[Select files]** in **[Intermediate certificate]**.
  - A dialog to select the file is displayed.
- 4) **Select the intermediate certificate file and click [Open]**.
- 5) Click **[Install]**.
  - The server certificate and the intermediate certificate are installed into the projector.

**Note**

- To confirm the information of the installed server certificate, refer to “Confirming the information of the server certificate” (➡ page 149).

**Confirming the information of the server certificate**

Confirm the information of the server certificate installed in the projector.

- 1) Click **[Certificate]** → **[Server certificate]** → **[Generated certificate information]** → **[Refer]**.
  - The information of the installed server certificate is displayed. The details of each item are as follows.

Item	Details	
<b>[Common name]</b>	The projector name or the IP address is displayed.	
<b>[Country]</b>	The country code defined in ISO 3166-1 alpha-2 (two upper case alphabets) is displayed.	
<b>[State]</b>	The State, etc. is displayed.	
<b>[Locality]</b>	The locality is displayed.	
<b>[Organization]</b>	The organization name is displayed.	
<b>[Organization unit]</b>	The organization unit name is not displayed. It is displayed as an asterisk.	
<b>[Validity start date]</b>	Displays the date and time that the self-signed certificate was issued.	
<b>[Validity end date]</b>	Displays the date and time that the self-signed certificate will expire.	
<b>[CRT- key]</b>	<b>[Last modified]</b>	The generation date and time of the CRT key is displayed.
	<b>[RSA key size]</b>	The key size of the CRT key is displayed.

**Note**

- The installed server certificate and the intermediate certificate can be deleted by clicking **[Certificate]** → **[Server certificate]** → **[Generated certificate information]** → **[Delete]**.  
 However, it cannot be deleted when **[HTTPS]** → **[Connection protocol]** is set to **[HTTPS]**. Delete it after changing the setting to perform the HTTP communication.  
 To delete the server certificate within the valid period, confirm that the certificate file used for installing is available on hand. It will be necessary when installing the server certificate again.

**Generating the self-signed certificate**

When the server certificate issued by the certification organization is not to be used as the security certificate, it is possible to use the self-signed certificate generated in the projector. Generate the self-signed certificate after generating the CRT key.

1) Click **[Certificate]** → **[Self-signed certificate]** → **[Generate self-signed certificate]** → **[Generate]**.

- The screen to generate the self-signed certificate is displayed.

2) Enter the information required for generation.

- The details of each item are as follows.

Item	Details	Character length limit
<b>[Common name]</b>	Enter the projector name or the IP address set in the projector.	64 characters
<b>[Country]</b>	Enter the country code defined in ISO 3166-1 alpha-2 (two upper case alphabets).	—
<b>[State]</b>	Enter the State, etc.	128 characters
<b>[Locality]</b>	Enter the locality.	128 characters
<b>[Organization]</b>	Enter the organization name.	64 characters
<b>[Organization unit]</b>	Enter the organization unit name.	64 characters
<b>[CRT- key]</b>	<b>[Last modified]</b>	The generation date and time of the current CRT key is displayed.
	<b>[RSA key size]</b>	The key size of the current CRT key is displayed.

3) Click **[Perform]**.

- Self-signed certificate is generated.

**Note**

- The characters that can be input are as follows.
  - Single-byte numbers: 0 to 9
  - Single-byte alphabets: A to Z, a to z
  - Single-byte symbols: - . \_ , + / ( )

**Confirming the information of the self-signed certificate**

Confirm the information of the self-signed certificate generated by the projector.

1) Click **[Certificate]** → **[Self-signed certificate]** → **[Generated certificate information]** → **[Refer]**.

- The information of the generated self-signed certificate is displayed. The details of each item are as follows.

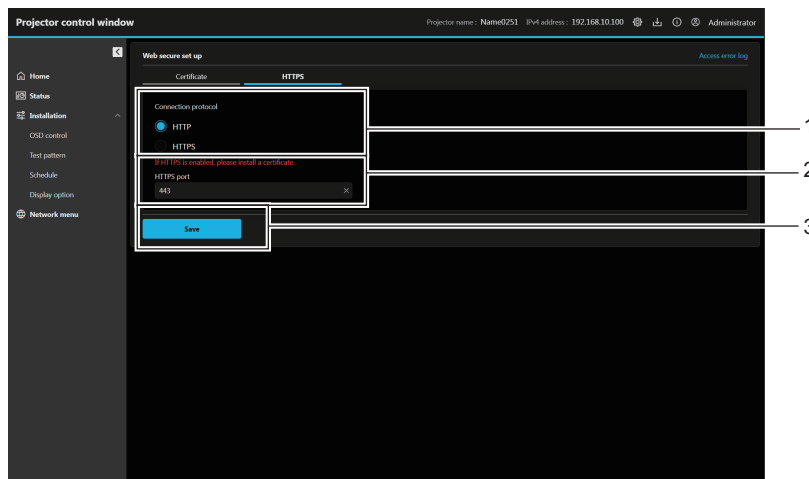
Item	Details	
<b>[Common name]</b>	The projector name or the IP address is displayed.	
<b>[Country]</b>	The country code defined in ISO 3166-1 alpha-2 (two upper case alphabets) is displayed.	
<b>[State]</b>	The State, etc. is displayed.	
<b>[Locality]</b>	The locality is displayed.	
<b>[Organization]</b>	The organization name is displayed.	
<b>[Organization unit]</b>	The organization unit name is displayed.	
<b>[Validity start date]</b>	Displays the date and time that the self-signed certificate was issued.	
<b>[Validity end date]</b>	Displays the date and time that the self-signed certificate will expire (local time corresponding to 23:59, December 31, 2063 in Greenwich Mean Time).	
<b>[CRT- key]</b>	<b>[Last modified]</b>	The generation date and time of the CRT key is displayed.
	<b>[RSA key size]</b>	The key size of the CRT key is displayed.

**Note**

- The generated self-signed certificate can be deleted by clicking **[Certificate]** → **[Self-signed certificate]** → **[Generated certificate information]** → **[Delete]**.  
However, it cannot be deleted when **[HTTPS]** → **[Connection protocol]** is set to **[HTTPS]**. Delete it after changing the setting to perform the HTTP communication.

**[Web secure] (HTTPS)**

Set this screen when HTTPS (Hypertext Transfer Protocol Secure) communication encrypted with the SSL/TLS protocol is to be performed between the computer and the projector while the web control function is used. To perform the HTTPS communication, it is necessary to install the certificate for authentication into the projector in advance. For details of installing the certificate, refer to “[Web secure] (Certificate)” (➔ page 145). Click **[HTTPS]**.



- |  |  |
|--|--|
| <p><b>1 [Connection protocol]</b><br/>Set the connection method to the projector.</p> <ul style="list-style-type: none"> <li><b>[HTTP]:</b> Uses the HTTP communication. (Factory default setting)</li> <li><b>[HTTPS]:</b> Uses the HTTPS communication.</li> </ul> | <p><b>2 [HTTPS port]</b><br/>Set the port number to be used with the HTTPS communication.<br/>Allowed port number: 1 to 65535<br/>Factory default setting: 443</p> <p><b>3 [Save]</b><br/>Enables the setting.</p> |
|--|--|

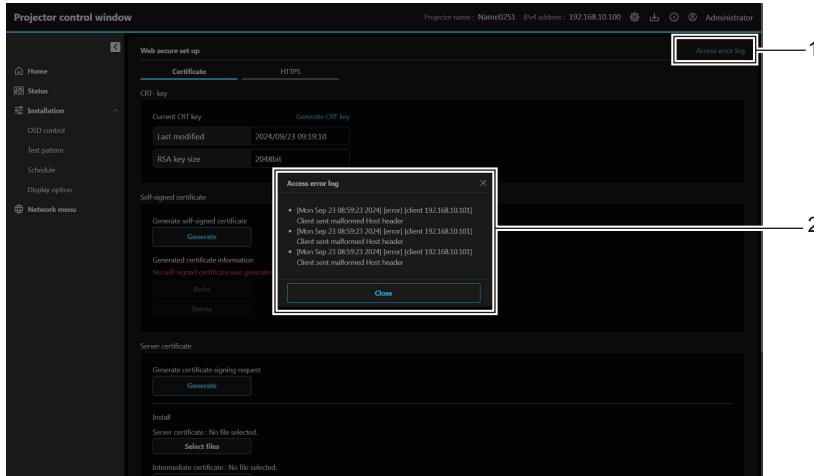
**Note**

- When the **[Connection protocol]** setting is changed from **[HTTPS]** to **[HTTP]**, the screen may not be displayed when the operation or update of the web control screen is performed. In such case, delete the cache of the web browser.

**[Web secure] (Access error log)**

The error log on the web server is displayed such as access to the pages that do not exist or access with unauthorized user names or passwords.

Click [Access error log].



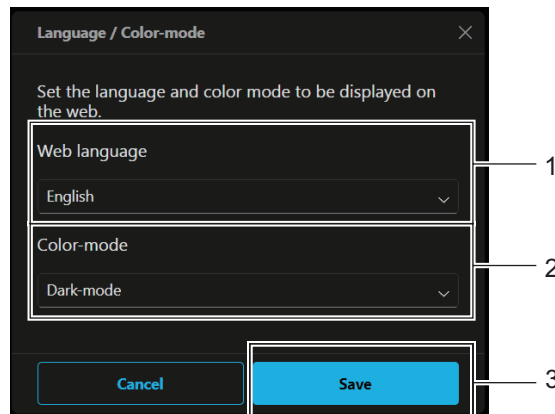
1 [Access error log]

Click to display the access error log screen.

2 Example of access error log

**[Language / Color-mode]**

Set the language and color mode to be displayed on the web.



1 [Web language]

Set the web language ([日本語] / [English]) to be displayed.

2 [Color-mode]

Set the color-mode of the web screen.

[Dark-mode]: light-colored text on a dark-colored background

[Light-mode]: dark-colored text on a light-colored background

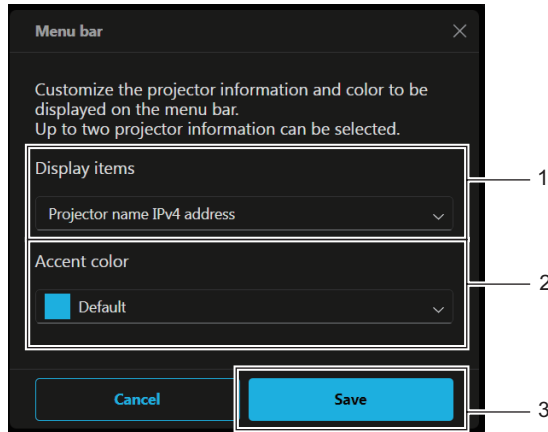
3 [Save]

Enables the setting.



**[Menu bar]**

Customize the projector information and color to be displayed on the menu bar.



**1 [Display items]**

Set the projector information (up to two items) to be displayed on the menu bar from the following display items.  
 [Projector name], [IPv4 address], [Wireless LAN IP address],  
 [MAC address], [Serial number], [Projector type]

**2 [Accent color]**

Set the accent color of the menu bar from the following seven colors.  
 [Default], [Blue], [Purple], [Green], [Yellow], [Orange], [Red]

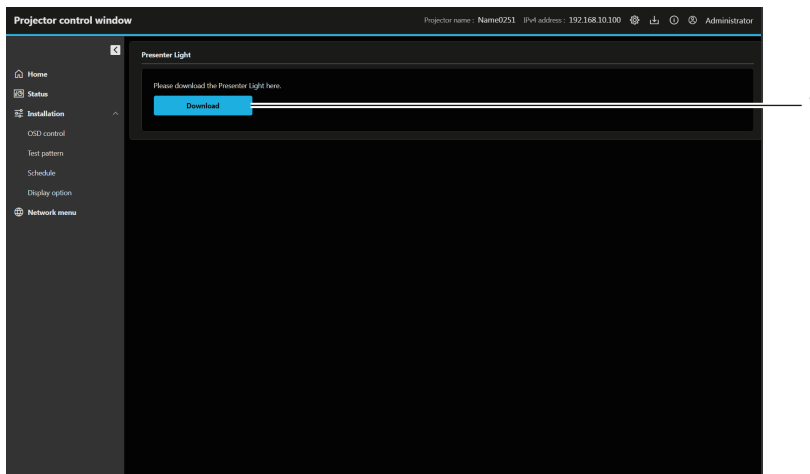
**3 [Save]**

Enables the setting.

**Download (Presenter Light Software download page)**

Displays the Presenter Light Software download page.

Click the Download (📄) button → [Presenter Light].

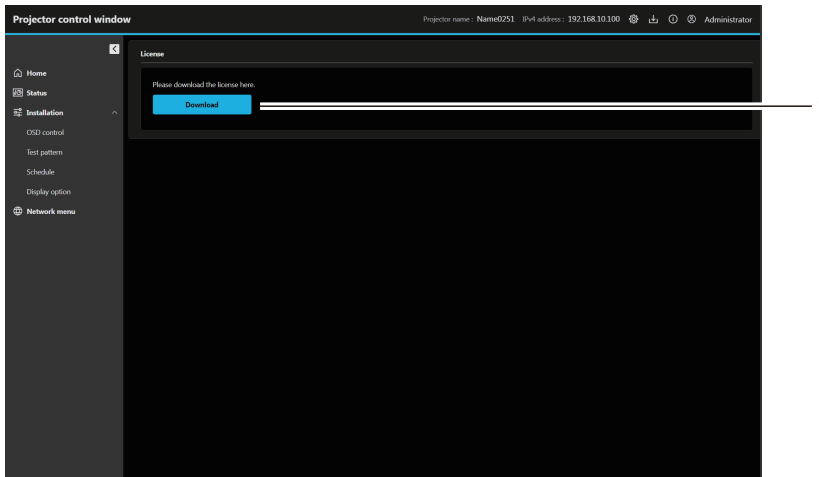


**1 [Download]**

Click to download the Presenter Light Software.  
 For details, refer to "About Presenter Light". (➡ page 138)

## Web info (license download page)

Displays the license download page.  
Click the Web info (🌐) button → [License].



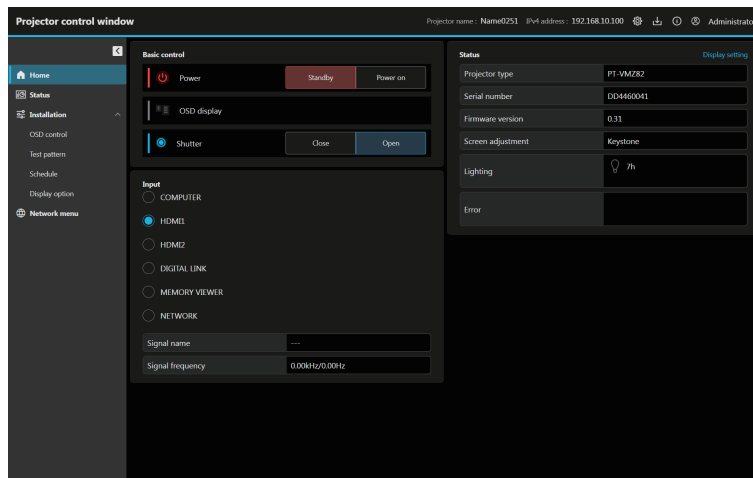
- 1 **[Download]**  
The license for the open source software used in the projector is downloaded by clicking this item.

### Note

- Provided license is a text file, and it is saved in the firmware of the projector in zip format compressed file.  
File name: License.zip

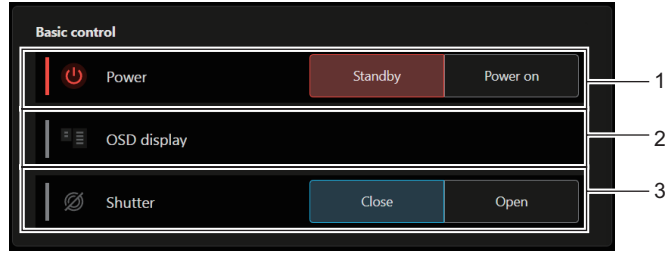
## [Home]

To operate the basic control and check the status.  
Click [Home].



■ [Basic control]

Switches the power([Standby]/[Power on]), OSD display([OFF]/[ON]) and shutter([Close]/[Open]).



- 1 **[Power]**  
Turns off/on ([Standby]/[Power on]) the power of the projector.
- 2 **[OSD display]**  
Switches the status of the on-screen display function.  
([OFF]: Hide; [ON]: Display)  
[OSD display] cannot be set when the projector is in standby mode.

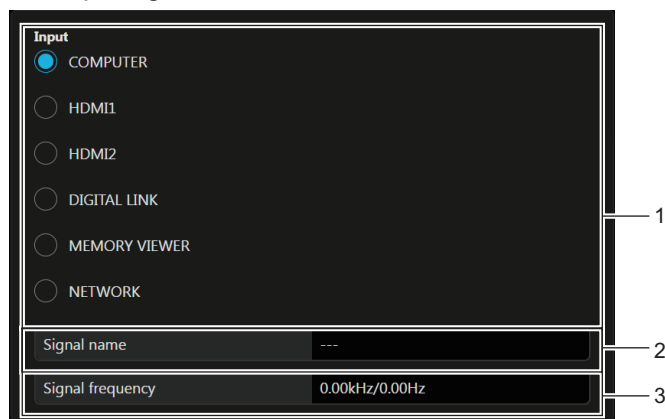
- 3 **[Shutter]**  
Switches the status of the shutter.  
([Close]: Shutter function enabled; [Open]: Shutter function disabled)

Status display icon

[Power]		The power is switched off. (Standby status)
		In the projection mode
[OSD display]		The on-screen display is set to on (display).
		The on-screen display is set to off (hide).
[Shutter]		The shutter function is enabled (shutter: closed).
		The shutter function is disabled (shutter: opened).

■ [Input]

Switches the input and check the input signal information.

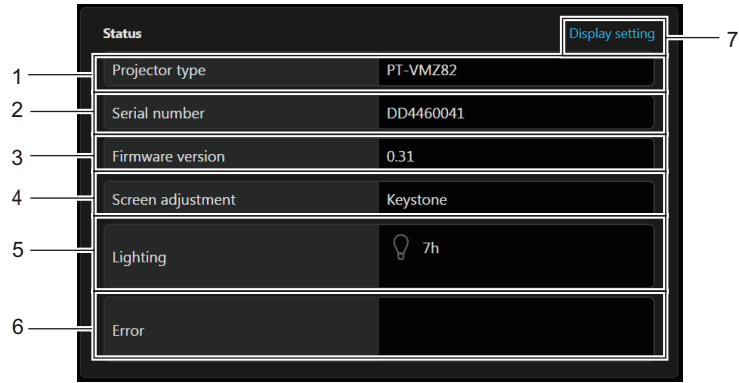


- 1 **[Input]**  
Switches to the input to view the image.
- 2 **[Signal name]**  
Displays the input signal name.

- 3 **[Signal frequency]**  
Displays the frequency of the input signal.

■ [Status] (Customized display)

Display the status of the projector.



1 [Projector type]

Displays the type of the projector.

2 [Serial number]

Displays the serial number of the projector.

3 [Firmware version]

Displays the firmware version of the projector.

4 [Screen adjustment]

Displays the setting status of [SCREEN ADJUSTMENT].

5 [Lighting]

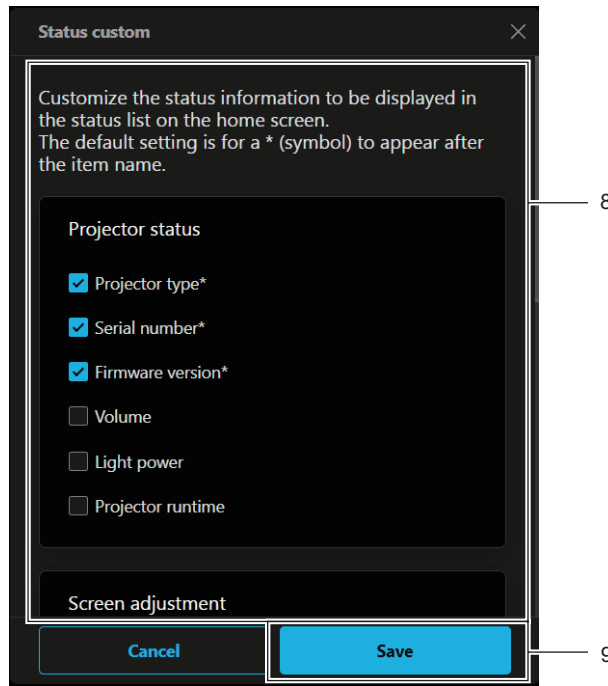
Displays the lighting status and runtime of light sources.

6 [Error]

Displays the occurrence status of error/warning in icon. Refer to "Self-diagnosis display" (➔ page 197) for the display details.

7 [Display setting]

Click to display the [Status custom] screen.













8 [Status custom]

Customize the status information to be displayed in the status list on the home screen. The default setting is for a \* (symbol) to appear after the item name.

9 [Save]

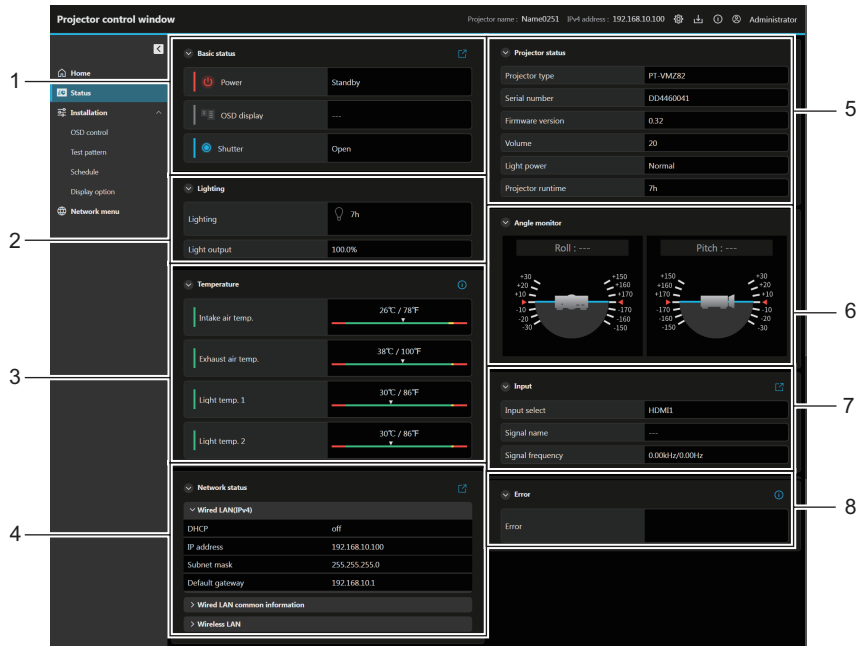
Enables the setting.

Status display icon

[Lighting]		Corresponding light source is illuminated.
		Corresponding light source is not illuminated.
[Error]		The light source is in warning status.
		The light source is in error status.
		The filter is in warning status.
		The filter is in error status.
		The temperature is in warning status.
		The temperature is in error status.
		A warning other than light source, filter or temperature has occurred.
		An error other than light source, filter or temperature has occurred.

**[Status]**

Display the status of the projector.  
Click [Status].



**1 [Basic status]**

**[Power]**

Displays the status([Standby]/[Power on]) of the power.

**[OSD display]**

Displays the status of the on-screen display function.  
([OFF]: Hide; [ON]: Display)

**[Shutter]**

Displays the status of the shutter. ([Close]: Shutter function enabled; [Open]: Shutter function disabled)

**icon**

Click to go to **[Home]** screen and switches power([Standby]/[Power on]), OSD display([OFF]/[ON]) and shutter([Close]/[Open]).

**2 [Lighting]**

**[Lighting]**

Displays the lighting status and runtime of light sources.

**[Light output]**

Displays the setting status of [LIGHT OUTPUT].

**3 [Temperature]**

**[Intake air temp.]**

Displays the status of the intake air temperature of the projector.

**[Exhaust air temp.]**

Displays the status of the exhaust air temperature of the projector.

**[Light temp. 1] / [Light temp. 2]**

Displays the temperature status of light source 1 and light source 2.

**icon**

Click to display the temperature details.

**4 [Network status]**

**[Wired LAN(IPv4)]**

Displays the settings of wired LAN (IPv4).

**[Wired LAN(IPv6)]**

Displays the settings of wired LAN (IPv6).

**[WIRED LAN common information]**

Displays the information common for the wired LAN (IPv4) and the wired LAN (IPv6).

**[Wireless LAN]**

Displays the settings of wireless LAN when the optional Wireless Module (Model No.: AJ-WM50 Series) is attached.

**icon**

Click to go to **[Network configs]** screen and set the wired LAN and wireless LAN.

**5 [Projector status]**

**[Projector type]**

Displays the type of the projector.

**[Serial number]**

Displays the serial number of the projector.

**[Firmware version]**

Displays the firmware version of the projector.

**[Volume]**

Displays the volume status.

**[Light power]**

Displays the setting status of [LIGHT POWER].

**[Projector runtime]**

Displays the runtime of the projector.

**6 [Angle monitor]**

Displays the roll angle and pitch angle.

**7 [Input]**

**[Input select]**

Displays the selected input.

**[Signal name]**

Displays the input signal name.

**[Signal frequency]**

Displays the frequency of the input signal.

**icon**

Click to go to **[Home]** screen and switch the input.

**8 [Error]**

Displays the occurrence status of error/warning in icon.

Refer to "Self-diagnosis display" (➔ page 197) for the display details.

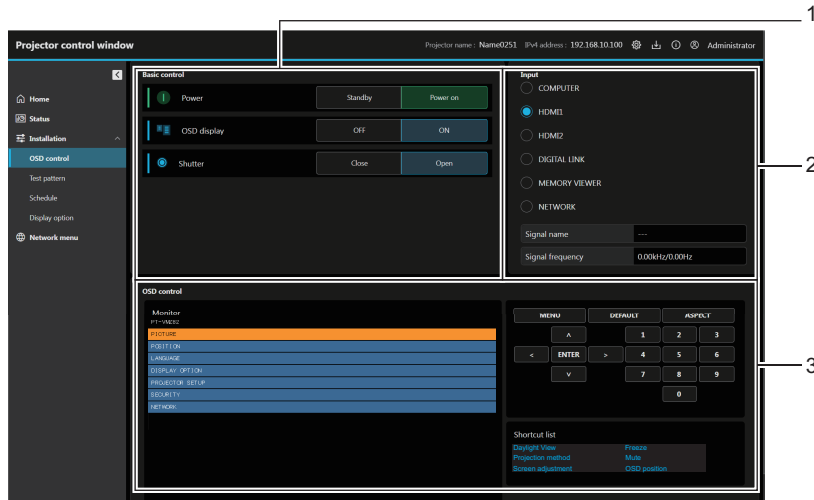
**icon**

Click to display the error code.

[Installation]

[OSD control]

Click [Installation] → [OSD control].



1 [Basic control]

[Power]

Turns off/on ([Standby]/[Power on]) the power of the projector.

[OSD display]

Switch the status of the on-screen display function. ([OFF]: Hide; [ON]: Display)

[Shutter]

Switch the status of the shutter. ([Close]: Shutter function enabled; [Open]: Shutter function disabled)

2 [Input]

Switch the input of the image to project.

3 [OSD control]

[Monitor]

Displays the same items as shown on the on-screen display of the projector. You can check or change the settings of the menus. It is displayed even if the on-screen display function is set to off (hide).

Control of the projector

The projector is controlled by clicking the buttons in the same way as the buttons on the remote control.

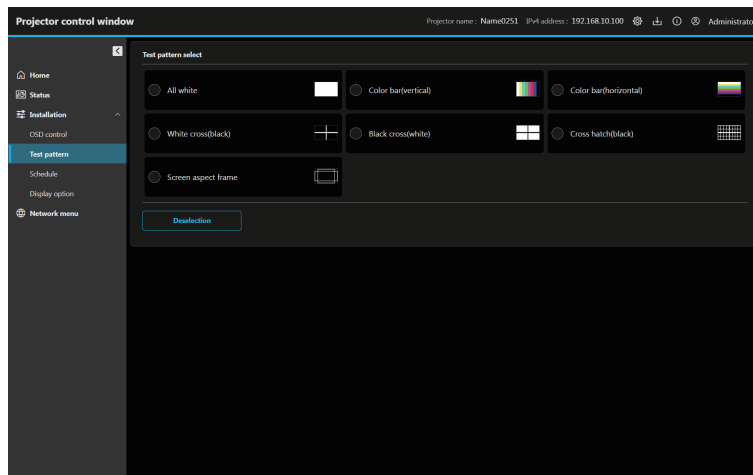
[Shortcut list]

Click to display the specific OSD and perform the function.

[Test pattern]

Click the test pattern to display in the projected image from the displayed test pattern. To cancel the test pattern display, click [Deselection].

Click [Installation] → [Test pattern].



Note

- The test pattern display is unavailable when the projector is in standby state.

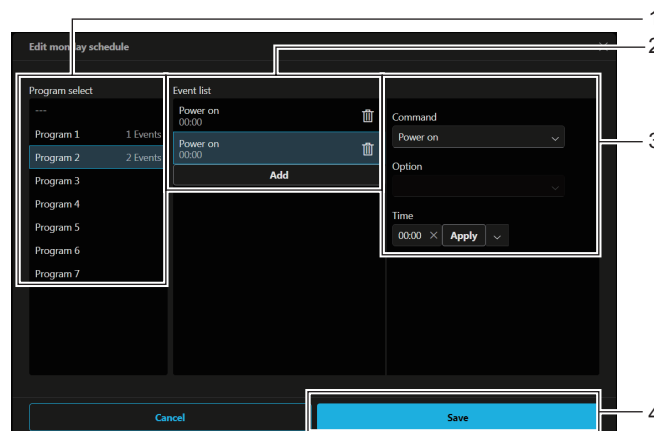
**[Schedule]**

Check and set the command execution schedule for each day of the week.  
Click [Installation] → [Schedule].



- 1 **[Schedule]**  
Enables/disables the schedule function.
- 2 **Days of the week**
- 3 **Program**  
Displays the program of day of the week and the event list. You can also change the program by selecting another program from the drop-down list and pressing the [Save] button. Program can be set from [Program 1] to [Program 7]. “- - -” indicates that no program has been selected.
- 4 **[Edit]**  
Click to open the schedule editing screen for day of the week. You can select and edit the program.
- 5 **[Save]**  
Update the setting.
- 6 **[Program select reset]**  
Initializes the program selection for all days of the week.

■ **Schedule editing screen**



- 1 **[Program select]**  
Select the program to edit.
- 2 **[Event list]**  
Displays the event list of the selected program. If there is no event in the program, select the desired program number and click [Copy] to copy the event list.  
**[Add]**  
Add an event to the program. Up to 16 commands can be set per program.  
**[Delete] button**  
Delete the event from the program.
- 3 **Event editing**  
Set the command for the event and execution time.  
**[Command]**  
Set the commands. For details of the commands, refer to [PROJECTOR SETUP] menu → [SCHEDULE] → “How to set a program” (➡ page 106).  
**[Option]**  
Set [Option] according to the command.  
**[Time]**  
Set the execution time for the command. Enter the time in the text box in one-minute increments and click [Apply]. You can also press the arrow button and select from the drop-down list [00:00] to [23:30] in increments of 30 minutes.
- 4 **[Save]**  
Update the setting.

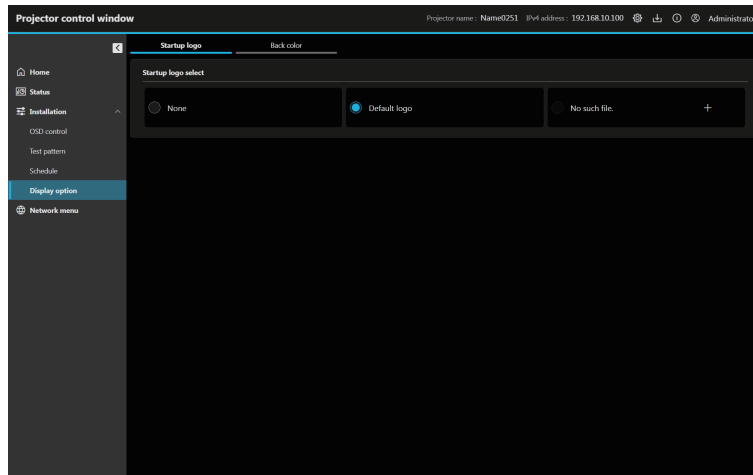


### [Display option]

Click [Installation] → [Display option].



### [Startup logo]

Set the display of startup logo. You can also register or delete the user image.



### ■ Registering the user image

#### 1) Click the button.

- The file selection screen is displayed.
  - When no user image is registered, [No such file.] and the  button is displayed.
  - When the user image has already been registered, [USER IMAGE] and the  button is displayed.

#### 2) Select the file to register, and click [Open].

- [USER IMAGE] is displayed, and the registration is completed.

### ■ Deleting the registered user image

#### 1) Click the button.

- The confirmation screen is displayed.

#### 2) Click [Delete].

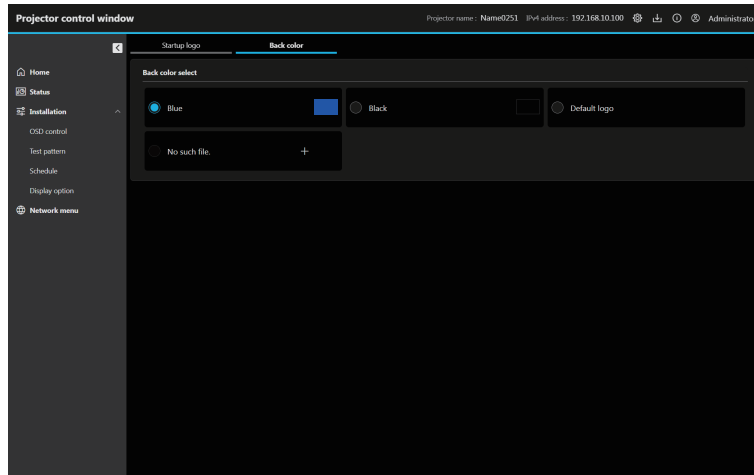
- Deleting of the user image is completed.

### Note

- When the following menu is set to [USER IMAGE], no content will be displayed if the user image is deleted.
  - [DISPLAY OPTION] menu → [BACK COLOR]
  - [DISPLAY OPTION] menu → [STARTUP LOGO]



### [Back color]

Set the display of back color. You can also register or delete the user image.



#### ■ Registering the user image

1) Click the  button.

- The file selection screen is displayed.
  - When no user image has been registered, [No such file.] and the  button is displayed.
  - When the user image has already been registered, [USER IMAGE] and the  button is displayed.

2) Select the file to register, and click [Open].

- [USER IMAGE] is displayed, and the registration is completed.

#### ■ Deleting the registered user image

1) Click the  button.

- The confirmation screen is displayed.

2) Click [Delete].

- Deleting of the user image is completed.

#### Note

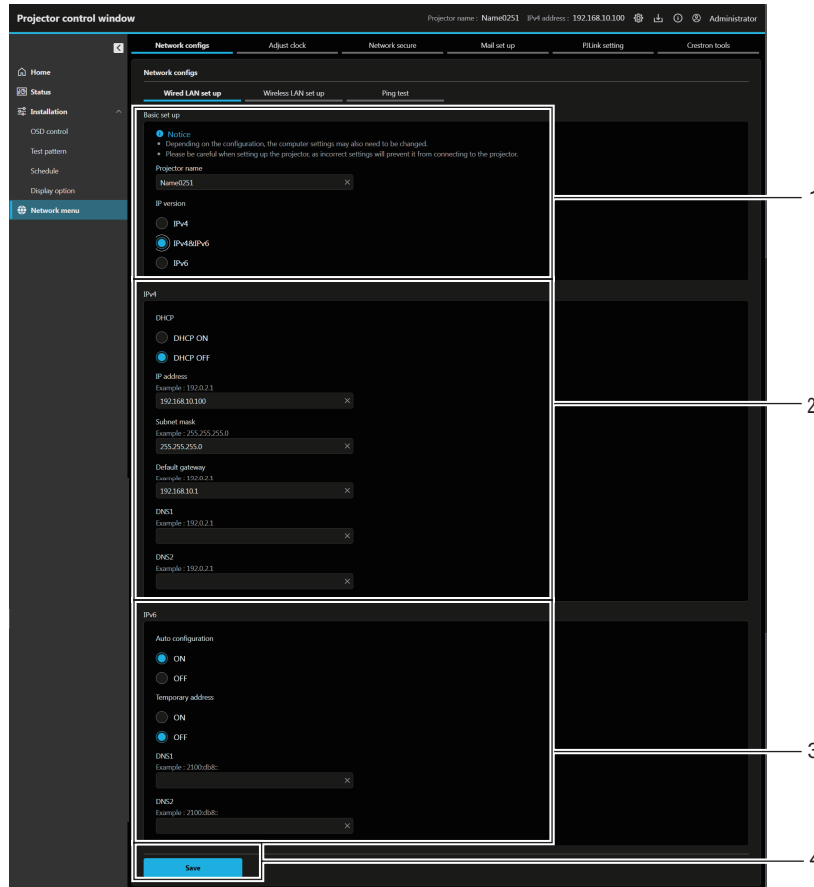
- When the following menu is set to [USER IMAGE], no content will be displayed if the user image is deleted.
  - [DISPLAY OPTION] menu → [BACK COLOR]
  - [DISPLAY OPTION] menu → [STARTUP LOGO]

[Network menu]

[Network configs]

Click [Network menu] → [Network configs].

For wired LAN connection



1 [Basic set up]

**[Projector name]**

Enter the name of the projector. Enter the host name if it is required when using a DHCP server etc.

**[IP version]**

[IPv4]: Uses only the “IPv4” protocol.

[IPv4 & IPv6]: Both the “IPv4” and the “IPv6” protocols can be used.

[IPv6]: Uses only the “IPv6” protocol.

2 [IPv4]

**[DHCP ON], [DHCP OFF]**

To enable the DHCP client function, set to [DHCP ON].

**[IP address]**

Enter the IPv4 address if a DHCP server is not used.

**[Subnet mask]**

Enter the subnet mask if a DHCP server is not used.

**[Default gateway]**

Enter the default gateway address for IPv4 if a DHCP server is not used.

**[DNS1]**

Enter the DNS1 server address (primary) for IPv4.

Allowed characters:

Numbers (0 - 9), period (.)

**[DNS2]**

Enter the DNS2 server address (secondary) for IPv4.

Allowed characters:

Numbers (0 - 9), period (.)

3 [IPv6]

**[Auto configuration]**

Select [ON] to automatically assign IPv6 address.

**[Temporary address]**

Select [ON] to use the temporary IPv6 address.

**[IP address]**

Enter the IPv6 address when the IPv6 address is not automatically assigned.

**[Prefix length]**

Enter the prefix length when the IPv6 address is not automatically assigned.

**[Default gateway]**

Enter the default gateway address for IPv6 when the IPv6 address is not automatically assigned.

**[DNS1]**

Enter the DNS1 server address (primary) for IPv6.

Allowed characters: Hexadecimal numbers (0 to f), colon (:)

**[DNS2]**

Enter the DNS2 server address (secondary) for IPv6.

Allowed characters: Hexadecimal numbers (0 to f), colon (:)

4 [Save]

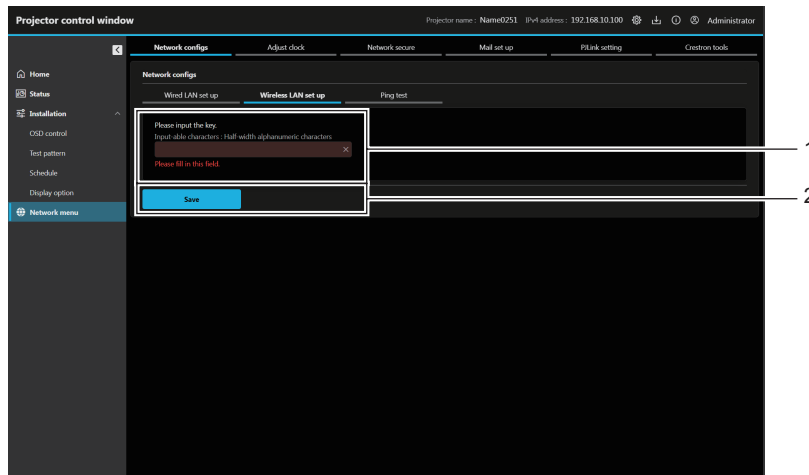
Update the setting.

Note

- When you use the “Forward” and “Back” functions of your browser, a warning message “Page has Expired” may appear. In that case, click [Network configs] again since the following operation will not be guaranteed.
- Changing LAN settings while connected to the LAN may cause the connection to disconnect.

For wireless LAN connection

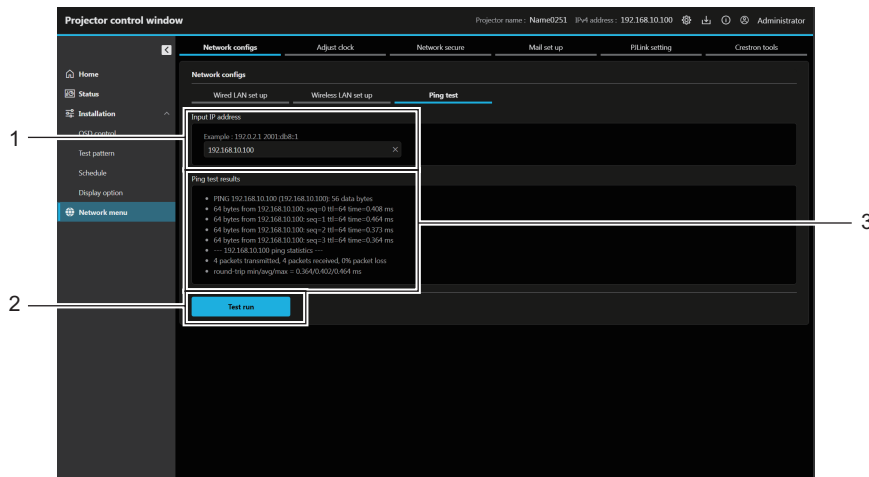
(Available only when the Wireless Module is attached to the projector)



- 1 **Key input box**  
Set the connection key.  
Enter 8 to 15 characters of single-byte alphanumeric.
- 2 **[Save]**  
Update the setting.

[Ping test]

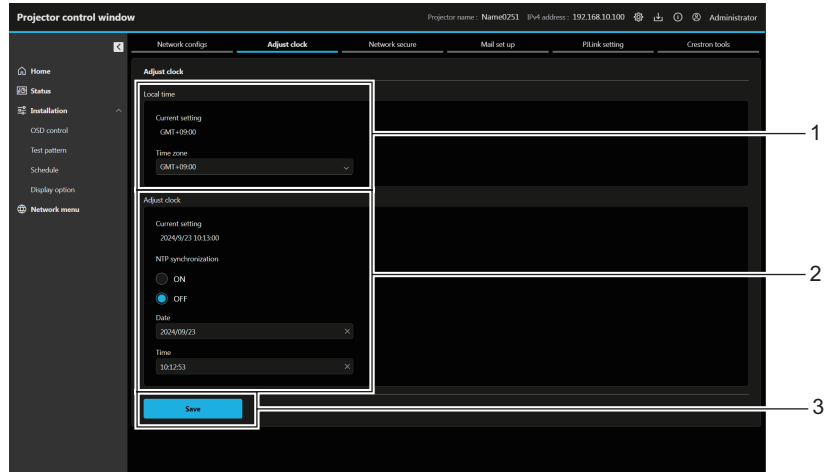
Check whether the network is connected to the E-mail server, POP server, DNS server, etc.



- 1 **[Input IP address]**  
Enter the IP address of the server to be tested.
- 2 **[Test run]**  
Execute the connection test.
- 3 **[Ping test results]**  
Displays the results of the connection test.  
Ping test results are displayed only after the test run has been executed.

**[Adjust clock]**

Click [Network menu] → [Adjust clock].



**1 [Local time]**

**[Current setting]**

Displays the current time zone setting. If the setting has been changed, it will be updated when you press the [Save] button.

**[Time zone]**

Select the time zone.

**2 [Adjust clock]**

**[Current setting]**

Displays the current date and time setting. If the setting has been changed, it will be updated when you press the [Save] button.

**[NTP synchronization]**

Set to [ON] when setting the date and time automatically.

**[NTP server name]**

Enter the IP address or server name of the NTP server when to adjust the date and time automatically.

(To enter the server name, the DNS server needs to be set up.)

**[Date]**

Enter the date to change when [NTP synchronization] is set to [OFF].

**[Time]**

Enter the time to change when [NTP synchronization] is set to [OFF].

**3 [Save]**

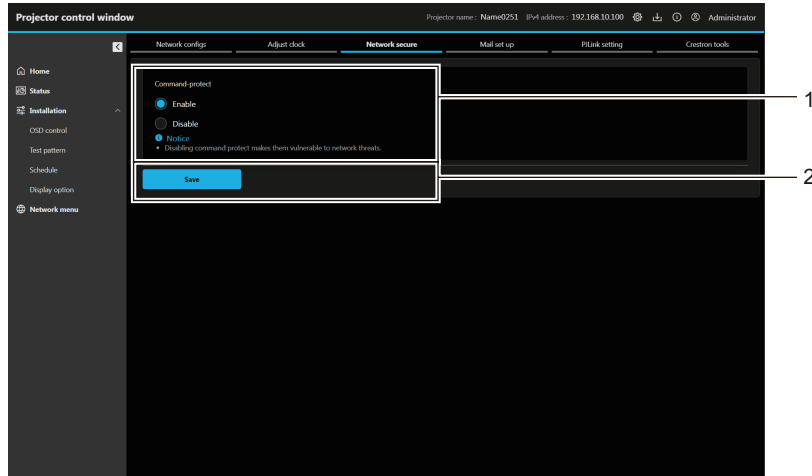
Update the settings.

**Note**

- The replacement of the battery inside the projector is required when the time goes out of alignment right after correcting the time. Consult your dealer.

### [Network secure]

Perform the setting to protect the projector from an external attack or abuse via LAN.  
Click [Network menu] → [Network secure].



#### 1 [Command-protect]

Performs the setting regarding connection authentication when using the command control function.

##### [Enable]:

Connects to the projector in protect mode.

Connection authentication is performed using the user name and password of the administrator account.

##### [Disable]:

Connects to the projector in non-protect mode.

Connection authentication is not performed.

#### 2 [Save]

Update the setting.

### Note

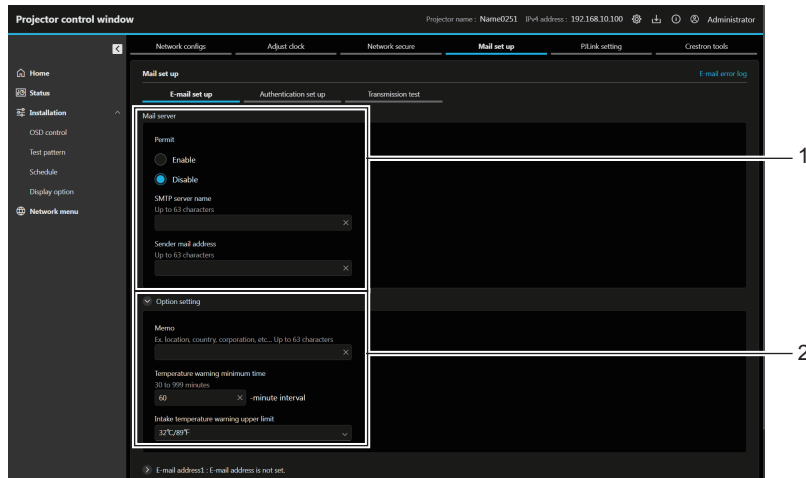
- When [Command-protect] is set to [Disable], the projector becomes vulnerable against a threat on the network because connection authentication will not be performed. Use this function by understanding the risk.
- For details on how to use the command control function, refer to "Control commands via LAN" (➔ page 201).

**[Mail set up]**

Click [Network menu] → [Mail set up].

**[E-mail set up]**

Send an E-mail to preset E-mail addresses (up to two addresses) when a problem has occurred.



**1 [Mail server]**

**[Permit]**

Select [Enable] to use the E-mail function.

**[SMTP server name]**

Enter the IP address or the server name of the E-mail server (SMTP). To enter the server name, the DNS server needs to be set up.

**[Sender mail address]**

Enter the E-mail address of the projector. (Up to 63 characters in single byte)

**2 [Option setting]**

**[Memo]**

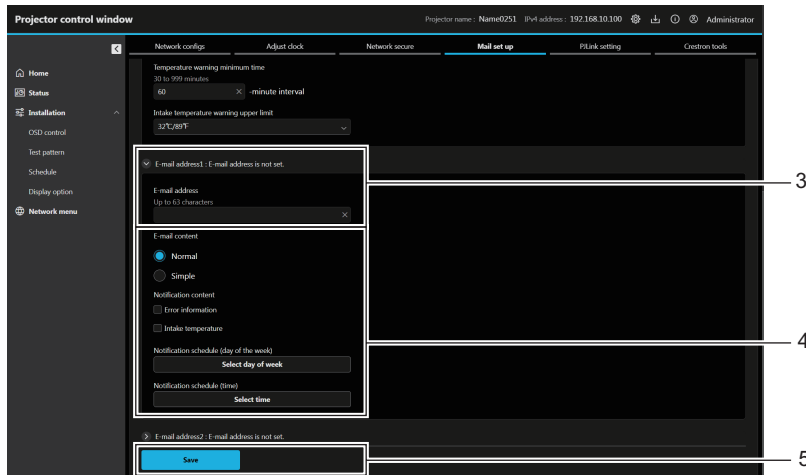
Enter information such as the location of the projector that notifies the sender of the E-mail. (Up to 63 characters in single byte)

**[Temperature warning minimum time]**

Change the minimum interval for the temperature warning E-mail. The default value is 60 minutes. In this case, another E-mail will not be sent for 60 minutes after sending the temperature warning E-mail even if it reaches the warning temperature.

**[Intake temperature warning upper limit]**

Change the temperature upper limit for the temperature warning mail. A temperature warning E-mail is sent when the temperature exceeds this value.



**3 [E-mail address1], [E-mail address 2]**

Enter the E-mail address to be sent. Leave [E-mail address 2] blank when two E-mail addresses are not to be used.

**4 Settings of the conditions to send E-mail**

Select the conditions to send E-mail.

**[E-mail content]:**

Select either [Normal] or [Simple].

- **[Normal]:** Select this item when sending detailed information including the status of the projector.
- **[Simple]:** Select this item when sending minimal information such as error information.

**[Notification content]:**

Send an E-mail when the following items are checked and occur.

**[Error information]:**

Send an E-mail when an error occurred in the self-diagnosis.

**[Intake temperature]:**

Send an E-mail when the intake air temperature has reached the value set at the above field.

**Periodic report:**

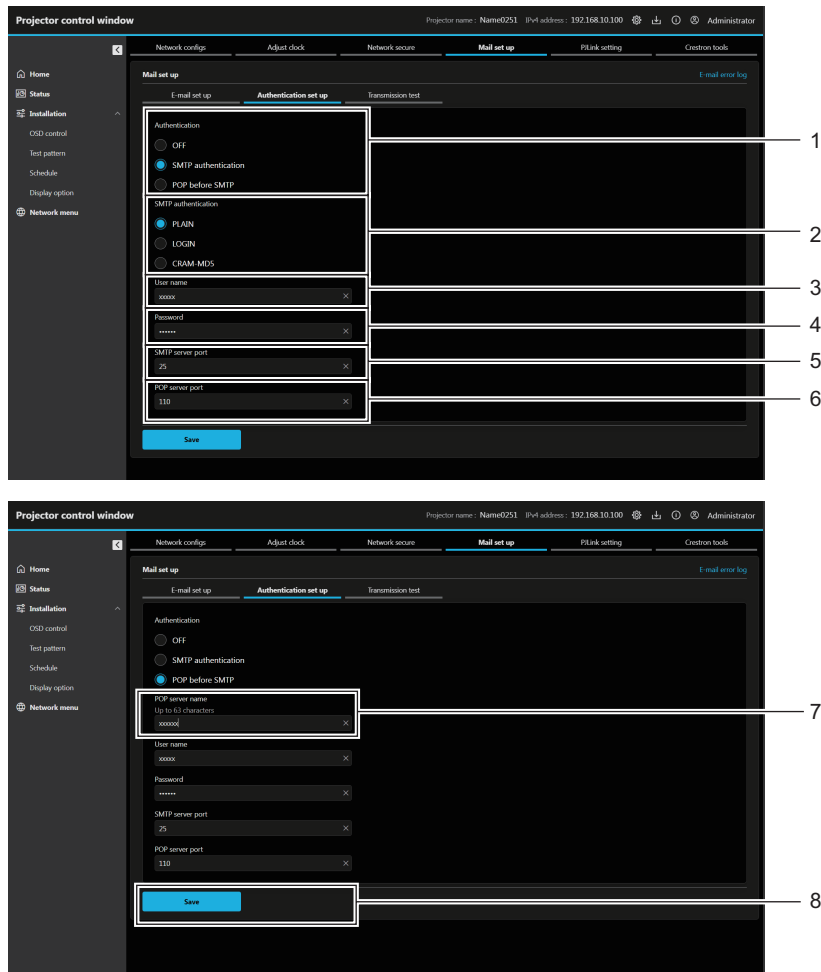
Set [Notification schedule (day of the week)] and [Notification schedule (time)] to send an E-mail periodically. An E-mail will be sent on the day and time with the check mark.

**5 [Save]**

Update the settings and sends the details by E-mail.

### [Authentication set up]

Set the authentication items when POP authentication or SMTP authentication is necessary to send an E-mail.

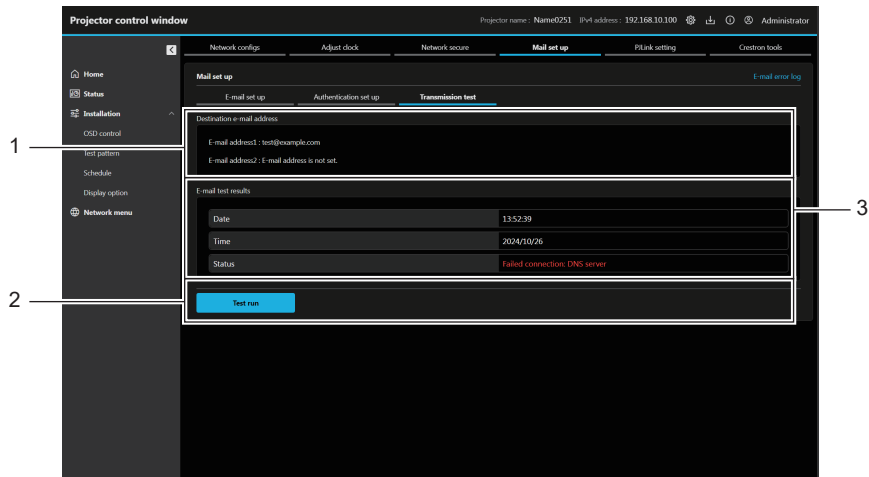


- |   |  |
|---|--|
| <p><b>1 [Authentication]</b><br/>Select the authentication method specified by your Internet service provider.</p> <p><b>2 [SMTP authentication]</b><br/>Set when the SMTP authentication is selected.</p> <p><b>3 [User name]</b><br/>Enter the user name for the POP server or the SMTP server.</p> <p><b>4 [Password]</b><br/>Enter the password for the POP server or the SMTP server.</p> <p><b>5 [SMTP server port]</b><br/>Enter the port number of the SMTP server.<br/>(Normally 25)</p> | <p><b>6 [POP server port]</b><br/>Enter the port number of the POP server.<br/>(Normally 110)</p> <p><b>7 [POP server name]</b><br/>Enter the POP server name.<br/>Allowed characters:<br/>Alphanumerics (A - Z, a - z, 0 - 9)<br/>Minus sign (-) period (.) colon (:)</p> <p><b>8 [Save]</b><br/>Update the settings.</p> |
|---|--|



**[Transmission test]**

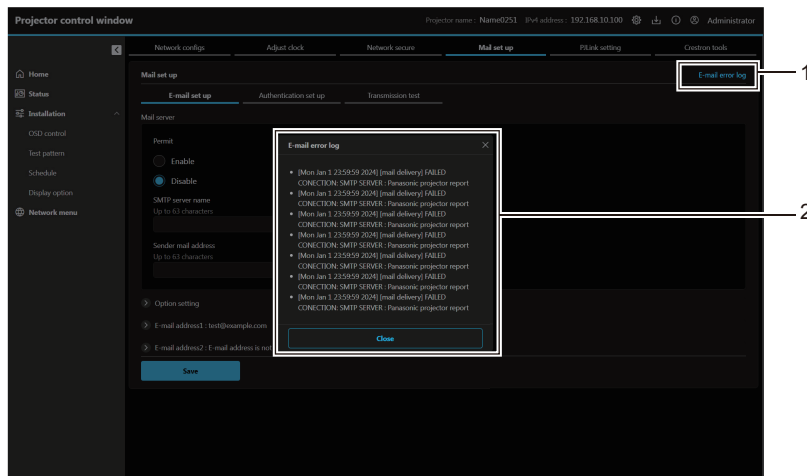
Perform an E-mail sending test to the destination e-mail address.



- |  |   |
|--|---|
| <p><b>1 [Destination e-mail address]</b><br/>Displays the preset destination e-mail address.</p> <p><b>2 [Test run]</b><br/>Execute the transmission test.</p> | <p><b>3 [E-mail test results]</b><br/>Displays the date, time, and status of the transmission. Transmission test results are displayed only after the test run has been executed.</p> |
|--|---|

**[E-mail error log]**

E-mail error log is displayed if periodic E-mail sending has failed.  
Click [E-mail error log] in the top-right corner of [Mail set up] screen.



- |  |   |
|--|---|
| <p><b>1 [E-mail error log]</b><br/>Click to display the E-mail error log screen.</p> | <p><b>2 Example of E-mail error log</b></p> |
|--|---|

**Note**

- [E-mail error log] displays the recent few thousand accesses/requests. All information may not be displayed when many accesses/requests are made at once.
- Logs in [E-mail error log] are deleted from the oldest when exceeding a certain amount.
- Check [E-mail error log] periodically.

### Contents of E-mail sent

#### Example of the E-mail sent when E-mail is set

The following E-mail is sent when the E-mail settings have been established.

- Example: When [E-mail content] is set to [Simple]

```
=== Panasonic projector report(CONFIGURE) ===
```

```
Projector Type:
```

```
[PT-VMZ82]
```

```
Serial No.:
```

```
[PA1234567]
```

```
--- E-mail setup data
```

```
-TEMP. WARNING SETUP
```

```
MINIMUM TIME :
```

```
at [ 60] minutes interval
```

```
INTAKE AIR TEMP. :
```

```
Over [ 32degC / 89degF ]
```

```
-
```

```
ERROR [ OFF ]
```

```
INTAKE TEMP. [ OFF ]
```

```
-PERIODIC REPORT
```

```
Sun[ OFF ] Mon[ OFF ]
```

```
Tue[ OFF ] Wed[ OFF ]
```

```
Thu[ OFF ] Fri[ OFF ]
```

```
Sat[ OFF ]
```

```
00:00[ OFF ] 01:00[ OFF ]
```

```
02:00[ OFF ] 03:00[ OFF ]
```

```
04:00[ OFF ] 05:00[ OFF ]
```

```
06:00[ OFF ] 07:00[ OFF ]
```

```
08:00[ OFF ] 09:00[ OFF ]
```

```
10:00[ OFF ] 11:00[ OFF ]
```

```
12:00[ OFF ] 13:00[ OFF ]
```

```
14:00[ OFF ] 15:00[ OFF ]
```

```
16:00[ OFF ] 17:00[ OFF ]
```

```
18:00[ OFF ] 19:00[ OFF ]
```

```
20:00[ OFF ] 21:00[ OFF ]
```

```
22:00[ OFF ] 23:00[ OFF ]
```

```
--- Error information
```

```
FAN [ OK ]
```

```
LD [ OK ]
```

```
TEMP. [ OK ]
```

```
FILTER [ OK ]
```

```
OTHER [ FAILED ]
```

```
Error code :
```

```
00 00 00 00
```

```
00 00 00 02
```

```
00 00 00 00
```

```
00 00 00 00
```

```
--- Temperature
```

```
Intake air:
```

```
27 degC / 80 degF
```

```
Exhaust air:
```

```
28 degC / 82 degF
```

```
Light1:
```

```
26 degC / 78 degF
```

```
Light2:
```

```
26 degC / 78 degF
```

```
----- Memo -----
```

**Example of the E-mail sent for an error**

The following E-mail is sent when an error has occurred.

- Example: When [E-mail content] is set to [Simple]

```

==== Panasonic projector report(ERROR) ====
Projector Type:
[PT-VMZ82]
Serial No:
[PA1234567]

--- Error information
FAN [ OK ]
LD [ OK ]
TEMP. [ OK ]
FILTER [ OK ]
OTHER [ FAILED ]
Error code :
00 00 00 00
00 00 00 02
00 00 00 00
00 00 00 00

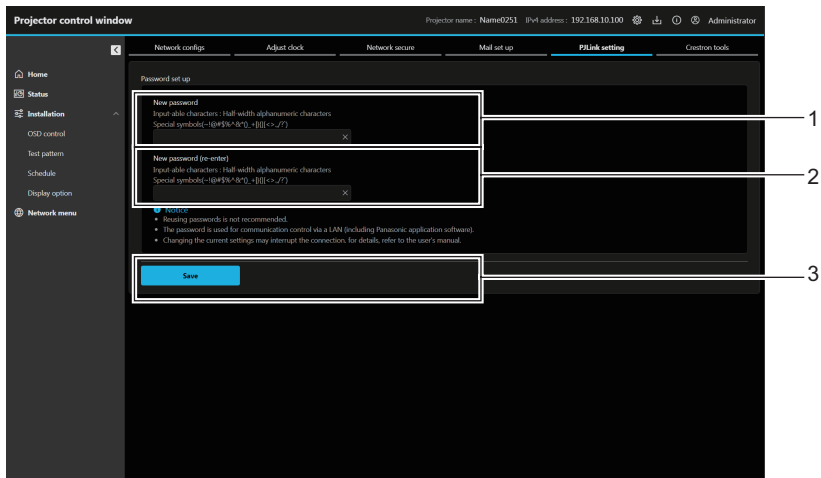
--- Temperature
Intake air:
27 degC / 80 degF
Exhaust air:
27 degC / 80 degF
Light 1:
26 degC / 78 degF
Light 2:
26 degC / 78 degF

----- Memo -----
    
```

**[PJLink setting]**

Set the password of PJLink.

Click [Network menu] → [PJLink setting].



- |  |   |
|--|---|
| <p><b>1 [New password]:</b><br/>Enter the desired new password. (Up to 32 half-width characters)</p> | <p><b>3 [Save]</b><br/>Update the settings.</p> |
| <p><b>2 [New password (re-enter)]:</b><br/>Enter the new password again.</p>                         |   |

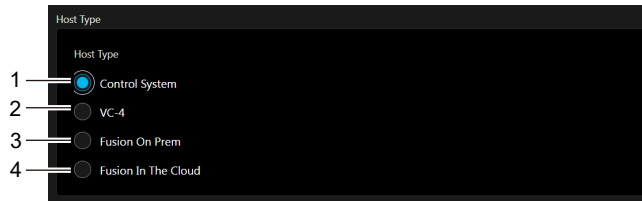
**[Crestron tools]**

Set the information required for connecting the control system of Crestron Electronics, Inc. to the projector, and the information to monitor/control the projector using the control system of Crestron Electronics, Inc. When the [NETWORK] menu → [NETWORK CONTROL] → [Crestron Connected™] is set to [OFF], the [Crestron tools] cannot be set.

Click [Network menu] → [Crestron tools].

To update the settings, click [Save].

**[Host Type]**



**1 [Control System]**

Select this item when using the control system of Crestron Electronics, Inc.

**2 [VC-4]**

Select this item when using VC-4 software control platform.

**3 [Fusion On Prem]**

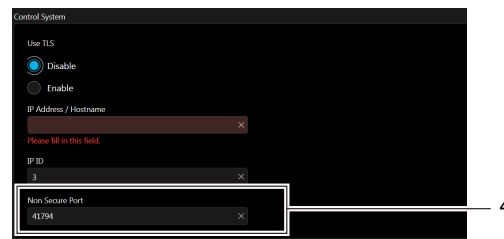
Select this item when using Crestron Fusion On-premises.

**4 [Fusion In The Cloud]**

Select this item when using Crestron Fusion Cloud.

**■ [Control system]**

Configure the setting for the control system required to connect to the projector as a client.



**1 [Use TLS]**

Set the secure communication.

**[Disable]:**

Performs the unsecured communication.

**[Enable]:**

Performs the secure communication using TLS (Transport Layer Security).

**2 [IP Address / Hostname]**

Enter the IP address or the host name of the connection destination.

**3 [IP ID]**

Set the IP ID used to determine the projector on the network. (A number up to four digits)  
Default value: 3

**4 [Non Secure Port]**

Set the port number to be used with the unsecured communication.  
Default value: 41794

**5 [Secure Port]**

Set the port number to be used with the secure communication.  
Default value: 41796

**6 [User Name]**

Enter the user name used for the connection authentication. (Up to 20 half-width characters)

**7 [Password]**

Enter the password used for the connection authentication. (Up to 20 half-width characters)

**8 [Verify Certification]**

Select whether to enable the certificate verification for secure communication.

**[Disable]:**

Does not perform the certificate verification.

**[Enable]:**

Performs the certificate verification.

**[Install the CA certificate]**

**[Select files]:** Select the certificate file.

**[Install]:**

Installs the certificate.

The certificate is installed into the projector by specifying the certificate file and clicking [Install].

**[Certificate information]**

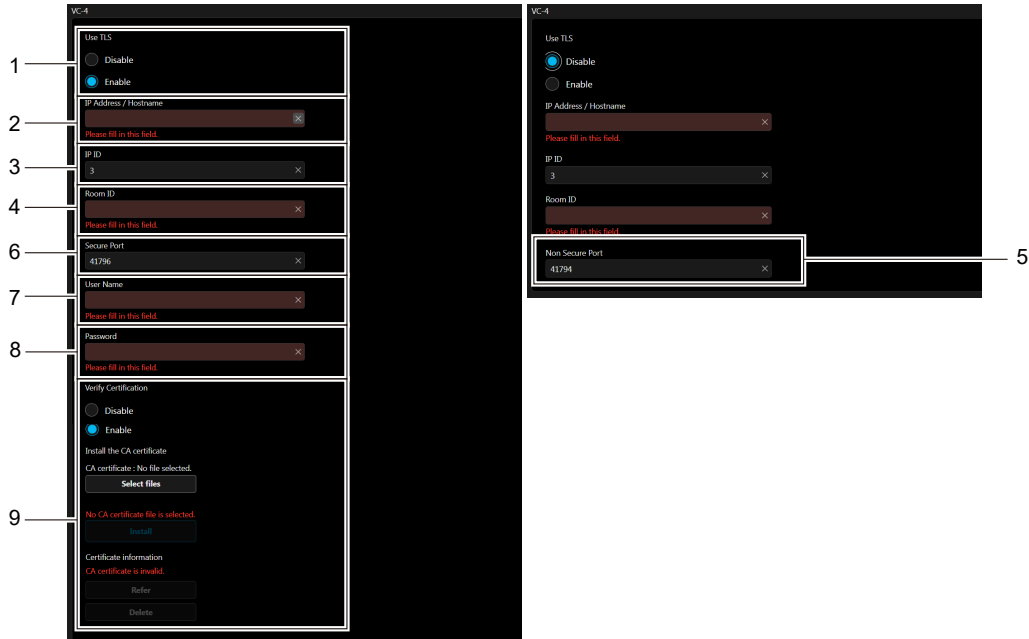
Displays the status of the certificate.

Information of the installed certificate is displayed by clicking [Refer].

The installed certificate can be deleted by clicking [Delete].

■ [VC-4]

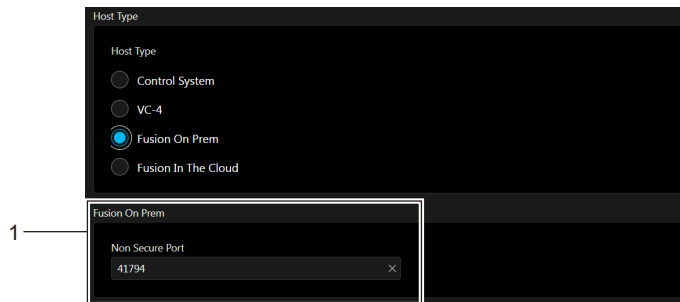
Configure the setting for the VC-4 required to connect to the projector as a client.



- 1 **[Use TLS]**  
Set the secure communication.  
**[Disable]:**  
Performs the unsecured communication.  
**[Enable]:**  
Performs the secure communication using TLS (Transport Layer Security).
- 2 **[IP Address / Hostname]**  
Enter the IP address or the host name of the connection destination.
- 3 **[IP ID]**  
Set the IP ID used to determine the projector on the network. (A number up to four digits)  
Default value: 3
- 4 **[Room ID]**  
Set the Room ID used to determine the projector on the network.  
(Up to 32 half-width characters)
- 5 **[Non Secure Port]**  
Set the port number to be used with the unsecured communication.  
Default value: 41794
- 6 **[Secure Port]**  
Set the port number to be used with the secure communication.  
Default value: 41796
- 7 **[User Name]**  
Enter the user name used for the connection authentication. (Up to 20 half-width characters)
- 8 **[Password]**  
Enter the password used for the connection authentication. (Up to 20 half-width characters)
- 9 **[Verify Certification]**  
Select whether to enable the certificate verification for secure communication.  
**[Disable]:**  
Does not perform the certificate verification.  
**[Enable]:**  
Performs the certificate verification.  
**[Install the CA certificate]**  
**[Select files]:**  
Select the certificate file.  
**[Install]:**  
Installs the certificate.  
The certificate is installed into the projector by specifying the certificate file and clicking [Install].  
**[Certificate information]**  
Displays the status of the certificate.  
Information of the installed certificate is displayed by clicking [Refer].  
The installed certificate can be deleted by clicking [Delete].

■ [Fusion On Prem]

Configure the setting required to access the projector assigned to a server using Crestron Fusion On-premises.

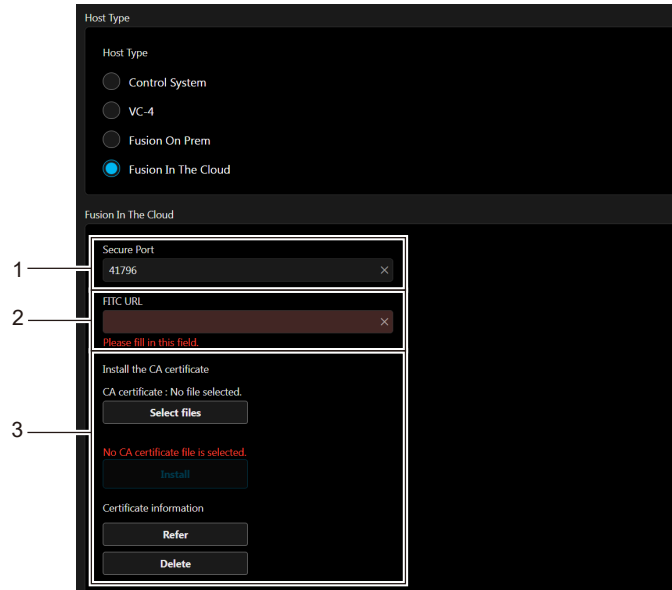


- 1 **[Non Secure Port]**  
Set the port number to be used with the unsecured communication.

Default value: 41794

■ [Fusion In The Cloud]

Configure the setting required to access the projector assigned to a server using Crestron Fusion Cloud.



1 [Secure Port]

Set the port number to be used with the secure communication.  
Default value: 41796

2 [FITC URL]

Enter the URL of the Fusion server in the Cloud.

3 [Install the CA certificate]

**[Select files]:**

Select the certificate file.

**[Install]:**

Installs the certificate.

The certificate is installed into the projector by specifying the certificate file and clicking [Install].

**[Certificate information]**

Displays the status of the certificate.

Information of the installed certificate is displayed by clicking [Refer].

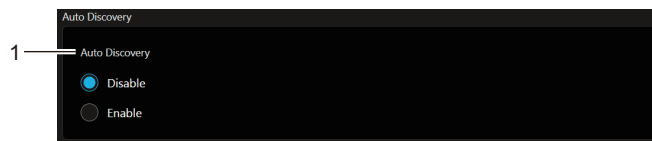
The installed certificate can be deleted by clicking [Delete].

**Note**

- The projector has a factory default built-in FITC CA certificate. You can replace the FITC CA certificate by installing a new certificate with [Install].
- If the FITC CA certificate has been deleted, it will be reinstalled after the projector's power has been switched off and on.

**[Auto Discovery]**

Set the standby process against the search protocol of the control system and the application software.



1 [Auto Discovery]

**[Disable]:**

Disables the standby process.

**[Enable]:**

Enables the standby process and enables the automatic detection of the projector.

**[XiO Cloud]**

Configure the setting to manage the devices using the XiO Cloud.



1 [XiO Cloud]

**[Disable]:**

Disables the XiO Cloud function.

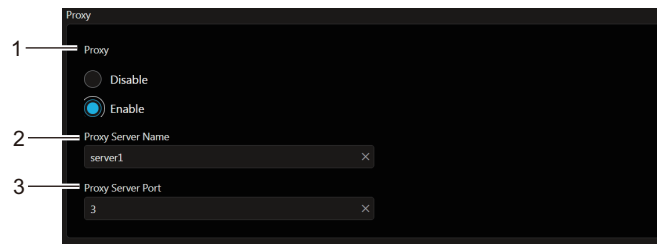
**[Enable]:**

Enables the XiO Cloud function.

### [Proxy]

---

Configure the proxy server setting.



**1 [Proxy]**

**[Disable]:**

Does not use the proxy server.

**[Enable]:**

Uses the proxy server.

**2 [Proxy Server Name]**

Enter the proxy server name or the IPv4 address.

**3 [Proxy Server Port]**

Enter the port number of the proxy server.

### Note

---

- [Proxy Server Name] does not support the IPv6 address.

## Using the data cloning function

Perform the operation of the data cloning function. Data such as the settings and adjustment values of the projector can be copied to multiple projectors via LAN or using the USB memory.

### ■ Data that cannot be copied

The following settings cannot be copied. Set these in each projector.

- The [PROJECTOR SETUP] menu → [PROJECTOR ID]
- The [PROJECTOR SETUP] menu → [DATE AND TIME] → [ADJUST CLOCK]
- The image registered in [PROJECTOR SETUP] menu → [USER IMAGE]
- The [PROJECTOR SETUP] menu → [DATA CLONING] → [LAN] → [WRITE PROTECT]
- The [SECURITY] menu → [PASSWORD]
- The [SECURITY] menu → [CONTROL DEVICE SETUP]
- The [NETWORK] menu → [WIRED LAN]
- The [NETWORK] menu → [PROJECTOR NAME]
- The [NETWORK] menu → [NETWORK SECURITY]
- Security password
- Control device password
- Password set in “[Account set up] (when accessed by administrator account)” (➔ page 143) of the web control screen
- CRT key, the self-signed certificate information, and the installed server certificate information generated in “[Web secure] (Certificate)” (➔ page 145) of the web control screen
- “[Network secure]” (➔ page 166) in the web control screen
- “[E-mail set up]” (➔ page 167) in the web control screen
- “[Authentication set up]” (➔ page 168) in the web control screen
- “[Crestron tools]” (➔ page 172) in the web control screen

### ■ Supported device

- Commercially available USB memory is supported.  
The USB memory with a security function is not supported.
- Only the cards formatted in FAT16 or FAT32 can be used.
- Only the single partition structure is supported.

#### Note

- The data cloning function will not operate when the models of the projectors are different. For example, data of PT-VMZ82 can be copied to other PT-VMZ82 projectors, but it can not be copied to PT-VMZ72. Data cloning is limited to the same model.

## Copying the data to another projector via LAN

Make the following settings on the projector of the copy destination in advance. For details, refer to “Setting [WRITE PROTECT]” (➔ page 177).

- The [PROJECTOR SETUP] menu → [DATA CLONING] → [LAN] → [WRITE PROTECT] → [OFF]

#### Note

- To use the network function with the projector, it is necessary to set the password of the administrator account. (➔ page 121)  
When a password is not set for the administrator account (blank), the network function of the projector cannot be used. To copy the data via LAN, set the passwords for the copy source projector and the copy destination projector.

- 1) **Connect all projectors to a switching hub using LAN cables.** (➔ page 132)
- 2) **Turn on all the projectors.**
- 3) **Press ▲▼ to select [DATA CLONING] on the copy source projector.**
- 4) **Press the <ENTER> button.**
  - The [PASSWORD] screen is displayed.
- 5) **Enter the security password and press the <ENTER> button.**
  - The [DATA CLONING] screen is displayed.
- 6) **Press ▲▼ to select [LAN].**



- 7) **Press the <ENTER> button.**
  - The [LAN DATA CLONING] screen is displayed.
- 8) **Press ▲▼ to select [SELECT PROJECTOR].**
- 9) **Press the <ENTER> button.**
  - The projectors in the same network are displayed as a list.
- 10) **Press ▲▼ to select the copy destination projector.**
- 11) **Press the <ENTER> button.**
  - To select multiple projectors, repeat Steps 10) to 11).
- 12) **Press the <DEFAULT> button on the remote control.**
  - The confirmation screen is displayed.
- 13) **Press ◀▶ to select [OK], and press the <ENTER> button.**
  - Copy of the data between the projectors is started.  
Once the copy is completed, results are displayed as a list in the [LAN DATA CLONING] screen.  
Meanings of the marks displayed in the list are as follows.
    - Green: Data copy has succeeded.
    - Red: Data copy has failed. Confirm the connection of the LAN cable and power status of the copy destination projector.
  - Data is copied to the copy destination projector in the standby mode.  
If the copy destination projector is in the projection mode, the LAN data cloning request message is displayed, and then the copy destination projector automatically shifts to the standby mode to start copy of data.
- 14) **Turn on the copy destination projector.**
  - The copied content is reflected to the projector.

#### Note

- The security password is the password set in the [SECURITY] menu → [PASSWORD CHANGE].  
Initial password of the factory default setting: ▲▶▼◀▲▶▼◀
- The light source indicator <LIGHT> and the temperature indicator <TEMP> of the copy destination projector blink while copying the data.  
Confirm that the blinking of the indicators stops, and then turn on the projector.

#### Setting [WRITE PROTECT]

Set if the copy of data via LAN is permitted or not.

- 1) **Press ▲▼ to select [DATA CLONING] on the copy destination projector.**
- 2) **Press the <ENTER> button.**
  - The [PASSWORD] screen is displayed.
- 3) **Enter the security password and press the <ENTER> button.**
  - The [DATA CLONING] screen is displayed.
- 4) **Press ▲▼ to select [LAN].**
- 5) **Press the <ENTER> button.**
  - The [LAN DATA CLONING] screen is displayed.
- 6) **Press ▲▼ to select [WRITE PROTECT].**
- 7) **Press ◀▶ to switch the item.**
  - The items will switch each time you press the button.

[OFF]	Permits operations of [DATA CLONING] from another projector via LAN.
[ON]	Does not permit the operations of [DATA CLONING] from another projector via LAN. <ul style="list-style-type: none"> <li>• Data copy will not be possible when [ON] is set. When it is not necessary to copy data, set [ON] so that the data is not changed by mistake.</li> </ul>

#### Note

- The security password is the password set in the [SECURITY] menu → [PASSWORD CHANGE].  
Initial password of the factory default setting: ▲▶▼◀▲▶▼◀

## Copying the data to another projector using USB

### Copying projector data to USB memory

- 1) Insert the USB memory into the <USB (VIEWER/WIRELESS/DC OUT)> terminal.
- 2) Press ▲▼ to select [DATA CLONING].
- 3) Press the <ENTER> button.
  - The [PASSWORD] screen is displayed.
- 4) Enter the security password and press the <ENTER> button.
  - The [DATA CLONING] screen is displayed.
- 5) Press ▲▼ to select [USB MEMORY].
- 6) Press the <ENTER> button.
  - The [SELECT COPY TYPE] screen is displayed.
- 7) Press ▲▼ to select [PROJECTOR -> USB MEMORY].
- 8) Press the <ENTER> button.
  - The confirmation screen is displayed.
- 9) Press ◀▶ to select [OK], and press the <ENTER> button.
  - Copying of data to the USB memory is started.
  - Once the copying of data is completed, [Data copy finished.] is displayed.
- 10) Press the <ENTER> button.
  - Disconnect the USB memory from the <USB (VIEWER/WIRELESS/DC OUT)> terminal.

### Note

- The security password is the password set in the [SECURITY] menu → [PASSWORD CHANGE].  
Initial password of the factory default setting: ▲▶▼◀▶▶▶▶▶▶▶▶▶
- [USB MEMORY] can not be set when the input is set to MEMORY VIEWER. (➔ page 53).
- For the USB memory that can be used with the projector and handling of the memory, refer to "Using the USB memory" (➔ page 57).
- An error message is displayed when saving or reading data to/from the USB memory has failed.

### Copying data in the USB memory to the projector

- 1) Insert the USB memory into the <USB (VIEWER/WIRELESS/DC OUT)> terminal.
- 2) Press ▲▼ to select [DATA CLONING].
- 3) Press the <ENTER> button.
  - The [PASSWORD] screen is displayed.
- 4) Enter the security password and press the <ENTER> button.
  - The [DATA CLONING] screen is displayed.
- 5) Press ▲▼ to select [USB MEMORY].
- 6) Press the <ENTER> button.
  - The [SELECT COPY TYPE] screen is displayed.
- 7) Press ▲▼ to select [USB MEMORY -> PROJECTOR].
- 8) Press the <ENTER> button.
  - The confirmation screen is displayed.
- 9) Press ◀▶ to select [OK], and press the <ENTER> button.
  - The projector automatically enters standby state and starts copying data from the USB memory to the projector.
- 10) Once the copying of the data is completed, disconnect the USB memory from the <USB (VIEWER/WIRELESS/DC OUT)> terminal.

### 11) Turn on the power of the projector.

- The copied content is reflected to the projector.

---

#### Note

---

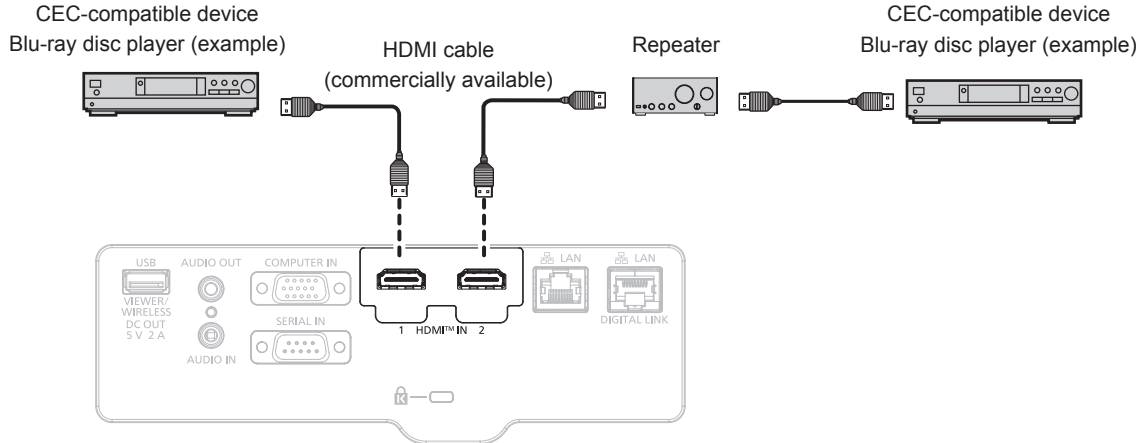
- The security password is the password set in the [SECURITY] menu → [PASSWORD CHANGE].  
Initial password of the factory default setting: ▲▶▼◀▲▶▼◀
- The light source indicator <LIGHT> and the temperature indicator <TEMP> of the copy destination projector blink while copying the data.  
Confirm that the blinking of the indicators stops, and then turn on the projector.

# Using HDMI CEC function

HDMI CEC function allows to operate the CEC-compatible device with the projector remote control and allows the power on/off link operations between the projector and CEC-compatible device.

## Connecting a CEC-compatible device

Connect a CEC-compatible device to the <HDMI IN 1> terminal or <HDMI IN 2> terminal.



Connection example with CEC-compatible device

## Setting the projector and CEC-compatible device

Before using the HDMI CEC function, you need to configure the settings on the projector and the CEC-compatible device.

- CEC-compatible device: enable the HDMI CEC function.
- Projector: Set the [PROJECTOR SETUP] menu → [HDMI CEC] to [ON]. (➡ page 108)

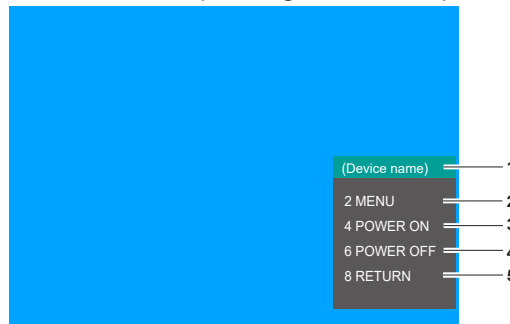
### Note

- After switching on the CEC-compatible device, switch on the projector and select HDMI1 input or HDMI2 input, then check that the image from the CEC-compatible device is projected correctly.

## Operating the CEC-compatible device with the projector remote control

You can operate the device using the projector remote control by calling up the operation menu of the CEC-compatible device from the HDMI CEC operation screen. Use the number buttons (<2>, <4>, <6>, <8>) on the remote control to select the operation item on the HDMI CEC operation screen.

About the HDMI CEC operation screen, refer to “Operating a CEC-compatible device” (➡ page 109).



HDMI CEC operation screen

- |  |   |
|--|---|
| 1 Displays the device name to be operated.                           | 4 [POWER OFF]<br>Switch off the device.   |
| 2 [MENU]<br>Call up the operation menu of the CEC-compatible device. | 5 [RETURN]<br>Returns the operation menu of the CEC-compatible device to the previous screen. |
| 3 [POWER ON]<br>Switch on the device.                                |   |

### Note

- If the operation menu of the CEC-compatible device cannot be called up from the HDMI CEC operation screen, change the menu code setting. For the operation details, refer to “Changing the menu code” (➡ page 109).

- If you cannot operate the operation menu of a CEC-compatible device, try setting the [PROJECTOR SETUP] menu → [HDMI CEC] to [OFF] and [ON] again. It may be improved.
- While the HDMI CEC operation screen is displayed, only the number buttons on the remote control can be used and other button operations are disabled.

### Menu operation of CEC-compatible device

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When the setting menu of the CEC-compatible device is displayed, you can use the ▲▼◀▶ buttons and <ENTER> button of the remote control to operate the menu.

### About the power link operations

---

By setting the [PROJECTOR SETUP] menu → [HDMI CEC] → [PROJECTOR -> DEVICE] / [DEVICE -> PROJECTOR] to a setting other than [DISABLE], the following operations can be achieved.

#### The link setting of [PROJECTOR -> DEVICE]

---

##### ■ When the setting is [POWER OFF] or [POWER ON / OFF]

- When you turn off the power of the projector and put it in standby mode, all CEC-compatible devices connected to the <HDMI IN 1> terminal and <HDMI IN 2> terminal will enter standby mode.

##### ■ When the setting is [POWER ON / OFF]

- If you turn on the projector and start projection, the CEC-compatible device connected to the <HDMI IN 1> terminal or <HDMI IN 2> terminal will turn on.

#### The link setting of [DEVICE -> PROJECTOR]

---

##### ■ When the setting is [POWER ON] or [POWER ON / OFF]

- While the projector is in standby, if the CEC-compatible device connected to the <HDMI IN 1> terminal or <HDMI IN 2> terminal is turned on, the projector turns on, starts projection, and switches to the input that the CEC-compatible device is connected.
- While the projector is in standby, if the CEC-compatible device starts playing, the projector turns on, starts projection, and switches to the input that the CEC-compatible device is connected.
- While the projector is turned on, if the CEC-compatible device starts playing, the projector switches to the input that the CEC-compatible device is connected.

##### ■ When the setting is [POWER ON / OFF]

- While the projector is turned on, if the CEC-compatible device connected to the <HDMI IN 1> terminal or <HDMI IN 2> terminal is switched off, the projector turns off and enters standby mode.

#### Note

---

- When the [DEVICE -> PROJECTOR] menu is set to [POWER ON / OFF], the link operations are available only if supported by the CEC-compatible devices.
- Depending on the status of the device, such as when the projector or the CEC-compatible device is starting up, it may not operate normally.
- The connected CEC-compatible device may not support the link operation described in the manual. Not all the operations of the CEC-compatible device are warranted.

# Updating the firmware

The firmware of the projector can be updated via LAN or using a USB memory.

Firmware that can be updated can be downloaded from the following website ("Panasonic Professional Display and Projector Technical Support Website"). Customer can update the firmware if a newer version than the current firmware version is published.

<https://docs.connect.panasonic.com/projector/pass>

It is necessary to register and log in to PASS<sup>\*1</sup> to confirm the availability of the firmware that can be updated or to download the firmware.

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

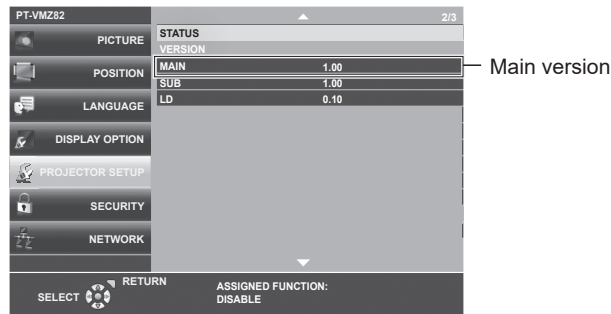
## ■ Firmware that can be updated

- Main version

## ■ How to confirm the firmware version

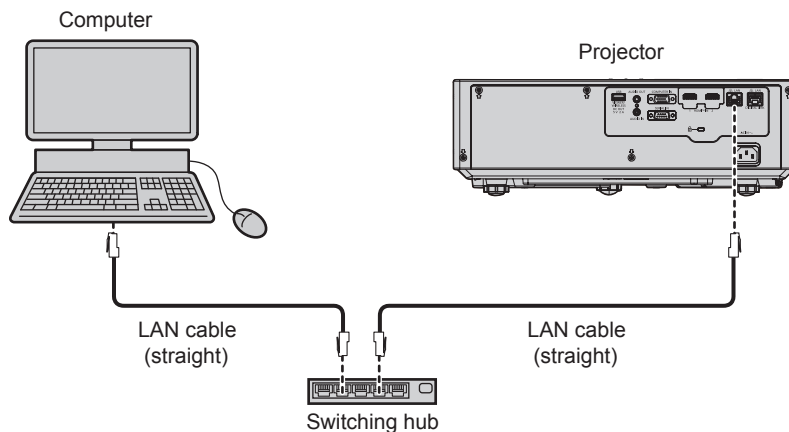
Current firmware version can be confirmed by pressing the <STATUS> button on the remote control and displaying the [STATUS] screen.

The firmware version can also be confirmed in the [PROJECTOR SETUP] menu → [STATUS].



## Updating the firmware via LAN

### Example of network connection



### Attention

- When a LAN cable is directly connected to the projector, the network connection must be made indoors.

### Note

- A LAN cable is required to connect to the network via wired LAN.
- Connect a LAN cable to the <LAN> terminal or the <DIGITAL LINK/LAN> terminal of the projector.
- To connect to the network using the <LAN> terminal, set the [NETWORK] menu → [ETHERNET TYPE] to [LAN] or [LAN & DIGITAL LINK].
- The firmware cannot be updated under the IPv6 protocol. To update the firmware, set the [NETWORK] menu → [WIRED LAN] → [IP VERSION] to [IPv4] or [IPv4 & IPv6] and assign an IPv4 address.
- To connect to the network using the <DIGITAL LINK/LAN> terminal, set the [NETWORK] menu → [ETHERNET TYPE] to [DIGITAL LINK] or [LAN & DIGITAL LINK].

- The <DIGITAL LINK/LAN> terminal and the <LAN> terminal are connected inside of the projector when the [NETWORK] menu → [ETHERNET TYPE] is set to [LAN & DIGITAL LINK]. Do not directly connect the <DIGITAL LINK/LAN> terminal and the <LAN> terminal using a LAN cable. Construct the system so that it is not connected to the same network via the peripherals such as the switching hub or the twisted-pair-cable transmitter.
- Use a straight or crossover LAN cable that is compatible with CAT5 or higher for the LAN cable to connect to the <LAN> terminal. Either the straight or the crossover cable, or both cables can be used depending on the system configuration. Consult your network administrator. The projector will determine the type of the cable (straight or crossover) automatically.
- Use a LAN cable of 100 m (328'1") or shorter as the LAN cable to connect to the <LAN> terminal.
- For the LAN cable between the twisted-pair-cable transmitter and the projector, use a cable that meets the following criteria:
  - Conforming to CAT5e or higher standards
  - Shielded type (including connectors)
  - Straight-through
  - Single wire
  - Diameter of the cable core is same or larger than AWG24 (AWG24, AWG23, etc.)
- The maximum transmission distance between the twisted-pair-cable transmitter and the projector is normally 100 m (328'1"). It is possible to transmit up to 150 m (492'2") if the twisted-pair-cable transmitter supports the long-reach communication method.
- Do not use a hub between the twisted-pair-cable transmitter and the projector.

### Computer used for updating the firmware

Prepare a computer compatible with the following OS equipped with a LAN terminal.

- Microsoft Windows 11  
Windows 11 Pro 64 bit, Windows 11 Home 64 bit
- Microsoft Windows 10  
Windows 10 Pro 32 bit/64 bit, Windows 10 Home 32 bit/64 bit

### Note

- The operation is not guaranteed when used in an environment outside the conditions described in this section, or when a home-made computer is used.
- This does not guarantee the operation on all computers even if it is used in the environment fulfilling the conditions described in this section.
- Connection with the projector or the data transfer of the firmware may fail in following cases. If it has failed, change the software setting or change the [Power Options] setting in Windows OS, and try the update again.
  - When security software such as firewall or the utility software for the LAN adapter is installed
  - When other software has started up or operating
  - When the computer has gone into sleep/pause status

### Acquiring the firmware

Download the firmware update tool for this projector (compressed file in zip format) from the following website.

<https://docs.connect.panasonic.com/projector/pass>

- File name (example): FirmUpdateTool\_VMZ82\_101.zip  
(Update tool for PT-VMZ82 / PT-VMZ72 / PT-VMZ62 series with version 1.01)

### Confirming the setting of the projector

Confirm the setting of the projector to be updated in advance.

- Whether the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE] is set to [NORMAL]
- The [NETWORK] menu → [NETWORK CONTROL] → [COMMAND PORT]
- The [NETWORK] menu → [NETWORK STATUS] → [WIRED LAN(IPv4)]
  - [DHCP]
  - [IP ADDRESS]
  - [SUBNET MASK]
  - [DEFAULT GATEWAY]
- [User name] and [Password] of the administrator account

### Confirming the computer setting

Confirm the network setting of the computer to be used for update, and make it possible to connect with the projector to be updated via network.

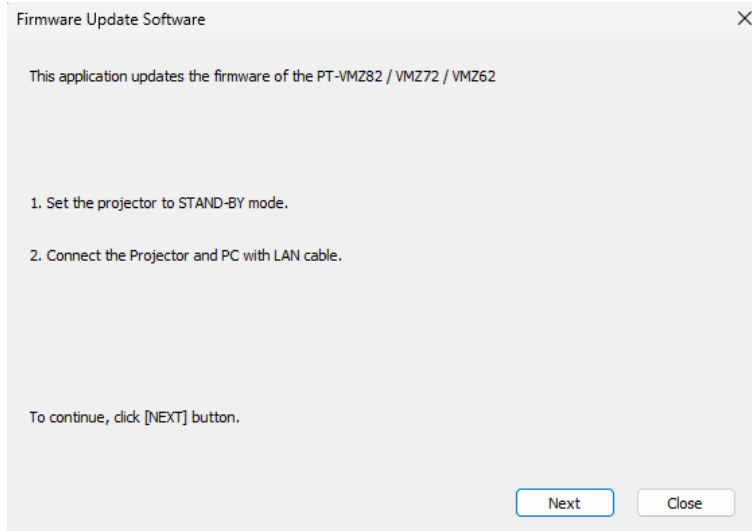
## Updating the firmware

**1) Extract the compressed file downloaded from the website.**

- The firmware update tool (executable file in exe format) is generated.  
File name (example): FirmUpdateTool\_VMZ82\_101.exe  
(Update tool for PT-VMZ82 / PT-VMZ72 / PT-VMZ62 series with version 1.01)

**2) Double-click the executable file generated by extracting.**

- The update tool is started up, and the confirmation screen is displayed.



**3) Confirm the status of the projector.**

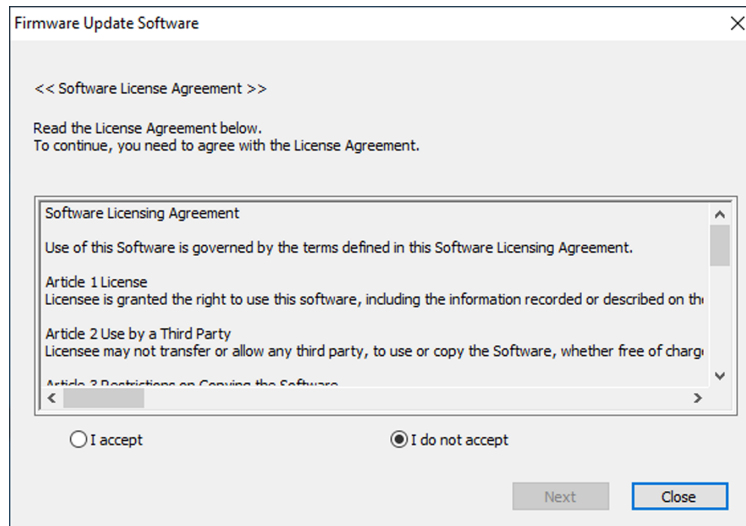
- Confirm that the projector to be updated is in the standby mode.

**4) Confirm the connection status.**

- Confirm that the projector to be updated and the computer to be used for update are correctly connected to LAN.

**5) Click [Next].**

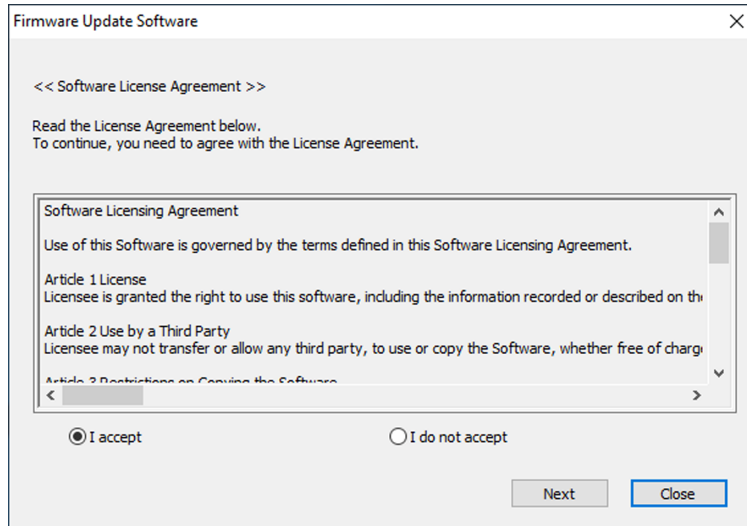
- The license agreement screen is displayed.
- Confirm the content of the license agreement.



- The update tool will end by clicking [Close].

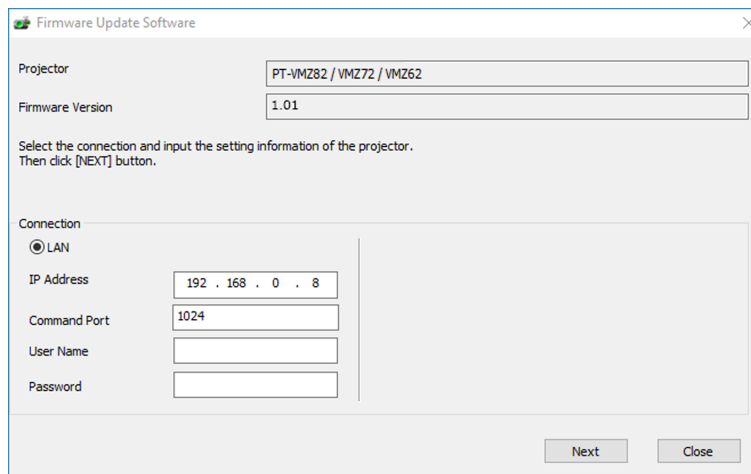


6) Select [I accept].



7) Click [Next].

- The connection setting screen is displayed.



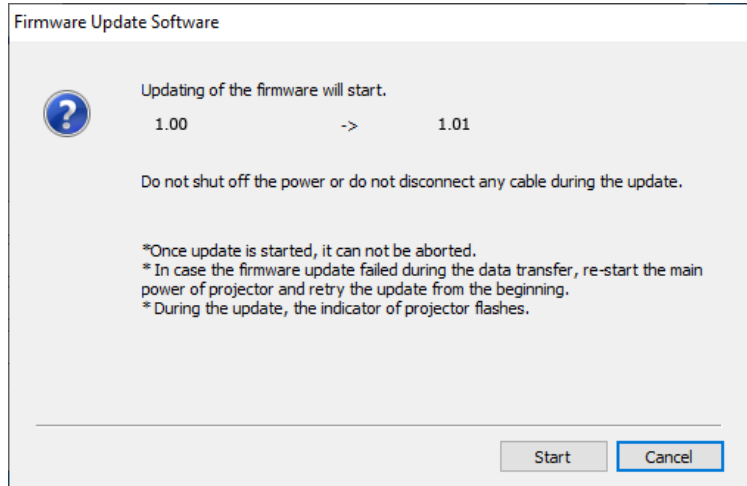
8) Enter the setting details of the projector.

- Enter the details set in the projector to be updated.

Item	Details
[IP Address]	The [NETWORK] menu → [NETWORK STATUS] → [WIRED LAN(IPv4)] → [IP ADDRESS]
[Command Port]	The [NETWORK] menu → [NETWORK CONTROL] → [COMMAND PORT]
[User Name]	[User name] of the administrator account
[Password]	[Password] of the administrator account

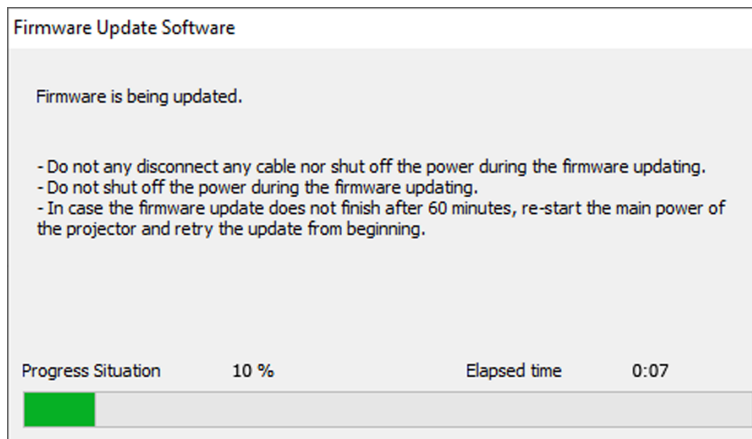
### 9) Click [Next].

- The update confirmation screen is displayed.



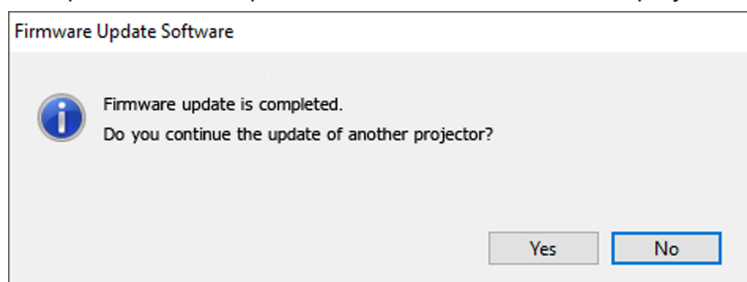
### 10) Click [Start].

- Update is started.
- The temperature indicator <TEMP> and the light source indicator <LIGHT> on the projector blink red alternately while updating.
- Elapsed time and rough progress can be confirmed in the update status display screen. The required time is approximately 20 minutes.



### 11) Confirm the completion of the update.

- Once the update is completed, the completion confirmation screen is displayed.



- To continue to update the firmware of another projector, click [Yes]. The connection setting screen in Step 7) is displayed.
- To end the update tool, click [No].

### 12) Confirm the firmware version.

- Turn on the power of the projector and confirm the firmware version in the [STATUS] screen.

#### Attention

- Do not turn off the main power of the projector or disconnect the LAN cable while updating.

### Note

---

- If the update does not complete after 60 minutes or more have elapsed, turn the power of the projector off and on and perform the update from the beginning.
- If the power of the projector is turned off by a power outage or other reason during the update, the update is automatically restarted after the power outage is restored or right after the power of the projector is turned on again.

## Updating the firmware using the USB memory

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### Supported device

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- Commercially available USB memory is supported.  
The USB memory with a security function is not supported.
- Only the cards formatted in FAT16 or FAT32 can be used.
- Only the single partition structure is supported.

### Acquiring the firmware

---

Download the firmware data for this projector (compressed file in zip format) from the following website.

<https://docs.connect.panasonic.com/projector/pass>

- File name (example)
  - VMZ82\_USER\_101.zip(Firmware data for PT-VMZ82 / PT-VMZ72 / PT-VMZ62 series with version 1.01)

### Preparing the USB memory

---

Prepare the USB memory to be used for update.

- 1) **Extract the compressed file downloaded from the website.**
  - The firmware data (file in rom format) is generated.  
File name (example)
    - VMZ82\_USER\_101.rom(Firmware data for PT-VMZ82 / PT-VMZ72 / PT-VMZ62 series with version 1.01)
- 2) **Save the firmware data generated by extracting into the USB memory.**
  - Save in the root directory of the formatted USB memory.

### Note

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- Delete everything other than the firmware data to be used for update from the USB memory.
- For the handling of the USB memory, refer to “Using the USB memory” (➡ page 57).

### Operating the OSD to update the firmware

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- 1) **Insert the USB memory with the firmware data saved into the <USB (VIEWER/WIRELESS/DC OUT)> terminal of the projector.**
- 2) **Turn on the power of the projector.**
- 3) **Press the <MENU> button on the remote control or control panel.**
  - The [MAIN MENU] screen is displayed.
- 4) **Press ▲▼ to select [PROJECTOR SETUP].**
- 5) **Press the <ENTER> button.**
  - The [PROJECTOR SETUP] screen is displayed.
- 6) **Press ▲▼ to select [USER UPDATE].**
- 7) **Press the <ENTER> button.**
  - The [PASSWORD] screen is displayed.
- 8) **Enter the security password and press the <ENTER> button.**
  - The [USER UPDATE] screen is displayed.

**9) Confirm the main version to update, then press the <ENTER> button.**

- Update is started.

**10) When the update is completed, press the <ENTER> button.**

- The projector enters standby mode.

**11) Turn on the power of the projector.**

- The **[USER UPDATE]** screen will be displayed. Check the main version displayed on the screen. You can also confirm the main version on the **[STATUS]** screen.

**12) Press any button on the remote control or control panel to continue.**

---

### Attention

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- Do not disconnect the main power supply of the projector while updating.

---

### Note

---

- The security password is the password set in the **[SECURITY]** menu → **[PASSWORD CHANGE]**.  
Initial password of the factory default setting: ▲▶▼◀▲▶▼◀
- When the projector is turned on and the **[SECURITY]** menu → **[PASSWORD]** is set to **[OFF]**, if you insert the USB memory with the valid firmware update file to the projector for the first time, the **[USER UPDATE]** screen will be displayed. Follow the instruction on the screen to perform the user update.
- In following cases, turn the power of the projector off and on, then perform the update from the beginning.
  - When the update does not complete after 60 minutes or more have elapsed
  - When the power of the projector has turned off due to power outage, etc., during the update

# Chapter 6 Maintenance

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This chapter describes methods of inspection when there are problems, maintenance and replacement of the units.

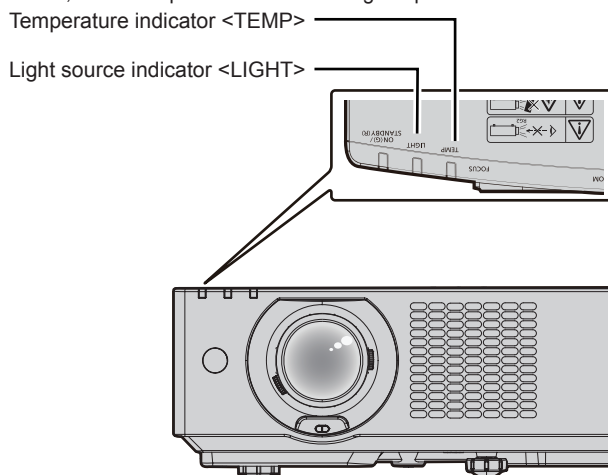
# Light source and temperature indicators

## When an indicator lights up

If a problem should occur inside the projector, the light source indicator <LIGHT> and the temperature indicator <TEMP> will inform you by lighting or blinking. Check the status of the indicators and remedy the indicated problems as follows.

### Attention

- Before you take a remedial measure, follow the procedure of switching the power off indicated in “Switching off the projector” (➔ page 52).



## Light source indicator <LIGHT>

Indicator status	Blinking red (1 time)	Blinking red (2 times)	Blinking red (3 times)
Status	Some of the elements of the light source are defective and the light output has decreased.	The light source turns off or does not light up since the phosphor wheel is abnormal.	The light source does not light up, or the light source turns off while the projector is in use.
Solution	Disconnect the power cord plug from the outlet, and switch the power on again. The light source indicator <LIGHT> may not light up or blink.		

### Note

- If the light source indicator <LIGHT> continues to light or blink even after the measure is taken, switch off the projector and remove the power cord plug from the outlet, then ask your dealer for repair.

## Temperature indicator <TEMP>

Indicator status	Blinking red (3 times)		Blinking red (2 times)	
Status	The air filter is clogged, internal temperature is high (warning).	The air filter is clogged, internal temperature is high (standby status).	Fan rotation is abnormal and internal temperature is high (warning).	The projector detects an abnormal condition and cannot be turned on.
Check	<ul style="list-style-type: none"> <li>• Is the intake/exhaust vent blocked?</li> <li>• Is the room temperature high?</li> <li>• Is the air filter unit dirty?</li> </ul>		-	
Remedy	<ul style="list-style-type: none"> <li>• Remove any objects that are blocking the intake/exhaust vent.</li> <li>• Use the projector in an appropriate operating environment temperature<sup>*1</sup>.</li> <li>• Do not use the projector at high altitudes of 2 700 m (8 858') or higher above sea level.</li> <li>• Clean or replace the air filter unit. (➔ page 191)</li> </ul>		<ul style="list-style-type: none"> <li>• Unplug the AC power cord and contact the dealer or the service center for service and checkup.</li> </ul>	

\*1 For details of operating environment temperature of the projector, refer to “Operating temperature” (➔ page 209).

### Note

- If the temperature indicator <TEMP> is still lighting or blinking after taking the preceding measures, ask your dealer for repair.

# Maintenance/replacement

## Before performing maintenance/replacement

- Make sure to turn off the power before maintaining the projector or replacing the unit.
- When switching off the projector, make sure to follow the procedures in “Switching off the projector” (➔ page 52).

## Maintenance

### Outer case

Wipe off dirt and dust with a soft, dry cloth.

- If the dirt is persistent, soak the cloth with water and wring it thoroughly before wiping. Dry off the projector with a dry cloth.
- Do not use benzene, thinner, or rubbing alcohol, other solvents, or household cleaners. Doing so may deteriorate the outer case.
- When using chemically treated dust cloths, follow the instructions written on its packaging.

### Lens front surface

Wipe off dirt and dust from the front surface of the lens with a soft clean cloth.

- Do not use a cloth that is fluffy, dusty, or soaked with oil/water.
- Since the lens is fragile, do not use excessive force when wiping the lens.

### Attention

- The lens may be damaged if you hit with a hard object or wipe with excessive force. Handle with care.



#### DO NOT WIPE THE LENS DURING OPERATION

Cleaning the lens during operation may cause foreign objects adhering to the lens or bring damage to the lens surface.

### Air filter unit

This section describes the maintenance of the air filter unit that is installed as standard on the projector.

The air filter unit is the same as the optional Replacement Filter Unit (Model No.: ET-RFV500).

In the following cases, remove the air filter unit and check the clogging condition of the air filter. If the air filter is clogged, clean the air filter unit.

- The message of “CLEAN THE AIR FILTER” is displayed on the projection screen.
- The temperature indicator <TEMP> blinks red (3 times) (➔ page 190).
- The message of “FILTER COUNTER has reached the set time.” that prompts to perform maintenance of the air filter unit is displayed on the projection screen.

### Attention

- Make sure to turn off the power before performing maintenance of the air filter. (➔ page 52)
- Make sure that the projector is stable, and perform the maintenance in a safe place even if the air filter unit falls accidentally.
- Take care not to remove the sponge (Fig. 1) on the side of the air filter unit when removing or attaching the air filter unit.

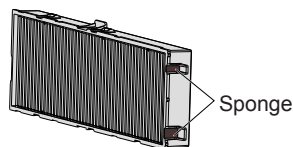


Fig. 1

### Note

- Check the usage time of the air filter in the [PROJECTOR SETUP] menu → [FILTER COUNTER].(➔ page 105)
- Air filter replacement is recommended after washing the air filter two times for recycling.
- The air filter performance after washing may be reduced compared with its initial performance.
- The time until the air filter is clogged varies greatly depending on the usage environment.

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## Removing the air filter unit

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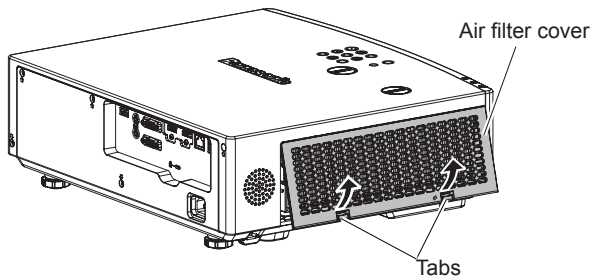


Fig. 1

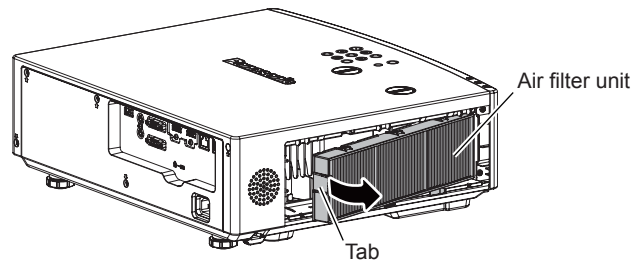


Fig. 2

### 1) Turn off the projector.

- When switching off the projector, make sure to follow the procedures in “Switching off the projector” (➔ page 52).

### 2) Remove the air filter cover. (Fig. 1)

- Push the tabs of the air filter cover upward as shown in the figure, remove them from the hooks of the projector and open it in the direction of the arrow in the figure.

### 3) Remove the air filter unit. (Fig. 2)

- Put your finger on the tab on the left side of the air filter unit, open it in the direction of the arrow shown in the figure and remove it.
- After removing the air filter unit, remove the foreign objects and dust in the air filter unit compartment if there are any.
- After removing the air filter unit, proceed to “Performing maintenance of the air filter unit” (➔ page 192).

### Note

- When using the projector, be sure to attach the air filter unit. If it is not attached, the projector will suck in dirt and dust causing a malfunction.

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## Performing maintenance of the air filter unit

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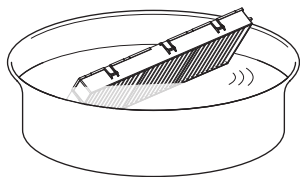


Fig. 1

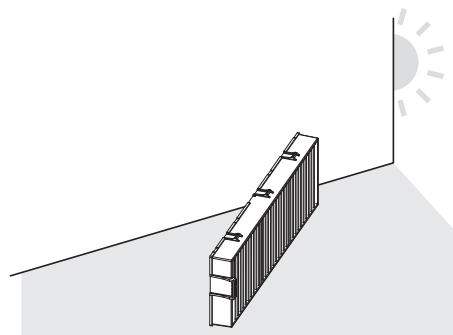


Fig. 2

### 1) Wash the air filter unit. (Fig. 1)

- Soak the air filter unit in cold or warm water and then lightly rinse it.
  - Do not use cleaning tools such as brushes.
  - When rinsing, hold the frame of the air filter unit without putting strong pressure on the filter.
- Rinse the air filter unit two or three times with fresh water.
  - Insufficient rinsing may result in odors.

### 2) Dry the air filter unit. (Fig. 2)

- Let the air filter unit naturally dry off in a well-ventilated place where there is little dust and is not exposed to direct sunlight.
- Do not dry using drying devices such as dryers.
- After the air filter unit is dried, proceed to “Attaching the air filter unit” (➔ page 193).



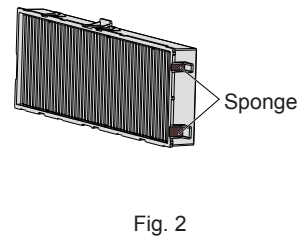
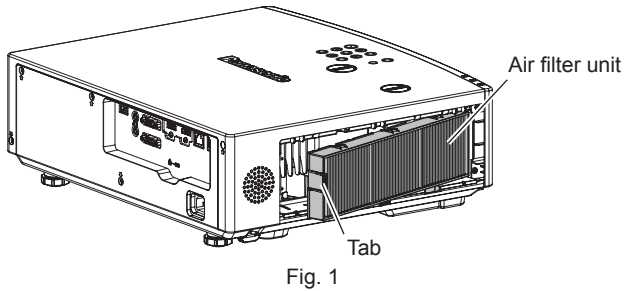
### Attention

- After washing the air filter unit, dry it thoroughly before attaching it back to the projector. Attaching a wet unit will cause an electric shock or malfunction.
- Do not disassemble the air filter unit.

### Note

- Replace the air filter unit with a new optional Replacement Filter Unit (Model No.: ET-RFV500) if it is damaged or if the dirt does not come off even after washing

### Attaching the air filter unit



#### 1) Attach the air filter unit to the projector. (Fig. 1)

- Hold the air filter unit with the tab on the left side as shown in the figure, attach it from the right side, and push the tab until it clicks.
- Take care not to remove the sponge (Fig. 2) on the side of the air filter unit when attaching the air filter unit.
- Do not press on the crease part of the air filter when pressing into place.

#### 2) Attach the air filter cover to the projector.

- Perform in the reverse order of the Step 2) of “Removing the air filter unit” (➡ page 192) to close the air filter cover. Make sure to press the air filter cover firmly until it clicks into place.
- When the air filter unit is attached to the projector, proceed to the “Resetting the air filter counter” (➡ page 193).

### Note

- When using the projector, be sure to attach the air filter unit. If it is not attached, the projector will suck in dirt and dust causing a malfunction.

### Resetting the air filter counter

- 1) Turn on the projector.
- 2) Press the <MENU> button on the remote control or the control panel.
  - The main menu screen is displayed.
- 3) Press ▲▼ to select [PROJECTOR SETUP].
- 4) Press the <ENTER> button.
  - The [PROJECTOR SETUP] screen is displayed.
- 5) Press ▲▼ to select [FILTER COUNTER].
- 6) Press the <ENTER> button.
  - The [FILTER COUNTER] screen is displayed.
- 7) Press ▲▼ to select [FILTER COUNTER RESET] and press the <ENTER> button.
- 8) When the confirmation screen is displayed, press ◀▶ to select [OK], then press the <ENTER> button.
  - The [PROJECTOR SETUP] menu → [FILTER COUNTER] → [FILTER COUNTER] is displayed as “0H”.

### Note

- When the projector is used without resetting the filter counter, the actual filter usage time (counter numeric value) will not be able to be confirmed.

## Replacement

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### Air filter unit

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If dirt does not come off even after the air filter unit is cleaned, it is time for the unit to be replaced. The Replacement Filter Unit (Model No.: ET-RFV500) is an optional accessory. To purchase the product, consult your dealer.

#### Attention

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- Make sure to turn off the power before replacing the filter. (➔ page 52)
- Make sure that the projector is stable, and perform the maintenance in a safe place even if the air filter unit falls accidentally.

#### Note

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- The replacement cycle of the air filter unit varies greatly depending on the usage environment.

### How to replace the air filter unit

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#### 1) Remove the air filter unit.

- Refer to “Removing the air filter unit” (➔ page 192).

#### 2) Install the optional Replacement Filter Unit (Model No.: ET-RFV500) to the projector.

- Refer to “Attaching the air filter unit” (➔ page 193).

#### 3) Reset the air filter counter.

- Refer to “Resetting the air filter counter” (➔ page 193).

#### Attention

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- When switching on the projector, make sure that the air filter unit is attached. If it is not attached, the projector will suck in dirt and dust causing a malfunction.
- If the projector is used without resetting the filter counter, the actual filter usage time (counter numeric value) will not be able to be confirmed.

# Troubleshooting

Please check following points. For details, refer to the corresponding pages.

Problem	Points to be checked	Reference page
<b>Power does not turn on.</b>	<ul style="list-style-type: none"> <li>Is the power plug firmly connected to the outlet?</li> <li>Is the wall outlet supplying electricity?</li> <li>Have the circuit breakers tripped?</li> <li>Is the light source indicator &lt;LIGHT&gt; or temperature indicator &lt;TEMP&gt; lit or blinking?</li> </ul>	— — — 190
<b>No image appears.</b>	<ul style="list-style-type: none"> <li>Are connections to external devices correctly performed?</li> <li>Is the input selection setting correct?</li> <li>Is the [BRIGHTNESS] adjustment setting at a minimum?</li> <li>Is the external device that is connected to the projector working properly?</li> <li>Is the shutter function activated?</li> </ul>	39 53 69 — 58, 89
<b>Image is fuzzy.</b>	<ul style="list-style-type: none"> <li>Is the lens focus set correctly?</li> <li>Is the projection distance appropriate?</li> <li>Is the lens dirty?</li> <li>Is the projector installed perpendicular to the screen?</li> </ul>	55 35 23 —
<b>Color is pale or grayish.</b>	<ul style="list-style-type: none"> <li>Is [COLOR] or [TINT] adjusted correctly?</li> <li>Is the external device connected to the projector adjusted correctly?</li> </ul>	70, 70 —
<b>No audio.</b>	<ul style="list-style-type: none"> <li>Is the external device connected correctly to the audio input terminal?</li> <li>Is the volume set to the minimum level?</li> <li>Is the shutter function activated?</li> <li>Is the mute function activated?</li> <li>Is the audio input selection in [AUDIO SETTING] set correctly?</li> <li>Is the cable connected to the &lt;AUDIO OUT&gt; terminal? If connected, the built-in speaker will not output audio.</li> </ul>	39 58, 103 58, 89 58, 103 104 39
<b>Remote control does not work.</b>	<ul style="list-style-type: none"> <li>Are the batteries depleted?</li> <li>Is the polarity of the batteries set correctly?</li> <li>Are there any obstructions between the remote control and the remote control signal receiver of the projector?</li> <li>Is the remote control used beyond its effective operation range?</li> <li>Is the remote control subject to influences from fluorescent light, etc.</li> <li>Is the [REMOTE CONTROLLER] setting in [CONTROL DEVICE SETUP] set to [DISABLE]?</li> <li>Is the ID number setting operation correct?</li> </ul>	— 32 28 28 28 114 63
<b>Menu screen does not appear.</b>	<ul style="list-style-type: none"> <li>Is the on-screen display function turned off (hidden)?</li> </ul>	59
<b>Buttons on the control panel do not work.</b>	<ul style="list-style-type: none"> <li>Is the [CONTROL PANEL] setting in [CONTROL DEVICE SETUP] set to [DISABLE]?</li> </ul>	114
<b>Image does not display correctly.</b>	<ul style="list-style-type: none"> <li>Is there a problem with the external device to output images?</li> <li>Is the signal input incompatible with the projector?</li> </ul>	— 212
<b>Image from a computer does not appear.</b>	<ul style="list-style-type: none"> <li>Is the cable too long? (For D-Sub cables, the cable length should be 10 m (32'10") or shorter.)</li> <li>Is the external video output on the laptop computer set correctly? (Ex.: The external output settings may be switched by pressing the "Fn" + "F3" or "Fn" + "F10" simultaneously. Since the method varies depending on the computer type, refer to the user manual provided with your computer.)</li> </ul>	— —
<b>Video from HDMI compatible device does not appear or it appears jumbled.</b>	<ul style="list-style-type: none"> <li>Is the HDMI cable securely connected?</li> <li>Turn the power of the projector and the external device off and on.</li> <li>Is the signal input incompatible with the projector?</li> </ul>	39 — 212
<b>Audio from HDMI compatible device is not output.</b>	<ul style="list-style-type: none"> <li>Set to the linear PCM audio for the connected devices.</li> </ul>	—
<b>The DIGITAL LINK input image or sound is not output.</b>	<ul style="list-style-type: none"> <li>Is the cable compatible to the condition of the projector used?</li> <li>Are the connections between the twisted-pair-cable transmitter and the projector or an external device correctly done?</li> <li>Is [DIGITAL LINK MODE] set to [AUTO], [DIGITAL LINK] or [LONG REACH]? Is it set to [ETHERNET]?</li> <li>Is the signal input incompatible with the twisted-pair-cable transmitter?</li> </ul>	41 — 116 —

## Chapter 6 Maintenance - Troubleshooting

Problem	Points to be checked	Reference page
<b>No power supplied from &lt;USB (VIEWER/WIRELESS/DC OUT)&gt; terminal</b>	• Is the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE] set to [ECO] ?	100
	• Has the external device connected to the <USB (VIEWER/WIRELESS/DC OUT)> terminal exceeded the rating (5 VDC, maximum 2 A)?	30
<b>Operation noise became loud.</b>	If the temperature inside the projector becomes high, the speed of the internal cooling fan increases automatically and the operation noise becomes loud. If the internal temperature reaches the abnormal value, the indicators will light up or blink.	190
	• Is the ambient temperature high?	20
	• Is the air filter unit dirty?	191
	• Is the intake/exhaust vent blocked?	20

### Attention

- If the problem persists, after confirming the contents of the table, consult your dealer.

# Self-diagnosis display

When an error or a warning occurs, a symbol for that is displayed in the web control screen [Status] → [Error]. The following list shows the alphanumeric symbol that is displayed when an error or a warning has occurred and its details. Confirm “Action number”, and follow the measure in “Measure for error and warning” (➡ page 197).

Error/warning display	Details	Action number
U11	Intake air temp. warning	1
U13	Exhaust air temp. warning	1
U21	Intake air temp. error	1
U23	Exhaust air temp. error	1
FL5	Light Bank 1 warning	2
FL6	Light Bank 2 warning	2
FL7	Light Bank 3 warning	2
FH0	PW error(SUB)	2
H01	Battery replacement for the internal clock	5
H11	Intake air temp. sensor error	2
H13	Exhaust air temp. sensor error	2
U04	Air filter clogged	4
FL1	Light unit error	3
FE1	Lcd R fan error	2
FE2	Lcd G fan error	2
FE3	Lcd B fan error	2
FE4	Exhaust fan error	2
FE5	Light fan error	2
FE6	Power fan error	2
FE7	Motor fan error	2
U25	Light temperature 1 error	1
U27	Light temperature 2 error	1
F16	Angle sensor error	2
F19	Lens block detection sensor error	2
H14	Light temperature sensor 1 error	2
H16	Light temperature sensor 2 error	2
U16	Light temperature 1 warning	1
U18	Light temperature 2 warning	1
F18	Air pressure sensor error	2
F50	Lcd R fan warning	1
F51	Lcd G fan warning	1
F52	Lcd B fan warning	1
F53	Exhaust fan warning	1
F54	Light fan warning	1
F55	Power fan warning	1
F56	Motor fan warning	1
F61	Light driver communication error	2
U78	Air filter clogged	4

## Note

- The self-diagnosis display and the details of the malfunction may be different.
- For errors and warnings that are not described in the table, consult your dealer.

## ■ Measure for error and warning

Action number	Measure
1	The operating environment temperature is too high. Use the projector in an appropriate operating environment temperature*1.
2	If the error/warning display does not go off even after unplugging the power plug from the outlet and turning on the power again, consult your dealer.
3	The light source has failed to turn on. If the light source does not light up after turning the power off and on, consult your dealer.
4	Perform maintenance or replacement of the filter. (➡ page 191)
5	Battery replacement is required. Consult your dealer.

\*1 For the operating environment temperature of the projector, refer to “Operating temperature” (➡ page 209).

# Chapter 7 Appendix

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This chapter describes specifications for the projector.

# Technical information

## Using the PJLink function

The network function of this projector supports the PJLink class 1 and class 2, and setting of the projector or querying of the projector status can be performed from the computer using the PJLink protocol.

### Note

- Setting the password of the administrator account (➔ page 120) is required for using the PJLink function of the projector.

### PJLink commands

The following table lists the PJLink commands supported by the projector.

- x characters in tables are non-specific characters.

Class	Command	Control details	Parameter/ response string	Remark		
1	POWR	Power supply control	0 1	Standby Power on		
1	POWR?	Power supply status query	0 1 2	Standby Power on Preparing for switching off the projector		
1, 2	INPT	Input selection	11 31 32	COMPUTER HDMI1 HDMI2		
	INPT?	Input selection query	33 41 51	DIGITAL LINK MEMORY VIEWER NETWORK		
1	AVMT	Shutter control/audio output control	20 21 30 31	Mute function disabled Mute function enabled (muted) Shutter function disabled (shutter: open), mute function disabled Shutter function enabled (shutter: closed), mute function enabled (muted)		
	AVMT?	Shutter status query/ audio output status query	21 30 31	Shutter function disabled (shutter: open), mute function enabled (muted) Shutter function disabled (shutter: open), mute function disabled Shutter function enabled (shutter: closed), mute function enabled (muted)		
1	ERST?	Error status query	xxxxxx	1st byte	Indicates fan errors, and returns 0 or 2.	<ul style="list-style-type: none"> <li>• 0 = No error is detected</li> <li>• 1 = Warning</li> <li>• 2 = Error</li> </ul>
				2nd byte	Indicates light source errors, and returns 0 - 2.	
				3rd byte	Indicates temperature errors, and returns 0 - 2.	
				4th byte	Returns 0.	
				5th byte	Indicates filter errors, and returns 0 - 2	
				6th byte	Indicates other errors, and returns 0 - 2.	
1	LAMP?	Light source status query	AAAAA X	AAAAA: Light source runtime X: 0 = Light source off, 1 = Light source on		
1, 2	INST?	Input selection list query	11 31 32 33 41 51	—		
1	NAME?	Projector name query	xxxxx	Returns the name set in the [NETWORK] menu → [PROJECTOR NAME].		
1	INF1?	Manufacturer name query	Panasonic	Returns manufacturer name.		
1	INF2?	Model name query	PT-VMZ82 PT-VMZ72 PT-VMZ62	Returns model name.		
1	INF0?	Other information queries	xxxxx	Returns information such as version number.		
1	CLSS?	Class information query	2	Returns class for PJLink.		

## Chapter 7 Appendix - Technical information

Class	Command	Control details	Parameter/ response string	Remark
2	SNUM ?	Serial number query	xxxxxxxx	Returns serial number.
2	SVER ?	Software version query	xxxxxxxx	Returns version number.
2	INNM ?	Input name query	COMPUTER HDMI1 HDMI2 DIGITAL LINK MEMORY VIEWER NETWORK	Returns input name.
2	IRES ?	Input signal resolution query	AAAAxBBBB	AAAA: Horizontal resolution BBBB: Vertical resolution
2	RRES ?	Recommended resolution query	1920 x 1200	—
2	FILT ?	Filter runtime inquiry	xxxxx	Returns the runtime of the filter.
2	RFIL ?	Filter replacement model number inquiry	ET-RFV500	Returns the Replacement Filter Unit model number.
2	SVOL	Speaker volume	0 1	Decreases the volume. Increases the volume.
2	FREZ	Freeze control	0	Freeze function disabled
	FREZ ?	Freeze status query	1	Freeze function enabled (freeze)
2	LKUP	Link up notification	xx:xx:xx:xx:xx:xx	Notifies the MAC address when the PJLink communication becomes possible.
2	SRCH	Projector search	ACKN= xx:xx:xx:xx:xx:xx	The projector connected to the same network that can communicate with PJLink will respond with its MAC address.

### PJLink security authentication

A PJLink password for security authentication is required for PJLink command communication.

The PJLink password can be set from the [NETWORK] menu → [PJLink] → [PJLink PASSWORD] (➡ page 124) or in “[PJLink setting]” (➡ page 171) of the web control screen.

When using the PJLink commands without security authentication, set the PJLink password to blank. The factory default setting of PJLink password is blank.

- For specifications related to PJLink, visit the website of Japan Business Machine and Information System Industries Association.

<https://pjlink.jbmia.or.jp/english/>



## Control commands via LAN

You can also control via the <DIGITAL LINK/LAN> terminal or <LAN> terminal by using the control command format via the <SERIAL IN> terminal.

For examples of the available commands, refer to “Control command” (➔ page 206).

### Note

- Setting the password of the administrator account is required (➔ page 120) for sending and receiving the commands via LAN.

## When connecting in protected mode

### Connection method

This is the connection method when [NETWORK] menu → [NETWORK SECURITY] → [COMMAND PROTECT] is set to [ENABLE].

#### 1) Obtain the IP address and port number (Initial set value = 1 024) of the projector and make a request for connection to the projector.

- You can obtain both the IP address and the port number from the menu screen of the projector.

<b>IP address</b>	Obtain from the [NETWORK] menu → [NETWORK STATUS].
<b>Port No.</b>	Obtain from the [NETWORK] menu → [NETWORK CONTROL] → [COMMAND PORT].

#### 2) Check the response from the projector.

	Data section	Blank	Mode	Blank	Random number section	Termination symbol
<b>Command example</b>	“NTCONTROL” (ASCII string)	‘ ’ 0x20	‘1’ 0x31	‘ ’ 0x20	“ZZZZZZZ” (ASCII code hexadecimal number)	(CR) 0x0d
<b>Data length</b>	9 bytes	1 byte	1 byte	1 byte	8 bytes	1 byte

- Mode : 1 = Protect mode
- Example: Response during protect mode (random number section is undefined value)  
“NTCONTROL 1 23181e1e” (CR)

#### 3) Generate a 32-byte hash value from the following data using MD5 algorithm.

- “xxxxxx:yyyyy:zzzzzzz”

<b>xxxxxx</b>	User name of the administrator account
<b>yyyyy</b>	Password of the administrator account
<b>zzzzzzz</b>	8-byte random number obtained in Step 2)

### Command data format

It is the data format used for sending and receiving commands.

#### ■ Transmitted data

	Header			Data section	Termination symbol
<b>Command example</b>	Hash value “Connection method” (➔ page 201)	‘0’ 0x30	‘0’ 0x30	Control command (ASCII string)	(CR) 0x0d
<b>Data length</b>	32 bytes	1 byte	1 byte	Undefined length	1 byte

- Example: Transmission of power supply status acquisition command (hash value is calculated from the user name and password of the administrator account, and acquired random number)  
“dbdd2dabd3d4d68c5dd970ec0c29fa6400QPW” (CR)

## ■ Received data

	Header		Data section	Termination symbol
<b>Command example</b>	'0' 0x30	'0' 0x30	Control command (ASCII string)	(CR) 0x0d
<b>Data length</b>	1 byte	1 byte	Undefined length	1 byte

- Example: The projector is powered on "00001" (CR)

## ■ Error response

	String	Details	Termination symbol
<b>Message</b>	"ERR1"	Undefined control command	(CR) 0x0d
	"ERR2"	Out of parameter range	
	"ERR3"	Busy state or no-acceptable period	
	"ERR4"	Timeout or no-acceptable period	
	"ERR5"	Wrong data length	
	"ERRA"	Password mismatch	
<b>Data length</b>	4 bytes	—	1 byte

### Note

- The projector automatically disconnects from the network immediately after sending the command. Such specifications are made from the viewpoint of security, such as prevention of illegal operation of the projector by a malicious third party. To send commands continuously, make a request for network connection every time and send it. For details, see "Communication flow between the server and the client" (→ page 203).

## When connecting in non-protected mode

### Connection method

This is the connection method when [NETWORK] menu → [NETWORK SECURITY] → [COMMAND PROTECT] is set to [DISABLE].

#### 1) Obtain the IP address and port number (Initial set value = 1 024) of the projector and make a request for connection to the projector.

- You can obtain both the IP address and the port number from the menu screen of the projector.

<b>IP address</b>	Obtain from the [NETWORK] menu → [NETWORK STATUS].
<b>Port No.</b>	Obtain from the [NETWORK] menu → [NETWORK CONTROL] → [COMMAND PORT].

#### 2) Check the response from the projector.

	Data section	Blank	Mode	Termination symbol
<b>Command example</b>	"NTCONTROL" (ASCII string)	' ' 0x20	'0' 0x30	(CR) 0x0d
<b>Data length</b>	9 bytes	1 byte	1 byte	1 byte

- Mode : 0 = Non-protect mode
- Example: Response during non-protect mode "NTCONTROL 0" (CR)

### Command data format

It is the data format used for sending and receiving commands.

■ Transmitted data

	Header		Data section	Termination symbol
Command example	'0' 0x30	'0' 0x30	Control command (ASCII string)	(CR) 0x0d
Data length	1 byte	1 byte	Undefined length	1 byte

- Example: Transmission of power supply status acquisition command  
"00QPW" (CR)

■ Received data

	Header		Data section	Termination symbol
Command example	'0' 0x30	'0' 0x30	Control command (ASCII string)	(CR) 0x0d
Data length	1 byte	1 byte	Undefined length	1 byte

- Example: The projector is in standby status  
"00000" (CR)

■ Error response

	String	Details	Termination symbol
Message	"ERR1"	Undefined control command	(CR) 0x0d
	"ERR2"	Out of parameter range	
	"ERR3"	Busy state or no-acceptable period	
	"ERR4"	Timeout or no-acceptable period	
	"ERR5"	Wrong data length	
Data length	4 bytes	—	1 byte

Note

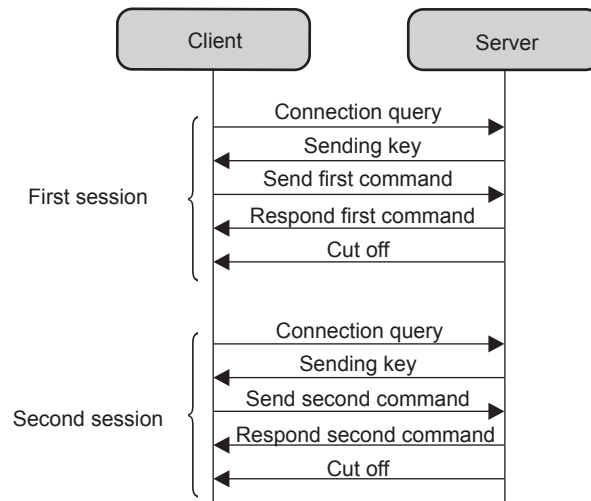
- The projector automatically disconnects from the network immediately after sending the command. Such specifications are made from the viewpoint of security, such as prevention of illegal operation of the projector by a malicious third party. To send commands continuously, make a request for network connection every time and send it. For details, see "Communication flow between the server and the client" (➔ page 203).

Communication flow between the server and the client

When sending / receiving commands via LAN, refer to the communication flow shown below.

**Server:** the projector

**Client:** the control device such as a computer

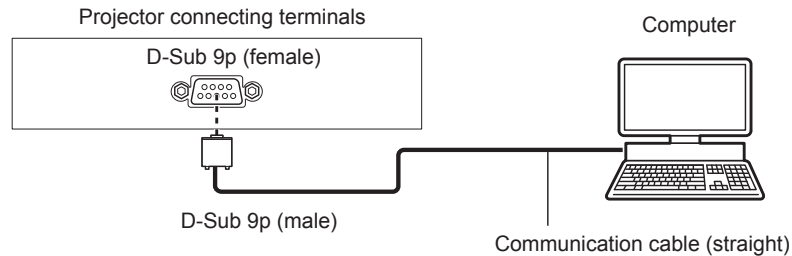


## <SERIAL IN> terminal

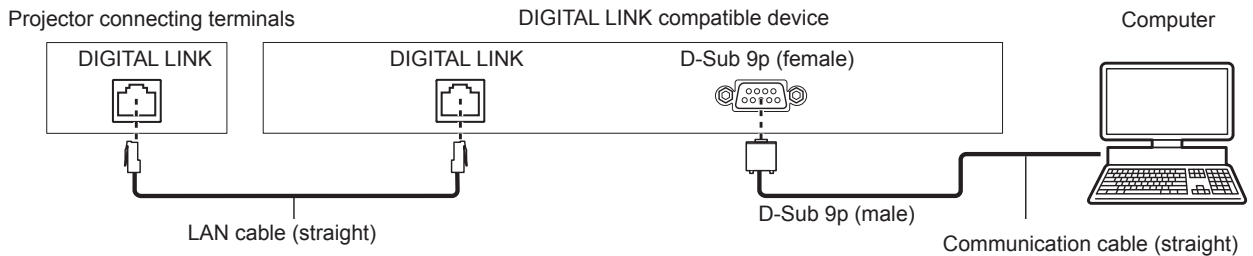
The <SERIAL IN> terminal of the projector conforms with RS-232C so that the projector can be connected to and controlled from a computer.

### Connection

#### ● When connecting directly



#### ● When connecting with DIGITAL LINK compatible devices



### Note

- The destination of [RS-232C] (➔ page 101) must be set according to the connection method.
- When connecting by a DIGITAL LINK compatible device, set the [PROJECTOR SETUP] menu → [ECO MANAGEMENT] → [STANDBY MODE] (➔ page 100) to [NORMAL] to control the projector in standby mode.  
When [STANDBY MODE] is set to [ECO], the projector cannot be controlled during standby.

### Pin assignments and signal names

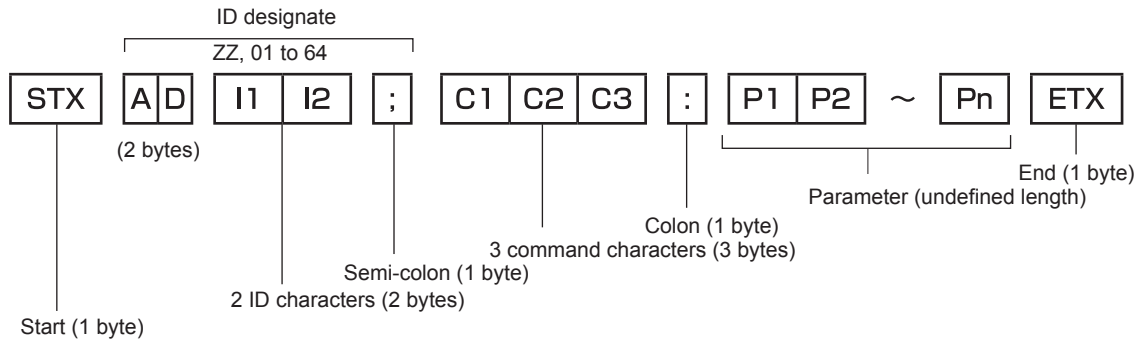
Outside view	Pin No.	Signal name	Details
	(1)	—	NC
	(2)	TXD	Transmitted data
	(3)	RXD	Received data
	(4)	—	NC
	(5)	GND	Earth
	(6)	—	NC
	(7)	CTS	Connected internally
	(8)	RTS	
	(9)	—	NC

### Communication conditions (Factory default)

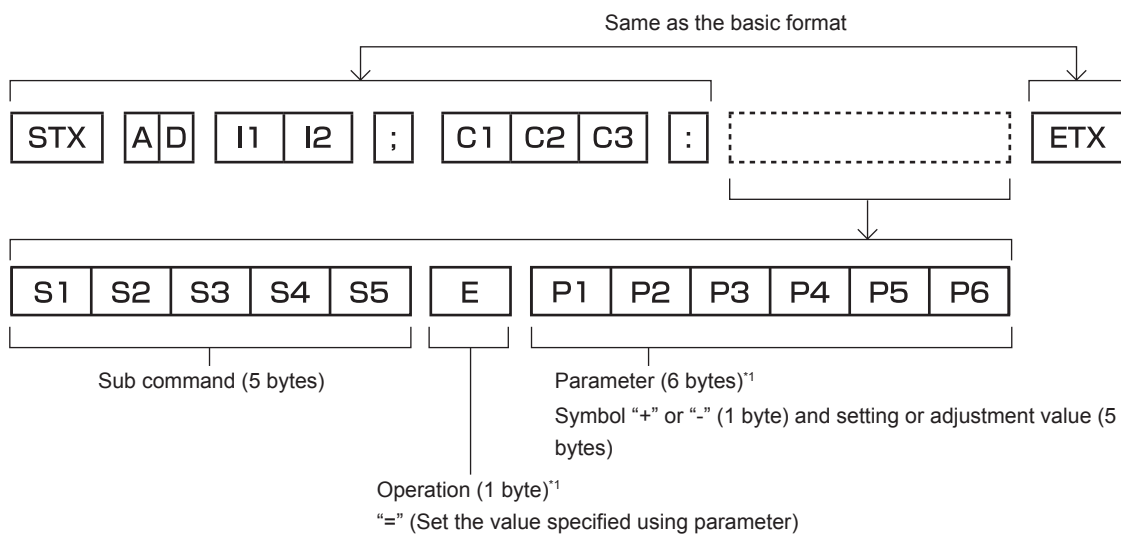
Signal level	RS-232C-compliant
Sync. method	Asynchronous
Baud rate	9 600 bps
Parity	None
Character length	8 bits
Stop bit	1 bit
X parameter	None
S parameter	None

**Basic format**

Transmission from the computer starts with STX, then the ID, command, parameter, and ETX are sent in this order. Add parameters according to the details of control.



**Basic format (has subcommands)**



\*1 When transmitting a command which does not need a parameter, an operation (E) and parameter are not necessary.

**Attention**

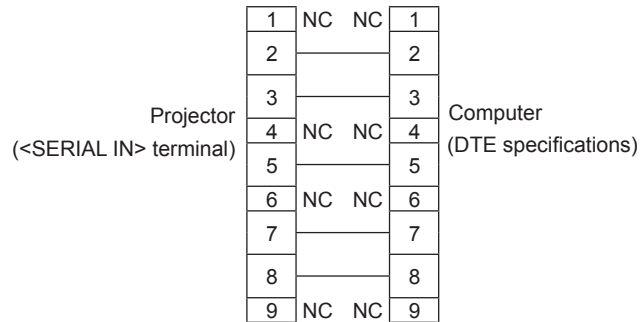
- If a command is transmitted after the light source starts illuminating, there may be a delay in response or the command may not be executed. Try sending or receiving any command after 60 seconds.
- When transmitting multiple commands, be sure to wait until 0.5 seconds has elapsed after receiving the response from the projector before sending the next command. When transmitting a command which does not need a parameter, a colon (:) is not necessary.

**Note**

- If a command cannot be executed, the "ER401" response is sent from the projector to the computer.
- If an invalid parameter is sent, the "ER402" response is sent from the projector to the computer.
- ID transmission in RS-232C supports ZZ (ALL) and 01 to 64.
- If a command is sent with a specified ID, a response will be sent to the computer only in the following cases.
  - It matches the projector ID
  - When [PROJECTOR ID] (➔ page 96) on the projector is [ALL]
- STX and ETX are character codes. STX shown in hexadecimal is 02, and ETX shown in hexadecimal is 03.

**Cable specification**

When connected to a computer



**Control command**

The following table lists the commands that can be used to control the projector using a computer.

■ Projector control command

Command	Details	Parameter/response string	Remark (parameter)
PON	Power on	—	To check if the power is on, use the "Power query" command.
POF	Power standby		
QPW	Power query	000 001	STANDBY Power on
IIS	Switching the input signal	RG1 HD1 HD2 DL1 MV1 NWP	COMPUTER HDMI1 HDMI2 DIGITAL LINK MEMORY VIEWER NETWORK
Q\$L	Light source cumulative runtime query	—	Returned with 0 to 99999
OSH	Shutter control	0	Shutter function off (shutter open)
QSH	Shutter status query	1	Shutter function on (shutter closed)
Q\$S	Light source condition query	0 1 2 3	Stand-by Light source ON control active Light source ON Light source OFF control active
VSE	Aspect ratio switch	1 2 5	NORMAL WIDE NATIVE
QS1	Aspect ratio settings query	6 9 10	FULL H FIT V FIT

**<COMPUTER IN> terminal pin assignments and signal names**

Outside view	Pin No.	Signal names	Pin No.	Signal names
	①	R/P <sub>R</sub>	⑨	+5 V
	②	G/Y	⑩	GND
	③	B/P <sub>B</sub>	⑪	GND
	④	—	⑫	DDC data
	⑤	GND	⑬	HD/SYNC
	⑥	GND	⑭	VD
	⑦	GND	⑮	DDC clock
	⑧	GND		

# Specifications

The specifications of this projector are as follows.

<b>Display system</b>		Translucent screen LCD panel x 3, 3 primary colors system	
<b>Display device</b>	<b>Size of effective display area</b>	1.63 cm (0.64") x 3 (aspect ratio 16 : 10)	
	<b>Number of pixels</b>	2 304 000 pixels (1 920 x 1 200 dots)	
<b>Projection lens</b>	<b>Supplied projection lens</b>	Zoom ratio: 1.6 x F = 1.58 to 1.91 f = 15.30 mm to 24.60 mm	
	<b>Zoom</b>	Manual	
	<b>Focus</b>	Manual	
	<b>Changeable lens</b>	No	
<b>Light source</b>		Laser diode	
<b>Screen size</b>		0.76 m (30") to 7.62 m (300")	
<b>Light output<sup>*1</sup></b>	<b>PT-VMZ82</b>	8 000 lm	When [PICTURE MODE] is set to [DYNAMIC], [LIGHT POWER] is set to [NORMAL], [DAYLIGHT VIEW] is set to [OFF], and [AUTO POWER SAVE] is set to [OFF]
	<b>PT-VMZ72</b>	7 300 lm	
	<b>PT-VMZ62</b>	6 500 lm	
<b>Contrast ratio<sup>*1</sup></b>	5 000 000:1	When [PICTURE MODE] is set to [DYNAMIC], [DYNAMIC CONTRAST] is set to [1]	
<b>Center to corner zone ratio<sup>*1</sup></b>		85%	
<b>Speaker</b>		4.0 cm, round, x 1 10 W (monaural)	
<b>Displayable scanning frequency</b>	<b>Horizontal</b>	15.6 kHz to 95.5 kHz	
	<b>Vertical</b>	24.0 Hz to 85.0 Hz	
<b>Input compatibility</b>	<b>HDMI signal input</b>	<b>Video signal resolution:</b> 480/60p, 576/50p to 4 096 x 2 160/30p <b>Computer signal resolution:</b> 640 x 480 to 3 240 x 1 080 (non-interlace) <b>Dot clock frequency:</b> 25.2 MHz to 297 MHz	
	<b>DIGITAL LINK signal input</b>	<b>Video signal resolution:</b> 480/60p, 576/50p to 4 096 x 2 160/30p <b>Computer signal resolution:</b> 640 x 480 to 3 240 x 1 080 (non-interlace) <b>Dot clock frequency:</b> 25.2 MHz to 297 MHz	
	<b>COMPUTER signal input</b>	<b>Video signal resolution:</b> 480i/576i to 1 920 x 1 080 <b>Computer signal resolution:</b> 640 x 480 to 1 920 x 1 200 (non-interlace) <b>Dot clock frequency:</b> 13.5 MHz to 162 MHz	

\*1 Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118:2020 international standards.



## Chapter 7 Appendix - Specifications

<b>Connecting terminals</b>	<HDMI IN 1> terminal <HDMI IN 2> terminal	HDMI x 2, HDCP compatible, Deep Color compatible, CEC supported <b>Audio signal</b> Linear PCM (sampling frequency: 48 kHz/44.1 kHz/32 kHz)	
	<DIGITAL LINK/LAN> terminal	RJ-45 x 1, for network and DIGITAL LINK connections (HDBaseT™ compliant), PJLink (class 2) compatible, 100Base-TX, HDCP compatible, Deep Color compatible	
	<LAN> terminal	RJ-45 x 1, for network connection, PJLink (class 2) compatible, 10Base-T/100Base-TX	
	<COMPUTER IN> terminal	High-density D-Sub 15 p (female) x 1 0.7 V [p-p] 75 Ω (SYNC ON GREEN: 1.0 V [p-p] 75 Ω) <b>RGB signal</b> SYNC/HD TTL high impedance, automatic positive/negative polarity compatible VD TTL high impedance, automatic positive/negative polarity compatible <b>Y<sub>P</sub>P<sub>R</sub> signal</b> Y: 1.0 V [p-p] including synchronization signal, P <sub>B</sub> P <sub>R</sub> : 0.7 V [p-p] 75 Ω	
	<AUDIO IN> terminal	M3 stereo mini jack x 1, 0.5 V [rms], input impedance 22 kΩ or more	
	<AUDIO OUT> terminal	M3 stereo mini jack x 1, monitor output and stereo compatible, 0 V [rms] to 2.0 V [rms] (variable), output impedance 2.2 kΩ or lower	
	<USB (VIEWER/WIRELESS/DC OUT)> terminal	USB connector (type A) x 1, for Memory Viewer function/ Wireless module (Model No.: AJ-WM50 Series) connection/power supply (DC 5 V, maximum 2 A)	
	<SERIAL IN> terminal	D-Sub 9 p x 1, RS-232C compliant, for computer control	
<b>Acoustic noise<sup>*1</sup></b>	<b>PT-VMZ82</b>	39 dB	When [LIGHT POWER] in [ECO MANAGEMENT] is set to [NORMAL] or [ECO].
	<b>PT-VMZ72</b>	37 dB	
	<b>PT-VMZ62</b>	35 dB	
	<b>PT-VMZ82</b>	34 dB	When [LIGHT POWER] in [ECO MANAGEMENT] is set to [QUIET1]
	<b>PT-VMZ72</b>	32 dB	
	<b>PT-VMZ62</b>	30 dB	
	<b>PT-VMZ82</b>	29 dB	When [LIGHT POWER] in [ECO MANAGEMENT] is set to [QUIET2]
	<b>PT-VMZ72</b>	27 dB	
	<b>PT-VMZ62</b>	25 dB	
<b>Operating environment</b>	<b>Operating temperature</b>	0 °C (32 °F) to 45 °C (113 °F) <sup>*2,3</sup>	
	<b>Operating humidity</b>	20 % to 80 % (no condensation)	
<b>Operation position</b>		[FRONT/CEILING], [FRONT/DESK], [REAR/CEILING], [REAR/DESK]	

\*1 Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118:2020 international standards.

\*2 The projector cannot be used at an altitude of 2 700 m (8 858') or higher above sea level.

If the operating environment temperature exceeds the following value, the light output may be reduced to protect the projector.

- When using the projector at an altitude lower than 700 m (2 297') above sea level: 36 °C (97 °F)
- When using the projector at an altitude between 700 m (2 297') and 1 400 m (4 593') above sea level: 34 °C (93 °F)
- When using the projector at an altitude between 1 400 m (4 593') and 2 100 m (6 890') above sea level: 32 °C (90 °F)
- When using the projector at an altitude between 2 100 m (6 890') and 2 700 m (8 858') above sea level: 30 °C (86 °F)

\*3 The projector's operating environment temperature should be within 0 °C (32 °F) to 40 °C (104 °F) when the optional wireless module (Model No.: AJ-WM50 Series) is attached.

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<b>Power requirements</b>		110 V ~ (110 V alternating current), 60 Hz (for Taiwan)		
		100 V - 240 V ~ (100 V - 240 V alternating current), 50 Hz/60 Hz (for other countries and regions)		
<b>Rated current</b>		<b>PT-VMZ82</b>	3.7 A (for Taiwan) 4.2 A - 1.7 A (for other countries and regions)	
		<b>PT-VMZ72</b>	3.2 A (for Taiwan) 3.6 A - 1.5 A (for other countries and regions)	
		<b>PT-VMZ62</b>	2.9 A (for Taiwan) 3.3 A - 1.4 A (for other countries and regions)	
<b>Maximum power consumption</b>		<b>PT-VMZ82</b>	400 W (The power consumption is 385 W at 200 V - 240 V.)	
		<b>PT-VMZ72</b>	345 W (The power consumption is 335 W at 200 V - 240 V.)	
		<b>PT-VMZ62</b>	320 W (The power consumption is 305 W at 200 V - 240 V.)	
<b>Standby mode power consumption</b>		Approx. 0.5 W		
		Approx. 15 W		
		<b>PT-VMZ82</b> <b>PT-VMZ72</b>	Approx. 51 W	
		<b>PT-VMZ62</b>	Approx. 47 W	
		<b>PT-VMZ82</b> <b>PT-VMZ72</b>	Approx. 92 W	
		<b>PT-VMZ62</b>	Approx. 85 W	
<b>Standard outside dimensions</b>	<b>Width</b>	399 mm (15-23/32")		
	<b>Height</b>	133 mm (5-1/4") (with legs at shortest position)		
	<b>Depth</b>	348 mm (13-11/16")		
<b>Weight<sup>*1</sup></b>		<b>PT-VMZ82</b>	Approx. 7.4 kg (16.3 lbs.)	
		<b>PT-VMZ72</b>	Approx. 7.0 kg (15.4 lbs.)	
		<b>PT-VMZ62</b>	Approx. 6.9 kg (15.2 lbs.)	
<b>Outer case</b>	<b>Materials</b>	Molded plastic		
	<b>Color</b>	White / Black		
<b>Power cord length</b>		India: 3.0 m (118-1/8") Other countries or regions: 2.0 m (78-3/4")		
<b>Laser Classification</b>	<b>Laser Class</b>	Class 1 (IEC 60825-1:2014)		
	<b>Risk Group</b>	Risk group 2 (IEC 62471-5:2015)		
<b>Wireless LAN<sup>*2</sup></b>	<b>Compliance standards</b>	IEEE802.11b/g/n		
	<b>Transmission method</b>	DSSS, OFDM		
	<b>Frequency range (Channel)</b>	2 412 MHz to 2 462 MHz (1 to 11ch)		
	<b>Data transfer speed (Standard value)</b>	IEEE802.11n	Maximum 144 Mbps	
		IEEE802.11g	Maximum 54 Mbps	
IEEE802.11b		Maximum 11 Mbps		
<b>Encryption method</b>	WPA2-PSK (AES)			
<b>Remote control</b>	<b>Power requirements</b>	DC 3 V (AAA/R03/LR03 battery x 2)		
	<b>Operating range</b>	Within approx. 30 m (98'5") (when operated directly in front of signal receiver)		
	<b>Weight</b>	102 g (3.6 ozs.) (including batteries)		
	<b>Outside dimensions</b>	Width: 48 mm (1-7/8"), Height: 145 mm (5-23/32"), Depth: 27 mm (1-1/16")		

\*1 Average value. Weight varies for each product.

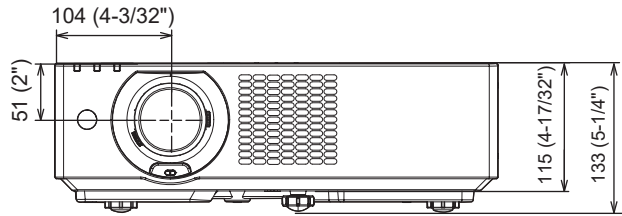
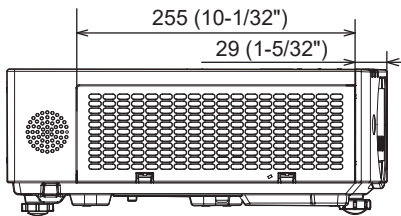
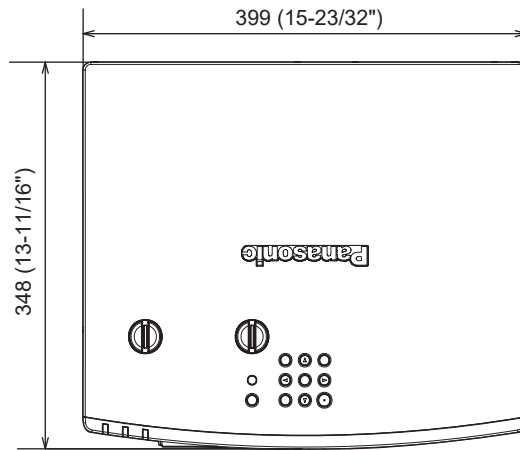
\*2 To use the wireless LAN function with the projector, it is necessary to attach the optional Wireless Module (Model No.: AJ-WM50 Series).

### Note

- The model numbers of accessories and optional accessories are subject to change without prior notice.

## Dimensions

Unit : mm (inch)



## List of compatible signals

The following table specifies the image signals that the projector can project.

This projector supports the signal with ✓ in the compatible signal column.

- The content of the signal type column is as follows.

- V: Video signal
- C: Computer signal

Signal type	Signal name (SIGNAL FORMAT)	Resolution (dots)	Scanning freq.		Dot clock freq. (MHz)	Compatible signal	
			Horizontal (kHz)	Vertical (Hz)		COMPUTER	HDMI / DIGITAL LINK
V	480i (525i)	712 x 483i	15.7	59.9	13.5	✓	—
	576i (625i)	702 x 575i	15.6	50.0	13.5	✓	—
	480/60p	720 x 480	31.5	59.9	27.0	✓	✓
	576/50p	720 x 576	31.3	50.0	27.0	✓	✓
	720/60p	1 280 x 720	45.0	60.0 <sup>1</sup>	74.3	✓	✓
	720/50p	1 280 x 720	37.5	50.0	74.3	✓	✓
	1080/60i	1 920 x 1 080i	33.8	60.0 <sup>1</sup>	74.3	✓	✓
	1080/50i	1 920 x 1 080i	28.1	50.0	74.3	✓	✓
	1080/24p	1 920 x 1 080	27.0	24.0 <sup>1</sup>	74.3	✓	✓
	1080/24sF	1 920 x 1 080i	27.0	48.0 <sup>1</sup>	74.3	✓	✓
	1080/25p	1 920 x 1 080	28.1	25.0	74.3	✓	✓
	1080/30p	1 920 x 1 080	33.8	30.0 <sup>1</sup>	74.3	✓	✓
	1080/60p	1 920 x 1 080	67.5	60.0 <sup>1</sup>	148.5	✓	✓
	1080/50p	1 920 x 1 080	56.3	50.0	148.5	✓	✓
	3840 x 2160/24p	3 840 x 2 160	54.0	24.0 <sup>1</sup>	297.0	—	✓
	3840 x 2160/25p	3 840 x 2 160	56.3	25.0	297.0	—	✓
	3840 x 2160/30p	3 840 x 2 160	67.5	30.0 <sup>1</sup>	297.0	—	✓
	4096 x 2160/24p	4 096 x 2 160	54.0	24.0 <sup>1</sup>	297.0	—	✓
	4096 x 2160/25p	4 096 x 2 160	56.3	25.0	297.0	—	✓
	4096 x 2160/30p	4 096 x 2 160	67.5	30.0 <sup>1</sup>	297.0	—	✓
C	640 x 480/60	640 x 480	31.5	59.9	25.2	✓	✓
	800 x 600/60	800 x 600	37.9	60.3	40.0	✓	✓
	1024 x 768/50 <sup>2</sup>	1 024 x 768	39.6	50.0	51.9	✓	✓
	1024 x 768/60	1 024 x 768	48.4	60.0	65.0	✓	✓
	1024 x 768/70	1 024 x 768	56.5	70.1	75.0	✓	✓
	1024 x 768/75	1 024 x 768	60.0	75.0	78.8	✓	✓
	1152 x 864/75	1 152 x 864	67.5	75.0	108.0	✓	✓
	1152 x 864/85	1 152 x 864	77.1	85.0	119.7	✓	✓
	1280 x 720/60	1 280 x 720	44.8	59.9	74.5	✓	✓
	1280 x 768/60	1 280 x 768	47.8	59.9	79.5	✓	✓
	1280 x 800/50	1 280 x 800	41.3	50.0	68.0	✓	✓
	1280 x 800/60	1 280 x 800	49.7	59.8	83.5	✓	✓
	1280 x 800/75	1 280 x 800	62.8	74.9	106.5	✓	✓
	1280 x 800/85	1 280 x 800	71.6	84.9	122.5	✓	✓
	1280 x 960/60	1 280 x 960	60.0	60.0	108.0	✓	✓
	1280 x 1024/60 <sup>2</sup>	1 280 x 1 024	64.0	60.0	108.0	✓	✓
	1280 x 1024/75	1 280 x 1 024	80.0	75.0	135.0	✓	✓
	1280 x 1024/85	1 280 x 1 024	91.1	85.0	157.5	✓	✓
	1366 x 768/60	1 366 x 768	47.7	59.8	85.5	✓	✓
	1400 x 1050/60	1 400 x 1 050	65.3	60.0	121.8	✓	✓
1400 x 1050/75	1 400 x 1 050	82.2	75.0	155.9	✓	✓	
1440 x 900/60	1 440 x 900	55.9	59.9	106.5	✓	✓	
1600 x 900/60 <sup>2</sup>	1 600 x 900	55.9	60.0	119.0	✓	✓	

## Chapter 7 Appendix - Specifications

Signal type	Signal name (SIGNAL FORMAT)	Resolution (dots)	Scanning freq.		Dot clock freq. (MHz)	Compatible signal	
			Horizontal (kHz)	Vertical (Hz)		COMPUTER	HDMI / DIGITAL LINK
C	1600 x 1200/60	1 600 x 1 200	75.0	60.0	162.0	✓	✓
	1680 x 1050/60	1 680 x 1 050	65.3	60.0	146.3	✓	✓
	1920 x 1080/50	1 920 x 1 080	55.6	49.9	141.5	✓	✓
	1920 x 1200/50	1 920 x 1 200	61.8	49.9	158.3	✓	✓
	1920 x 1200/60RB	1 920 x 1 200 <sup>*3</sup>	74.0	60.0	154.0	✓	✓
	1920 x 720/60	1 920 x 720	46.0	60.0	95.0	—	✓
	1920 x 810/60	1 920 x 810	51.7	60.0	107.0	—	✓
	2048 x 1536/60	2 048 x 1 536	95.5	60.0	267.3	—	✓
	2560 x 1080/60RB	2 560 x 1 080 <sup>*3</sup>	66.6	60.0	181.3	—	✓
	3240 x 1080/60	3 240 x 1 080	69.0	60.0	237.1	—	✓

\*1 The signal with 1/1.001x vertical scanning frequency is also supported.

\*2 When inputting appropriate analog signal, it can be displayed by making the setting suitable for the signal from the [PICTURE] menu → [RGB-SYSTEM]. For digital signal, the [RGB-SYSTEM] setting is unnecessary.

\*3 VESA CVT-RB (Reduced Blanking)-compliant.

### Note

- A signal with a different resolution is converted to the number of display dots. The number of display dots is 1 920 x 1 200.
- The “i” at the end of the resolution indicates an interlaced signal.
- When interlaced signals are connected, flickering may occur on the projected image.
- When the DIGITAL LINK connection is made with the long-reach communication method, the signal that the projector can receive is up to 1080/60p (1 920 x 1 080 dots, dot clock frequency 148.5 MHz).
- Even if it is the signal listed in the list of compatible signals, it may not be displayed by the projector if the image signal is recorded in a special format.

## List of plug and play compatible signals

The following table specifies the image signals compatible with plug and play.

Signal with ✓ in the plug and play compatible signal column is the signal described in the EDID (extended display identification data) of the projector. For the signal without ✓ in the plug and play compatible signal column, the resolution may not be selected on the computer even if the projector is supporting it.

Signal name (SIGNAL FORMAT)	Resolution (dots)	Scanning freq.		Dot clock freq. (MHz)	Plug and play compatible signal	
		Horizontal (kHz)	Vertical (Hz)		COMPUTER	HDMI / DIGITAL LINK
480i (525i)	712 x 483i	15.7	59.9	13.5	—	—
576i (625i)	702 x 575i	15.6	50.0	13.5	—	—
480/60p	720 x 480	31.5	59.9	27.0	—	✓
576/50p	720 x 576	31.3	50.0	27.0	—	✓
720/60p	1 280 x 720	45.0	60.0	74.3	—	✓
720/50p	1 280 x 720	37.5	50.0	74.3	—	✓
1080/60i	1 920 x 1 080i	33.8	60.0	74.3	—	✓
1080/50i	1 920 x 1 080i	28.1	50.0	74.3	—	✓
1080/24p	1 920 x 1 080	27.0	24.0	74.3	—	✓
1080/24sF	1 920 x 1 080i	27.0	48.0	74.3	—	—
1080/25p	1 920 x 1 080	28.1	25.0	74.3	—	—
1080/30p	1 920 x 1 080	33.8	30.0	74.3	—	—
1080/60p	1 920 x 1 080	67.5	60.0	148.5	—	✓
1080/50p	1 920 x 1 080	56.3	50.0	148.5	—	✓
3840 x 2160/24p	3 840 x 2 160	54.0	24.0	297.0	—	✓
3840 x 2160/25p	3 840 x 2 160	56.3	25.0	297.0	—	✓
3840 x 2160/30p	3 840 x 2 160	67.5	30.0	297.0	—	✓
4096 x 2160/24p	4 096 x 2 160	54.0	24.0	297.0	—	✓
4096 x 2160/25p	4 096 x 2 160	56.3	25.0	297.0	—	✓
4096 x 2160/30p	4 096 x 2 160	67.5	30.0	297.0	—	✓
640 x 480/60	640 x 480	31.5	59.9	25.2	✓	✓
800 x 600/60	800 x 600	37.9	60.3	40.0	✓	✓
1024 x 768/50	1 024 x 768	39.6	50.0	51.9	—	—
1024 x 768/60	1 024 x 768	48.4	60.0	65.0	✓	✓
1024 x 768/70	1 024 x 768	56.5	70.1	75.0	✓	✓
1024 x 768/75	1 024 x 768	60.0	75.0	78.8	✓	✓
1152 x 864/75	1 152 x 864	67.5	75.0	108.0	—	—
1152 x 864/85	1 152 x 864	77.1	85.0	119.7	—	—
1280 x 720/60	1 280 x 720	44.8	59.9	74.5	—	—
1280 x 768/60	1 280 x 768	47.8	59.9	79.5	—	—
1280 x 800/50	1 280 x 800	41.3	50.0	68.0	—	—
1280 x 800/60	1 280 x 800	49.7	59.8	83.5	✓	✓
1280 x 800/75	1 280 x 800	62.8	74.9	106.5	—	—
1280 x 800/85	1 280 x 800	71.6	84.9	122.5	—	—
1280 x 960/60	1 280 x 960	60.0	60.0	108.0	—	—
1280 x 1024/60	1 280 x 1 024	64.0	60.0	108.0	—	—
1280 x 1024/75	1 280 x 1 024	80.0	75.0	135.0	✓	✓
1280 x 1024/85	1 280 x 1 024	91.1	85.0	157.5	—	—
1366 x 768/60	1 366 x 768	47.7	59.8	85.5	—	—
1400 x 1050/60	1 400 x 1 050	65.3	60.0	121.8	—	—
1400 x 1050/75	1 400 x 1 050	82.2	75.0	155.9	—	—
1440 x 900/60	1 440 x 900	55.9	59.9	106.5	—	—
1600 x 900/60	1 600 x 900	55.9	60.0	119.0	—	—
1600 x 1200/60	1 600 x 1 200	75.0	60.0	162.0	✓	✓
1680 x 1050/60	1 680 x 1 050	65.3	60.0	146.3	—	—
1920 x 1080/50	1 920 x 1 080	55.6	49.9	141.5	—	—
1920 x 1200/50	1 920 x 1 200	61.8	49.9	158.3	—	—
1920 x 1200/60RB	1 920 x 1 200 <sup>1</sup>	74.0	60.0	154.0	✓	✓
1920 x 720/60	1 920 x 720	46.0	60.0	95.0	—	—

## Chapter 7 Appendix - Specifications

Signal name (SIGNAL FORMAT)	Resolution (dots)	Scanning freq.		Dot clock freq. (MHz)	Plug and play compatible signal	
		Horizontal (kHz)	Vertical (Hz)		COMPUTER	HDMI / DIGITAL LINK
1920 x 810/60	1 920 x 810	51.7	60.0	107.0	—	—
2048 x 1536/60	2 048 x 1 536	95.5	60.0	267.3	—	✓
2560 x 1080/60RB	2 560 x 1 080 <sup>*1</sup>	66.6	60.0	181.3	—	✓
3240 x 1080/60	3 240 x 1 080	69.0	60.0	237.1	—	✓

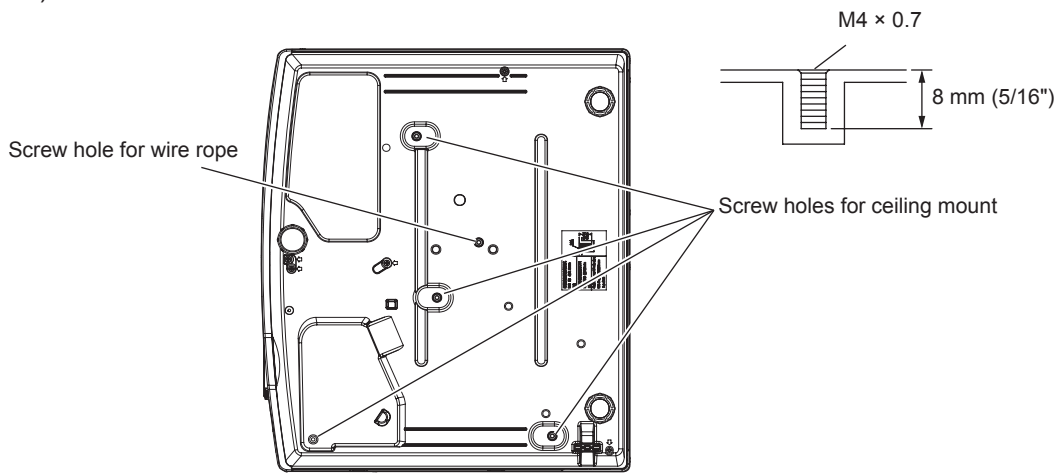
\*1 VESA CVT-RB (Reduced Blanking)-compliant.

# Precautions for attaching the Ceiling Mount Bracket

- When installing the projector to a ceiling, be sure to use the specified optional Ceiling Mount Bracket.  
**Model No.: ET-PKL100H (for high ceilings), ET-PKL100S (for low ceilings), ET-PKV400B (Projector mount bracket)**
- When installing the projector, attach the drop-prevention kit included with the Ceiling Mount Bracket.
- Ask a qualified technician to do the installation work such as mounting the projector on the ceiling.
- Panasonic Projector & Display Corporation takes no responsibility for any damage to the projector resulting from use of a ceiling mount bracket not manufactured by Panasonic Projector & Display Corporation or the inappropriate choice of location for installation, even if the warranty period of the projector has not expired.
- Unused products must be removed promptly by a qualified technician.
- Use a torque screwdriver or Allen torque wrench to tighten bolts to their specified tightening torques. Do not use electric screwdrivers or impact screwdrivers.  
 (Screw tightening torque:  $1.25 \pm 0.2 \text{ N}\cdot\text{m}$ )
- Read the Installation Instructions for the Ceiling Mount Bracket for details.
- The model numbers of accessories and optional accessories are subject to change without prior notice.

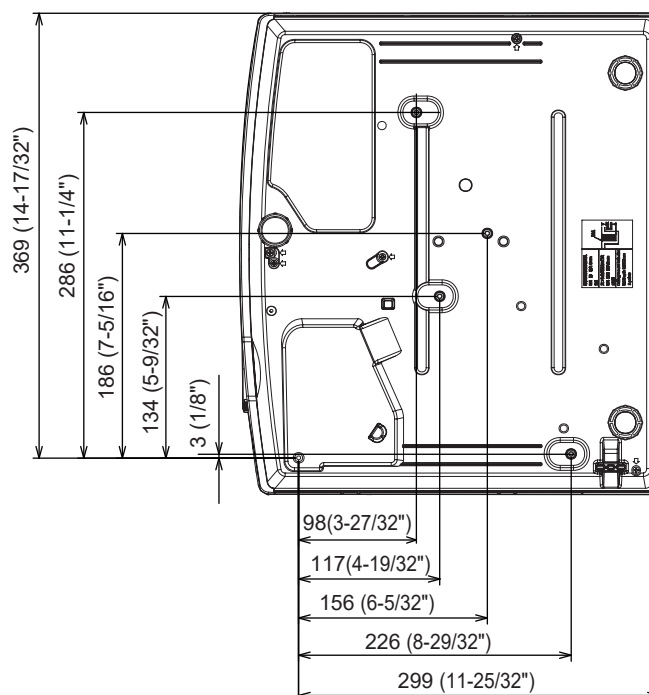
## ■ Screw hole specifications for ceiling mount (Bottom view)

Unit : mm (inch)



## ■ Screw hole dimensions for ceiling mount (Bottom view)

Unit : mm (inch)





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