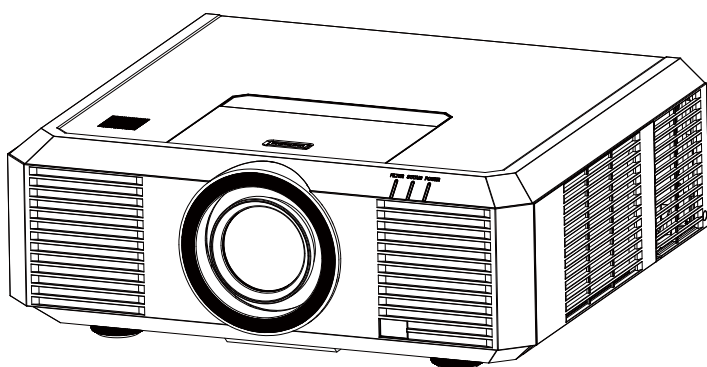




# Owner's manual



## Multimedia Projector

EK-501W

EK-502X

EK-501WL\*

EK-502XL\*

\*Projection lens is optional

# Features and Design

This Projector is designed with the most advanced technology for portability, durability, and ease of use. This projector utilizes built-in multimedia features, a palette of 16.77 million 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 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 19 languages: English, French, Spanish, Portuguese, German, Italian, Simple Chinese, Japanese, Korean, Russian, Finnish, Dutch, Thai, Vietnamese, Turkish, Afrikaans, Indonesian, Farsi and Arabic.

## **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.  
( Pages 62-65.)

## **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.

# Table of contents

<b>Features and Design</b> .....	2
<b>Table of contents</b> .....	3
<b>Safety operation guideline</b> .....	4
<b>Compliance</b> .....	11
<b>Accessory</b> .....	12

## Overview

### Name and function of individual component of your projector

Front/top .....	14
Rear .....	15
Terminal .....	16
Remote controller .....	17
Remote controller operation range .....	18
Install battery of remote controller .....	19

## Installation

### Installation

Lens installation .....	21
Lens movement adjustment .....	22
Set up your projector .....	23
Connect the AC power cord .....	24

### Connection to equipment

Connection to computer .....	25
Connect to video equipment .....	25
Connection to audio equipment .....	26

## Operation

### Basic operation

Power on your projector .....	28
Power off your projector .....	29
Zoom /focus function .....	30
Lens movement adjustment .....	30
Auto setup function .....	30
Adjustment pad .....	31
Keystone adjustment .....	31
Menu item overview .....	32
How to use the OSD .....	33
Menu operation .....	33
Remote controller operation .....	34

### Input source (Computer signals)

Input source selection (VGA / RGBHV) .....	36
Input source selection (HDMI / DVI) .....	36
System selection .....	37
Auto PC Adjusting .....	38
Manual computer adjustment .....	39
Image mode selection .....	40
Image Adjust .....	41
Screen size adjustment .....	42

### Input source (VIDEO signals)

Image mode selection .....	45
Image Adjust .....	46
Screen size adjustment .....	47

## Setting

Language .....	48
OSD Setting .....	48
Auto Setup .....	49
Keystone .....	50
Blue Back .....	50
Display .....	50
Logo screen .....	51
Ceiling mount .....	51
Rear .....	52
Remote Control .....	52
Power Management .....	52
On Start .....	53
Standby Mode .....	53
Closed Caption .....	53
Lamp Control .....	53
Test Pattern .....	53
Security .....	54
Cooling Fast .....	54
High Land .....	55
Filter counter .....	55
Warning Log .....	55
Factory Default .....	55
IRIS .....	55
Information .....	56

## Maintenance

### Regular maintenance

Status light indicator .....	58
Clean the lens .....	59
Clean casing of your projector .....	59
Clear the filter .....	59
Reset the filter counter .....	60
Lamp replacement .....	60

## Description on network control operation

Network control operation .....	62
---------------------------------	----

## Appendix




### Appendix

Troubleshooting .....	66
Light indicator status .....	69
Compatible computer screen .....	70
Terminal configuration .....	71
Menu tree .....	72
Technical specifications .....	74
Dimensions .....	76

# 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.

	<div>Caution</div> <div><b>Danger of electric shock</b> <b>DO NOT open this.</b></div>	
<p>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.</p>		



High voltage inside with risks of electric shock.



Operation and maintenance tips about these components.



# Safety operation guideline

## Notes



### Caution

#### Safety precautions:

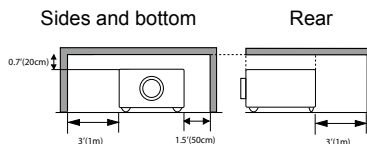
- GROUND your projector.
- Lens of your projector projects strong light. DO NOT look at the light beam directly. You may get your eyesight hurt. This is especially the case with children.
- Unplug the AC power plug if your projector will not be used for long time.
- DO NOT overload the socket of power 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/](http://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.

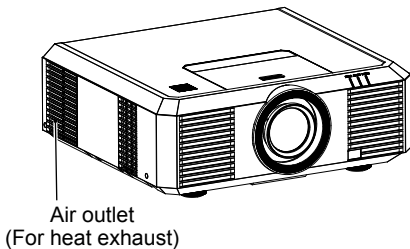
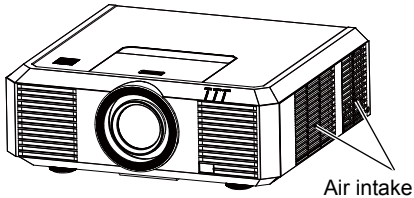
### **NOTE FOR CUSTOMERS IN THE US**

 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.

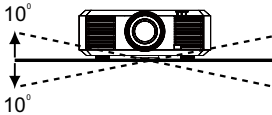


Note:

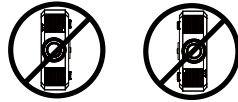
- Enable the "Ceiling" function if flip over screen is required.

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

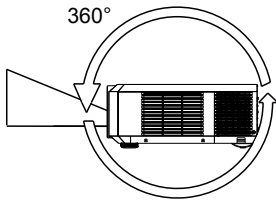
- DO NOT incline your projector more than  $\pm 10^\circ$  degrees.



- DO NOT place your projector as illustrated above.



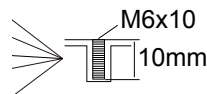
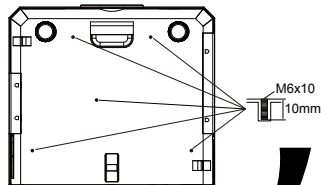
### ■The projector supports 360° projection in Vertical.



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.

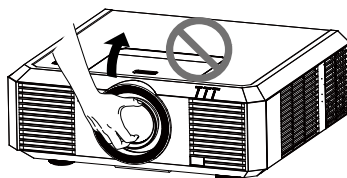
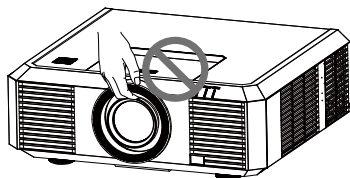


Note:

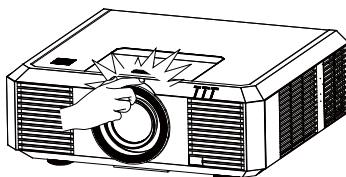
Lens or your projector is electric powered.

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

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Use of shielded cable is required to comply with class B limits in Subpart B of Part 15 of FCC Rules.

Do not make any changes or modifications to the equipment unless otherwise specified in the instructions. If such changes or modifications should be made, you could be required to stop operation of the equipment.

Model Number : EK-502X, EK-501W

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.

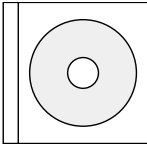
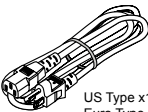

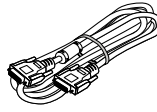
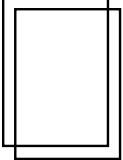
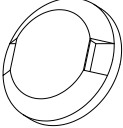
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

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

Owner's Manual(CD)	AC Power cord	Remote control with batteries (AA or LR6)
	 US Type x1 Euro Type x1	
VGA cable	Quick start guide	Lens Cover
		

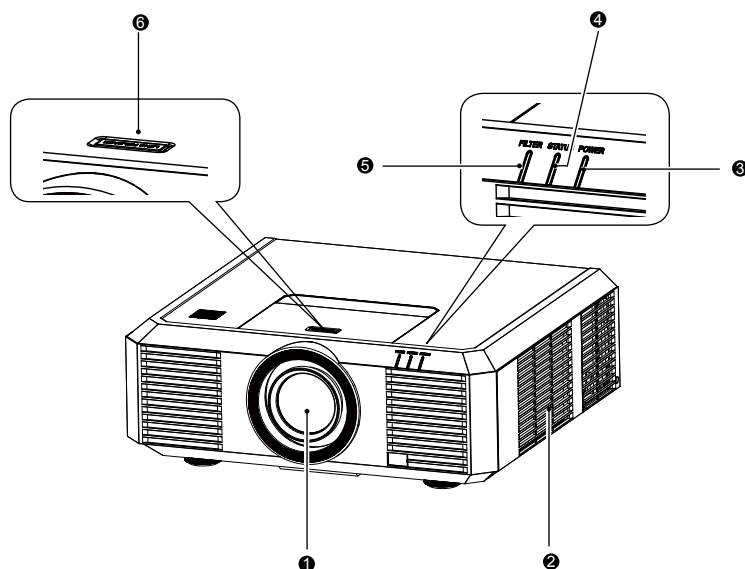


# Overview

This chapter presents names and functions of individual component.

# Name and function of your projector

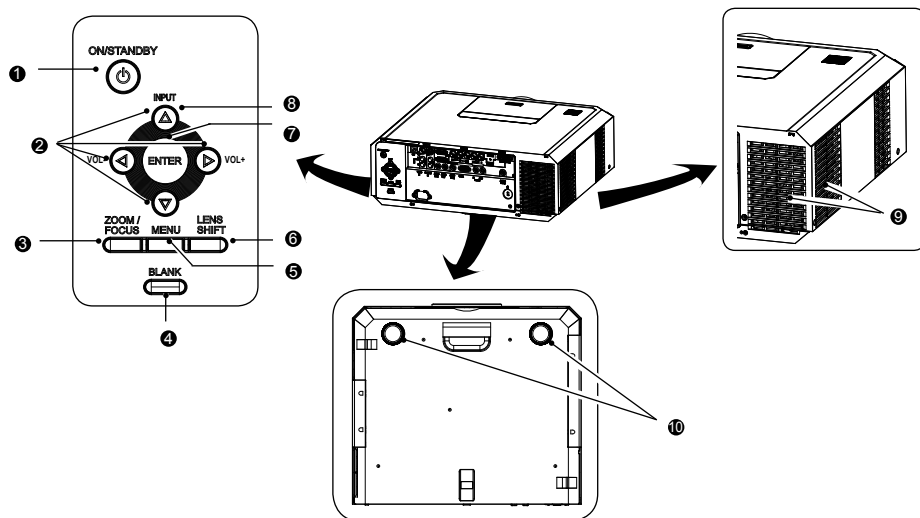
## Front/top



- ❶ Projection lens
- ❷ Air intake with filter
- ❸ POWER indicator (Refer to Page 69)
  - 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 69)
  - It flashes red when internal temperature of your projector is out of operation range
- ❺ FILTER indicator (Refer to Page 69)
  - It turns red when the filter needs be replaced
- ❻ Lens release button

# Name and function of your projector

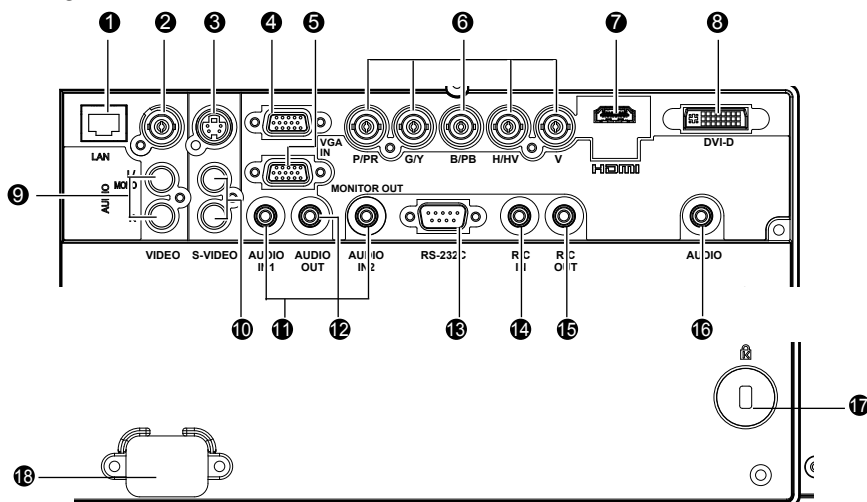
## Rear



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

# Name and function of your projector

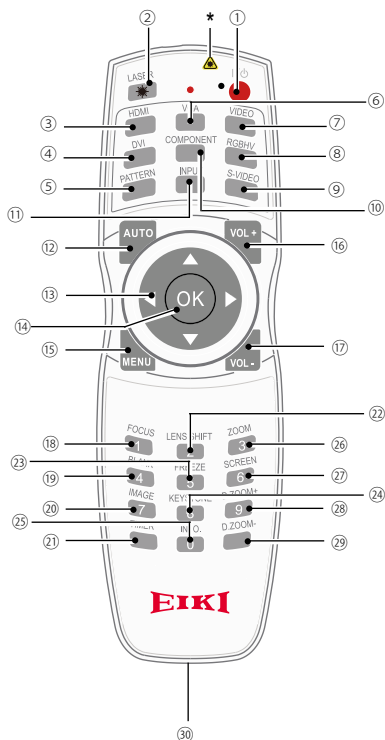
## Terminal



- 1 LAN**  
Connect network cable to this port for controlling and operating your projector via network.
- 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 to this terminal.
- 8 DVI-D IN(HDCP)**  
Connect DVI digital output signals to this terminal.
- 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 SERIAL**  
Connect serial cable to this terminal when using RS232 device to control or operate your projector.
- 14 REMOTE IN**  
Connect wired remote controller to this terminal. Connection of a wired remote controller will disable the wireless one.
- 15 REMOTE OUT**  
Transmit wired remote controller signals of **14** to another projector when a wired remote controller is used.
- 16 AUDIO/DVI-D**  
Connect audio signals of DVI equipment to this terminal.
- 17 Anti-theft slot**
- 18 Power cord connector**

# Name and function of your projector

## Remote controller



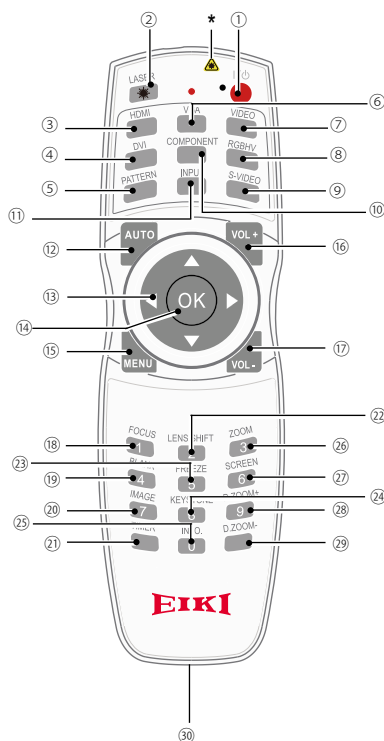
\* **Laser Transmitting Window:**  
Laser beam will emit from this window while pressing LASER button during the projection to use the remote controller as a laser pointer.

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 **DVI**  
Select DVI input source
- 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

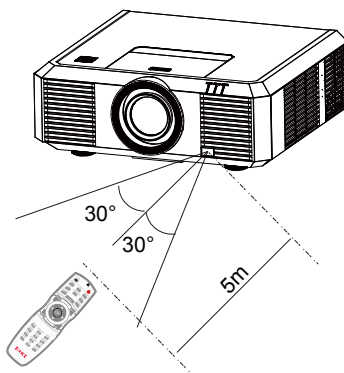
- ②1 **TIMER**  
Enable the timer function
- ②2 **LENS SHIFT**  
Enter the lens moving mode
- ②3 **FREEZE**  
Freeze projected images
- ②4 **KEYSTONE**  
Keystone calibration  
The keystone calibration mode changed as:  
H/V Keystone -> Corner Keystone -> H/V  
Keystone -> ....
- ②5 **INFO.**  
Display 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

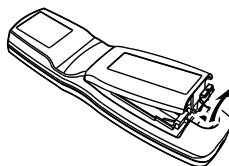
Maximum operation range of your remote controller is an area of radius 5 meters and arc 60° in front of and behind your projector



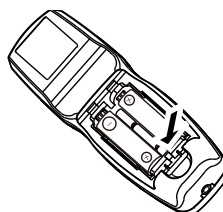
# Name and function of your projector

## Install battery of remote controller

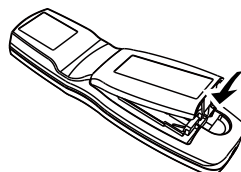
- ❶ Open the battery cover.



- ❷ Insert a new battery in it.  
Two AA 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

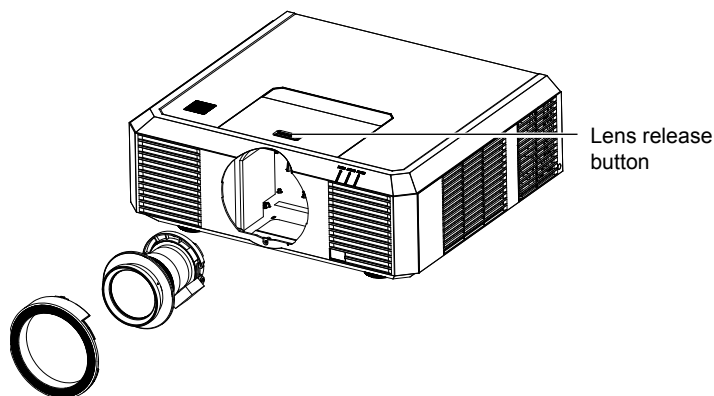
This chapter introduces the information of install.



# 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 Turn it counterclockwise and remove its decoration ring.
- 4 Press and hold the lens release button at top of the casing. Turn it counterclockwise 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 Turn the lens counterclockwise and remove its decoration ring.
- 2 Align the red mark on your lens and your projector and insert the lens in the latter.
- 3 Turn the lens clockwise slowly until you hear a click. Make sure the lens is fully inserted in your projector.
- 4 Turn the lens decoration ring clockwise to replace it.



Note:

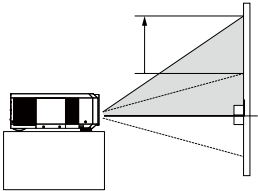
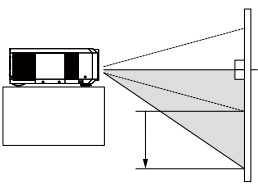
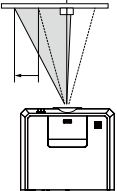
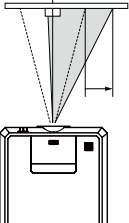
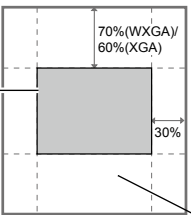
Do not press and hold the lens release button when installing it.

- 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.

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

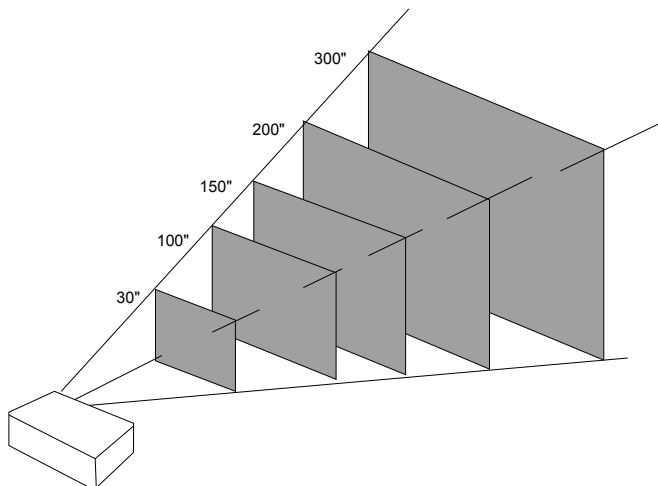
\*This table is measured with standard lens.

\*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-501W(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
30 inch	64	40	51	70	99	91	163	155	278	262	464
100 inch	215	135	170	250	330	314	566	550	950	920	1580
150 inch	323	202	250	380	490	474	853	840	1430	1390	2370
200 inch	431	269	340	510	660	633	1140	1120	1910	1860	3170
300 inch	646	404	500	770	990	953	1715	1680	2870	2800	4770

EK-502X(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
30 inch	61	46	48	69	84	86	155	156	260	244	436
100 inch	203	152	160	240	310	299	537	530	900	870	1500
150 inch	305	229	240	360	470	450	811	800	1360	1320	2260
200 inch	406	305	320	480	630	602	1084	1060	1820	1770	3020
300 inch	610	457	480	730	950	906	1630	1600	2730	2660	4540

# 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.

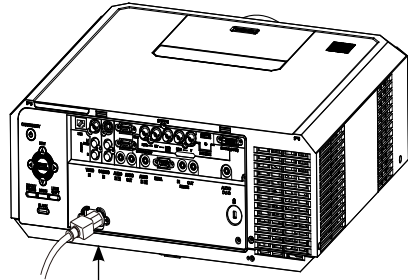


Note:

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.

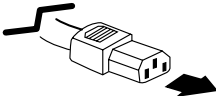
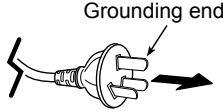
### Precautions on power cord

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.








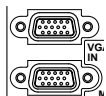



# Connection to equipment

## Connection to computer

Cables for connection:

- VGA cable
- BNC cable\*
- DVI cable\*
- HDMI cable\*

(\* This cable is optional. )






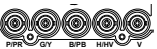

Ports on your projector	Connection cable	Equipment
DVI-D(HDCP) 	DVI cable 	
HDMI 	HDMI cable 	
R(PR) / G(Y) / B(PB) / H(HV) / V 	BNC cable 	
VGA IN MONITOR OUT 	VGA cable 	
RS232C 	RS232C control cable 	

## Connect to video equipment

Cables for connection:

- S-VIDEO cable\*
- BNC cable\*
- VIDEO 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 	



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


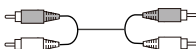


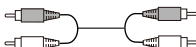






# Connection to equipment

## Connection to audio equipment

Cables for connection:

- Audio cable\*

(\* This cable is optional.)

Ports on your projector	Connection cable	Equipment	
MONO L/R 	Audio cable 		
AUDIO IN 	Audio cable 		
AUDIO IN / OUT 	Audio cable 		
AUDIO DVI-D 			
REMOTE IN/OUT 	Audio cable 		



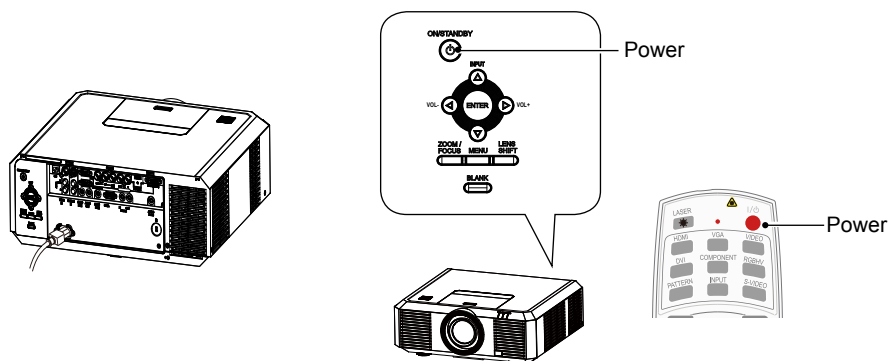
Unplug power cords of your projector and all external equipment before connecting any cable to them.

# 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 ▲▼ button to select a number, press ► button to enter it and move the cursor. The number you typed is displayed as “\*”. To edit number you have entered, press ◀ button to move the cursor to the number you want to change, press ▲▼ button to select the correct one.

Repeat this step to type in a 3-digit number.

Move the cursor to OK after you have typed the 3-digit number. Press the ENTER button and now you are ready to use your projector.

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 54 for details.

Precautions on password (PIN) operation

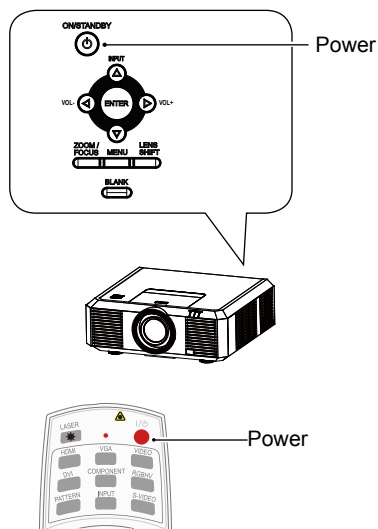
You cannot operate a password (PIN) protected projector without correct password (PIN). Please set up a new password (PIN) and keep your operation manual in safe place. In case the password (PIN) is lost or forgotten, call your dealer or service center.



# Basic operation

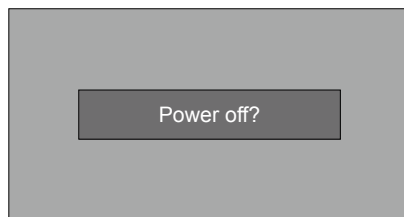
## Power off your projector

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.

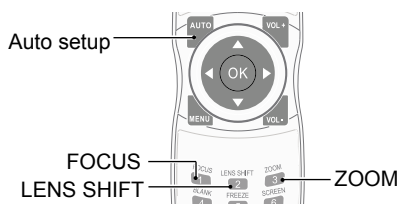
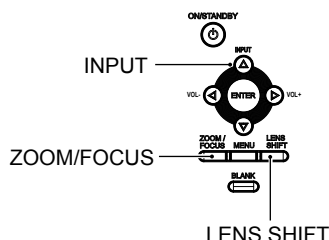


"Power off?" message disappears in 4 seconds.

### ✓ 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 53)
- 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 69)
- 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.

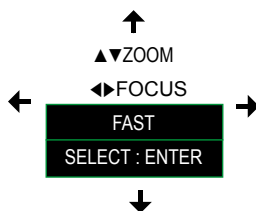
# Basic operation



## 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.

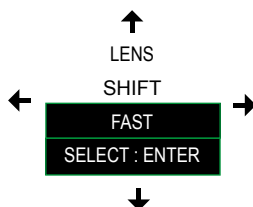
### Zoom / focus



## Lens movement adjustment

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% for WXGA model and 60% for XGA model. 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 movement



✓ 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).



# Basic operation

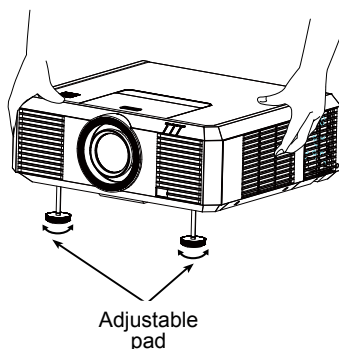
## Adjustment pad

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.

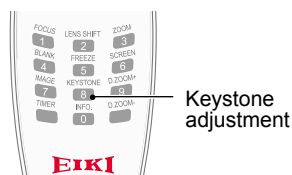


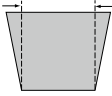
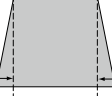
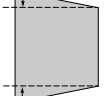
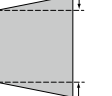




## Keystone adjustment

You may adjust keystone distortion of image in your projector with the H/V and Corner keystone adjustment.

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

Press the KEYSTONE button on your remote controller. The keystone adjustment dialog box displays, press **▲▼◀▶** button to adjust keystone distortion. You may save your settings for keystone adjustment.



H/V keystone adjustment	Press <b>▲</b> button to narrow upper part of the image 	Press <b>▼</b> button to narrow lower part of the image 	Press <b>◀</b> button to reduce height to the left. 	Press <b>▶</b> button to reduce height to the right. 
Corner keystone adjustment	Press <b>▼▶</b> button to adjust keystone distortion at the upper left corner 	Press <b>◀▼</b> button to adjust keystone distortion at the upper right corner 	Press <b>◀◀</b> button to adjust keystone distortion at the lower right corner 	Press <b>▶▶</b> button to adjust keystone distortion at the lower left corner 

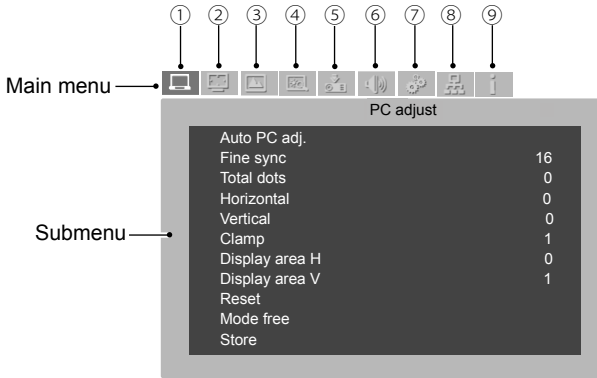
## Keystone adjustment



- 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

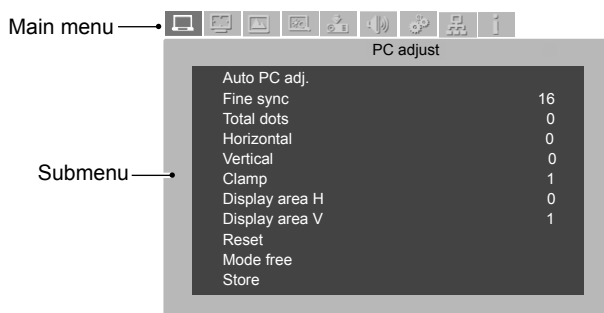
## Menu item overview



- ① **PC Adjust**  
Select Auto PC Adjust, Fine sync., Total Dots, Horizontal and Vertical position, Clamp function, Display area H, Display area V, Reset, Mode free and Store to align each parameter with VGA input signal format.
- ② **Screen**  
For computer input, the available image size setup options are Normal, True, Wide, Full, Custom, and Digital Zoom +/- . For video input, the available image size setup options are: Normal, Wide, or Custom.
- ③ **Image Select**  
Available options in the Image Select menu are: Dynamic, Normal, Cinema, Blackboard (Green), Colorboard, or User Image.
- ④ **Image Adjust**  
For computer input the screen adjustment options are: Contrast, Brightness, Color Temp., White Balance (Red/Green/Blue), Sharpness, Gamma  
For video input the screen adjustment options are: Contrast, Brightness, Color, Tint, White Balance (Red/Green/Blue), Sharpness, Gamma, Noise reduction, Progressive.
- ⑤ **Input**  
Select one input from this menu including: HDMI, DVI, VGA, Component, S-Video, VIDEO, RGBHV.
- ⑥ **Sound**  
Adjust volume or mute the sound.
- ⑦ **Setup**  
Set up operation of the projector.
- ⑧ **Network**  
Network function menu
- ⑨ **Information**  
Display information about the projector.

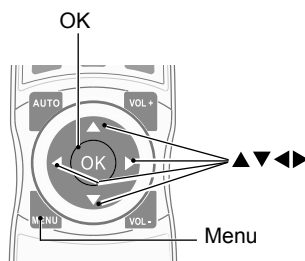
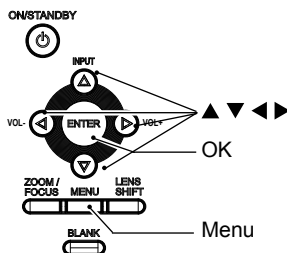
# Basic operation

## 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 submenu, 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

## 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

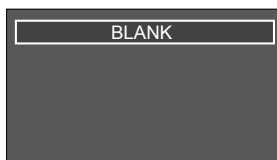
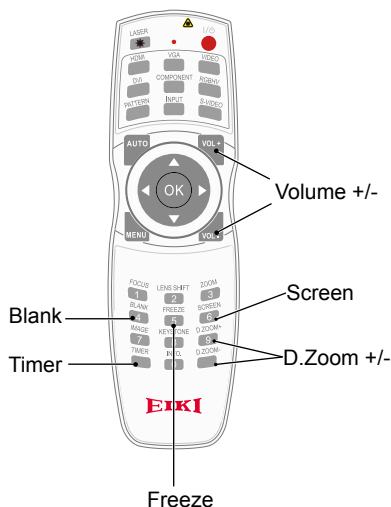
### Freeze (FREEZE)

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 → .....

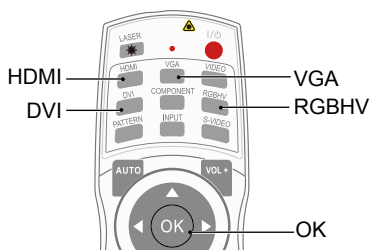
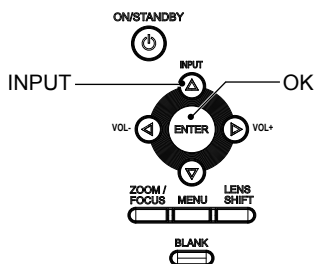


The BLANK screen disappears if no buttons are pressed in 4 seconds.

# Input source (Computer signals)

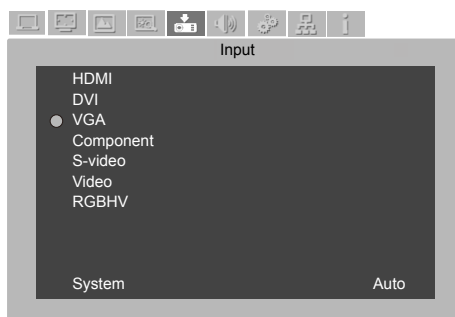
## Basic operation

Press the INPUT button on the control panel to select one of the following input: VGA, RGBHV, HDMI or DVI. Alternatively, you may press the VGA, RGBHV, HDMI, DVI button on remote controller to select individual source directly.



## Menu operation

- 1 Press the MENU button on remote controller and the OSD displays. Press ◀▶ button, select the input icon, press ▼ button or OK button to enter the Input menu.
- 2 Press ▲▼ button, select VGA, RGBHV, HDMI or DVI, then press OK button to confirm your selection.



Input menu

### ✓ Note:

If the Input Search option in the Auto Setup function is set to On, your projector will search for input signals automatically.

# Input source (Computer signals)

## Input source selection (VGA / RGBHV)

### VGA 1

Select input VGA if a PC is connected to the VGA IN port with a VGA cable.

### RGBHV

Select input RGBHV if a PC is connected to the BNC terminal with a 5 BNC cable.

## Input source selection (HDMI / DVI)

### HDMI

Select input HDMI if a device is connected to the HDMI terminal with a HDMI cable.

### DVI

Select input DVI if a device is connected to the DVI terminal with a DVI cable.

#### ✓ Note:

If the Input Search option in the Auto Setup function is set to On, your projector will search for input signals automatically.



# Input source (Computer signals)

## System selection

The scanning system and auto computer adjustment function may detect scores of signal format. If a PC is selected as the input signal source, your projector will detect and adapt to its signal format automatically. Correct image can be displayed without any setup operation.

Your projector will display one of the following:

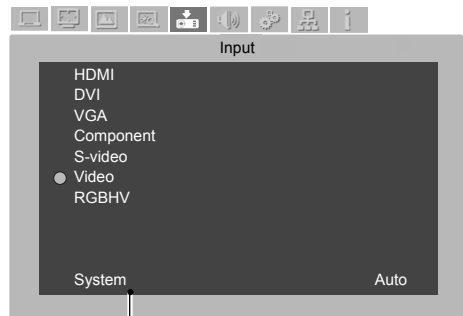
### Auto

If your projector failed to identify signals not shown in the signals format table, the "Auto" message will display in the System Signal Format menu. The Auto PC Adjusting function will make necessary adjustment to your projector to project valid images. If images are displayed incorrectly, adjust it manually.

-----

No PC signals detected. Check the connection between PC and your projector.

### OSD menu



The selected system displays in the PC system menu.

Select the computer system manually.

- 1 Press the MENU button on remote controller and the OSD displays. Press ◀▶ button to point to the Input icon, press ▼ button or OK button and the Input menu displays.
- 2 Press ▲▼ button to select System Signal Format, then press OK button.
- 3 Press ▲▼ button to select required system signal format, then press OK button to confirm your selection.

### ✓ Note:

Your projector may save data generated by the Auto PC Adjusting function.

### ✓ Note:

The computer system menu will be disabled once HDMI or DVI has been selected.

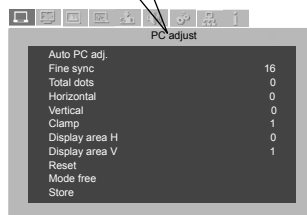
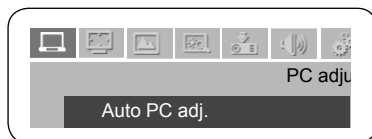
# Input source (Computer signals)

## 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.

### Auto PC Adjusting

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



#### ✓ Note:

- Total Dots, Horizontal and Vertical position 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 function will be disabled once 480i, 575i, 480p, 575p, 720p, 1035i or 1080i has been selected in the system menu.

# Input source (Computer signals)

## 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 and the OSD displays. Press ◀▶ button to select PC adjustment 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. The adjustment dialog box prompts. Press ◀▶ button to adjust settings.

### Fine Sync

Eliminate flashes in image. Press ◀▶ button to adjust Total Dots.

### Total Dots

Press ◀▶ button to align number of dots in a horizontal cycle with the computer image.

### Horizontal position

Press ◀▶ button to adjust horizontal position of image.

### Vertical position

Press ◀▶ button to adjust vertical position of image.

### Clamp

Press ◀▶ button to select Clamp. Try this function to remove black strips in image.

### Display area H

Press ◀▶ button to adjust horizontal projection area of your projector.

### Display area V

Press ◀▶ button to adjust vertical projection area of your projector.

### Reset

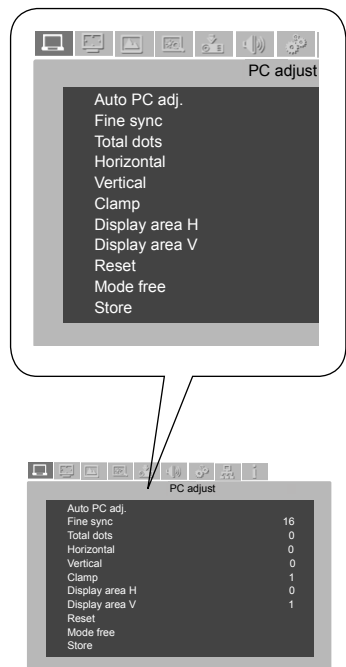
Select Reset, then press OK to reset adjustments you have made. A confirm dialog box prompts, select "Yes" to confirm your selection. This reset all settings to its initial status.

### Mode free

Select Mode free to delete saved data, press ▶ button or OK button to confirm your selection. Select the mode to be deleted, press OK to confirm your selection.

### Store

To save adjustments you have made, select Store, press ▶ button or OK button to confirm your selection. Select one from mode 1-5, then press OK button.



#### ✓ Note:

- The Fine Sync, Total Dots and Clamp function will be disabled if 480i, 576i, 480p, 576p, 720p, 1035i or 1080i has been selected in the system menu.

# Input source (Computer signals)

## Image mode selection

### Direct operation

Press the Image Select button on remote controller to select required image mode.

### Menu operation

- 1 Press the MENU button on remote controller and the OSD displays. Press ◀▶ button select image select 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.

### Dynamic

An image mode suitable for viewing in bright room.

### Normal

The default mode of your projector.

### Cinema

Enriched grayscale for viewing movies.

### Blackboard (Green)

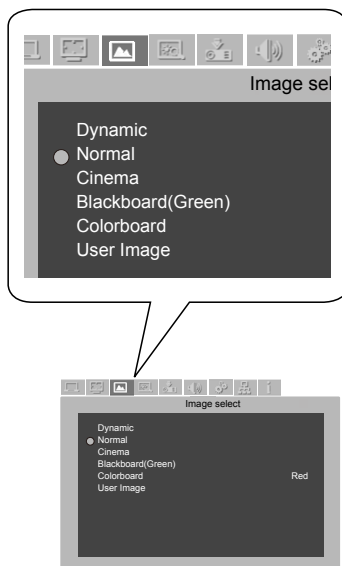
An image mode designed for displaying on a blackboard (Green). It boosts quality of image projected on blackboard (Green). This is designed for a board in green rather than black as indicated by its name.

### Colorboard

A 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.



# Input source (Computer signals)

## Image Adjust

- 1 Press the MENU button on remote controller and the OSD displays. Press ◀▶ button to select the Image Adjust icon, press ▼ button or OK button to confirm your selection.
- 2 Press ▲▼ button to select item for adjustment, press ▶ button or OK button to confirm your selection. The adjustment dialog box prompts. Press ◀▶ button to adjust settings.

### 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 (Cold, Mid. and Warm)

### 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

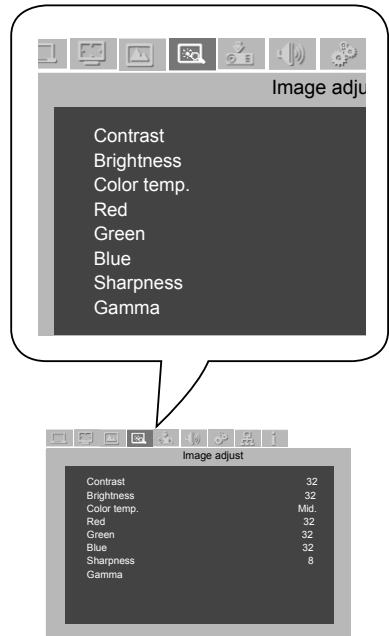
Press ◀ button to lighten blue tint and ▶ button to darken it.

### Sharpness

Press ◀ button to soften image and ▶ button to sharpen it.

### Gamma

Press ◀▶ button to adjust gray scale for better contrast balance.



# Input source (Computer signals)

## Screen size adjustment

Your projector comes with screen size adjustment function for you to display required image size.

- 1 Press the MENU button on remote controller and the OSD displays. Press ◀▶ button to select Screen 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.

### Normal

This function keeps aspect ratio of the projected image consistent with its input source.

### True

Display image in its original size. If the original size of a image is greater than screen image of your projector (XGA:1024x768/ WXGA:1280x800), the later enters the Image Display Area Selection mode. Press ▲▼◀▶ button to select image display area. The arrow mark turns red during adjusting. It disappears when the adjustment limit is reached.

### Wide

Provide image in aspect ratio of 16:9 by expanding image width proportionally.

### Full

Project image in full screen.

### Custom

Adjust screen aspect ratio and position manually. Press ▶ button in customization area and Custom options display. Press ▲▼ button to select required items.

Horizontal ratio / Vertical ratio:

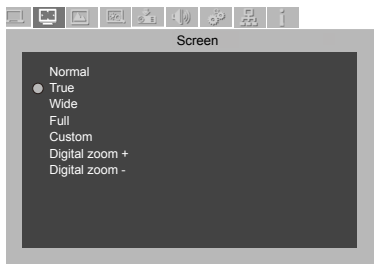
Adjust horizontal and vertical screen ratio.

Horizontal and Vertical:

The aspect ratio option will be disabled when the horizontal and vertical screen ratio is set to On. The vertical ratio option dims and appears unavailable. Adjust the horizontal ratio and the screen size is adjusted according to the aspect ratio.

Horizontal position / Vertical position:

Adjust horizontal / vertical position of image.



**Common:** Save adjustment ratio applicable with all input. Point to common and press OK button to display a confirm menu. Press Yes then OK to save your ratio settings. The saved ratio will be used when Custom is selected by user.

**Reset:** Reset your adjustments to its initial status. Point to Reset and press OK to display a confirm menu. Press OK to reset.

### Digital Zoom +

Select Digital Zoom +. The OSD is replaced by the Digital Zoom + message. Press OK button to zoom in.

Press ▲▼◀▶ button to span the image. This function is available only when the image is of size greater than the screen.

### Digital Zoom -

Select Digital Zoom -. The OSD is replaced by the Digital Zoom - message. Press OK button to zoom out.

Press any key, except the OK one, to exit the Digital Zoom mode.

To reset to original screen size, select Screen size in the Screen Size Adjustment menu, select Input again in the Input menu, or press OK button to adjust its size.

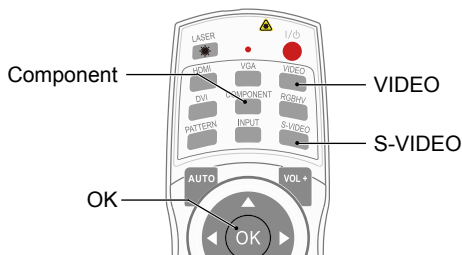
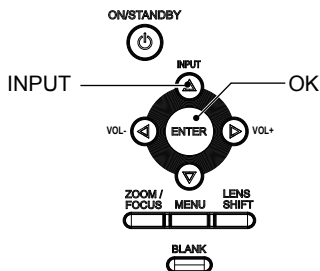
#### ✓ Note:

- Your projector does not support resolution greater than 1920x1200. For computer display of resolution greater than 1920x1200, downgrade it before connecting to your projector.
- Image data other than physical resolution will be modified to fit screen size give in reset mode.
- Option True, Full Screen, and Digital Zoom will be unavailable if no signals is detected in the PC system menu.

# Input source (VIDEO signals)

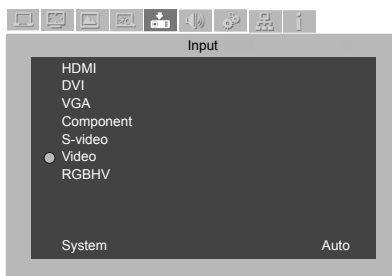
## Basic operation

Press the INPUT button on control panel to select Component, S-Video or VIDEO. Press COMPONENT, S-VIDEO or VIDEO button on remote controller to select individual item directly.



## Menu operation

- 1 Press the MENU button on remote controller and the OSD displays. Press ▲▼ button to point to the Input icon, press ▼ button or OK button to access the Input menu.
- 2 Press ▲▼ button to select Component, S-Video or VIDEO, then press OK button to select input source.



Input Select menu

### Component

Select Component when a video signal source is connected to the Y, Cb/Pb, Cr/Pr port with a VGA cable.

### VIDEO

Select Video when video signal is connected to the video port.

### S-VIDEO

Select S-Video when video signal is connected to the S-Video port.

# Input source (VIDEO signals)

## Video system selection

- 1 Press the MENU button on remote controller and the OSD displays. Press ◀▶ button to point to the Input icon, press ▼ button or OK button to confirm your selection.
- 2 Press ▲▼ button to select Component, VIDEO, or S-Video, and then press OK button.
- 3 Press ▲▼ button to select system, and then press OK button. Press ▲▼ button to select required signal format, and then press OK button.

### VIDEO or S-Video

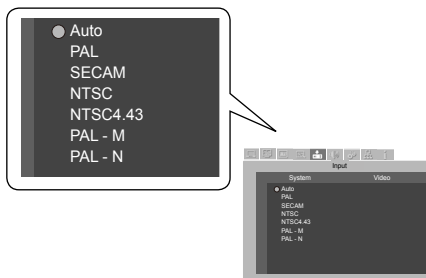
#### Auto

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 system menu (VIDEO or S-VIDEO)



### Component

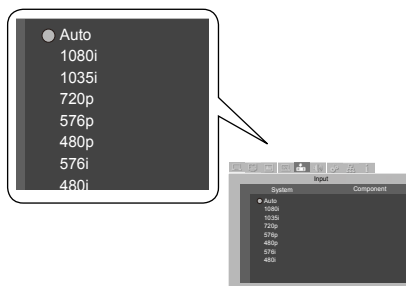
#### Auto

Your projector may auto detect the input component video signal and adjust to the optimum status.

#### Component video signal format

If image cannot be displayed correctly, you may need to select one signal format from 480i, 576i, 480p, 576p, 720p, 1035i and 1080i.

### VIDEO system menu (Component)

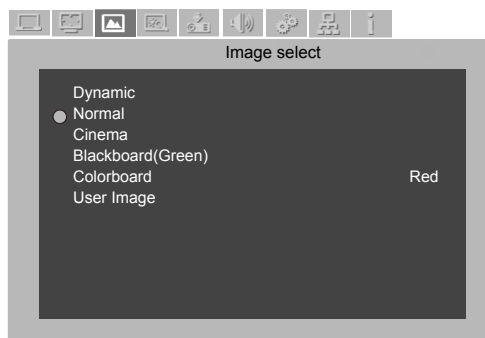










# Input source (VIDEO signals)

## Image select

- 1 Press the MENU button on remote controller and the OSD displays. Press ◀▶ button to select the Image icon, press ▼ button then press OK button.
- 2 Press ▲▼ button to point to required item, then press OK button.

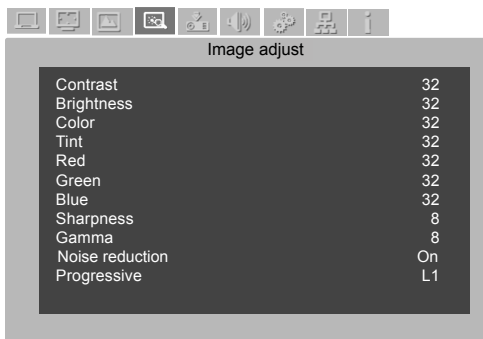


 Dynamic	An image mode suitable for viewing in bright rooms.
 Normal	The default image mode of your projector.
 Cinema	Vivid image mode
 Blackboard (Green)	Improve quality of image projected on blackboard (Green). (This is designed for a board in green rather than black as indicated by its name.)
 Colorboard	A image mode suitable for image projecting on the surface of a wall in red, blue, yellow or green.
 User Image	Image mode set by users in the Image Adjust menu.

# Input source (VIDEO signals)

## Image Adjust

- 1 Press the MENU button on remote controller and the OSD displays. Press ◀▶ button to select the Image Adjust icon, press ▼ button or OK button to confirm your selection.
- 2 Press ▲▼ button to point to required item, press ▶ button or OK button to confirm your selection.
- 3 Press ◀▶ button to adjust settings, then press OK button; or press ◀▶ button to adjust settings in the pop-up adjustment menu.



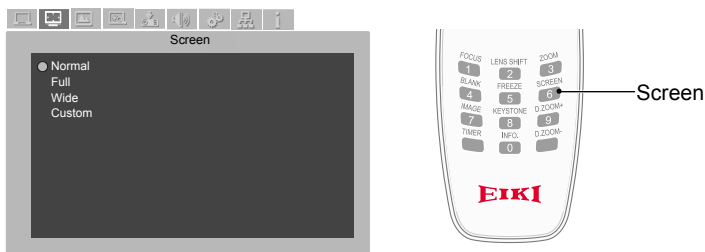
	Contrast	Press ◀ button to decrease contrast and ▶ button to increase it.
	Brightness	Press ◀ button to decrease brightness, press ▶ button to increase it.
	Color	Press ◀ button to decrease color saturation and ▶ button to increase it.
	Tint	Press ◀▶ button to adjust image to required tint.
	White balance (Red)	Press ◀ button to lighten the red color and ▶ button to darken it.
	White balance (Green)	Press ◀ button to lighten green tint and ▶ button to darken it.
	White balance (Blue)	Press ◀ button to lighten the blue color and ▶ button to darken it.
	Sharpness	Press ◀ button to soften image and ▶ button to sharpen it.
	Gamma	Press ◀▶ button to adjust gray scale for better contrast balance.
	Noise Reduction	Select Noise Reduction to cut snow interference to your screen for even smoother and clearer image.
	Progressive	Display lined video signal as stepped image. You may select one of the following according to type of signal: Off.....Disable the function L1.....Project dynamic image L2.....Project still image Quality image.....For movie viewing This function enables your projector to treat image for high quality representation with less image distortion.

# Input source (VIDEO signals)

## Screen size adjustment

Your projector comes with screen size adjustment function for you to display required image size.

1. Press the MENU button on remote controller and the OSD displays. Press ◀▶ button to select Screen 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.



Normal	Select this function to maintain the aspect ratio of the projected image consistent with its input source.
Full	Project image in full screen.
Wide	Provide image in aspect ratio of 16:9 by expanding image width proportionally.
Custom	<p>Adjust screen aspect ratio and position manually.</p> <p>Press ▶ button in customization area and Custom options display. Press ▲▼ button to select required items.</p> <p>Horizontal ratio/vertical ratio:            Adjust horizontal and vertical screen ratio.            The aspect ratio option will be disabled when the horizontal and vertical screen ratio is set to On. The vertical ratio option dims and appears unavailable. Adjust the horizontal ratio and the screen size is adjusted according to the aspect ratio.</p> <p>Horizontal / Vertical position:            Adjust horizontal /vertical position of image.</p> <p>Common: Save adjustment ratio applicable with all input. Point to Common and press OK button to display a confirm menu. Press Yes then OK to save your ratio settings. The saved ratio will be used when Custom is selected as user.</p> <p>Reset: Reset your adjustments to its initial status. Point to Reset and press OK button to display a confirm menu. Point to Yes and press OK button to reset.</p>

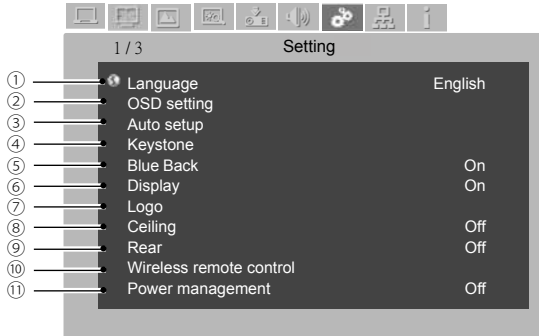
### ✓ Note:

- If no signals was detected, the Auto setting will be accepted automatically and the adjustment pop-up menu disappears.
- Adjustment range of the horizontal /vertical position ratio and position varies with input signal.

# Setting

Select the Setting 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 Setting, 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.



## ① Language

Your projector comes with multiple language support. You may select required one from them.

## ② OSD Setting

Press ▲▼ button to point to the Setting menu, press OK button or ▶ button.

### Menu Position

Select this option to change position of OSD.  
Point to Menu Position and press ENTER button.  
Press the ENTER button to change OSD position in sequence as shown below:

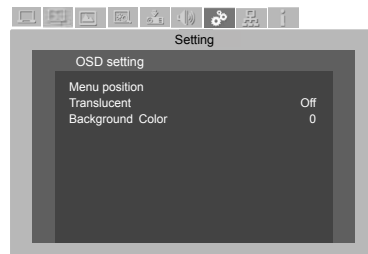
Upper left → Upper right → Center →  
Lower left → Lower right → Upper left  
→ .....

### Translucency

Change translucency of OSD menu. Press ▲▼ button to select Off, High, Medium, or Low.

### Background Color

Change background color of the OSD menu.  
Press ▲▼ button to select color in code 0~6.



# Setting

## ③ Auto Setup

Press the AUTO button on your remote controller to execute functions including Auto Searching, Auto PC Adjusting, and Auto Keystone. These function settings may convert according to steps shown below:

### Input Search

Select this function to auto detect input signal.

Stop searching after valid signal was found.

Press ▲▼ button to select the following options:

- Off.....Disable the input search function.
- On.....Enable the input search function. This function detects input signals automatically and stops searching after any successful detection.

### Auto PC Adjusting

On.....Press the AUTO button on remote controller to enable the Auto PC Adjusting function.

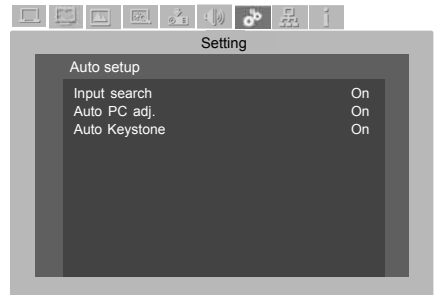
Off.....Disable the Auto PC Adjusting function.

### Auto Keystone

Off.....Disable the Auto Keystone function.

Auto .....Execute auto keystone adjustment according to inclination of your projector.

Manual...Press the AUTO button on remote controller to enable this function.



#### ✓ Note:

- Your projector detects only the input source you selected last time.
- Press the INPUT button on the control panel during input source searching, then the latter stops and the input signal you used last time will be selected.
- You cannot disable Input Search and Auto PC Adjusting concurrently.
- Fine Sync, Total Dots, Horizontal and Vertical position 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.

# Setting

## ④ Keystone

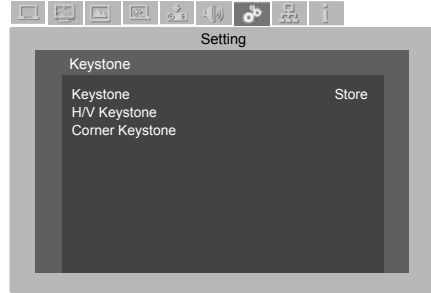
Select this function to save or reset keystone adjustment of projection after your projector is disconnected from AC power. Press ▲▼◀▶ button to navigate available options.

Keystone..... store/reset  
H/V Keystone..... Press ▲▼◀▶ button to adjust vertical and horizontal keystone.

Corner Keystone... Press ▲▼◀▶ button to adjust keystone at four corners of the screen. The four corners are looped in sequence shown below:

Upper left → Upper right  
→ Lower right → Lower  
left → ...

Press ▶▼ button to adjust keystone at upper left corner, ◀▼ button to adjust keystone at upper right corner, ◀▲ button to adjust keystone at lower right corner, ▶▲ button to adjust keystone at lower left corner.



## ⑤ Blue Back

Set default background color of your projector when no signals are detected, Press ▲▼ button to navigate available options.

On.....Enable blue projection background color.  
Off.....Disable blue projection background color.

## ⑥ Display

Select this function to display the Logo screen (including a countdown timer) when power on your projector.

On.....Display the logo screen when power on.  
Off.....Do not display the logo screen when power on.

# Setting

## ⑦ Logo screen

Logo (including Logo and Logo PIN Code lock setup) You may use this function to select Logo screen, Logo PIN Code lock, change power on password, and set up default logo screen.

### Logo Select

Select this to set up the logo screen when power on your projector:

- Default.....Display factory default logo screen.
- User..... Use the logo that user captured.
- Off.....Power on without logo screen.

### Logo PIN Code lock

This function helps preventing unauthorized personnel from changing the Logo screen.

- Off.....The Logo screen may be changed with the Logo menu.
- On.....You may not alter the logo screen without the Logo PIN Code.

To change the logo screen password protection, press ENTER button, and the Logo PIN Code change pop-up dialog box prompts. Follow steps below to enter a logo screen password.

Press ▲▼ button to select a number, press ► button to enter it and move the cursor. The number you typed is displayed as “\*”. To edit number you have entered, press ◀ button to move the cursor to the number you want to change, press ▲▼ button to select the correct one.

Repeat this step to type in a 3-digit number.

Move the cursor to OK after you have typed the 3-digit number. Press ENTER.

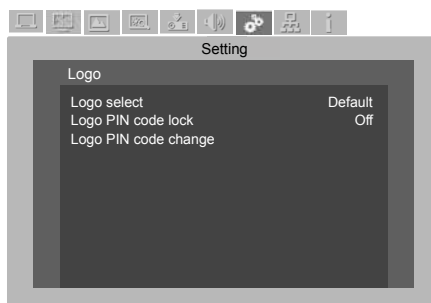
If the password is invalid, the password displayed as “\*\*\*” will be in red. Please try again with a valid one.

After you have entered valid logo screen PIN code, you may press ▲▼ button to toggle switch Off and On.

### Logo PIN Code change

You may change the Logo PIN Code to any 3-digit number you like. Press ENTER button to select Logo PIN Code change. The Logo PIN Code change dialog box prompts, press ▲▼ button to give a valid new code. The New Logo PIN Code dialog box prompts. Set up a new Logo PIN Code, check contents contained in the dialog box, select Yes and the new password is set now.

Please remember your new password and keep it safe. You cannot change the Logo PIN Code again if you forgot the password you have set.



### ✓ Note:

After changing the Logo PIN Code to a new number, please remember it and keep it safe. The Logo PIN Code cannot be changed again if the new password is lost or forgotten.

## ⑧ Ceiling mount

Select this function for ceiling mounted your projector.

- ON.....The projector is in an upside down position.
- Auto.....The projector auto detect normal or upside down position.
- Off.....The projector is in up straight position.

# Setting

## 9 Rear

Select this function to mirror reflect the projected image. This function projects image to the back side of projection screen.

## 10 Remote Control

### Remote Control

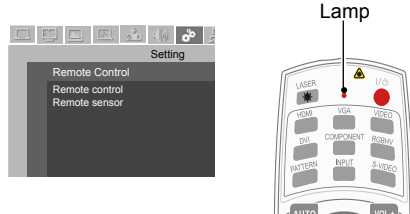
Select this function to prevent one remote controller from interfering multiple projectors.

Your projector comes with 10 remote controller code (0-9) with default code at "0".

Your projector and the remote controller must be paired with the same code. For example: For a projector set to be operated by code 7, then the remote controller for controlling it needs be set to code 7 as well.

Change code of your projector:  
Select Remote Control in the Setup menu.

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



### Sensor for the remote controller

Set up the sensor when operating your projector with remote controller.

Front .....Select the front sensor.

Rear .....Select the rear sensor.

Both .....Select the front and rear sensors.

#### ✓ Note:

- No control operation is available if your projector and the remote controller is in different remote control code. You may have to change the remote control code on both devices to pair with each other in case like this.
- The remote control code will be reset if battery of the remote controller is removed for long time.

## 11 Power Management

To reduce power consumption and maintain life cycle of lamp, the power management function will turn off the projection lamp after your projector has been idle for a period of time. Available options are:

Ready ..... The POWER light indicator flashes green after the lamp is fully cooled down. The lamp turns on again if an input signal is connected or any key on the rear panel and remote controller is pressed during this period of time.

Power off .... The projector shut down after the lamp is fully cooled down.

Off ..... Disable the power management function.

Timer ..... Once the input signal is interrupted and no button has been pressed for 30 seconds afterwards, the "No signal" message displays in the timer. The timer counts down until the lamp turns off. Press ▲▼ button to set up the timer in range of 1~30 minutes.

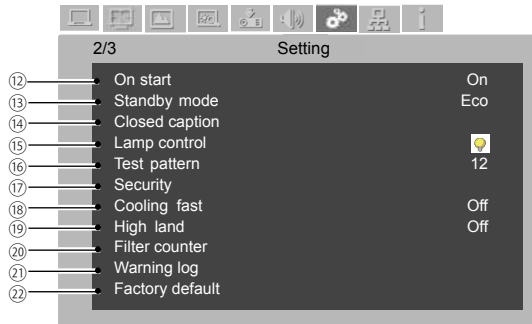
Ready countdown..... Set up the interval from ready mode change to standby (0 to 30 minutes) automatically. A setting of zero minute keeps your projector from auto transition. Press the Power button to change your projector from ready to standby mode and any other button to power it on.

#### ✓ Note:

Factory default for standby time: 5 minutes. Count down for ready mode: 30 minutes.



# Setting



## ⑫ On Start

Set this option to On to power on your projector automatically when it is connected to an AC power source.

## ⑬ Standby Mode

Select this function when operating your projector through network.

ECO.....Select ECO mode when your projector is operated not through network. The Network, RS232C and MONITOR OUT function will be disabled once your projector is powered off in ECO mode.

Normal...Power the network function after your projector is powered off. You may power on and off your projector via network.

## ⑭ Closed Caption

Closed Caption is program's sound track or the screen display version of other messages. If closed caption is contained in the input signal, you may enable this function and change channels. Press ▲▼ button to select OFF, CC1, CC2, CC3 or CC4.

You may change color of text to white if the original color in Closed Caption looks unclear.

✓ Note:

The Closed Caption option is available only in conditions listed below:

- The input signal is of NTSC video or S-video format.
- Your projector has selected NTSC or Auto in its video system options.
- Closed Caption icon It dims when this function is unavailable.
- The Closed Caption will be suppressed by OSD and Timer display.

## ⑮ Lamp Control

Select this function to change screen brightness.

💡 Standard .....Normal brightness

💡 Energy saving mode ...Keep screen less bright to reduce power consumption and extend lamp life cycle.

## ⑯ Test Pattern

Select this function to test your projector with built-in signal.

# Setting

## 17 Security

**Security:** This option provides Key Lock and PIN Code Lock to ensure your projector's operation safety.

### Key Lock

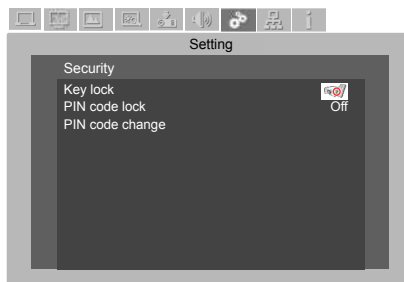
Select this function to lock the control panel or remote controller keypad to prevent unauthorized personnel from operating your projector. Select Key Lock, press ◀▶ button to select required item.

🔒 Off .....Go without lock.

🔒 Projector .....Lock the control panel operation.  
Unlock with remote controller.

🔒 Remote controller .....Lock the remote controller operation  
Unlock with the control panel.

If your control panel becomes locked and no remote controller is available (e.g. no remote controller is with you or it is out of work) to unlock it, contact your dealer or service center.



### ✓ Note:

Please note down your new password and keep it safe after changing to a new one. You cannot power on your projector without the password.

### PIN Code Lock

This function helps preventing unauthorized personnel from operating your projector and provides the following options:

Off.....Without locking

On.....A password is required every time your projector is powered on.

You have to provide the old password if you want to change the PIN Code Lock settings or its code. The factory default PIN Code Lock is "111". To change the logo screen password protection, press ENTER button and the Logo PIN Code change pop-up dialog box prompts.

Enter the code

Press ▲▼ button to select a number, press ▶ button to enter it and move the cursor. The number you typed is displayed as "\*". To edit number you have entered, press ◀ button to move the cursor to the number you want to change, press ▲▼ button to select the correct one.

Repeat this step to type in a 3-digit number.

Move the cursor to OK after you have typed the 3-digit number. Press the ENTER button and now you are ready to use your projector.

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

### Logo PIN Code change

You may change the Logo PIN Code to any 3-digit number you like. Press ENTER button to select Logo PIN Code change. The Logo PIN Code change dialog box prompts, press ▲▼ button to give a valid new code. The New Logo PIN Code dialog box prompts. Start setting up a new Logo PIN Code.

## 18 Cooling Fast

After your projector is powered off, the cooling fan may operate in ways outlined below:

Off.....Run in normal way.

On.....Run in speed faster than that of normal with louder noise and shorter cooling time.

# Setting

## ⑲ High Land

You may set up fan control function in the Setting menu. Set up fan speed according to the altitude your projector is operating.

- Off.....Normal speed Set this function to Off when your projector is in use in environment of low altitude.
- On.....The fan runs at speed faster than that of the Off mode. Set this function to On when your projector is in use in environment of high altitude, as its cooling effect gets lower.

✓ Note:

Set this function to On when your projector is in use in environment of altitude above 1400 meter.

## ⑳ Filter counter

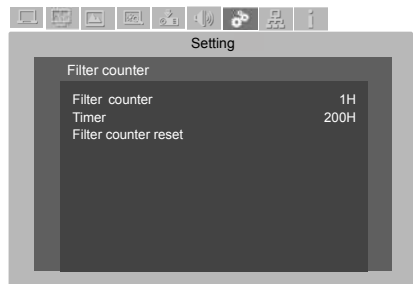
Select this function to set up cleaning interval of the filter.

A filter warning message displays to remind you cleaning the filter when the cleaning time is due. Please reset and set up the timer after the filter is cleaned. The filter warning message closes only after the filter counter is reset.

Filter counter: Time the filter has been in service.

Timer: Filter cleaning cycle.

Reset the filter counter: Reset the filter counter after it has been cleaned.



## ㉑ Warning Log

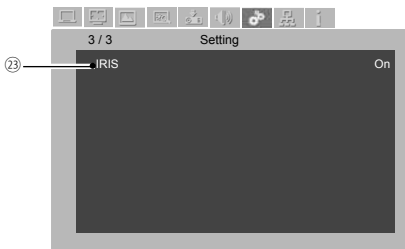
This function keeps abnormal operation of your projector during its use for troubleshooting. It contains the latest 9 warning messages in time sequence.

✓ Note:

Records contained in the log will be erased after a Factory Default reset.

## ㉒ Factory Default

This function resets all your settings to Factory Default except the user Logo screen, PIN Code lock, lamp use time and filter counter.



## ㉓ IRIS

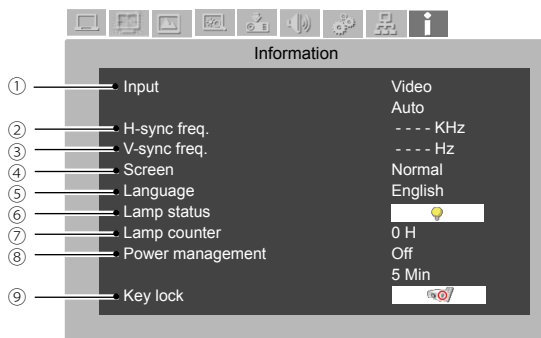
Select this function to change image contrast.

On.....Enable IRIS function for better image contrast.

Off.....Disable IRIS function.

# Information

Select this function to detect projection image signal and operation status of your projector.  
Press ◀▶ button to select the Message icon. The Information menu displays.  
See below for messages shown in the menu.



① Input	Display selected input and current signal format.
② H- sync. Freq.	Display horizontal frequency of input signal in unit of KHz. Show “---KHz” when no signals are in existence.
③ V- sync. Freq.	Display vertical frequency of input signal in unit of Hz. Show “---Hz” when no signals are in existence. The frequency (Hz) doubles in case of progressive display.
④ Screen	Display selected screen mode.
⑤ Language	Display language in use.
⑥ Lamp mode	Display selected lamp mode.
⑦ Lamp counter	Display time of the lamp in service.
⑧ Power management	Display selected power management mode.
⑨ Key Lock	Display Off, Remote controller or Projector.

# 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 red.

Your projector powers off automatically to protect components within it when it is overheated. The POWER indicator flashes 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 red

✓ 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 red.

The STATUS indicator turns red 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 red

# Regular maintenance

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

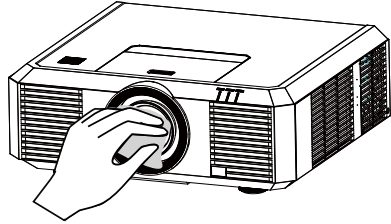


**Note:**  
Unplug the AC power cord before any cleaning operation.

## 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.

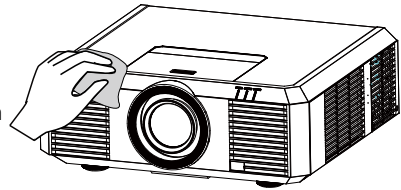
Do not over apply cleaner to the lens. Abrasive cleaner, solution, or other rough chemical may scratch the lens.



## 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.

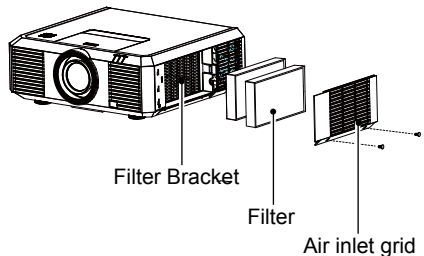


## Clear the filter

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 Loosen 2 screws of the Air inlet grid and remove the filter.
- 3 Gently clean it with a brush.
- 4 Replace the filter. Make sure it has been fully inserted.

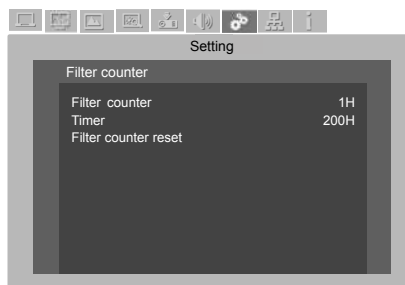


**Note:**  
Do not operate your projector after its filter is removed. Dust may attach to the lens assembly and deteriorate image quality.  
Do not insert any small object in the air outlet. It may fail your projector.

# Regular maintenance

## Reset the filter counter

- 1 Press MENU button and the OSD displays. Press ◀▶ button to select Setup menu, press ▶ button or OK.
- 2 Press ▲▼ button to select "Filter Counter", press ▶ button or OK. Press ▲▼ button to select "Reset the filter counter" and press OK. The "Reset filter counter?" 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 3 screws fixing the lamp. Remove the lamp by holding its handle.
4. Replace with a new lamp and tighten all 3 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.



## 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.

Description on  
network control  
operation

# Description on network control operation

## Network control operation

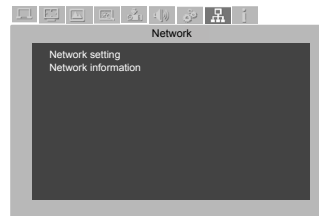
Function: This function is designed to remote control computer in the same LAN.

### Preparation

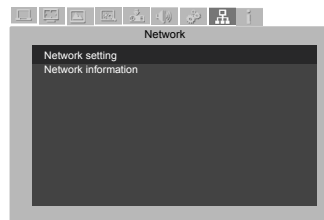
- 1 Required equipment: Projector, connection, network cable
- 2 Connection:  
Connect your projector to a router or switch in the LAN with normal or jumper network cable. In case a normal network cable failed to connect successfully, use a jumper cable instead.
- 3 Turn on the computer. The LAN port and computer port of your projector flashes after it is powered on.

### Operation steps

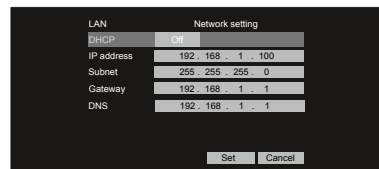
- 1 Power on your projector.
- 2 Acquire the IP address, with DHCP set to on and auto IP allocation set to On. (You may set DHCP to Off and set up IP address manually if you are somehow familiar with networking.)
- 3 Enter the network setup menu
  - (1) Press MENU button on remote controller or top of the control panel, press ▲▼ button to select network icon.



- (2) Press ENTER button or ► button and the network menu displays.
- (3) Press ▲▼ button select network settings and press ENTER to confirm.



- (4) Press ▲▼ button to set DHCP On and press OK button to confirm.
- (5) Press ▲▼ button to select Set, press OK button to wait until the "Please wait.." message disappears.



# Description on network control operation

4. In the network menu, select network setting status, press OK button, check network IP address.
5. Open a browser program, e.g. IE, on any computer in the LAN. Enter the IP address you just acquired in the address field in format of http://IP address/.
6. Set up options in the page including home page, network control settings, projector status and control, reminder email settings and safety settings.

The screenshot shows the 'Web Management' interface with a sidebar on the left containing links: Home Information, LAN Status, Projector Status and Control, LAN Control, and Security Setting. The main content area is titled 'Projector Information' and displays the following details:

Model Name	LS10-A (Projector)
Projector Name	LS10-A
Location	LS10-A
Control	Control
Power	Control
Language	English
IP Address	192.168.1.100
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1

Below the table, there is a 'Language' dropdown menu set to 'English' and a 'Refresh' button.

Password setup, see figure to the right for interface:

The screenshot shows the 'Web Management' interface with the 'Security Setting' page. A message states: 'Please set your password if you enable this feature for first time. If password is not, you will require to enter with your password after you connect to the Web Management.' Below this, there are fields for 'New Password' and 'Confirm Password', each with a 'Show' button. There are also checkboxes for 'Enable' and 'Disable' and a 'Submit' button.

Network control settings:  
Change network setting parameter

The screenshot shows the 'Web Management' interface with the 'LAN Setting' page. It has two tabs: 'Static' and 'DHCP'. The 'Static' tab is selected, showing fields for 'IP Address' (192.168.1.100), 'Subnet Mask' (255.255.255.0), 'Gateway' (192.168.1.1), and 'DNS' (192.168.1.1). Below these are fields for 'Enable Control System Status' (IP Address: 192.168.1.100, Subnet Mask: 255.255.255.0, Gateway: 192.168.1.1, DNS: 192.168.1.1) and a 'Submit' button.

# Description on network control operation

**Projector status and control:**  
Check projector's current status and change its settings.

The screenshot shows the 'Projector Status and Control' web interface. On the left is a navigation menu with links: 'Device Information', 'Link Settings', 'Projection Status and Control', 'Control Settings', and 'Security Settings'. The main content area is titled 'Projector Status and Control'. It includes a 'Projector Status' section with buttons for 'Refresh', 'Power On', and 'Power Off'. Below this is the 'Auto Power Off (Min)' setting, currently set to 30, with a 'Set' button. The 'Image Control' section contains various settings: 'Scaling Method' (Front), 'Input' (HDMI), 'Color Mode' (Normal), 'AV Mute' (Off), 'Focus' (On), 'Aspect Ratio' (Normal), 'Brightness' (50), 'Contrast' (50), 'Color' (50), 'Temperature' (50), 'Tint' (50), 'Hue' (50), 'Green' (50), and 'Blue' (50). Each has a 'Set' button. There are also 'Auto Adjust' and 'Factory' buttons.

**Reminder email settings:**  
Set up your email address to get reminder email in case of projector failure.

The screenshot shows the 'E-mail Setting' web interface. The left navigation menu is the same as the previous screenshot. The main content area is titled 'E-mail Setting'. It has an 'E-mail Alert' section with 'Enable' and 'Disable' radio buttons, and a 'Send Test Mail' button. Below this are fields for 'To', 'CC', 'From', and 'Subject'. The 'SMTP Setting' section includes a 'SMTP Server' field and an 'Alert Condition' section with checkboxes for 'Temperature warning', 'Lamp life warning', and 'Lamp life reminder'. A 'Save' button is at the bottom.

**Safety settings:**  
Users may change login password.  
(Default value is without password.)

The screenshot shows the 'Security Setting' web interface. The left navigation menu is the same. The main content area is titled 'Security Setting'. It includes a message: 'Please set your password if you enable this feature for the first time. If password is set, you will require to enter with your password upon you connect to the Web Management.' Below this is the 'Administration' section with 'Password' and 'New Password' fields, and a 'Confirm Password' field. There are 'Enable', 'Disable', and 'Submit' buttons.

# Appendix

# Appendix

## Troubleshooting

Check the following before calling your dealer or service center:

Troubleshooting	Solution
Power on failure	<ul style="list-style-type: none"><li>– Plug the power cord of your projector in an AC socket.</li><li>– Make sure the POWER light indicator turns red.</li><li>– Restart your projector until the POWER light indicator turns red. It indicates your projector is ready for power on again.</li><li>– Check the lamp.</li><li>– Disable the Key Lock function of your projector.</li></ul>
Logo screen display failure	<ul style="list-style-type: none"><li>– Make sure the Off and Countdown Off is selected in the Display function.</li></ul>
The Logo screen differs from the standard settings.	<ul style="list-style-type: none"><li>– Make sure you did not select User or Off in the Logo Screen.</li></ul>
Input signal switch (or do not switch) automatically.	<ul style="list-style-type: none"><li>– Make sure you have correctly set up the Input Search function.</li></ul>
Press INPUT button during power on and a non-input mode icon displays.	<ul style="list-style-type: none"><li>– This is a filter or lamp replacement alerts.</li></ul>
A non-input or lamp mode icon displays.	<ul style="list-style-type: none"><li>– This is a filter replacement alerts.</li></ul>
Image looks fuzzy	<ul style="list-style-type: none"><li>– Adjust focus of your projector.</li><li>– Provide proper projection distance.</li><li>– The projection lens requires cleaning.</li><li>– 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.</li></ul>
Image mirror reflected	<ul style="list-style-type: none"><li>– Check the Ceiling and Rear settings.</li></ul>
Image turns upside down	<ul style="list-style-type: none"><li>– Check the Ceiling settings.</li></ul>
Image looks dim	<ul style="list-style-type: none"><li>– Check for contrast and brightness settings.</li><li>– Check for correct image mode settings</li><li>– Check for lamp brightness settings.</li><li>– 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.</li></ul>

# Appendix

No image displays	<ul style="list-style-type: none"><li>– Check for the connection between your projector and computer or image equipment.</li><li>– 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.</li><li>– It takes about 30 seconds for your projector to show the first image.</li><li>– Check for mode of signal, color system, image system, or computer system.</li><li>– Make sure the ambient temperature is within given range (41°F–95°F; 5°C–35°C).</li><li>– Image does not display in BLANK mode. The BLANK button or other buttons on the remote controller.</li></ul>
Abnormal color	<ul style="list-style-type: none"><li>– Check for mode of signal, color system, image system, or computer system.</li><li>– Make sure Blackboard mode is not selected in Image Select.</li></ul>
Some operations are invisible	<ul style="list-style-type: none"><li>– Check the display function.</li></ul>
Auto PC Adjusting function failure	<ul style="list-style-type: none"><li>– Check input signal. Auto PC Adjusting function is unavailable in 480p, 576p, 720p, 480i, 576i, 1080i or 1080p mode.</li></ul>
Settings do not save after power off	<ul style="list-style-type: none"><li>– Make sure you have selected Store after settings adjustment. Certain settings do not keep without selecting Store.</li></ul>
Power management failure	<ul style="list-style-type: none"><li>– In case of Freeze or Blank operation, the power management function does not work.</li></ul>
Auto Setting does not work	<ul style="list-style-type: none"><li>– Make sure it is not set to "Off" in each setup menu.</li><li>– Make sure "On" is not set in Ceiling function.</li></ul>
Image distorted or disappeared	<ul style="list-style-type: none"><li>– Check and revise the PC Adj. menu or Screen menu.</li></ul>
A password prompt displays after power on	<ul style="list-style-type: none"><li>– You have set up the Logo PIN Code lock function</li></ul>
Remote controller does not work	<ul style="list-style-type: none"><li>– Check the battery.</li><li>– Make sure there is no obstacles stand in between your projector and the remote controller.</li><li>– Make sure the remote controller is not too far away from your projector. The maximum operation range is 5m.</li><li>– Make sure the remote controller and your projector are paired with the same remote control codes.</li><li>– Disable the key lock of the remote controller in the Setup menu.</li></ul>



# Appendix

Light indicator turns on or flashes	– Check status of your projector according to the light indicator status.
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	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



.....Turns on



.....Off



.....Flashing green



.....Flashing red



.....Flashing

# 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 140MHz.

See table below for details on resolution and relevant frequency.

Input	Signal format	Resolution	Frequency (Hz)
PC	VGA	640x480	60
		640x480	68
		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
	MXGA	1152x864	75
	WXGA	1280x768	60
		1280x768	75
		1280x768	85
		1280x800	60
		1280x800	75
		1280x800	85
	QVGA	1366x768	60
		1280x960	60
	SXGA	1280x960	85
		1280x1024	60
		1280x1024	75
	SXGA+	1280x1024	85
		1400x1050	60
	UXGA	1400x1050	75
		1600x1200	60
	WSXGA+	1680x1050	60
	WUXGA	1920x1200	60
Component	480i	720x480i	60
	576i	720x576i	50
	483p	720x483p	60
	576p	720x576p	50
	720p	1280x720	50
	720p	1280x720	60
	1080i	1920x1080i	50
	1080i	1920x1080i	60

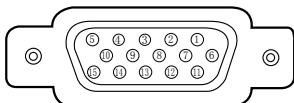
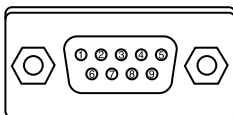

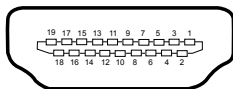
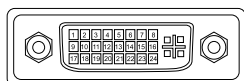
Input	Signal format	Resolution	Frequency (Hz)
HDMI	VGA	640x480	60
		640x480	68
		640x480	72
		640x480	75
		640x480	85
	SVGA	800x600	56
		800x600	60
		800x600	72
		800x600	75
		800x600	85
	MAC 16	832x624	75
	XGA	1024x768	60
		1024x768	70
		1024x768	75
		1024x768	85
	XGA+	1152x864	75
	WXGA	1280x768	60
		1280x768	75
		1280x768	85
		1280x800	60
		1280x800	75
		1280x800	85
	QVGA	1366x768	60
		1280x960	60
	SXGA	1280x960	85
		1280x1024	60
		1280x1024	75
	SXGA+	1280x1024	85
		1400x1050	60
	UXGA	1400x1050	75
		1600x1200	60
	WSXGA+	1680x1050	60
	WUXGA	1920x1200	60
Video/S-video	NTSC	NTSC	-
	PAL	PAL	-
	SECAM	SECAM	-

✓ Note:

Changes to this manual may be made without notice.

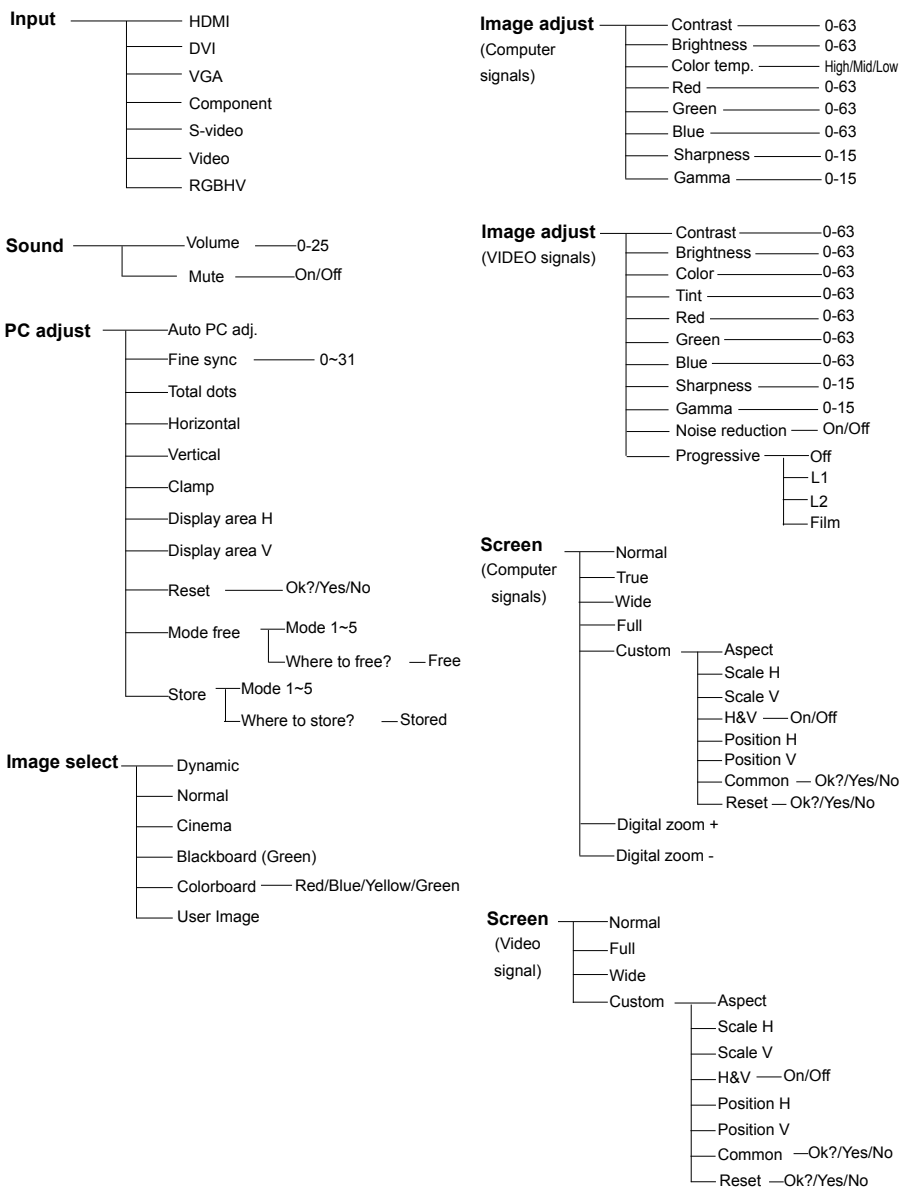
# Appendix

## Terminal configuration

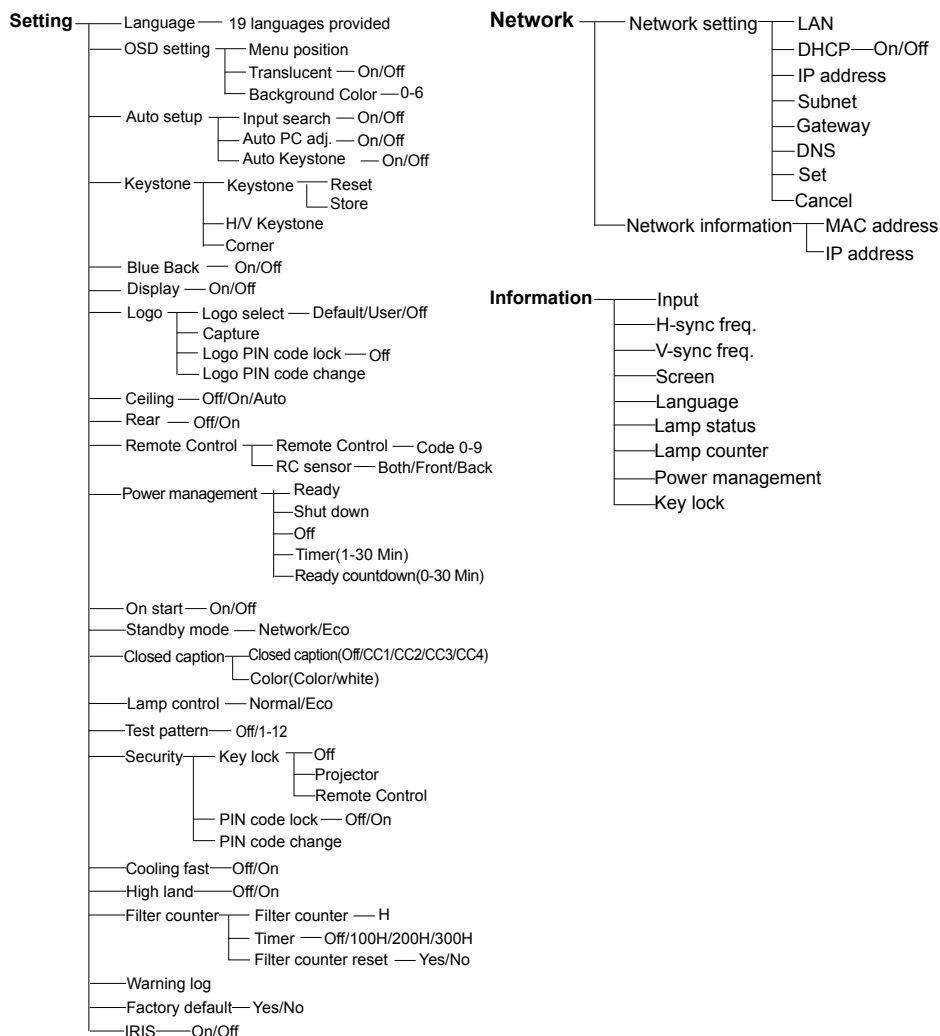
VGA IN / MONITOR OUT Terminal (D-sub 15)				
	1	Red (Input/output)	9	-----
	2	Green(Input/output)	10	Grounding (field synchronizing)
	3	Blue(Input/output)	11	Grounding
	4	-----	12	DDC data
	5	Grounding (line synchronizing)	13	Horizontal synchronizing (compound sync.)input/output
	6	Grounding(red)	14	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				
 87654321	1	TX +	5	-----
	2	TX -	6	-----
	3	-----	7	RX +
	4	-----	8	RX -
HDMI Terminal (HDMI Type A 19)				
 19 17 15 13 11 9 7 5 3 1 18 16 14 12 10 8 6 4 2	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+		
DVI Terminal (DVI-D,24)				
	1	TMDS Date 2-	13	-----
	2	TMDS Date 2+	14	+5V Power
	3	TMDS Date 2 Shield	15	Ground (for +5V)
	4	-----	16	Hot Plug Detect
	5	-----	17	TMDS Data 0-
	6	DDC Clock	18	TMDS Data 0+
	7	DDC Date	19	TMDS Date 0 Shield
	8	-----	20	-----
	9	TMDS Date 1-	21	-----
	10	TMDS Date 1+	22	TMDS Clock Shield
	11	TMDS Date 1 Shield	23	TMDS Clock +
	12	-----	24	TMDS Clock -

# Appendix

## Menu Tree



# Appendix



# Appendix

## Technical Specifications

### Mechanical properties

Dimensions (W×H×D )	481mmx179mmx418mm
Net Weight	9.98Kg
Adjustable foot	5°

### LCD resolution

LCD system	0.79" TFT, active matrix, 3-panel (EK-502X)
	0.75" TFT active matrix, 3-panel (EK-501W)
LCD resolution	1024X768 (EK-502X) /1280X800(EK-501W)

### Compatible signals

Color standard	PAL, SECAM, NTSC, NTSC4.43, PAL-M and PAL-N
HDTV signal	480i, 480p, 575i, 575p, 720p, 1035i and 1080i
Scanning frequency	Horizontal frequency: 15 kHz–100 KHz; Vertical frequency: 48–85 Hz

### Optical elements

Image size (diagonal lines)	40"-300", adjustable
Projection distance	4:3 1.17m-9.06m(W) 2.15m-16.41m(T)
(with Standard Lens)	16:10 1.23m-9.53m(W) 2.25m-17.23m(T)
Lens (Standard Lens)	F=1.8~2.6, f=24.0~43.2mm; Electric zooming and focusing; Zoom times: 1.8
Lamp power	350W (Normal)/264W(ECO)
Contrast Ratio	2000:1 with IRIS @ lens shift 1:1
Aspect Ratio	4:3 (EK-502X) / 16:10 (EK-501W)

### Terminal

S-Video	S-Video Mini Din 4pin x1
BNC/VIDEO	BNC x 5 (G or Video/Y, B or Pb/Cb, R or Pr/Cr, HV and V)
VGA IN	Mini D-sub 15 pin x1
MONITOR OUT	Mini D-sub 15 pin x1
DVI	Digital (DVI-D) 24 pin x1
HDMI	HDMI A type 19 pin (the number of HDMI terminals varies from model to model. See the real product.)
AUDIO IN	3.5mm Mini Type Stereo x3
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
LAN terminal	100 Base-TX (100Mbps)/10 Base-T (10Mbps), RJ45

### Power

Voltage and power consumption	AC 100–240 V (Max 7A), 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

Owner's Manual(CD)	
Quick Start Guide	
Remote control and batteries	
AC power cord (US Type x 1 / Euro Type x 1)	
VGA cable	

- 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	x1.35 Power zoom	x1.36 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)	12.414	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



# Appendix

## Dimensions

Unit: mm

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

