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LG LCD PROJECTOR

Please read this manual carefully before operating your set.

Retain it for future reference.

Record model number and 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 :

Serial number :

RL-JA10
OWNER'S MANUAL





LCD PROJECTOR



FCC NOTICE

- **A Class B digital device**

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

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

CONTENTS

INDEX

Before operating the unit, please read this manual carefully.

1	Safety Instructions	3	INTRO- DUCTION
	Names of parts	7	
2	Installation Instructions	13	INSTALLATION AND COMPOSITION
	Composition	15	
	Turning on the Projector	17	
	Turning off the Projector	18	
	Operating the Projector	19	
	Selecting source mode	20	
3	Connecting to a Desktop PC	21	CONNECTION
	Connecting to a Notebook PC	22	
	Connecting to a Macintosh Desktop PC	23	
	Connecting to a Macintosh PowerBook	26	
	Connecting to a wireless trasmitter(TW-AV10T)	27	
	Connecting to a wireless receiver(TW-AV10R)	28	
	Connecting to a Video Source	29	
	Connecting to a DVD	30	
	Connecting to a D-TV Settop Box	31	
4	Function checking	32	BASIC FUN- CTIONS
	Using Still function	33	
5	Selecting language	34	SPECIAL FUNCTIONS
	Using Flip Horizontal / Vertical function	35	
	Using Blank function	37	
	Checking lamp time	38	
	Selecting PC screen size input signal	39	
6	Using Resize function	40	POSI- TIONING
	Adjusting screen display	41	
7	Using Tracking function	43	TRACK- ING
8	Adjusting Video	45	VIDEO / AUDIO
	Adjusting Audio	47	
9	Supported Monitor Display	48	INFORMA- TION
	Maintenance	49	
	Specifications	50	

Safety Instructions

▶ Always keep the safety instructions to prevent any potential accident or misuse of the projector.

▶ Safety Instructions have two kinds of information, and each meaning of it is as below.



WARNING

The violation of this instruction may cause serious injuries and even death.




NOTES

The violation of this instruction may cause light injuries or damage of the projector.

* The meanings of symbols in the manual and the unit are as below.

▶  Take care of danger that may happen under specific condition.

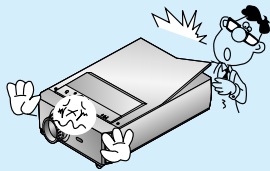
▶  Take care of electric shock that may happen under specific condition.

▶ After reading this manual, keep it in the place that the user always can contact easily.



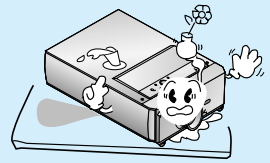
WARNING

Do not attempt to repair or adjust this equipment. Contact your dealer or Service center. High risk of electric shock!



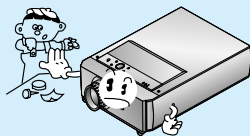
Do not place anything containing liquid on top of the projector. High risk of Electric Shock or damage to the projector.

This may cause a fire or could give an electric shock.



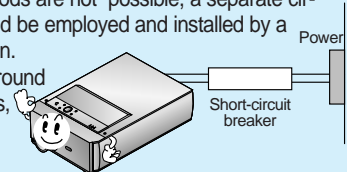
Don't insert any object into the exhaust vent .

This may cause a fire or could give an electric shock.



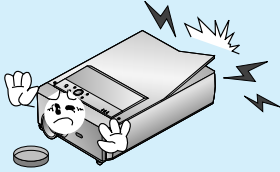
Earth wire should be connected.

- If the earth wire is not connected, there is possible a danger of electric shock caused by the current leakage.
- If grounding methods are not possible, a separate circuit breaker should be employed and installed by a qualified electrician.
- Do not connect ground to telephone wires, lightning rods or gas pipe.

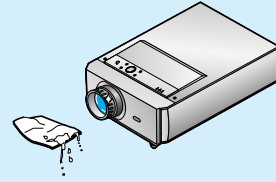


⚠ WARNING

Don't remove any covers (except lens cover). High risk of Electric Shock!

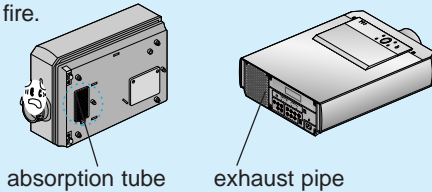


Use an air spray or soft cloth that is wet with a neutral detergent and water for removing dust or stains on the projection lens.

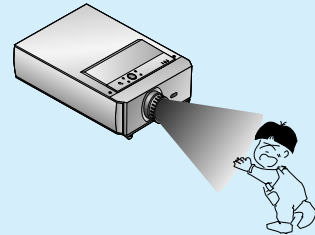


Don't clog the opening (absorption tube/exhaust pipe) of the projector.

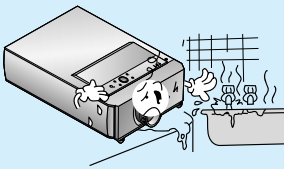
It makes internal temperature increase and causes a fire.



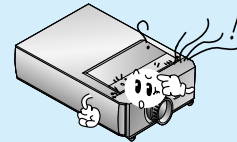
Don't look directly onto the lens when the projector is in use. Eye damage may occur!



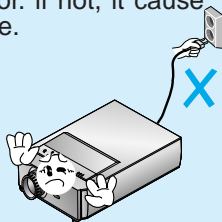
Don't use the projector in damp place such as a bathroom or any place where it is likely to get wet. Serious damage could occur or risk of Electric Shock!



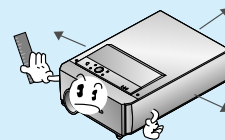
Don't use the projector if there is smoke or unusual smell from the projector. Disconnect from the mains and contact the service center. Risk of fire!



To cooling the lamp, leave the projector plugged in for at least 3 minutes after switching off the projector. If not, it causes shortening of projector life.

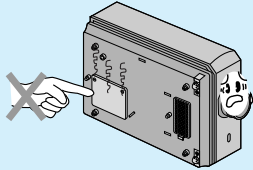


Leave an adequate distance (30cm or more) around the projector.



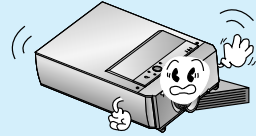
⚠ NOTES

No contact while working, or right after the lamp is off since the exhaust port and the lamp lid generate heat.



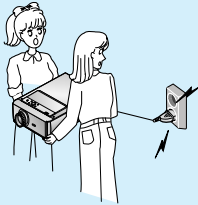
Only use the projector on a level and stable surface.

It may fall down or be upset.



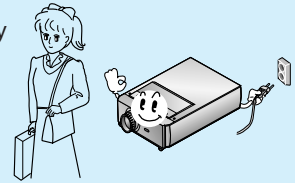
Disconnect from the mains and remove all connections before moving.

Damage of cords may cause a fire or electric shock.



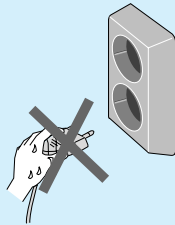
Be sure to unplug when you don't use the projector for a long period or you are absent.

Accumulated dust may cause a fire, electric shock from deterioration, or electric leakage.

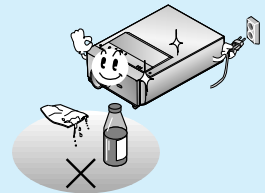


Never touch the power plug with wet hand.

It may cause electric shock.

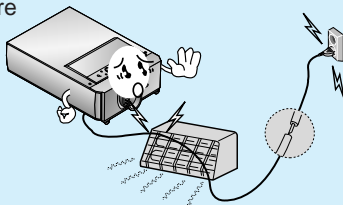


Don't use alcohol, benzene, or thinners to clean any plastic parts of the projector. Never use industrial chemicals or detergents.



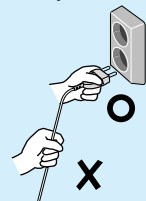
Ensure the power lead doesn't trail across any hot objects like a heater.

It may cause a fire or electric shock.



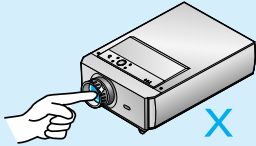
Hold the plug tightly when unplugging.

If you hold the cord when unplugging, the internal line of the cord may be cut. This may cause heating and fire.

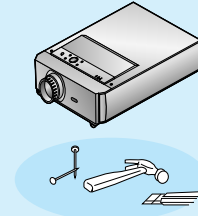


⚠ NOTES

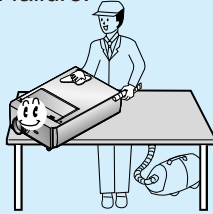
Don't touch the lens of the projector. It may cause damage of it.



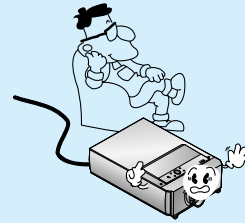
Don't use any sharp tools on the projector as this will damage the casing.



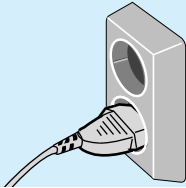
If the projector requires cleaning inside contact the service centre. Accumulated dust can cause mechanical failure.



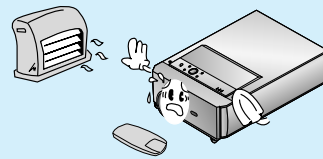
Place the projector where people will not trip or tread on the power lead.



Use the indicated type of power source on the projector. If you are not sure of the type of power available, consult your dealer or customer service center.

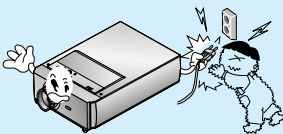


Don't place the projector or the remote control on a heater or use in a heated car.

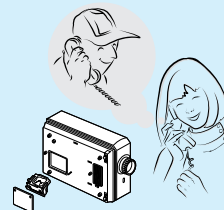


Don't use the projector when the power cord or the plug is damaged or the connecting part of wall socket is loose.

It may cause electric shock or a fire.



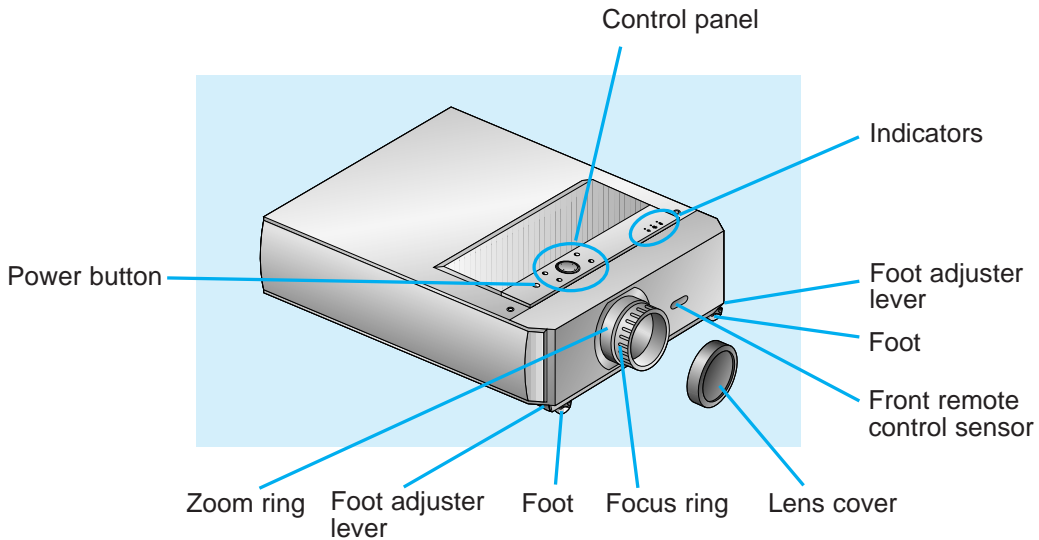
Contact your dealer for replacing a new lamp.



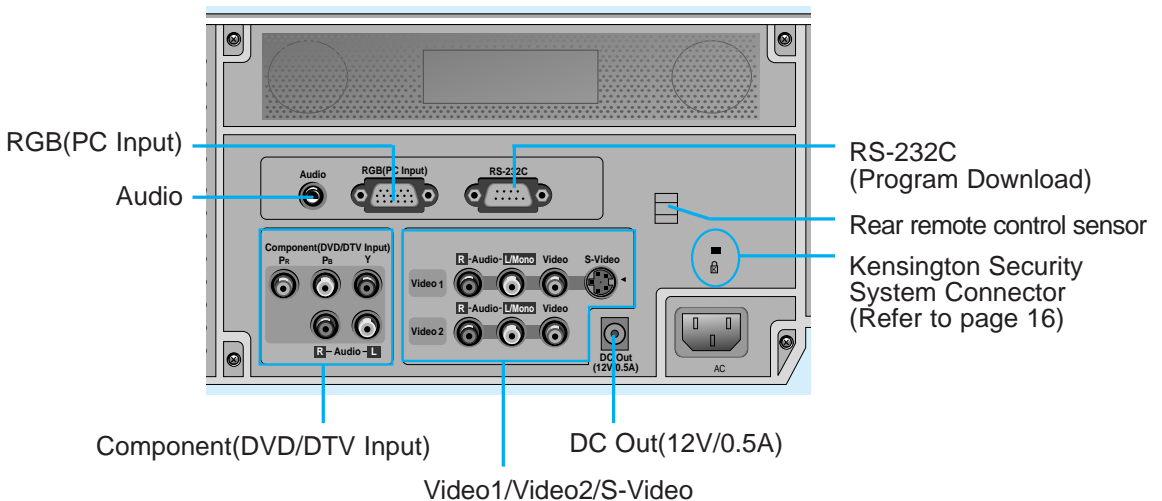
Names of parts

Main Body

* The LCD projector is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD projector. This is a normal result of the manufacturing process and does not indicate a malfunction.



Rear Connecting Part

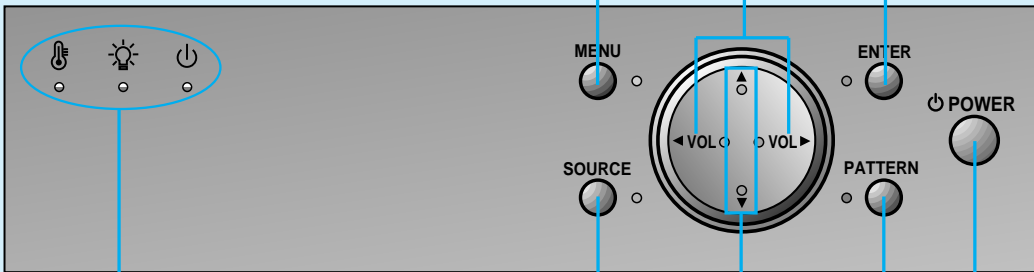


Control Panel

VOLUME ◀, ▶ Button
Adjusts volume level and functions of menus.

MENU Button
Selects or closes menus.

ENTER ■ Button
Checks present mode and saves the change of functions.



Indicators

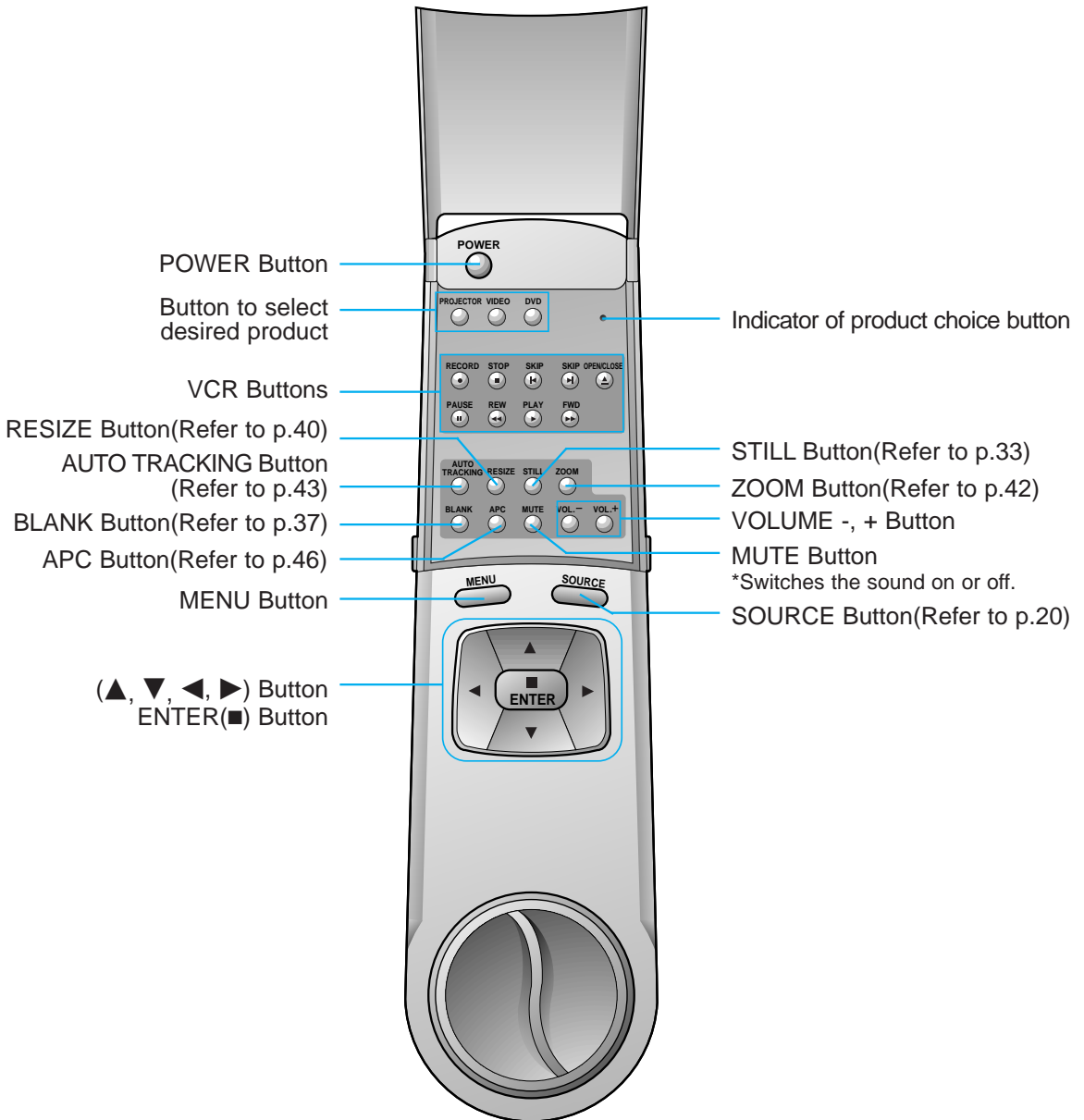
▲, ▼ Button
Selects menus and items in the menu.

POWER Button

SOURCE Button
Switches to RGB, Video 1, Video 2, S-Video, Component mode.

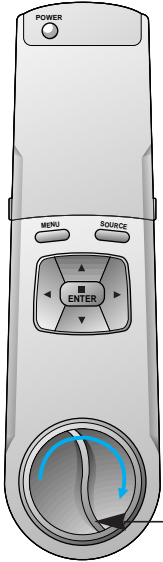
PATTERN Button
When pressing PATTERN button, the screen display's the screen for focus adjustment.

Remote Control



How to use the remote control

* The remote control can be charged with the internal electric generator. So you don't need change the battery and the remote control will not break down by battery damage.



Charge the remote control in the arrow direction as picture left.

To charge the remote control

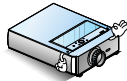
Caution : Do not rotate the handle too rapidly for the remote control.

In first use

20 times rotation of the remote control → waiting for one minute → 20 times rotation again → waiting for one minute → 20 times rotation again → beginning of use

In usual use

5 or 6 times rotation → resuming to use



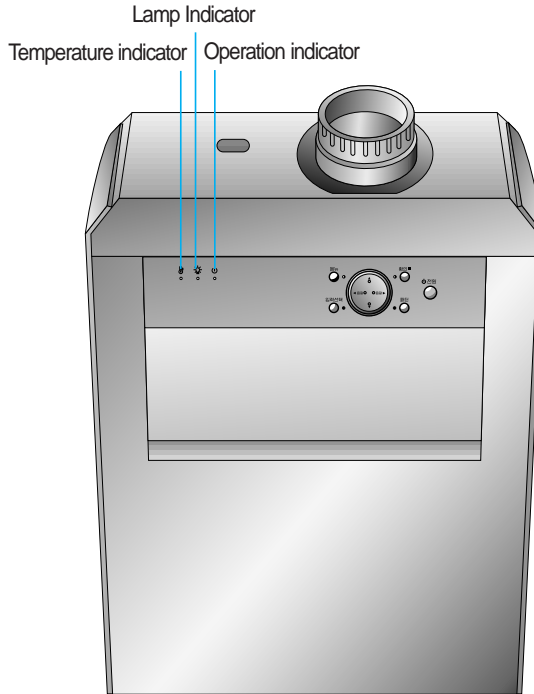
If you don't use the remote control for long time, charge it.

Operation range of remote control based on a product

Button	Projector	VCR	DVD
PROJECTOR	X	X	X
VIDEO	X	X	X
DVD	X	X	X
POWER	O	O	O
RECORD	X	O	X
SPOP	X	O	O
SKIP ▶	X	X	O
SKIP ◀	X	X	O
PAUSE	X	O	O
REW	X	O	O
PLAY	X	O	O
FWD	X	O	O
OPEN/CLOSE	X	O	O
AUTO TRACKING	O	X	X
RESIZE	O	X	X
STILL	O	X	X
ZOOM	O	X	X
PATTERN	O	X	X
APC	O	X	X
MUTE	O	X	X
VOL.-	O	X	X
VOL.+	O	X	X
MENU	O	X	O
SOURCE	O	X	X
ENTER	O	O	O
▲	O	X	O
▼	O	X	O
◀	O	X	O
▶	O	X	O

Projector Status Indicators

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



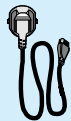
Operation Indicator	Orange	Standby.
	Green	On operation.(Turn on the lamp)
	Orange(flashing)	Projector lamp is cooling as power out(3 minutes)
	Off	Power off.
Lamp Indicator	Red	Projection lamp is reaching the end of its life and needs to be replaced with a new lamp.(over 1500 hours) "Replace the Lamp"
	Red(flashing)	The projector has trouble in the lamp or around it. Contact the service center.
	Green(flashing)	The lamp cover or absorption pipe cover is not closed.
Temperature Indicator	Orange	This projector is in high temperature. If you don't turn off the projector, it'll be turned off automatically. "Temperature is Too High"
	Red	The projector is turned off as its high temperature.
	Red (flashing)	Power has turned off due to problem with the internal cooling fan. Contact your service center.

" " is the warning message on screen.

Accessories



Remote Control



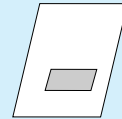
Power Cord



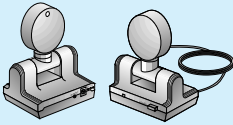
Audio/Video Cable



Audio Cable

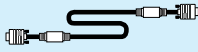


Operating guide



A/V wireless transmitter-receiver

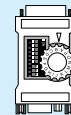
* See A/V wireless transmitter-receiver operating guide for installation and connection etc.



Computer Cable



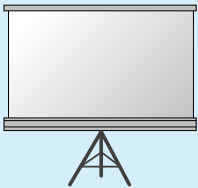
SCART to RCA jack (option)



MAC Desktop Adaptor

Optional Extras

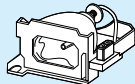
- * Contact your dealer for buying these items.
- * When applying a ceiling installer, use only the ceiling installer for LCD projector.
- * Contact your dealer for replacing a new lamp.



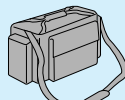
Screen for projecting



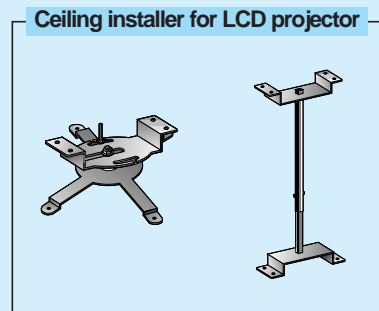
S-Video Cable



Lamp



Portable Bag

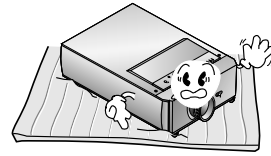
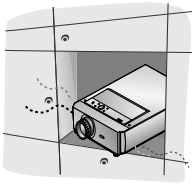


Installation Instructions

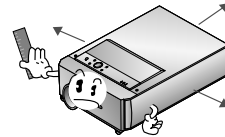
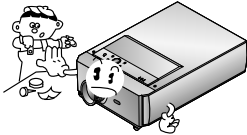
* Don't place the projector in the following conditions. It may cause malfunction or product damage.

Provide proper ventilation for this projector.

- The projector is equipped with ventilation holes(intake) on the bottom and ventilation holes(exhaust) on the front. do not block or place anything near these holes, or internal heat build-up may occur, causing picture degradation or damage to the projector.
- Do not place the projector on a carpet, rug or other similar surface. It may prevent a adequate ventilation of the projector bottom. This product should be mounted to a wall or ceiling only.

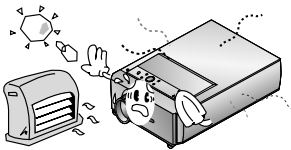


- Never push projector or spill liquid of any kind into the projector.
- Leave an adequate distance(30cm or more) around the projector.



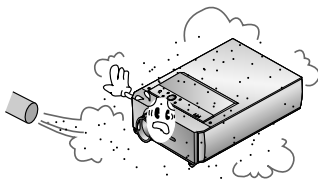
Place this projector in adequate temperature and humidity conditions.

- Install this projector only in a location where adequate temperature and humidity is available. (refer p.50)

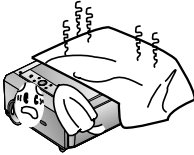


Don't place the projector where it can be covered with dust.

- This may cause overheating of the projector. Clean the Air filter periodically.



- Do not clog the slots and openings of the projector. It may cause overheating.



- The LCD projector is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD projector. This is a normal result of the manufacturing process and does not indicate a malfunction.

- This product should be used adequate length bolt (within 15mm) when installing it. The bolt not included with the projector.

- When applying a ceiling installer, use only the fixing bolt and ceiling installer for LCD projector. Contact your dealer for purchase or installation.



TP-ML1



TP-MH1

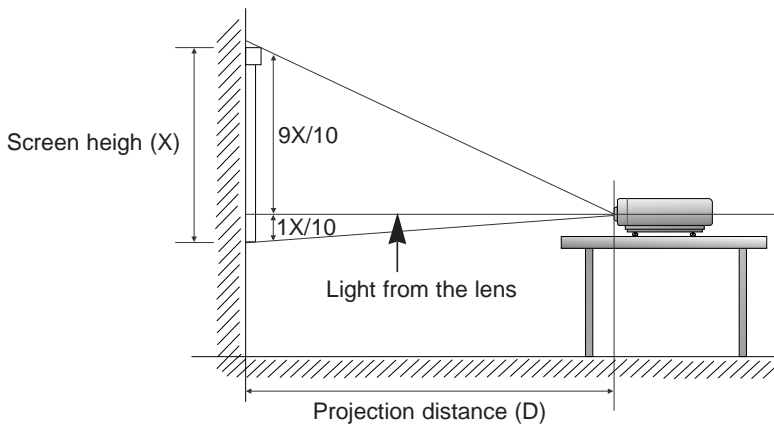
- To receive the DTV program, it is necessary to purchase DTV receiver (Settop Box) and connect it to the projector.

- If there is no input signal, Menu will not display 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 the correct distance from the screen. The distance between the projector and the screen determines the actual size of the image.
3. Turn the projector so that the lens can be at a right angle to the screen. If the projector is not at a right angle, the screen image will be crooked. At this time perform keystone function.(Refer to page 41.)
4. Connect the cables of the projector to a wall power socket and other connected sources.

projection distance based on the picture format



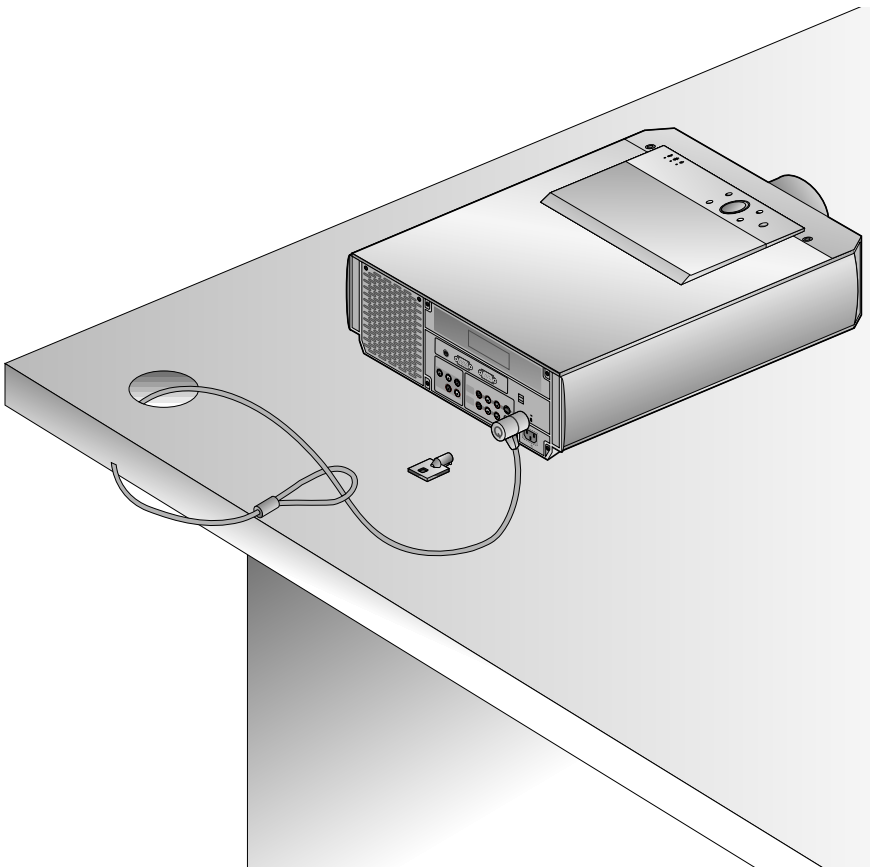
16:9 picture format										mm
scree size	40"	60"	80"	90"	100"	110"	120"	150"	200"	300"
scree height (X)	498	747	996	1121	1245	1370	1494	1868	2491	3736
The shortest distance (D)	1640	2510	3340	3760	4180	4600	5020	6270	8360	12550
The longest distance (D)	2190	3460	4610	5190	5760	6340	6920	8650	11530	17300

* The longest distance/the shortest distance show status what adjusted by zoom function.

4:3 picture format										mm
scree size	40"	60"	80"	90"	100"	110"	120"	150"	200"	300"
scree height (X)	610	914	1220	1370	1520	1670	1830	2290	3050	4570
The shortest distance (D)	2030	3050	4070	4580	5090	5600	6110	7640	10190	15280
The longest distance (D)	2800	4200	5610	6320	7020	7720	8420	10530	14040	21060

Using Kensington Security System

- The projector has 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.
And for further information, contact <http://www.kensington.com>, the internet homepage of the Kensington company that deals with expensive electronic equipments such as notebook PCs or LCD projectors.
- Kensington Security System is an optional item.



Turning on the Projector

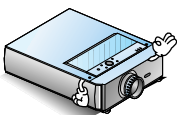
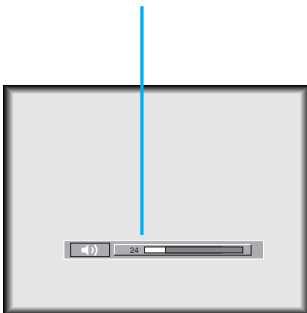
1 Remove the lens cover of the projector.

2 Press the **POWER** button on the remote control or top cover. (Green operation indicator flashes during turning on the lamp.)

- It will take about 1 minute to display the picture after power on because the lamp of the projector needs stabilization.
 - An image will appear after the operation indicator has flashed green for some time.
 - Select the source mode with the **SOURCE** button.
 - To cooling the lamp, leave the projector plugged in for at least 3 minutes after switching off the projector screen. If not, it cause shortning of projector life.
 - Do not turn on the projector until it takes about 6 seconds after connecting projector.
-

3 Adjust volume level.

- If you press **VOLUME -** button, sound and volume level number are increased.
- If you press **VOLUME +** button, sound and volume level number are decreased.



* Don't turn main power off and don't unplug the power cord while the ventilation fan(inlet/outlet) is working.

Turning off the Projector

- 1 Press the **POWER** button on the top cover or remote control.



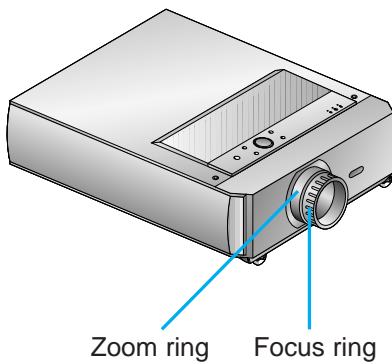
- 2 Press the **POWER** button on the top cover or remote control again to cut off the power.

- 3 If operation indicator is flashing (orange), leave the power cord plugged into the outlet (for 3 minutes). Do not pull out from the outlet until operation indicator is orange.
 - If operation indicator is flashing (orange), the power button on the top cover or remote control may not operate for 1 minute.

Operating the Projector

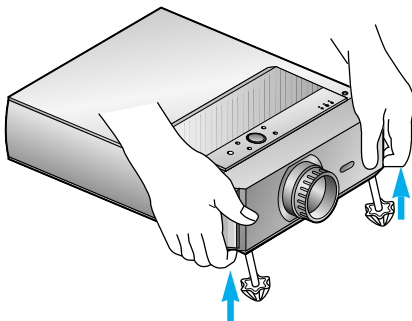
Focusing and Positioning the Screen Image

When an image appears on the screen, check if it is in proper focus and fits well to the screen.



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

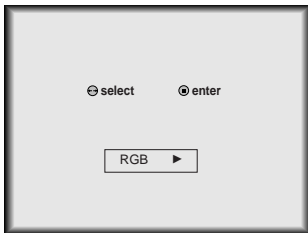
To raise or lower the image on the screen, extend or retract two feet at the bottom of the projector as below.



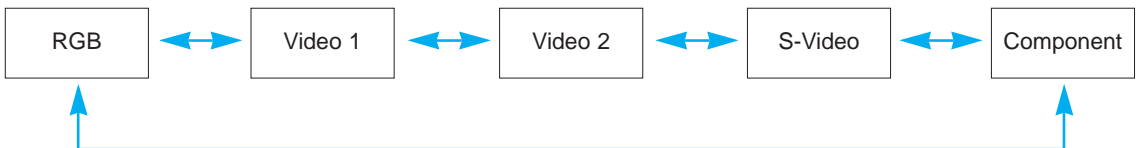
1. Stand behind the projector and lift the foot adjuster levers while you support the front of the projector. This unlocks the feet and can make them move freely. Take care not to drop the projector.
2. While lifting the foot adjuster levers, raise or lower the projector until the screen image is positioned properly.
3. Release the lever to lock the feet in their new position.
4. To fine-tune the height of the projector, rotate the front feet to raise or lower it. After raising the front feet, don't give impact on the upper side of the projector or press down strongly.

Selecting source mode

- 1 Press the **SOURCE** button

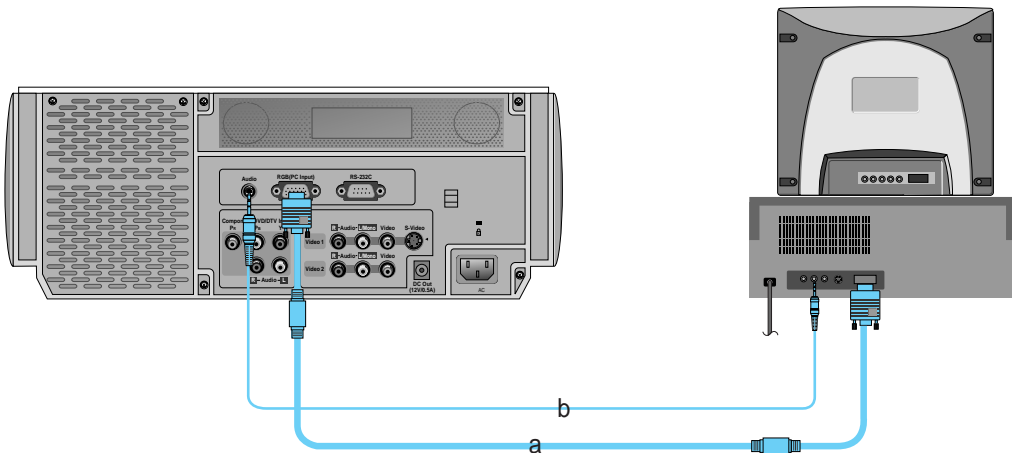


- 2 Each press of the (◀, ▶) buttons button changes the display as below.



Connecting to a Desktop PC

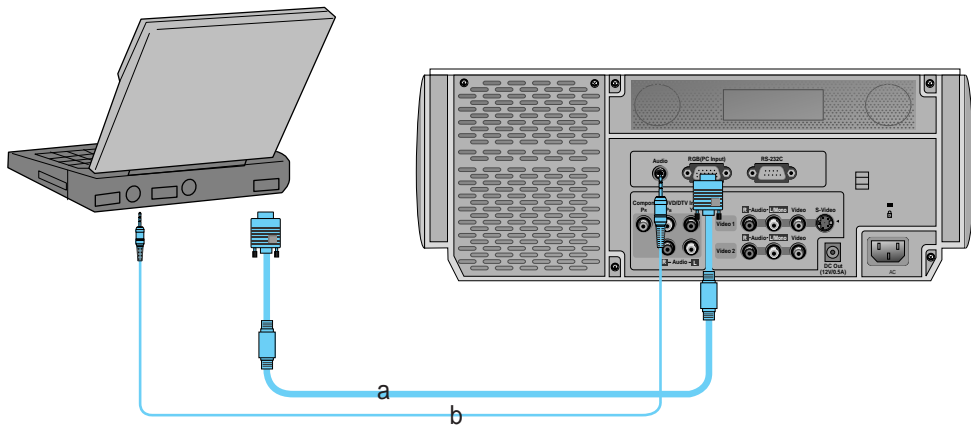
- * You can connect the projector to a computer of VGA, SVGA, XGA and SXGA output.
- * Refer to page 48 for the projector supported monitor display.



< How to connect >

- Connect computer cable to **RGB (PC Input)** of the projector.
- Connect the audio cable of PC (LINE OUT sound port) to **Audio** of the projector.
* If the PC has two audio out ports of SPEAKER OUT and LINE OUT, connect the LINE OUT port to get better sound quality.

Connecting to a Notebook PC



< How to connect >

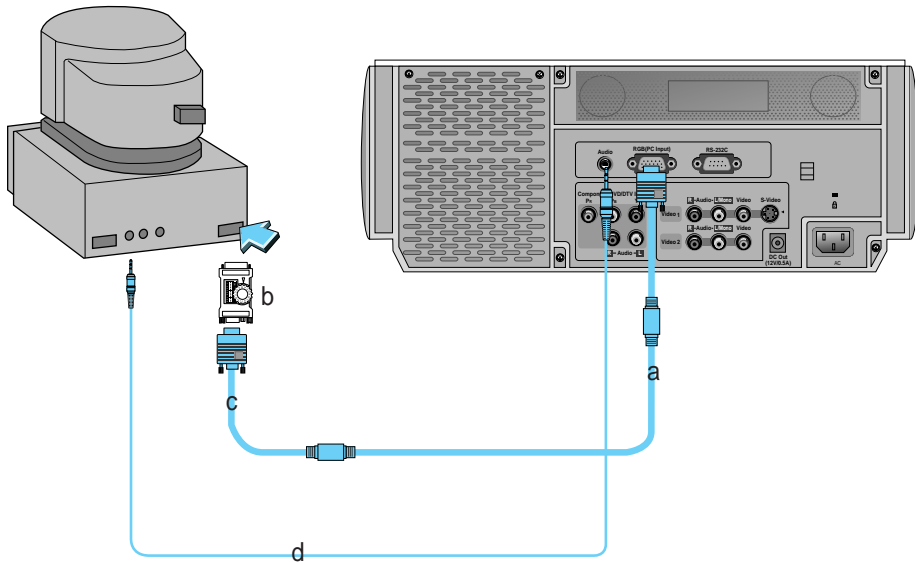
- a. Connect computer cable to **RGB (PC Input)** of the projector.

* If you set your computer, such as a notebook type IBM PC/AT compatible, to output the signal to both the display of your computer and the external monitor, the picture of the external monitor may not appear properly. IN such cases, set the output mode of your computer to output the signal only to the external monitor. For details, refer to the operating instructions supplied with your computer.

- b. Connect the audio cable of PC to **Audio** of the projector.

Connecting to a Macintosh Desktop PC

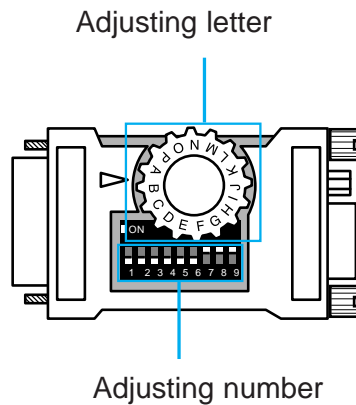
* You must use the Macintosh desktop adaptor to connect the projector to a Macintosh PC.



< How to connect >

- a. Connect either end of the computer cable to **RGB (PC Input)** of the projector.
- b. Set the adjusting number and letter of the Macintosh desktop adaptor in accordance with the resolution you want to use and connect the adaptor to the Macintosh. (Refer to page 24 ~ 25)
- c. Connect the computer cable to the Macintosh desktop adaptor.
- d. Connect the audio cable of the PC to **Audio** of the projector.

How to use the Macintosh desktop adaptor



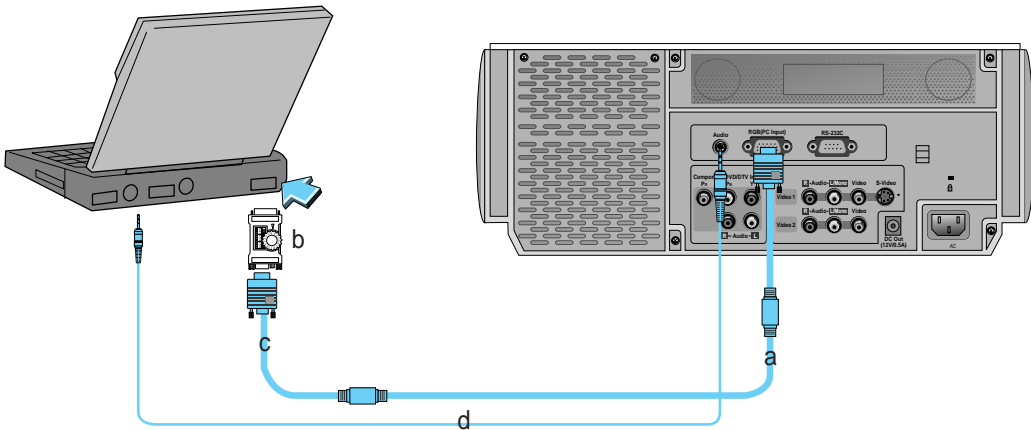
- a. How to use
Usually set 1 ~ 6 to OFF status and 7 ~ 9 to ON status of the adjusting numbers. And select the adjusting letter which is correct to the Macintosh and the monitor. (Refer to page 25.)
- b. Notes for Connecting to the Macintosh PowerBook
If you get problems when connecting it to the projector, set the adjusting number 9 to OFF status and restart the Macintosh PowerBook.

Connecting to a Macintosh Desktop PC

Adjusting letters of MAC desktop adaptor in accordance with kinds of MAC and output spec.

MAC S	output spec output resolution horizontal frequency(KHz) vertical frequency(Hz) adjusting letter	12xRGB	13x14xRGB	15xPortrait	VGA	SVGA	SVGA	16xColor	19xColor	19xColor	2Page Mono	21xColor	NTSC	PAL
		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
MAC Ixi, Ixi		N	J	O	G						M	P	L	H
MAC Ixi, Iix		N	J		G									
LC		N	J		M									
LCII		N	J		G									
LCIII		N	J	O	G			F						
LC475, LC550		N	J	O	G	G		F						
LC575		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														
160,165C,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

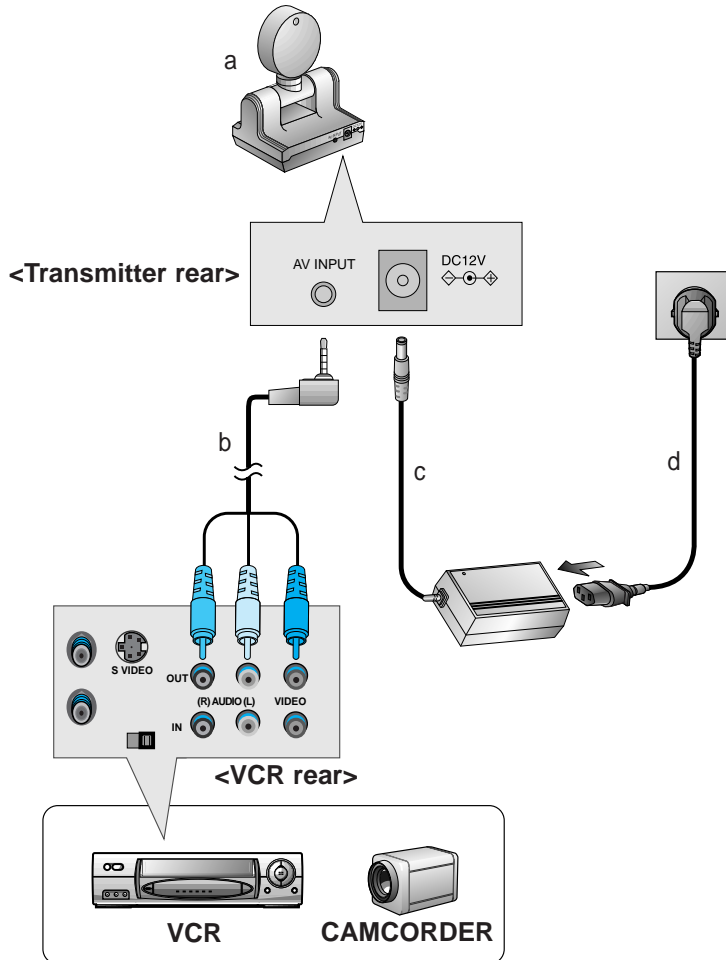


< How to connect >

- a. Connect the computer cable to **RGB (PC Input)** of the projector.
- b. Set the adjusting number and letter of the Macintosh desktop adaptor in accordance with the resolution you want to use and connect the adaptor to the Macintosh PowerBook.(Refer to page 24 ~ 25)
- c. Connect the other end of the computer cable to the Macintosh desktop adaptor.
- d. Connect the audio cable from the PC to **Audio** of the projector.

Connecting to a wireless transmitter (TW-AV10T)

- * When connecting the wireless transmitter with external equipments, match the colors of connecting ports (Video - yellow, Audio(L) - white, Audio(R) -red).
- * If you have a mono VCR, connect the audio cable from the VCR to the AV input of the wireless AV transmitter.
- * See the wireless transmitter-receiver operating guide for installation and connection etc.

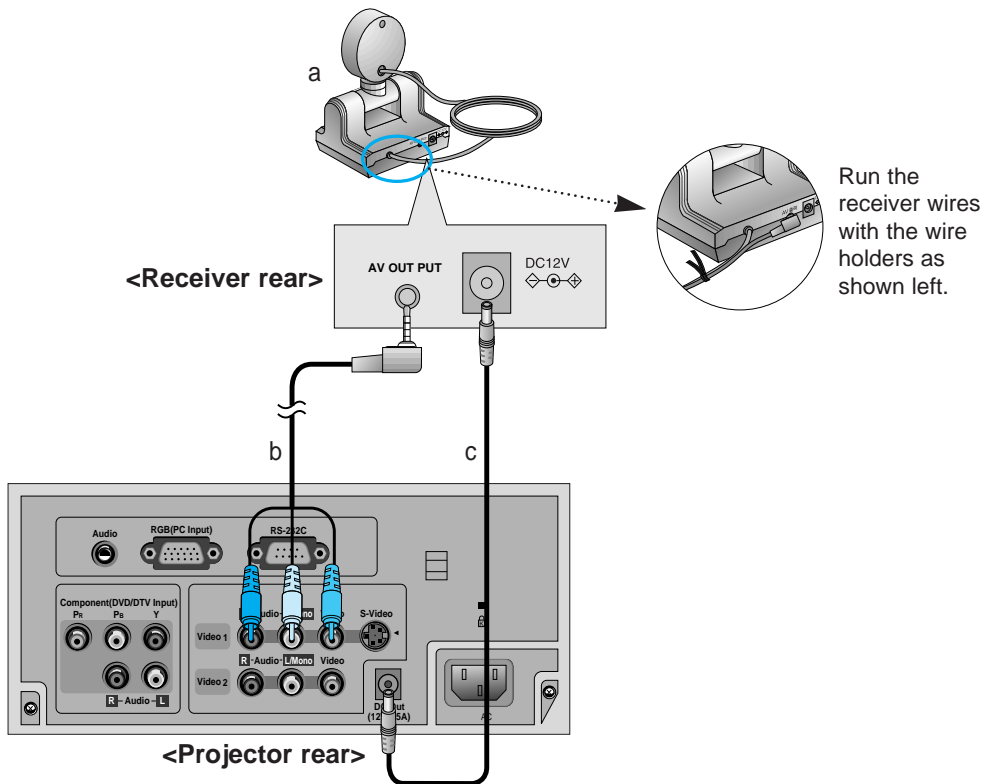


< How to connect >

- Place the wireless AV transmitter toward the wireless receiver.
- Connect the output ports of the VCR to the AV INPUT port of the wireless AV transmitter.
- Connect the adaptor to the DC input of the wireless AV transmitter .
- Connect the power plug to the wall outlet socket after connecting the power cord to the adaptor.

Connecting to a wireless receiver (TW-AV10R)

* When connecting the wireless receiver with external equipments, match the colors of connecting ports (Video - yellow, Audio(L) - white, Audio(R) -red).

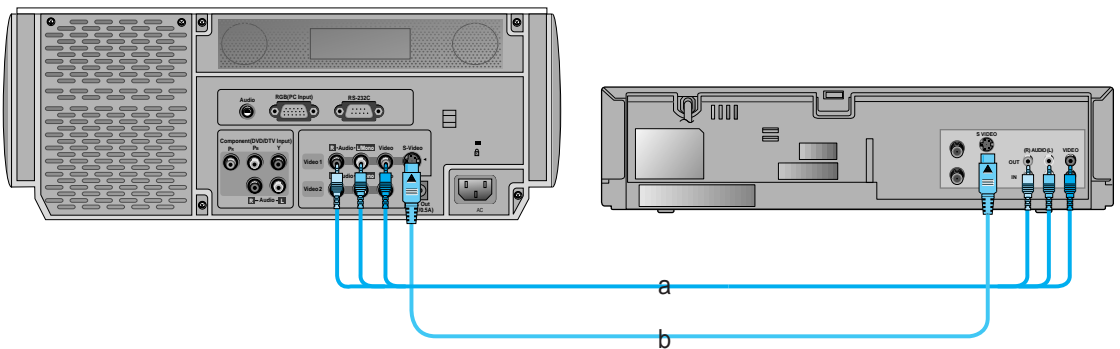


< How to connect >

- Place the wireless AV receiver toward the wireless transmitter.
- Connect the AV input ports of the Projector to the AV OUTPUT port of the receiver.
- Connect the DC output of the projector to DC input of the wireless receiver with DC cable.

Connecting to a Video Source

- * In AV input mode, if the auto video system recognition fails to detect a correct video system type, please press the **AUTO TRACKING** button on the remote. Then the projector executes the fine auto video system recognition.
- * You can connect a VTR, a camcorder, a LDP or any other compatible video image source to the projector.



< How to connect 1 >

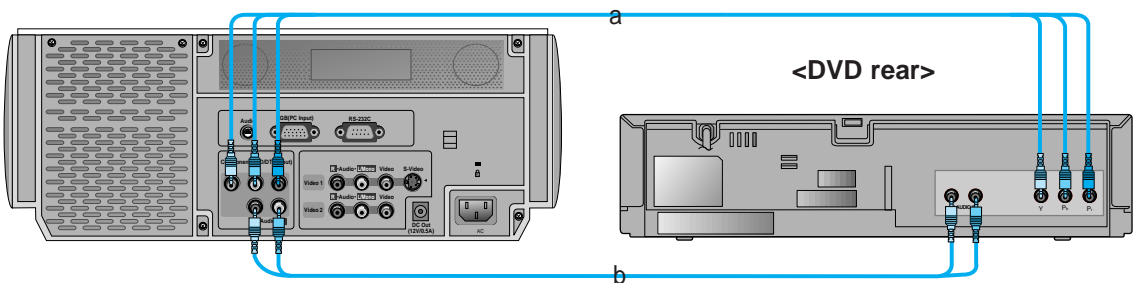
- Connect the AV input ports of the projector to the output ports of the A/V source with A/V cables. The video cable is yellow and the left audio is white and right audio is red.
 - * In case of connecting Video 1, select Video 1.

< How to connect 2 >

- Connect S-Video input port of the projector to S-Video output port of A/V source with S-Video cable.
 - * You can get better picture quality when connecting S-Video source to the projector.

Connecting to a DVD

* The output ports (Y, Pb, Pr) of the DVD might be inscribed as Y, Pb, Pr / Y, B-Y, R-Y / Y, Cb, Cr according to the equipments.



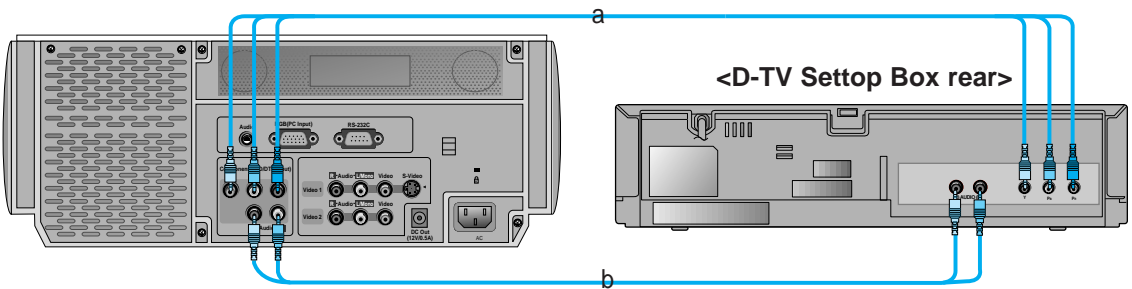
CONNECTION

< How to connect >

- Connect the **Component (DVD/DTV Input)** ports (Y, Pb, Pr) of the projector to the Video output ports (Y, Pb, Pr) of the DVD.
- Connect the **Component (DVD/DTV Input)** ports (R, L) of the projector to the Audio output ports (R, L) of the DVD.

Connecting to a D-TV Settop Box

- * To receive the DTV program, it is necessary to purchase DTV receiver (Settop Box) and connect it to the projector.
- * Please refer to the owner's manual of the DTV Settop Box for the connection between LCD projector and DTV Settop Box.



< How to connect >

- Connect the **Component (DVD/DTV Input)** ports (Y, PB, PR) of the projector to **DTV OUT** of the D-TV Settop Box.
- Connect the **Component (DVD/DTV Input)** ports (Y, PB, PR) of the projector to the Audio output ports (R, L) of the D-TV Settop Box.

Function checking

- * If there is no input signal, Menu will not display on screen.
- * This operating guide explains operation of RGB (PC) mode mainly.

1 Press the **MENU** button.

2 Press the (▲,▼) buttons to select a function you want to use, then press the **ENTER(■)** button to the screen as shown below.



3 Press the (▲,▼,◀,▶) buttons to select a function that you want to use or adjust.

● To finish the menu display, press the **MENU** button.

* In Video 1, Video 2, S-Video and Component (480i) mode, **[Horizontal]** / **[Vertical]** in POSITION menu is not displayed.

In Video 1, Video 2, S-Video and Component (480i/480p/720p/1080i) mode, **[Zoom]** in POSITION menu is not displayed.

* S-Video and Component (480i/480p/720p/1080i) mode, TRACKING menu and **[VGA Text]** in SPECIAL menu is not displayed. In Video 1 and Video 2 mode, **[VGA Text]** in SPECIAL menu is not displayed.

* The sub menus of VIDEO menu in Video 1, Video 2, S-Video and Component mode are different from those in the RGB (PC) mode. (Refer to page 45).

Using Still function

- 1 Press the **STILL** button.
* You can freeze the input image.



<Moving Image>

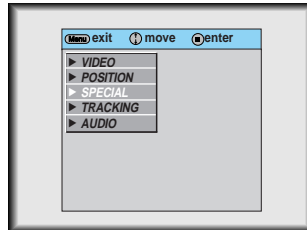


<Still Image>

- 2 To finish this function, press the **STILL** button again.

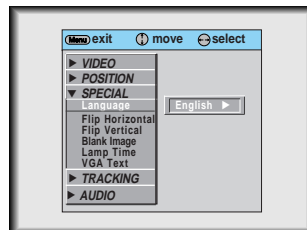
Selecting language

- 1 Press the **MENU** button and then press the (▲, ▼) buttons to select the SPECIAL menu as below.



- 2 Press the **ENTER**(■) button and press the (▲, ▼) buttons to select [Language] item.

- 3 Press the (◀, ▶) Buttons to select the language you want to use.
 - On-Screen-Display(OSD) is marked in the selected language from this point.
 - To finish menu display, press the **MENU** button.

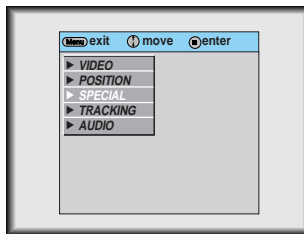


Using Flip Horizontal / Vertical function

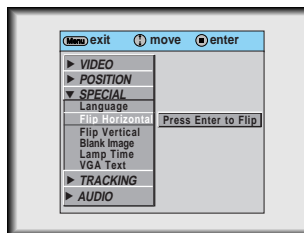
Flip Horizontal Function

* 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 then press the (▲,▼) buttons to select the SPECIAL menu as below.

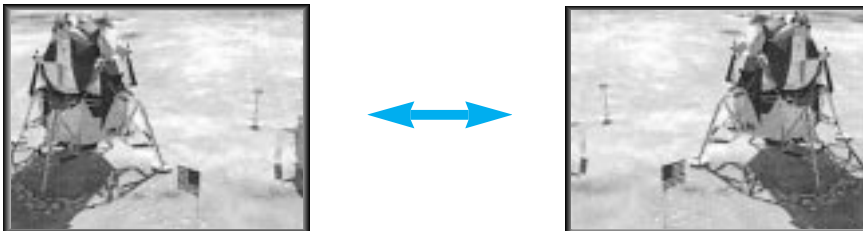


- 2 Press the **ENTER**(■) button and press the (▲,▼) buttons to select [Flip Horizontal] item.



- 3 Press the **ENTER**(■) button to see reversed image.

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

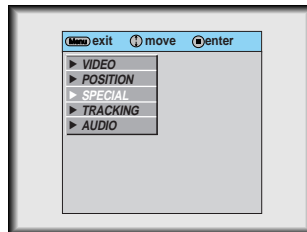


Flip Vertical Function

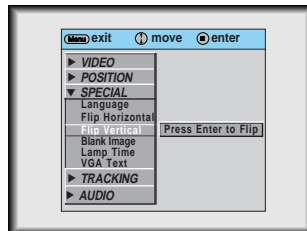
* This function reverses the upper and the lower side of the projected image.

* When you hang the projector upside down from the ceiling for using, you need to reverse all the sides(left, right, upper, lower) of the image.

- 1 Press the **MENU** button and then press the (▲,▼) buttons to select the SPECIAL menu as below.



- 2 Press the **ENTER**(■) button and press the (▲,▼) buttons to select [Flip Vertical] item.



- 3 Press the **ENTER**(■) button to see reversed image.

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



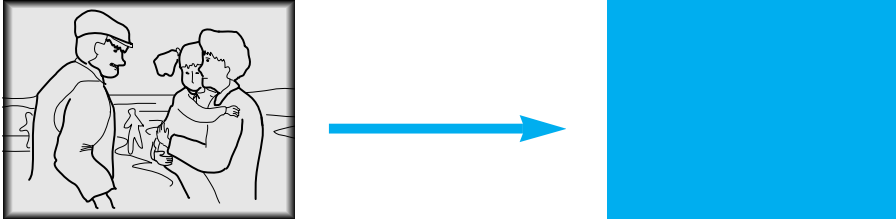
Using Blank function

* This function may be effective if you need to get attention of the attendants in meetings or briefings.

1 Press the **BLANK** button.

* The screen turns of to a background color and sound turns off.

* You can choose the background color in [Blank image] of SPECIAL menu. (Refer to 'Selecting blank image color')

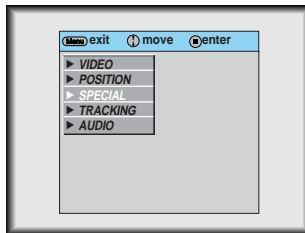


2 To exit the blank status, press any button (Except **POWER** button).

* If exiting the blank status sound also comes on.

Selecting Blank Image color

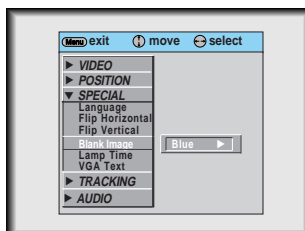
1 Press the **MENU** button and then press the (▲, ▼) buttons to select the SPECIAL menu as below.



2 Press the **ENTER**(■) button and press the (▲, ▼) buttons to select [Blank Image] item.

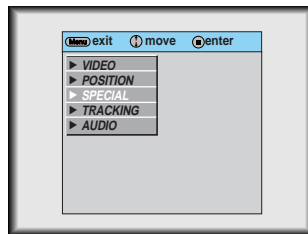
3 Press the (◀, ▶) buttons to select the color you want to use.

- Background color will be changed to the selected color from this point.
- To exit menu display, press the **MENU** button.

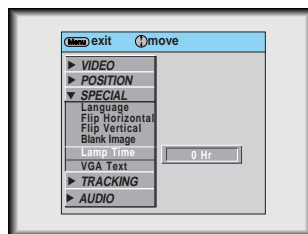


Checking lamp time

- 1 Press the **MENU** button and then press the (▲,▼) buttons to select the SPECIAL menu as below.



- 2 Press the **ENTER**(■) button and press the (▲,▼) buttons to select [Lamp Time] item.



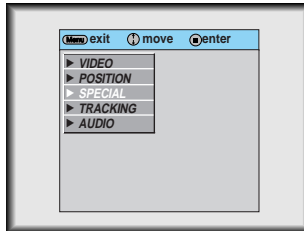
- You can see the used lamp time.
- When projector lamp is reaching the end of its life(over 1500 hours), the lamp indicator will flash(red) and the projector will display "Replace the Lamp" on screen.

Selecting PC screen size input signal

* When PC input mode, select the appropriate screen size in SPECIAL menu as below to get the image size of PC on DOS mode to fit on the projected screen.

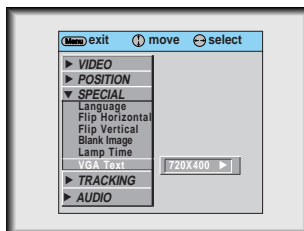
In other screen size signals (except 640X400 70Hz and 720X400 70Hz), the projected screen sizes are adjusted automatically.

- 1 Press the **MENU** button and then press the (▲,▼) buttons to select the SPECIAL menu as below.



- 2 Press the **ENTER**(■) button and press the (▲,▼) buttons to select the [VGA Text] item.

- 3 Press the (◀, ▶) buttons to select the screen size you want to use.



- a. Selecting 720X400
: When input signals are 720X400 70Hz or 640X400 70Hz , the projected screen size is always adjusted to the format of 720X400 70Hz.
- b. Selecting 640X400
: When input signals are 720X400 70Hz or 640X400 70Hz , the projected screen size is always adjusted to the format of 640X400 70Hz.
- To exit menu display, press the **MENU** button.

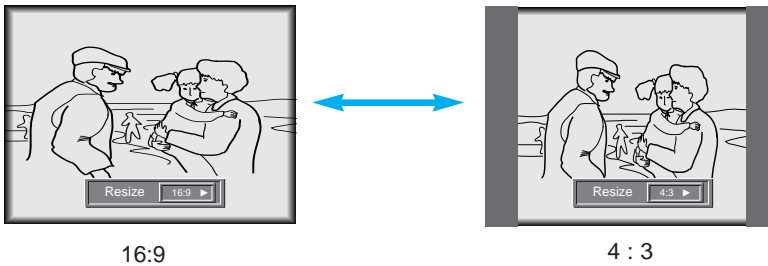
Using Resize function

* With HD input (720p,1080i) mode, you can select 16:9 picture format only.

1 Press the **RESIZE** or (◀, ▶) buttons.

Each press of the button changes the display as below.

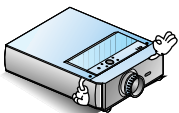
< RGB(PC) mode >



< Video 1/Video 2/S-Video/Component mode >



POSI-
TIONING



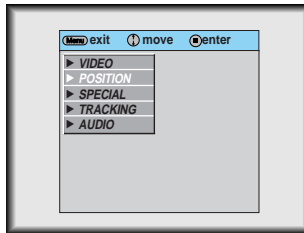
* You can also use this function by using the **MENU** button.

Adjusting screen display

Positioning

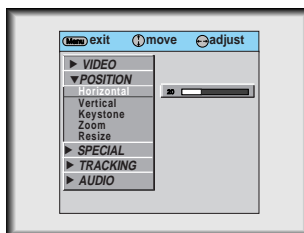
- * If the image size does not fit the screen in accordance with the input source, set the position of the image by selecting Horizontal / Vertical position.
- * **Keystone** function adjusts the upper and lower width of the projected image to prevent the image shape from being a trapezoid shape. Use this function when the screen or the projector is slanted and cannot make a rectangular projection angle.

- 1 Press the **MENU** button and then press the (▲, ▼) buttons to select the POSITION menu.



- 2 Press the **ENTER**(■) button and press the (▲, ▼) buttons to select to select (Horizontal), (Vertical) or (Keystone) item.

< RGB (PC) mode >

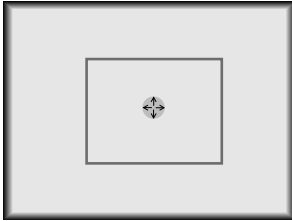


- 3 Press the (◀, ▶) buttons or **VOLUME** (-, +) buttons to adjust the screen condition as you want.
 - (Horizontal), (Vertical) , (Keystone) are adjusted from -50 to +50.
 - To exit the menu display, press the **MENU** button.

Zoom Function

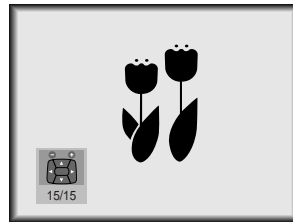
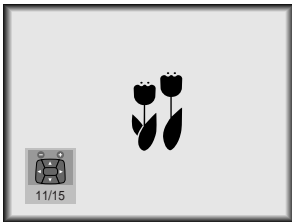
* This function works only in RGB (PC) mode.

- 1 Press the **ZOOM** button.



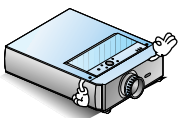
- 2 Press the (▲, ▼, ◀, ▶) buttons to move the screen position you want to enlarge and press the **ENTER**(■) button.

- 3 Press the **VOLUME** (+, -) buttons to adjust the zoom level.



- 4 Move to the position you want to see the enlarged display by pressing the (▲, ▼, ◀, ▶) buttons.

- 5 Press the **ZOOM** button again to finish the zoom function.



- * You can use this function by using the **MENU** button.(RGB(PC) mode)
- * In the zoom mode, you can adjust horizontal / vertical position with the (▲, ▼, ◀, ▶) button.

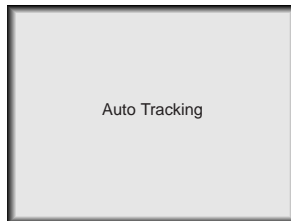
Using Tracking function

Auto Tracking Function

* Auto Tracking Function

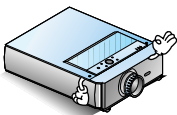
This function assures you of getting the best video quality by automatically adjusting the difference of horizontal width and tremor of the image. This difference is caused by disaccord of the internal signal of the projector and diverse graphic signals of PC.

- 1 Press the **AUTO TRACKING** button.



* Image positioning and tremor adjusting are automatically performed.

- 2 Adjust [**Clock**] or [**Phase**] in TRACKING menu after operation of [**Auto Tracking**] if you want to get better picture quality in accordance with PC input modes. (Refer to page 44.)



- * You can also use this function by using the **MENU** button.(RGB (PC)/Video 1/Video 2 mode)
- * Perform this function while on stopped image because you may not get the best video quality on a moving image of PC graphic signal.

Clock / Phase Function

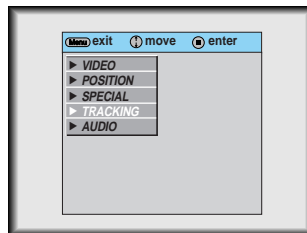
* Clock Function

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

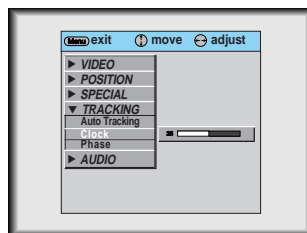
* Phase Function

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

- 1 Press the **MENU** button and then press the (▲,▼) buttons to select the TRACKING menu.



- 2 Press the **ENTER**(■) button and press the (▲,▼) buttons to select the [Clock] or [Phase] item.

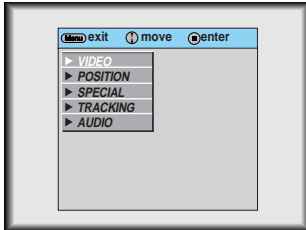


- 3 Press the (◀, ▶) buttons or **VOLUME** (-, +) buttons to adjust the screen position.
 - To exit the menu display, press the **MENU** button.

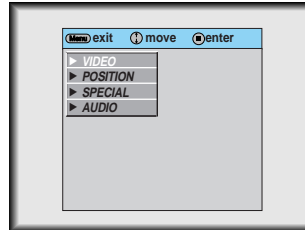
Adjusting Video

- 1 Press the **MENU** button and then press the (▲, ▼) buttons to select VIDEO menu.

< RGB(PC) mode >



< Video 1/Video 2/S-Video/Component mode >

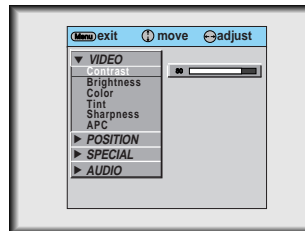


- 2 Press the **ENTER**(■) button

< RGB(PC) mode >



< Video 1/Video 2/S-Video/Component mode >



- 3 Press the (▲, ▼) buttons to select a video item you want to adjust.

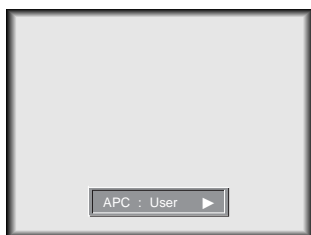
- 4 Press the (◀, ▶) buttons or **VOLUME** (-, +) buttons to adjust the selected video item as you want.

- To restore the original image condition after changing it, press **ENTER**(■) button after selecting (**Reset**) item. (RGB(PC) mode)
- If you select the [APC] in Video 1, Video 2 and Component, you can select [Dynamic], [Standard] and [Mild].
- To finish menu display, press the **MENU** button.

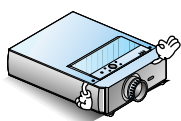
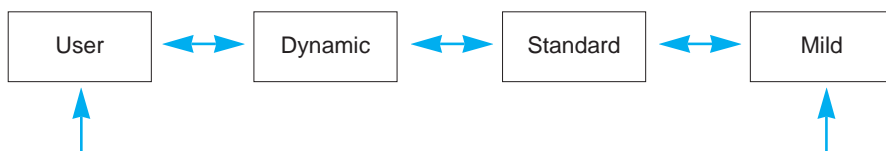
APC (Auto Picture Control)

* This function doesn't work in RGB (PC) mode.

- 1 Press the **APC** button.



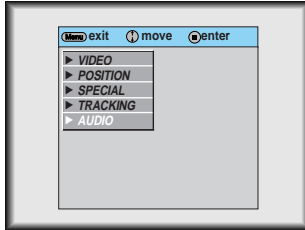
- 2 Each press of the **APC** button or (◀, ▶) buttons changes the screen as shown below.



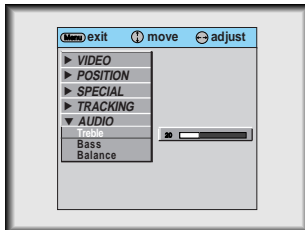
* You can also use this function by using the **MENU** button.(Video1/Video2 /S-Video/Component mode)

Adjusting Audio

- 1 Press the **MENU** button and then press the (▲, ▼) buttons to select AUDIO menu.



- 2 Press the **ENTER**(■) button



- 3 Press the (▲, ▼) buttons to select a audio item you want to adjust.

- 4 Press the (◀, ▶) buttons or **VOLUME** (-, +) buttons to adjust the selected audio condition as you want.

- To finish menu display, press the **MENU** button repeatedly.

Supported Monitor Display

* The projector displays images at a resolution of 1280x720 pixels. A definition or screen quality in PC mode may be deteriorate because other resolution change and output into resolution of 1280x720 pixels by enlarging or reduction of image.

Video system input signal

Video System	Remarks
NTSC M	3.579545 / 60Hz
NTSC 4.43	4.433618 / 60Hz
PAL	4.433618 / 50Hz
PAL M	3.575611 / 60Hz
PAL N	3.582056 / 50Hz
SECAM	4.286 / 50Hz

DVD/DTV display specification

Sources	Format	Vertical Freq.(Hz)	Horizontal Freq.(kHz)
480i	704X480	60/50Hz	15kHz
	720X480	50/60Hz	15kHz
480p	704X480	60Hz	31kHz
	720X480	60Hz	31kHz
720p	1280X720	60Hz	45kHz
1080i	1920X1080	60Hz	33.75kHz

Projector image display specification

Sources	Format	Vertical Freq.(Hz)	Horizontal Freq.(kHz)	
VGAEGA	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	
SVGA	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	
	800X600	90.00Hz	56.00kHz	
XGA	1024X768	60.004Hz	48.363kHz	
	1024X768	70.069Hz	56.476kHz	
	1024X768	75.029Hz	60.023kHz	
	1024X768	84.997Hz	68.677kHz	
SXGA	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	
	1280X1024	60.020Hz	63.981kHz	
	1280X1024	75.025Hz	79.976kHz	
MAC	16¥ 832X624	74.550Hz	49.725kHz	
	19¥	1024X768	60.004Hz	48.363kHz
		1024X768	75.029Hz	60.023kHz
	20¥	1152X870	75.062Hz	68.681kHz

* If the projector does not support the input signal, "CHECK INPUT SIGNAL" message appears on the screen.

* The projector supports DDC1/2B type as Plug & Play function.(Auto recognition of PC monitor)

* Synchronization input form : separate, Composite

Maintenance

- * The projector needs little maintenance. You should keep the lens clean because any dirt or stains may appear on the screen. You will also need to 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 dealer. When cleaning any part of the projector, always turn the power off and unplug the projector first.

Cleaning the lens

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

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 clean the projector case, first unplug the power cable. 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.

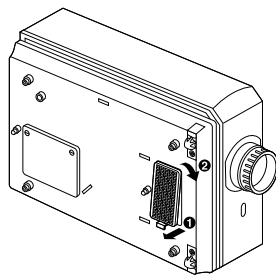
Do not use alcohol, benzene, thinners or other chemical detergents as these can cause the casing to be warped.

Cleaning the Air Filter

The air filter, which is located at the bottom of the projector, should be cleaned after every 100 hours' 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. Switch the projector off and unplug the power cable from the wall socket.
2. Stand the projector on it's side so that the handle can be at the top, and you can easily access the air filter.
3. Push the opening tip of the air filter cover and remove the cover.



4. The air filter is inside the cover. To clean the filter, use a small vacuum cleaner designed for computers or other office equipment. If not, you may use a dry, lint-free cloth. If it is difficult to remove dirt or the filter is torn, contact your dealer or the service center to replace it.
5. Close the filter cover after cleaning.
6. Plug the power cable back into the wall socket.

Specifications.

RL-JA10	Model
1.2 inches	LCD panel size
1280(Horizontal) x 720(Vertical)pixel	resolution
1.01~7.6m(40~300 inches)	screen size
12m	remote control distance
1.5W + 1.5W	speaker system
16:9(horizontal:vertical)	horizontal / vertical ratio
1:1.3	zoom ratio
NTSC/PAL/SECAM/NTSC4.43/PAL-M/PAL-N	Video compatibility
AC 100 - 240V~50/60Hz	Power
158mm(including front foot)	height
344mm	breadth
448.6mm(including lens)	length
9.6kg	weight



Warning

This is a class B product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

Operating Condition

temperature

In operation : 32~104°F(0°C~40°C)
In storage and transit : -4~140°F(-20°C~60°C)

humidity

In operation : 0~ 80% relative humidity by dry hygrometer
Not in operation : 0 ~ 90% relative humidity by dry hygrometer

Projection Lamp

lamp model

AJ-LA30

power consumption

150W



P/NO : 3828VA0284J(373-026H)

