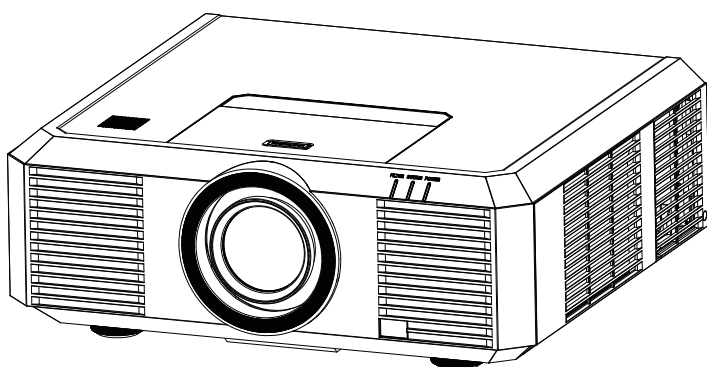




Owner's manual



Multimedia Projector

EK-510U

EK-510UL*

EK-511W

EK-511WL*

EK-512X

EK-512XL*

*Projection lens is optional

Features and Design

This Projector is designed with the most advanced technology for durability and ease of use. This projector utilizes built-in multimedia features, a palette of 1.07 billion colors and matrix liquid crystal display (LCD) technology.

Simple Computer System Setting

The projector has the Multi-scan system to conform to almost all computer output signals quickly. Up to WUXGA resolution can be accepted.

Useful Functions for Presentations

- The digital zoom and focus function allows you to focus on the crucial information during a presentation.
- The 10W audio output allows you to make a presentation without any external audio equipment.

Lamp Control

Brightness of the projection lamp can be selected.

Logo Function

The Logo function allows you to customize the screen logo.

Multilanguage Menu Display

The screen menu of the projector is available in 26 languages: English, German, French, Italian, Spanish, Polish, Swedish, Dutch, Portuguese, Japanese, Simplified Chinese, Traditional Chinese, Korean, Russian, Arabic, Turkish, Finnish, Norwegian, Danish, Indonesian, Hungarian, Czech, Kazakh, Vietnamese, Thai, Farsi.

Helpful Maintenance Functions

Lamp and filter maintenance functions provide for better and proper maintenance of the projector.

Security Function

The Security function helps you to ensure security of the projector. With the Key lock function, you can lock the operation on the control panel or remote control. PIN code lock function prevents unauthorized use of the projector.

LAN Network Function

This projector is loaded with the wired LAN network function. You can operate and manage the projector via network.

Auto Setup Function

This function enables input source search, auto PC adjust and auto focus by simple pressing the AUTO button on the remote control.

Colorboard Function

At the time of simple projection on the colored wall, you can get the close color image to the color image projected on a white screen by selecting the similar color to the wall color from the preset four colors.

Power Management

The Power management function reduces power consumption and maintains the lamp life.

Closed Caption

This is a printed version of the program sound or other information displayed on the screen. You can turn on the feature and switch the channels.

✓ *Note:*

- The screen menu and images in the manual may slightly differ from the real product.
- The manual is subject to change without prior notice.

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Safety operation guideline

Safety instructions

This document and your projector employ certain symbols to illustrate how to use your projector safely. They are described below: Please get yourself familiar with them before going through this document.

	Caution	Ignoring messages indicated by this symbol may lead to personal injuries or deaths due to human errors.
	Note	Ignoring messages indicated by this symbol may lead to personal injuries or property damage.
		High voltage inside with risks of electric shock.

Please read this manual carefully before installing and operating your projector.

Your projector comes with a lot of convenient features and functions. You may make the most of these features and keep your projector in good working conditions by using it correctly. Invalid operation of your projector may not only shorten its life cycle but also may lead to product failure, fire, or other incidents.

In case of any operation abnormality, refer to this manual to check your operation and connections and try solutions given in the "Troubleshooting" section at end of this manual. If the problem persists, call your dealer or our service center.

Your projector's lamp is a consumable and will get dimmer after long-term use. It's normal for an older lamp to be dimmer than a newer one. Please power on and off your projector by strictly following steps given in "Power on your projector" and "Power off your projector" section of this manual. Execute regular maintenance and cleaning according to instructions set forth in "Maintaining and cleaning your projector" section of this manual. Fail to do so may shorten life cycle of your projector and its lamps sharply or even damage your projector and its lamps before long.

	Caution Danger of electric shock DO NOT open this.	
Note: DO NOT remove the casing (or back cover) as this may result in electric shock. Users shall not execute any maintenance work on components within your projector except replacing lamps. Call qualified maintenance personnel in case of any maintenance requirements.		



High voltage inside with risks of electric shock.



Operation and maintenance tips about these components.

Safety operation guideline

Notes



Caution

Safety precautions:

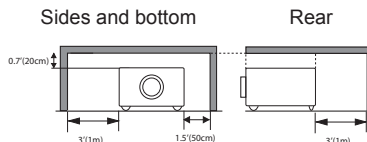
- GROUND your projector.
- Lens of your projector projects strong light. DO NOT look at the light beam directly. You may get your eyesight hurt. This is especially the case with children.
- Unplug the AC power plug if your projector will not be used for long time.
- DO NOT overload the socket of power cord as it may lead to fire or electric shock. DO NOT subject the power cord to any object. DO NOT place your projector in locations where its power cord may become damaged by treading by passersby.
- Disconnect the power plug before cleaning your projector. DO NOT apply liquid or sprays to your projector. DO NOT wipe your projector with wet cloth.
- Please follow warnings and instructions given in labels attached to your projector. Unplug your projector when your projector is exposed to thunderstorm weather, is unmanned, or not in use for long periods to prevent damage caused by lightning and power surges.
- DO NOT use accessories without recommendation by the manufacturer as it may result in potential risks.



Caution

Precautions on air outlet:

- Keep adequate clearance around your projector for its ventilation and cooling. See figure below for the least clearance requirements. The least clearance is a MUST when your projector is placed within a cabinet or other closed environment.



- DO NOT cover the air outlet of your projector. Poor ventilation not only shorten life cycle of your projector but also may lead to risks.
- Slots and openings at rear and bottom of your projector are designed for ventilation. Keep your projector from overheated to ensure its steady operation.
- DO NOT cover the air outlet with cloth or other objects. DO NOT place your projector on the surface of bed, sofa, carpets, or similar object as this may block the air outlets at its bottom.
- DO NOT place your projector in closed environment, e.g. a bookcase, unless it is well ventilated.
- Keep any matter from falling in your projector through the air outlets as they may touch high voltage parts and lead to fire or electric shock by short circuits. DO NOT splash liquid to your projector.

Safety operation guideline



Note:

Precautions on location of your projector:

- Place your projector in a proper location or it may result in fire.
- DO NOT expose your projector in rain or high humidity environments or it may result in fire or electric shock. DO NOT place your projector near water or splashing water. DO NOT place any water container, e.g. flower vase, atop your projector.
- DO NOT place your projector in environments of soot, moisture or smoke, e.g. your kitchen, or it may lead to product failure or accidents. Your projector may be damaged by contact with oil or chemicals.
- DO NOT place your projector near exhaust pipe or air conditioning equipment.
- DO NOT place your projector near radiator or heating pipes.
- DO NOT place your projector atop unstable truck, rack, or table. It may fall off the surface and lead to personal injuries and property damages. Please use cart or rack recommended by the manufacturer or included with your product. Please follow steps given in installation guideline included with the wall and ceiling mount racks for installation. Use installation components approved by the manufacturer.
- Be careful when moving your projector with cart. Abrupt stops, pushing too hard and rugged surfaces may topple your projector and the cart together.

FOR EU USERS

The symbol mark and recycling systems described below apply to EU countries and do not apply to countries in other areas of the world.

Your product is designed and manufactured with high quality materials and components which can be recycled and/or reused.

The symbol mark means that electrical and electronic equipment, batteries and accumulators, at their end-of-life, should be disposed of separately from your household waste.

Note:

If a chemical symbol is printed beneath the symbol mark, this chemical symbol means that the battery or accumulator contains a heavy metal at a certain concentration.

This will be indicated as follows: Hg: mercury, Cd: cadmium, Pb: lead In the European

Union there are separate collection systems for used electrical and electronic equipment, batteries and accumulators.

Please, dispose of them correctly at your local community waste collection/recycling centre.

Please help us to conserve the environment we live in!



Caution:

Contains mercury

For more information on safe handling procedures, the measures to be taken in case of accidental breakage and safe disposal options visit: ec.gc.ca/mercure-mercury/

Dispose of or recycle in accordance with applicable laws.

Safety operation guideline



Note:

Precautions on using your projector:

- DO NOT project the same image for long time as residual images may be left in the panel. This is a property of LCD panel.
- Use power as indicated in tags attached to your projector. If you have doubts over available power type, consult your dealer or local power company first.
- DO NOT open or remove the casing for maintenance as this may lead to electric shock or other damages. Call qualified maintenance personnel in case of any maintenance requirements.
 - In case of the following, unplug the power cord and call qualified maintenance personnel for service immediately:
 - a. Damaged or broken power cord or plug
 - b. Liquid splashed in your projector
 - c. Your projector exposed to rain or water
 - d. If your projector fails to work as expected by following operation instructions, adjust it according to given instructions. Other invalid operations may damage your projector, which requires the technician to spend more time before returning it back to normal.
 - e. The projector falls off to ground or its casing is damaged.
 - f. In case of any abnormal change in your projector during its use, then maintenance services would be required.
- In case components replacement is required, make sure the replacements have been approved by the manufacturer and features the same with the one being replaced. Use of unauthorized parts may lead to fire, electric shock or personal injury.
- After the completion of maintenance or repair work, get the maintenance personnel to run routine safety check to ensure your projector's safety operation status.

Information for users in the European Union

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.

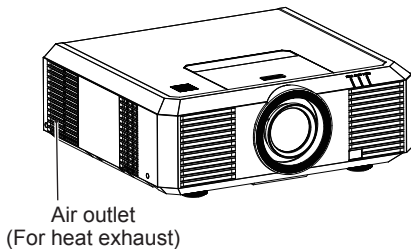
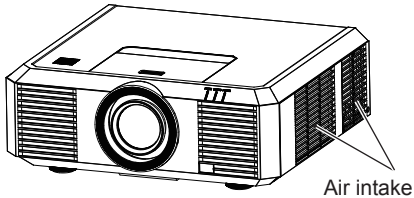
NOTE FOR CUSTOMERS IN THE US

 LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL STATE OR FEDERAL LAWS.

Safety operation guideline

Air ventilation

Openings in the casing are designed for ventilation and overheating prevention. DO NOT block or cover these openings to keep your projector in normal operation and from overheating.



Note:

Heat exhaust at the air outlet Keep the following in mind when using or installing your projector:

- DO NOT place flammable materials or sprayers near your projector.
- Keep the air outlet one meter away from other objects.
- DO NOT touch the area close to the air outlet especially the metal components, e.g. screws. This area and parts will get very hot once your projector starts operating.
- DO NOT place any object atop your projector. They may not only be damaged but also lead to fire after being overheated.

Cooling fans are designed for cooling your projector. Fan speed is auto adjusted subject to internal temperature of your projector.

Safety operation guideline

Place your projector correctly

Use your projector at specified location in correct way. Invalid projector location may shorten life-cycle of lamps or even lead to severe incidents or fire.

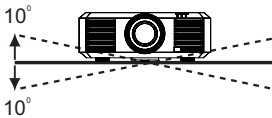


Note:

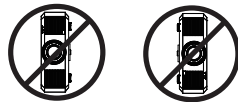
- Enable the “Ceiling” function if flip over screen is required.

■DO NOT install your projector in ways as illustrated below.

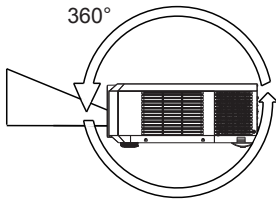
- DO NOT incline your projector more than $\pm 10^\circ$ degrees.



- DO NOT place your projector as illustrated above.



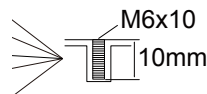
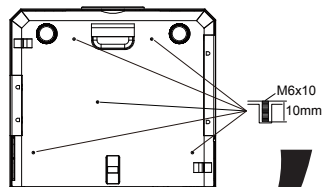
■The projector supports 360° projection in Vertical.



Note:

Precautions on ceiling mount racket installation:

- Get qualified technician to install the ceiling mount racket.
- Warranty of your projector does not cover hazards and damage caused by using ceiling mount rackets provided by unauthorized dealers.
- Remove the ceiling mount racket when it is not in use.
- Apply torque driver instead of power driver or impact driver in your projector.



Safety operation guideline

Moving your projector

When moving your projector close its adjustment legs as they may damage the lens and casing. Keep your projector in suitable box when it is not to be used for a long time.



Note:

Precautions on moving or shipping your projector:

- DO NOT drop or impact your projector as it may get damaged or failed in operation.
- Please employ proper container for movement.
- Prohibit express or other shipping service provider personnel from shipping your projector with improper boxes. Your projector may become damaged. Please consult your dealers for shipping your projector by express or other shipping service providers.
- Place your projector in box only after it has been fully cooled down.

Precautions on dealing with your projector:

DO NOT lift or move your projector by holding the lens or projecting decoration ring as it may damage the lens and your projector.

Be careful when handling your projector. DO NOT drop it, subject it to external forces, or place objects atop it.



Note:

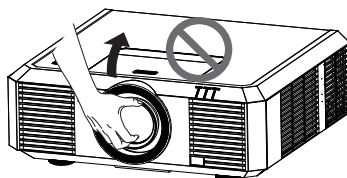
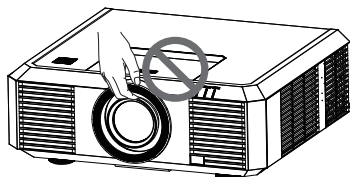


Lens of your projector is electric powered.

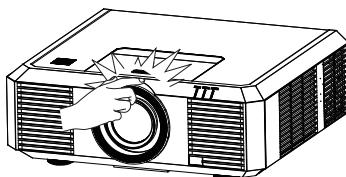


Precautions on using your projector:

- DO NOT touch the lens when it is working as your fingers may get hurt.
- DO NOT let children touch the lens.



DO NOT hold the lens or area around it.



Compliance

FCC Caution

Declaration of Conformity

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.

To assure continued compliance, follow the attached installation instructions and do not make any unauthorized modifications.

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.

Model Number : EK-510U, EK-511W, EK-512X

Trade Name : EIKI

Responsible party : EIKI International, Inc.

Address : 30251 Esperanza Rancho Santa Margarita CA 92688-2132

Telephone No. : 800-242-3454 (949-457-0200)

AC Power Cord Requirement

The AC Power Cord supplied with this projector meets the requirement for use in the country you purchased it.

AC Power Cord for the United States and Canada:

AC Power Cord used in the United States and Canada is listed by the Underwriters Laboratories (UL) and certified by the Canadian Standard Association (CSA).

AC Power Cord has a grounding-type AC line plug. This is a safety feature to be sure that the plug will fit into the power outlet. Do not try to defeat this safety feature. Should you be unable to insert the plug into the outlet, contact your electrician.

AC Power Cord for the United Kingdom:

This cord is already fitted with a moulded plug incorporating a fuse, the value of which is indicated on the pin face of the plug. Should the fuse need to be replaced, an ASTA approved BS 1362 fuse must be used of the same rating, marked thus . If the fuse cover is detachable, never use the plug with the cover omitted. If a replacement fuse cover is required, ensure it is of the same colour as that visible on the pin face of the plug (i.e. red or orange). Fuse covers are available from the Parts Department indicated in your User Instructions.

If the plug supplied is not suitable for your socket outlet, it should be cut off and destroyed.

The end of the flexible cord should be suitably prepared and the correct plug fitted.

WARNING : A PLUG WITH BARED FLEXIBLE CORD IS HAZARDOUS IF ENGAGED IN A LIVE SOCKET OUTLET.

The Wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow	Earth
Blue	Neutral
Brown	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol  or coloured green or green-and-yellow.

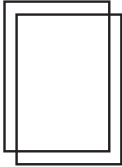
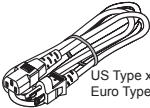
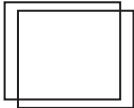
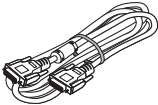
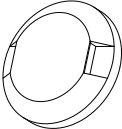
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

WARNING: THIS APPARATUS MUST BE EARTHED.

THE SOCKET-OUTLET SHOULD BE INSTALLED NEAR THE EQUIPMENT AND EASILY ACCESSIBLE.

Accessories

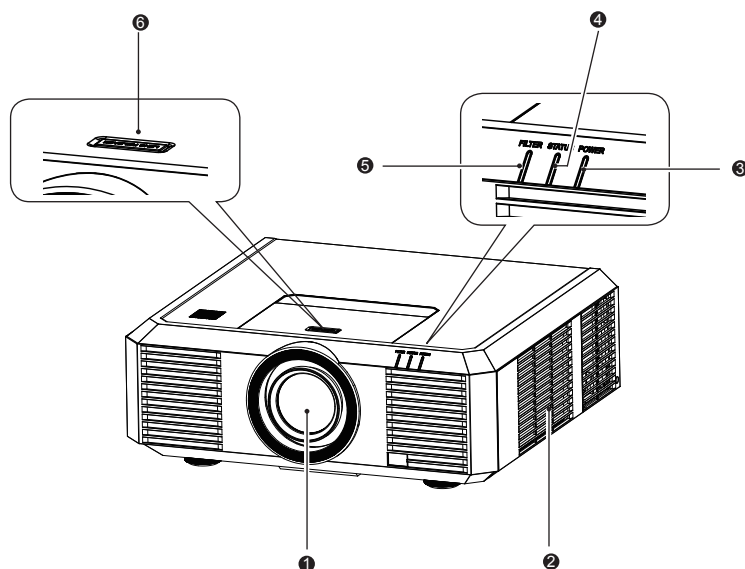
Quick Start Guide	AC Power Cord	Remote Control with batteries (AA or LR6)
	 US Type x1 Euro Type x1	
Safety Information	VGA Cable	Lens Cover (For EK-510U, 511W and 512X)
		

Overview

This chapter presents names and functions of individual component.

Name and function of your projector

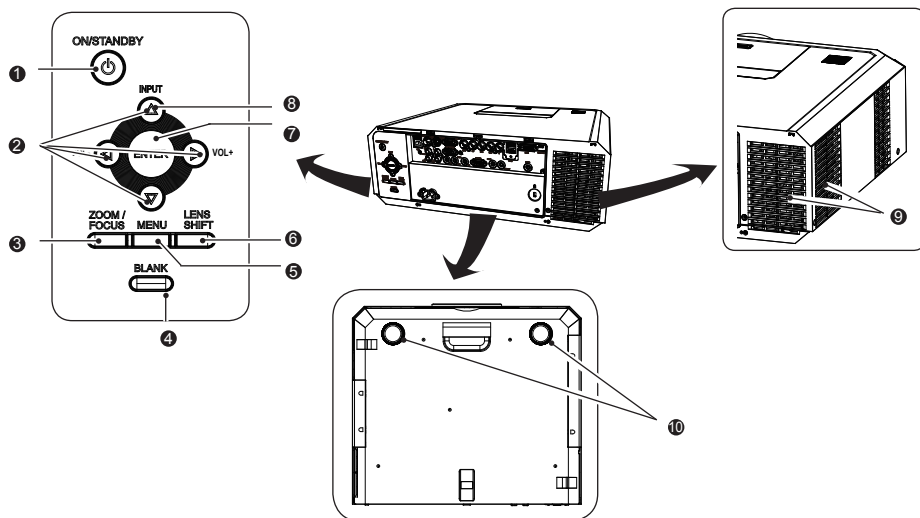
Front/top



- ❶ Projection lens
- ❷ Air intake with filter
- ❸ POWER indicator (Refer to Page 77)
 - The power indicator turns steady red when your projector is in standby mode
 - It turns steady green when your projector is in normal operation
- ❹ STATUS indicator (Refer to Page 77)
 - It flashes orange when internal temperature of your projector is out of operation range
- ❺ FILTER indicator (Refer to Page 77)
 - It turns orange when the filter requires cleaning
- ❻ Lens release button

Name and function of your projector

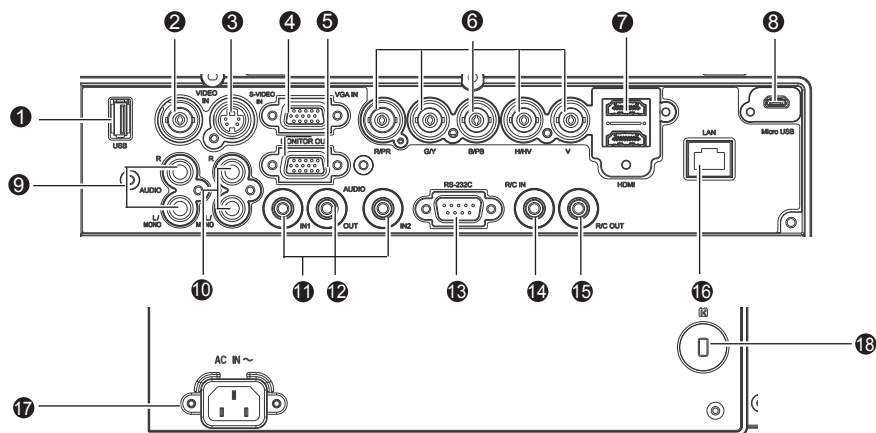
Rear



- | | |
|--|---|
| <p>1 ON/STAND-BY
Power on or off your projector</p> <p>2 ▲▼ / Vol- ◀ / Vol+ ▶
– Select items or adjust values in the OSD menu.
– Select display area in digital zoom+ mode
– Adjust the volume.</p> <p>3 ZOOM/FOCUS
– Enter the optical zoom adjustment mode
– Enter the focus adjustment mode</p> <p>4 BLANK
Dark out screen images temporarily</p> <p>5 MENU
Open or close the OSD menu</p> | <p>6 LENS SHIFT
Enter the lens moving mode</p> <p>7 ENTER
Enter the OSD menu or select options in a menu</p> <p>8 INPUT
Select source of input</p> <p>9 Air exhaust</p> <p>10 Adjustment pad</p> <p>! Note:
Air exhaust emits hot air. DO NOT place heat sensitive objects near it.</p> |
|--|---|

Name and function of your projector

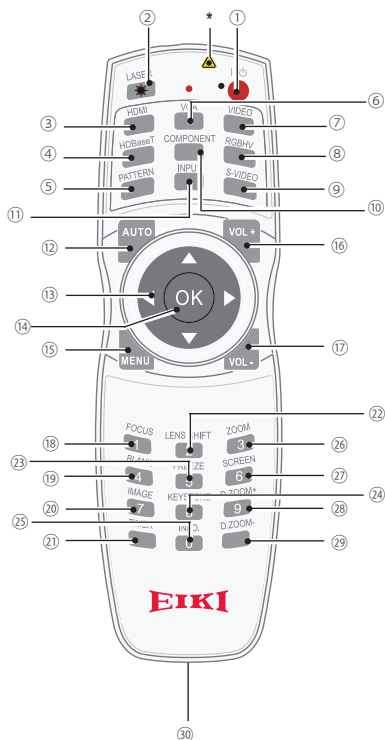
Terminal



- 1 USB**
When using the Memory Viewer function, insert the USB memory directly to this terminal.
- 2 VIDEO IN**
Connect video output signal to this terminal.
- 3 S-VIDEO IN**
Connect S-VIDEO output signal of video device to this terminal.
- 4 VGA IN**
Connect output signal from computer to this terminal.
- 5 MONITOR OUT**
Transmit signals from **4** to other displays when your projector is acting as a display output.
- 6 R(PR)/G(Y)/B(PB)/H(HV)/V**
 - Connect RGBHV format (5-core) signals to R/G/B/HS/VS terminal respectively.
 - Connect component signals to Y, Pb, Pr terminal respectively.
- 7 HDMI**
Connect HDMI digital output signals or MHL digital output signals to this terminal.
- 8 Micro-USB**
The terminal is to use the USB display function, when connected the projector to computer with USB cable
- 9 AUDIO (Video)**
Connect audio signal from **2** to this terminal
- 10 AUDIO (S-Video)**
Connect audio signal from **3** to this terminal.
- 11 AUDIO IN1/AUDIO IN2**
 - Connect audio signals for device **4** to AUDIO IN1
 - Connect audio signals for device **6** to AUDIO IN2
- 12 AUDIO OUT**
Output audio signals to amplifier or other audio equipment.
- 13 RS232C**
Connect serial cable to this terminal when using RS232 device to control or operate your projector.
- 14 R/C IN**
Connect wired remote controller to this terminal. Connection of a wired remote controller will disable the wireless one.
- 15 R/C OUT**
Transmit wired remote controller signals of **14** to another projector when a wired remote controller is used.
- 16 HDBaseT (for EK-510U, 510UL, 501W, 501WL)**
When the projector is equipped with HD-Ba-seT function, connect to this terminal through a network cable to achieve the function as for it is optional.
LAN (for EK-512X, 512XL)
Connect network cable to this port for controlling and operating your projector via network.
- 17 Power cord connector**
- 18 Anti-theft slot**

Name and function of your projector

Remote controller



* Laser Transmitting Window:

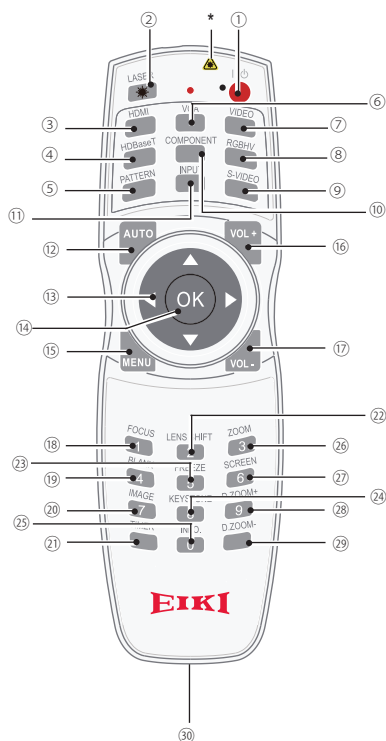
Laser beam will emit from this window while pressing LASER button during the projection to use the remote controller as a laser pointer.

Do not stare directly at the laser transmitting window or aim the window at human body, to avoid any physical injury.

- ① **POWER**
Power on or off your projector.
- ② **LASER**
Press the LASER button during presentation to use the remote controller as laser pointer
- ③ **HDMI**
Select HDMI input source
- ④ **HDBaseT**
Select HDBaseT input source
*This function is not available for EK-512X, 512XL
- ⑤ **PATTERN**
Select built-in test pattern of your projector
- ⑥ **VGA**
Select VGA input source
- ⑦ **VIDEO**
Select VIDEO input source
- ⑧ **RGBHV**
Select RGBHV input source
- ⑨ **S-VIDEO**
Select S-VIDEO input source
- ⑩ **COMPONENT**
Select Component input source
- ⑪ **INPUT**
Open or close the INPUT menu
- ⑫ **AUTO**
Enter auto adjustment mode
- ⑬ **Arrow ▲▼◀▶**
– Select items or adjust values in the OSD menu
– Select display area in digital zoom+ mode
- ⑭ **OK**
Enter the OSD menu or select options in it
- ⑮ **MENU**
Open or close the OSD menu
- ⑯ **VOLUME +**
Increase volume
- ⑰ **VOLUME -**
Decrease volume
- ⑱ **FOCUS**
Enter the focus adjustment mode
- ⑲ **BLANK**
Dark out screen images temporarily
- ⑳ **IMAGE**
Select image mode

Name and function of your projector

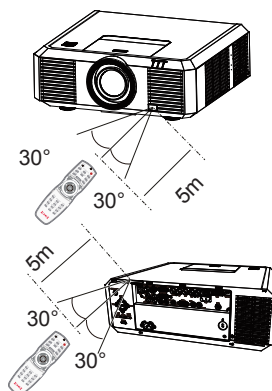
- ②1 **TIMER**
Enable the timer function
- ②2 **LENS SHIFT**
Enter the lens moving mode
- ②3 **FREEZE**
Freeze projected images
- ②4 **KEystone**
Keystone calibration
- ②5 **INFO.**
Display current status information of your projector
- ②6 **ZOOM**
Enter the zooming mode
- ②7 **SCREEN**
Select screen size
- ②8 **D.ZOOM+**
Zoom in projected image
- ②9 **D.ZOOM-**
Zoom out projected image
- ③0 **Wired remote controller output terminal**
Connect cable of wired remote controller to this port while operating the projector by wired remote control



Remote controller operation range

Point your remote controller to the IR receiver of your projector

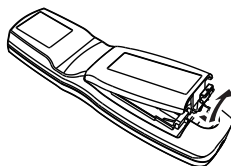
Maximum operation range of your remote controller is an area of radius 5 meters and arc 60° in front of and behind your projector



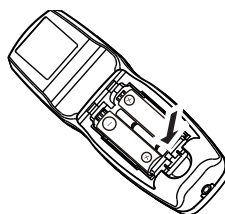
Name and function of your projector

Install battery of remote controller

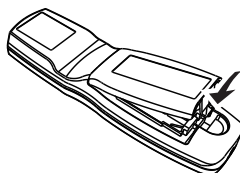
- ❶ Open the battery cover.



- ❷ Insert a new battery in it.
Two AA (LR6) batteries
Place your batteries with its
anode and cathode (+ and -)
in correct direction. Keep both
poles in good connection to the
contacts within the compartment.



- ❸ Put the cover back.



Please follow the following rules for safety operation:



- Use two of AA or LR6 alkaline batteries.
- Replace both batteries at the same time.
- Do not mix new and old batteries as one pair.
- Keep your remote controller away from water or other liquids.
- Do not expose your remote controller to environments with high humidity or temperature.
- Do not drop your remote controller.
- In case of any battery solution leaking in the compartment, clear it thoroughly before placing new batteries in it.
- Using battery of other types than what specified on this manual may lead to risks of explosion.
- Please dispose your old battery by following instructions given in tag of the battery or local regulations.

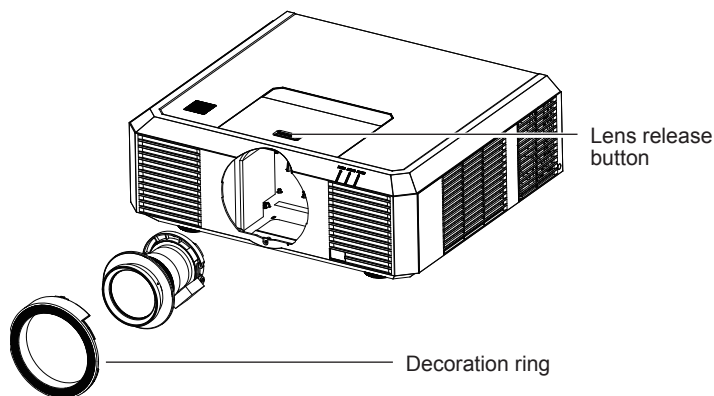
Installation

This chapter introduces the information of install.

Installation

Lens installation

Please follow steps given below to install lens after its replacement or when optional ones are employed. Please consult your dealers for details on optional lenses.



Remove the lens

- 1 Center the lens with its movement function. (Hold 5 sec. on Lens Shift button. Refer to the Page 30).
- 2 Power off your projector and unplug the AC power cord.
- 3 Remove the decoration ring by turn it counterclockwise.
- 4 Press and hold the lens release button at top of the casing. Turn it counter clockwise until it sticks, and then pull it out of your projector gently.



Note:
Be careful in removing the lens.
Do not drop it.

Installing lens

- 1 Align the red mark on your lens and your projector and insert the lens in the latter.
- 2 Turn the lens clockwise slowly until you hear a click. Make sure the lens is fully inserted in your projector.
- 3 Turn the lens decoration ring clockwise to replace it.



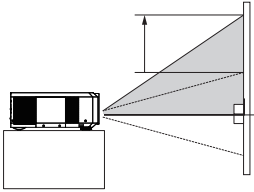
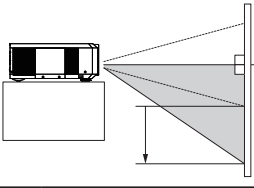
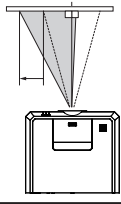
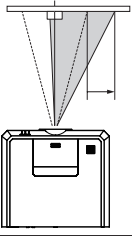
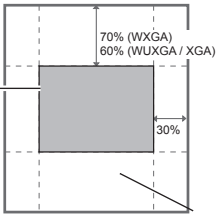
Note:
Do not press and hold the lens release button when installing it.

- Do not touch or remove any other component except the lens and parts related to it. Otherwise, you may experience product failure, electric shock, fire, or other incidents.
- Make sure model of the lens is compatible with your projector before installing it.
- For details on lens and its installation, please call local dealers.

Installation

Lens shift adjustment

The electric lens shift function may adjust your lens in all four directions.
This function enables easy image position adjustment.

The projection location of your image may be moved upward a distance up to 70% (WXGA) / 60% (WUXGA / XGA) of the length of the image.	Move lens to it top position 
The projection location of your image may be moved downward a distance up to 70% (WXGA) / 60% (WUXGA / XGA) of the length of the image.	Move lens to it bottom position 
The projection location of your image may be moved leftward a distance up to 30% of the width of the image.	Move lens to it leftmost position 
The projection location of your image may be moved rightward a distance up to 30% of the width of the image.	Move lens to it rightmost position 
Scope of lens shift adjustment	 Lens shift range

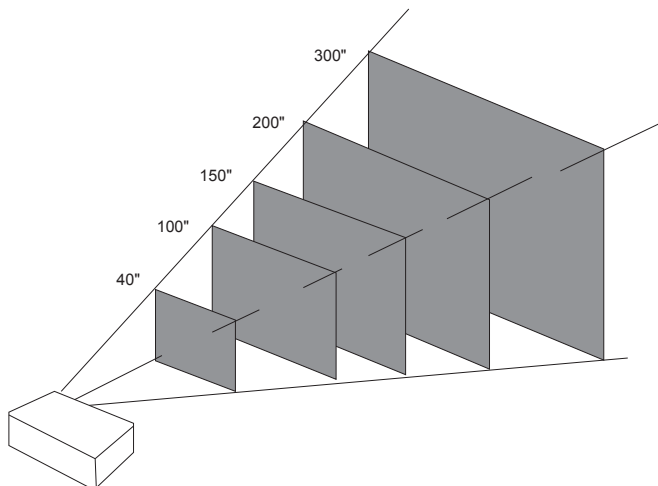
*This table is measured with standard lens.

*When the setting of LENS SHIFT as the maximum position, the corner of projection image might be darker.

Installation

Set up your projector

- Ambient brightness may affect your projection image quality. For the optimal image effect, it is recommended to control brightness in your environment.
- Values shown in figure below are approximates only. They may differ from the actual ones.



EK-510U / EK-510UL, EK-511W / EK-511WL (16:10)

Unit:cm

Lens Model No.			AH-E22010		AH-E22020		AH-E21010		AH-E23010		AH-E23020	
Screen size	Width	Height	Distance	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele	
40 inch	86	54	67	93	126	121	223	212	363	349	606	
100 inch	215	134	166	244	322	310	564	538	927	898	1541	
150 inch	323	202	250	371	484	468	849	809	1398	1356	2321	
200 inch	431	269	333	497	647	626	1134	1080	1869	1813	3101	
300 inch	646	404	499	750	972	941	1703	1622	2811	2728	4660	

EK-512X / EK-512XL (4:3)

Unit:cm

Lens Model No.			AH-E22010		AH-E22020		AH-E21010		AH-E23010		AH-E23020	
Screen size	Width	Height	Distance	Wide	Tele	Wide	Tele	Wide	Tele	Wide	Tele	
40 inch	81	61	64	90	124	116	215	200	359	340	588	
100 inch	203	152	160	238	316	299	544	522	904	876	1497	
150 inch	305	229	240	361	475	450	818	791	1359	1322	2255	
200 inch	406	305	320	484	635	602	1092	1060	1814	1769	3012	
300 inch	610	457	480	730	955	906	1641	1598	2723	2662	4527	

Installation

Connect the AC power cord

Standard voltage employed by your projector is AC 100-240V. It adapts to different input voltage automatically. Your projector employs 2-phase power cord with neutral ground cable.

Do not use any other type of power cords or you may face the risks of electric shock. In case you have any doubt on type of power cord you are using, please call authorized dealer or service center for help. Before powering on your projector, get all external equipment connected in advance.

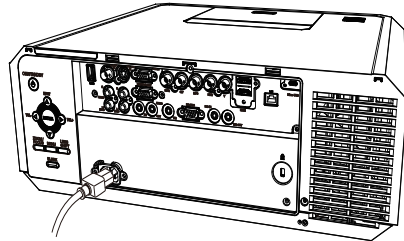


Note:

Keep your AC power socket close to your projector for easy plugging and unplugging.

✓ Note:

For safety reasons, unplug the AC power cord when your projector is not in use. Your projector will consume a small amount of power when it is connected to AC grid power and in standby mode.



Connect included AC power cord to your projector.

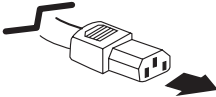
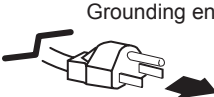
Precautions on power cord

Your AC power cord should meet regulations of the country/district where your projector is used.

Please make sure the type of the power plug is compliant with those given in figure below.

Make sure you are using a valid AC power cord.

In case the included AC power cord does not comply with the AC power socket in your location, call your dealer for replacement.

The projector side	Connect to the AC power socket
 Connect to power cord connector of your projector	 Connect to AC power socket

✓ Note:

- Use of invalid power cord may hamper product performance or even lead to electric shock, fire, and other incidents. Please use power cord compliant with the included one to ensure product performance and operation safety.
- The frequently used cables are: AC power cord, VGA cable, audio cable, video cable, and RS232 control cable.

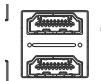
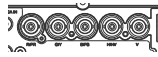
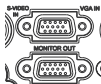
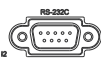
Connection to equipment

Connection to computer

Cables for connection:

- VGA cable
- BNC cable*
- HDMI cable*
- Network cable
- RS232 control cable*

(* This cable is optional.)

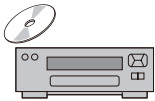
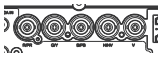
Ports on your projector	Connection cable	Equipment
HDMI 	HDMI cable 	
R(PR) / G(Y) / B(PB) / H(HV) / V 	BNC cable 	
VGA IN MONITOR OUT 	VGA cable 	
RS232C 	RS232 control cable 	
LAN 	Network cable 	

Connection to video equipment

Cables for connection:

- S-VIDEO cable*
- BNC cable*
- VIDEO cable*
- Network cable

(* This cable is optional.)

Ports on your projector	Connection cable	Equipment
S-VIDEO IN 	S-VIDEO cable 	
VIDEO IN 	VIDEO cable 	
R(PR) / G(Y) / B(PB) / H(HV) / V 	BNC cable 	
HDBaseT 	Network cable 	



Unplug power cords of your projector and all external equipment before connecting any cable to them.

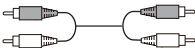
Connection to equipment

Connection to audio equipment

Cables for connection:

- Audio cable*

(* This cable is optional.)

Ports on your projector	Connection cable	Equipment
AUDIO MONO L/R 	Audio cable 	
AUDIO IN 1 / IN 2 / OUT 	Audio cable 	
RC IN/ RC OUT 	Audio cable 	

Connection to USB equipment

Cables for connection:

- USB cable*

(* This cable is optional.)

Ports on your projector	Connection cable	Equipment
USB 	USB-A Device 	
Micro USB 	USB cable 	



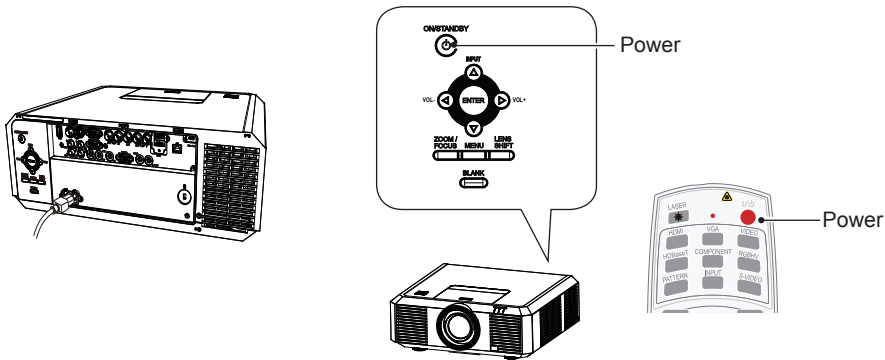
Unplug power cords of your projector and all external equipment before connecting any cable to them.

Operation

This chapter introduces you to basic operation of your projector.

Basic operation

Power on your projector



1. Connect all external equipment to your projector (e.g. computer or camera) before powering it on.
2. Connect AC power cord of your projector to an AC power socket. The Power indicator turns on in red.
3. Press the Power button on the rear control panel or the remote controller. The Power indicator lights in green and the cooling fan starts running.
4. If your projector is setting as password protected, the password dialog box displays. Enter your password as instructed below.

Enter password (PIN)

Press ENTER button to start input the PIN code. Press ◀▶ button to select a number, then press ENTER button to select and the cursor would move to next field automatically. The number you typed is displayed as "*". Repeat this step to fill in a 3-digit number. If any mistake, press MENU button to reset.

After fill in the PIN code, the cursor would move to the "Set" selection. Press the ENTER button and now you are ready to use your projector. Or press ▶ button select "Cancel" to give up the setting.

If the password is invalid, the password displayed as "***" will be in red. Please try again with a valid one.

✓ Note:

- In case the "Logo Select" option is set to OFF, then no welcome image will display in screen.
- You can do nothing but powering off your projector during the welcome image is displaying.



What is a password (PIN)?

A password (PIN) is an ID code for identifying people with knowledge about it to operate your projector. A password (PIN) setting may help preventing your projector from unauthorized use.

Your password (PIN) code is a 3-digit number. To find out more about protecting your projector with a password (PIN), please refer to the PIN Code Lock function in the Setup menu on Page 49 for details.

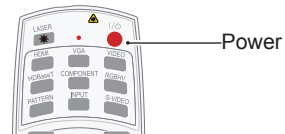
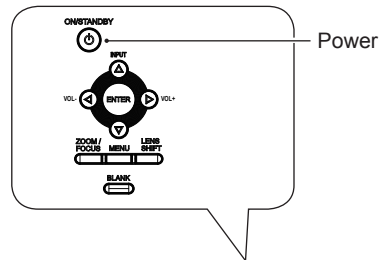
Precautions on password (PIN) operation

You cannot operate a password (PIN) protected projector without correct password (PIN). Please set up a new password (PIN) and keep your operation manual in safe place. In case the password (PIN) is lost or forgotten, call your dealer or service center.

Basic operation

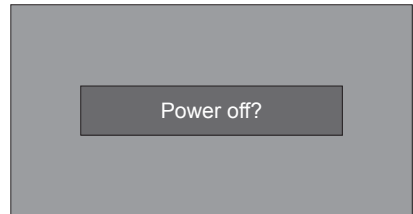
Power off your projector

1. Press the Power button at the rear control panel or the remote controller, the “Power off?” message displays.
2. Press the Power button again in 4 seconds after the “Power off?” message prompted to you. The POWER indicator flashes red while the cooling fan continues running. (You may set up noise level and speed of the fan.) Unplug the power cord until the fan stops running. Failure to do so may shorten life cycle of your projector or lead to power on failures or operation abnormalities.
3. The POWER indicator stops flashing once the projector has been cooled down to ready for power on again.



To maintain the life cycle of the lamp, power off your projector after it has been turn on for at least five minutes.

Do not use your projector without stop. As it may hurt the life cycle of your lamp. Power off your projector at least once every 24 hours and have it idle for an hour.

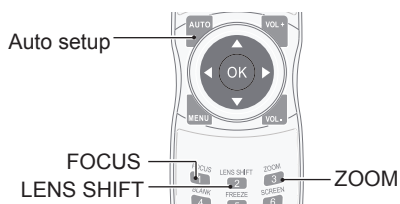
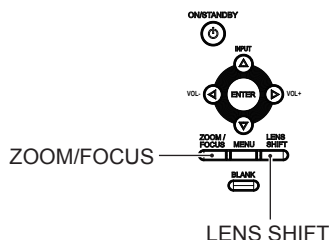


“Power off?” message disappears in 4 seconds.

✓ Note:

- If the “On Start” function is set to “On”, your projector will power on once it is connected to an AC power socket. (Refer to page 43)
- Speed of the cooling fan varies with internal temperature of your projector.
- Do not place your projector in any box before it is fully cooled down.
- In case the POWER indicator flashes or turns red, refer to the “Light indicator status” for instructions. (Refer to page 77)
- The POWER indicator flashes when the lamp is cooling down. Do not power on your projector at this time. Power on your projector only after the POWER indicator turns red.
- Unplug the power cord after your projector has been turned off. The fan stops running.
- The POWER indicator turns red when your projector is ready for power on again. It takes less time to restart your projector after it was powered off in the standard power off procedure than that of the non-standard one.

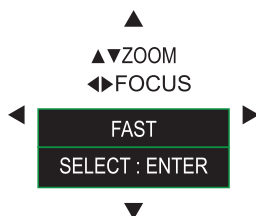
Basic operation



Zoom / focus function

1. Press the ZOOM / FOCUS button on the rear control panel or remote controller for zooming and focusing.
2. Press ▲▼ button to zoom in and out. Press ◀▶ button to change focus of image. Default adjustment speed is set to FAST. You may press the ENTER button, select STEP for speed fine-tuning.

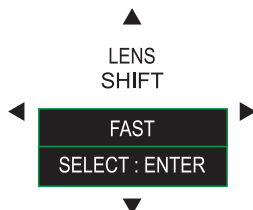
Zoom / focus



Lens Shift function

1. Press the LENS SHIFT on the rear control panel or remote controller to adjust position of the lens. Default adjustment speed is set to FAST. You may press the ENTER button, select STEP for speed fine-tuning.
2. Movement of the lens is shown on the screen. Press ▲▼◀▶ button to move the screen to required location without any image distortion. Range of screen movement - Upward or downward from the lens movement axis: 70%(WXGA), 60%(XGA / WUXGA). Leftward or rightward: 30%.
3. Press and hold the LENS SHIFT button on the rear control panel or remote controller for 5 seconds to home it to the center position.

Lens shift

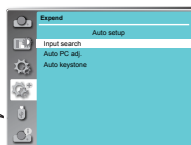


✓ Note:
The arrow mark displays in black when the lens is not moved. It turns red once the lens is moved for adjustment.

Auto setup function

Press the AUTO button on your remote controller to auto execute settings given in the Auto Setup menu (including Auto Searching, Auto PC Adjusting and Auto Keystone).

Input search
Auto PC adj.
Auto keystone



Basic operation

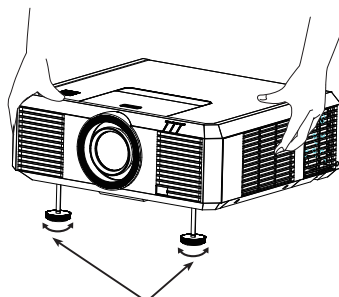
Adjustment pad

You may use the adjustment leg to raise your projector up to 5.0 degree.

Turn the pad to tilt your projector to required height. To raise your projector, turn both pads clockwise.

To lower down your projector or close the pad, turn both pads counterclockwise.

You may use the auto setup function to adjust your projector's keystone distortion automatically or do this with the remote controller or OSD menu manually.



Adjustable pad

Keystone adjustment

You may adjust keystone distortion of image in your projector with the keystone adjustment.

Follow steps below to adjust keystone distortion of projected image manually.

Press the KEYSTONE button on your remote controller.

The Keystone selection menu show up, press ▲▼ button to select..

The keystone adjustment dialog box displays, press ▲▼◀▶ button to adjust keystone distortion.

You may save your settings for keystone adjustment.



Keystone adjustment

Keystone adjustment

*for XGA / WXGA model

H/V Keystone

Corner correction
Curved correction
Reset value

*for WUXGA model

H/V Keystone

Corner correction
Reset value

H/V Keystone

Adjust the projected image when the projector is on the horizontal or vertical keystone distortion.

Corner correction

Adjust the projected image when the projector is key-stone distortion of four corners .

Curved correction

Adjust the projected image when the projector linearity is uneven or the projected images bent vertically and horizontally. (*This function is unavailable of EK-510U/EK-510UL)

Reset value

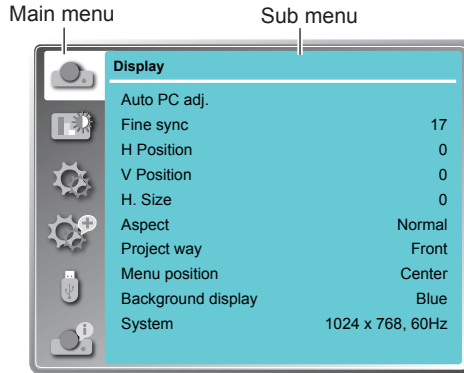
The correction values will be restored to the factory defaults.

Keystone adjustment

- The arrow mark looks white when there is no keystone adjustment in existence.
- The arrow mark indicating the adjustment direction turns red.
- The arrow mark disappears when the maximum adjustment limit reaches.
- The keystone adjustment will be canceled if you press the keystone adjustment button when it is displaying.
- The adjustable range is subject to source of signal input.

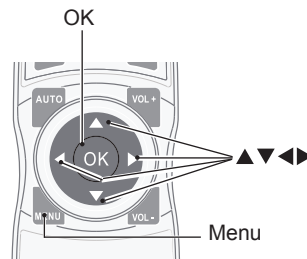
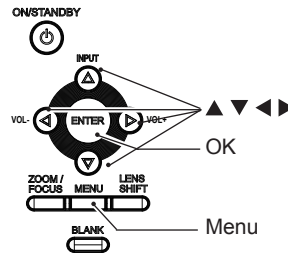
Basic operation

How to use the OSD



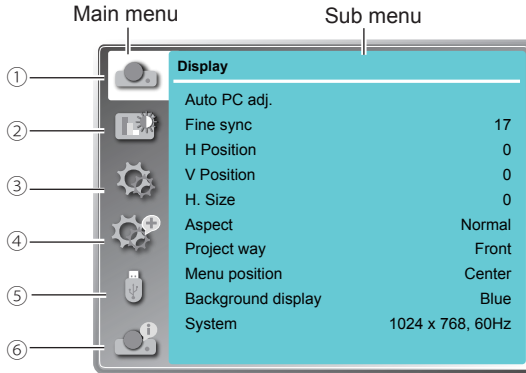
Menu operation

1. Press the MENU button on the rear control panel or remote controller and the OSD displays.
2. Press ▲▼ button to act on or select one main menu item. Press ► button or OK button to enter a submenu.
3. Press ▲▼ button to select required sub-menu, then press OK button or ► button to set up or enter an option.
4. Press ▲▼◀▶ button to select settings or navigate options, then press OK button to act on the item and exit.
5. Press ◀ button to return to mainmenu. Press the MENU button on remote controller or control panel to exit the OSD.



Basic operation

Menu item overview



- ① **Display**
Select Auto PC Adjust, Fine sync., H Position, V Position, H size, Aspect, Project way, Menu position, Background display, System to align each parameter with VGA input signal format.
- ② **Color adjust**
For computer input source, the color adjust options are: Image mode (Cinema/ Blackboard(Green)/ DICOM/ Colorboard/ User Image/ Dynamic/ Standard), Contrast, Brightness, Color temp., Red, Green, Blue and sharpness.
For the input source as video equipment, the color adjust options are: Image mode (Cinema/ Blackboard(Green)/ DICOM/ Colorboard/ User Image/ Dynamic/ Standard), Contrast, Brightness, Color, Tint, Red, Green, Blue and sharpness.
- ③ **Setting**
For computer input the setting options are: On start, Standby mode, High land, Lamp control, Cooling fast, Key lock, Iris, Remote control and Sound.
For video input the setting options are: On start, Standby mode, High land, Lamp control, Cooling fast, Closed caption, Key lock, Iris, Remote control and Sound.
For HDMI input the setting options are: On start, Standby mode, High land, Lamp control, Cooling fast, Key lock, Iris, Remote Control, Sound and HDMI setup.
- ④ **Expend**
Setting the Language, Auto setup (Input search/ Auto PC adj./ Auto keystone), Keystone, Logo, Security, Power management, Filter counter, Test pattern, Network, Factory default and Lamp counter function as you need.
- ⑤ **Memory Viewer**
Setting the display method of Memory Viewer page as Set slide, Slide transition effect, Sort order, Best fit, Rotate, Repeat and Apply.
- ⑥ **Information**
Display information about the projector.

Basic operation

Remote controller operation

Use your remote controller for common operations.

Screen size selection (SCREEN)

Press the SCREEN button on remote controller to select required screen size mode.

Digital Zoom (D.ZOOM+/-)

Press the D.ZOOM+/- button on remote controller to enter the Digital Zoom mode.

*Only for input as VGA, RGBHV, and the screen size setting as Normal or Wide.

Volume +/- (VOLUME +/-)

Increase or decrease volume.

Timer (TIMER)

Press the TIMER button on remote controller.

A timer animation (00:00) displays and starts timing in format of (00:00-59:59).

Press the TIMER button again to stop timing.

Press the TIMER button again to disable the timing function.



Timer display

Freeze (FREEZE)

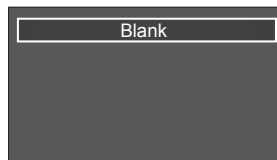
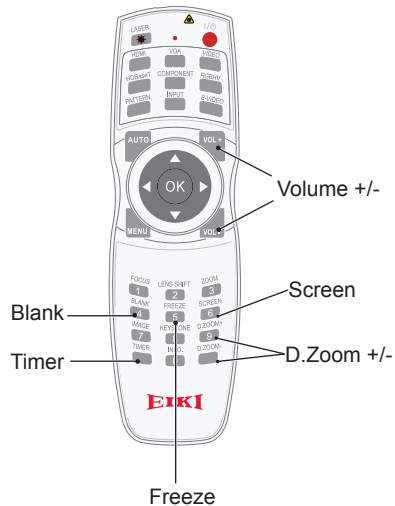
Press the FREEZE button on remote controller to freeze image on the screen. Press the FREEZE button or any button to cancel the freeze function.

Blank (BLANK)

Press the BLANK button on remote controller; a blank screen displays to replace existing image. Press the BLANK button or any other button to restore the image.

Press the BLANK to toggle switch your screen as shown below:

BLANK → Normal → BLANK → Normal →



The Blank screen disappears if no buttons are pressed in 4 seconds.

Input selection

Input select

Direct Operation

Press HDMI, VGA, VIDEO, HDBase T, COMPONENT, RGBHV or S-VIDEO on the remote control as input source.

Menu operation

1 Press INPUT button on the remote control or control panel to display the input select menu.

2 Press ▲▼ button to select VGA, RGBHV, HDMI 1, HDMI 2(MHL), HDBaseT, Component, Video, S-video, Memory Viewer, Network or USB Display, then press the OK button.

VGA

When input source is from computer connected to VGA terminal with VGA cable, please select "VGA".

RGBHV

When input source is from computer equipment connected to BNC terminal with BNC*5 cable, please select RGBHV..

HDMI 1

When input source is from equipment connected to HDMI terminal with HDMI cable, please select "HDMI 1".

HDMI 2(MHL)

When input source is from equipment connected to HDMI terminal with HDMI cable, please select "HDMI 2".

HDBase T

When input source is from equipment connected to HDBaseT terminal with RJ45 cable, please select "HDBaseT".

*This function is not available for EK-512X

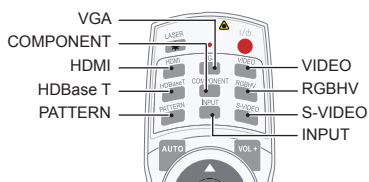
Component

Select it when the input source is from the video equipment connected to YPbPr terminal.

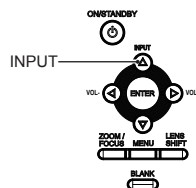
Video

Select it when the video input signal is connected to VIDEO IN terminal.

Remote control



Control Panel



Input select menu

- ☒ VGA
- RGBHV
- HDMI 1
- HDMI 2(MHL)
- HDBase T
- Component
- Video
- S-video
- Memory Viewer
- Network
- USB Display

✓ Note:

- When the "Input search" function is set to "On" in the "Auto setup" function, the input signal will be searched automatically.

Input selection

S-video

Select it when the video input signal is connected to S-VIDEO IN terminal.

Memory Viewer

When input source is from device connected to USB-A terminal, please select "Memory Viewer".

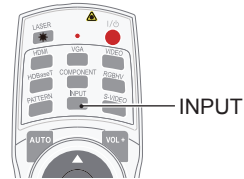
Network

When input source is from network connected to LAN terminal with LAN cable, please select "Network".

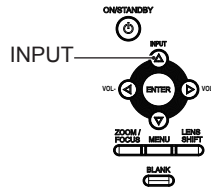
USB Display

When input source is from device connected to Micro-USB terminal, please select "USB Display".

Remote control



Control Panel



Input select menu

- ☒ VGA
- RGBHV
- HDMI 1
- HDMI 2(MHL)
- HDBase T
- Component
- Video
- S-video
- Memory Viewer
- Network
- USB Display

✓ Note:

- When the "Input search" function is set to "On" in the "Auto setup" function, the input signal will be searched automatically.
- When signal is in "USB Display", "Memory Viewer" and "Network", FREEZE, ASPECT, IMAGE, AUTO SETUP, TEST PATTERN and SCREEN function cannot work.

OSD Setting-Display

Auto PC Adjusting

The Auto PC Adjusting function may get Total Dots, Horizontal and Vertical position, Display area H, and Display area V aligned with computer input.

Direct Operation

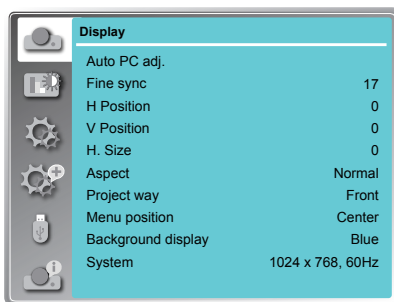
Press Auto button on the remote control to launch the Auto PC Adj. function.



Menu Operation

- 1 Press the MENU button on remote controller and the OSD displays. Press ▲▼ button to select Display icon. Press ► button or OK button and the Display menu displays.
- 2 Press ▲▼ button to point to Auto PC Adj. option, press OK button to confirm your choice.

Display menu



✓ Note:

- The projector executes the Auto PC adjustment automatically when the computer signals input the projector for the first time.
- Auto PC adjustment may not work depending on the model of the computer and the input signal.
- The Auto PC adjustment cannot be operated when 480i, 576i, 480p, 576p, 720p 1080i or 1080p is selected in the "Display" menu → "System", or when the signal is coming from the HDMI terminal.

✓ Note:

- Fine sync., H and V position and H Size of certain computers may be fully adjusted by the Auto PC Adjusting function. In case the post-adjustment image still looks incorrect, adjust it again manually.
- The Auto PC Adjusting, H and V position function will be disabled once 480i, 576i, 480p, 576p, 720p, 1080i or 1080p has been selected in the system menu.

OSD Setting-Display

Manual computer adjustment

The scan system of your projector may fail to detect signal format used by certain computers as they opted some special signal format. The manual computer adjustment function of your projector enables you to adjust individual parameter to align with most special signal format. Your projector comes with up to storage area to keep parameters manually adjusted by you. You may save preferred settings for certain computers as required.

- 1 Press MENU button on the remote controller or control panel and the OSD displays. Press ▲▼ button to select Display icon, press ► button or OK button to confirm your selection.
- 2 Press ▲▼ button to select items for adjustment, press ► button or OK button to confirm your selection. Press ▲▼ button to adjust settings.

Auto PC adj.

Adjust [Fine sync], [H Position], [V Position] and [H Size] automatically.

Fine Sync

Eliminate flashes in image. Press ▲▼ button to adjust Total Dots. (From 0 to 31)

H Position

Press ▲▼ button to adjust horizontal position of image.

V Position

Press ▲▼ button to adjust vertical position of image.

H size

Adjust and minimize the effect of interference caused by projection of patterns consisting of vertical stripes.
The projection of the vertical striped pattern may cause cyclic patterns (noise). Adjust to minimize the amount of interference. (From -15 to +15).
Note: H.Size must be set before adjust Fine sync.

Aspect

Press ▲▼ button to select the item to set the screen size to fit the image while maintaining the aspect ratio of the input signal.
Normal.....Projects the image at the maximum size while maintaining the aspect ratio of the input signal.

WideProjects the image at 16:9 aspect ratio.

FullTo provide an image to fit the screen.

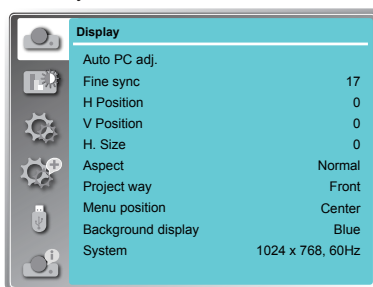
(*This function is unavailable of EK-510U/EK-510UL)

Advanced Splicing screen.

*Executing edge blending function

**Edge blending software and its manual can be downloaded from EIKI website. See page 68 for usage of Edge blending.

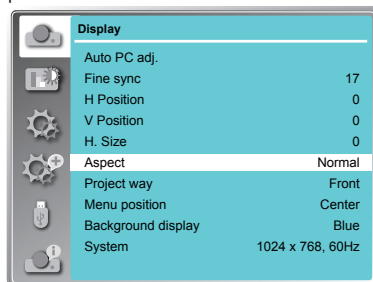
Auto PC adj. Menu



✓ Note:

- The projector executes the Auto PC adjustment automatically when the computer signals input the projector for the first time.
- Auto PC adjustment may not work depending on the model of the computer and the input signal.
- The Auto PC adjustment cannot be operated when 480i, 576i, 480p, 576p, 720p 1080i or 1080p is selected in the "Display" menu → "System", or when the signal is coming from the HDMI terminal.

Aspect menu



✓ Note:

- The adjustment of Fine sync, H Position, V Position and H.Size is only for computer signal input.
- The Fine Sync, Total Dots and Clamp function will be disabled if 480i, 576i, 480p, 576p, 720p, 1080i or 1080p has been selected in the system menu.

OSD setting-Display

Project way

Press ▲▼ button to select the project way.

Front Projects to front screen when projector is front standing.

Rear Projects to rear screen when projector is front standing.

Ceiling/Front Projects to front screen when projector is in ceiling state.

Ceiling/Rear Projects to rear screen when projector is in ceiling state.

Auto Ceiling/Front: Projects to front screen when projector is in ceiling state automatically.

Auto Ceiling/Rear: Projects to rear screen when projector is in ceiling state automatically.

Menu position

Press ▲▼ button to select the position of the on screen menu.

Upper left Menu locates on upper left of the screen.

Upper right Menu locates on upper right of the screen.

Center Menu locates at the center of the screen.

Lower left Menu locates on lower left of the screen.

Lower right Menu locates on lower right of the screen.

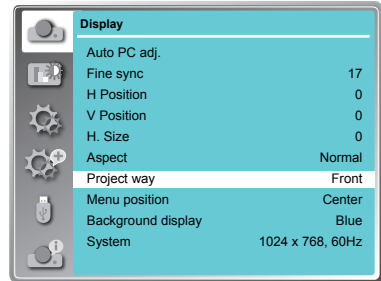
Background display

Press ▲▼ button to select the screen background of the projector when there is no signal detected.

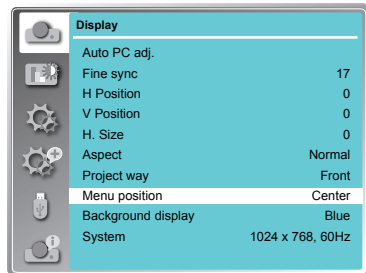
Black Select black background.

Blue Select blue background.

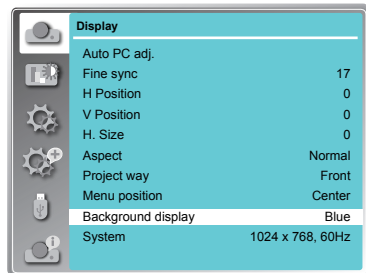
Project way menu



Menu position



Background display



Note: Edge blending software and its manual can be downloaded from EIKI website. See page.68 for usage of Edge blending.

OSD setting-Display

System

The projector automatically tunes to various types of computers with its function of Multi-scan system and Auto PC Adjustment. If a computer is selected as a signal source, the projector automatically detects the signal format and tunes to project proper images without any additional setting.

One of the following messages may appear when input source as computer:

Auto

When the projector cannot recognize the connected signal conforming to the provided computer system, Auto is displayed on the System menu box and the Auto PC Adj. function works to display proper images. If the image is not projected properly, a manual adjustment is required.

There is no signal input from computer. Check the connection between your computer and projector.

When input source as VIDEO or S-Video

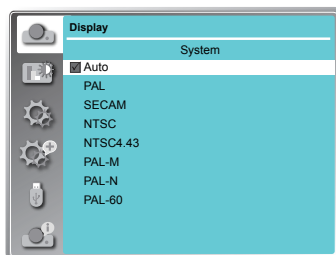
Auto

Your projector may auto detect the input video system and adjust to the optimum status. For PAL-M or PAL-N video system, select the system manually.

PAL/SECAM/NTSC/NTSC4.43/PAL-M/
PAL-N

If image cannot be displayed correctly, you may need to select one from PAL, SECAM, NTSC, NTSC 4.43, PAL-M and PAL-N for playing.

VIDEO or S-Video system menu



✓ Note:

- When HDMI, Component, HDBaseT, Network or USB display is selected, System menu for computer is disable.

OSD setting-Color Adjust(Computer signals)

Color Adjust

Menu operation

- 1 Press the MENU button on remote controller and the OSD displays. Press ▲▼ button select Color Adjust icon, press ► button or OK button to confirm your selection.
- 2 Press ▲▼ button to point to required item and press OK button to confirm your selection.

Image mode

Switch image mode to fit the image source and the projector.

Dynamic

The light output is maximized for use in bright areas.

Standard

The picture becomes suitable for moving images in general.

Cinema

Enriched grayscale for viewing movies.

Blackboard (Green)

An image mode designed for displaying on a blackboard (Green). It boosts quality of image projected on blackboard (Green). This is designed for a board in green rather than black as indicated by its name.

DICOM

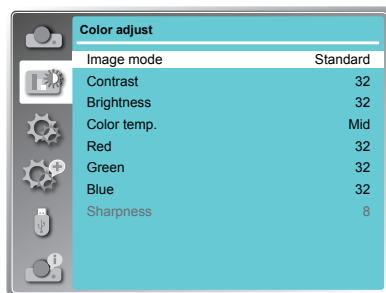
A highly clear X-ray image is reproduced. Digital radiographs with excellent detail and clarity for medical training, presentations and conferences.

Colorboard

Image mode suitable for image projecting on surface of wall in red, blue, yellow or green.

User Image

Default image mode set by users in the Image Adjust menu.



Contrast

Press ▼ button to decrease contrast, press ▲ button to increase contrast.

Brightness

Press ▼ button to decrease brightness, press ▲ button to increase brightness

Color Temp.

Press ▲▼ button to select required color temperature

High: Blueish image color

Mid.: Natural image color

Low: Reddish image color

Red

Press ▼button to lighten red tint and ▲ button to darken it.

Green

Press ▼ button to lighten green tint and ▲ button to darken it.

Blue

Press ▼ button to lighten blue tint and ▲ button to darken it.

Sharpness

Press ▼ button to soften image and▲ button to sharpen it.

OSD setting-Color Adjust(Video signals)

Color Adjust

Menu operation

- 1 Press the MENU button on remote controller and the OSD displays. Press ▲▼ button select Color Adjust icon , press ► button or OK button to confirm your selection.
- 2 Press ▲▼ button to point to required item and press OK button to confirm your selection.

Image mode

Switch image mode to fit the image source and the projector.

Dynamic

The light output is maximized for use in bright areas.

Standard

The picture becomes suitable for moving images in general.

Cinema

Enriched grayscale for viewing movies.

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An image mode designed for displaying on a blackboard (Green). It boosts quality of image projected on blackboard (Green). This is designed for a board in green rather than black as indicated by its name.

DICOM

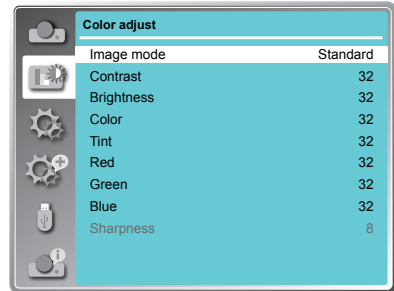
A highly clear X-ray image is reproduced. Digital radiographs with excellent detail and clarity for medical training, presentations and conferences.

Colorboard

Image mode suitable for image projecting on surface of wall in red, blue, yellow or green.

User Image

Default image mode set by users in the Image Adjust menu.



Contrast

Press ▼ button to decrease contrast, press ▲ button to increase contrast.

Brightness

Press ▼ button to decrease brightness, press ▲ button to increase brightness

Color

Press ▼ to decrease the chroma and ▲ to increase it.

Tint

Press ▲▼ to select the appropriate tone for the image.

Red

Press ▼ button to lighten red tint and ▲ button to darken it.

Green

Press ▼ button to lighten green tint and ▲ button to darken it.

Blue

Press ▼ button to lighten blue tint and ▲ button to darken it.

Sharpness

Press ▼ button to soften image and ▲ button to sharpen it.

OSD setting-Setting

Setting

Your projector comes with convenient adjustment function.

- 1 Press the MENU button on remote controller and the OSD displays. Press ▲▼ button to select Setting icon, press ► button or OK button to confirm your selection.
- 2 Press ▲▼ button to point to required item and press OK button to confirm your selection.

On start

Setting the projector to be turned on automatically just by connecting the AC power cord.

On Start the projection immediately, enter countdown display.

Off Start up in the standby mode.

Standby mode

Press▲▼ button to select the item below:

Eco..... Restrict some functions in the standby mode to reduce power consumption. In this case, you cannot use network functions and some RS-232C commands.

Normal ... Do not restrict network function and serial communication function even in the standby mode.

High land

Control the fan through the Setting menu.

Off Normal speed. Set it so if the projector is operated at a lower altitude.

On Faster than Off. Set it so if the projector is operated at a higher altitude.

✓ Note:

- When operating the projector at an altitude around 1400~2700m, please setting as ON.
- When you select High land "On", brightness is change to Eco automatically. When you restore the High land to Normal, please select Normal or Eco again in lamp control setting of OSD.

Lamp control

Change the brightness of the screen.

☀ Normal Normal brightness.

☾ Eco Lower brightness, reducing power consumption and extending the lamp life.

Cooling fast

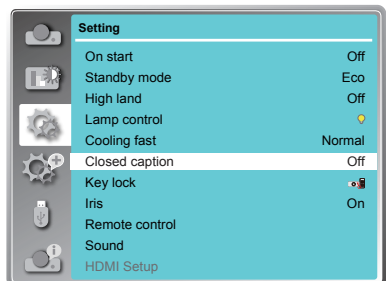
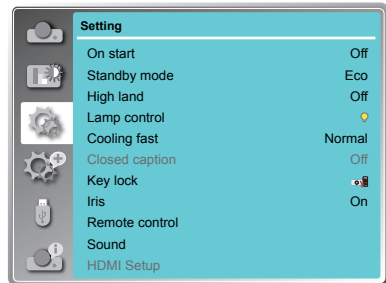
provides the following options in the cooling fans' operation after turning off the projector.

Normal .. As default cooling time.

60 sec ... Faster cooling time and louder noise of fan.

Closed caption (Video signal only)

Allows the subtitle to be displayed for the audio contents or other information. If the input source contains closed caption, you can



OSD setting-Setting

enable this function and change the channel.
Press ▲▼ to select Off, CC1, CC2, CC3 or CC4.

Keylock

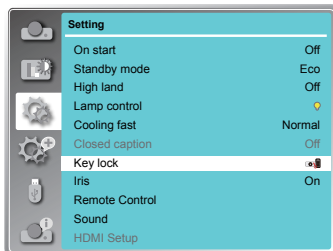
Set the security for the projector operation.

 Off.....

The control panel and remote controller are effective.

 Projector.....

Lock the operation of the control panel.
To unlock, use the remote control.



✓ Note:

- If the control panel accidentally becomes locked and you do not have the remote control nearby or there is something wrong with your remote control, contact the dealer where you purchased the projector or the service center.

 Remote Control

Lock the operation of the remote control.
To unlock, use the control panel.

Iris

Increase the contrast of the image.

On Enable Iris function, increase the contrast of the image.

Off Disable Iris function.

Remote control

Prevent the interference from the remote controller while multiple projectors or video devices are operated at the same time. (default setting is Code 0)

Change code on Projector:

Code 0 ~ code 9 Select the specified ID number to control the individual projectors.

Change code on remote controller:

Press and hold the OK button and one of the number button for 5 seconds to set the code as the number you pressed. The code is set successfully when the light indicator on the remote controller flashed.

✓ Note: Your projector and the remote controller must be paired with the same code.

Sound

Adjust the volume.

Volume Press ▲ button to increase the volume, press ▼ button to decrease the volume.

Mute Press ▼ button to switch mute function. (On/Off)

HDMI setup (HDMI only)

Switch the settings of "Image" or "Sound" in "HDMI setup" menu, if the image is not projected properly.

Image

64-940 For the video device.

0-1023 For the computer device.

✓ 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.*

Sound

HDMI The image and audio are transmitted.

VGA The audio signal is input by "AUDIO IN" terminal.

OSD setting-Expand

Expand

Select the Expand menu to set up other functions of your projector.

1. Press the MENU button on remote controller and the OSD displays. Press ▲▼ button to select Expand icon, press ► button or OK button to enter the submenu.
2. Press ▲▼ button to point to required item, press ► button or OK button to confirm your selection.
3. Press ▲▼ button to point to required item, press OK button to confirm your selection.

Language

This projector provides multi-language screen menu.

You can press▲▼ button to select the language you want: English, German, French, Italian, Spanish, Polish, Swedish, Dutch, Portuguese, Japanese, Simplified Chinese, Traditional Chinese, Korean, Russian, Arabic, Turkish, Finnish, Norwegian, Danish, Indonesian, Hungarian, Czech, Kazakh, Vietnamese, Thai and Farsi.

Auto setup

Press AUTO button on the remote control to execute "Input search", "Auto PC adj." and "Auto keystone" functions.

Input search

Allows you to automatically detect input signals. It stops when a signal is found. Press ▲▼ button to select an option below:

- On.....Enabled.
- Off.....Disabled.

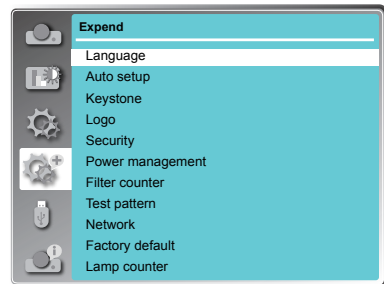
Auto PC adj.

- On.....Press the AUTO button on the remote control to enable Auto PC adj. function automatically.
- Off.....Cancel Auto PC adj. function.

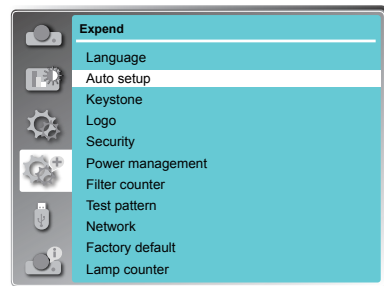
Auto keystone

- Auto ...When detecting the projector is tilted, correct the vertical keystone in real time.
- Manual When pressing AUTO button on the remote control, perform a vertical keystone.
- Off.....Disabled.

Expand menu



Auto setup



✓ Note:

- "Input search", "Auto PC Adj." and "Auto Keystone" cannot be set to "Off" at the same time. At least one of them is set to "On".
- Sometimes the auto keystone maybe correct image imperfectly, manual keystone is required.
- The Auto keystone function cannot work when "Display" → "Project way" is set to "Ceiling/Front" or "Ceiling/Rear".

OSD setting-Expand

Keystone

This function is used to store or reset the keystone correction when the AC power cord is unplugged.

- 1 Press MENU button on the remote control to display screen menu. Press ▲▼ button to select "Expand", then press the OK button.
- 2 Press ▲▼ button to select "Keystone", press the OK button.
- 3 Press ▲▼ button to select the item you want to set, press the OK button.

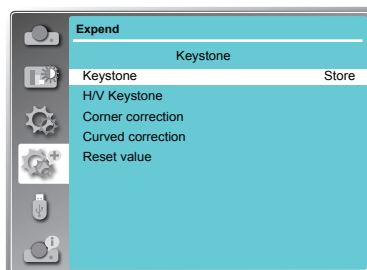
Keystone

Sets whether or not to keep the keystone correction after turn off the projector or plug out the power cord.

Store.... The keystone correction will be kept when plug out the power cord or turn off the projector.

Reset... When "Standby mode" is set to "Eco", plug out the power cord or turn off the projector, the keystone correction will be canceled. When "Standby mode" is set to "Normal", plug out the power cord, the keystone correction will be canceled; turn off the projector, the keystone correction will be kept.

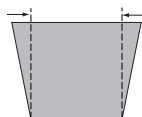
Keystone menu



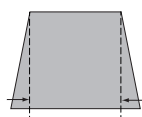
H/V Keystone

Adjust when the horizontal or vertical trapezoid of the projected image is distorted.

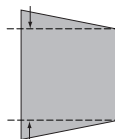
Reduce the upper width with ▲ button.



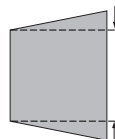
Reduce the lower width with ▼ button.



Reduce the left width with ◀ button.



Reduce the right width with ▶ button.



Corner correction

Adjust when the four corners of the projected image are distorted.

Press ▲▼◀▶ to adjust the item.

Corner correction			
Upper left	Upper right	Lower left	Lower right

✓ Note:

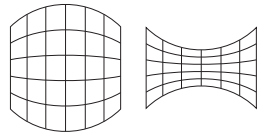
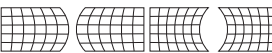
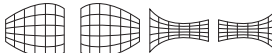
- The white arrows indicate that there is no correction.
- A red arrow indicates the direction of correction.
- An arrow disappears at the maximum correction.

OSD setting-Expand

Curved correction (For XGA and WXGA model only)

Adjust when the linearity is not uniform or the vertical and horizontal lines are distorted.

Press ▲ ▼ ◀ ▶ to adjust the item.

Items	Operation	Adjustment	
Curved correction - X/Y Gain	Press the ◀ & ▶ button	Adjust the right & left of the width	
	Press the ▲ & ▼ button	Adjust the top & bottom of the width	
Curved correction - X Offset	Press the ◀ / ▶ button	Adjust the left / right of the distortion	
	Press the ▲ / ▼ button	Adjust the top / bottom of the distortion	
Curved Correction - Y Offset	Press the ◀ / ▶ button	Adjust the left / right of the distortion	
	Press the ▲ / ▼ button	Adjust the top / bottom of the distortion	

✓ Note:

- Either "H/V Keystone", "Corner correction" or "Curved correction" setting value is valid. When the "H/V Keystone", "Corner correction" or "Curved correction" adjustment is finished, the adjusted value will be reset when you adjust the other one.
- The "Curved Correction X Offset" and the "Curved Correction Y Offset" can not be adjusted independently. After adjusting the "Curved Correction X/Y Gain" at the beginning, please adjust the "Curved Correction X Offset" and "Curved Correction Y Offset".
- Press the KEYSTONE button on the remote control when the keystone screen is displaying (it includes: H/V Keystone, Corner correction, Curved correction and Reset value), press ▲ ▼ button switch to the other adjustment screen.
- Keep pressing ▲ ▼ ◀ ▶ button for the continuous adjustment and this operation is faster.
- Correcting up to $\pm 30^\circ$ for the tilt in the vertical direction and $\pm 15^\circ$ for the tilt in the horizontal direction are available for adjustments with "Keystone". However, the image quality will degrade and it will get harder to focus with more correction. Install the projector so that the correction will be as small as possible.
- Screen size will also change when "H/V Keystone" is used to perform various adjustments.
- Aspect ratio of the image size may shift depending on the correction.

Reset value

Return the corrected values to the factory default values.

Press ▲ ▼ to select "Reset value", and then press the OK button, the state of the keystone correction is released.

OSD setting-Expand

Logo

This function allows you to customize the screen logo with Logo select, Capture, Logo PIN code lock and Logo PIN code change functions.

Logo Select

This function decides on the starting-up display from following options.

- Default. Show the factory-set logo.
- User..... Show the image captured by user.
- Off..... Show the countdown display only.

Capture (for XGA and WXGA model only)

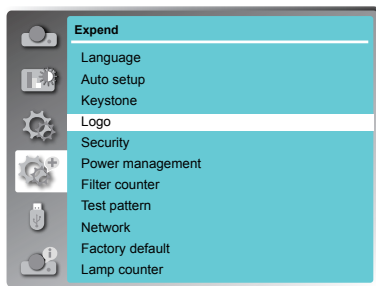
You can capture a projected image as start logo .

Select "Capture" and press the OK button on remote control or control panel.

Confirmation dialog box appears, select "Yes" to start capturing.

✓ *Note: The captured user logo image is deleted when factory default is executed.*

Logo



Logo PIN code Lock

This function prevents an unauthorized person from changing the screen logo.

Off The screen logo can be changed freely from the Logo menu.

On The screen logo cannot be changed without a Logo PIN code.

If you want to change the Logo PIN code lock setting, press the OK button and the Logo PIN code dialog box appears. Enter a Logo PIN code by following the steps below. The default PIN code is "111".

Press OK button to enter the PIN code. Press ◀▶ button to select a number, and then press the OK button to enter this number, the cursor automatically move to next box. If you fixed an incorrect number, press MENU button to reset it again.

Repeat this step to complete entering a three-digit number.

After entering the three-digit number, the cursor automatically move to "Set", and press the OK button, then you can start to operate the projector.

If you entered an incorrect PIN code, the number (***) turn red, it will be reset automatically within one second. Enter the correct PIN code all over again.

Logo PIN code change

You can change the Logo PIN code (three number). Press the OK button to select Logo PIN code change. Logo Pin code dialog box appears, press ◀▶ button to enter the correct PIN code.

The New Logo PIN code input dialog box appears. Set a new Logo PIN code, confirmation box appears, select Yes to set the new Logo Pin code.

Be sure to note the new Logo PIN code and keep it on hand. If you lost the number, you could no longer change the Logo PIN code setting.

CAUTION:

WHEN YOU HAVE CHANGED THE LOGO PIN CODE, WRITE DOWN THE NEW PIN CODE IN COLUMN OF THE LOGO PIN CODE NO. MEMO ON PAGE 87, AND KEEP IT SECURELY. SHOULD THE LOGO PIN CODE BE LOST OR FORGOTTEN, THE LOGO PIN CODE SETTING CAN NO LONGER BE CHANGED.

OSD setting-Expand

Security

This function allows you to use the PIN code lock and PIN code change functions to set the security for the projector operation.

PIN code lock

This function prevents the projector from being operated by unauthorized persons and provides the following setting options for security.

Off Unlocked.

OnEnter the PIN code every time turning on the projector. If you want to change PIN code lock setting or PIN code, you must enter the PIN code.

The default PIN code is "111".

If you want to change the PIN code lock setting, press the OK button, then PIN code dialog box appears.

Press ◀▶ button to select a number, and then press the OK button to enter this number, the cursor automatically moves to next box. If you fixed an incorrect number, press MENU button to reset it again.

Repeat this step to complete entering a three-digit number.

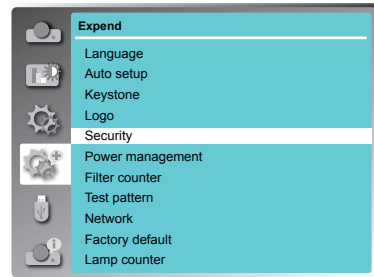
After entering the three-digit number, the cursor automatically move to "Set", and press the OK button, then you can change the PIN code lock setting.

If you entered an incorrect PIN code, the number (***) turn red, it will be reset automatically within one second. Enter the correct PIN code all over again.

PIN code change

The PIN code can be changed to three-digit number. Press ▲▼ button to select PIN code change. Pin code dialog box appears, Press ◀▶ button to enter the correct code. The New PIN code input dialog box appears. Set a new PIN code.

Security



CAUTION:

WHEN YOU HAVE CHANGED THE PIN CODE, WRITE DOWN THE NEW PIN CODE IN COLUMN OF THE PIN CODE NO. MEMO ON PAGE 87, AND KEEP IT SECURELY. SHOULD THE PIN CODE BE LOST OR FORGOTTEN, THE PIN CODE SETTING CAN NO LONGER BE CHANGED.

OSD setting-Expand

Power management

For reducing power consumption as well as maintaining the lamp life, the Power management function turns off the projection lamp when the projector is not operated for a certain period. Select one of the following options:

Ready

When the lamp has been fully cooled down, the POWER indicator changes to green blinking. In this condition, the projection lamp will be turned on if the input signal is reconnected or any button on the remote control or control panel is pressed.

Power off

When the lamp has been fully cooled down, the power will be turned off.

Off

Disable the Power management function.

Timer

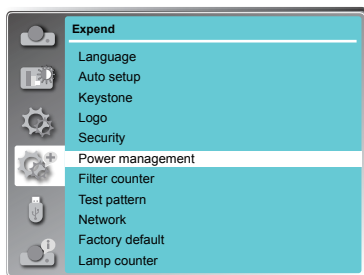
If the input signal is interrupted and no button is pressed for more than 30 seconds, the timer display with No signal appears. It starts the countdown until the lamp is turned off. Press ▲▼ button to set the Timer(1~30min.)

Ready countdown

Set the time that ready status transfers to standby status automatically.(0-30min. 0 Min: not transfer automatically)

In ready status, press POWER button to switch to standby status, and press any other button to turn on the projector.

Power management



Time left before Lamp is off.

✓ Note:

*Factory default: "Timer: 5 min",
"Ready countdown: 5 min".*

Filter counter

This function is used to set a frequency for filter cleaning.

When the projector reached a specified time between cleanings, a Filter warning icon appears on the screen, notifying the cleaning is necessary. After cleaning the filter, be sure to select RESET and set the timer. The Filter warning icon will not turn off until the filter counter is reset.

Filter counter

Display the using time of the filter.

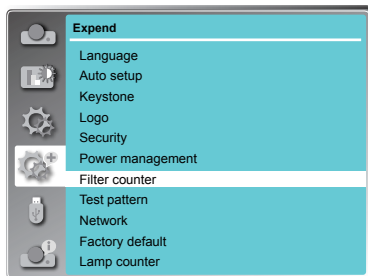
Timer

Set the time to display the warning icon.

Filter counter reset

Reset the filter counter.

Filter counter

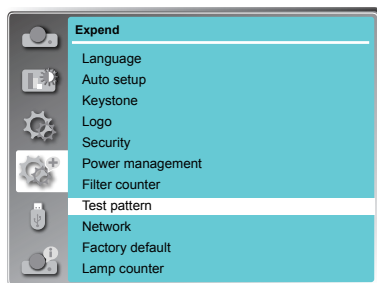


OSD setting-Expand

Test Pattern

This function is used to set the internal test signal: Gray scale 1, Gray scale 2, Gray scale 3, Gray scale 4, Color bar, Red, Green, Blue, Cross hatch, White, Black and Raster gray.

Test Pattern



Network

Function : PC controls projector via LAN.

Preparation:

1. Equipments: PC, projector, cables
2. Connection procedures:

Connect the projector to routers or switches of the LAN by direct or cross cable. If it fails to connect PC and projector by parallel cable, please switch to cross cable as suggested.

3. After the computer is booted and the projector is plugged in, indicator lights of LAN interface on will flash continuously.

Operation procedures:

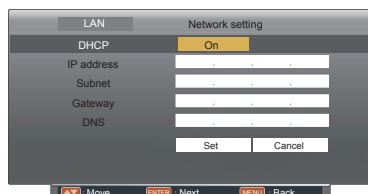
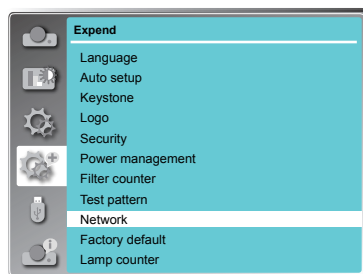
- 1 Turn on the projector.
- 2 Obtain network address. DHCP set is displayed as On and obtain network address automatically.(If familiar with network, you can set DHCP as Off and obtain network address manually.)
- 3 Enter network settings menu.

- (1) Press MENU button on the remote control to display screen menu. Press ▲▼ button to select Expand, and then press the OK button.

- (2) Press ▲▼ button to select Network, and then press the OK button to enter the network menu.

MAC address ... Displays the MAC address of wired network of this projector.

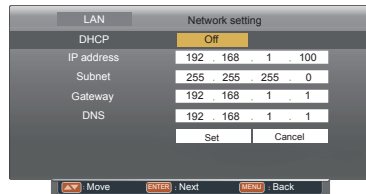
IP addressDisplays the IP address of wired network of this projector.



OSD setting-Expand

- (3) When DHCP is set On, IP address, Subnet, Gateway and DNS will be obtained automatically, press the OK at "Set" to confirm the parameters.

When DHCP is set Off, press the OK button to enter IP address, then press ▼ button to enter Subnet, Gateway and DNS respectively, press the OK at "Set" to confirm the parameters.



✓ Note:

See page 56 for usage of Network.

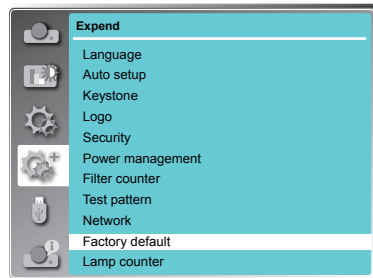
Factory default

This function returns all setting values except for the PIN code lock, Logo PIN code lock, Lamp counter and Filter counter to the factory default settings.

✓ Note:

The captured user logo image is deleted when factory default is executed.

Factory Default



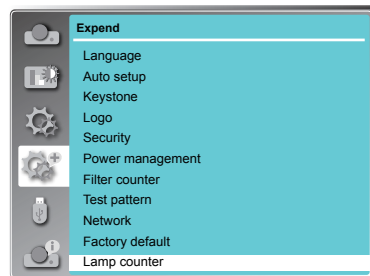
Lamp Counter

This function resets the counter of Lamp usage hours. Please be sure to reset the lamp counter after replacing the lamp. WARNING indicator turns Off and the lamp replacement icon disappears after reset the lamp counter.

Press < MENU > button on the remote controller or on the control panel to display the OSD menu. Press ▲▼button to select the Expand menu, then press <OK> or ►button.

- 1) Press ▲▼ button to select [Lamp counter] menu.
- 2) Press <OK > button.
- 3) Press ▲▼button to select [Lamp counter reset], then press <OK> button.
- 4) " Lamp replacement counter reset ? " conformation box appear.
- 5) Select "Yes" and Press <OK> button.

Lamp Counter



OSD setting-Memory Viewer

Memory Viewer

The Memory Viewer function makes it possible to project the pictures which are stored in the USB memory when the USB memory is inserted into the projector

- 1 Press MENU button on the remote control to display screen menu.
- 2 Press ▲▼ button to select "Memory Viewer", then press the OK button.
- 3 Press ▲▼ button to select the item you want to set, press the OK button.
- 4 Press ▲▼ button to adjust the item, then press the OK button.

Set Slide

Start the slide show.

Slide transition effect

Set the slide transition effect when the slide show image is switching.

Slide down.....Switch the image from the top to the bottom.

Slide right..... Switch the image from the left to the right.

Press▲▼to select "Apply" and press the OK button to execute the setting.

Sort Order

Set the sort order of the slide show.

Extend OrderSort files or folders in extended order.

Size OrderSort files or folders in amount of data order.

Time OrderSort files or folders in stored time order.

Name Order.....Sort files or folders in name order.

Press▲▼to select "Apply" and press the OK button to execute the setting.

Rotate

Set the rotate direction of image.

No Rotate Rotate is disabled.

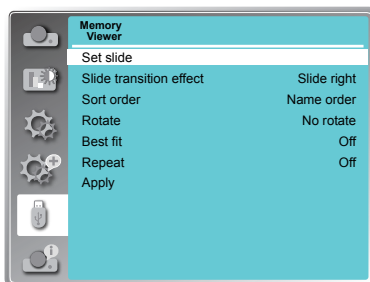
270 Degrees..... Rotate 270 degrees in anti-clockwise direction.

180 Degrees..... Rotate 180 degrees.

90 Degrees..... Rotate 90 degrees in anti-clockwise direction.

Press▲▼to select "Apply" and press the OK button to execute the setting.

Memory Viewer menu



✓ Note:

- The "Memory Viewer" menu is available when select the input source as "Memory Viewer".
- All the setting except "Set Slide" will effective after execute "Apply".
- See page 64 for Memory viewer function.

Best Fit

Set the image whether or not to fit with the projected screen.

On.....Display the image to fit with the aspect of the projected screen.

Off.....Display in the normal pixels of the image.

Press▲▼to select "Apply" and press the OK button to execute the setting.

Repeat

Enable or disable repeat function of the slide show.

On.....Display all of the files repeatedly.

Off.....Return to the thumbnail page after the last file is broadcasted.

Press▲▼to select "Apply" and press the OK button to execute the setting.

Apply

Execute the setting in slide show mode.

Press ▲▼ to select "Apply", then press the OK button, the setting of the items except the "Set Slide" will be effective.

OSD setting-Info.

Information

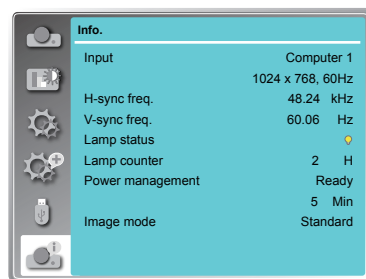
The information menu is used to detect signal of projected image and running state.

Menu operation

Press MENU button on the remote control or control panel to display the screen menu.

Press ▲▼ to select Info., the information menu will appear as the right picture.

info. menu



The status of projector will display in information menu.

Input

The selected input source is displayed.

H-sync freq .

The horizontal frequency of the input signal is displayed in KHz or - - -KHz when no signal is detected.

V-sync freq .

The vertical frequency of the input signal is displayed in Hz or - - - Hz when no signal is detected.

Lamp status

The setting status of "Lamp control" is displayed.

Lamp counter

The usage time of the lamp is displayed.

Power management

The setting status of "Power management" is displayed.

Image mode

The setting status of "Image mode" is displayed.

Description on using
useful function

Description on network control operation

LAN control

Function : PC controls projector via LAN.

Preparation:

1. Equipments: PC, projector, cables
2. Connection procedures:

Connect the projector to routers or switches of the LAN by direct or cross cable. If it fails to connect PC and projector by parallel cable, please switch to cross cable as suggested.

3. After the computer is booted and the projector is plugged in, indicator lights of LAN interface and computer interface will flash continuously.

Operation procedures:

- 1 Turn on the projector.
- 2 Obtain network address. DHCP set is displayed as on and obtain network address automatically. If familiar with network, you can set DHCP as close and obtain network address manually.

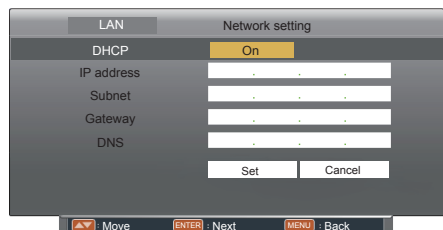
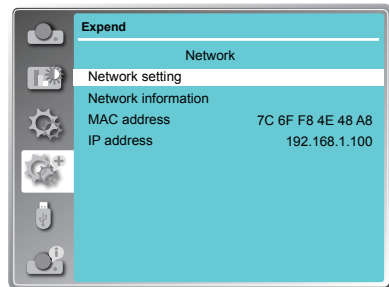
- 3 Enter network settings menu.

(1) Press MENU button on control panel or remote control to display screen menu. Press ▲▼ button to select "Expand" icon, then press the OK button.

(2) Press ▲▼ button to select "Network" setting and press the OK button enter the network setting.

(3) Press ▲▼ button to set DHCP as on.

(4) Press ▲▼ button to "Set" and press the OK button. "Please wait..." appears.



Description on network control operation

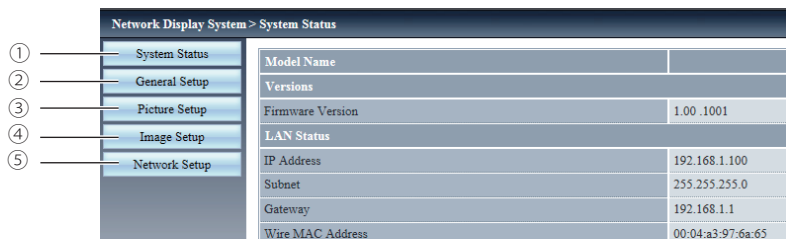
4. Activate the Web browser in the personal computer.
5. Enter the IP address set by the projector into the URL input field of the Web browser.
6. Select "Login" to login the Network Display System page. (Both the initial name and passwords are "admin".)



✓ **Note:**

- You can click the upper right corner of the web browser screen to select the display language.
- Do not perform setting or control simultaneously by starting up multiple web browsers. Do not set or control the projector from multiple computers.
- Change the password first. (8 half-width characters).
- If the screen for the web control is not displayed, consult your network administrator.

7. Items in Network Display System page including: "System Status", "General Setup", "Picture Setup", "Image Setup" and "Network Setup".



① **System Status**

The "System Status" page is displayed by clicking this item.

② **General Setup**

The "General Setup" page is displayed by clicking this item.

③ **Picture Setup**

The "Picture Setup" page is displayed by clicking this item.

④ **Image Setup**

The "Image Setup" page is displayed by clicking this item.

⑤ **Network Setup**

The "Network Setup" page is displayed by clicking this item.

Description on network control operation

"System Status" page

Display the status of the projector for the following items.

- ① Model Name
Displays the model No. of the projector.
- ② Versions
Displays the version of the firmware of the projector.
- ③ LAN Status
Displays the connection status of the LAN.

"General Setup" page

Change Password for Webpage is displayed.

- ① Enter Old password
Enters the configured password.
- ② Enter New password
Enters the new password.
- ③ Confirm New password
Enters the wanted new password again for confirmation.
- ④ Apply
Updates the settings.
- ⑤ Power
Switches on/off the power of the projector.
- ⑥ Source Select
Switches the input source of the projector.

"Picture Setup" page

Description on network control operation

- ① Brightness
Adjusts the brightness of the projected image.
- ② Contrast
Adjusts the contrast of the projected image.
- ③ Sharpness
Adjusts the sharpness of the projected image.
- ④ Color
Adjusts the color saturation of the projected image.
- ⑤ Tint
Adjusts the skin tone of the projected image.
- ⑥ Color Temperature
Adjusts the color temperature of the projected image.

"Image Setup" page

Network Display System > Image Setup	
System Status	Aspect Normal
General Setup	Fine sync (0 --- 31) 0
Picture Setup	H Position 0
Image Setup	V Position 0
Network Setup	H Size (-15 --- 15) 0
	Freeze ☐ On ☒ Off
	Y Keystone (-60 --- 60) 0
	H Keystone (-30 --- 30) 0
	Curved correction XGain (-40 --- 40) 0
	Curved correction YGain (-40 --- 40) 0
	Curved correction XOffset_x (0 --- 1279) 640
	Curved correction XOffset_y (0 --- 799) 400
	Curved correction YOffset_x (0 --- 1279) 640
	Curved correction YOffset_y (0 --- 799) 400
	Corner correction TopLeft_x (0 --- 1279) 0
	Corner correction TopLeft_y (0 --- 799) 0
	Corner correction TopRight_x (0 --- 1279) 1279
	Corner correction TopRight_y (0 --- 799) 0
	Corner correction BottomLeft_x (0 --- 1279) 0
	Corner correction BottomLeft_y (0 --- 799) 799
	Corner correction BottomRight_x (0 --- 1279) 1279
	Corner correction BottomRight_y (0 --- 799) 799

- ① Aspect
Switches the aspect of the projected image.
- ② Fine sync
Adjusts the fine sync of the projected image.
- ③ H Position
Adjusts the horizontal position of the projected image.
- ④ V Position
Adjusts the vertical position of the projected image.
- ⑤ H.Size
Adjusts the total number of dots of the projected.
- ⑥ Freeze
Switches the freeze function between on and off.
- ⑦ Auto PC adj.
Executes the Auto PC adj. function.
- ⑧ V Keystone
Corrects the keystone in vertical direction.
- ⑨ H Keystone
Corrects the keystone in horizontal direction.
- ⑩ Curved Correction
Corrects the pincushion or barrel of the projected image.
- ⑪ Corner correction
Corrects the four corners of the projected image.

Description on network control operation

"Network Setup" page

LAN Setup	
IP Address	[192] [168] [1] [100]
Subnet	[255] [255] [255] [0]
Gateway	[192] [168] [1] [1]
DNS	[192] [168] [1] [1]

Apply

① LAN Setup

Select [Obtain an IP address automatically] if you want to enable the DHCP client.

IP Address

Enter the IP address when not using a DHCP server.

Subnet

Enter the subnet mask when not using a DHCP server.

Gateway

Enter the default gateway address when not using a DHCP server.

DNS

Enter the DNS server when not using a DHCP server.

② Apply

Updates the settings.

Description on network display operation

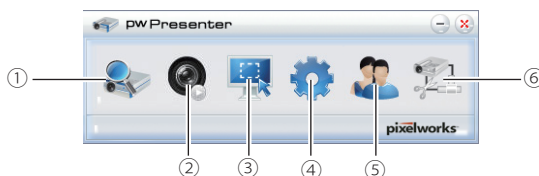
Network Display function

1. PwPresenter software: when "Network" is selected in Source Select, you can project the current computer images via network.

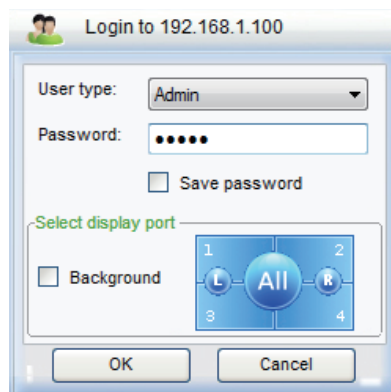
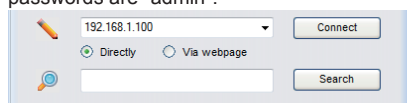
Input the IP address of the projector in webpage to enter the Network Display System, click "Download" to download the PwPresenter software according to your operation system.



2. Launch the pwPresenter software.



- ① Search for projector display
Click to enter Search, select the projector and connect it. Please setting the same IP address of the projector in pwPresenter software, (such as: 192.168.1.100). Both the initial name and passwords are "admin".



✓ **Note:**

- Before use PwPresenter software to search, you need change Source Select to "Network".

Description on network display operation

② Play/Pause

Play or pause the selected image.

③ Choose capture mode

Choose a capture mode from "Full Screen", "Fixed Size" or "Alterable."

④ Parameters Setting

Basic Setting

Setting language, region of capture image etc.

The Basic Setting dialog box contains the following elements:

- Tabs: Basic Setting (selected), Advanced Setting, Global Setting, Multicast Setting.
- Language select: A dropdown menu showing "English".
- Region size of fixed size capture mode: Input fields for "800" and "600" (pixels).
- Enable mirror driver when startup if there is: A checked checkbox.
- Allow notification message popup: Radio buttons for "Yes" (selected) and "No".
- Data Transfer Encryption: Radio buttons for "None" (selected), "Partial", and "Full".
- Software Information section:
 - Version number: pwPresenter PC51.0
 - Manufacturer: Pixelworks
 - Frame rate: An empty input field.
- Buttons: OK, Apply, Cancel, Default.

Advanced Setting

Setting image quality, network port etc.

The Advanced Setting dialog box contains the following elements:

- Tabs: Basic Setting, Advanced Setting (selected), Global Setting, Multicast Setting.
- Jpeg image setting section:
 - Quality: A dropdown menu showing "High".
 - YUV sample format: Radio buttons for "YUV444" (selected) and "YUV420".
- Network port setting section:
 - Fixed (selected), Manual (5900).
- Allow resolution to be changed: Radio buttons for "Yes" (selected) and "No".
- White list and Black list section:
 - Devices allowed: An empty list box.
 - Devices banned: An empty list box.
 - Navigation buttons: >>, <<, and <>.
- Buttons: OK, Apply, Cancel, Default.

Global Setting

Setting remote control, capture by audio or screen etc.

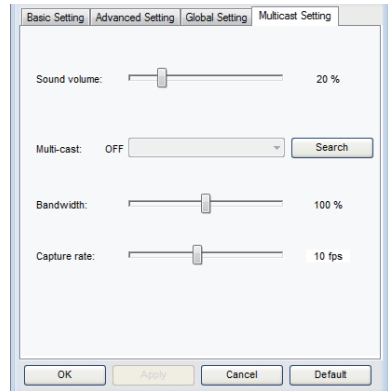
The Global Setting dialog box contains the following elements:

- Tabs: Basic Setting, Advanced Setting, Global Setting (selected), Multicast Setting.
- Allow remote control: Radio buttons for "Yes" (selected) and "No".
- Allow audio capture: Radio buttons for "Yes" (selected) and "No".
- Allow screen capture: Radio buttons for "Yes" (selected) and "No".
- Sound volume: A slider bar with a value of "20 %".
- Mode: A dropdown menu showing "Video".
- Buttons: OK, Apply, Cancel, Default.

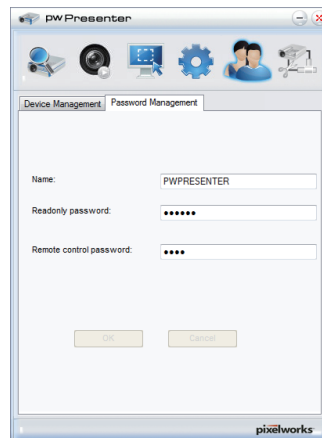
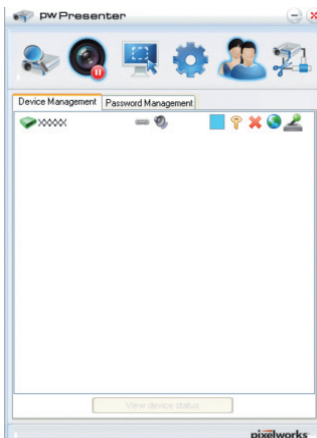
Description on network display operation

Multicast Setting

Setting Sound volume, Bandwidth and Capture rate etc.



- ⑤ Network Display Management
Setting device and password management.



- ⑥ Disconnect the projector.

Description on using Memory Viewer function

Memory Viewer function

The Memory Viewer function is used to project the pictures which are stored in the USB memory when the USB memory is inserted into USB A(VIEWER) terminal of the projector.

Memory Viewer function supports the following image files.

Picture	Extension	Format	Description
	jpg/jpeg	Baseline encoder 24 bit	Max. resolution : 10000 x 10000
		Progressive RGB 24 bit	Max. resolution : Panel Resolution
	bmp	1, 4, 8 bit Palette-based RGB 24, 32 bit	Max. resolution : 1280 x 800
	png	24, 48 bit True color	24 bit color palette space Max. resolution : 1024 x 768
	gif	1, 4, 8 bit Palette-based	Max. resolution : 800 x 600
	tiff	—	Max. resolution : 800 x 600

Display the Memory Viewer screen

1. Press the INPUT button on the remote control or on the control panel to select the input source as Memory Viewer.
2. Insert the USB memory into the USB-A terminal of the projector directly, the standby screen of please press RC ENTER appears when the USB memory icon is displayed on the screen.
3. Press the OK button on the remote control, the root directory of the USB memory will appear in thumbnail on the screen.

Play the pictures

It will display a picture when play the picture manually every time.

1. Press ▲▼◀▶ to select a file on the thumbnail screen.
2. Press the OK button, 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 OK button on the remote control to return to thumbnail screen.

Executing the slide

All pictures in the same folder will play automatically when "Slide Transition Effect" of "Memory Viewer" menu is set to the special setting.

1. Press ▲▼◀▶ to select a file.
2. Press the "MENU" button to select the "Memory Viewer" → "Set Slide".
3. Press the OK button.
 - The picture will display on the full screen.
 - Press the OK button to return to the thumbnail screen.

Description on using Memory Viewer function

Play the PDF

Playing the PDF file.

press ▲▼◀▶ to select a PDF file and press the OK button, playing the PDF on the full screen.



▲ ▼	Displays the previous or next page.
◀ 5 5 ▶	The page number increases or decreases by 5 pages.
◀ ▶	The page number increases or decreases by 1 page.
GO 1	Jumps to page number directly.
	Switches PDF file between full screen display or whole page display.
	Switches the display size on 3 levels of magnification. Press ▲▼ on the remote control to move the display screen up and down.
	Remove the display screen up, down, left and right by ▲▼◀▶ button on the remote control.
	Exit the PDF file, and return to the thumbnail screen.

Termination of the Memory Viewer

1. Press ▲▼◀▶ to the thumbnail which is displayed on the upper left corner.
2. Press the OK button on the remote control to return to the standby screen of Press "OK".
3. Remove the USB memory directly.

Description on using USB display function

USB Display function

The USB Display function is used to project the image from the computer which is connected to Micro-USB(DISPLAY) terminal of the projector by a USB converting cable.

■ When using Windows

Windows operation environment

OS	Windows Vista 32 bit, Windows 7 32/64 bit, Windows 8 32/64 bit
CPU	Intel Core 2 Duo 2.0 GHz or faster, the compatible processor
Amount of memory	256 MB or more (Recommended : 512 MB or more)
Hard-disk free space	20 MB or more
Display	Resolution 640 x 480 or more, 1 600 x 1 200 or less

- There is no guarantee for all computers that meet the above conditions will operate properly.

Projecting the USB Display

1. Connect the Micro-USB terminal of the projector to a computer with a USB converting cable.
2. Press the Input button on the remote controller or control panel to switch the input source as USB Display.
 - The startup screen will be displayed automatically due to the driver which is built-in the projector, and executes the installation according to the instructions of the screen. The displaying of the auto installation screen depends on the setting of computer. At this time, please select "Run autorun.exe". Please double-click "autorun.exe" in the folder of the USB Display when the automatically startup is disabled.
 - The image on the computer screen is projected.
3. Click the driver icon  in the task bar of computer and select one item in Pop-up menu.
 - Pop-up menu is only displayed in English.
 - The item which is displayed in gray is unavailable.

Active audio/ Disable audio	Set whether to output the audio from the computer.
Play video/ Pause video	Switch between play and pause the image.
Start/Stop	Set whether to display the image from the computer.
Exit	Exit USB Display.

✓ Note:

- The driver is not installed in your computer, and it will be removed from the computer when disconnecting the USB cable.
- It will take a while when you want to project the computer screen.
- Connect a USB cable directly to the USB connector of a computer. It will not work when connecting through a USB hub.

Termination of the USB display

When terminate the USB display, remove the USB cable directly. There is no need to follow "Remove hardware safely" when a USB cable is disconnected.

Description on using USB display function

■ When using Mac OS

Mac OS operating environment

OS	Mac OS X 10.5, 10.6, 10.7
CPU	Power PC G4 1GHz or faster
Amount of memory	512 MB or more
Hard-disk free space	20 MB or more
Display	Resolution 640 x 480 or more, 1 600 x 1 200 or less

- There is no guarantee for all computers that meet the above conditions will operate properly.

Projecting the USB Display

1. Connect the Micro-USB terminal of the projector to a computer with a USB converting cable.
2. Press the INPUT button on the remote control or Control panel to switch the input source to USB Display.
 - The image on the computer screen is projected.
3. Double-click "Monitor.app" in the virtual disk that has been mounted.
4. Right-click the driver icon  in the dock of computer and select one item in Pop-up menu.
 - Pop-up menu is only displayed in English.
 - The item which is displayed in gray is unavailable.

Active audio/ Disable audio	Set whether to output the audio from the computer.
Play video/ Pause video	Switch between playing and pausing the image.
Start/Stop	Set whether to display the image from the computer.
Quit	Terminate the USB Display.

✓ Note:

- It will take a while when you want to project the computer screen.
- Connect a USB cable directly to the USB connector of a computer. It will not work when connecting through a USB hub.

Termination of the USB display

When terminate the USB display, remove the USB cable directly.

Description on using Edge Blending function

Edge Blending

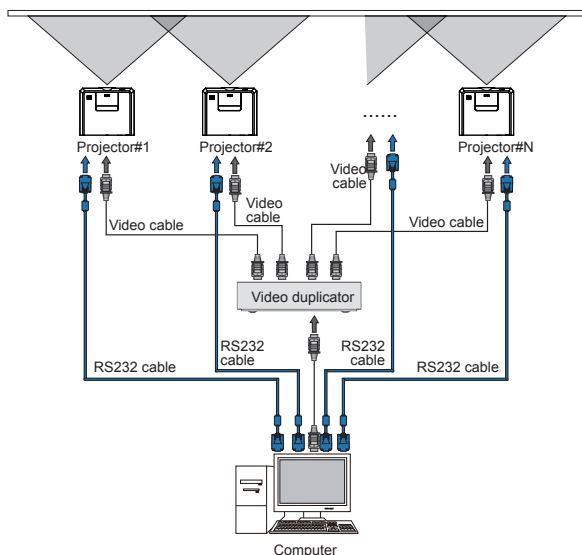
Edge Blending function could project bigger and brighter with high resolution pictures via multi projector. The Edge Blending software could adjust the color and the effect of the overlay edge.

Equipment:

2 or more projector with same resolution, Video duplicator, RS232 series cable.

Connection:

- (1)Setting the projectors with the same level from ground and the same projection distance from screen.
- (2)Project the image through the video duplicator to each projector.
- (3)Connect the computer and projectors via RS232 cable.



Setting:

- (1)Setting the projected image as the same dimension by each projector.
- (2)Press Menu button on the remote controller or control panel to pop up the OSD.
- (3)Press ▲▼ button to select "Display"
- (4)Press ▲▼ button to select "Aspect"
- (5)Press ▲▼ button to select "Advanced" and press OK to ready for Edge Blending function.

Adjustment:

The color and effect of the overlay edge can be adjusted with the Edge Blending software.

The Edge Blending Software and its manual can be downloaded from EIKI website.

URL: <http://www.eiki.com>

✓ Note:

- Edge Blending function can only effected with the same resolution projectors.
- Edge Blending function can apply via HDMI, VGA and RGBHV as input source.
- Setting the same level and position with the same dimension image would make the better effect after edge blending adjustment.

Maintenance

This chapter describes the regular maintenance procedure of your projector to ensure its optimal operation status for long.

Regular maintenance

Status light indicator

The status light indicator shows status of projector protection function. Check status and POWER light indicator for good maintenance operation.



Note:

Unplug the AC power cord in case of any abnormality as it may lead to fire or electric shock.

The projector turns off and the status light indicator flashes orange.

Your projector powers off automatically to protect components within it when it is overheated. The POWER indicator flashes red when your projector is cooling down. Press the STANDBY button to power your projector on again when it is cooled down to normal operation temperature.

FILTER STATUS POWER



The status indicator
flashing orange

✓ Note:

The POWER indicator stops flashing when your projector's internal temperature cooled down to normal and it is powered on again.

Check the following:

- Is adequate clearance provided for your projector's ventilation? Check the installation status and any air outlet block.
- Is your projector installed at location close to outlet of air conditioning equipment? Keep your projector away from air outlet of air conditioning equipment.
- Is the filter in clean condition? Please clean the filter regularly.

Your projector powers off and the status light indicator turns orange.

The STATUS indicator turns orange and your projector powers off to protect its internal components whenever an abnormality is detected. Unplug the AC power cord and connect again. Restart your projector and run checkup routine. If the problem persists, unplug the AC power cord and call your service center for checkup and maintenance.

FILTER STATUS POWER



The status indicator
turns orange

Regular maintenance

Clean your projector when it is contaminated by foreign matter or its display effects are getting worse.

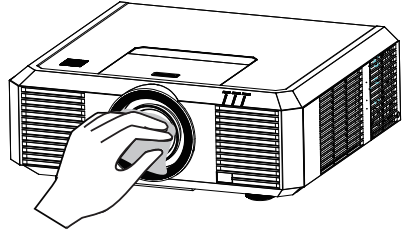


Note:
Unplug the AC power cord before any cleaning operation.

Clean the lens

Wipe the lens with clean cloth dampened with non-abrasive camera lens cleaner or clean it with lens cleaning paper or air blower.

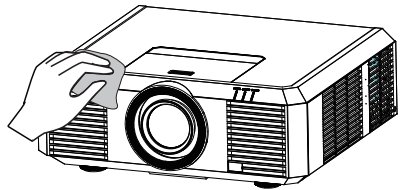
Do not over apply cleaner to the lens. Abrasive cleaner, solution, or other rough chemical may scratch the lens.



Clean casing of your projector

Wipe the casing surface with clean and soft cloth. Gently wipe the casing with clean and soft cloth dampened with small amount of neutral detergent to remove heavy dirt. Do not over apply cleaner to the casing. Abrasive cleaner, solution, or other rough chemical may scratch the casing surface.

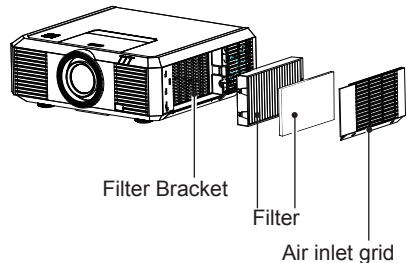
Place your projector in proper container after use to protect it from dirt and dust and being scratched.



Clean the filter

The filter is designed to keep dust from entering in your projector, which may lead to dusts accumulated on surface of internal components. Clogged filter may reduce cooling fan effects, which, in turn, will overheat your projector and shorten its life cycle. Clean the filter immediately whenever the Filter Warning icon displays. Please follow these steps to clean your filter:

- 1 Power off your projector and unplug from AC power source.
- 2 Remove the filter.
- 3 Gently clean it with a brush.
- 4 Insert the filter. Make sure it has been fully inserted.



Note:
Do not operate your projector after its filter is removed. Dust may attach to the lens assembly and deteriorate image quality.
Do not insert any small object in the air outlet. It may fail your projector.

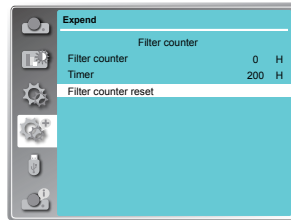
Regular maintenance

Reset the filter counter

- 1 Press MENU button and the OSD displays. Press ▲▼ button to select Expend menu, press ► button or OK.
- 2 Press ▲▼ button to select "Filter Counter", press ► button or OK. Press ▲▼ button to select "Filter counter reset" and press OK. The "Filter counter reset?" message displays. Select Yes to proceed.
- 3 In another pop-up dialog box, select Yes to reset the filter counter.

Recommendations

Please do not use your projector at place of dust and smoke. This may affects image quality. Using your projector in place of dust and smoke may lead to piling dusts on lens, LCD panel, and lens components within it. In case like this, call your dealer or service center for correct cleaning.



Note:
Reset the filter counter after its cleaning or replacement.

Lamp replacement

The lamp replacement icon displays when its use life dues. Please replace it with a new one of the same model immediately.

The lamp replacement icon

Lamp replacement



Note:

Do not replace the lamp after it went dark as it may be broken. Always assume the lamp of a ceiling mount your projector is broken when replacing it. Stand beside the lamp cover instead of below it. Remove the lamp cover gently. Small piece of glass debris may fall off when opening the lamp cover. Consult with a doctor immediately if there is any glass debris fell in your eyes or mouth.



Note:

Let your projector cool for at least 45 minutes before opening the lamp cover, as temperature within your projector is high.



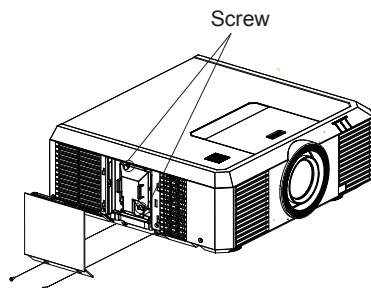
Note:

Replace the lamp with a new one of the same model just in case. Do not drop or touch the lamp! It may break and lead to personal injuries.

Regular maintenance

Follow steps below to replace the lamp:

1. Power off your projector and unplug the AC power cord. Let it cool down for at least 45 minutes.
2. Open the lamp cover after removing screws holding the cover.
3. Loose all screws fixing the lamp. Remove the lamp by holding its handle.
4. Replace with a new lamp and tighten all screws. Make sure the lamp has been installed correctly. Close the lamp cover and tighten the screw.
5. Connect your projector to an AC power source and power it on.



Replacement lamp can be ordered through your dealer. When ordering a projection lamp, give the following information to the dealer.

Replacement Lamp Model No.: 23040055



Precautions on lamp operation

Your projector employs high voltage lamp, which requires careful and correct operation. Fail to do so may lead to accidents, personal injuries, or fire.

- Life cycle of lamp varies with environment it is in service. Life cycle of lamp varies. That is, some lamps may last longer than their counterparts.
- If your projector prompts you to replace lamp (by showing a lamp replacing icon) then replace it with a new one after powering it off and it is fully cooled down. (Please replace lamp by strictly following steps given in this manual.)
If you keep on using the lamp after being prompted to replace it then you are exposed to greater risks of lamp explosion.
- Lamp may explode due to external impact and shock. Risks of explosion vary with projector and use environment and status of the lamp.

In case of lamp explosion, take the following safety measures:

Disconnect your projector from power source immediately in case of lamp explosion. Call authorized service center to inspect your projector and replace lamp. Make a thorough inspection to ensure every piece of debris after explosion has been removed. Remove every piece of debris after explosion. No one else may inspect the internal of your projector except those authorized and well trained technician who also are familiar with its maintenance. Or we shall not be held liable for the consequences.

Appendix

Appendix

Troubleshooting

Check the following before calling your dealer or service center:

Troubleshooting	Solution
Power on failure	– Plug the power cord of your projector in an AC socket. – Make sure the POWER light indicator turns red. – Restart your projector until the POWER light indicator turns red. It indicates your projector is ready for power on again. – Check the lamp. – Disable the Key Lock function of your projector.
Logo screen display failure	– Make sure the Off and Countdown Off is selected in the Display function.
The Logo screen differs from the standard settings.	– Make sure you did not select User or Off in the Logo Screen.
Input signal switch (or do not switch) automatically.	– Make sure you have correctly set up the Input Search function.
Press INPUT button during power on and a non-input mode icon displays.	– This is a filter or lamp replacement alerts.
A non-input or lamp mode icon displays.	– This is a filter replacement alerts.
Image looks fuzzy	– Adjust focus of your projector. – Provide proper projection distance. – The projection lens requires cleaning. – Moving your projector from a colder environment to a hotter one may result in condensing on the lens. If this is the case, wait until the condensing water evaporated before powering on your projector.
Image mirror reflected	– Check the Ceiling and Rear settings.
Image turns upside down	– Check the Ceiling settings.
Image looks dim	– Check for contrast and brightness settings. – Check for correct image mode settings – Check for lamp brightness settings. – Check for lamp replacement alert. The lamp replacement alert suggests the lamp is reaching the end of its life cycle. Please replace it with a new one of the same model immediately.

Appendix

No image displays	– Check for the connection between your projector and computer or image equipment. – Check for correct input signal from computer. Connection with certain notebook computer may mandate changes to its display output settings. See the user manual included with the computer for details on settings. – It takes about 30 seconds for your projector to show the first image. – Check for mode of signal, color system, image system, or computer system. – Make sure the ambient temperature is within given range (41°F–95°F; 5°C–35°C). – Image does not display in BLANK mode. The BLANK button or other buttons on the remote controller.
Abnormal color	– Check for mode of signal, color system, image system, or computer system. – Make sure Blackboard mode is not selected in Image Select.
Some operations are invisible	– Check the display function.
Auto PC Adjusting function failure	– Check input signal. Auto PC Adjusting function is unavailable in 480p, 576p, 720p, 480i, 576i, 1080i or 1080p mode.
Settings do not save after power off	– Make sure you have selected Store after settings adjustment. Certain settings do not keep without selecting Store.
Power management failure	– In case of Freeze or Blank operation, the power management function does not work.
Auto Setting does not work	– Make sure it is not set to "Off" in each setup menu. – Make sure "On" is not set in Ceiling function.
Image distorted or disappeared	– Check and revise the PC Adj. menu or Screen menu.
A password prompt displays after power on	– You have set up the Logo PIN Code lock function
Remote controller does not work	– Check the battery. – Make sure there is no obstacles stand in between your projector and the remote controller. – Make sure the remote controller is not too far away from your projector. The maximum operation range is 5m. – Make sure the remote controller and your projector are paired with the same remote control codes. – Disable the key lock of the remote controller in the Setup menu.
Light indicator turns on or flashes	– Check status of your projector according to the light indicator status.

Appendix

Exclamation mark displays	– Invalid operation, please operate your projector correctly.
Control panel does not function	– Disable the key lock on control panel function in the Safety option of the Setup menu.
Cannot remove the Logo Select password, Key Lock, and PIN Code lock	– Please call your dealer or service center.

- Make sure your projector is correctly connected to external equipment.
- Make sure all devices have plugged in an AC power source and have been powered on.
- If your projector fails to project image of the connected computer, restart the computer.

Warning:

Your projector employs high voltage power for operation. Do not open its casing.

If the problem persists, call your dealer or service center. Along with model number of your projector and a description to your problem. You will be advised on getting our services.

Appendix

Light indicator status

Check light indicator to learn status of your projector.

Light indicator			Status of your projector
POWER Green /Red	STATUS	FILTER	
			Your projector is in Off status (without AC power supply).
			Your projector is in standby status. Press Standby button to turn it on.
			Your projector is in normal status.
			It is ready for standby or the lamp is cooling. You may power on your projector only after the lamp is fully cooled and the POWER light indicator stops flashing.
			Your projector is in Ready mode.
			Your projector detects abnormal situation and cannot power on. Unplug the AC power cord and connect it again before powering on your projector. If it powers off again, please unplug the cord and call your dealer or service center for maintenance or inspection. Do not let it continue operating as this may lead to electric shock or fire.
			Your projector detects lamp abnormality and cools down.
			Your projector detects lamp abnormality and switches into standby mode.
			Your projector cannot power on, as its internal temperature is too high. You may power it on after it is fully cooled, temperature backs to normal, and the POWER light indicator turns red.
			You may power is fully cooled with temperature backs to normal.
			The lamp cover is not fully closed.
			The filter requires cleaning

 ... Green

 ... Red

 ... Orange

 ... Turns off

 ... Flashing green

 ... Flashing red

 ... Flashing orange

Appendix

Compatible computer screen

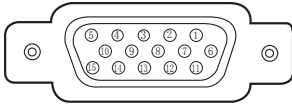
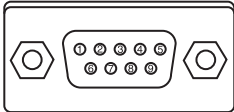
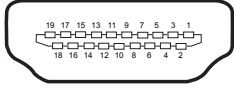
Your projector is designed to accept every analog computer signal below Dot Clock 160MHz and digital computer signal below Dot Clock 150MHz.
See table below for details on resolution and relevant frequency.

Input	Signal format	Resolution	Frequency (Hz)
PC	VGA	640x480	60
		640x480	67
		640x480	72
		640x480	75
		640x480	85
	SVGA	800x600	56
		800x600	60
		800x600	72
		800x600	75
		800x600	85
	MAC 16	832x624	75
	XGA	1024x768	60
		1024x768	70
		1024x768	75
		1024x768	85
	XGA+	1152x864	70
		1152x864	75
	WXGA	1280x768	60
		1280x768	75
		1280x768	85
		1280x800	50
		1280x800	60
		1280x800	75
		1280x800	85
		1366x768	50
		1366x768	60
	MSXGA	1280x960	60
	SXGA	1280x1024	60
		1280x1024	72
		1280x1024	75
		1280x1024	85
	SXGA+	1400x1050	60
		1400x1050	75
		1440x900	60
	UXGA	1600x1200	60
	WSXGA+	1600x900	50
		1600x900	60
		1680x1050	60
	WUXGA	1920x1200	60
Component	480i	720x480i	60
	576i	720x576i	50
	480p	720x480p	60
	576p	720x576p	50
	720p	1280x720	50
	720p	1280x720	60
	1080i	1920x1080i	50
	1080i	1920x1080i	60
	1080p	1920x1080p	50
	1080p	1920x1080p	60
Input	Signal format	Resolution	Frequency (Hz)
HDMI	VGA	640x480	60
		640x480	67
		640x480	72
		640x480	75
		640x480	85
	SVGA	800x600	56
		800x600	60
		800x600	72
		800x600	75
		800x600	85
	MAC 16	832x624	75
	XGA	1024x768	60
		1024x768	70
		1024x768	75
		1024x768	85
	XGA+	1152x864	70
		1152x864	75
	WXGA	1280x768	60
		1280x768	75
		1280x768	85
		1280x800	50
		1280x800	60
		1280x800	75
		1280x800	85
		1366x768	50
		1366x768	60
	MSXGA	1280x960	60
	SXGA	1280x1024	60
		1280x1024	72
		1280x1024	75
		1280x1024	85
	SXGA+	1400x1050	60
		1400x1050	75
		1440x900	60
	UXGA	1600x1200	60
	WSXGA+	1600x900	50
		1600x900	60
		1680x1050	60
	WUXGA	1920x1200	60
Video/S-video	NTSC	NTSC	-
	PAL	PAL	-
	SECAM	SECAM	-
	NTSC4.43	NTSC4.43	-
	PAL-M	PAL-M	-
	PAL-N	PAL-N	-
	PAL-60	PAL-60	-

✓ Note:
Changes to this manual may be made without notice.

Appendix

Terminal configuration

VGA IN / MONITOR OUT Terminal (D-sub 15)				
	1	Red (Input/output)	9	-----
	2	Green(Input/output)	10	Grounding (field synchronizing)
	3	Blue(Input/output)	11	Grounding
	4	-----	12	DDC data
	5	Grounding (line synchronizing)	13	Horizontal synchronizing (compound sync.)input/output
	6	Grounding(red)	14	Vertical synchronizing input/output
	7	Grounding(green)	15	DDC Clock
	8	Grounding(blue)		
SERIAL Terminal(D-SUB 9)				
	1	-----	6	-----
	2	RXD	7	-----
	3	TXD	8	-----
	4	-----	9	-----
	5	GND		
LAN Terminal (for EK-512X/EK-512XL)				
	1	TX +	5	-----
	2	TX -	6	-----
	3	-----	7	RX +
	4	-----	8	RX -
HDBaseT Terminal (for EK-510U/EK-510UL/EK-511W/EK-511WL)				
	1	HDBT_P0	5	HDBT_P2
	2	HDBT_N0	6	HDBT_N2
	3	HDBT_P1	7	HDBT_P3
	4	HDBT_N1	8	HDBT_N3
HDMI Terminal (HDMI Type A 19)				
	1	TMDS Data2+	11	TMDS Clock Shield
	2	TMDS Date2 Shield	12	TMDS Clock-
	3	TMDS Date2-	13	CEC
	4	TMDS Date1+	14	Reserved (N.C. on device)
	5	TMDS Date1 Shield	15	SCL
	6	TMDS Date1-	16	SDA
	7	TMDS Date0+	17	DDC/CEC Ground
	8	TMDS Date0 Shield	18	+5V Power
	9	TMDS Date0-	19	Hot Plug Detect
	10	TMDS Clock+		

Appendix

Menu tree

Main menu	Sub-menu	Setting	Default value	Remarks
Display	Auto PC adj.			
	Fine sync	0-31		
	H Position	-5 - +5		
	V Position	-5 - +5		
	H Size	-15 - +15		The range of H Size differs from signals.
	Aspect	Normal Wide Advanced Full*	Normal	*This function is disable on EK-510U/ EK-510UL
	Project way	Front Rear Ceiling / Front Ceiling / Rear Auto ceiling / Front Auto ceiling / Rear	Front	
	Menu position	Upper Left, Upper Right Center Lower Left, Lower Right	Upper Left	
	Background display	Black Blue	Blue	
Color adjust	System	Auto PAL SECAM NTSC NTSC4.43 PAL-M PAL-N PAL-60	verify by input source	S-Video Input Video Input
	Image mode	Dynamic Standard Cinema Blackboard (Green) DICOM Colorboard User Image	Standard	
	Contrast	0-63	32	PC Input
	Brightness	0-63	32	
	Color temp	High/Middle/Low	Middle	
	Red	0-63	32	
	Green	0-63	32	
	Blue	0-63	32	
	Sharpness	0-15	8	

Appendix

Main menu	Sub-menu	Setting		Default value	Remarks
Color adjust	Contrast	0-63		32	Component Input S-Video Input Video Input
	Brightness	0-63		32	
	Color	0-63		32	
	Tint	0-63		32	
	Red	0-63		32	
	Green	0-63		32	
	Blue	0-63		32	
	Sharpness	0-15		8	
Setting	On start	On/Off		Off	
	Standby Mode	Normal/Eco mode		Eco	
	High land	On/Off		Off	
	Lamp control	Normal/ECO mode		Normal	
	Cooling fast	Normal/60s		Normal	
	Closed caption	Off/CC1/CC2/CC3/CC4		Off	
	Key lock	Off/Projector/Remote controller		Off	
	Iris	On/Off		On	
	Remote control	Code 0-9		Code 0	
	Sound	Volume	0-25	12	
		Mute	On/Off	Off	
	HDMI Setup	Image	64-940 0-1023	0-1023	
		Volume	HDMI PC	HDMI	
Expand	Language	Projector provides multiple language support		English	
	Auto Setup	Input Search	On/Off	On	
		Auto PC Adj.	On/Off	On	
		Auto Keystone	Off	Auto	
			AUTO		
			Manual		
	Keystone	Keystone	Store / Reset	Store	
		H/V Keystone			
		Corner correction			
		Curved correction			(This function is disable on EK-510U)
		Reset value			
	Logo	Logo select	Default/User/Off		
		Capture			(This function is disable on EK-510U)
		Logo PIN Code Lock	On/Off		
		Logo PIN Code Change			

Appendix

Main menu	Sub-menu	Setting		Default value	Remarks
Expand	Security	PIN code lock		On/Off	Off
		PIN code change			
	Power management	Ready		Ready	
		Shut down			
		Off			
		Timer			
	Filter counter	Ready Countdown		Timer	
		Filter counter			
		Filter counter reset			
	Test pattern	Off, Gray scale (1-4), Color bar, Red, Green, Blue, Cross hatch , White, Black, Raster gray		Off	
		Network	Network setting	LAN	
	DHCP(On/Off)			Off	
	IP address				
	Subnet			255.255.255.0	
	Gateway			192.168.1.1	
DNS	192.168.1.1				
Network status	MAC address				
	IP address		192.168.1.100		
Factory default					
Lamp counter	Lamp counter				
	Lamp counter reset				
Memory Viewer	Set slide				
	Slide transition effect	Slide down		Slide right	
		Slide right			
	Sort order	Extend name order		Name order	
		Size order			
		Time order			
		Name order			
	Rotate	No rotate		No rotate	
270° Degree					
180° Degree					
90° Degree					
Best fit	On/Off		Off		
Repeat	On/Off		Off		
Apply					

Appendix

Main menu	Sub-menu	Setting	Remarks
Info.	Input		
	H- sync. Freq.		
	V- sync. Freq.		
	Lamp status		
	Lamp counter		
	Power management		
	Image mode		

Input	VGA
	RGBHV
	HDMI1
	HDMI 2(MHL)
	HD-BaseT
	Component
	Video
	S-video
	Memory Viewer
	Network
	USB display

Appendix

Technical Specifications

Mechanical properties

Dimensions (W×H×D)	474mmx179mmx412mm
Net Weight	10.30Kg (with AH-E21010)
Adjustable foot	5°

LCD resolution

LCD system	EK-510U: 0.76" TFT / EK-511W: 0.76" TFT / EK-512X: 0.79" TFT
LCD resolution	EK-510U:1920X1200 / EK-511W:1280X800 / EK-512X: 1024X768

Compatible signals

Color standard	PAL, SECAM, NTSC, NTSC4.43, PAL-60, PAL-M and PAL-N
HDTV signal	480i, 480p, 576i, 576p, 720p, 1080p and 1080i
Scanning frequency	Horizontal frequency: 15~100 KHz; Vertical frequency: 48~85 Hz

Optical elements

Image size (diagonal lines)	40"-300"
Projection distance	XGA: Wide: 1.16m ~ 9.06m / Tele: 2.15m~16.41m
(with Standard Lens)	WXGA, WUXGA: Wide: 1.21m ~ 9.41m / Tele: 2.22m ~ 17.04m
Lens (Standard Lens)	F = 1.8~2.6 / f =24.0~43.2mm; Zoom times: 1.8
Lamp power	430W (Normal)
Contrast Ratio	2500:1 with IRIS @ lens shift 1:1
Aspect Ratio	EK-510U & EK-511W:16:10 EK-512X: 4:3

Terminal

S-Video	S-Video Mini Din 4pin x1
BNC/VIDEO	BNC x 5 (G or Video/Y, B or Pb, R or Pr, HV and V)
VGA IN	Mini D-sub 15 pin x1
VGA OUT	Mini D-sub 15 pin x1
HDMI	HDMI x2
USB connector	USB-A x1, Micro-USB x1
AUDIO IN	3.5mm Mini Type Stereo x2, RCA (L/R) x2
Wired remote control input terminal	Mini Jack, 3.5mm x1
Wired remote control output terminal	Mini Jack, 3.5mm x1
CONTROL terminal	D-sub 9 pin x1
HDBaseT terminal(For EK-510U, EK-511W)	RJ45 x1 HDMI (Video, Audio), RS-232C, 100 Base-TX (100Mbps)/10 Base-T (10Mbps), RJ45 x1, 100 Base-TX (100Mbps)/10 Base-T (10Mbps)
LAN terminal (For EK-512X)	

Power

Voltage and power consumption	AC 100~240 V (Max 5.8A), 50/60 Hz
Fuse	10A/250V
Internal speaker	10W RMS 8ohm, *1

Operating Environment

Operating temperature	41°F-104°F (5°C-40°C)
Storage Temperature	14°F-140°F (-10°C-60°C)
High land	2000 m

Remote control

Battery	AA or LR6 1.5V ALKALINE TYPE x 2
Operating Range	16.4' (5 m)±30°
Dimensions	48mm (W) x 26mm (H) x 160mm (D)
Net Weight	67g (including batteries)

Accessories

Safety Guide	AC power cord (US Type x 1 / Euro Type x 1)
Quick Start Guide	VGA cable
Remote control and batteries	Lens Cover (For EK-510U, EK-511W and EK-512X)

- The aforesaid specification is subject to change without prior notice.
- Liquid crystal panel is made on the basis of high standard, where 99.99% of the pixels are effective. Due to the nature of the liquid crystal panel, a fraction of the pixels (0.01% or less) may be ineffective.

Appendix

Type	Short Lens	Short Zoom Lens	Standard Lens	Long Zoom Lens	Long Zoom Lens
Model Number	AH-E22010	AH-E22020	AH-E21010	AH-E23010	AH-E23020
Zoom	Fixed	x1.3 Power zoom	x1.8 Power zoom	x1.6 Power zoom	x1.7 Power zoom
Iris (F)	1.8	2.0 - 2.6	1.8 - 2.6	2.2 - 2.8	2.2 - 2.8
Focal Length (f)	12.4	19.3 - 24.9	24.0 - 43.2	45.6 - 73.8	70.3 - 119.5
Throw ratio	0.8:1	1.2 - 1.5:1	1.5 - 2.7:1	2.6 - 4.4:1	4.3 - 7.3:1

We will persevere in our efforts to keep clean environment. Please return the non - repairable components to the sales department or recycling center.

Chemical Substances table

Component name	Harmful substances					
	Pb	Hg	Cd	Cd(vi)	PBB	PBDE
PCB	x	○	○	○	○	○
Optical components	x	○	○	○	○	○
Projection lens	x	○	○	○	○	○
Projection lamp	x	x	○	○	○	○
Outer casing	x	○	○	○	○	○
Internal mechanical parts	x	○	○	○	○	○
Speaker	x	○	○	○	○	○
Remote control	x	○	○	○	○	○
Annex	x	○	○	○	○	○

This table is made according to SJ/T 11364 specifications.

- The contents of toxic and hazardous substances in all homogeneous materials of this part is below the limit requirement in GB/T 26572.
- × The contents of toxic and hazardous substances in at least one of the homogeneous materials of this part is above the limit requirement in GB/T 26572 .



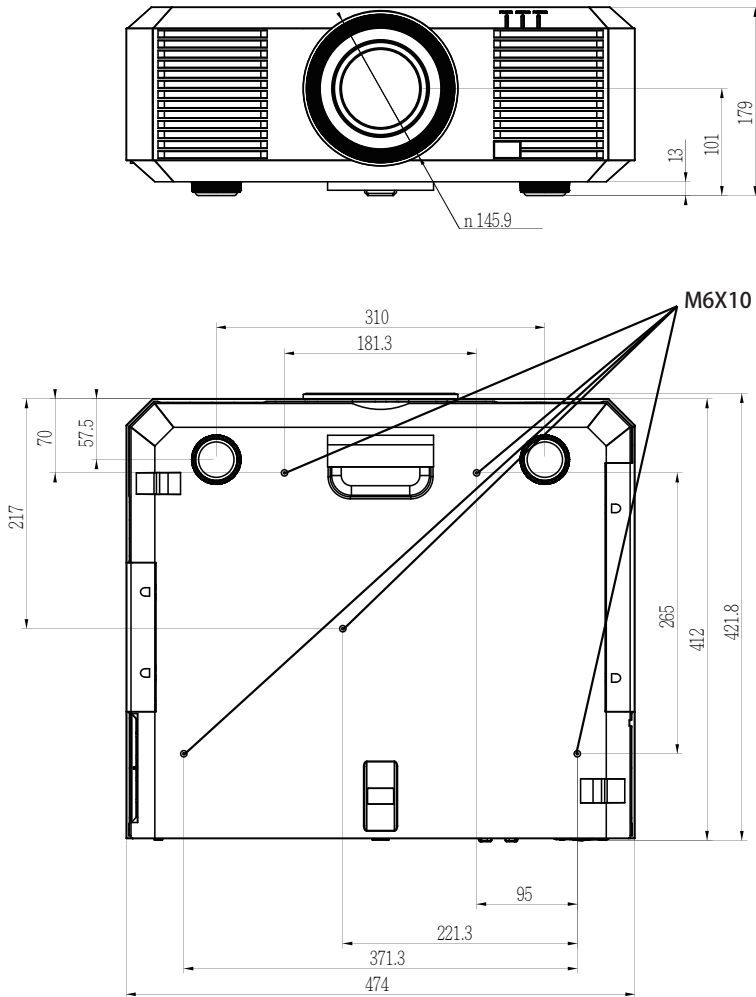
The date of products compatible with the projection lamp within the environmental protection period is five years

Appendix

Dimensions

Unit: mm

➤ Screw Holes for Ceiling Mount
Screw: M6
Depth: 10.0



Appendix

PIN code memorandum

Write down the PIN code in the blank below and keep it, If you forgot or lost the number and unable to operate the projector, contact the service center.

PIN code lock

Factory default PIN code 111*

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Logo PIN code Lock No.

Factory default PIN code 111*

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*If this 3-digit number is changed,
the factory default number will be ineffective.

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