



Please read this manual carefully before operating your set.

Retain it for future reference.

Record the serial number of the set.

See the label attached on the bottom of the set and quote this information to your dealer when you require service.

Model number : LXG-120

Serial number :

## LXG-120 OWNER'S MANUAL



zenith 

# LCD PROJECTOR



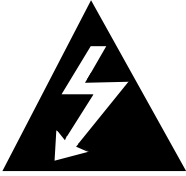
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Before operating the unit, please read this manual carefully.

# SAFETY INSTRUCTIONS



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



## **WARNING:**

TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



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



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

## **WARNING:**

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

## **CAUTION:**

REFER LAMP REPLACEMENT TO QUALIFIED SERVICE PERSONNEL ONLY.

## **REGULATORY INFORMATION:**

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 when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. 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.

## **CAUTION:**

Do not attempt to modify this product in any way without written authorization from Zenith Electronics Corporation. Unauthorized modification could void the user’s authority to operate this product.

The responsible party for this device compliance is:

Zenith Electronics Corporation  
201 James Record Road  
Huntsville, AL 35824, USA  
1-888-865-3026

# SAFETY INSTRUCTIONS

## Important safeguards for you and your new product

Your product has been manufactured and tested with your safety in mind. However, improper use can result in potential electrical shock or fire hazards. To avoid defeating the safeguards that have been built into your new product, please read and observe the following safety points when installing and using your new product, and save them for future reference.

Observing the simple precautions discussed in this booklet can help you get many years of enjoyment and safe operation that are built into your new product.

This product complies with all applicable U.S. Federal safety requirements, and those of the Canadian Standards Association.

### 1. Read Instructions

All the safety and operating instructions should be read before the product is operated.

### 2. Follow Instructions

All operating and use instructions should be followed.

### 3. Retain Instructions

The safety and operating instructions should be retained for future reference.

### 4. Heed Warnings

All warnings on the product and in the operating instructions should be adhered to.

### 5. Cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

### 6. Water and Moisture

Do not use this product near water - for example, near a bath tub, wash

bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.

### 7. Accessories

Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

### 8. Transporting Product

A product and cart combination should be moved with care. Quick



PORTABLE CART WARNING

# SAFETY INSTRUCTIONS

stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

## 9. Attachments

Do not use attachments not recommended by the product manufacturer as they may cause hazards.

## 10. Ventilation

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

## 11. Power Sources

This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

## 12. Line-Cord Polarization

This product is equipped with a 3-wire grounding-type alternating-current line plug. This plug will fit into the power

outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the three-wire ground-type plug.

## 13. Power-Cord Protection

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

## 14. Lightning

For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

## 15. Overloading

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

## 16. Object and Liquid Entry

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

## 17. Servicing

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

## 18. Damage Requiring Service

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- a. If the power-supply cord or plug is damaged.
- b. If liquid has been spilled, or objects have fallen into the product.
- c. If the product has been exposed to rain or water.
- d. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- e. If the product has been dropped or the cabinet has been damaged.
- f. If the product exhibits a distinct change in performance.

## 19. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

## 20. Safety Check

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

## 21. Wall or Ceiling Mounting

The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

## 22. Heat

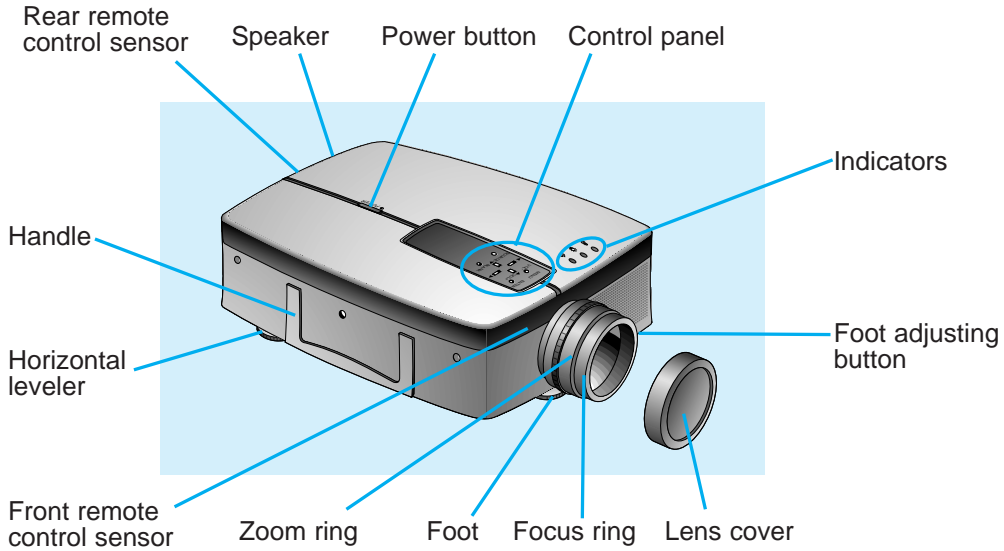
The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

## 23. Eye Protection

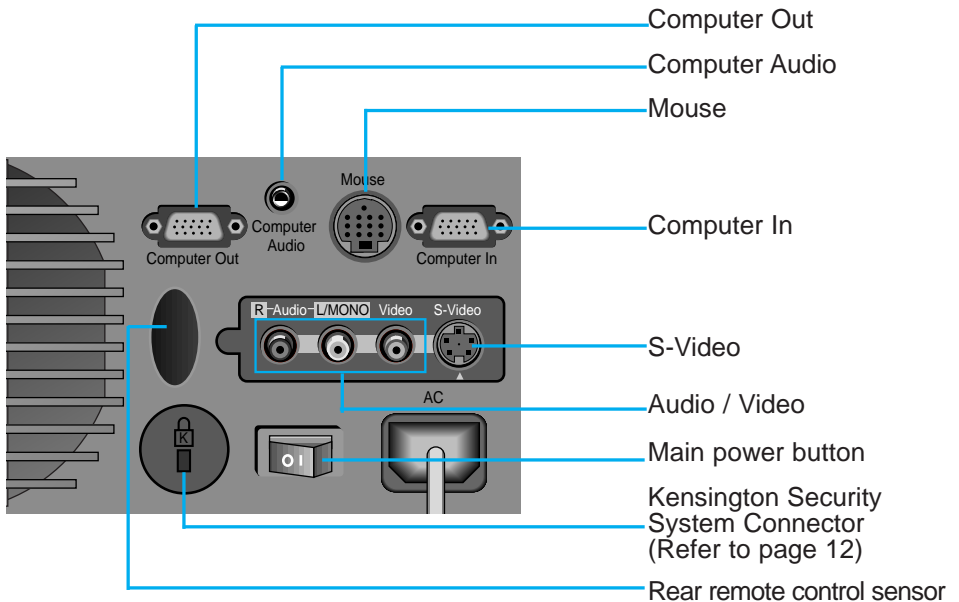
Do not look directly into the lens when the projector is in use. Eye damage may occur.

# Feature Locations

## Main Body

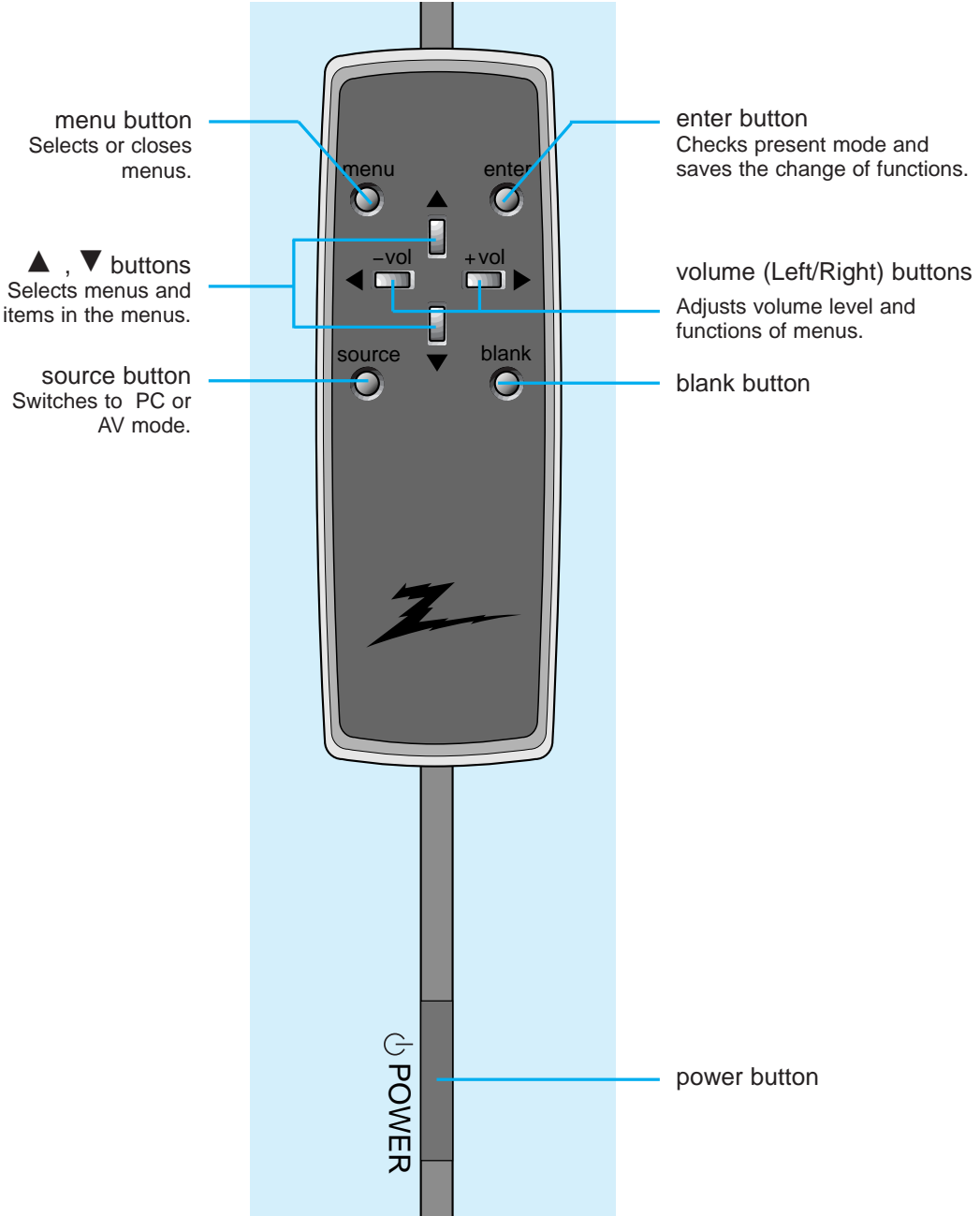


## Rear Connector Panel

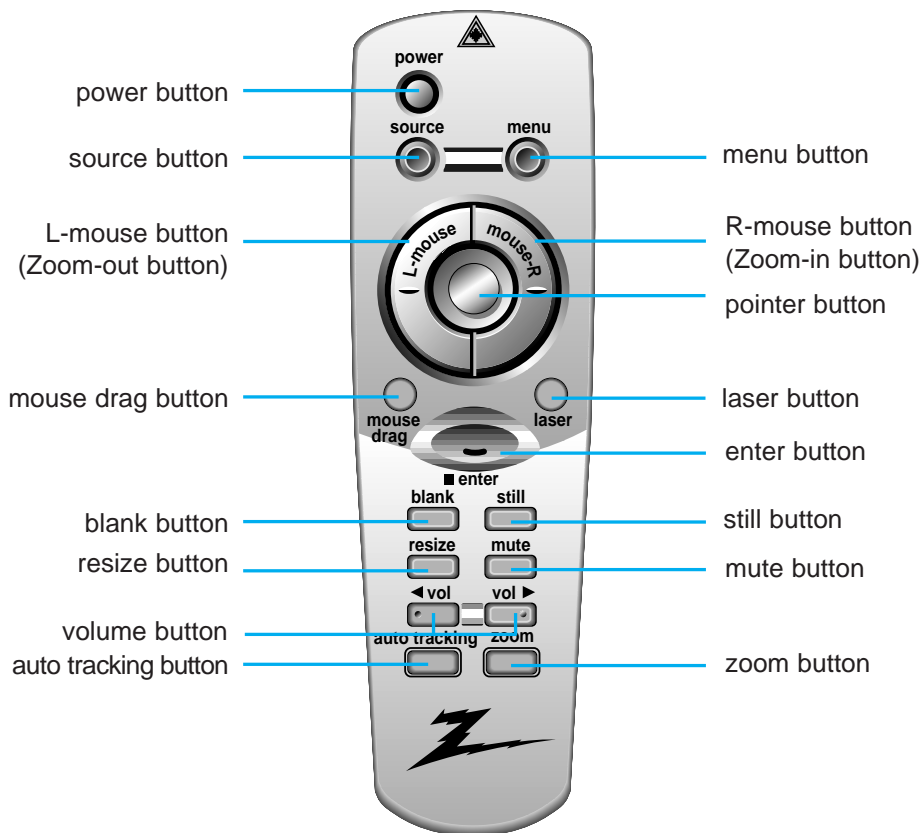




# Control Panel

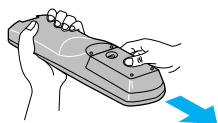


## Remote Control

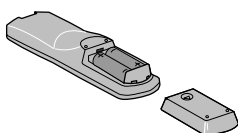


## Inserting the batteries

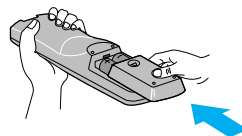
- 1** Slide the battery cover in the direction of the arrow to remove.



- 2** Insert two AA batteries with correct polarity.



- 3** Replace the battery compartment cover as shown.



## Functions on the Remote Control

Button	Function
power button	Switches power ON/OFF.
source button	Switches to PC or AV mode.
menu button	Displays or hides the menu.
L-mouse button (Zoom-out button)	<ul style="list-style-type: none"> <li>* Corresponds to the Left - Click of PC Mouse. This button registers a menu selection and selects other custom functions.</li> <li>* Downsizes the screen on the zoom function.</li> </ul>
R-mouse button (Zoom-in button)	<ul style="list-style-type: none"> <li>* Corresponds to the Right - Click of PC Mouse. This button registers a menu selection and selects other custom functions.</li> <li>* Enlarges the screen size on zoom function.</li> </ul>
pointer button	<ul style="list-style-type: none"> <li>* After selecting menus, controls selecting and adjusting functions with the direction of up, down, left, right.</li> <li>* Moves the screen with the direction of up, down, left, right on zoom function.</li> <li>* Moves and releases the selected icon on PC screen.</li> </ul>
mouse drag button	Used to select and drag an icon in PC mode.
enter button	Checks the present mode and saves the change of functions.
zoom button	Refer to page 38.
resize button	Refer to page 36.
auto tracking button	Refer to page 39.
blank button	Refer to page 33.
still button	Refer to page 28.
mute button	Cuts off audio.
volume button	Adjusts volume level.
laser button	<p>Displays a bright red laser pointer. (Don't look at laser beam directly as it may cause eye damage.)</p> <p>Wave length: 650nm Max. output: &lt;1mW</p>

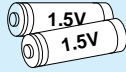


# Installation and Connection

## Accessories



Remote Control



Batteries 2 (size AA)



Power Cord



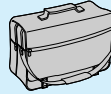
Audio/Video Cable



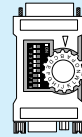
Audio Cable



Computer Cable



Portable Bag



MAC Desktop Adapter

### Mouse Connecting Cables



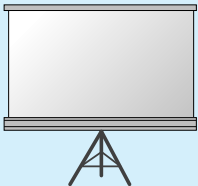
PS/2 Mouse Cable  
(IBM PC or Compatible)



MAC Serial Mouse Cable

## Optional Extras

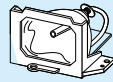
- Contact the service center for lamp replacement.
- Contact your dealer to purchase other items.
- When applying a ceiling mount, use only the ceiling mount for this unit (contact your dealer).



Screen for projecting

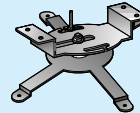


S-Video Cable



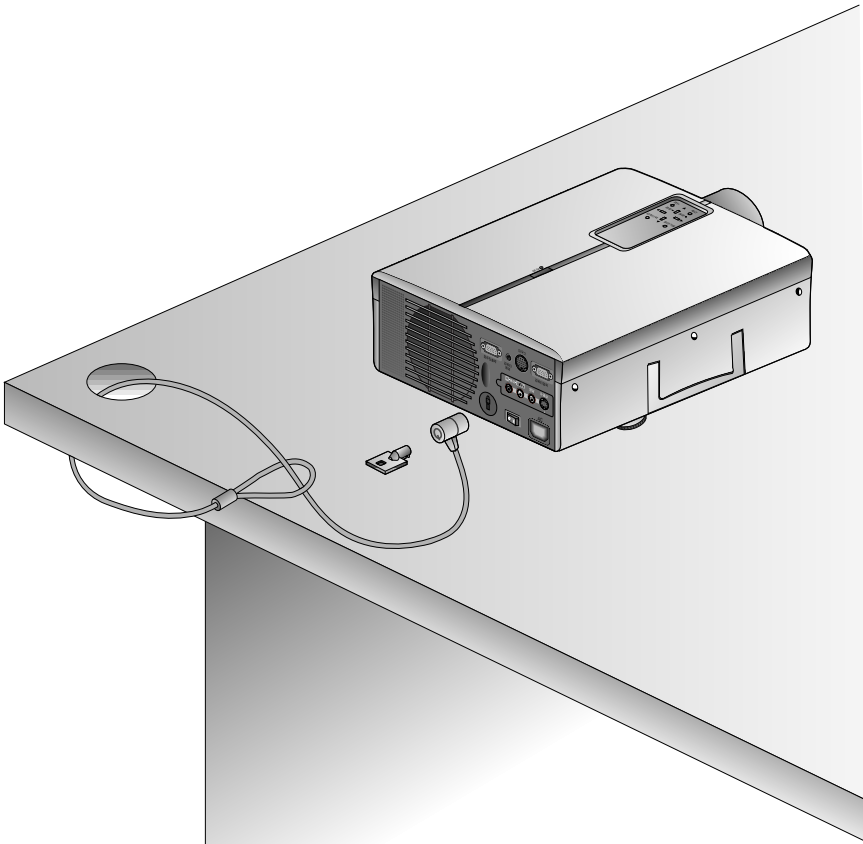
Lamp

### Ceiling mount for LCD projector



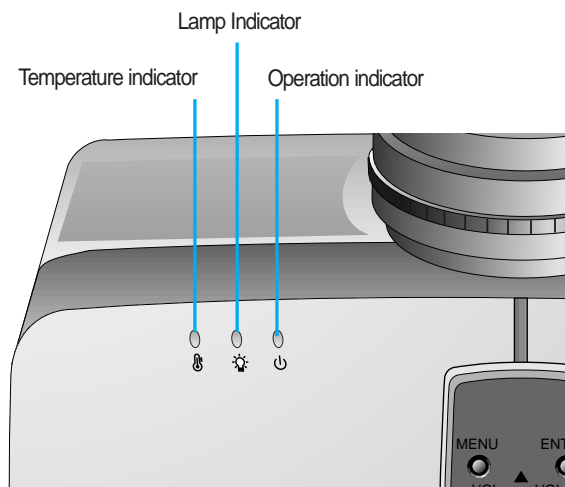
## Using Kensington Security System

- Kensington Security System is an optional item.
- The projector has a Kensington Security System Connector on the back panel. Connect the Kensington Security system cable as below.
- For the detailed installation and use of the Kensington Security System, refer to the user's guide attached to the Kensington Security System set.  
For further information, contact <http://www.kensington.com>, the internet homepage of the Kensington company that deals with electronic equipment such as notebook PCs or LCD projectors.



## Projector Status Indicators

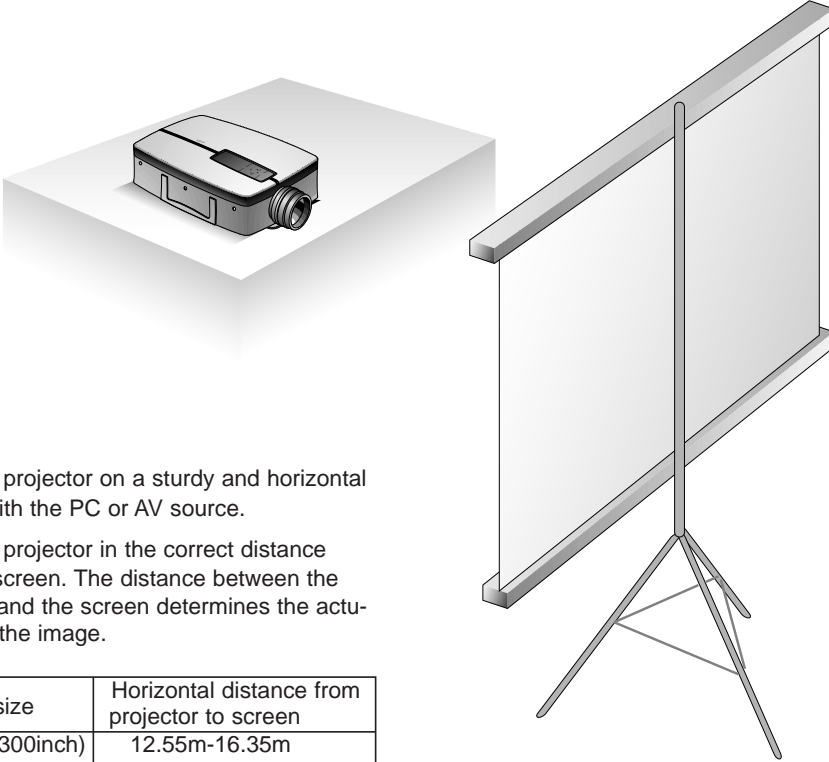
- Lamp Indicator, operation indicator and temperature indicator at the top of the projector shows the user the operating status of the projector.



Operation Indicator	Orange	Standby.
	Green	In Operation.
	Off	Power Off.
	Green (flashing)	Indicates lamp is warming up.
Lamp Indicator	Red	Projection lamp will expire within 100 hours of operation. *Replace the Lamp.
	Red (flashing)	Indicates failure of Lamp or associated circuitry. Contact your service center.
	Green (flashing)	The Lamp cover is not closed.
Temperature Indicator	Orange	Indicates over temperature conditions. Unit will turn off automatically. *Temperature is too high.
	Red	Projector has shut off due to over temperature condition. Contact your service center.
	Red (flashing)	Projector has a defective internal cooling fan. Contact your service center.

\* is the warning message on screen.

## Basic Operation of the Projector



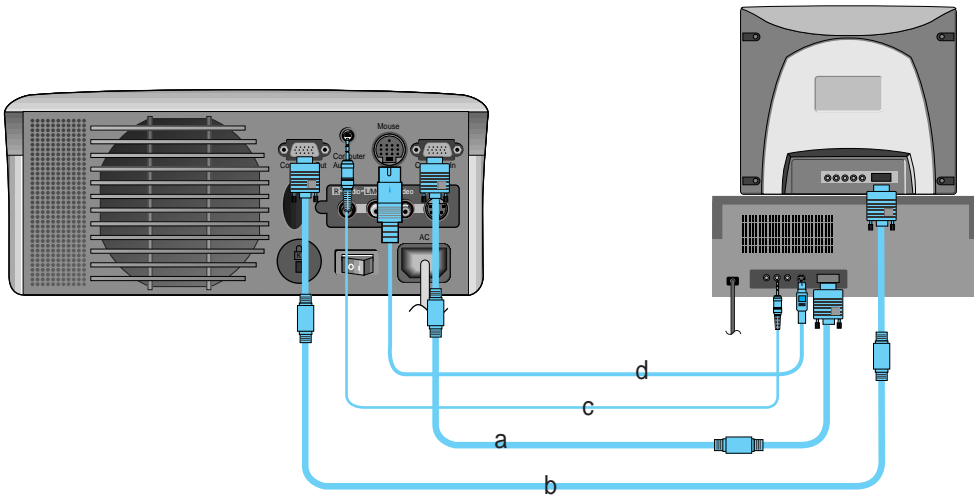
1. Place the projector on a sturdy and horizontal surface with the PC or AV source.
2. Place the projector in the correct distance from the screen. The distance between the projector and the screen determines the actual size of the image.

Screen size	Horizontal distance from projector to screen
610x460cm(300inch)	12.55m-16.35m
410x300cm(200inch)	8.35m-10.87m
200x150cm(100inch)	4.16m-5.42m
160x120cm(70inch)	2.90m-3.78m
120x90cm(50inch)	2.06m-2.69m
81x61cm(40inch)	1.64m-2.15m

3. Turn the projector so that the lens is at a right angle to the screen. If the projector is not at a right angle, the screen image will not be square. At this time adjust position of image. (Refer to page 37.)
4. Connect the cables of the projector to a 120V, 60Hz wall power socket.

# Connecting to a Desktop PC

- You can connect the projector to a computer's VGA, SVGA, XGA and SXGA output.
- You can resize the image for VGA, SVGA output.
- Refer to page 42 for the projector supported monitor display.

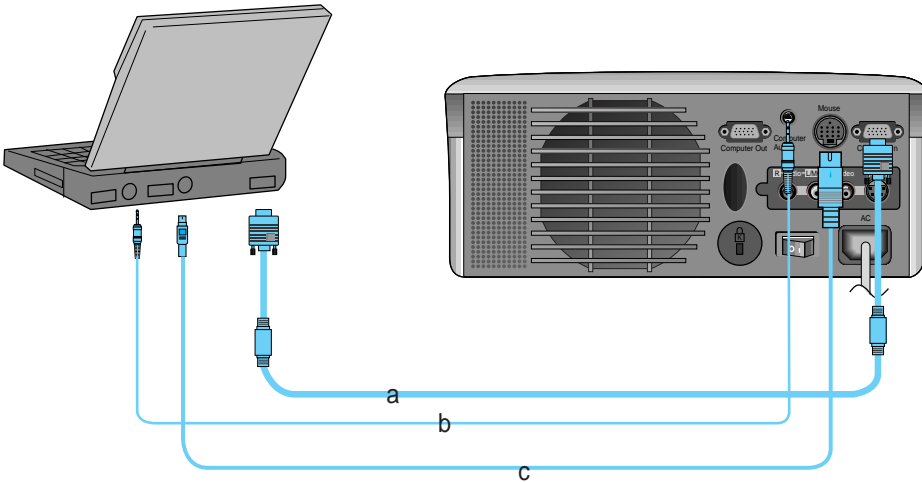


## Connections

- Connect either end of the computer cable to **Computer In** of the projector.
- Connect the monitor cable from the PC monitor to **Computer Out** of the projector in order to see the projected image on a PC monitor.
- Connect the audio cable from the PC (LINE OUT sound port) to **Computer Audio** of the projector.  
\* If the PC has two audio out ports of SPEAKER OUT and LINE OUT, connect to LINE OUT port for best sound quality.
- Connect the PS/2 mouse(for IBM PC or compatible) cable (6 pin) to the **Mouse** of the projector.



# Connecting to a Notebook PC

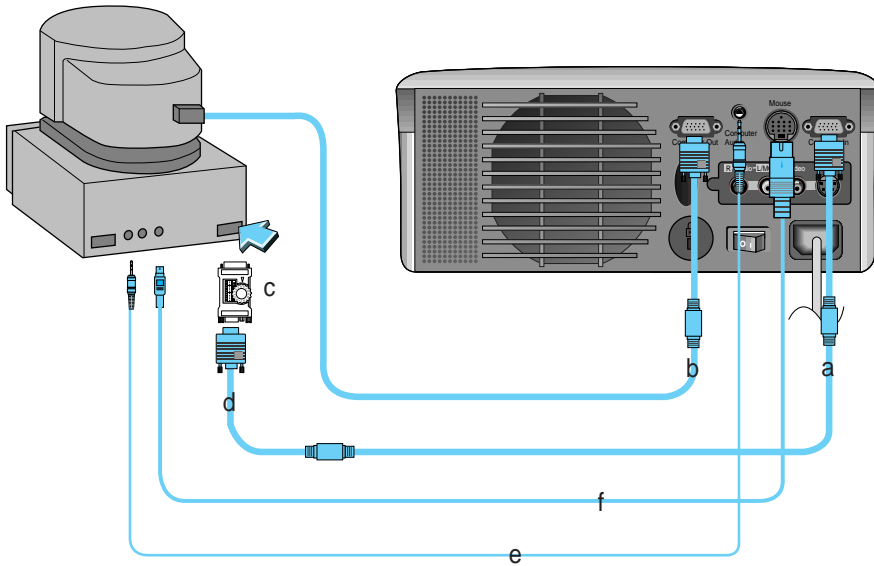


## Connections

- Connect either end of the computer cable to **Computer In** of the projector.
- Connect the audio cable from the PC to **Computer Audio** of the projector.
- Connect the PS/2 mouse(for IBM PC or compatible) cable(6 pin) to the **Mouse** of the projector.

# Connecting to a Macintosh Desktop PC

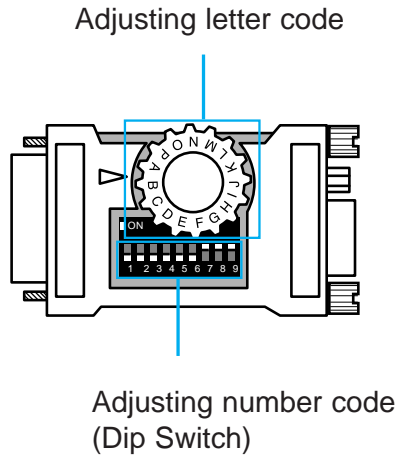
- You must use the Macintosh desktop adapter to connect the projector to a Macintosh PC.



## Connections

- Connect either end of the computer cable to the **Computer In** of the projector.
- Connect the monitor cable from the Macintosh monitor to **Computer Out** of the projector in order to see the projected image on a Macintosh monitor.
- Set the adjusting number and letter of the Macintosh desktop adapter to the resolution you want to use and connect the adapter to the Macintosh. (Refer to page 18-19)
- Connect the computer cable to the Macintosh desktop adapter.
- Connect the audio cable from the PC to the **Computer Audio** of the projector.
- Connect the mouse cable (4 pin) from the Macintosh mouse port to the **Mouse** of the projector.

## How to use the Macintosh desktop adapter



a. How to use

Set 1-6 to OFF status and 7-9 to ON status on the dip switches. Select the adjusting letter which is correct to the Macintosh and the monitor. (Refer to page 19.)

b. Notes for Connecting to the Macintosh PowerBook

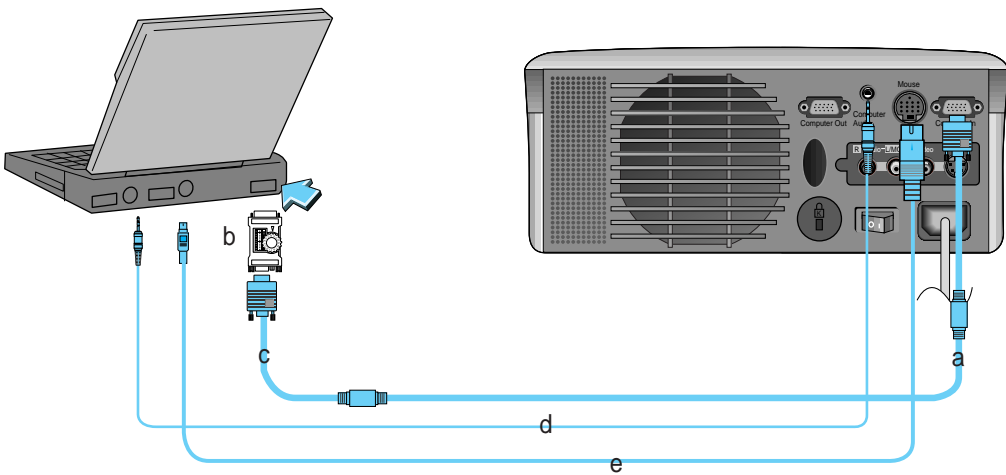
If you have problems after connecting the PowerBook to the projector, set dip switch number 9 to OFF status and restart the Macintosh PowerBook.

# Connecting to a Macintosh Desktop PC

## Adjusting letter code of MAC desktop adapter based upon types of MAC and output spec.

MAC S	output spec	12fRGB	13x14fRGB	15fPortrait	VGA	SVGA	SVGA	16fColor	19fColor	19fColor	2fPage Mono	21fColor	NTSC	PAL
	output resolution horizontal frequency(KHz) vertical frequency(Hz)	512x384 24.5 60	640x480 35 66	640x870 68.8 75	640x480 31 60	800x600 35 56	800x600 56 or 72	832x624 50 75	1024x768 60 75	1024x768 60 or 70	1150x870 68.7 75	1152x870 68.7 75	15.7 60	16 50
	adjusting letter	N	J	O	G	G	G	F	D	G	M	P	L	H
MAC Ixi, Ixi		N	J	O										
MAC Ivi, Ivi		N	J		G									
LC		N	J		M									
LCII		N	J		G									
LCII		N	J	O	G			F						
LC 475, LC 550		N	J	O	G	G		F						
LC 575		N	J	O	G	G		F	D		M	P	L	H
Performa														
400,405,410,430,600,600CD		N	J		G									
450		N	J	O	G			F						
Quadra														
700,900		N	J	O	G	G		F			M	P	L	H
605,610,650,800,950		N	J	O	G	G		F	D		M	P	L	H
840AV		N	J	O	G	G	G	F	D	G	M	P	L	H
Centris														
610,650		N	J	O	G	G		F	D		M	P	L	H
660AV		N	J	O	G	G	G	F	D	G	M	P	L	H
PowerBook														
180,165C,180,180C		N	J	O	G	G		F						
DUO DOC, MINI DOC		N	J	O	G	G		F						
824 BOARD		N	J	O				F			M	P	L	H

# Connecting to a Macintosh PowerBook

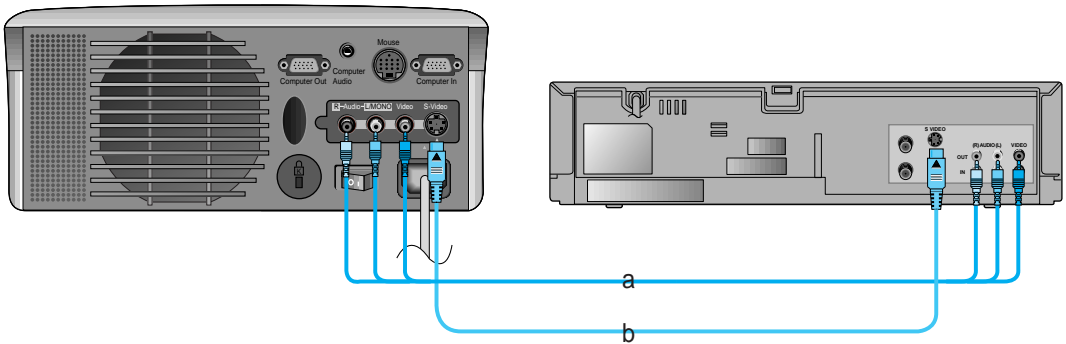


## Connections

- Connect either end of the computer cable to **the Computer In** of the projector.
- Set the adjusting number and letter of the Macintosh desktop adapter to the resolution you want to use and connect the adapter to the Macintosh PowerBook.(Refer to page 18-19)
- Connect the other end of the computer cable to the Macintosh desktop adapter.
- Connect the audio cable from the PC to the **Computer Audio** of the projector.
- Connect the mouse cable from the Macintosh mouse port to the **Mouse** of the projector.

# Connecting to a Video Source

- In AV input mode, if the auto video system recognition fails to detect a correct video input signal, press the **auto tracking** button on the remote control.
- You can connect a VCR, a camcorder, a DVD or any other compatible video image source to the projector.



## Standard Audio/Video Connection

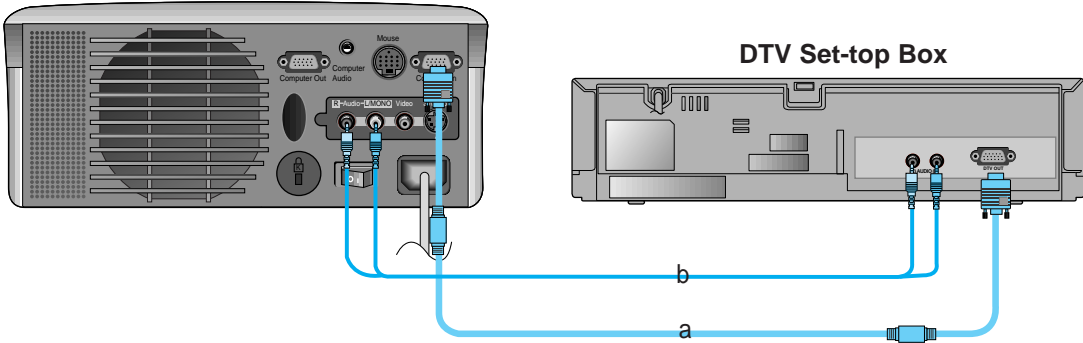
- When connecting the projector to an A/V source, connect the A/V input ports of the projector to the output ports of the A/V source with A/V cables of the same color. The video cable is yellow. The left audio is white and right audio is red.

## S-VHS Video Connection

- Connect S-Video input port of the projector to S-Video output port of A/V source with S-Video cable.
  - \* For better picture quality, use the S-Video connection rather than the A/V connection.
  - \* If you connect S-Video cable and Video cable simultaneously, only the S-Video source will be displayed.
  - \* For Mono Audio Input, connect the single audio cable to the Audio L port of the projector.

# Connecting to a DTV Settop Box

- To receive HDTV programming, a DTV receiver (Set-top Box) must be connected to the projector.



## Connections

- Connect the **Computer In** of the projector to **DTV OUT** of the D-TV Set-top Box.
- Connect the Audio input ports (**R, L/Mono**) of the projector to the Audio output ports (**R, L**) of the D-TV Set-top Box.

# Turning on the Projector

1 Remove the lens cover of the projector.

---

2 Press the main power button on the back panel.

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3 Press the **power** button on the remote control or top cover. (Green operation indicator flashes during warming up of the lamp.)

- An image appears after the green power indicator has flashed for some time.

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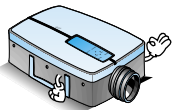
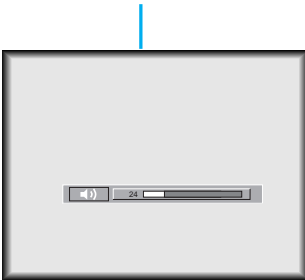
4 Select the source mode.

- Press the **source** button repeatedly to change between PC and A/V Inputs.

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5 Adjust volume level.

- Press **volume** buttons to increase or decrease sound level.



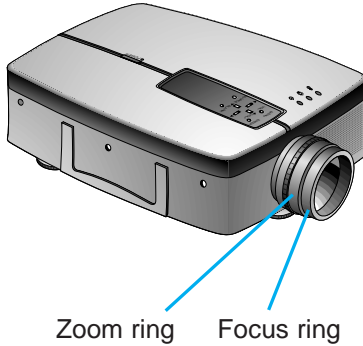
- Do not shut off the main power (back panel switch) or unplug the power cord while the ventilation fan is in operation.



# Operating the Projector

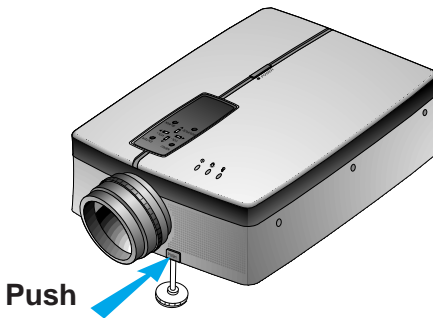
## Focusing and Positioning the Screen Image

When an image appears on the screen, make certain that the picture is focused and fits properly on the screen.



- To adjust the focus of the image, rotate the focus (outer) ring on the lens.
- To adjust the size of the image, rotate the zoom (inner) ring on the lens.

To raise or lower the image on the screen, extend or retract the foot at the bottom of the projector by pushing foot adjuster as shown below.



1. Carefully press the foot adjuster button while you support the other side of the projector. This unlocks the foot and allows it move freely. Be careful not to drop the projector.
2. While pressing the foot adjuster button, raise or lower the projector to place the image in the proper position on the screen.
3. Release the button to lock the foot in its new position.
4. To fine-tune the height of the projector, rotate the front foot to raise or lower it.
5. Once the projector height has been adjusted, do not press down on the projector.

# Operating the Projector

- If the projector is installed on a surface that is not stable or flat, the projected image shape will be distorted.

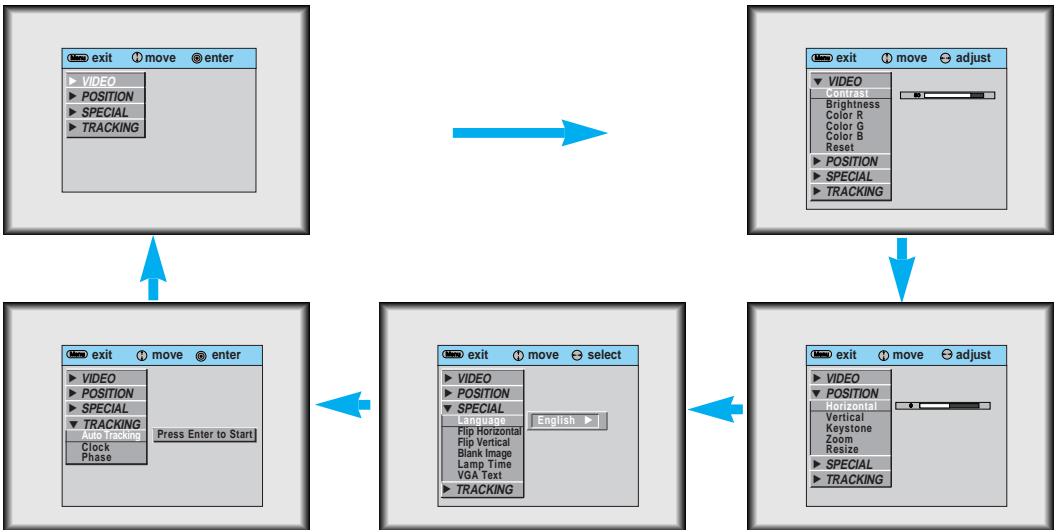


- To correct this condition, adjust the projector's position using the horizontal leveler as shown above.

# Function checking

1 Press the **menu** button.

2 Move the **pointer** button up or down to select a menu and press the **enter** button. Each press of the button will cycle through the available menus.



BASIC  
FUNCTIONS

3 Move the **pointer** button up or down to select a function that you want to use or adjust.

- Without an input signal from a PC or Video source, the On-Screen Display (OSD) doesn't appear.
- To exit the menu display, press the **menu** button repeatedly.

\* In AV mode, **Horizontal / Vertical** in POSITION menu, **VGA Text** in SPECIAL menu and TRACKING menu are not displayed.

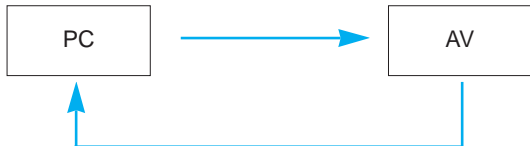
\* The sub menus for the VIDEO menu in AV mode are different from those in the PC mode (Refer to page 41).

# Selecting source mode

1 Press the **source** button

---

2 Each press of the **source** button changes the display as shown below.



# Using Still function

- 1 Press the **still** button.
  - You can freeze the input image from a PC or AV source.



Moving Image

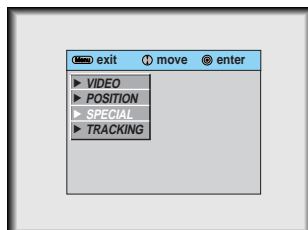


Still Image

- 2 To return to normal video, press the **still** button again.

# Selecting language

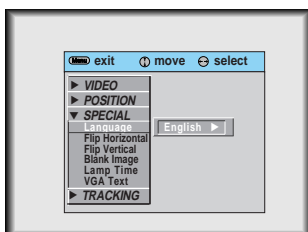
- 1 Press the **menu** button and move the **pointer** button up or down to select the SPECIAL menu as shown below.



- 2 Press the **enter** button and move the **pointer** button up or down to select the **Language** item.

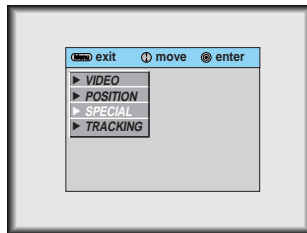
- 3 Move the **pointer** button left or right to select the language you want to use.

- On-Screen-Display(OSD) will change to the language chosen.
- To exit the menu display, press the **menu** button repeatedly.

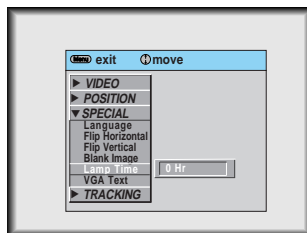


# Checking lamp time

- 1 Press the **menu** button and move the **pointer** button up or down to select the SPECIAL menu as below.



- 2 Press the **enter** button and move the **pointer** button up or down to select the **Lamp Time** item.



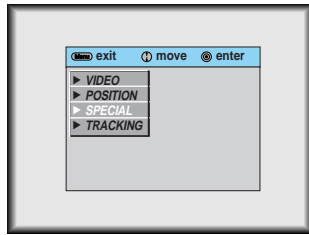
- The elapsed lamp time is displayed in hours.
- When the lamp time has reached 1400 hours, the lamp indicator changes to red color.

# Using Flip Horizontal / Vertical function

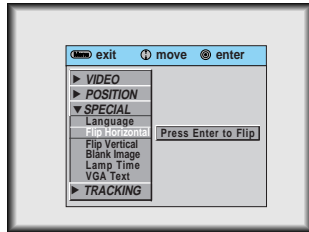
## Flip Horizontal Function

- This function reverses the left and the right side of the projected image. Use this function when projecting from behind onto a transparent screen being viewed from the opposite side.

- 1 Press the **menu** button and move the **pointer** button up or down to select the SPECIAL menu.

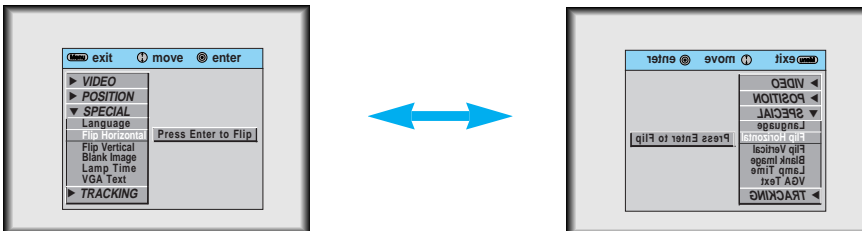


- 2 Press the **enter** button and move the **pointer** button up or down to select the Flip Horizontal item.



- 3 Press the **enter** button to see reversed image.

- Each time you press the button, the image will be reversed.
- To exit the menu display, press the **menu** button repeatedly.

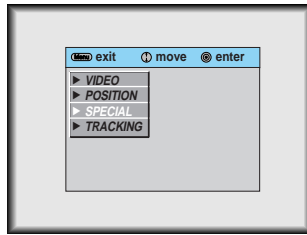




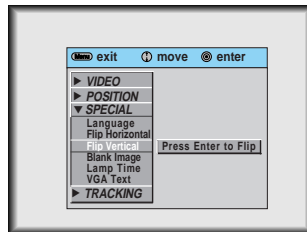
## Flip Vertical Function

- This function reverses the upper and the lower side of the projected image.
- When you hang the projector upside down from the ceiling, you must reverse all the sides(left, right, upper, lower) of the image.

1 Press the **menu** button and move the **pointer** button up or down to select the **SPECIAL** menu.

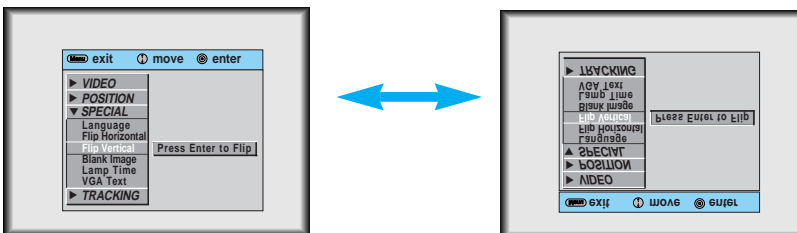


2 Press the **enter** button and move the **pointer** button up or down to select the **Flip Vertical** item.



3 Press the **enter** button to see the reverse image.

- Each time you press the button, the image will be reversed.
- To exit the menu display, press the **menu** button repeatedly.



# Using Blank function

- This function blanks the Video and mutes the Audio.

1

Press the **blank** button.

- The screen will blank and the audio is muted.
- You can choose the background color. Refer to page 34.

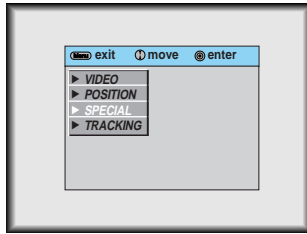


2

To exit the blank status, press the **blank** button again.

## Selecting Blank Image color

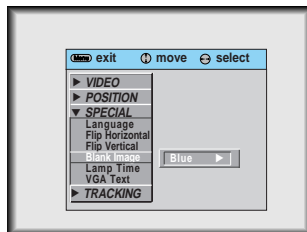
- 1 Press the **menu** button and move the **pointer** button up or down to select the SPECIAL menu.



- 2 Press the **enter** button and move the **pointer** button up or down to select the **Blank Image** item.

- 3 Move the **pointer** button left or right to select the color you want to use.

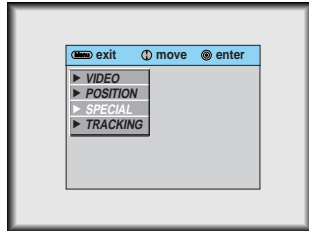
- Background color changes to the selected color.
- To exit the menu display, press the **menu** button repeatedly.



# Selecting PC screen size input signal

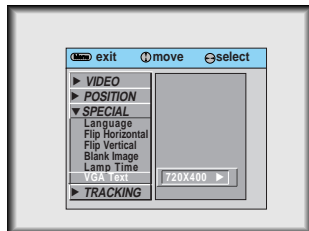
- When using the PC input mode, before turning on the PC, select the appropriate screen size in the SPECIAL menu. This will enable the image size of the PC in DOS mode to fit on the projection screen.
- For other screen size signals except 640X400 70Hz and 720X400 70Hz, the projected image sizes are adjusted automatically.

- 1 Press the **menu** button and move the **pointer** button up or down to select the SPECIAL menu as below.



- 2 Press the **enter** button and move the **pointer** button up or down to select the VGA Text item.

- 3 Move the **pointer** button left or right to select the screen size you want to use.

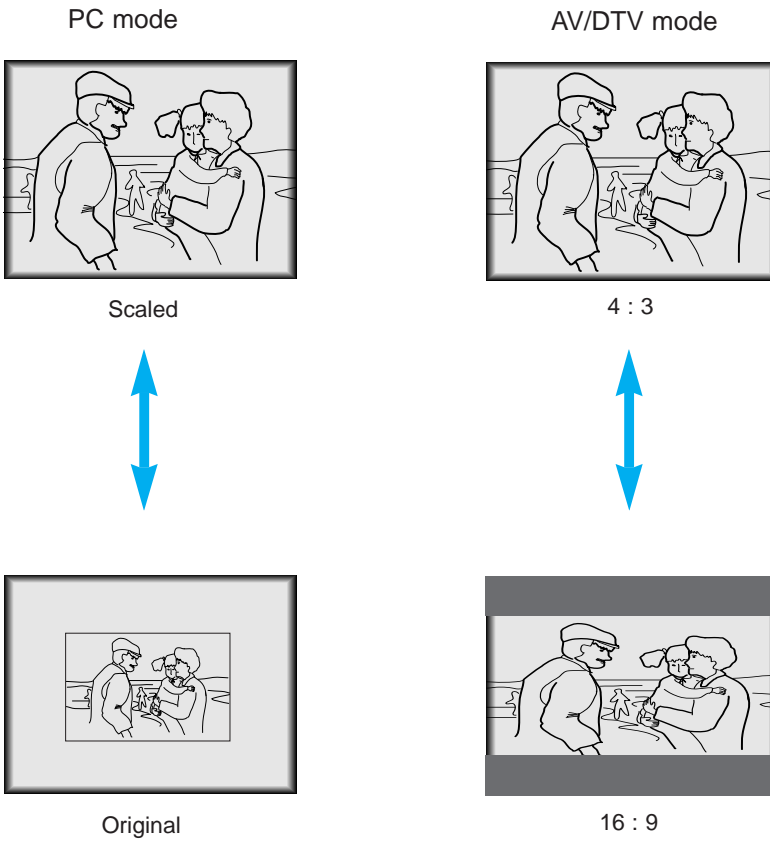


- a. Selecting 720X400  
: If the input signals are 720X400 70Hz or 640X400 70Hz, the projected image size will always be adjusted to the format of 720X400 70Hz.
- b. Selecting 640X400  
: If the input signals are 720X400 70Hz or 640X400 70Hz, the projected image size will always be adjusted to the format of 640X400 70Hz.
- To exit menu display, press the **menu** button repeatedly.

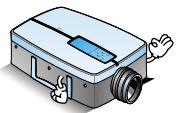
# Using Resize function

Press the **resize** button.

Each press of the button changes the display as below.



DISPLAY  
POSITION



● You can also use this function by using the **menu** button.

# Adjusting screen display

## Positioning

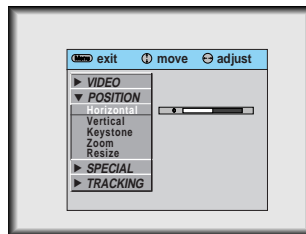
- If the image size does not fit the screen properly, set the position of the image by selecting the **Horizontal / Vertical** item.
- **Keystone** function adjusts the upper and lower width of the projected image to prevent the image shape from appearing skewed. This can occur if the screen and projector are not perpendicular to one another.

**1** Press the **menu** button and move the **pointer** button up or down to select the POSITION menu.



**2** Press the **enter** button and move the **pointer** button up or down to select the **Horizontal**, **Vertical** or **Keystone** item.

### PC mode

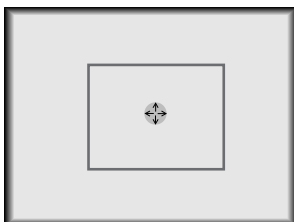


**3** Press the **pointer** button and move the button left or right or press the **volume** buttons to adjust the image on the screen.

- **Horizontal, Vertical, Keystone** are adjusted from -50 to +50.
- To exit the menu display, press the **menu** button repeatedly.

## Zoom Function

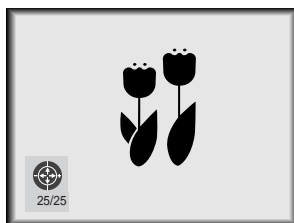
- 1 Press the **zoom** button.



- 2 Move the **pointer** button to the position you wish to see enlarged. Press the **enter** button to enlarge the selected areas.

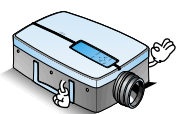
- 3 Press the **L-mouse** or **R-mouse** button to adjust the zoom level.

- **L-mouse** button makes the image look smaller.
- **R-mouse** button makes the image look larger.



- 4 Move to the position you want to see the enlarged display by moving the **pointer** button left, right, up, or down.

- 5 Press the **zoom** button again to return to normal viewing.



- You can also use this function by using the **menu** button.
- In the zoom mode, you can adjust horizontal / vertical position with the **pointer** button.

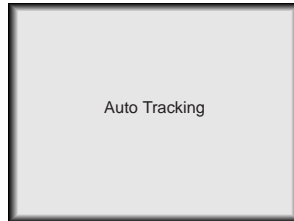
# Using Tracking function

## Auto Tracking Function

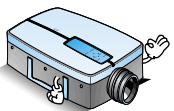
### ● Auto Tracking Function

This function automatically adjusts the difference of horizontal width and tremor of the image. This difference is caused by discord of the internal signal of the projector and diverse graphic signals of PC.

Press the **auto tracking** button.



- Image positioning and tremor adjusting are automatically performed.



- You can also access this function by using the **menu** button.(PC mode)
- Perform this function while on a stationary image because you may not get the best video quality on a moving image from a PC graphic signal.
- This function should be performed using a stationary image from the PC.



## Clock / Phase Function

- **Clock Function**

This function adjusts the horizontal width of the projected image to enable the image to fit on the screen size.

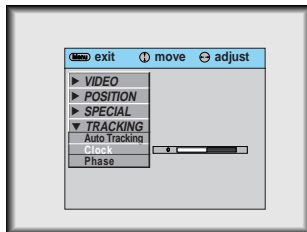
- **Phase Function**

This function is for the detailed adjustment of the clock function.

- 1 Press the **menu** button and move the **pointer** button up or down to select the TRACKING menu.



- 2 Press the **enter** button and move the **pointer** button up or down to select the **Clock** or **Phase** item.



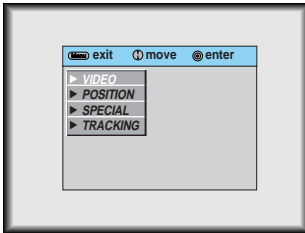
- 3 Move the **pointer** button left or right or press the **volume** buttons to adjust the screen condition.

- To exit the menu display, press the **menu** button repeatedly.

# Adjusting Video

- 1 Press the **menu** button and move the **pointer** button up or down to select the VIDEO menu.

PC Mode

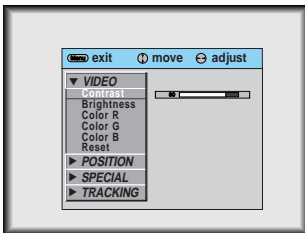


AV Mode

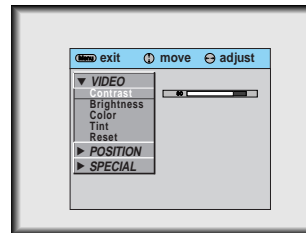


- 2 Press the **enter** button.

PC Mode



AV Mode



- 3 Move the **pointer** button up or down to select the desired video item.

- 4 Move the **pointer** button left or right or press the **volume** buttons to adjust the selected video item:

- To restore the original image condition select the **Reset** item and press ENTER.
- To exit the menu display, press the **menu** button repeatedly.

# Supported Monitor Display

- The projector displays images at a resolution of 1024 x 768 pixels. To display higher resolution images (1152 x 864 mode, 1280 x 1024 mode), the projector compresses it to 1024 x 768. The following table lists the display formats supported by the projector.

Sources	Format	Vertical Freq. (Hz)	Horizontal Freq. (kHz)
VGA/EGA	640X350	70.090Hz	31.468kHz
	640X350	85.080Hz	37.861kHz
PC98 / VGA text	640X400	85.080Hz	37.861kHz
	720X400	70.082Hz	31.469kHz
	720X400	85.039Hz	37.927kHz
VGA	640X480	59.940Hz	31.469kHz
	640X480	66.667Hz	35.00kHz
	640X480	72.800Hz	37.861kHz
	640X480	75.00Hz	37.500kHz
	640X480	85.008Hz	43.269kHz
	640X480	100.040Hz	53.011kHz
SVGA	640X480	120.00Hz	64.062kHz
	800X600	56.250Hz	35.156kHz
	800X600	60.317Hz	37.879kHz
	800X600	72.188Hz	48.077kHz
	800X600	75.00Hz	46.875kHz
	800X600	85.061Hz	53.674kHz
XGA	800X600	90.00Hz	56.00kHz
	800X600	100.00Hz	64.016kHz
	1024X768	43.479Hz	35.522kHz
	1024X768	60.004Hz	48.363kHz
	1024X768	70.069Hz	56.476kHz
	1024X768	75.029Hz	60.023kHz
SXGA	1024X768	84.997Hz	68.677kHz
	1152X864	60.053Hz	54.348kHz
	1152X864	70.016Hz	63.995kHz
	1152X864	75.00Hz	67.500kHz
	1152X864	85.057Hz	77.487kHz
	1280X960	60.00Hz	60.00kHz
	1280X960	75.00Hz	75.00kHz
	1280X960	85.002Hz	85.938kHz
	1280X1024	60.020Hz	63.981kHz
	1280X1024	75.025Hz	79.976kHz
1280X1024	85.024Hz	91.146kHz	
UXGA	1600X1200	60.00Hz	75.00kHz
MAC	16¥ 832X624	74.550Hz	49.725kHz
	19¥ 1024X768	60.004Hz	48.363kHz
	1024X768	75.029Hz	60.023kHz
	20¥ 1152X870	75.062Hz	68.681kHz
HD	1920X1080i	60.00Hz	33.750kHz
	1280X720p	60.00Hz	45.00kHz

- If the projector does not support the input signal, the OUT OF RANGE message will appear on the screen.
- The projector supports DDC1/2B type as Plug & Play function.(Auto recognition of PC monitor)

# Maintenance

- The projector requires very little maintenance. You should keep the lens clean because any dirt or stains may appear on the screen. Clean the air filter attached at the bottom of the projector periodically because a clogged air filter prevents proper ventilation that is necessary to cool the projector and prevents it from overheating. If any parts need to be replaced, contact your service center.
- When cleaning any part of the projector, always turn the power off and unplug the projector first.

## Cleaning the lens

Clean the lens if dirt or dust appears on the surface of it. Wipe the lens surface gently with a soft, dry lint-free cloth, or use an air spray.

To remove dirt or stains on the lens, moisten a soft cloth with water and a neutral detergent and wipe the lens surface gently.

## Cleaning the Projector Case

To remove dirt or dust, wipe the casing with a soft, dry, lint-free cloth. To remove stubborn dirt or stains, moisten a soft cloth with water and a neutral detergent and then wipe the casing.

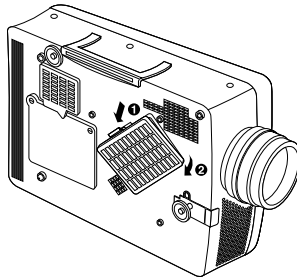
Do not use alcohol, benzene, thinners or other chemical detergents as these can cause damage to the case.

## Cleaning the Air Filter

The air filter, which is located at the bottom of the projector, should be cleaned after every 100 hours of use. If it is not cleaned periodically, it can become clogged with dust and prevent the projector from being ventilated properly. This may cause overheating and damage of the projector.

To clean the air filter :

1. Stand the projector on its side so that the handle is on the top, and you can easily access the air filter.
2. Push the opening tip of the air filter cover and remove the cover.



3. To clean the filter, use a small vacuum cleaner designed for computers or other office equipment. Or you may use a dry, lint-free cloth.  
If it is difficult to remove dirt or the filter is torn, contact your the service center for replacement.
4. Close the filter cover after cleaning.

# Troubleshooting

Before calling for service, please check the following symptoms/solutions. You may be able to avoid a service call.

Symptom	Cause	Solution	Page
Operation indicator does not light.	-Power Cable is loose.	<ul style="list-style-type: none"> <li>• Tighten power cable securely to projector and power outlet.</li> </ul>	25
Projected image gets darker or deteriorates.	-Lamp is about to fail.	<ul style="list-style-type: none"> <li>• Contact service center to replace lamp.</li> </ul>	13
Temperature indicator is red.	<ul style="list-style-type: none"> <li>-Cooling fan not working.</li> <li>-Internal circuits damaged.</li> <li>-Air filter clogged.</li> <li>-Room is hot.</li> </ul>	<ul style="list-style-type: none"> <li>• Contact service center.</li> <li>• Contact service center.</li> <li>• Clean air filter.</li> <li>• Cool off room.</li> </ul>	13, 43
No image appears on-screen.	<ul style="list-style-type: none"> <li>-Power off.</li> <li>-Lens cap on.</li> <li>-Source not selected/off.</li> <li>-Unit warming up.</li> </ul>	<ul style="list-style-type: none"> <li>• Turn power on.</li> <li>• Remove lens cap.</li> <li>• Select correct source, turn source on.</li> <li>• Lamp at full power after 40 seconds.</li> </ul>	15 - 23
Menu will not appear.	-Source not connected.	<ul style="list-style-type: none"> <li>• Connect source.</li> </ul>	15 - 22, 27
"NO SIGNAL" message appears.	<ul style="list-style-type: none"> <li>-Source not connected.</li> <li>-Source not sending out a signal.</li> </ul>	<ul style="list-style-type: none"> <li>• Connect source.</li> <li>• Check all connections.</li> <li>• Check source operation.</li> </ul>	15 - 22, 27
"OUT OF RANGE" message appears.	-Not a supported format.	<ul style="list-style-type: none"> <li>• Change to supported format.</li> <li>• Change format of source signal output.</li> </ul>	42
No sound.	<ul style="list-style-type: none"> <li>-Volume level too low.</li> <li>-Connection problem.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase sound level.</li> <li>• Connect cables securely.</li> </ul>	15 - 23
Image color is wrong.	<ul style="list-style-type: none"> <li>-Incorrect color balance.</li> <li>-Wrong video settings.</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust color balance.</li> <li>• Adjust Video menu options.</li> </ul>	41
Blurred or out of focus image.	<ul style="list-style-type: none"> <li>-Out of focus or position.</li> <li>-Tracking wrong.</li> <li>-Lens dirty.</li> </ul>	<ul style="list-style-type: none"> <li>• Focus and position image on screen.</li> <li>• Adjust tracking.</li> <li>• Clean lens, see maintenance.</li> </ul>	23 - 24 39 43



## Specifications.

LXG-120	Model
0.9 in. (22.9 mm)	LCD panel size
1024 (Horizontal) x 768 (Vertical) pixels	resolution
40-300 in. (1.01-7.6 m)	screen size
5.03-54.08 ft. (1.64-16.35 m.)	projecting distance
39.3 ft. (12 m)	remote control distance
1W	speaker system
4:3 (horizontal:vertical)	horizontal / vertical ratio
1:1.3	zoom ratio
NTSC/PAL/SECAM/NTSC4.43/PAL-M/PAL-N	Video Compatibility
AC 120V 60Hz	Power
3.9 in. (98.5 mm) (including front foot)	height
9.3 in. (238 mm)	width
13.18 in. (329.5 mm) (including lens)	length
7.5 lbs. (3.4 kg)	weight



### Operating Condition

#### temperature

In operation : 32-104°F(0°C-35°C)  
In storage and transit : -4-140°F(-20°C-60°C)

#### humidity

In operation : 20 - 80% relative humidity by dry hygrometer  
In storage : 10 - 90% relative humidity by dry hygrometer

P/NO : 3828VA0245G (3840VA0026E)

206-3671