Features of CPE-S110 Projector

ICC (Independent Color Control)

In order to help users to resolve problems in adjusting whole colors, CPE-S100 Projector enables users to adjust the intended colors to be controlled independently, such as red, green, blue and yellow.

i-Brightness

i-Brightness complements both brightness and contrast of the dark screen simultaneously.
This function is designed to resolve fundamental problem that projecting screen gets darker when DVD is inserted in the computer.
You may adjust the brightness and contrast conveniently using the shortcut key on the remote controller or the control panel on the projector without having to control the brightness and contrast in a separate way.

PIP / POP

In case you need to show two screens simultaneously, PIP overlaps two screens, whereas POP shows two screens evenly (1:1).
You may freely adjust the size of each screen when the PIP/POP function is implemented.

Color Mode

Since 5 pre-defined user modes are provide, you may need to make complex color control, which is optimized for the operational environment.
You can select a mode that best matches with the projecting image out of five pre-defined modes.
- Standard mode
- Cinema mode
- P.T mode (Presentation Mode)
- Sport mode
- Game mode

Table of Contents

Safety Precautions **3**
Symbols 3
Precautions on Installation 4
Precautions on Power Supply 4
Precautions on Usage and Miscellaneous 5

Product Description **7**
What's Inside 7
Names and Functions of Projector Unit 8
Remote Controller 10

Installing the Projector **11**
Installing the Projector 11
Projection Distance and Screen Size 11
Connecting to the S-Video Signal 12
Connecting to the Video Signal 12
Connecting to the PC 13
Connecting to the Power Cord 14

Basic Operations **15**
Power On 15
Adjusting Projected Image Size (Optical Zoom) 16
Adjusting Focus 16
Adjusting the Image Angle 17
Removing the Trapezoidal Position of the Image (keystone) 18
Adjusting the Computer Image 19
Power Off 19

Adjustments **21**
Setting and Adjusting the Menus 21
How to Use the Menu on the Remote Controller 22
How to Use the Menu on the Control Panel 23
Shortcut Key Functions 24
Image Adjustments 26
Screen Adjustments 28
Menu Adjustments 30
Tuning Adjustments 31
Automatic Adjustments 31

Troubleshooting **33**

Miscellaneous **36**
Specifications 36
Standard Signal Table 37
Maintenance and Repair 38
Cleaning the External Parts of the Projector 38
Cleaning a Lens 38
Cleaning the Air Filter 39
Replacing the Air Filter 39
Time to Replace the Lamp 40
Replacing the Lamp 40

Customer Service Information **42**
Warranty Card 43

Safety Precautions

English

Symbols

Symbols and descriptions in this manual are designed to prevent possible injuries and product damages through safe projector using guide. Please comply with the instruction.

Warning	Ignoring warning messages may result in serious injuries or fatal product damages.
Caution	Ignoring caution messages may result in slight injuries or product damages.
Note	The note section provides supplementary information on selected subjects as well as the useful information.

This product is registered as an EMI regulation compliant household appliance.
You can use this product in all areas including the residential area.

Safety Precautions

Precautions on Installation

Warning

1. Be careful not to drop foreign objects into the holes of the projector. Moreover, do not spill liquid into the projector.
2. Do not place any breakable objects, liquid cans, medical supplies or any other similar objects near by the product.
3. Do not close the projector and remote controller loaded with batteries inside the vehicle with windows closed, or under the direct sunlight, or close to the air conditional or heater outlet, or areas with high temperature.
4. Do not fill in the cracks or holes of the projector. If proper ventilation is not secured, the projector can be heated. Furthermore, do not install the projector in a poor ventilated place, or the places with soft surface such as couch and cushion, or the closed places.

Caution

1. Do not install the projector at a place where cables can be trampled. Plugs can be damaged or worn out.
2. Do not install the projector at a place where vibration or strong impacts can be applied.
3. Do not install the projector close to a high voltage wire or magnetic fields. It may interrupt the normal operation of the projector.
4. Keep projector at least 20 cm apart from deadlocked areas such as walls.
5. Do not place heavy objects on top of the projector.
6. Do not install the projector in an unstable or slating area.
7. Keep away from reach of children.
8. Do not install the projector close to kitchen or humidifier, or unclean places filled with smoke or steams.
9. Turn off the power and unplug the power cord and remove all cables before moving the projector.

Safety Precautions

English

Precautions on Power Supply

Warning

1. Use the voltage indicated on the projector only. If you use the voltage other than specified, fire may break out or you may be struck by electricity.
2. Do not place heavy objects on the power cord.
3. Do not bend or pull the power cord.
4. Do not place the power cord close to a heater.
5. Be careful not to get overloaded on the power cord.
6. Do not insert unclean and dusty plug or connector into a socket.
7. Plug socket tightly.
8. Do not touch the power cord with wet hands.
9. Do not pull out the cable when removing the plug or the connector. Instead, hold the plug or connector head.

Precautions on Usage and Miscellaneous

Warning

1. Do not stare the projector lens while the illumination lamp is turned on. Exposure of your eyes to the strong light can result in impaired vision. Especially, warn the children.
2. Do not open the projector cover except the lens cap. The electrical voltage inside the projector is dangerous and can cause a fatal injury. Do not attempt to disassemble or fix the product except as it is specified. Ask for certified service engineers for product repair.
3. Do not insert or drop metallic objects, combustible objects or other foreign objects into the projector inlet and outlet.
4. If the projector runs abnormally as described below, turn off the power immediately and unplug the power cord. Then, contact customer service center for assistance.
   - In case smoke, smell or strange sounds are detected.
   - In case an image is not projected, or the fan rotation noise is not heard.
   - In case liquid is spilled or other objects are inserted into the projector.
   - In case the projector is dropped on a floor or the case is wrecked.

Safety Precautions

Precautions on Usage and Miscellaneous

Caution

1. If you plan not to use the projector for a long time, plug out the power cord for your safety. Fire may break out.
2. Do not remove a lamp after using the projector. Turn off the power and wait until it cools down sufficiently. Otherwise, you may get burned or injured by heat.
3. Do not use the projector while the lens cap is closed. The lens cap can be malformed due to heat.
4. The LCD display panel is manufactured by the leading-edge technology. It contains more than 99.99% active pixels. However, pixels less than 0.01% can inactivate and emit the light inappropriately.
5. Do not touch the lamp bulb when replacing the lamp. The lifecycle of the lamp can be reduced if grease remains on the lamp. Make sure to use the cloth or glove when handling a lamp.
6. Clean inside of the projector periodically. In case the projector remains unattended for a long time, dusty projector may cause a fire or the electrical shock.
7. Do not use or store the projector in a place with extremely high or low temperature. Also, stay away from abrupt temperature changing area. Make sure to use or store the projector with the temperature range specified by the instructions.
8. A certain point (dot) may get brighter or darker than other points during projection. This is part of the LCD panel features, not a symptom of malfunction. The LCD panel is manufactured with high-precision technology that black dot may appear, or red/green/blue dot can be too bright at the same time. Moreover, the irregular vertical lines or brighter parts can appear from time to time.
9. Close the lens cap when not in use. It may protect from contamination and damage.
10. Do not use or store the projector at a place with smoke or flame. It can affect the image quality.
11. Mercury and other substance used for projector's light source can be damaged by noise, abnormal operation or shock. If it is damaged, the projector will not activate and its lifecycle can be reduced. Lamp lifecycle varies according to the lamp characteristics and operational environment, therefore, it is recommended to prepare a spare lamp.
12. The mercury lamp can be inactive if it is used as a projector light source, which is the normal characteristic of the lamp. If the lamp is not turned on when you turn on the projector, you have to check to see if the lamp is damaged or not. If the lamp is not damaged, install the lamp again. Refer to the instruction for lamp replacement and reinstallation. If the lamp is damaged, replace with new ones or ask for assistance to the nearest dealers. It is recommended to have a spare lamp to prepare for unexpected occasions.
13. Precautions when moving the projector.
    - Turn off the projector and plug out all power cords from the consent. If other cables are connected, remove them all.
    - Close the lens cap.
    - Push back the adjustable foot
    - Put the projector into a carry-on case when you carry it.

Product Description

English

What's Inside

See if the following components are included in the product package.
If you find anything is missing, consult the authorized dealer or the service center.

Projector carry-on case
(including a shoulder strap)

Projector

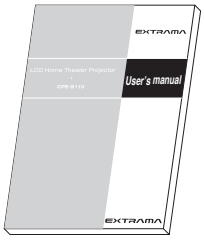
Remote controller
(including CR2025 lithium battery)

Power cord

S-Video cable

Video cable

15pin D-sub cable



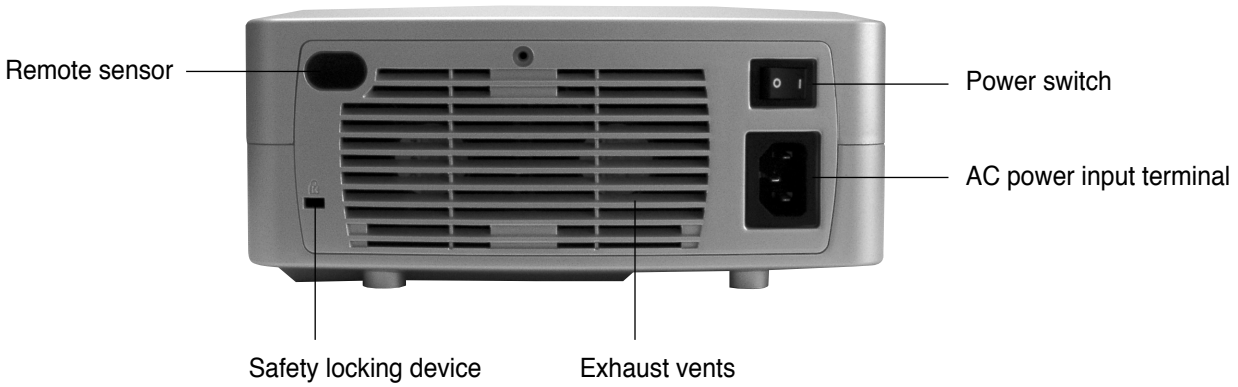
User's manual

Product Description

Names and Functions of Projector Unit

< Front side >

< Rear side >

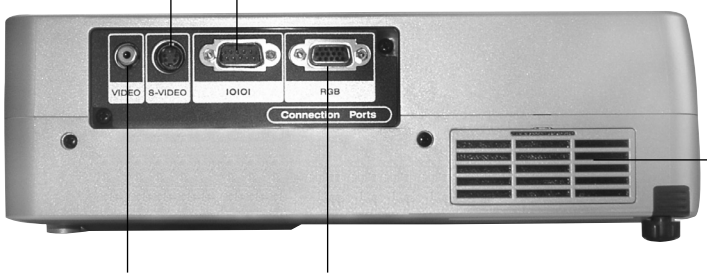


Product Description

English

Names and Functions of Projector Unit

< Left side >



<Top surface and control panel>

Yellow lamp : When the lamp is not in the projector or fan is disconnected, the yellow lamp blinks. (Indicates a fan malfunction)

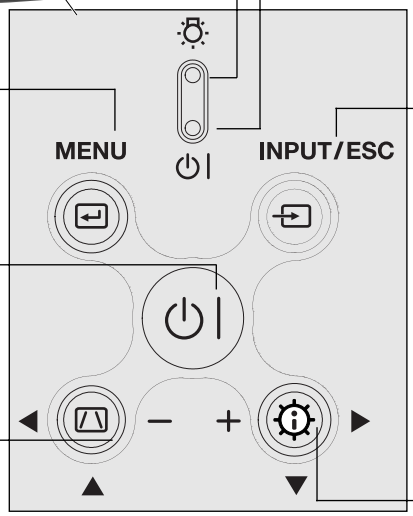
Lamp indicator:
Yellow : On standby mode.
Green: During projection.
Green / Yellow blinking :
On cool down mode.

MENU button
- Use this button to enter or exit the menu mode.

INPUT/ESC button:
INPUT: Use this button to select an input device.
(S-VIDEO → COMPOSITE → COMPUTER)
ESC:
- When the menu screen is open, the menu will move to the upper level.
- If the menu screen is not opened in the PIP/POP mode, the menu will return to the original screen.

Power button
- Use this button to turn the power on/off.(Press this button twice to turn off.)

Keystone button
- Use this button to remove the trapezoidal distortion of the image projected on the screen.
- Moves to the upper or the left menu.
- Reduces the value of the function selected by the menu.



<control panel>

i-Brightness button
- Use this button to compensate for the dark screen when displaying the movie file in the PC.
- Moves to the lower or right menu.
- Increases the value of the function selected by the menu.

Product Description

Remote Controller

Power button

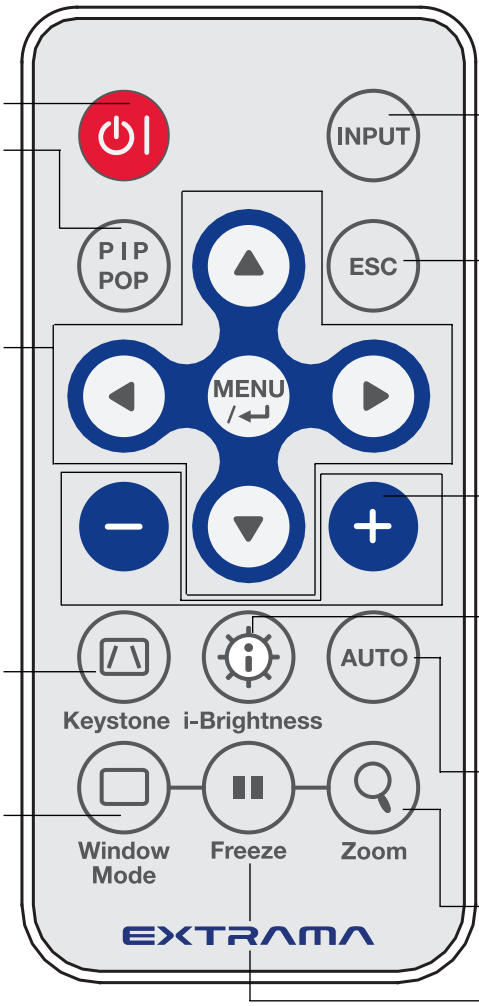
PIP : Two screen button. Use this button to project two screens at a time.
POP : Displays the video and computer screen with the same size.

MENU/↵ : Menu/Select button
- Displays the main menu or select it.

▲▼ : • Pops up the sub-menu.
• Moves to the upper/lower menu item.
◀▶ : • Shows/Hides the sub-menu.
• Moves to the left/right menu item.

Keystone button
Use this button to remove the trapezoidal distortion of the image projected on the screen.

Window Mode button
Sets the window mode for the currently active screen in order to adjust screen size or position.



Input Select button
(Switches between S-Video → VIDEO → Computer)

ESC button
- Moves to the upper menu when the menu screen is available.
- If the menu screen is not opened in the PIP/POP mode, the menu will return to the original screen.

–/+ button
Increases or decreases the value of the selected menu.

i-Brightness button
Use this button to compensate for the dark screen when displaying the movie file in the PC.

Auto button
Automatically detects the input signal to optimize the computer image.

Zoom button
Magnifies the screen.

Freeze button
This button allows the image to be retained in the projector memory and stills the picture on the screen. Press the button once to freeze the picture and again to de-freeze.

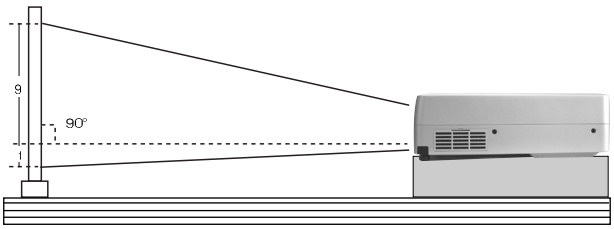
Replacing Batteries
- **Refer to the figures shown at the rear side of the remote controller when replacing batteries.**
- **Use the CR2025 type battery.**

Installing the Projector

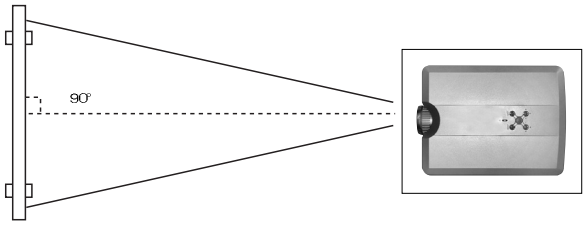
Installing the Projector

The projector should be placed so that the center line of the lens is at a right angle to the screen as in the following figures.
Use the adjustable foot to control the angle of the projector. (See page 17.)

Seen from the side



Seen from the top



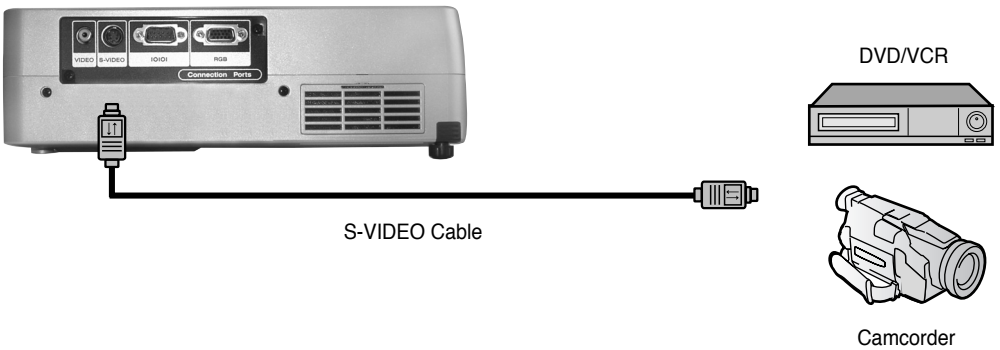
Projection Distance and Screen Size

1 The projected image size may vary depending on the lens and projection distance.
Please use the following table.

Projecting distance	Screen size (inch/cm)	
	Maximum zoom	Minimum zoom
1.7 m	40 ″ (102cm)	50 ″ (127cm)
2.0 m	46 ″ (117cm)	58 ″ (147cm)
3.0 m	68 ″ (173cm)	86 ″ (218cm)
4.0 m	88 ″ (224cm)	114 ″ (290cm)
5.0 m	107 ″ (272cm)	140 ″ (356cm)
6.0 m	128 ″ (325cm)	166 ″ (422cm)
7.0 m	148 ″ (376cm)	187 ″ (475cm)
8.0 m	153 ″ (389cm)	200 ″ (508cm)

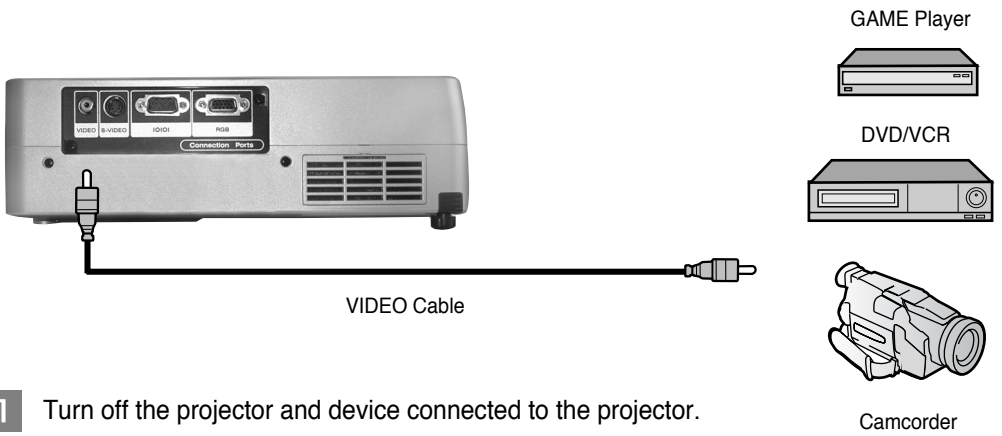
Installing the Projector

Connecting to the S-Video Signal



1. Turn off the projector and device connected to the projector.
2. Connect the S-video output terminal for DVD, TV, camcorder or set-top box to the projector S-video output terminal, using the provided S-video cable.

Connecting to the Video Signal



1. Turn off the projector and device connected to the projector.
2. Connect the video output terminal for DVD, TV, camcorder or set-top box to the projector video output terminal, using the provided S-video cable.

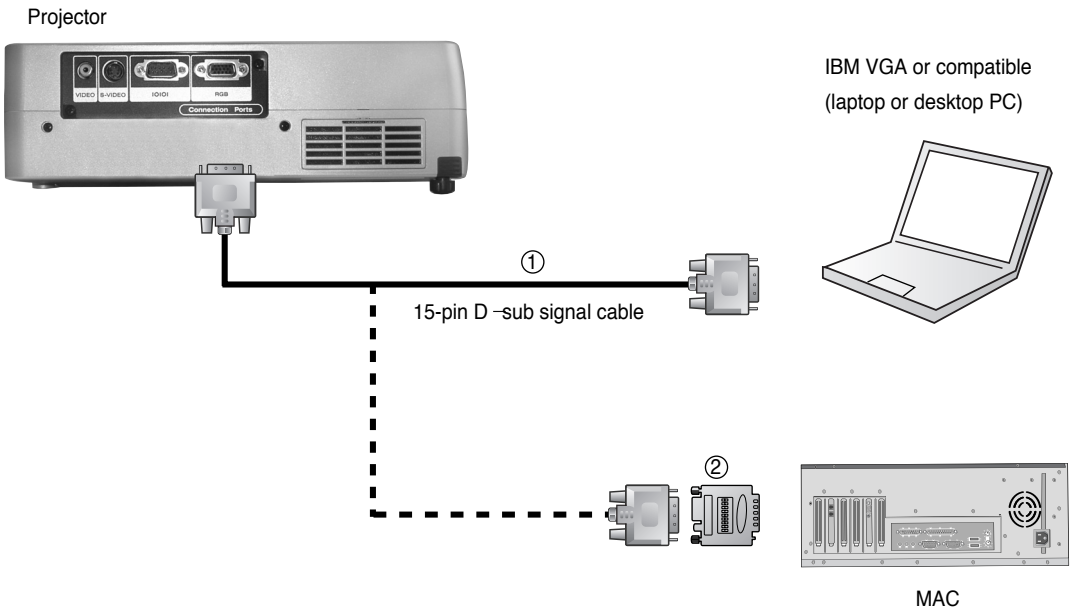
To connect the digital camera, use the connection cable provided with the digital camera.

Installing the Projector

English

Connecting to the PC

Always turn off the projector before connecting to the PC in order to protect the PC connected to the projector.



1. Check to see if the computer power is off and the power switch located at the rear side of the projector is also turned off.
2. Connect the PC to the projector RGB terminal using the provided 15-pin D–sub signal cable.
3. If you're using the old model Macintosh, buy Macintosh adaptor from the market and connect to the Macintosh video port.

If you want to use the computer as a projector, you should check the computer resolution and frequency by referring to the computer user's manual because the output resolution of the video signal should match with that of the projector.

Installing the Projector

Connecting to the Power Cord

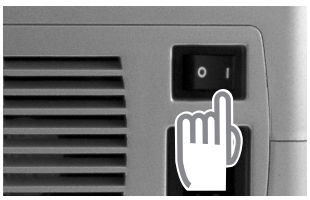
Never look into the lens after turning on the projector.
Your vision can be impaired due to strong light.

Do not project with lens cap on.
The lens cap may be deformed by heat.

1. See if the projector and connected device are turned off.
2. Check connection status between the projector and computer or video device.
3. Open the lens cap.
4. Plug in the provided power cord completely to the power port located at the rear side of the projector.
   Then, connect the power cord plug t the power socket.

Basic Operations

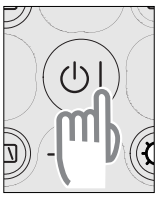
Power On



< Projector >

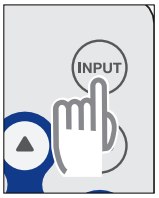
1 Press the power switch on located at the rear side of the projector. (The power indicator will light up with red color and the projector will be standby mode.)

< Remote controller >

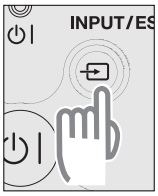


< Projector >

2 Press the Power button(⏻) on the remote controller or the top surface of the projector. (The operation indicator will light up with green color and projection will be started.)



< Remote controller >



< Projector >

3 Press the Input button on the remote controller or the projector control panel to select the intended device. (Whenever you press the Input button, the input source will be switched to S-video → Composite → Computer.)

Basic Operations

Adjusting Projected Image Size (Optical Zoom)

The projected image size varies depending on the distance between the screen and the projector. To adjust screen size in the optimal state, check the projected distance range by screen size and adjust the distance using the optical zoom function.

Projection distance: Screen size at 1.7mm ~ 8.0mm is 40"(102cm) ~ 200"(508cm).

1 Turn the iris inside the projector lens clockwise or counterclockwise to set the proper projected image.

Adjusting Focus

1 Adjust focus by turning the focus iris located at the front side of the projector clockwise or counterclockwise.

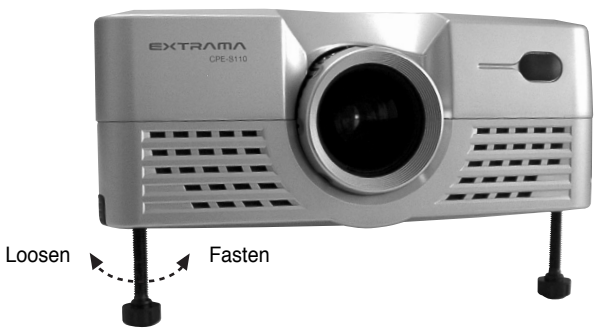
- **If the lens is stained or set with dirt, focus cannot be set properly. Clean it neatly.**
- **If you cannot adjust focus, refer to the recommended installation distance by screen size to see if the installation distance is proper or not.**

Basic Operations

Adjusting the Image Angle

1 Lift up the front side of the projector until the intended angle is obtained. Then, press down the adjustable foot button with both hands. The front foot will be ejected.
Release the adjustable foot button when the front foot is ejected as much as you want.
If you want to take the foot back, put down the projector while pressing down the adjustable foot button.

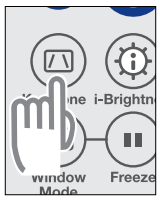
2 If the projector is tilting vertically, adjust the level using the adjustable foot.



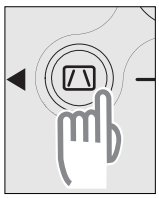
When you use an adjustable foot, the image may get distorted in trapezoid form sometimes. Use the keystone function to remove the trapezoidal distortion of the image. (8page)

Removing the Trapezoidal Position of the Image (keystone)

If you install the projector with a specific angle suing the adjustable foot lever of the projector, the projected image may get distorted in trapezoid form. You can adjust the projected image if it can be adjusted within approximately 15" range vertically, suing the keystone adjustment function.



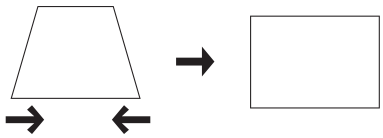
< Remote controller >



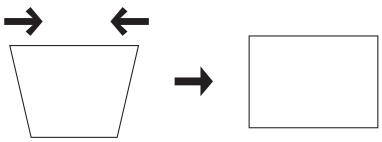
< Projector >

1 Press the Keystone button( ) on the remote controller or the projector control panel.

2 Press the " –" button to make the lower side image narrower.



3 Press the "+" button to make the upper size image narrower.



4 Press the Keystone button( ) again to complete adjustment and exit from this function.

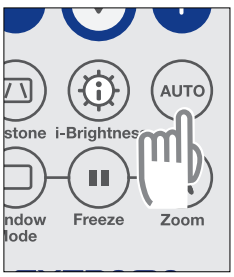
- **When you use the keystone function, image size will be reduced.**
- **You need to re-adjust the image when you move the projector to a different place or change the projection angle.**

Basic Operations

English

Adjusting the Computer Image

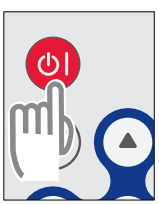
1 Press the Auto button on the remote controller.
When the computer signal is entered, phase, frequency and position will be automatically adjusted to the optimal state.



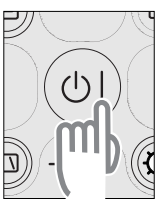
> **You can use this function only when the input signal of the projecting device is a computer.**

Power Off

1 Turn off the power of the input device connected to the projector.



< Remote controller >



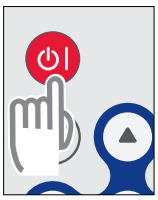
< Projector >

2 Press the Power button(⏻) on the remote controller or the connected input device.

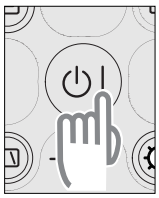
DO you want to turn off?

[Turn off mode]

Power Off (continue)



< Remote controller >



< Projector >

3 Press the Power button(⏻) again.
The lamp will be turned off and the power indicator will blink with yellow color. The projector will enter into the cool down mode. (Duration of the cool down mode varies depending on the surrounding temperature.)
When the power indicator is on with yellow color continuously, fan operation will be stopped and the cool down mode will be completed.

4 Plug out the power consent if you will not use the projector for a long time.

Do not plug out the power cord from the consent when the power indicator blinks (cool down mode). If you pull out the power cord while the indicator blinks with yellow color, the projector malfunction can occur or lamp life can be reduced.

5 If you expand the lamp height adjustment foot, take it back to the original position.

6 Fit the lens cap on.
Be sure to fit the lens cap on when the projector is not in use to keep out dirt.
Fit the lens cap on.

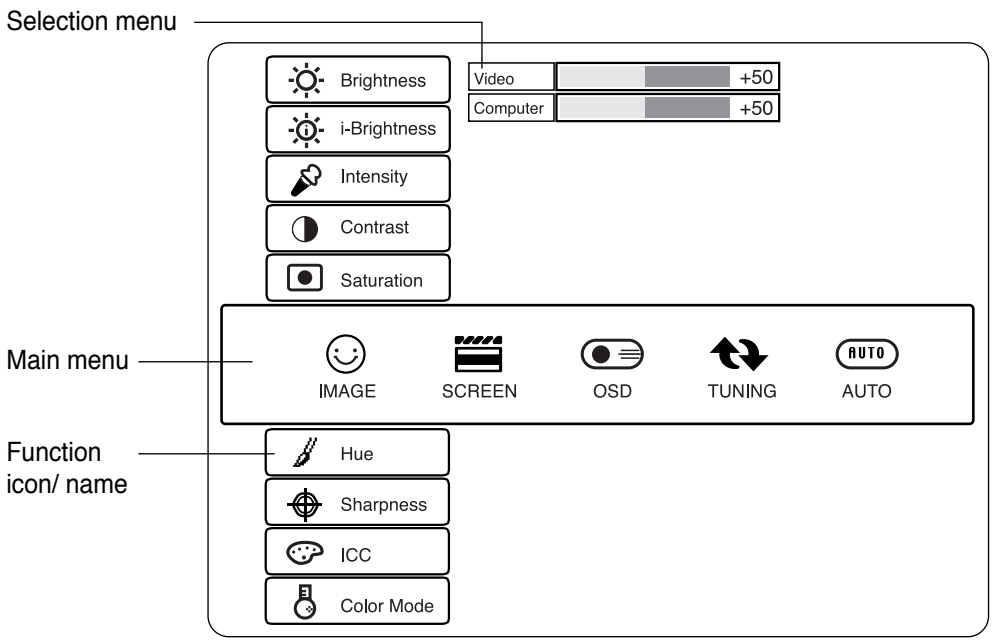
Adjustments

Setting and Adjusting the Menus

You can adjust or set the video or computer images using the remote controller of the menu function of the control panel located on the top surface of the projector.
This chapter describes how to adjust or set the projector using a remote controller.

Use the projector adjustment function after running the projector more than 3 minutes.

The menus of the projector are set in Korean by default.
To use the English menus, select the "English" screen from the main menu ( ) with reference to the following menu usages.



<Main menu>

How to Use the Menu on the Remote Controller

1 Press the MENU button on the remote controller.
The main menu will appear on the projector screen.

2 Press the ◀ or ▶ button to select the icon you want (main screen menu)
The selected icon menu will be displayed brighter.

3 Press the Enter (↵) button.
The submenu will be displayed on the screen (function icon and name).

4 Press the ▲ or ▼ button to select an adjustment item.
The selected item will be displayed brighter.

5 Press the Enter (↵) button.
The selection menu will appear.
1) If the common menu appears,
Adjust the value you want using the "–" or "+" button or select the item you want.
2) If the selection menu appears,
Press the ▲ or ▼ button to select a group or an item you want.
The selected group item or the item will be displayed brighter.

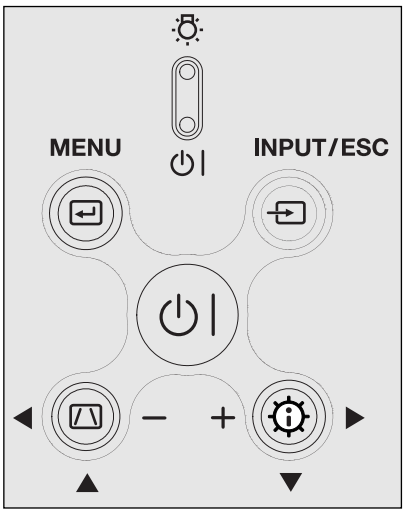
6 Press the " –" or "+" button to adjust the value.
If the group item appear, press the ▲ or ▼ button to move to the menu item you want and then, adjust the value using the " –" or "+" button.

7 Press the ESC button to return to the previous menu.

8 To exit from the menu, press the ESC button until the main menu disappears.

Adjustments

How to Use the Menu on the Control Panel



1 **Press the MENU button( ) on the control panel located on the top surface of the projector.**
The main menu will appear on the projector screen.

2 **Press the ◀ ( ) or ▶ ( ) button to select the icon you want (main screen menu)**
The selected icon menu will be displayed brighter.

3 **Press the MENU button( ).**
The submenu will be displayed on the screen (function icon and name).

4 **Press the ▲ ( ) or ▼ ( ) button to select an adjustment item.**
The submenu will be displayed brighter.

5 **Press the MENU button( ).**
The selection menu will appear.
1) If the common menu appears,
Press the MENU button( ).
2) If the selection menu appears,
Press the ▲ ( ) or ▼ ( ) to select a group or an item you want.
The selected group item or the item will be displayed brighter. Press the MENU button( ).

6 **Press the "–"( ) or "+"( ) button to adjust the value.**
If a group item appear, press the ▲( ) or ▼( ) button to move to the menu item( ) you want and then, adjust the value using the "–"( ) or "+"( ) button.

7 **Press the INPUT/ESC button to return to the previous menu.**

8 **To exit from the menu, press the INPUT/ESC button until the main menu disappears.**

Adjustments

Shortcut Key Functions

You can use several functions for adjustments by selecting the following shortcut key once on the remote controller or the control panel of the projector.

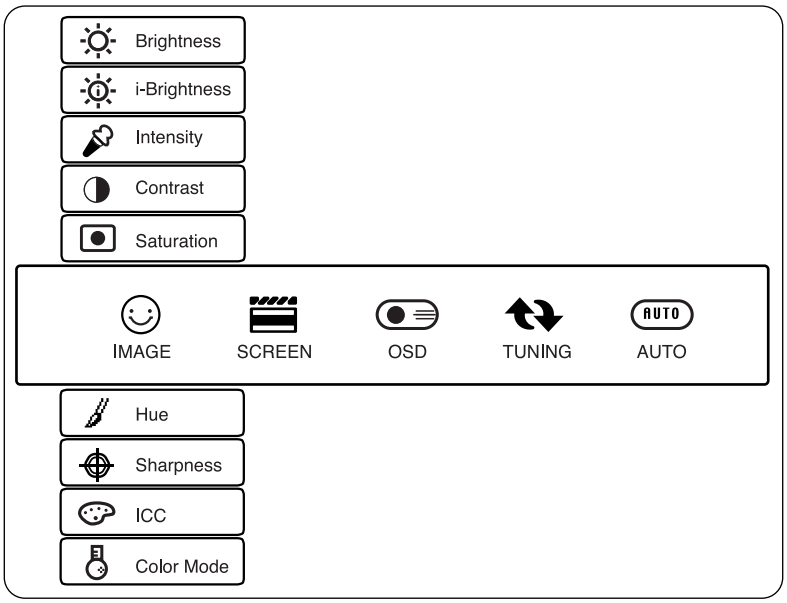
Icon / Menu	Function Description	Remote controller	Control Panel
INPUT INPUT	• You can select a projected input signal among several projector input signals. • Press the INPUT button. The input signal will be S-Video → Composite → Computer whenever you press this button.	✓	✓
PIP POP PIP/POP	• You can display a small computer screen on the video screen, or small video screen on the computer screen (PIP). or, you can display the video screen and the computer screen by the same size (PIP). ☞ Press the PIP/POP button. Display will be changed from "small computer screen/ entire video screen" → "small video screen / entire computer screen" → "computer screen / video screen" → "video screen / computer screen". **You can use this function when more than two input signals are available. You should set to the Window mode to adjust size and position of the PIP / POP screen.**	✓	✓
Keystone	• Using this button, you can adjust image projection if size of the upper side does not match with that of the lower side. 1) Press the Keystone button. 2) **– button:** Size of the lower side becomes narrower. **+ button:** Size of the upper side becomes narrower. 3) Press the INPUT/ESC button to exit from this function.	✓	✓
i-Brightness	• Use this button to compensate for the dark screen when displaying the movie file in the PC. Brightness and contrast will be improved at the same time. 1) Press the i-Brightness button. 2) **–, + :** Function is set to on, and brightness and contrast will be improved at the same time **This function is enabled for the computer input only.**	✓	✓

Shortcut Key Functions (continue)

Icon / Menu	Function Description	Remote controller	Control Panel
AUTO Auto	• Use this button to automatically adjust phase, frequency and position of the computer input. 1) Press the Auto button. Phase, frequency and position will be automatically adjusted.	✓	–
Window mode	• Use this button to set the active window for the currently projected screen, in order to adjust screen size or position. 1) Press the Window mode button on the remote controller. The active window will be set. 2) Use the " – " or "+" button to adjust screen size. **– button:** Zooms in the projected image. **+ button:** Zooms out the projected image. 3) Use the cursor button (◀ ▶ ▲▼) to move the screen position up / down / left / right. **In the PIP mode, the small screen will be adjusted, whereas the left screen will be adjusted in the POP mode.**	✓	–
Freeze	• Freezes the projected image only. 1) Press the Freeze button on the remote controller. The projecting image will be frozen. 2) Press the Freeze button again to resume projection.	✓	–
Zoom	• Zooms in/out the video screen. 1) Press the Zoom button. 2) **– button:** Zooms in the projected image. **+ button:** Zooms out the projected image. 3) Press the Zoom button again to exit from the magnified or shrunken screen.	✓	–

Adjustments

Image Adjustments



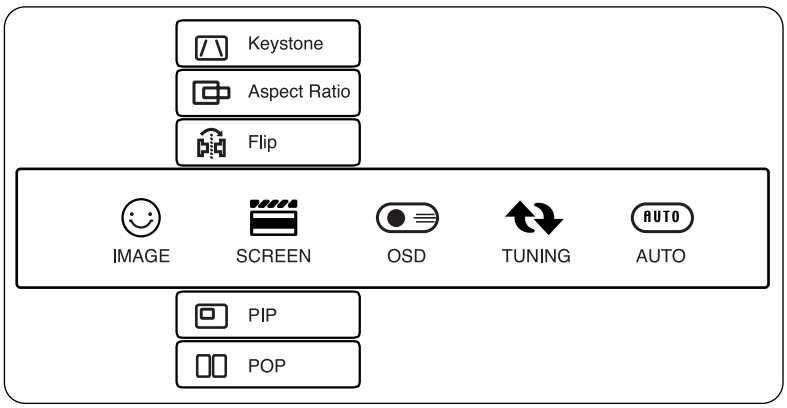
Icon	Menu	Function Description
	Brightness	• Adjusts screen brightness. – **button:** Screen becomes darker. + **button:** Screen becomes brighter.
	i-Brightness	• Compensates for the dark screen when displaying the movie file in the PC. Screen becomes brighter and contrast sharpens. –, + button: Enable / Disable toggle button. Enable: i-Brightness function is activated. Screen becomes brighter. Disable: i-Brightness function is deactivated. Screen resumes normal display. **This function will be disabled if the input signal comes from the video.**
	Intensity	• Adjusts image intensity when the image is blurred or dark. – **button:** Screen intensity becomes darker. + **button:** Screen intensity becomes brighter.
	Contrast	• Changes image contrast. It makes the bright section brighter and the dark section darker. – **button:** Contrast decreases, which reduces difference between bright section and dark one. + **button:** Contrast increases, which increases difference between bright section and dark one.

Image Adjustments (continue)

Icon	Menu	Function Description
	Saturation	• Adjusts depth of color (saturation). – **button:** Screen color becomes light. + **button:** Screen color becomes dark.
	Hue	• Adjusts balance between green and red color while not changing the blue color. – **button:** Red color is added to the image. + **button:** Green color is added to the image.
	Sharpness	• Adjusts the image if the image border line becomes blurred or too strong. – **button:** Image border line (outline) becomes blurred. + **button:** Image border line (outline) becomes more clear.
	ICC	• Adjusts color sensation by controlling red, green, blue or yellow color. Video/Computer – R: Red color becomes weaker, + R: Red color becomes stronger. Video/Computer – G: Green color becomes weaker, + G: Green color becomes stronger. Video/Computer – B: Blue color becomes weaker, + B: Blue color becomes stronger. Video/Computer – Y: Yellow color becomes weaker, + Y: Yellow color becomes stronger.
	Color Mode	• You can select five user modes optimized for the operational environment. **Standard:** General color mode. Input image will be presented naturally. **Cinema:** Move color sensation becomes richer. **Presentation:** Widens the color presentation range so that the computer input signal can be projected without change. Therefore, color is presented more clearly. **Sport:** Emphasizes green and blue color to present vivid image. **Game:** Rough image of the game screen is presented softly so that more vivid image can be obtained.

Adjustments

Screen Adjustments



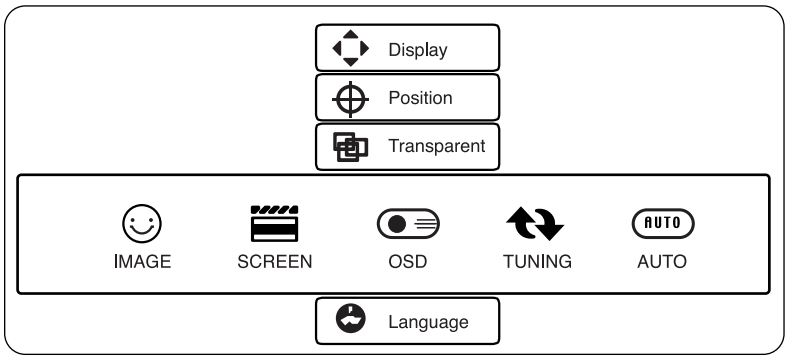
Icon	Menu	Function Description
	Keystone	• Adjusts screen size when the upper side and the lower size mismatch in size depending on the projection angle. – **button:** The lower screen part becomes narrower. + **button:** The upper screen part becomes narrower.
	Aspect Ratio	• Selects the screen aspect ratio. **–, + button:** Toggles between 4:3 or 16:9 aspect ratio.
		• 16:9 aspect ratio. Selects 16:9 aspect ratio position. **–, + button:** select one of top, middle or bottom. **This function is disabled when the input signal comes from the computer.**
	Flip	• Flips the screen left/right or up/down, Left/Right Disabled: Normal screen. Left/Right Enabled: Screen flips left/right from Left/Right Disable. Up/Down Disabled: Normal screen. Up/Down Enabled: Screen flips up/down from Up/Down Disable.

Screen Adjustments (continue)

Icon	Menu	Function Description
	PIP	• Displays the small computer screen on the video screen or small video screen on the computer screen. **+:** Changes from Video → Computer → V on C → C on V **Video:** Video screen will be displayed on the entire screen. **Computer:** Computer screen will be displayed on the entire screen. **V on C:** Small video screen will be displayed on the entire computer screen. **C on V:** Small computer screen will be displayed on the entire video screen. **This function is enabled only when more than two input signals are available.**
	POP	• Displays the video and computer screen with the same size. **+:** Changes from Disable → C vs V → V vs C. **Disable:** The currently selected screen will be displayed. **C vs V:** Computer screen will be displayed on the left side and the video screen is displayed on the right side. **V vs C:** Video screen will be displayed on the left side and the computer screen is displayed on the right side. **This function is enabled only when more than two input signals are available.**

Adjustments

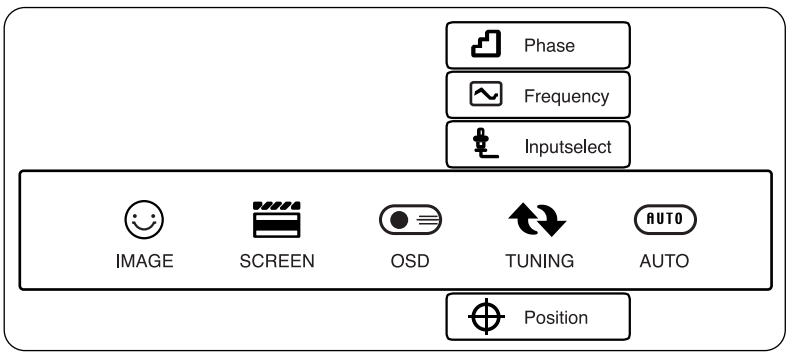
Menu Adjustments



Icon	Menu	Function Description
	Display	• Size Selects the menu screen size - normal or double. Normal: Sets the normal menu screen. Double: Sets the menu screen two times bigger than the normal menu screen. • Grid Normal: The menu screen will be displayed normally. Grid: The menu screen will be displayed with a grid format.
	Position	• Changes the menu screen display position. **–, + button:** Center → TopLeft → TopRight →BottomRight → BottomLeft.
	Transpa-rency	• Changes color transparency in the menu area. You can adjust color sensation by red, green or blue color.
	Language	• Changes the menu display language. You can display the menu in Korean or English.

Adjustments

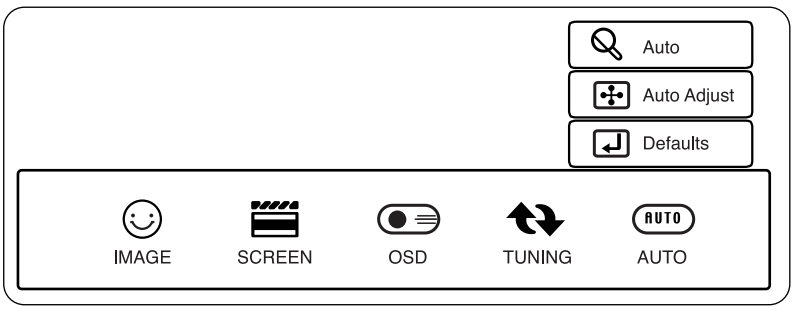
Tuning Adjustments



Icon	Menu	Function Description
	Phase	• Corrects noise to the horizontal direction when displaying the computer input. Press the "–" or "+" button for adjustment until noise is removed. **This function is enabled only when the input signal comes from the computer.**
	Frequency	• Corrects strip noise when displaying the computer input. Press the "–" or "+" button for adjustment until strip noise is removed. **Refrain from using this function as much as possible since correct adjustment can be made using the automatic adjustment menu.**
	Input Select	• Changes the input source that will be projected into the screen. **+:** Changes the input source from S-video → Video → Computer.
	Position	• Changes the screen position vertically or horizontally. **– button:** Moves to the left horizontally and upwards vertically. **+ button:** Moves to the right horizontally and downward vertically.

Adjustments

Automatic Adjustments



Icon	Menu	Function Description
	Auto	• Automatically detects the projector input signal. (Default: Off) **+:** Enables the automatic adjustment function. **Press the INPUT button on the remote controller or the INPUT/ESC button on the control panel to change the projector input signal.**
	Auto Adjust	• Automatically adjusts phase, frequency and position when displaying the computer input. : Returns to the off mode when automatic adjustment is made. **This function is enabled only when the input signal comes from the computer.**
	Defaults	• Returns to the factory default value. **Select:** Returns to the default value. Selected value will be off after returning to the default value.

Troubleshooting

The following table describes the problems that can occur while using the projector or installing the projector as well as its resolution.
Before consulting your authorized dealer, please check the following points.

Symptom	Probable Cause and Corrective Action	Page
The warning lamp blinks every 0.5 second.	• Lamp is not available. Insert a lamp inside the projector. • If you turn on the projector without a lamp, a malfunction may occur.	9
The power indicator lamp blinks every 0.5 second with green and yellow color by turns.	• Cooling down is in progress. • Cooling down takes about 2 seconds.	9
The power lamp is turned on with yellow color.	• Implies the waiting mode. • Press the Power button on the remote controller or top surface of the projector to start projection. • To start projection, press the Power button on the remote controller or top surface of the projector to start projection at least one second after switch on. (If you press the button within one second, the projector may not be started due to self-diagnosis.)	9,10
The power lamp is turned on with green color.	• If you press the Power button in the waiting mode, the power indicator lamp turns to green color and warning-up starts. • Warming-up takes about one minute. The projection screen will be brighter piecemeal.	9
Video image does not appear.	• See if the power is in the waiting mode. (Yellow color on) • Press the Power button on the remote controller or top surface of the projector. • See if lens cap is on. • Cooling time is needed to shut down the power compulsory. (about two minutes)	9,10

Troubleshooting

Symptom	Probable Cause and Corrective Action	Page
Video image does not appear.	• See if the signal is being received. • See if the cable for projection is properly connected. • See if the power saving function is enabled in case of the computer input. • See if the frequency and resolution of the computer are within the range of the one in the standard signal mode table of the projector.	12,13 37
Video image is fuzzy.	• Adjust focus with the ring of the lens. (The minimum distance to adjust focus is 1 meter.) • Set the projector at the correct distance. (Recommended distance is 1 ~ 8.3 m) (See the projection distance for each screen size.) • Adjust brightness. • See if the lens is clean. If not, clean it.	16 11 27 38
Video by computer input signal is abnormally dark.	• Press the i-Brightness button on the remote controller or top surface of the projector. (It compensates both brightness and contrast of the video from the computer input.)	9,10
Video image is abnormally dark.	• Adjust brightness and contrast. • Replace the lamp. (The recommended lamp life is 3,000 hours. Replace it earlier if the video looks darker.)	26 40

Troubleshooting

Symptom	Probable Cause and Corrective Action	Page
Color is poor or unstable.	• Adjust ICC or hue. • Adjust saturation. • Adjust brightness and contrast.	27 27 26
Video seems reversed in left/right or up/down position.	• Adjust screen flip.	28
The upper part of the video image bows or distorts.	• Use the Keystone button on the remote controller or top surface of the projector.	9,10
Remote control unit does not work.	• See if the projector remote sensor is blocked. • See if the distance from the remote controller to the projector is within the operation distance range. (Operational distance: About 6 meter. Operational angle: About ±30° horizontally and ±15° vertically.) • See if the remote sensor is exposed to the too bright place. (The remote controller may not work normally under the direct sunlight or fluorescent lamp.) • See if batteries are installed correctly. • Replace with new batteries.	8 11 8 10

Miscellaneous

Specifications

Model Name		CPE-S110
Type of Input Signal	PC Input	Input Resolution: VGA ~ XVGA
		Vertical frequency: 56 ~ 85Hz
Output	Color System	NTSC, PAL, SECAM (Automatic switching)
	Display Method	3 panel transmitted light type
	Panel Size	0.7″
	Emission Method	TFT active matrix
	Resolution	SVGA (800 x 600)
	Contrast Ratio	350:1
	Number of Colors	16.7 million color
	Projection Brightness	1,100 Ansi Lumens
	OSD Language	English
Lens		Zoom lens F/1.7~ 2.1, F=26 ~ 32mm
Lamp		150W (Lifetime 3,000hrs)
Projection Screen Size		40”~ 200”
Projection Distance		1.33m ~ 8.33m
Connection terminal	PC Input terminal	Mini 15－pin D-sub
	S-Video Input terminal	Mini 4－pin DIN
	Video Input terminal	RCA terminal
	Control terminal	RS-232C
Power Consumption		220W
Power Input		AC 110 ~ 220V, 50/60Hz
Weight		2.9kg
Dimension (W×D×H)		220 x 305 x 102.5mm
Operation Environment		Temperature : 0 ~ 40˚C, Humidity : 30 ~ 70%
Major Functions		ICC(Independent Color Control) PIP(Picture in Picture) , POP(Picture out Picture) i-Brightness, Digital Zoom, Optical Zoom, Digital Keystone, Freeze
Accessories		Carry-on Case

Standard Signal Table

Mode	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Clock Frequency (MHz)	Sync. Polarity (H/V)
VGA	640×350	37.861	85.080	31.500	+ / –
	720×400	37.927	85.039	35.500	– / +
	640×480	31.469	59.940	25.175	– / –
	640×480	37.861	72.809	31.500	– / –
	640×480	37.500	75.000	31.500	– / –
	640×480	43.269	85.008	36.000	– / –
SVGA	800×600	35.156	56.250	36.000	+, – / +, –
	800×600	37.879	60.317	40.000	+ / +
	800×600	48.077	72.188	50.000	+ / +
	800×600	46.875	75.000	49.500	+ / +
	800×600	53.674	85.061	56.250	+ / +
XGA	1024×768	48.363	60.004	65.000	– / –
	1024×768	56.476	70.069	75.000	– / –
	1024×768	60.023	75.029	78.750	+ / +
	1024×768	68.677	84.997	94.500	+ / +
WXGA	1280×960	60.000	60.000	108.000	
SXGA	1280×1024	63.981	60.020	108.000	+ / +
	1280×1024	79.976	75.025	135.000	+ / +
	1280×1024	91.146	85.024	157.500	+ / +

Miscellaneous

Maintenance and Repair

Cleaning

Clean the projector if it is dirty or the projected image quality is degraded.

Read the safety precautions carefully and comply with instructions before cleaning the projector.
Make sure to turn off the projector and remove the power cord before cleaning the projector.

Cleaning the External Parts of the Projector

Clean the external parts of the projector with soft cloth.
If the external part of the projector is too dirty, dip the cloth into a detergent fluid that is half mixed with water and scrub the surface. Then, scrub it with a dry cloth again.

Do not use the active solvents such as wax, alcohol and thinner because the external color can be de-colored or damaged.
If you have to use the detergent, make sure to scrub it out.

Cleaning a Lens

To clean a lens, use the air spray or lens cleaning paper that you can buy at the market.

How to clean alens

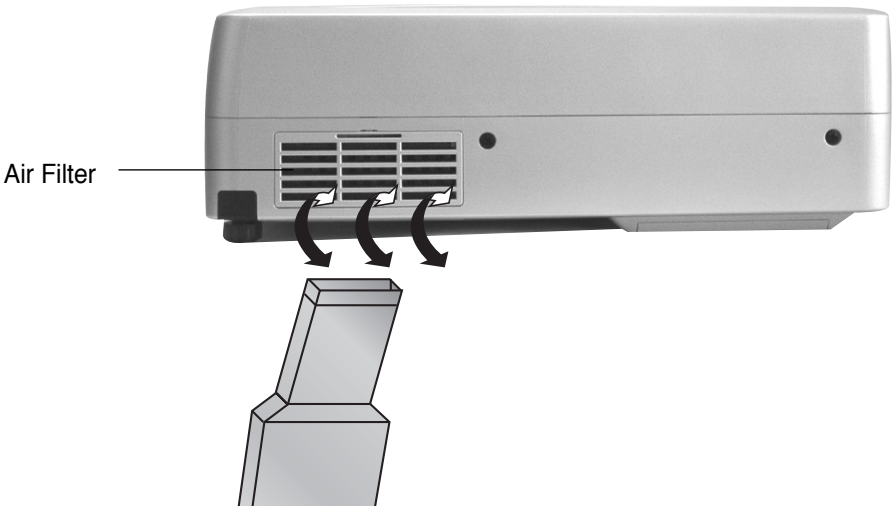
1) Beat the dust out of the lens surface using an air spray.
2) Shake the dust off again using a soft brush.
3) If a lens is stained with fingerprint or foreign object, dip the lens tissue paper into the lens cleaning fluid and scrub the lens softly.
4) When the fluid is dried up, finish cleaning with soft cloth.

The lens surface can be easily damaged.
Therefore, use the soft materials always.

Miscellaneous

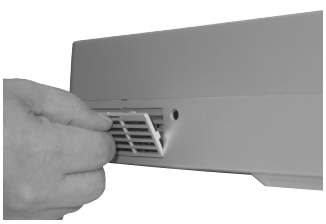
Cleaning the Air Filter

If dirt has gotten in or blocked by the foreign objects, ventilation performance will be degraded and can cause a malfunction due to overheat inside the project.
Clean dirt and foreign objects using a vacuum cleaner or replace with new one.



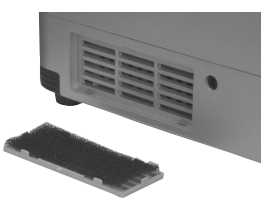
Replacing the Air Filter

If you cannot remove dirt and foreign objects using a vacuum cleaner, replace the air filter.



1 Unplug the power cod after cooling down.

2 Pull down the hook on the upper side of the air filter cover, located at both sides of the projector, to remove it.



3 Replace with a new air filter and reinstall the filter. Than, press softly to fix it.

If the air filter is damaged or the dir has gotten in, you have to replace the filter. Consult the authorized dealer where you purchased the projector.

Miscellaneous

Time to Replace the Lamp

Please purchase the new lamp unit under the following circumstances.

1 The projector lamp is not turned on or the screen disappears while it is in use.

2 Brightness and the quality of the projected image is deteriorated compared wit the initial usage.

- **The life of the lamp currently used for this projector is about 3000 hours. However, it the lamp is not turned on, replace with new one regardless of the life of the lamp.**
- **Get a replacement lamp ready since the lamp can be broken before reaching 3000, depending on the characteristics of the lamp and the operation environment.**
- **Purchase the replacement lamp from the authorized dealer where you purchased the projector.**

Replacing the Lamp

- When you replace the lamp while using it due to a malfunction, take time until the lamp is cooled down completely.
- The lamp can be broken. Pay attention when replacing it.

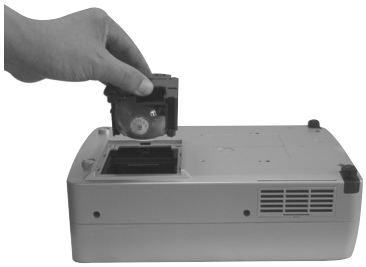
1 Turn off the projector and wait until the cooling down procedure is completed. Then, remove the power cord from the power consent.

2 Wait until the lamp is completely cooled down. And, turn the projector upside down so that the bottom faces upwards.

Time to Replace the Lamp (continue)

3 Push the lamp cover to the arrow direction to remove it from the projector.

4 Loosen the two screws with a (+) screwdriver.



5 Remove the lamp unit.
Hold the handles at both sides of the lamp and pull it up to remove from the projector.

Do not touch the glass surface of the lamp directly with your hand. Wear the gloves.

6 Insert the new lamp unit fully in.
Hold the lamp using the same method used for removal and push into the replacement point inside the projector.
Then, tighten the tow screws.

7 Push back the lamp cover to the arrow direction until you can hear a click sound.

Customer Service Information

If the EXTRAMA you use is not working properly or cannot solve the problem using the troubleshooting points in this instruction, contact the customer service center as described below.

Customer Support Center

+82+080-263-0914

Free call number

EXTRAMA Homepage

www.extrama.co.kr

Please visit the EXTRAMA web site (http://www.extrama.co.kr) for diverse and detailed information on new products and Q&A.

FCC RF

INTERFERENCE STATEMENT

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 technical for help.
- Only shielded interface cable should be used.

Caution

Do not change or modify the product without permission or authority of manufacturer. It may cause undesirable operations, permanent damages or harmful interferences

.

◎ Notice

· Design and specification are subject to change without notice for product improvement purposes.