

LCD PROJECTOR

MODEL

**UL7400U**

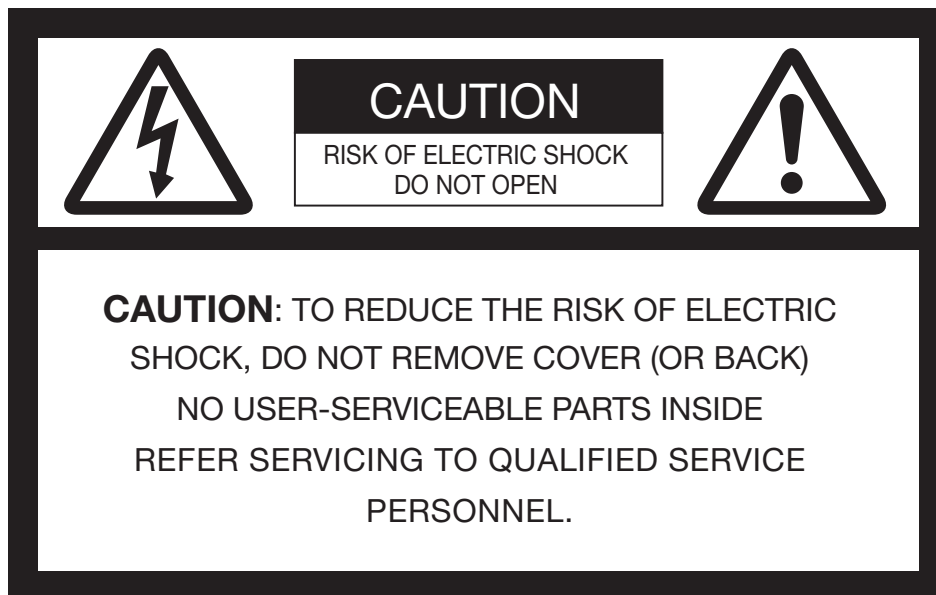
User Manual



*UL7400*

This User Manual is important to you.  
Please read it before using your projector.





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.



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 HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

**CAUTION:**

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

**NOTE:**

SINCE THIS PROJECTOR IS PLUGGABLE EQUIPMENT, THE SOCKET-OUTLET SHALL BE INSTALLED NEAR THE EQUIPMENT AND SHALL BE EASILY ACCESSIBLE.

**WARNING**

Use the attached specified power supply cord. If you use another power supply cord, it may cause interference with radio and television reception.

This apparatus must be grounded.

**DO NOT LOOK DIRECTLY INTO THE LENS WHEN THE PROJECTOR IS IN THE POWER ON MODE.**

**CAUTION**

Not for use in a computer room as defined in the Standard for the Protection of Electronic Computer/ Data Processing Equipment, ANSI/NFPA 75.

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# Important safeguards

Please read all these instructions regarding your projector and retain them for future reference. Follow all warnings and instructions marked on the projector.

1. Read instructions  
All the safety and operating instructions should be read before the appliance is operated.
2. Retain instructions  
The safety and operating instructions should be retained for future reference.
3. Warnings  
All warnings on the appliance and in the operating instructions should be adhered to.
4. Instructions  
All operating instructions must be followed.
5. Cleaning  
Unplug this projector from the wall outlet before cleaning it. Do not use liquid aerosol cleaners. Use a damp soft cloth for cleaning.
6. Attachments and equipment  
Never add any attachments and/or equipment without the approval of the manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.
7. Water and moisture  
Do not use this projector near water or in contact with water.
8. Accessories  
Do not place this projector on an unstable cart, stand, tripod, bracket or table. Use only with a cart, stand, tripod bracket, or table recommended by the manufacturer or sold with the projector. Any mounting of the appliance should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer.



An appliance and cart combination should be moved with care. Quick stops, excessive force and uneven surfaces may cause the appliance and cart combination to overturn.

9. Ventilation  
Slots and openings in the cabinet are provided for ventilation, ensuring reliable operation of the projector and to protect it from overheating. Do not block these openings or allow them to be blocked by placing the projector on a bed, sofa, rug, or bookcase. Ensure that there is adequate ventilation and that the manufacturer's instructions have been adhered to.

10. Power sources  
This projector 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, please consult your appliance dealer or local power company.
11. 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. Pay particular attention to cords at plugs, convenience receptacles, and points where they exit from the appliance. Do not put the power cord under a carpet.
12. Overloading  
Do not overload wall outlets and extension cords as this can result in a fire or electric shock.
13. Objects and liquids  
Never push objects of any kind through openings of this projector 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 projector.
14. Servicing  
Do not attempt to service this projector by yourself. Refer all servicing to qualified service personnel.
15. Damage requiring service  
Unplug this projector 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 projector.
  - (c) If the projector does not operate normally after you follow the operating instructions. Adjust only those controls that are covered by the operating instructions. An improper adjustment of other controls may result in damage and may often require extensive work by a qualified technician to restore the projector to its normal operation.
  - (d) If the projector has been exposed to rain or water.
  - (e) If the projector has been dropped or the cabinet has been damaged.
  - (f) If the projector exhibits a distinct change in performance - this indicates a need for service.
16. Replacement parts  
When replacement parts are required, be sure that the service technician has used replacement parts specified by the manufacturer or parts having the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
17. Safety check  
Upon completion of any service or repair to this projector, ask the service technician to perform safety checks determining that the projector is in a safe operating condition.

## Important safeguards (continued)

### WARNING:

#### Unplug immediately if there is something wrong with your projector.

Do not operate if smoke, strange noise or odor comes out of your projector. It might cause fire or electric shock. In this case, unplug immediately and contact your dealer.

#### Never remove the cabinet.

This projector contains high voltage circuitry. An inadvertent contact may result in an electric shock. Except as specifically explained in the User Manual do not attempt to service this product by yourself. Please contact your dealer when you want to fix, adjust or inspect the projector.

#### Do not modify this equipment.

It can lead to fire or electric shock.

#### Do not keep using the damaged projector.

If the projector is dropped and the cabinet is damaged, unplug the projector and contact your dealer for inspection. It may lead to fire if you keep using the damaged projector.

#### Be sure to unplug the power cord from the wall outlet if the projector is fractured or deformed.

Otherwise, it may result in fire or electric shock. Ask your dealer for repair.

#### Do not face the projector lens to the sun.

It can lead to fire.

#### Use correct voltage.

If you use incorrect voltage, it can lead to fire.

#### Do not connect multiple electrical appliances to a single wall outlet.

It can lead to fire.

#### Do not extend the power cord.

It can lead to fire.

#### Do not place the projector on uneven surface.

Place the projection on a leveled and stable surface only. Please do not place equipment on unstable surfaces.

#### Do not look into the lens when it is operating.

It may hurt your eyes. Never let children look into the lens when it is on.

#### Do not touch the air outlet grille and bottom plate, which become hot.

Do not touch them or put other equipment in front of the air outlet grille. The air outlet grille and bottom plate, when heated, may cause injury or damage to other equipment. Also, do not set the projector on the desk which is easily affected by heat.

#### Do not look into the air outlet grille when projector is operating.

Heat, dust, etc. may blow out of it and hurt your eyes.

#### Do not insert your fingers in the space between the lens and the cabinet.

The lens may shift causing injury or damage to the projector.

#### Do not block the air inlet and outlet grilles.

If they are blocked, heat may be generated inside the projector, causing deterioration in the projector quality and fire.

#### Do not use flammable solvents (benzene, thinner, etc.) and flammable aerosols near the projector.

Flammable substances may ignite causing fire or breakdown because the temperature inside the projector rises very high while the lamp is illuminating.

**Do not use the projector with condensation on it.**  
It can lead to breakdown or other failure.

#### Place of installation

For safety's sake, refrain from setting the projector at any place subjected to high temperature and high humidity. Please maintain an operating temperature, humidity, and altitude as specified below.

- Operating temperature:  
For use in the STANDARD mode, the allowable operating temperature is +41°F (+5°C) to +104°F (+40°C).  
For use in the HIGH ALTITUDE mode (see page 13), the allowable operating temperature is +41°F (+5°C) to +86°F (+30°C), which allows floor installation or ceiling installation only.
- Operating humidity: between 30% and 90%
- Never put any heat-producing device under the projector so that the projector does not overheat.
- Do not attach the projector to a place that is unstable or subjected to vibration.
- Do not install the projector near any equipment that produces a strong magnetic field. Also refrain from installing near the projector any cable carrying a large current.
- Place the projector on a solid, vibration free surface; otherwise it may fall, causing serious injury to a child or adult, and serious damage to the product.
- Do not stand the projector; it may fall, causing serious injury and damage to the projector.
- Slanting the projector more than  $\pm 10^\circ$  (right and left) may cause trouble or explosion of the lamp.
- Do not place the projector near air-conditioning unit, heater, or humidifier to avoid hot or moist air to the exhaust and ventilation hole of the projector.
- Do not place the projector in the following places. Otherwise, a short circuit, heat generation, or melting of the power cord coating may occur, causing fire, electric shock, product failure, or deformation.
  - Outdoors or non air-conditioned place
  - Place where a gas such as a hydrogen sulfide is generated (i.e. hot spring)
  - Place where there is too much salt such as near the coast
- We don't recommend using the projector at an altitude of 2700 meters or higher (When using the product at an altitude of 1500 to 2700 meters above the sea level, set the HIGH ALTITUDE MODE to HIGH ALTITUDE.). Use at an altitude of 2700 meters or higher may affect the projector's life.

#### Do not place a container containing water or other liquid on the projector.

If water spills on or enters the projector, it may result in fire or electric shock.

#### Do not put any object that is heavy or larger than the outer frame on the projector.

Otherwise, the object may fall losing its balance and cause injury.

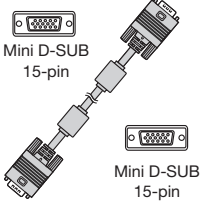
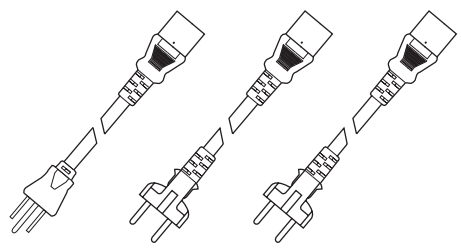
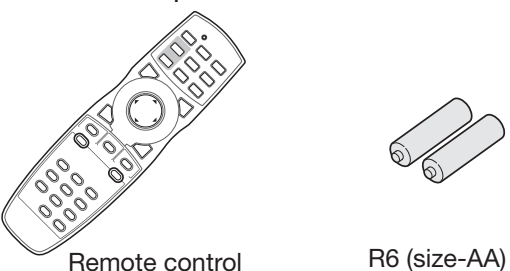
#### Do not subject the projector to strong shocks or vibrations. Do not handle the projector roughly.

The projector may be damaged, resulting in fire or electric shock.

# Preparing your projector

## Checking accessories

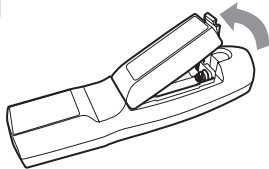
The following accessories are provided with this projector. Check to be sure that all of the accessories are packed in the package.

<b>■ Cables</b>  Mini D-SUB 15-pin D-SUB 9-pin Computer cable (J2552-0072-05) RS-232C cable (J2552-0114-00) <ul style="list-style-type: none"><li>Used for projector control by computer.</li></ul>	<b>■ Power supply part</b>  Power cord for US (J2552-0063-00) Power cord for EU/South Korea (J2552-0066-00) Power cord for UK (J2552-0065-00)
<b>■ Remote control parts</b>  Remote control (290P188-10) R6 (size-AA) battery (two)	<b>■ Others</b> <ul style="list-style-type: none"><li>• Lens cap (attached to the projector)</li><li>• Lens ring</li><li>• Terminal cover</li><li>• Lamp replacement tray</li><li>• CD-ROM</li><li>• Safety Manual/Quick Start up</li></ul>

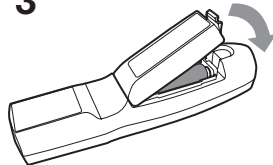
### Important:

- The attached power cord is to be used exclusively for this product. Never use it for other products.

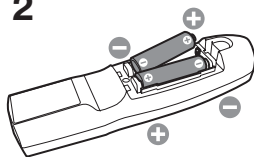
1



3



2



### Inserting the batteries into the remote control

1. Remove the rear lid of the remote control.
2. Check the polarity (+), (-) of the batteries, and set them correctly, inserting their (-) side first.
  - If the battery is inserted from the (+) side first, inserting the (-) side is difficult because the coil spring end hits on the battery side. If the battery is forced to insert in this way, the outer label of the battery may get ripped and it may cause a short-circuit and heating.
3. Attach the rear lid.

### Important:

- Use two size-AA batteries (R6).
- Replace the 2 batteries with new ones when the remote control is slow to operate.

### Removing the batteries from the remote control

Remove the back lid of the remote control and take out the batteries.

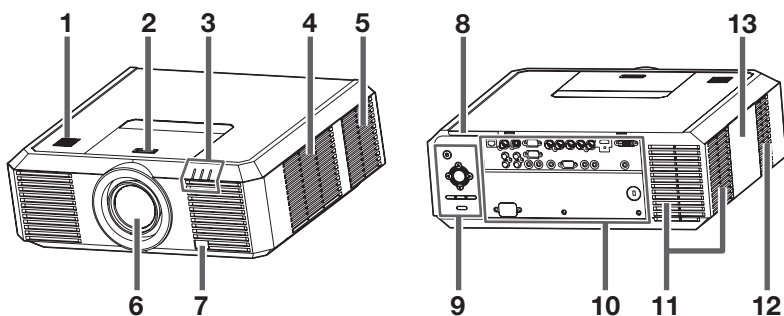
### Caution:

- Use of a battery of wrong type may cause explosion.
- Only Carbon-Zinc or Alkaline-Manganese Dioxide type batteries should be used.
- Dispose of used batteries according to your local regulations.
- Before you dispose of the batteries, insulate them by placing insulation tape on the positive (+) and negative (-) terminals. If you dispose of the batteries together with other conductive objects such as a metal piece, they may short out, resulting in fire or explosion.
- Batteries may explode if misused. Do not recharge, disassemble, or heat the batteries, or put them into fire or water.
- Be sure to handle the batteries according to the instructions.
- Load the batteries with its positive (+) and negative (-) sides correctly oriented as indicated on the remote control.
- Keep batteries out of reach of children and pets. If children swallow the battery, see a doctor immediately.
- Remove the batteries, if the remote control is not used for a long time.
- Do not combine a new battery with an old one.
- If the solution of batteries comes in contact with your skin or clothes, rinse with water. If the solution comes in contact with your eyes, rinse them with water and then consult your doctor.
- Do not carry or store the batteries together with metallic ballpoint pens, necklaces, coins, or hairpins. Otherwise, they may short out, causing explosion or liquid leakage and resulting in fire or injury.
- Do not store the batteries where they are exposed to direct sunlight or subjected to high temperature and high humidity. High temperature and high humidity may cause corrosion or liquid leakage.



## Preparing your projector (continued)

### Overview

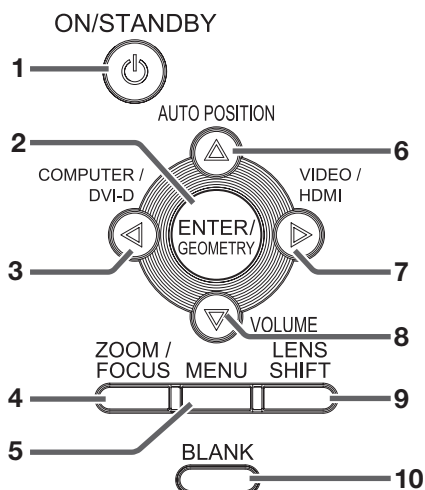


- 1 Speaker
- 2 Lens release button
- 3 Indicators
- 4 Air inlet grille/Filter cover
- 5 Air inlet grille
- 6 Lens
- 7 Remote control sensor (front)
- 8 Remote control sensor (rear)
- 9 Control area
- 10 Terminal panel
- 11 Air outlet grille
- 12 Air inlet grille
- 13 Lamp cover

### Caution:

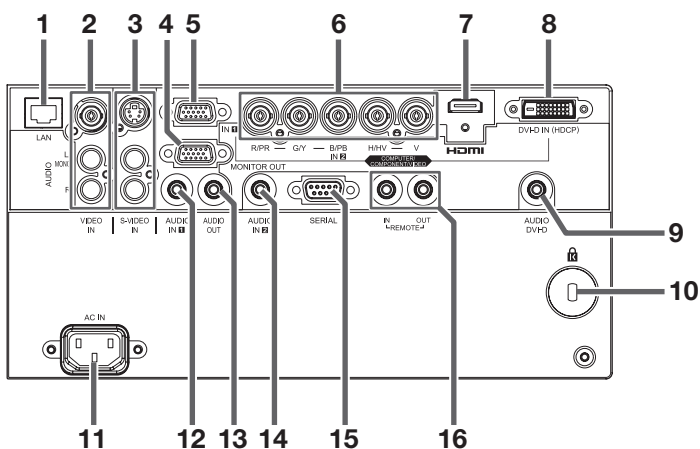
Do not replace the lamp immediately after using the projector because the lamp would be extremely hot and it may cause burns.

### Control area



- 1 **POWER button (ON/STANDBY)**  
The status is changed between ON and STANDBY.
- 2 **ENTER/GEOMETRY button**
- 3 **COMPUTER/DVI-D/◀ button**
- 4 **ZOOM/FOCUS button**
- 5 **MENU button**
- 6 **AUTO POSITION/▲ button**
- 7 **VIDEO/HDMI/▶ button**
- 8 **VOLUME/▼ button**
- 9 **LENS SHIFT button**
- 10 **BLANK button**

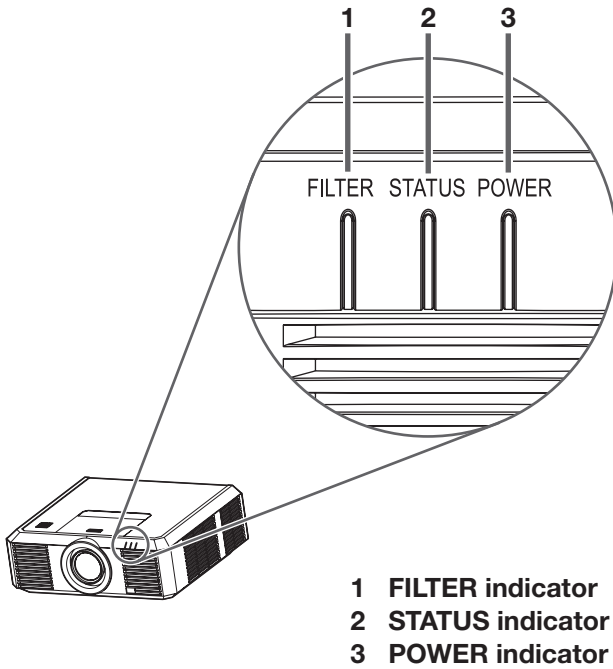
### Terminal panel



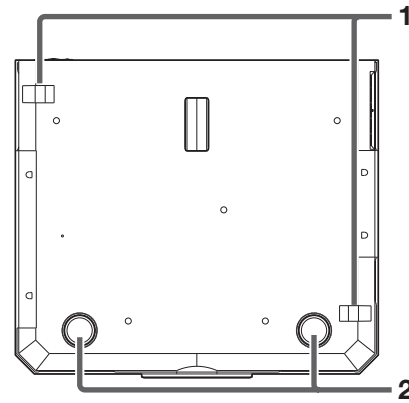
- 1 LAN terminal
- 2 VIDEO IN (BNC) and audio input terminals
- 3 S-VIDEO IN and audio input terminals
- 4 MONITOR OUT terminal (mini D-SUB 15-pin)
- 5 COMPUTER/COMPONENT/VIDEO IN 1 terminal (mini D-SUB 15-pin)
- 6 COMPUTER/COMPONENT/VIDEO IN 2 terminals (R/P<sub>R</sub>, G/Y, B/P<sub>B</sub>, H/HV, V) (BNC)
- 7 HDMI IN terminal (HDMI 19-pin)
- 8 COMPUTER/COMPONENT/VIDEO DVI-D IN (HDCP) terminal (DVI-D 24-pin)
- 9 AUDIO DVI-D terminal (mini jack)
- 10 Kensington Security Lock Standard connector
- 11 Power jack
- 12 AUDIO IN 1 terminal (mini jack)
- 13 AUDIO OUT terminal (mini jack)
- 14 AUDIO IN 2 terminal (mini jack)
- 15 SERIAL terminal (D-SUB 9-pin male)
- 16 REMOTE IN and OUT terminals

## Preparing your projector (continued)

### Indicators

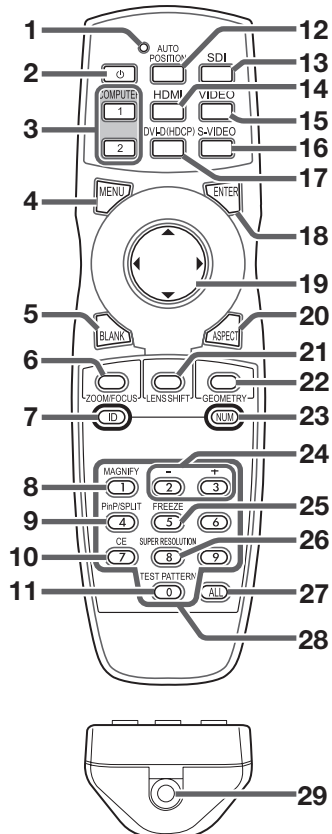


### Bottom side



- 1 **Lock bar (SECURITY ANCHOR)**
  - Attach a chain, etc. to this lock bar to anchor the projector.
- 2 **Adjustment feet**

### Remote control



- 1 **Indicator**
- 2 **POWER button (ON/STANDBY)**  
The status is changed between ON and STANDBY.
- 3 **COMPUTER 1, 2 buttons**
- 4 **MENU button**
- 5 **BLANK button**
- 6 **ZOOM/FOCUS button**
- 7 **ID button**
- 8 **MAGNIFY button**<sup>\*1</sup>
- 9 **PinP/SPLIT button**<sup>\*2</sup>
- 10 **CE (Color Enhancer) button**
- 11 **TEST PATTERN button**
- 12 **AUTO POSITION button**
- 13 **SDI button**<sup>\*3</sup>
- 14 **HDMI button**
- 15 **VIDEO button**
- 16 **S-VIDEO button**
- 17 **DVI-D(HDCP) button**
- 18 **ENTER button**
- 19 **▲, ▼, ◀, ▶ buttons**
- 20 **ASPECT button**
- 21 **LENS SHIFT button**
- 22 **GEOMETRY button**
- 23 **NUM button**
- 24 **+ , - buttons**<sup>\*4</sup>
- 25 **FREEZE button**
- 26 **SUPER RESOLUTION button**
- 27 **ALL button**
- 28 **Number (0 to 9) buttons**<sup>\*5</sup>
- 29 **Wired remote control jack**

<sup>\*1</sup>: The MAGNIFY button doesn't work with this projector.

<sup>\*2</sup>: The PinP/SPLIT button functions as the SPLIT button for this projector. (It doesn't function as the PinP button.)

<sup>\*3</sup>: The SDI button doesn't work with this projector.

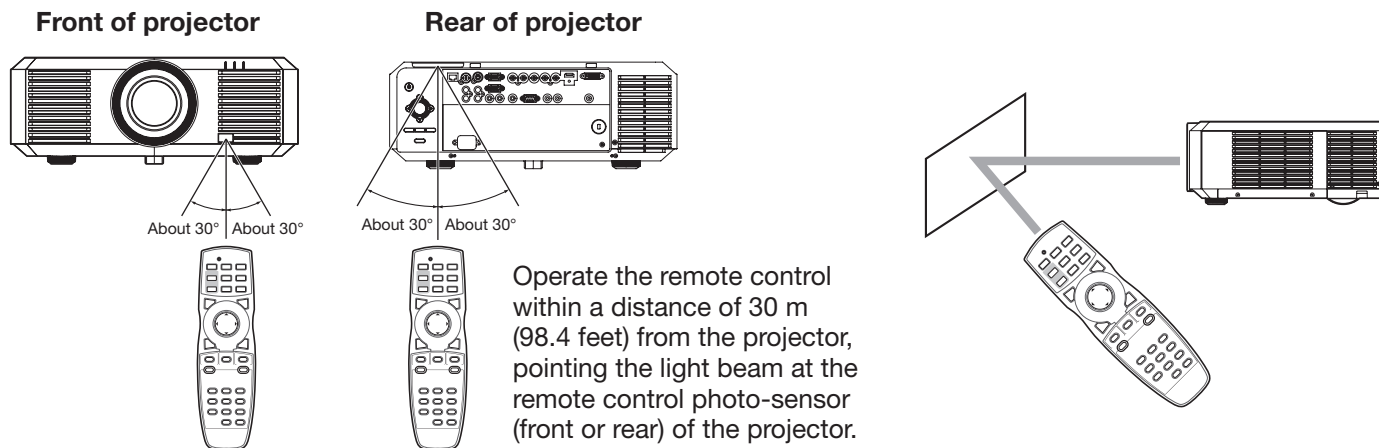
<sup>\*4</sup>: The + , - buttons also function as the VOLUME button.

<sup>\*5</sup>: To use the number buttons (0 to 9), press them while holding down the ID button or the NUM button.



# Using the remote control

## Operational range of the remote control

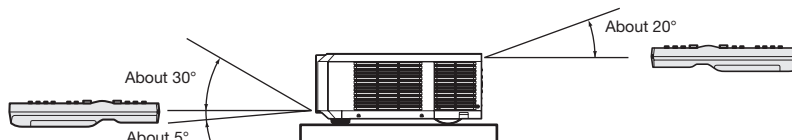


- Keep the remote control sensor out of direct sunlight or fluorescent lamp light.
- Keep the remote control sensor at least 2 m (6 feet) away from fluorescent lamps. Otherwise, the remote control may malfunction.
- If there is an inverter-operated fluorescent lamp near the remote control, the remote control operation may become unstable.
- When you use the remote control too close to the remote control sensor, the remote control may not work correctly.
- When the terminal cover is attached, remote control may not work properly from behind the projector.

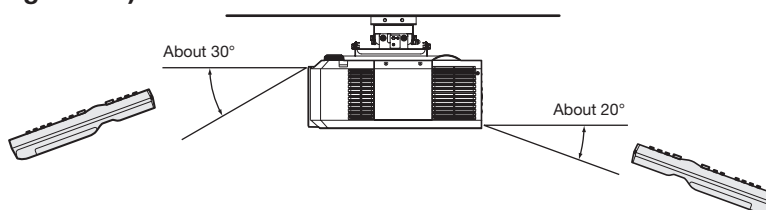
You can control the projector by the remote control signals reflected on the screen. However, the remote control distance may be restricted by the light reflection loss due to the screen characteristics.

## Reception angle

### Vertical directions

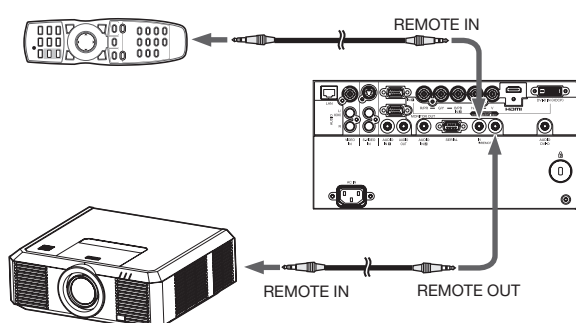


### Vertical directions (ceiling mount)



## Using the wired remote control

Attached remote control for this projector can be used as a wired remote control with remote control cable. Wired remote control is useful for operating in a distance or outside of the operating area.

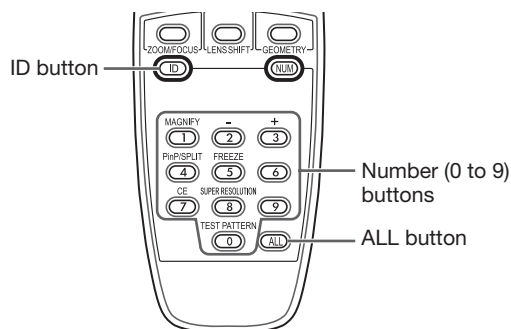


- For connection, use the pin-pin cable of  $\phi 3.5$  stereo type, which is commercially available. However, some cable may not work correctly.
- When REMOTE OUT terminal on this projector is connected to the REMOTE IN terminal on the other projector, the two projectors can be controlled together by using the remote control.
- When the remote control is connected with remote control cable, it does not work as a wireless remote control.
- When using the remote control as wired for a long time period, remove the batteries from it. (Dispose of the removed batteries according to the cautions on page 6.)

## Using the remote control (continued)

### Setting the ID number of the remote control

You can control multiple projectors collectively or individually using one remote control by setting the ID number (CONTROLLER ID) of the remote control. To control multiple projectors using the remote control, you need to select the projector's ID number (PROJECTOR ID) with the remote control in advance. ID numbers should be two-digit numbers "01" to "63" or "ALL." Other numbers cannot be used.



### Setting by the remote control alone

1. While holding down the ID button on the remote control, press the number buttons (0 to 9) to set a two-digit ID number.  
Or, while holding down the ID button on the remote control, press the ALL button.
  - You cannot set the ID number by pressing the number buttons (0 to 9) or the ALL button unless pressing them while holding down the ID button on the remote control.
  - You can set the CONTROLLER ID using the remote control alone. When you set the ID with the remote control directed to the projector, you can see the setting status on the screen.

### Setting by using the projector

1. Carry out the procedure described in "Setting by the remote control alone" with the remote control directed to the projector.
  - The ID setting dialog box is displayed on the upper right area of the screen.

PROJECTOR ID	XX
CONTROLLER ID (01 - 63/ALL)	YY → ZZ

- XX: Shows the ID number of the projector.  
(When the PROJECTOR ID is "ALL," "ALL" is displayed.)
- YY: Shows the current CONTROLLER ID. (When the CONTROLLER ID is "ALL," "ALL" is displayed.)
- ZZ: Shows the CONTROLLER ID to be changed.  
(When the CONTROLLER ID is "ALL," "ALL" is displayed.)
- Before a CONTROLLER ID is entered, \*\* is displayed. When you press a number button (0 to 9), the left digit of the ID number is entered first.

#### When the CONTROLLER ID setting has succeeded:

PROJECTOR ID	XX
CONTROLLER ID (01 - 63/ALL)	YY → ZZ COMPLETE

"COMPLETE" is displayed under the CONTROLLER ID number you entered.

- The ID setting dialog box automatically disappears after it is displayed for about 5 seconds.
- By pressing any button other than the ID button, number buttons (0 to 9), and ALL button while the ID setting dialog box is being displayed, you can cancel the dialog box.

#### When the CONTROLLER ID setting has failed:

PROJECTOR ID	XX
CONTROLLER ID (01 - 63/ALL)	YY → ZZ ERROR

"ERROR" is displayed under the CONTROLLER ID number you entered.

- The ID setting dialog box automatically disappears after it is displayed for about 5 seconds.
- By pressing any button other than the ID button, number buttons (0 to 9), and ALL button while the ID setting dialog box is being displayed, you can cancel the dialog box.

### Setting PROJECTOR IDs

You can monitor and control multiple projectors individually.

PROJECTOR IDs should be two-digit numbers "01" to "63" or "ALL." The other numbers cannot be used.

- The default PROJECTOR ID is ALL.
- By assigning the same PROJECTOR ID to multiple projectors, you can monitor and control those projectors collectively.

(See page 31 for menu setting.)

1. Display the FEATURE menu.
2. Select PROJECTOR ID by pressing the ▲ or ▼ button.



3. Set the PROJECTOR ID by pressing the ◀ or ▶ button.

#### Important:

- To monitor and control the projectors individually, assign different PROJECTOR IDs to them.
- By assigning ALL, you can monitor and control the projectors regardless of the ID numbers.

#### Important:

- ID numbers should be two-digit numbers "01" to "63." The other numbers are invalid.
- When the PROJECTOR ID number is any of "01" to "63," you can control the projector by matching the CONTROLLER ID with the PROJECTOR ID number or setting it to "ALL."
- When the PROJECTOR ID number is "ALL," you can control the projector using the remote control regardless of the CONTROLLER ID number.
- When the PROJECTOR ID number is uncertain, you can control the projector regardless of the ID number by setting the CONTROLLER ID to "ALL."

# Setting up your projector

## Before setting up

Before setting up the projector, check the operating environment.

If the environmental requirements are not satisfied, the projector may break down or fail.

## Setup environment

The allowable operating temperature varies depending on the HIGH ALTITUDE MODE setting.

For use in the STANDARD mode, the allowable operating temperature is +41°F (+5°C) to +104°F (+40°C).

For use in the HIGH ALTITUDE mode (see page 13), the allowable operating temperature is +41°F (+5°C) to +86°F (+30°C), which allows floor installation or ceiling installation only.

## Setting up the screen

Install the screen perpendicularly to the projector. If the screen can not be installed in such a way, adjust the projection angle of the projector. (See page 13.)

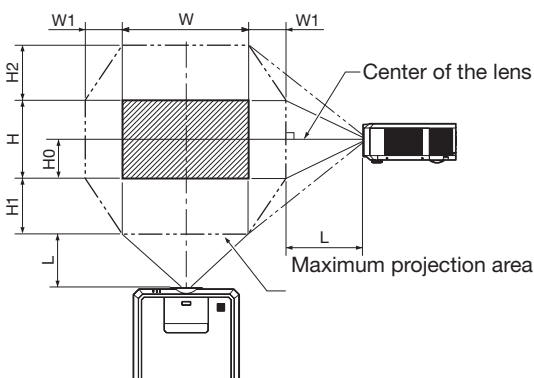
- Install the screen and projector so that the projector's lens is placed at the same height and horizontal position of the screen center.
- Do not install the screen where it is exposed to direct sunlight or lighting. Light directly reflecting on the screen makes the projected images whitish and hard to view.

## Screen size and projection distance

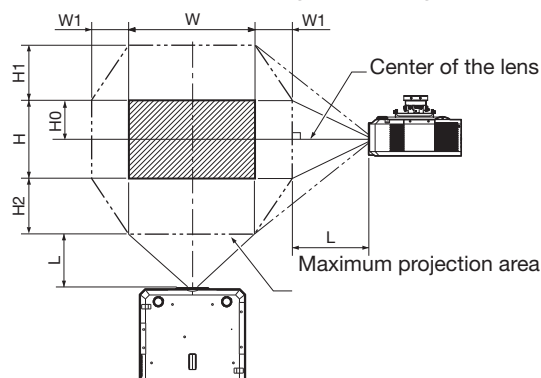
Refer to the following table to determine the screen size, aspect ratio and projection distance.

- For the aspect ratio setting, see page 24.
- The figures in the tables are approximate and may be slightly different from the actual measurements.
- The lens shift height and width show distances from the factory default position.

Front projection



Front projection, ceiling mounting



## Correlation table of the lens shift

Lens shift up-down	60%	50%	20%	0%	-20%	-50%	-60%
Lens shift right-left	±4.3%	±8.6%	±21.4%	±30%	±21.4%	±8.6%	±4.3%

\* The values of the up-down and right-left can not set to maximum simultaneously.

## When the aspect ratio is "FULL" (Display at 1920 x 1200 pixels)

Size of the projected image (16:10)						Projection distance (L)				Lens shift height								Lens shift width	
Diagonal size		Width (W)		Height (H)		Shortest (Wide)		Longest (Tele)		Standard (H0)		Movement distance (H1)		Movement distance (H2)		Movement distance (W1)			
inch	cm	inch	cm	inch	cm	inch	m	inch	m	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm
40	102	34	86	21	54	48	1.2	88	2.2	-11	-27	13	32	13	32	10	26		
60	152	51	129	32	81	73	1.8	133	3.4	-16	-40	19	48	19	48	15	39		
80	203	68	172	42	108	97	2.5	177	4.5	-21	-54	25	65	25	65	20	52		
100	254	85	215	53	135	122	3.1	222	5.6	-26	-67	32	81	32	81	25	65		
120	305	102	258	64	162	147	3.7	267	6.8	-32	-81	38	97	38	97	31	78		
150	381	127	323	79	202	184	4.7	334	8.5	-40	-101	48	121	48	121	38	97		
200	508	170	431	106	269	246	6.3	446	11.3	-53	-135	64	162	64	162	51	129		
250	635	212	538	132	337	308	7.8	559	14.2	-66	-168	79	202	79	202	64	162		
300	762	254	646	159	404	371	9.4	671	17.0	-79	-202	95	242	95	242	76	194		

## When the aspect ratio is "16:9" (Display at 1920 x 1080 pixels)

Size of the projected image (16:9)						Projection distance (L)				Lens shift height								Lens shift width	
Diagonal size		Width (W)		Height (H)		Shortest (Wide)		Longest (Tele)		Standard (H0)		Movement distance (H1)		Movement distance (H2)		Movement distance (W1)			
inch	cm	inch	cm	inch	cm	inch	m	inch	m	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm
40	102	35	89	20	50	49	1.2	90	2.3	-10	-25	13	33	13	33	10	27		
60	152	52	133	29	75	75	1.9	136	3.5	-15	-37	20	50	20	50	16	40		
80	203	70	177	39	100	100	2.5	182	4.6	-20	-50	26	66	26	66	21	53		
100	254	87	221	49	125	126	3.2	228	5.8	-25	-62	33	83	33	83	26	66		
120	305	105	266	59	149	151	3.8	275	7.0	-29	-75	39	100	39	100	31	80		
150	381	131	332	74	187	189	4.8	344	8.7	-37	-93	49	125	49	125	39	100		
200	508	174	443	98	249	253	6.4	459	11.7	-49	-125	65	166	65	166	52	133		
250	635	218	553	123	311	317	8.1	574	14.6	-61	-156	82	208	82	208	65	166		

- Depending on the installation conditions, warm air that is emitted from the exhaust vents may flow into the intake vent, causing the projector to display "TEMPERATURE!!" and then stop projecting images.

## Setting up your projector (continued)

### Setup adjustment

#### How to turn on the projector

When you have to turn on the projector for setup adjustment, see the following pages:

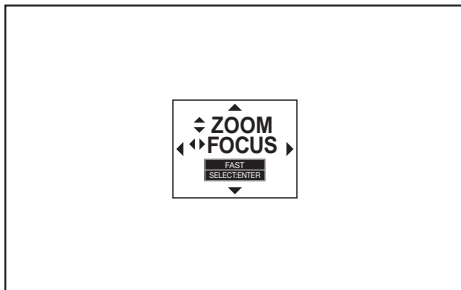
- Plugging the power cord (page 19)
- Turning on the power (page 21)
- Turning off the power (page 22)

#### Adjusting the position of the projected image

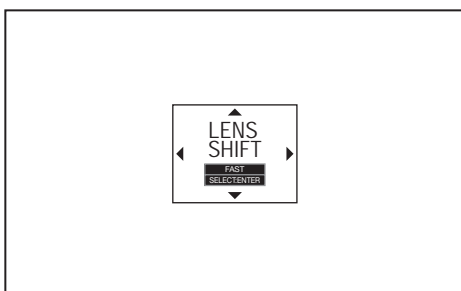
Adjust the focus.

If the projected image is out of the screen after the adjustment, adjust the projector position or the lens position using the lens shift function.

1. Press the ZOOM/FOCUS button to display the ZOOM/FOCUS menu.



2. Adjust with the ◀ or ▶ button to get a fine picture.
  - When the ENTER button is pressed while the ZOOM/FOCUS menu is displayed, the adjustment mode is switched between FAST and STEP. When FAST is selected, the speed of focus controlled by the ◀ or ▶ button becomes fast, and it becomes slow when STEP is selected.
3. Press the LENS SHIFT button.
  - The LENS SHIFT menu appears at the center of the screen.



4. Press the ▲, ▼, ◀ or ▶ button to move the image position.
  - When the ▼ button is pressed, the image moves down.
  - When the ▲ button is pressed, the image moves up.
  - When the ▶ button is pressed, the image moves to the right.
  - When the ◀ button is pressed, the image moves to the left.

- When the ENTER button is pressed while the LENS SHIFT menu is displayed, the shift mode can be switched between FAST and STEP. When FAST is selected, the lens shifts in a large amount with the ▲, ▼, ◀ or ▶ button, and it shifts in a small amount when STEP is selected.
- When the ZOOM/FOCUS menu or the LENS SHIFT menu is displayed while no video signal is input to the projector, a crosshatch appears on the entire screen.
- Be careful not to be caught in the opening in the lens while the lens is moving.
- When the lens is vertically shifted by a large amount, color separation may occur.
- While the lens shift is working, the screen may flicker.
- When the TEST PATTERN button on the remote control is pressed, the test pattern is displayed. Each time you press the TEST PATTERN button, the display switches in the order of “cross hatch (green)” → “cross hatch (red)” → “cross hatch (blue)” → “vertical color bars” → “normal screen” → ... When you press the ZOOM/FOCUS button or LENS SHIFT button at this time, you can adjust the zoom, focus, or lens shift with the test pattern displayed.
- When you adjust the image position beyond the movable range of the lens shift, the triangle mark in the dialog box blinks. You cannot adjust the image position any further in the direction of the blinking triangle mark.

#### Changing the AUTO POWER OFF setting

The AUTO POWER OFF function of this projector is enabled by default.

Change the AUTO POWER OFF setting as necessary. (See page 33.)

##### To change the AUTO POWER OFF setting:

(See page 31 for menu setting.)

1. Display the INSTALLATION menu.
2. Select AUTO POWER OFF by pressing the ▲ or ▼ button.



3. Select your desired item by pressing the ◀ or ▶ button.

## Setting up your projector (continued)

### Setting HIGH ALTITUDE MODE

- Set HIGH ALTITUDE MODE in the FEATURE menu according to the altitude at which you use the projector. The default setting is STANDARD.
- Select STANDARD when using the projector at an altitude from 0 to 1500 meters.
- Select HIGH ALTITUDE when using the projector at an altitude from 1500 to 2700 meters.

#### Important:

- If you select STANDARD when using the projector at an altitude higher than 1500 meters, the projector may break down or fail.
- When you use the projector in the HIGH ALTITUDE mode, only floor installation and ceiling installation are allowed.
- When you select HIGH ALTITUDE in HIGH ALTITUDE MODE, LAMP MODE setting automatically changes to LOW.



(See page 31 for menu setting.)

1. Display the FEATURE menu.
2. Select HIGH ALTITUDE MODE by pressing the ▲ or ▼ button.



3. Press the ENTER button.



4. Select STANDARD  or HIGH ALTITUDE  by pressing the ◀ or ▶ button.
5. Press the ENTER button.

### Setting IMAGE REVERSE

Set IMAGE REVERSE in the INSTALLATION menu according to the orientation of the projector. The default setting is OFF.

- Select OFF for the combination of floor installation and front projection.
- Select MIRROR INVERT for the combination of ceiling installation and front projection.
- Select MIRROR for the combination of floor installation and rear projection.
- Select INVERT for the combination of ceiling installation and rear projection.

(See page 31 for menu setting.)

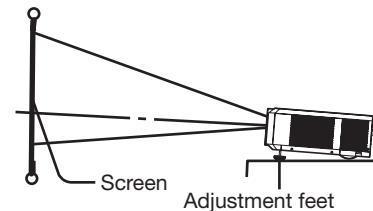
1. Display the INSTALLATION menu.
2. Select IMAGE REVERSE by pressing the ▲ or ▼ button.



3. Select OFF, MIRROR, INVERT or MIRROR INVERT by pressing the ◀ or ▶ button.

### Correcting skewed or distorted image

For the best projection, project images on a flat screen installed at 90 degrees to the floor. If necessary, tilt the projector using the two adjustment feet on the bottom of the projector.



1. Tilt up the projector to the appropriate angle.
2. Rotate the adjustment feet for fine adjustment.

#### Important:

- Don't transport the projector with its adjustment feet extended. Otherwise the adjustment feet may be damaged.

### When fine streaks are seen on projected images

This is due to interference with the screen surface and is not a malfunction. Replace the screen or displace the focus a little. (See page 12 for focus adjustment.)

### When the projected image is distorted:

When the projected image is distorted, carry out any of the KEYSTONE, CORNERSTONE, and CURVED-mode adjustments to correct the distortion.

When the image distorts in a trapezoid shape, use the KEYSTONE-mode adjustment. For fine adjustment of the image shape, use the CORNERSTONE-mode adjustment. To adjust the image projected on a curved surface, use the CURVED-mode adjustment.

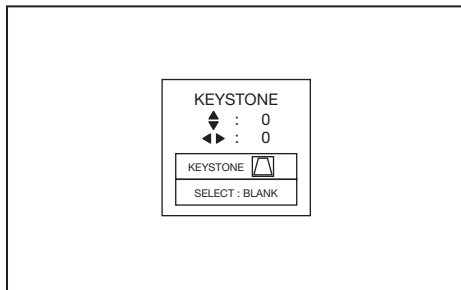
When you press the ENTER/GEOMETRY button on the projector or the GEOMETRY button on the remote control, the menu switches in the order of KEYSTONE, CORNERSTONE, CURVED, regular display, KEYSTONE...



## Setting up your projector (continued)

### Adjustment using the KEYSTONE mode:

When the screen and the projector are not placed perpendicularly to each other, projected images become trapezoidal. If you cannot place them perpendicularly to each other, press the ENTER/GEOMETRY button on the projector or the GEOMETRY button on the remote control to display the KEYSTONE mode and then press the ▲, ▼, ◀ or ▶ button to correct the distortion.



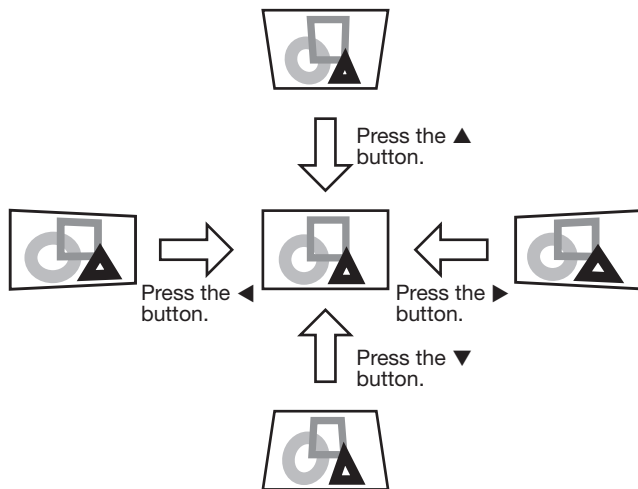
Every time you press the BLANK button, the adjustment menu changes as follows:

KEYSTONE → RESET → KEYSTONE ...

#### KEYSTONE menu

You can correct the distortion vertically or horizontally focusing on the screen center.

In the following cases (for front projection):



When you press the ◀ or ▶ button in the RESET mode, the distortion correction is reset.

#### Important:

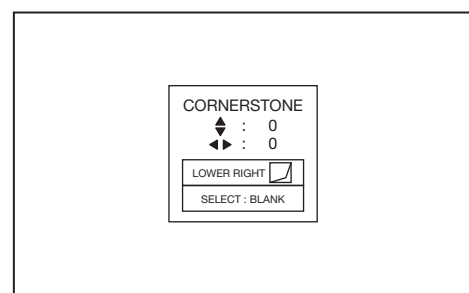
- The best adjustment result can be obtained when the lens is positioned at the center of the lateral direction at the top in the longitudinal direction (when the projector is installed on the floor, or at the bottom when it is installed on the ceiling). Before performing the keystone adjustment, reset the lens position to the default position by using LENS SHIFT RESET (see page 33) and then move it to the top using LENS SHIFT (see page 12).
- When the KEYSTONE-mode adjustment is carried out, the adjustment value is indicated. Note that this value doesn't mean a projection angle.
- When the KEYSTONE-mode adjustment takes

effect, the resolution decreases. In addition, stripes may appear or straight lines may bend in images with complicated patterns. They are not due to product malfunctions.

- When the KEYSTONE-mode adjustment is performed, the displayed image may be distorted.
- Depending on the installation conditions of the projector and the screen, a perfect rectangular image and the proper aspect ratio may not be obtained. Slight distortion can be corrected by the CORNERSTONE-mode adjustment.
- Noise may appear on the screen during the KEYSTONE-mode adjustment because of the type of the video signal being projected and the setting values of the KEYSTONE-mode adjustment. In such cases, set the KEYSTONE-mode adjustment values in the range where the image is displayed without noise.
- When you carry out the KEYSTONE-mode adjustment and the CURVED-mode adjustment in combination, the adjustment range becomes narrower than that in the case where you carry out these adjustments individually. When setting the KEYSTONE-mode adjustment value to 11 or larger, you cannot use the CURVED-mode adjustment.
- When carrying out the KEYSTONE-mode adjustment while the option lens is in use, you may not be able to obtain a perfectly rectangular image or the correct aspect ratio. Slight distortion can be corrected by the CORNERSTONE-mode adjustment.

### Adjustment using the CORNERSTONE mode:

Use this adjustment for fine adjustment of the image shape. For adjustment, press the ENTER/GEOMETRY button on the projector or the GEOMETRY button on the remote control to display the CORNERSTONE mode and then press the ▲, ▼, ◀ or ▶ button.



Every time you press the BLANK button, the adjustment menu changes as follows:

LOWER RIGHT → LOWER LEFT → UPPER RIGHT → UPPER LEFT → RESET → LOWER RIGHT ...

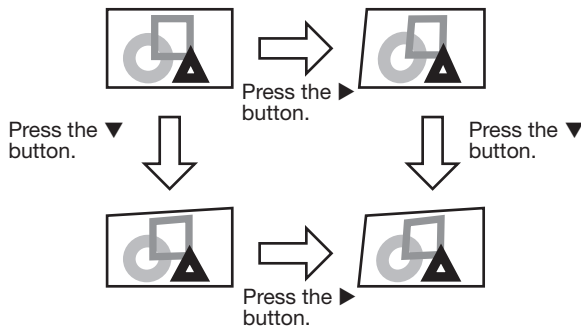


## Setting up your projector (continued)

### LOWER RIGHT, LOWER LEFT, UPPER RIGHT, or UPPER LEFT menu

You can adjust the horizontal or vertical position of the selected corner.

Example: Adjustment of the upper left corner position (UPPER LEFT)



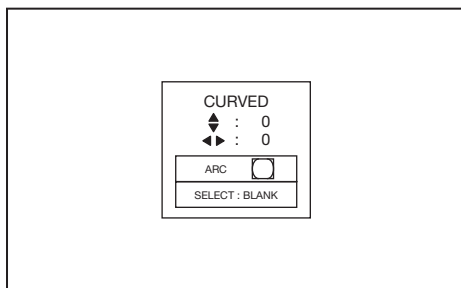
When you press the ◀ or ▶ button in the RESET mode, the distortion correction is reset.

#### Important:

- When the CORNERSTONE-mode adjustment takes effect, the resolution decreases. In addition, stripes may appear or straight lines may bend in images with complicated patterns. They are not due to product malfunctions.
- When the CORNERSTONE-mode adjustment is performed, the displayed image may be distorted.
- Noise may appear on the screen during the CORNERSTONE-mode adjustment because of the type of the video signal being projected and the setting values of the CORNERSTONE-mode adjustment. In such cases, set the CORNERSTONE-mode adjustment values in the range where the image is displayed without noise.
- Large distortion of the image shape or aspect ratio may not be corrected by the CORNERSTONE-mode adjustment.

### Adjustment using the CURVED mode

To adjust images projected on a curved surface, press the ENTER/GEOMETRY button on the projector or the GEOMETRY button on the remote control to display the CURVED mode, and then press the ▲, ▼, ◀ or ▶ button to correct the distortion.

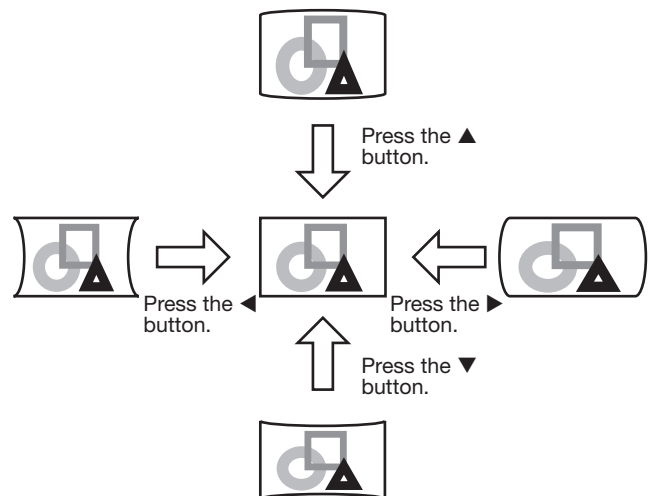


Every time you press the BLANK button, the adjustment menu changes as follows:

ARC → HORIZ. ORIGIN → VERT. ORIGIN → RESET → ARC...

### ARC menu

You can correct the arc vertically or horizontally focusing on the screen center.

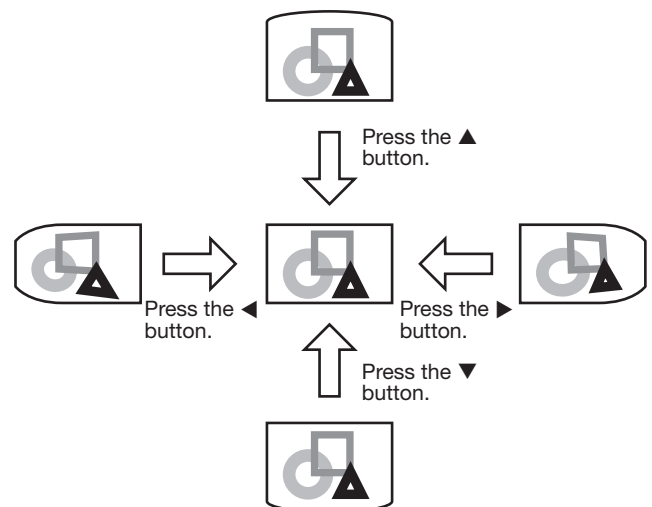


### HORIZ. ORIGIN or VERT. ORIGIN menu

When the CURVED-mode adjustment has excessive effect on either top or bottom or either right or left side of the screen, adjust the horizontal or vertical position of the origin to the horizontal or vertical arc. Without the arc adjustment, the image shape won't change.

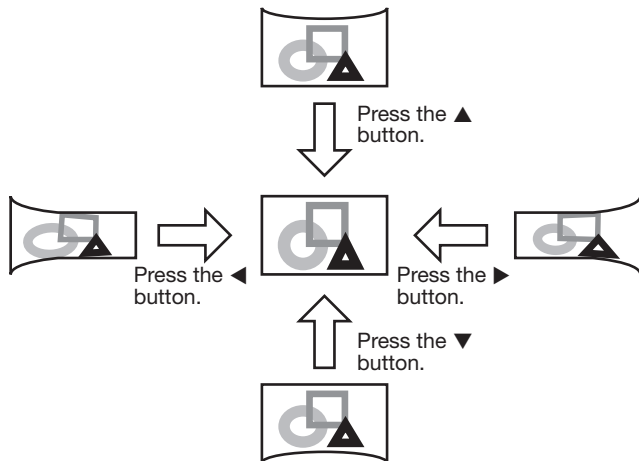
Adjusting the origin to the horizontal arc

- When the horizontal arc adjustment is negative (-) (or the ARC is adjusted in the ▼ direction)



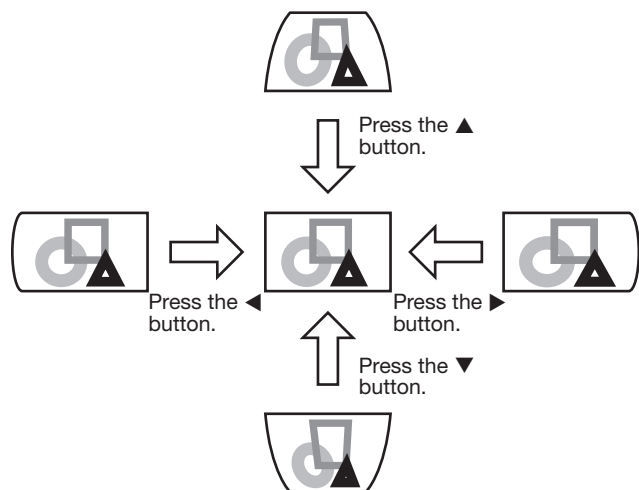
## Setting up your projector (continued)

- When the horizontal arc adjustment is positive (+) (or the ARC is adjusted in the ▲ direction)

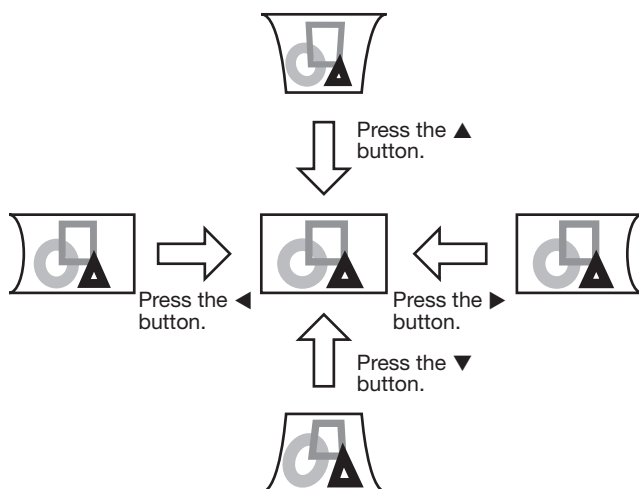


Adjusting the origin to the vertical arc

- When the vertical arc adjustment is negative (-) (or the ARC is adjusted in the ◀ direction)



- When the vertical arc adjustment is positive (+) (or the ARC is adjusted in the ▶ direction)



When you press the ◀ or ▶ button in the RESET mode, the distortion correction is reset.

### Important:

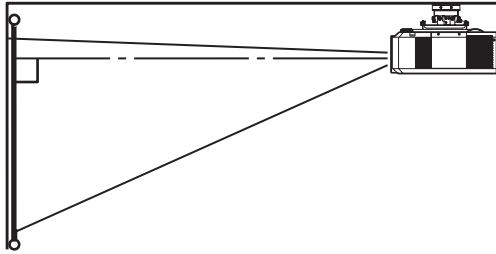
- When the CURVED-mode adjustment takes effect, the resolution decreases. In addition, stripes may appear or straight lines may bend in images with complicated patterns. They are not due to product malfunctions.
- When the CURVED-mode adjustment is performed, the displayed image may be distorted.
- Depending on the installation conditions of the projector and the screen or the correction amount of the CURVED-mode adjustment, you may not obtain a complete rectangular screen or the correct aspect ratio. Slight distortion can be corrected by the CORNERSTONE-mode adjustment.
- Noise may appear on the screen during the CURVED-mode adjustment because of the type of the video signal being projected and the setting values of the CURVED-mode adjustment. In such cases, set the CURVED-mode adjustment values in the range where the image is displayed without noise.
- When you carry out the KEYSTONE-mode adjustment and the CURVED-mode adjustment in combination, the adjustment range becomes narrower than that in the case where you carry out these adjustments individually. When setting the arc setting value of the CURVED-mode adjustment to 16 or larger, you cannot use the KEYSTONE-mode adjustment.
- When carrying out the CURVED-mode adjustment while the option lens is in use, you may not be able to obtain a perfectly rectangular image or the correct aspect ratio. Slight distortion can be corrected by the CORNERSTONE-mode adjustment.

## Setting up your projector (continued)

### Front projection, ceiling mounting

For ceiling mounting, you need the ceiling mount kit designed for this projector. Ask a specialist for installation. For details, consult your dealer.

- The warranty on this projector does not cover any damage caused by use of any non-recommended ceiling mount kit or installation of the ceiling mount kit in an improper location.



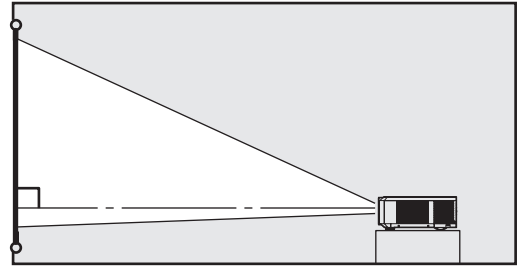
- When using the projector mounted on the ceiling, set IMAGE REVERSE in the INSTALLATION menu to MIRROR INVERT. See page 33.
- When the projector is mounted on the ceiling, images may appear darker than those projected in the case of tabletop mounting. This isn't a product malfunction.
- Ask your installation specialist to provide a breaker. When you do not use the projector, be sure to shut down the main power by the breaker.
- Do not install the projector where the exhaust vents are exposed to air emitted by an air conditioning. Such installation may cause a breakdown.
- Do not install the projector near a fire alarm because it emits hot air from its exhaust vents.

#### Caution:

- Installation must be done by a qualified professional.  
When the projector is installed on the ceiling using the ceiling mount kit, it is recommended to hold the mount kit and the projector using metal bars or wires in addition to the mount kit fixing screws to prevent the projector from falling due to an earthquake or other cause. For that purpose, use metal bars, wires, or screws that bear a load of at least 140 kgf. When using metal wires, secure one end to the adjustment foot of the projector and the other end to the mount kit. In this case, make sure that no electrical current is flowing in the mount kit due to current leakage or other cause.

### Rear projection

Ask a specialist for installation. For details, consult your dealer.



- For rear projection, set IMAGE REVERSE in the INSTALLATION menu to MIRROR. See page 33.

#### Caution:

- Placing the projector directly on a carpet impairs ventilation by the fans, causing damage or failure. Put a hard board under the projector to facilitate ventilation.
- Place the projector at least 50 cm (or 20 inches) away from the wall to prevent the air inlet grille and the air outlet grilles that emit hot air from being blocked.
- Do not use the projector in the following locations and manners, which may cause fire or electric shock.
  - In a dusty or humid place.
  - In a sideways position, or with the lens facing down.
  - Near a heater.
  - In an oily, smoky, or damp place such as a kitchen.
  - In direct sunlight.
  - Where the temperature rises high, such as in a closed car.
  - Where the temperature is lower than +41°F (or +5°C) or higher than +104°F (or +40°C).
  - For use in the HIGH ALTITUDE mode
    - Where the temperature is lower than +41°F (or +5°C) or higher than +86°F (or +30°C).
    - For use in other than floor installation and ceiling installation.
- Keep foliage plants and pets away from the projector. The temperature around the exhaust vents and that of the cabinet on the top of the exhaust vents become high. Take special care for small children.

#### Important:

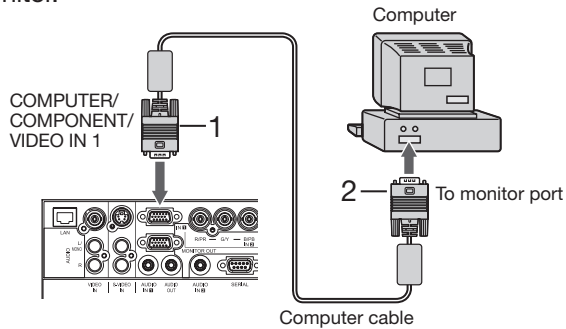
- We don't recommend using the projector at an altitude of 2700 meters or higher (When using the product at an altitude of 1500 to 2700 meters above the sea level, set the HIGH ALTITUDE MODE to HIGH ALTITUDE.). Use at an altitude of 2700 meters or higher may affect the projector's life.

# Viewing computer images

## A. Connecting the projector to a computer

### Preparation:

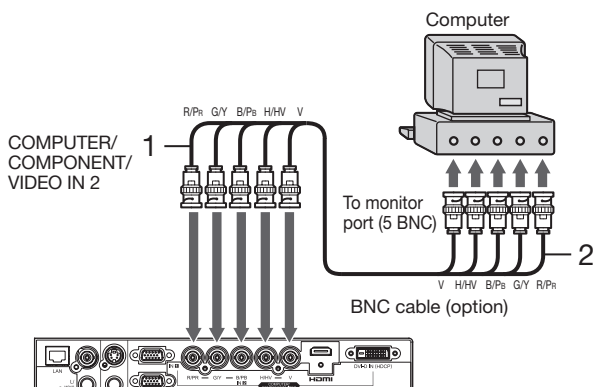
- Make sure that the power of the projector and that of the computer are turned off.
- When connecting the projector to a desktop computer, disconnect the computer cable that is connected to the monitor.



### For analog connection:

(For using the **COMPUTER/COMPONENT/VIDEO IN 1** terminal.)

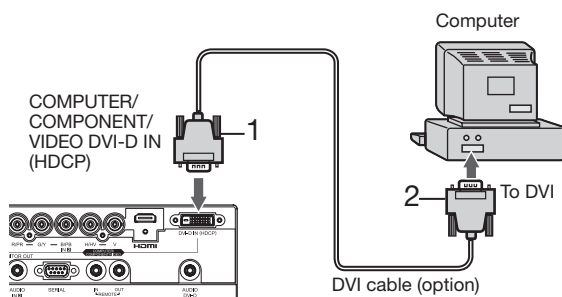
1. Connect one end of the supplied computer cable to the **COMPUTER/COMPONENT/VIDEO IN 1** terminal of the projector.
  2. Connect the other end of the computer cable to the monitor port of the computer.
- When viewing images supplied from an analog-connected computer, press the **COMPUTER 1** button on the remote control.



### For analog connection:

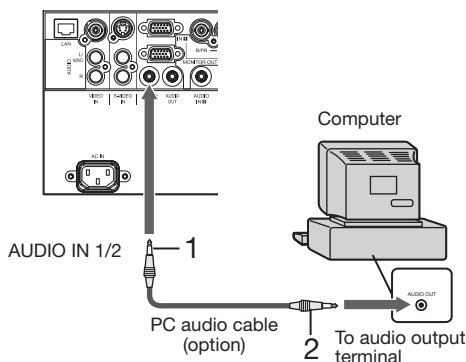
(For using the **COMPUTER/COMPONENT/VIDEO IN 2** terminal.)

1. Connect one end of a commercially available BNC cable to the **COMPUTER/COMPONENT/VIDEO IN 2** terminal of the projector.
  2. Connect the other end of the BNC cable to the 5 BNC terminals of the monitor port of the computer.
- When viewing images supplied from an analog-connected computer, press the **COMPUTER 2** button on the remote control.



### For digital connection:

1. Connect one end of a commercially available DVI cable to the **COMPUTER/COMPONENT/VIDEO DVI-D IN (HDCP)** terminal of the projector.
  2. Connect the other end of the DVI cable to the DVI terminal of the computer.
- When viewing images supplied from a digital-connected computer, press the **DVI-D (HDCP)** button on the remote control.
  - Turn on the power of the projector before starting the computer.

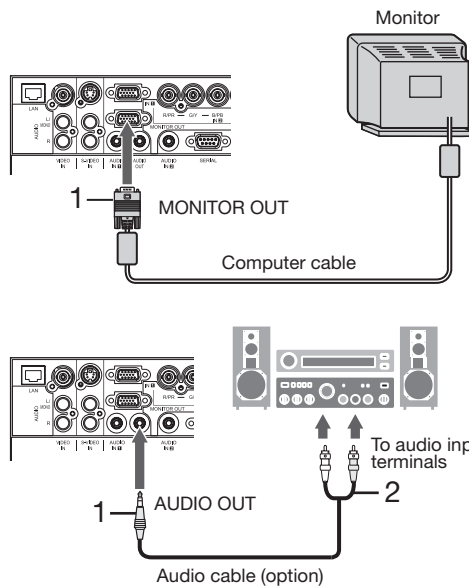


### For audio connection:

1. Connect one end of a commercially available PC audio cable to the **AUDIO IN 1/2** terminal of the projector.
  2. Connect the other end of the PC audio cable to the audio output terminal of the computer.
- This projector uses stereo pin jack for its audio input. Check the type of the audio output terminal of the connected computer and prepare a proper cable for connection. Some computers don't have the audio output terminal.
  - Speaker output is mono.
  - Only when **STADNBY MODE** is set to **STANDARD**, audio is output from the **AUDIO OUT** terminal during power standby.

- Additional devices, such as a conversion connector and an analog RGB output adapter, are required depending on the type of the computer to be connected.
- Use of a long cable may decrease the quality of projected images.
- Images may not be projected correctly, depending on the type of the connected computer.
- When DVI-D signal is input, some signal setting menus are unavailable.
- Also read the instruction manual of the equipment to be connected.
- Contact your dealer for details of connection.

## Viewing computer images (continued)



### For monitor connection:

1. Connect the computer cable from the monitor to the MONITOR OUT terminal of the projector.
- Only when STANDBY MODE is set to STANDARD, video signal is output from the MONITOR OUT terminal during power standby.

### For audio output connection:

1. Connect one end of a commercially available audio cable to the AUDIO OUT terminal of the projector.
2. Connect the other end (white and red) of the audio cable to the audio input terminals (L, R) of the audio equipment.
- When the audio cable is connected to the AUDIO OUT terminal, the speaker output is muted.

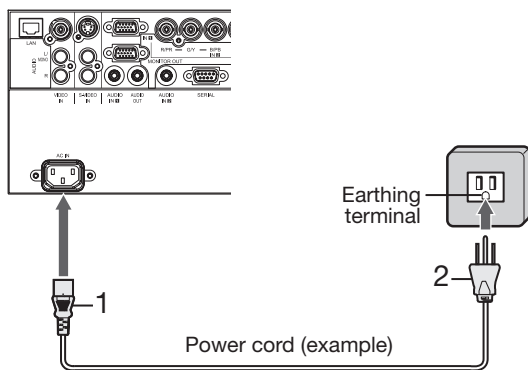
## About DDC

The COMPUTER/COMPONENT/VIDEO IN 1 terminal of this projector complies with the DDC1/2B standard and the COMPUTER/COMPONENT/VIDEO DVI-D IN (HDCP) terminal complies with the DDC2B standard. When a computer supporting this standard is connected to this terminal, the computer will automatically load the information from this projector and prepare for output of appropriate images.

- After connecting a computer supporting this standard to this terminal, plug the power cord of the projector in the wall outlet first, and then boot up the computer.

## B. Plugging the power cord

- In order to ensure the safety in case of trouble with the projector, use an electrical outlet having an earth leakage breaker to supply the power to the projector. If you do not have such outlet, ask your dealer to install it.



1. Plug the attached power cord into the power cord inlet of this projector.
2. Plug the other end of the power cord into a power outlet.

- One of power cords for the U.S., Europe, U.K. and South Korea is provided appropriately.
- This projector uses the power plug of 3-pin grounding type. Do not take away the grounding pin from the power plug. If the power plug doesn't fit your wall outlet, ask an electrician to change the wall outlet.
- In case that the power cord for the U.S. is provided with this projector, never connect this cord to any outlet or power supply using other voltages or frequencies than rated. If you want to use a power supply using other voltage than rated, prepare an appropriate power cord separately.
- Use 100-240 V AC 50/60 Hz to prevent fire or electric shock.
- Do not place any objects on the power cord or do not place the projector near heat sources to prevent damage to the power cord. If the power cord should be damaged, contact your dealer for replacement because it may cause fire or electric shock.
- Do not modify or alter the power cord. If the power cord is modified or altered, it may cause fire or electric shock.

## Viewing computer images (continued)

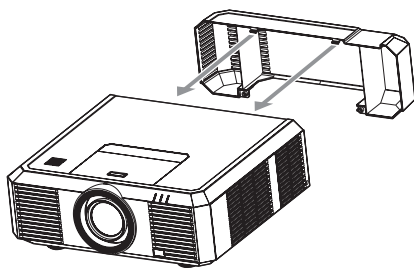
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### Caution:

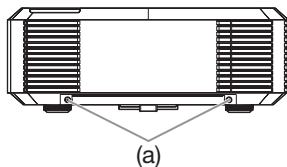
- Plug in the power cord firmly. When unplugging, hold and pull the power plug, not the power cord.
- Do not plug in or out the power cord with your hand wet. It may cause electric shock.
- Do not turn on the power before attaching the lens. The cabinet may be exposed to the light from the lamp directly and heated to a high temperature, resulting in deformation.
- When you move the projector, turn off the power, unplug the power cord from the wall outlet, and then remove the connected cords. Otherwise, the power cord may be damaged, resulting in fire or electric shock.
- If dust or metallic substance is on or around the pins of the power plug, unplug the power cord and clean it using a dry cloth. If you continue to use the projector without cleaning, it may result in fire or electric shock. Clean the power plug periodically at least once a year.
- Be sure to unplug the power cord from the wall outlet if the projector will not be used for a long period of time. Otherwise, it may cause fire.

### C. Installing the terminal cover

This projector includes a terminal cover. If necessary, install the terminal cover to the projector.



1. Fit two hooks of the terminal cover into the projector.



2. Tighten the attachment screws (a) firmly.

### Important:

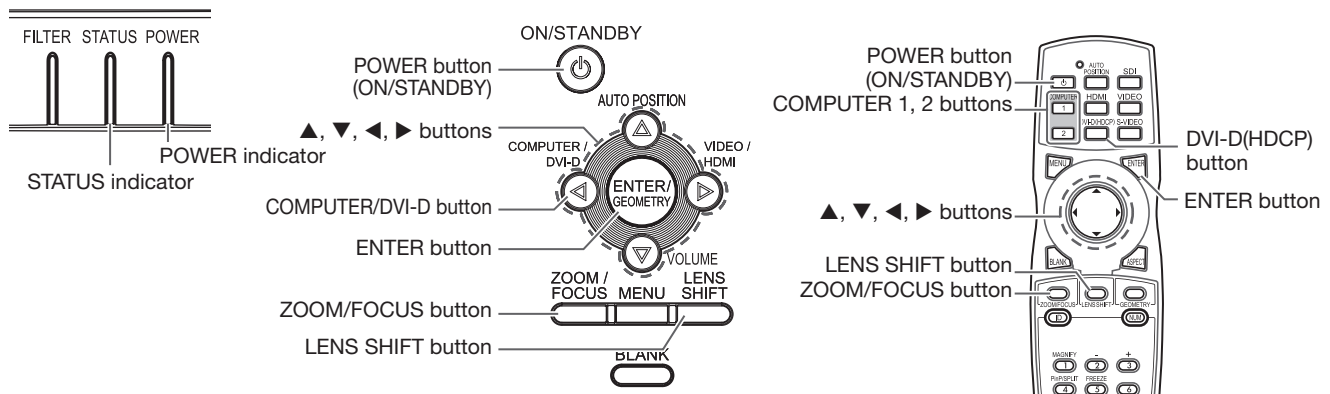
- Don't carry the projector by the terminal cover.
- When the terminal cover is attached, remote control may not work properly from behind the projector.



### D. Projecting images

#### Preparation:

- Remove the lens cap.



- Confirm the POWER indicator lights up red.
  - If the projector was turned off before the lamp was cooled down sufficiently last time, the fan may start rotating and the POWER button may not work after the power cord is plugged. (The STATUS indicator blinks green.) After the fan stops rotating, press the POWER button to turn back on the POWER indicator.
- Turn on the power of the connected computer.
- Press the POWER button.
  - It may take about 1 minute for the lamp to light up.
  - The lamp fails to light up on rare occasions. In such a case, wait for a few minutes and then try again.
  - Do not cover the lens with the lens cap while the lamp is on.
  - After the POWER button is pressed, the image may flicker before the lamp becomes stable. This is not a product malfunction.
  - Regardless of the setting of LAMP MODE, the LOW lamp mode is activated by default whenever the projector is turned on. When LAMP MODE has been set to STANDARD, the lamp mode changes from LOW to STANDARD about 2 minutes after turn-on.
  - The projector starts warming up when the POWER button is pressed. During the warm-up process, images may appear dark and no commands are accepted.
  - By blinking red, the STATUS indicator indicates that the lamp should be replaced soon. Replace the lamp when the STATUS indicator blinks red. (See page 62.)
- Press the ZOOM/FOCUS button to display the ZOOM/FOCUS menu.
- Adjust with the ◀ or ▶ button to get a fine picture.
  - When the ENTER button is pressed while the ZOOM/FOCUS menu is displayed, the adjustment mode is switched between FAST and STEP. When FAST is selected, the speed of focus controlled by the ◀ or ▶ button becomes fast, and it becomes slow when STEP is selected.
- Select an input source.
  - Press the COMPUTER/DVI-D button on the projector or the COMPUTER 1, COMPUTER 2 or DVI-D(HDCP) button on the remote control that is corresponding to the terminal in use.
  - The input source is switched from COMPUTER 1 to COMPUTER 2 to DVI at every press of the COMPUTER/DVI-D button on the projector.
  - The projector automatically selects the appropriate signal format. The selected signal format is displayed on the screen.
  - You cannot change the input source while the menu is being displayed.
  - Though it may take some time before an image is displayed on the screen depending on the type of the input signal, such symptom is not a malfunction.
  - Images may not be projected in the correct position, depending on the type of the input signal. In such a case, press the AUTO POSITION button. (See page 23.)
  - When COMPUTER 1 or COMPUTER 2 is chosen as the source, images supplied from the computer may flicker. Press the ◀ or ▶ button on the remote control to reduce flicker, if it occurs. (Fine adjustment)
- Adjust the position of the projector to keep an appropriate projection distance with which images are projected in their specified sizes.
- Adjust the position of the projector so that the projector and the screen are perpendicular to each other. (See page 11.)
  - When the projector cannot be positioned perpendicularly to the screen, adjust the projection angle. (See page 13.)

## Viewing computer images (continued)

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9. Press the ZOOM/FOCUS button to display the ZOOM/FOCUS menu.
  10. Adjust with the ▲ or ▼ button to get an approximate size.
    - When the ENTER button is pressed while the ZOOM/FOCUS menu is displayed, the adjustment mode is switched between FAST and STEP. When FAST is selected, the speed of zoom controlled by the ▲ or ▼ button becomes fast, and it becomes slow when STEP is selected.
  11. Press the LENS SHIFT button. The LENS SHIFT menu appears at the center of the screen.
  12. Press the ▲ or ▼ button to adjust the vertical position and ◀ or ▶ button to adjust the horizontal position of the displayed image.
    - When the image is not displayed within the screen, adjust the projection angle. In addition, perform the keystone adjustment, if necessary. (See page 14.)
- Repeat steps 4, 5 and 9 to 12, if necessary.

### Important:

- Focus, zoom and lens shift adjustment is possible in the normal picture mode only.
- When a 16:9 image is kept displayed for a long time before displaying FULL image, the afterimages of the black bars may appear on the FULL image screen. (See page 59.)

### To stop projecting:

13. Press the POWER button.
  - A confirmation message is displayed.
  - To cancel the procedure, leave the projector for a while or press any button except the POWER button.
14. Press the POWER button again.
  - The lamp goes out and the projector goes into a standby mode. In this standby mode, the STATUS indicator blinks green.
15. Wait about 2 and a half minutes for the STATUS indicator to be turned off.
  - During this period of 2 and a half minutes in the standby mode, the intake fan and exhaust fan rotate to cool the lamp.
  - The air outlet fans rotate faster as the temperature around the projector rises.
  - Though the fans make loud sounds during cooling, such symptom is not a malfunction.
16. Unplug the power cord from the outlet.
  - The POWER indicator will go out.
  - If the power cord should be unplugged accidentally while either the air inlet fan or the air outlet fans are operating or the lamp is on, allow the projector to cool down for 10 minutes with the power off. To light the lamp again, press the POWER button. If the lamp doesn't light up immediately, press the POWER button a few minutes later. If it should still fail to light up, replace the lamp.
  - Cover the lens with the lens cap to protect it from dust.
  - If necessary, disconnect the cables from the computer after unplugging the power cord.

### Direct Power OFF

You can turn off this projector just by unplugging the power cord without pressing the POWER button.

- Don't shut down the projector while the STATUS indicator is blinking after the lamp lights up because the lamp's life may be shortened.
- Don't turn the projector back on right after shutting it down because the lamp's life may be shortened. (Wait about 10 minutes before turning the projector back on.)
- Before shutting down the projector, be sure to close the menu screen. If you shut down the projector without closing the menu, the setting data of the menu may not be saved.
- If you shut down the projector while controlling the projector using the network function, the application software such as ProjectorView may fail. The data such as the operating time and temperature display may not be changed. In such a case, close the browser and then start up again.
- Don't shut down the projector while the filter is rolling (while the FILTER indicator is blinking green).

## ***Viewing computer images (continued)***

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### **Blanking the screen temporarily (BLANK)**

The video and audio signals are temporarily muted when the BLANK button is pressed. You will hear an operating sound inside the projector. To cancel muting, press the BLANK button again.

- You can alter the splash screen optionally. See page 33.
- The audio from the AUDIO OUT terminal is also muted by pressing the BLANK button.

### **AUTO POSITION button**

When the image supplied from the computer is displaced, carry out the following procedure.

1. Project a bright image containing as many texts and characters as possible.
  2. When the screen saver has been enabled, disable it.
  3. Press the AUTO POSITION button.  
The projector automatically makes optimum positional settings for the input signal.
- If the projected image is still displaced even after pressing the AUTO POSITION button several times, refer to the procedure to adjust computer images. (See pages 42 and 43.)
  - When you carry out this procedure with a dark image, the image may be displaced.

### **When connecting to a notebook computer:**

When the projector is connected to a notebook computer, images may not be projected in some cases. In such cases, set the computer so that it can output signals externally. The setting procedure varies depending on the type of the computer. See the instruction manual of your computer.

### **Example of the setting procedure for external output**

Press the [Fn] key and any of the keys [F1] to [F12] at the same time. (The key to be pressed depends on the type of the computer you use.)

### **Setting of the resolution**

If the resolution of the computer doesn't match with that of the projector, projected images may be obscured. Ensure that their resolutions are the same (see page 64). For the method to change the output resolution of the computer, contact the manufacturer of the computer.

## Viewing computer images (continued)

### Setting the aspect ratio

You can change the aspect ratio of the input video signal (or the ratio of width to height of the image). Change the setting according to the type of the screen to be used or your preference.













#### How to change the settings:

##### With the remote control:

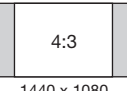
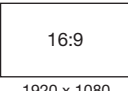
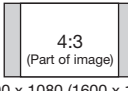
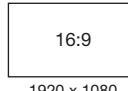
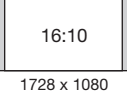
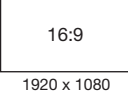
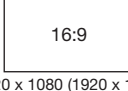
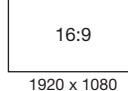
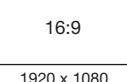
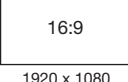
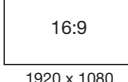
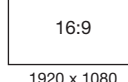
1. Press the ASPECT button.

- Every time the ASPECT button is pressed, the aspect mode changes from NORMAL to 16:9, to REAL, to FULL, and back to NORMAL.
- The following table shows the image display patterns depending on the settings.

When SCREEN is 16:10:

Setting	NORMAL	16:9	REAL	FULL
Input signal	Input video signal is displayed at the max height (1200 pixels) or max width (1920 pixels) of the panel while its aspect ratio is maintained.	Regardless of the type of input signal, image is displayed at 16:9 aspect ratio (1920 x 1080 pixels). Select to expand squeezed (or horizontally compressed) images such as DVD images to 16:9.	Input video signal is displayed at its original pixel size. (When the pixel size is larger than the panel size, only the center part of the image is displayed.)	Regardless of the type of input signal, image is displayed at the full panel size (1920 x 1200 pixels).
UXGA signal 1600 x 1200 (4:3)	 1600 x 1200	 1920 x 1080	 1600 x 1200	 1920 x 1200
WUXGA signal 1920 x 1200 (16:10)	 1920 x 1200	 1920 x 1080	 1920 x 1200	 1920 x 1200
1080p signal 1920 x 1080 (16:9)	 1920 x 1080	 1920 x 1080	 1920 x 1080	 1920 x 1200


When SCREEN is 16:9:

Setting	NORMAL	16:9	REAL	FULL
Input signal	Input video signal is displayed at the max height (1080 pixels) or max width (1920 pixels) of the panel while its aspect ratio is maintained.	Regardless of the type of input signal, image is displayed at 16:9 aspect ratio (1920 x 1080 pixels). Select to expand squeezed (or horizontally compressed) images such as DVD images to 16:9.	Input video signal is displayed at its original pixel size. (When the pixel size is larger than the panel size, only the center part of the image is displayed.)	Regardless of the type of input signal, image is displayed at the full panel size (1920 x 1080 pixels, SCREEN 16:9).
UXGA signal 1600 x 1200 (4:3)	 1440 x 1080	 1920 x 1080	 1600 x 1080 (1600 x 1200)	 1920 x 1080
WUXGA signal 1920 x 1200 (16:10)	 1728 x 1080	 1920 x 1080	 1920 x 1080 (1920 x 1200)	 1920 x 1080
1080p signal 1920 x 1080 (16:9)	 1920 x 1080	 1920 x 1080	 1920 x 1080	 1920 x 1080

#### With the FEATURE menu:

(See page 31 for menu setting.)

1. Display the FEATURE menu.
2. Select ASPECT by pressing the ▲ or ▼ button.
3. Select your desired aspect ratio by pressing the ◀ or ▶ button.

When 16:9  is selected with the FEATURE menu, you can select whether or not to display signals at 16:9 depending on their type using the following procedures.

4. Press the ENTER button.
5. Select a setting for the item MODE by pressing the ◀ or ▶ button.
  - ALL SIGNALS:  
All signals are always displayed at 16:9 irrespective of their type.
  - VIDEO ONLY:  
Signals supplied from video devices only are displayed at 16:9.

To cancel the menu:

6. Press the MENU button.

#### Important:

- If you change the aspect ratio to 16:9, REAL, or FULL while displaying images on a 4:3 screen with the aspect ratio set to NORMAL, images appear partly off screen.
- In such cases as when you keep displaying images in the 4:3 mode for a long time and then change the mode to FULL, the masking areas may remain as afterimage around the displayed image. (See page 59.)
- When the input video signal is interrupted with NORMAL selected, the image turns blue and appears partly off screen. In this case, set BACK COLOR in the INSTALLATION menu to BLACK and set MENU POSITION to the center.



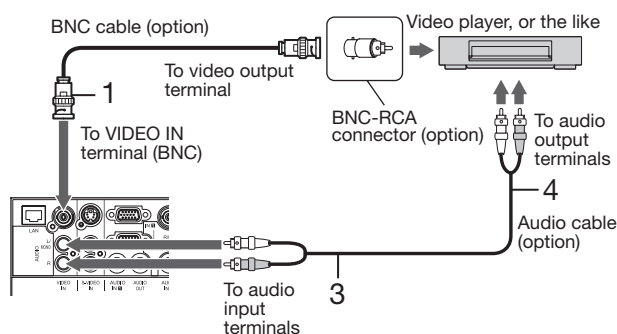
# Viewing video images

## A. Connecting the projector to video equipment

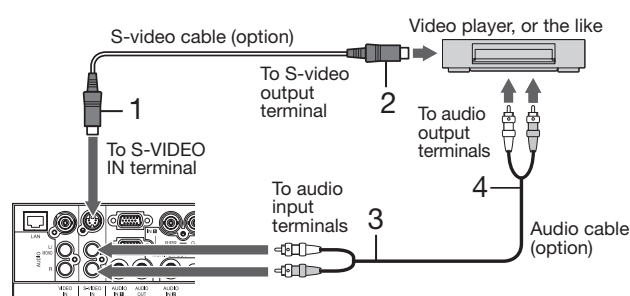
### Preparation:

- Make sure that the power of the projector and that of the video equipment are turned off.

### Connecting to a video player, etc.



1. Connect one end of a commercially available BNC cable to the VIDEO IN terminal of the projector.
2. Connect the other end of the BNC cable to the video output terminal of the video equipment.
3. Connect one end of a commercially available audio cable to the audio input terminals (L/MONO, R) of the projector.
4. Connect the other end of the audio cable to the audio output terminals (L, R) of the video equipment.



### When the video equipment is equipped with the S-video output terminal, make the connection as follows:

1. Connect one end of a commercially available S-video cable to the S-VIDEO IN terminal of the projector.
2. Connect the other end of the S-video cable to the S-video output terminal of the video equipment.
3. Connect one end of a commercially available audio cable to the audio input terminals (L/MONO, R) of the projector.
4. Connect the other end of the audio cable to the audio output terminals (L, R) of the video equipment.

- When connecting a monophonic video device, use the white (L) terminal to connect the audio cable. (The same audio signal is output from the channels L and R of the AUDIO OUT terminal.)
- Also read the instruction manual of the equipment to be connected.
- Contact your dealer for details of connection.

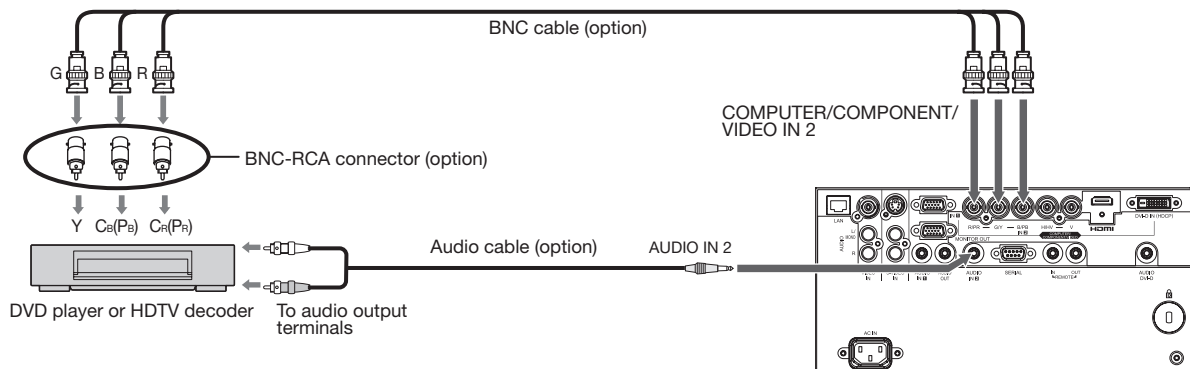
### When a TV tuner or VCR is connected:

When you use this projector with a TV tuner or VCR connected, no image may appear or a message of "NO SIGNAL" may appear on the screen when you change the channel via any channel that is not being received. In such a case, set the channels of the TV tuner or VCR again. To avoid such symptom, use the TV tuner or VCR with its channel skip function (that is a function not to display channels that are not being received) enabled.

## Viewing video images (continued)

### Projector + DVD player or HDTV decoder

Some DVD players have an output connector for 3-line fitting (Y, C<sub>B</sub>, C<sub>R</sub>). When connecting such DVD player with this projector, use the COMPUTER/COMPONENT/VIDEO IN 2 terminals.



- The terminal's names Y, P<sub>B</sub>, and P<sub>R</sub> are given as examples of when a HDTV decoder is connected.
- The terminal's names vary depending on the connected devices.
- Use BNC cables for connection.
- Image may not be projected correctly with some DVD players.
- If colors aren't displayed correctly when the projector is connected to a high-definition video device having R, G, and B output terminals, set COMPUTER INPUT to RGB in the SIGNAL menu. (See page 36.)

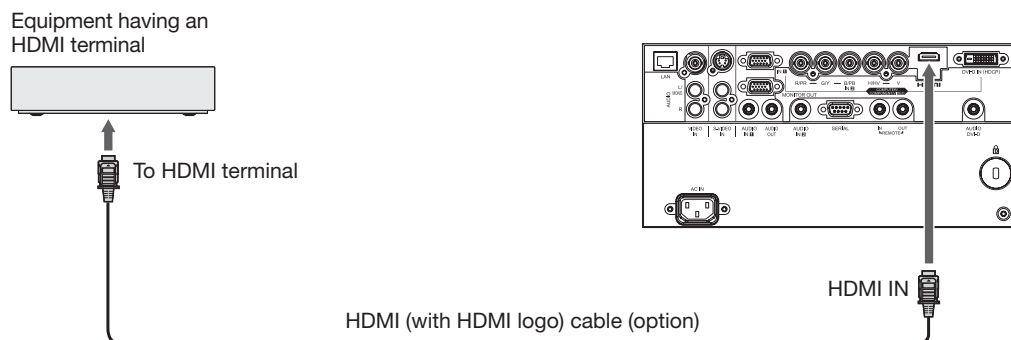
### Connecting to video equipment having a HDMI terminal or DVI-D terminal

You can project high-quality images by connecting the COMPUTER/COMPONENT/VIDEO DVI-D IN (HDCP) terminal of this projector to video equipment having a HDMI output terminal or DVI-D terminal. In addition, this projector supports HDCP and is able to receive encrypted digital video data that are output from DVD players.

- HDCP (High-bandwidth Digital Content Protection), developed by Intel Corporation, is a method to encrypt digital video data for the purpose of copy protection.
- HDMI (High-Definition Multimedia Interface) is fully backward compatible with computers, displays and consumer electronics devices incorporating the DVI standards.
- This projector can be linked with video devices equipped with HDMI output terminal or DVI-D output terminal. However, with some of them, this projector may not display any image or not operate correctly.
- If this projector doesn't display any image or not operate correctly, see the operation manual of the video device for its connection.
- Use of a long cable may decrease the quality of projected images.

#### Connection (for video equipment having an HDMI terminal)

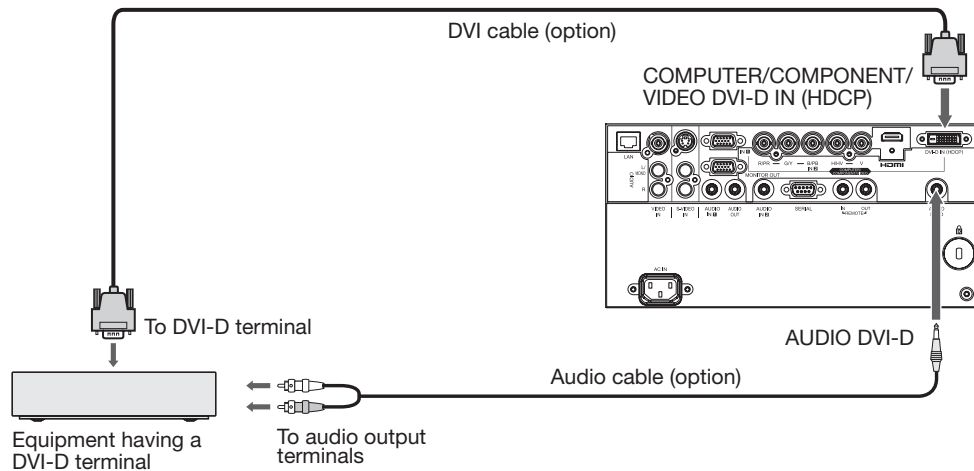
- Use a commercially available HDMI (with HDMI logo) cable.
- You don't have to connect any cable for audio input. You can input video and audio using an HDMI cable only.
- When HDMI audio isn't output, it may be output by turning off the power of the video equipment with the projector and the video equipment connected to each other and then turning back on the power.
- Some cables may not be connected correctly depending on the size and shape of their connectors.
- When HDMI is selected as the input source, settings of FINE SYNC., TRACKING, HOLD, etc. are unavailable.
- During power standby, HDMI audio isn't output from the speaker and the AUDIO OUT terminal on the projector.





## Viewing video images (continued)

### Connection (for video equipment having a DVI-D terminal)



- For connection to the DVI-D terminal, use a commercially available DVI cable.
- Use AUDIO DVI-D terminal for audio input.
- Some cables may not be connected correctly depending on the size and shape of their connectors.
- When DVI is selected as the input source, settings of FINE SYNC., TRACKING, HOLD, etc. are unavailable.

**When you connect this projector and a digital device (such as a DVD player) via the HDMI IN or COMPUTER/COMPONENT/VIDEO DVI-D IN (HDCP) terminal, black color may appear dark and deep, depending on the type of the connected device.**

- This depends on the black level setting of the connected device. There are 2 kinds of methods to digitally transfer image data, in which different black level settings are employed respectively. Therefore, the specifications of the signals output from DVD players differ, depending on the type of the digital data transfer method they use.
- Some DVD players are provided with a function to switch the methods to output digital signals. When your DVD player is provided with such function, set it as follows.  
EXPAND or ENHANCED → NORMAL
  - See the users guide of your DVD player for details.
  - When your digital device does not have such function, set INPUT LEVEL to ENHANCED in the ADVANCED MENU of the IMAGE menu of this projector, or adjust the black color by viewing the image.

### B. Plugging in the power cord

Plug the power cord in the same way as in the case of “Viewing computer images.” (See page 19.)

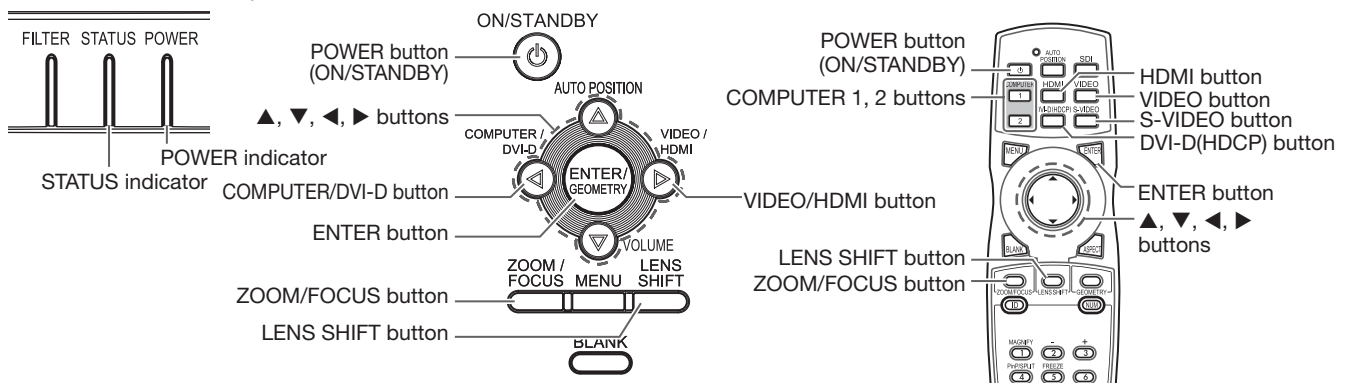
### C. Installing the terminal cover

If necessary, install the terminal cover to the projector in the same way as in the case of “Viewing computer images.” (See page 20.)

### D. Projecting images

#### Preparation:

- Remove the lens cap.



- Confirm the POWER indicator lights up red.
  - If the projector was turned off before the lamp was cooled down sufficiently last time, the fan may start rotating and the POWER button may not work after the power cord is plugged. (The STATUS indicator blinks green.) After the fan stops rotating, press the POWER button to turn back on the POWER indicator.
- Turn on the power of the connected video equipment.
- Press the POWER button.
  - It may take about 1 minute for the lamp to light up.
  - The lamp fails to light up on rare occasions. In such a case, wait for a few minutes and then try again.
  - Do not cover the lens with the lens cap while the lamp is on.
  - After the POWER button is pressed, the image may flicker before the lamp becomes stable. This is not a product malfunction.
  - Regardless of the setting of LAMP MODE, the LOW lamp mode is activated by default whenever the projector is turned on. When LAMP MODE has been set to STANDARD, the lamp mode changes from LOW to STANDARD about 2 minutes after turn-on.
  - The projector starts warming up when the POWER button is pressed. During the warm-up process, images may appear dark and no commands are accepted.
  - By blinking red, the STATUS indicator indicates that the lamp should be replaced soon. Replace the lamp when the STATUS indicator blinks red. (See page 62.)
- Press the ZOOM/FOCUS button to display the ZOOM/FOCUS menu.
- Adjust with the ◀ or ▶ button to get a fine picture.
  - When the ENTER button is pressed while the ZOOM/FOCUS menu is displayed, the adjustment mode is switched between FAST and STEP. When FAST is selected, the speed of focus controlled by the ◀ or ▶ button becomes fast, and it becomes slow when STEP is selected.
- Select an input source.
  - Press the VIDEO/HDMI button on the projector or the VIDEO, S-VIDEO or HDMI button on the remote control that is corresponding to the terminal in use.
  - The input source is switched between VIDEO, S-VIDEO and HDMI at every press of the VIDEO/HDMI button on the projector.
  - You cannot change the input source while the menu is being displayed.
  - Though it may take some time before an image is displayed on the screen depending on the type of the input signal, such symptom is not a malfunction.
  - Some images become easier to view when the setting of aspect ratio is changed. (See page 24.)
  - When projecting images from a DVD player that is connected to the COMPUTER/COMPONENT/VIDEO DVI-D IN (HDCP) terminal, press the COMPUTER/DVI-D button on the projector to select DVI or press the DVI-D (HDCP) button on the remote control.
  - When projecting images from a DVD player that is connected to the COMPUTER/COMPONENT/VIDEO IN 1 or COMPUTER/COMPONENT/VIDEO IN 2 terminal, press the COMPUTER/DVI-D button on the projector or the COMPUTER 1 or COMPUTER 2 button on the remote control.
- Adjust the position of the projector to keep an appropriate projection distance with which images are projected in their specified sizes.
- Adjust the position of the projector so that the projector and the screen are perpendicular to each other. (See page 11.)
  - When the projector cannot be positioned perpendicularly to the screen, adjust the projection angle. (See page 13.)
- Press the ZOOM/FOCUS button to display the ZOOM/FOCUS menu.
- Adjust with the ▲ or ▼ button to get an approximate size.
  - When the ENTER button is pressed while the ZOOM/FOCUS menu is displayed, the adjustment mode is switched between FAST and STEP. When FAST is selected, the speed of zoom controlled by the ▲ or ▼ button becomes fast, and it becomes slow when STEP is selected.

## Viewing video images (continued)

11. Press the LENS SHIFT button. The LENS SHIFT menu appears at the center of the screen.
  12. Press the ▲ or ▼ button to adjust the vertical position and ◀ or ▶ button to adjust the horizontal position of the displayed image.
    - When the image is not displayed within the screen, adjust the projection angle. In addition, perform the keystone adjustment, if necessary. (See page 14.)
- Repeat steps 4, 5 and 9 to 12, if necessary.

### Important:

- Focus, zoom and lens shift adjustment is possible in the normal picture mode only.

### To stop projecting:

13. Press the POWER button.
  - A confirmation message is displayed.
  - To cancel the procedure, leave the projector for a while or press any button except the POWER button.
14. Press the POWER button again.
  - The lamp goes out and the projector goes into a standby mode. In this standby mode, the STATUS indicator blinks green.
15. Wait about 2 and a half minutes for the STATUS indicator to be turned off.
  - During this period of 2 and a half minutes in the standby mode, the intake fan and exhaust fan rotate to cool the lamp.
  - The air outlet fans rotate faster as the temperature around the projector rises.
  - Though the fans make loud sounds during cooling, such symptom is not a malfunction.
16. Unplug the power cord from the outlet.
  - The POWER indicator will go out.
  - If the power cord should be unplugged accidentally while either the air inlet fan or the air outlet fans are operating or the lamp is on, allow the projector to cool down for 10 minutes with the power off. To light the lamp again, press the POWER button. If the lamp doesn't light up immediately, press the POWER button a few minutes later. If it should still fail to light up, replace the lamp.
  - Cover the lens with the lens cap to protect it from dust.
  - If necessary, disconnect the cables from the computer after unplugging the power cord.

### Direct Power OFF

You can turn off this projector just by unplugging the power cord without pressing the POWER button.

- Don't shut down the projector while the STATUS indicator is blinking after the lamp lights up because the lamp's life may be shortened.
- Don't turn the projector back on right after shutting it down because the lamp's life may be shortened. (Wait about 10 minutes before turning the projector back on.)
- Before shutting down the projector, be sure to close the menu screen. If you shut down the projector without closing the menu, the setting data of the menu may not be saved.
- If you shut down the projector while controlling the projector using the network function, the application software such as ProjectorView may fail. The data such as the operating time and temperature display may not be changed. In such a case, close the browser and then start up again.
- Don't shut down the projector while the filter is rolling (while the FILTER indicator is blinking green).

### Volume from the speaker

Press the VOLUME + or - button to change the volume from the speaker.

The volume control bar will appear on the screen.



- The volume control bar will disappear about 10 seconds after the VOLUME button is released.
- The VOLUME buttons don't function while the menu selection bar or the menu is being displayed.
- When a high-level audio signal, such as a DVD audio signal, is supplied to the AUDIO IN terminals, the output from the speaker may be distorted.
- When the audio cable is connected to the AUDIO OUT terminal, the speaker output is muted.
- The volume of the audio from the AUDIO OUT terminal is also changed by pressing the VOLUME buttons.
- The volume of the audio from the AUDIO OUT terminal varies within the range between 0 and 31.

### Setting the aspect ratio

You can change the aspect ratio of the input video signal (or the ratio of width to height of the image). Change the setting according to the type of the input video signal. (See page 24.)

# Menu operation

You can make various settings using the displayed menus.  
Following 6 menus are displayed.

## IMAGE menu (page 32)

IMAGE		
	COLOR ENHANCER	◀ AUTO ▶
	SUPER RESOLUTION	◀ ON <input checked="" type="checkbox"/> ▶
	CONTRAST	◀ 0 ▶
	BRIGHTNESS	◀ 0 ▶
	NCM	◀ COMPUTER ▶
	COLOR TEMP.	◀ STANDARD ▶
	COLOR	◀ 0 ▶
	TINT	◀ 0 ▶
	SHARPNESS	◀ 0 ▶
	ADVANCED MENU	ENTER <input checked="" type="checkbox"/>

## INSTALLATION menu (page 33)

INSTALLATION		
	LAMP MODE	◀ STANDARD ▶
	STANDBY MODE	◀ LOW ▶
	AUTO POWER ON	◀ OFF ▶
	AUTO POWER OFF	◀ 5min ▶
	IMAGE CAPTURE	SETUP <input checked="" type="checkbox"/>
	SPLASH SCREEN	◀ ON ▶
	BACK COLOR	◀ BLUE ▶
	IMAGE REVERSE	◀ OFF ▶
	LENS LOCK	ENTER <input checked="" type="checkbox"/>
	DVI LONG CABLE	◀ AUTO ▶

## FEATURE menu (page 34)

FEATURE		
	ASPECT	◀ NORMAL ▶
	SCREEN	◀ 16:10 ▶
	PROJECTOR ID	◀ ALL ▶
	PASSWORD FUNCTION	◀ DISPLAY INPUT <input checked="" type="checkbox"/> ▶
	MENU POSITION	◀ 1.  ▶
	CINEMA MODE	◀ AUTO ▶
	FILTER MENU	ENTER <input checked="" type="checkbox"/>
	LANGUAGE	◀ English ▶
	HIGH ALTITUDE MODE	STANDARD <input checked="" type="checkbox"/>
	ADVANCED MENU	ENTER <input checked="" type="checkbox"/>
	RESET ALL	OK <input checked="" type="checkbox"/>

## SIGNAL menu (page 36)

SIGNAL		
	MEMORY CALL	◀ AUTO ▶
	RESOLUTION (MEMORIZE <input checked="" type="checkbox"/> )	1024 x 768 <input checked="" type="checkbox"/>
	HORIZ. POSITION	◀ 0 ▶
	VERT. POSITION	◀ 0 ▶
	FINE SYNC.	◀ 0 ▶
	TRACKING	◀ 0 ▶
	COMPUTER INPUT	◀ AUTO ▶
	OVER SCAN	◀ 100% ▶
	HOLD	◀ ON <input checked="" type="checkbox"/> ▶
	USER	ENTER <input checked="" type="checkbox"/>

## NETWORK menu (page 37)

NETWORK		
	PROJECTOR NAME	<input checked="" type="checkbox"/>
	NETWORK CERTIFICATION	ON <input checked="" type="checkbox"/>
	NETWORK PASSWORD	ENTER <input checked="" type="checkbox"/>
	IP CONFIG	ENTER <input checked="" type="checkbox"/>
	CONTROL SYSTEM	STANDARD <input checked="" type="checkbox"/>
	NETWORK RESET	OK <input checked="" type="checkbox"/>
	NETWORK RESTART	OK <input checked="" type="checkbox"/>

## INFORMATION menu (page 38)

INFORMATION		
	LAMP TIME (LOW)	****H <input type="text"/>
	SERIAL NUMBER	*****...
	INPUT	COMPUTER1
	RESOLUTION	1024 x 768
	VERTICAL FREQUENCY	60.00 Hz
	HORIZONTAL FREQUENCY	48.36 kHz
	SYNC. TYPE	5WIRE

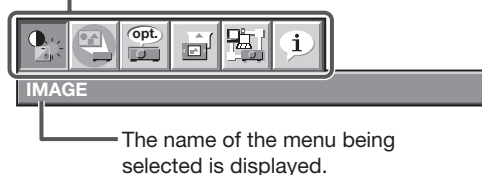
## Menu operation (continued)

### How to set the menus

1. Press the MENU button.

- The menu selection bar is displayed.

Selectable menus are displayed by icons. (The menu icon being selected is displayed on a blue background.)

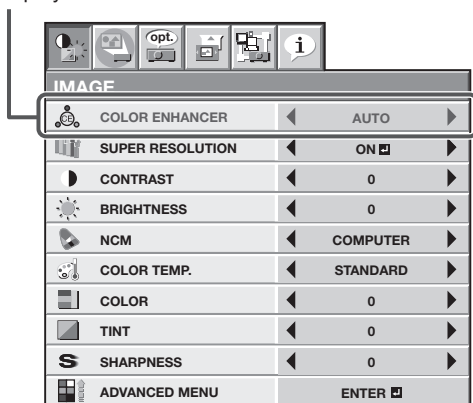


2. Press the ◀ or ▶ button to select a menu to use.

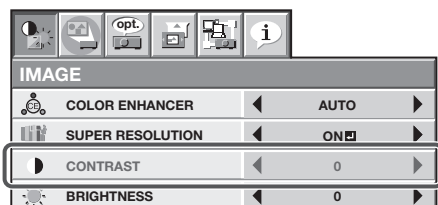
3. Press the ENTER button (or ▼ button).

- The selected menu is displayed.

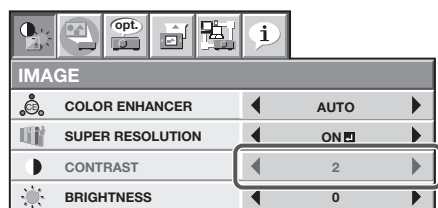
The item being selected is displayed in red letters.



4. Press the ▲ or ▼ button to select an item to adjust.




5. Set the selected item by pressing the ◀ or ▶ button.



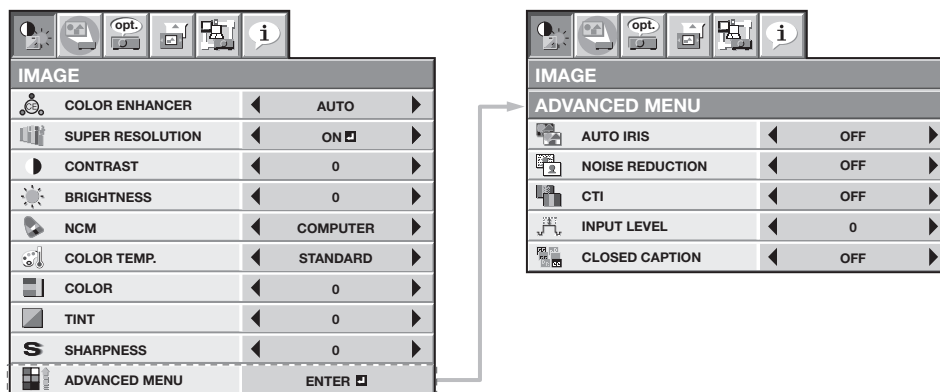
6. To cancel the menu, press the MENU button several times.

#### Important:

- When an item marked with “” is selected, pressing the ENTER button makes its value effective or displays another screen for further setting.
- When the MENU button doesn't function, unplug the power cord from the wall outlet. Wait about 10 minutes, plug the power cord in, and try again.
- The menus and screens shown in this manual may be different from those of the actual projector.

## Menu operation (continued)

### IMAGE menu



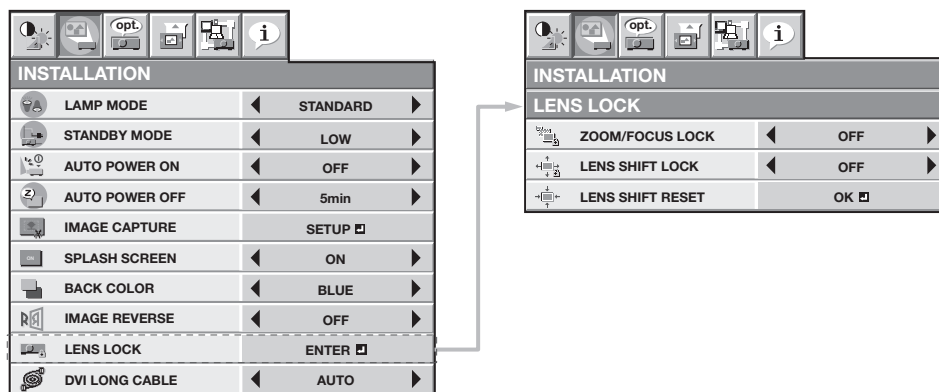
ITEM	SETTING	FUNCTION
COLOR ENHANCER	AUTO	Select to optimize the settings automatically depending on the input signal. (Select this option for normal use.)
	PRESENTATION	Select to make the displayed image look bright and crisp.
	STANDARD	Select to make the displayed image look natural.
	THEATER	This option, suitable for viewing movies, makes the displayed image look soft and smooth.
	sRGB	Select to give priority to the color reproducibility.
	USER	Select to set the gamma curve. (See page 40.)
	CLEAR BASE	Select to obtain the color close to that of the X-ray film (clear base).
	BLUE BASE	Select to obtain the color close to that of the X-ray film (blue base).
SUPER RESOLUTION	ON  / OFF	Use to emphasize the fineness of the image. (See page 41.)
CONTRAST	±30	Use to adjust the contrast of the projected image. (See page 39.)
BRIGHTNESS	±30	Use to adjust the brightness of the projected image. (See page 39.)
NCM	COMPUTER / VIDEO	Use to adjust the predetermined tone of each color.
	USER	Use to emphasize only certain colors or to correct the tonal deviation of only certain colors. (See page 41.)
	OFF	NCM doesn't work.
COLOR TEMP.	STANDARD / LOW / HIGH	Select from the predetermined color temperatures.
	USER	Use to adjust the color temperature to a desired value. (See page 39.)
COLOR	±10	Use to adjust the color thickness of the projected image. (See page 39.)
TINT	±10	Use to adjust the color tint of the projected image. (See page 39.)
SHARPNESS	±5	Use to adjust the sharpness of the projected image. (See page 39.)
ADVANCED MENU	ENTER	The ADVANCED MENU is displayed for the following settings.
AUTO IRIS	ON / OFF	Select the operation mode of the auto iris. When ON is chosen, the iris is automatically adjusted depending on the image being displayed. When OFF is chosen, the iris is kept fully opened.
NOISE REDUCTION	ON / OFF	Use to reduce noise and roughness in the image when noisy video signal is input.
CTI	ON / OFF	Use to correct smeared color boundaries.
INPUT LEVEL	±5	For analog signal input: The input level of video signal differs among devices to be connected. High input level causes solid white in displayed image and low input level causes displayed image to get dark. Use this menu to adjust the input level of analog video signal.
	AUTO / ENHANCED / NORMAL	For digital signal input: AUTO: The proper setting is automatically selected. (Selectable only when HDMI signal is input.) ENHANCED: Select when solid black occurs. NORMAL: Select when grayish black occurs. (See page 27.)
CLOSED CAPTION	OFF	Does not display captions.
	CC1 / CC2	Displays captions.

- When COLOR ENHANCER is sRGB, CLEAR BASE or BLUE BASE, COLOR TEMP., COLOR, TINT, NCM and AUTO IRIS can't be adjusted.
- When the setting of COLOR ENHANCER is changed, the displayed image may be disturbed.
- This product is not in compliance with DICOM Part 14. Do not use this product for actual medical diagnosis.
- The effect obtained when SUPER RESOLUTION is ON varies depending on the type and resolution of the input image.
- When the COMPUTER1, COMPUTER2, DVI or HDMI is selected as the input source, COLOR and TINT can't be adjusted.
- TINT is available only when the NTSC signal is input.
- INPUT LEVEL is unavailable when the digital signal is supplied from the YCbCr/YPbPr terminal of the connected device.
- Captions are not displayed while information about the menu or input signal selection is being displayed on the screen.
- The closed caption function displays text information included in the NTSC signal, which is mainly used for TV broadcasting in North America.



## Menu operation (continued)

### INSTALLATION menu

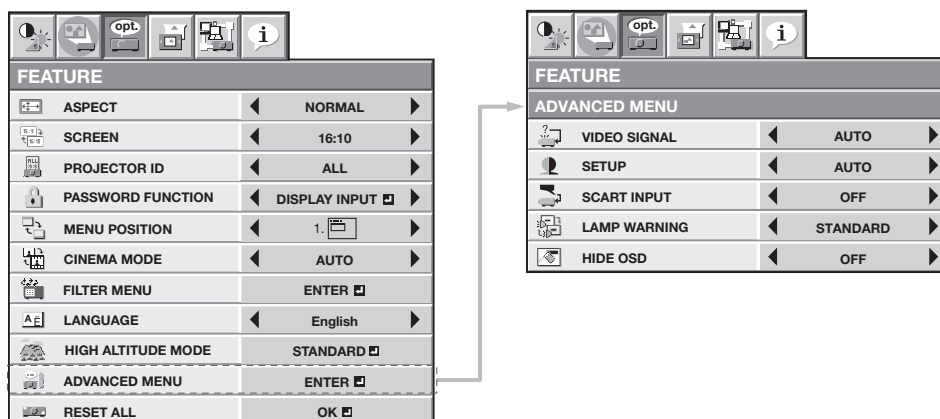


ITEM	SETTING	FUNCTION
LAMP MODE	STANDARD LOW	Select this option when you want to view images in a well-lit room. Select to moderate the intensity of the lamp. The operating sound is reduced and the lamp lifetime becomes longer.
STANDBY MODE	STANDARD	Select this option when you control the projector via the LAN terminal during power standby. Audio is output from the AUDIO OUT terminal. Video signal is output from the MONITOR OUT terminal.
	LAN	Select this option when you control the projector via the LAN terminal during power standby.
	LOW	Select this option when you don't control the projector via the LAN terminal during power standby. This option disables the LAN terminal and reduces the power consumption during the power standby.
AUTO POWER ON	ON / OFF	When ON is chosen, the projector is automatically turn on when the power cord is plugged in the wall outlet. Choose ON when using the projector mounted on the ceiling. <ul style="list-style-type: none"> <li>The projector is in the stand-by mode when the lamp is off. Use the remote control to turn on the lamp.</li> </ul>
AUTO POWER OFF	OFF / 5min-8hour	When no video signal is input and no operation is made, the projector automatically turns off after the selected time period. A dialog is displayed 5 minutes before the projector turns off.
IMAGE CAPTURE	SETUP	Use to capture the screen for the splash screen. (See page 48.)
SPLASH SCREEN	ON / OFF	Choose ON to display the splash screen when the power is turned on. <ul style="list-style-type: none"> <li>The splash screen can be changed. (See page 48.)</li> </ul>
BACK COLOR	BLUE / BLACK / IMAGE	Use to select the background from among BLUE, BLACK and IMAGE, which will be displayed when there is no signal input from the source. When IMAGE is selected, the splash screen will be displayed.
IMAGE REVERSE	OFF	Select when viewing images from the front with the projector installed on the floor.
	MIRROR	Select when viewing images projected from the behind of the screen with the projector installed on the floor.
	INVERT	Select when viewing images projected from the behind of the screen with the projector installed on the ceiling.
	MIRROR INVERT	Select when viewing images from the front with the projector installed on the ceiling.
LENS LOCK	ENTER	The LENS LOCK menu is displayed for the following settings.
ZOOM/FOCUS LOCK	ON / OFF	Use to enable or cancel the FOCUS LOCK and ZOOM LOCK.
LENS SHIFT LOCK	ON / OFF	Use to enable or cancel the LENS SHIFT LOCK.
LENS SHIFT RESET	OK	Use to reset the position of the lens to the factory setting.
DVI LONG CABLE	AUTO	Select this option for normal use.
	MANUAL	Use to adjust the amount of transmission signal correction when a long DVI cable is used.

- Regardless of the setting of LAMP MODE, the LOW lamp mode is activated by default whenever the projector is turned on. When LAMP MODE has been set to STANDARD, the lamp mode changes from LOW to STANDARD about 2 minutes after turn-on.
- When the ambient operating temperature is high, the brightness of the lamp isn't changed by switching the lamp mode.
- When the lamp mode is switched, the projected image may flicker.
- An icon is displayed to the right of the menu bar while the projector is warmed up. While the icon is being displayed, you cannot change the lamp mode. And an icon is displayed while the operating ambient temperature is high. While the icon is being displayed, the lamp may not brighten even when you change the LAMP MODE to STANDARD.
- Frequent switching of the lamp mode may damage the lamp.
- You can't set IMAGE CAPTURE and SPLASH SCREEN when PASSWORD FUNCTION in the FEATURE menu has been set to SPLASH ID SCREEN to enable the password lock.
- When you set BACK COLOR to IMAGE and display the splash screen (startup screen) for a long time of period, the after-image may remain on the screen. Consult your dealer in this case.
- Don't adjust the lens frequently with BACK COLOR set to IMAGE.
- The power can be saved using the functions marked with on the icon.

## Menu operation (continued)

### FEATURE menu



ITEM	SETTING	FUNCTION
ASPECT	NORMAL	Input video signal is displayed at the max height (1200 pixels) or max width (1920 pixels) of the panel while its aspect ratio is maintained.
	16:9	<ul style="list-style-type: none"> <li>When SCREEN is 16:9, the input video signal is displayed at the max height (1080 pixels) or max width (1920 pixels) of the panel.</li> </ul> Regardless of the type of input signal, image is displayed at 16:9 aspect ratio (1920 x 1080 pixels). Select to expand squeezed (or horizontally compressed) images such as DVD images to 16:9. Press the ENTER button to select whether or not to display signals at 16:9 depending on their type. (See page 24.)
	REAL FULL	Input video signal is displayed at its original pixel size. Select to project images in full size (1920 x 1200 pixels) irrespective of type of input signal. <ul style="list-style-type: none"> <li>When SCREEN is 16:9, images are displayed at 1920x1080 pixels.</li> </ul>
SCREEN	16:10	Select this setting when using a 16:10 screen.
	16:9	Select this setting when using a 16:9 screen.
PROJECTOR ID	ALL	Select this option to control the projector regardless of the ID number. (See page 10.)
PASSWORD FUNCTION	01 to 63	Use to set the ID number (two-digit number). (See page 10.)
	DISPLAY INPUT  / MENU ACCESS  / SPLASH ID SCREEN	Use to enable or cancel the password lock. See page 49 for details.
MENU POSITION	1 (upper left) / 2 (lower right) / 3 (center)	Use to change the position of the menu.
CINEMA MODE	AUTO	The film mode will be automatically activated when a film source signal is input. Select AUTO for normal use.
FILTER MENU	FILM	When flicker occurs on the screen, frame dropping or other incorrect display occurs, or jaggies on slanting lines are remarkable, select either FILM or VIDEO, which improves the symptom better.
	VIDEO	Fixed to the film mode.
	ENTER	The film mode will not be activated.
	OFF / EVERY 500H / PERIOD	The filter menu for the following settings is displayed. You can set the roll interval of the filter. (See page 56.)
	EVERY 750H / EVERY 1000H	
	MANUAL ROLL UP OK	Select this option to roll the filter immediately. (See page 56.)
	REMAINING FILTERS **	The remaining amount of the filter sheet is displayed.
	FILTER USAGE TIME *****H	The usage time of the current filter sheet is displayed.
LANGUAGE	FILTER RESET OK	Use to reset the roll counter of the filter.
		Use to select the language used in the menus.
HIGH ALTITUDE MODE	日本語 / English / Español / Deutsch / Français / Italiano / 中文 / 한국어 / РУССКИЙ / PORTUGUÊS / SVENSKA / POLSKI / Nederlands/ Norsk / اللغة العربية / Türkçe / ภาษาไทย / Bahasa Indonesia / Melayu / Tiếng Việt	
	STANDARD	Select this option for normal use.
	HIGH ALTITUDE	Select this option for use at an altitude of 1500 to 2700 meters above the sea level.