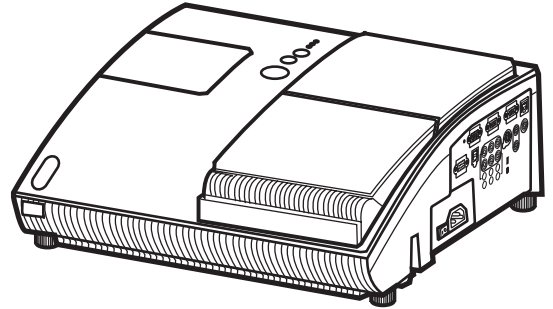


## Projector

# ED-A100/ED-A110/CP-A100W

## User's Manual (detailed) Operating Guide



Thank you for purchasing this projector.

**⚠ WARNING** ▶ Before using this product, please read all manuals for this product. Be sure to read “Safety Guide” first. After reading them, store them in a safe place for future reference.

### About this manual

Various symbols are used in this manual. The meanings of these symbols are described below.

**⚠ WARNING** This symbol indicates information that, if ignored, could possibly result in personal injury or even death due to incorrect handling.

**⚠ CAUTION** This symbol indicates information that, if ignored, could possibly result in personal injury or physical damage due to incorrect handling.

 Please refer to the pages written following this symbol.

**NOTE** • The information in this manual is subject to change without notice.

- The manufacturer assumes no responsibility for any errors that may appear in this manual.
- The reproduction, transfer or copy of all or any part of this document is not permitted without express written consent.

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  - VESA and SVGA are trademarks of the Video Electronics Standard Association.
  - Windows is a registered trademark of Microsoft Corporation.
- All other trademarks are the properties of their respective owners.

Projector

## User's Manual - Safety Guide

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Thank you for purchasing this projector.



**⚠ WARNING** • Before using, read these user's manuals of this projector to ensure correct usage through understanding. After reading, store them in a safe place for future reference. Incorrect handling of this product could possibly result in personal injury or physical damage. The manufacturer assumes no responsibility for any damage caused by mishandling that is beyond normal usage defined in these manuals of this projector.

**NOTE** • The information in this manual is subject to change without notice.

- The manufacturer assumes no responsibility for any errors that may appear in this manual.
- The reproduction, transmission or use of this document or contents is not permitted without express written authority.

### About The Symbols

Various symbols are used in this manual, the user's manual and on the product itself to ensure correct usage, to prevent danger to the user and others, and to prevent property damage. The meanings of these symbols are described below. It is important that you read these descriptions thoroughly and fully understand the contents.

 <b>WARNING</b>	This symbol indicates information that, if ignored, could possibly result in personal injury or even death due to incorrect handling.
 <b>CAUTION</b>	This symbol indicates information that, if ignored, could result possibly in personal injury or physical damage due to incorrect handling.

### Typical Symbols



This symbol indicates an additional warning (including cautions). An illustration is provided to clarify the contents.



This symbol indicates a prohibited action. The contents will be clearly indicated in an illustration or nearby (the symbol to the left indicates that disassembly is prohibited).



This symbol indicates a compulsory action. The contents will be clearly indicated in an illustration or nearby (the symbol to the left indicates that the power plug should be disconnected from the power outlet).

# Safety Precautions

## **WARNING**

### **Never use the projector if a problem should occur.**

Abnormal operations such as smoke, strange odor, no image, no sound, excessive sound, damaged casing or elements or cables, penetration of liquids or foreign matter, etc. can cause a fire or electrical shock.

In such case, immediately turn off the power switch and then disconnect the power plug from the power outlet. After making sure that the smoke or odor has stopped, contact your dealer. Never attempt to make repairs yourself because this could be dangerous.

- The power outlet should be close to the projector and easily accessible.

### **Use special caution for children and pets.**

Incorrect handling could result in fire, electrical shock, injury, burn or vision problem.

Use special caution in households where children and pets are present.

### **Do not insert liquids or foreign object.**

Penetration of liquids or foreign objects could result in fire or electrical shock.

Use special caution in households where children are present.

If liquids or foreign object should enter the projector, immediately turn off the power switch, disconnect the power plug from the power outlet and contact your dealer.

- Do not place the projector near water (ex. a bathroom, a beach, etc.).
- Do not expose the projector to rain or moisture. Do not place the projector outdoors.
- Do not place flower vases, pots, cups, cosmetics, liquids such as water, etc on or around the projector.
- Do not place metals, combustibles, etc on or around the projector.
- To avoid penetration of foreign objects, do not put the projector into a case or bag together with any thing except the accessories of the projector, signal cables and connectors.

### **Never disassemble and modify.**

The projector contains high voltage components. Modification and/or disassembly of the projector or accessories could result in fire or electrical shock.

- Never open the cabinet.
- Ask your dealer to repair and clean insider.

### **Do not give the projector any shock or impact.**

If the projector should be shocked and/or broken, it could result in an injury, and continued use could result in fire or electrical shock.

If the projector is shocked, immediately turn off the power switch, disconnect the power plug from the power outlet and contact your dealer.

### **Do not place the projector on an unstable surface.**

If the projector should be dropped and/or broken, it could result in an injury, and continued use could result in fire or electrical shock.

- Do not place the projector on an unstable, slant or vibrant surface such as a wobbly or inclined stand.
- Use the caster brakes placing the projector on a stand with casters.
- Do not place the projector in the side up position, the lens up position or the lens down position.
- In the case of a ceiling installation or the like, contact your dealer before installation.



Disconnect the plug from the power outlet.



Do not disassemble.



# Safety Precautions (continued)

## **WARNING**

### **Be cautious of High temperatures of the projector.**

High temperatures are generated when the lamp is lit. It could result in fire or burn. Use special caution in households where children are present.

Do not touch about the lens, air fans and ventilation openings during use or immediately after use, to prevent a burn. Take care of ventilation.

- Keep a space of 30 cm or more between the sides and other objects such as walls.
- Do not place the projector on a metallic table or anything weak in heat.
- Do not place anything about the lens, air fans and ventilation openings of the projector.
- Never block the air fan and ventilation openings.
- Do not cover the projector with a tablecloth, etc.
- Do not place the projector on a carpet or bedding.



### **Never look through the lens or openings when the lamp is on.**

The powerful light could adversely affect vision.

Use special caution in households where children are present.



### **Use only the correct power cord and the correct power outlet.**

Incorrect power supply could result in fire or electrical shock.

• Use only the correct power outlet depending on the indication on the projector and the safety standard.

• The enclosed power cord must be used depending on the power outlet to be used.



### **Be cautious of the power cord connection.**

Incorrect connection of the power cord could result in fire or electrical shock.

- Do not touch the power cord with a wet hand.
- Check that the connecting portion of the power cord is clean (with no dust), before using. Use a soft and dry cloth to clean the power plug.
- Insert the power plug into a power outlet firmly. Avoid using a loose, unsound outlet or contact failure.



### **Be sure to connect with ground wire.**

Connect the ground terminal of AC inlet of this unit with the ground terminal provided at the building using the correct power cord; otherwise, fire or electric shock can result.

- Don't take the core of power cord away.



Surely connect the ground wire.

## Safety Precautions (continued)

### **WARNING**

#### **Be careful in handling the light source lamp.**

The projector uses a high-pressure mercury glass lamp made of glass. The lamp can break with a loud bang, or burn out. When the bulb bursts, it is possible for shards of glass to fly into the lamp housing, and for gas containing mercury to escape from the projector's vent holes.

**Please carefully read the section "Lamp".**

#### **Be careful in handling the power cord and external connection cables.**

If you keep using a damaged the power cord or cables, it can cause a fire or electrical shock. Do not apply too much heat, pressure or tension to the power cord and cables.

If the power cord or cables is damaged (exposed or broken core wires, etc.), contact your dealer.

- Do not place the projector or heavy objects on the power cord and cables. Also, do not place a spread, cover, etc, over them because this could result in the inadvertent placing of heavy objects on the concealed power cord or cables.

- Do not pull the power cord and cables. When connecting and disconnecting the power cord or cables, do it with your hand holding the plug or connector.

- Do not place the cord near the heater.

- Avoid bending the power cord sharply.

- Do not attempt to work on the power cord.

#### **Be careful in handling the battery of the remote control.**

Incorrect handling of the battery could result in fire or personal injury. The battery may explode if not handled properly.

- Keep the battery away from children and pets. If swallowed consult a physician immediately for emergency treatment.

- Do not allow the battery in a fire or water.

- Avoid fire or high-temperature environment.

- Do not hold the battery with the metallic tweezers.

- Keep the battery in a dark, cool and dry play.

- Do not short circuit the battery.

- Do not recharge, disassemble or solder the battery.

- Do not give the battery a physical impact.

- Use only the battery specified in the other manual of this projector.

- Make sure the plus and minus terminals are correctly aligned when loading the battery.

- If you observe a leakage of the battery, wipe out the flower and then replace the battery. If the flower adheres your body or clothes, rinse well with water.

- Obey the local laws on disposing the battery.



# Safety Precautions (continued)

## CAUTION

### **Be careful in moving the projector.**

Neglect could result in an injury or damage.

- Do not move the projector during use. Before moving, disconnect the power cord and all external connections, and close the slide lens door or attach the lens cap.
- Avoid any impact or shock to the projector.
- Do not drag the projector.
- For moving the projector, use the enclosed case or bag if provided.



### **Do not put anything on top of the projector.**

Placing anything on the projector could result in loss of balance or falling, and cause an injury or damage. Use special caution in households where children are present.



### **Do not attach anything other than specified things to the projector.**

Neglect could result in an injury or damage.

- Some projector has a screw thread in a lens part. Do not attach anything other than specified options (such as conversion lens) to the screw thread.



### **Avoid a smoky, humid or dusty place.**

Placing the projector in a smoke, a highly humid, dusty place, oily soot or corrosive gas could result in fire or electrical shock.

- Do not place the projector near a smoky, humid or dusty place (ex. a smoking space, a kitchen, a beach, etc.). Do not place the projector outdoors.
- Do not use a humidifier near the projector.



### **Take care of the air filter to normal ventilate.**

The air filter should be cleaned periodically. If the air filter becomes clogged by dust or the like, internal temperature rises and could cause malfunction. The projector may display the message such as "CHECK THE AIR FLOW" or turn off the projector, to prevent the internal heat level rising.

- When the indicators or a message prompts you to clean the air filter, clean the air filter as soon as possible.
- If the soiling will not come off the air filter, or it becomes damaged, replace the air filter.
- Use the air filter of the specified type only. Please order the air filter specified in the other manual of this projector to your dealer.
- When you replace the lamp, replace also the air filter. The air filter may be attached when you buy a replacement lamp for this projector.
- Do not turn on the projector without air filter.



### **Avoid a high temperature environment.**

The heat could have adverse influence on the cabinet of the projector and other parts. Do not place the projector, the remote control and other parts in direct sunlight or near a hot object such as heater, etc.



### **Avoid Magnetism.**

Manufacture strongly recommends to avoid any magnetic contact that is not shielded or protected on or near the projector itself. (ie., Magnetic Security Devices, or other projector accessory that contains magnetic material that has not been provided by the manufacture etc.) Magnetic objects may cause interruption of the projector's internal mechanical performance which may interfere with cooling fans speed or stopping, and may cause the projector to completely shut down.



# Safety Precautions (continued)

## CAUTION

### **Remove the power cord for complete separation.**

- For safety purposes, disconnect the power cord if the projector is not to be used for prolonged periods of time.
- Before cleaning, turn off and unplug the projector. Neglect could result in fire or electrical shock.



Disconnect the plug from the power outlet.

### **Ask your dealer to cleaning inside of the projector about every year.**

Accumulations of dust inside the projector cause result in fire or malfunction. Cleaning inside is more effective if performed before every humid periods such as rainy season.



- Do not clean inside yourself because it is dangerous.

## NOTE

### **Do not give the remote control any physical impact.**

A physical impact could cause damage or malfunction of the remote control.

- Take care not to drop the remote control.
- Do not place the projector or heavy objects on the remote control.

### **Take care of the lens.**

- Close the slide lens door or attach the lens cap to prevent the lens surface being scratched when the projector is not used.
- Do not touch the lens to prevent fog or dirt of the lens that cause deterioration of display quality.
- Use commercially available lens tissue to clean the lens (used to clean cameras, eyeglasses, etc.). Be careful not to scratch the lens with hard objects.

### **Take care of the cabinet and the remote control.**

Incorrect care could have adverse influence such as discoloration, peeling paint, etc.

- Use a soft cloth to clean the cabinet and control panel of the projector and the remote control. When excessively soiled dilute a neutral detergent in water, wet and wring out the soft cloth and afterward wipe with a dry soft cloth. Do not use undiluted detergent directly.
- Do not use an aerosol sprays, solvents, volatile substances or abrasive cleaner.
- Before using chemical wipes, be sure to read and observe the instructions.
- Do not allow long-term close contact with rubber or vinyl.

### **About bright spots or dark spots.**

Although bright spots or dark spots may appear on the screen, this is a unique characteristic of liquid crystal displays, and such do not constitute or imply a machine defect.

### **Be careful of printing of the LCD panel.**

If the projector continues projecting a still image, inactive images or 16:9 aspect images in case of 4:3 panel, etc., for long time, the LCD panel might possibly be printed.

# Safety Precautions (continued)

## NOTE

### **About consumables.**

Lamp, LCD panels, polarizers and other optical components, and air filter and cooling fans have a different lifetime in each. These parts may need to be replaced after a long usage time.

- This product isn't designed for continuous use of long time. In the case of continuous use for 6 hours or more, or use for 6 hours or more every day (even if it isn't continuous), or repetitious use, the lifetime may be shortened, and these parts may need to be replaced even if one year has not passed since the beginning of using.
- Any inclining use beyond the adjustment range explained in these user's manuals may shorten the lifetimes of the consumables.

### **Before turning on the power, make the projector cool down adequately.**

After turning the projector off, pushing the restart switch or interrupting of the power supply, make the projector cool down adequately. Operation in a high temperature state of the projector causes a damage of the electrode and un-lighting of the lamp.

### **Avoid strong rays.**

Any strong ray (such as direct rays of the sun or room lighting) onto the remote control sensors could invalidate the remote control.

### **Avoid radio interference.**

Any interfering radiation could cause disordered image or noises.

- Avoid radio generator such as a mobile telephone, transceiver, etc. around the projector.

### **About displaying characteristic.**

The display condition of the projector (such as color, contrast, etc.) depends on characteristic of the screen, because the projector uses a liquid crystal display panel. The display condition can differ from the display of CRT.

- Do not use a polarized screen. It can cause red image.

### **Turn the power on/off in right order.**

To prevent any trouble, turn on/off the projector in right order mentioned below unless specifying.

- Power on the projector before the computer or video tape recorder.
- Power off the projector after the computer or video tape recorder.

### **Take care not to fatigue your eyes.**

Rest the eyes periodically.

### **Set the sound volume at a suitable level to avoid bothering other people.**

- It is better to keep the volume level low and close the windows at night to protect the neighborhood environment.

### **Connecting with notebook computer**

When connecting with notebook computer, set to valid the RGB external image output (setting CRT display or simultaneous display of LCD and CRT).

Please read instruction manual of the notebook for more information.



# Lamp

## **WARNING**



HIGH VOLTAGE



HIGH TEMPERATURE



HIGH PRESSURE

The projector uses a high-pressure mercury glass lamp. The lamp can **break with a loud bang, or burn out**, if jolted or scratched, handled while hot, or worn over time. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them. In addition, when the bulb bursts, it is possible for **shards of glass** to fly into the lamp housing, and for **gas containing mercury** to escape from the projector's vent holes.

**About disposal of a lamp** • This product contains a mercury lamp; do not put in trash. Dispose of in accord with environmental laws.

For lamp recycling, go to [www.lamprecycle.org](http://www.lamprecycle.org). (in USA)

For product disposal, contact your local government agency or [www.eiae.org](http://www.eiae.org) (in the US) or [www.epsc.ca](http://www.epsc.ca) (in Canada).

For more information, call your dealer.



Disconnect  
the plug from  
the power  
outlet

- If the lamp should break (it will make a loud bang when it does), unplug the power cord from the outlet, and make sure to request a replacement lamp from your local dealer. Note that shards of glass could damage the projector's internals, or cause injury during handling, so please do not try to clean the projector or replace the lamp yourself.
- If the lamp should break (it will make a loud bang when it does), ventilate the room well, and make sure not to breathe the gas that comes out of the projector vents, or get it in your eyes or mouth.
- Before replacing the lamp, make sure the power switch is off and the power cable is not plugged in, then wait at least 45 minutes for the lamp to cool sufficiently. Handling the lamp while hot can cause burns, as well as damaging the lamp.



- Do not open the lamp cover while the projector is suspended from above. This is dangerous, since if the lamp's bulb has broken, the shards will fall out when the cover is opened. In addition, working in high places is dangerous, so ask your local dealer to have the lamp replaced even if the bulb is not broken.
- Do not use the projector with the lamp cover removed. At the lamp replacing, make sure that the screws are screwed in firmly. Loose screws could result in damage or injury.



- Use the lamp of the specified type only.
- If the lamp breaks soon after the first time it is used, it is possible that there are electrical problems elsewhere besides the lamp. If this happens, contact your local dealer or a service representative.
- Handle with care: jolting or scratching could cause the lamp bulb to burst during use.
- Using the lamp for long periods of time, could cause it dark, not to light up or to burst. When the pictures appear dark, or when the color tone is poor, please replace the lamp as soon as possible. Do not use old (used) lamps; this is a cause of breakage.

# Regulatory Notices

## FCC Statement Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

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

**INSTRUCTIONS TO USERS:** This equipment complies with the requirements of FCC (Federal Communication Commission) equipment provided that the following conditions are met. Some cables have to be used with the core set. Use the accessory cable or a designated-type cable for the connection. For cables that have a core only at one end, connect the core to the projector.

**CAUTION:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## For the Customers in CANADA

**NOTICE:** This Class B digital apparatus complies with Canadian ICES-003.

# Warranty And After-Service

Unless seen any abnormal operations (mentioned with the first paragraph of WARNING in this manual), when a problem occurs with the equipment, first refer to the "Troubleshooting" section of the "Operating Guide", and run through the suggested checks. If this does not resolve the problem contact your dealer or service company. They will tell you what warranty condition is applied.

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## Projector features

This product realizes the large projection image of various image signals, even if in a small space. This product can offer you convenience and various uses by the following features.

- ✓ The unique lens and mirror system realizes ultra short distance projection, which gives you more various way of use.
- ✓ The motorized lens door offers you very simple use of the projector.
- ✓ This projector can be controlled and monitored via LAN connection.

## Preparations

### Contents of package

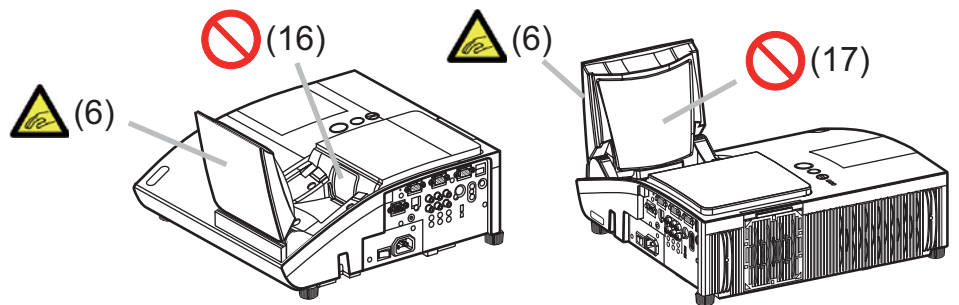
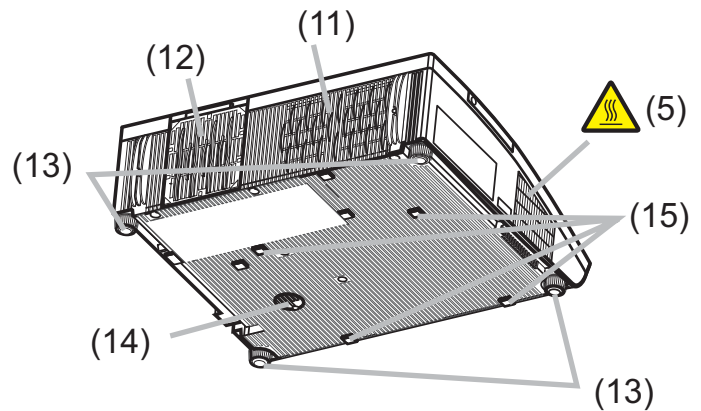
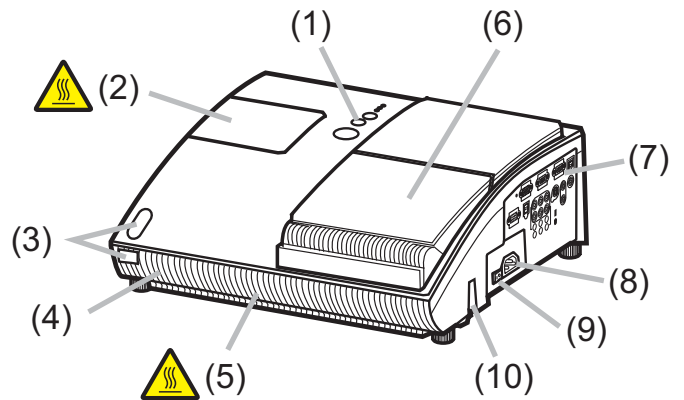
Please see the “Checking the contents” section in the User’s Manual (concise) which is a book. Your projector should come with the items shown there. Contact immediately your dealer if anything is missing.

**NOTE** • Keep the original packing materials, for future reshipment. Be sure to use the original packing materials when moving the projector. Use special caution for the lens.

Part names

**Projector**

- (1) Control buttons  
(See the following page.)
- (2) Lamp cover (📖61)
- (3) Remote sensors (📖14)
- (4) Speaker (📖37)
- (5) Exhaust vents
- (6) Lens door (📖16, 66)
- (7) Ports (📖5, 10)
- (8) AC inlet (📖12)
- (9) Power switch (📖16)
- (10) Security bar (📖13)
- (11) Intake vents
- (12) Filter unit (📖63)
- (13) Elevator feet (📖20)
- (14) Battery cover (📖65)
- (15) Internal threads  
These are threads for optional  
mounting accessories.
- (16) Lens (📖16, 66)
- (17) Mirror (📖16, 66)

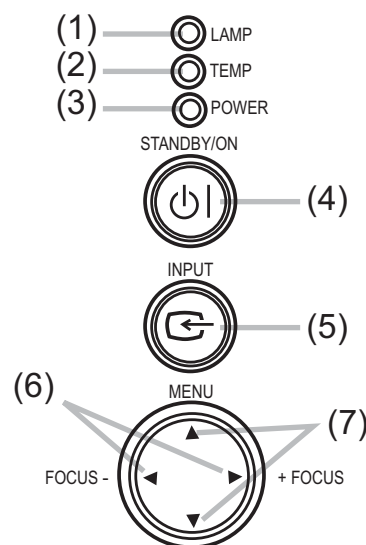


**⚠ WARNING** ▶ Be careful not to pinch your finger with the lens door, to prevent an injury.  
▶ Never look into the projection lens or mirror while the projection lamp lights, since the projection lamp ray may cause a trouble on your eyes.

**⚠ CAUTION** ▶ Do not touch the lamp cover or approach the exhaust vents while using the projector and for a while after use, to prevent a burn.  
▶ Do not cover, block, or plug up the vents to keep normal ventilation. Do not place anything that can stick or be sucked to the vents, around the intake vents.

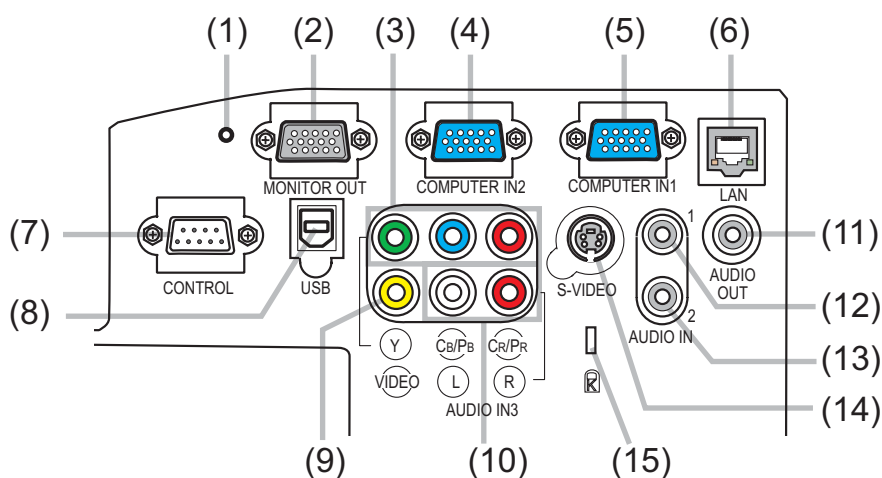
## Control buttons

- (1) LAMP indicator (📖69)
- (2) TEMP indicator (📖69)
- (3) POWER indicator (📖16, 17, 69)
- (4) STANDBY/ON button (📖16, 17)
- (5) INPUT button (📖18)
- (6) FOCUS +/- buttons
  - when no menu is displayed (📖21), or
  - Cursor ◀, ▶ buttons
  - when a menu is displayed (📖24).
- (7) MENU buttons
  - when no menu is displayed (📖24), or
  - Cursor ▲, ▼ buttons
  - when a menu is displayed (📖24).



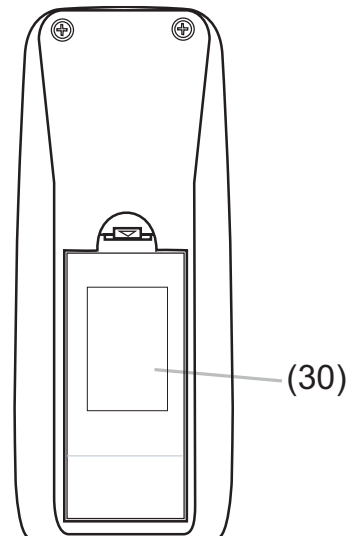
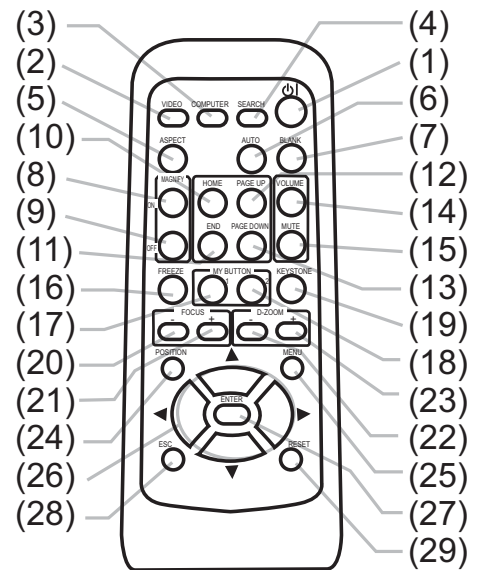
## Ports (📖10, Technical's 3 to 6)

- (1) Shutdown switch
- (2) MONITOR OUT port
- (3) Y, C<sub>B</sub>/P<sub>B</sub>, C<sub>R</sub>/P<sub>R</sub> (Component video) ports
- (4) COMPUTER IN2 port
- (5) COMPUTER IN1 port
- (6) LAN port
- (7) CONTROL port
- (8) USB port (📖15)
- (9) VIDEO port
- (10) AUDIO IN3 (L,R) ports (📖37)
- (11) AUDIO OUT port
- (12) AUDIO IN1 port (📖37)
- (13) AUDIO IN2 port (📖37)
- (14) S-VIDEO port
- (15) Security slot (📖13)



## Remote control

- (1) STANDBY/ON button (📖16, 17)
- (2) VIDEO button (📖19)
- (3) COMPUTER button (📖18)
- (4) SEARCH button (📖19)
- (5) ASPECT button (📖19)
- (6) AUTO button (📖21)
- (7) BLANK button (📖23)
- (8) MAGNIFY ON button (📖22)
- (9) MAGNIFY OFF button (📖15, 22)
- (10) HOME button (📖15)
- (11) END button (📖15)
- (12) PAGE UP button (📖15)
- (13) PAGE DOWN button (📖15)
- (14) VOLUME button (📖18)
- (15) MUTE button (📖15, 18)
- (16) FREEZE button (📖23)
- (17) MY BUTTON 1 button (📖44)
- (18) MY BUTTON 2 button (📖44)
- (19) KEYSTONE button (📖22)
- (20) FOCUS – button (📖21)
- (21) FOCUS + button (📖21)
- (22) D-ZOOM – button (📖20)
- (23) D-ZOOM + button (📖20)
- (24) POSITION button (📖20, 22, 24)
- (25) MENU button (📖24)
- (26) Cursor ▲/▼/◀/▶ buttons (📖24, 25)
- (27) ENTER button (📖24, 25)
- (28) ESC button (📖24, 25)
- (29) RESET button (📖24, 25)
- (30) Battery cover (📖14)

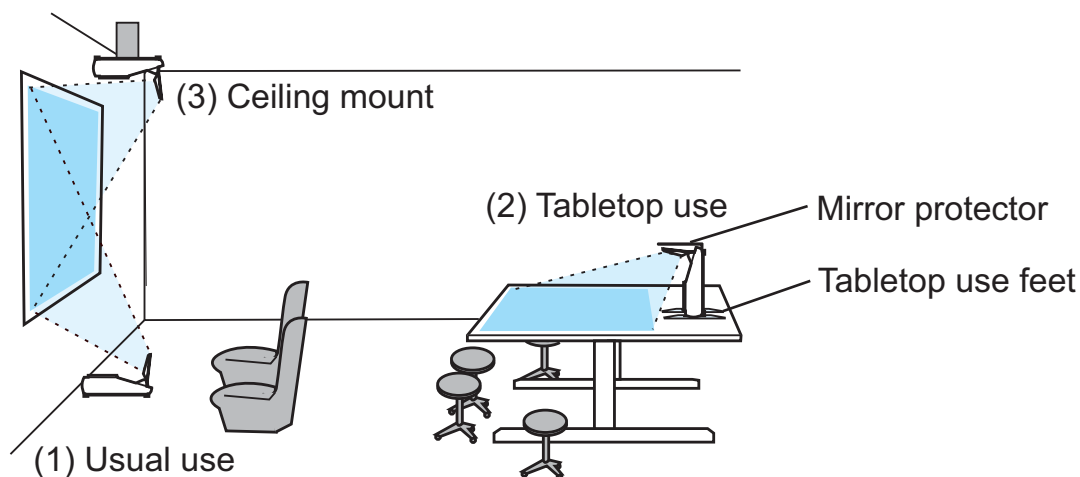


Back of  
the remote control

## Setting up

### Arrangement

Install the projector in a stable, cool, dry and airy place, keeping a space of 30 cm or more between the sides of the projector and other objects such as walls. Refer to the following to decide the projection style. Ceiling mount and tabletop use must be setup with the designated optional accessories. Ask your dealer for details.



**NOTE** • When installing the projector, confirm that there is nothing that blocks the projection light between the projector and the screen.  
 • When installing the projector, check that the remote sensors are not exposed to any strong ray (📖14).

**⚠ CAUTION** ► The designated optional accessory for the tabletop use contains the tabletop use feet and mirror protector. Please see the manual enclosed with the accessory.

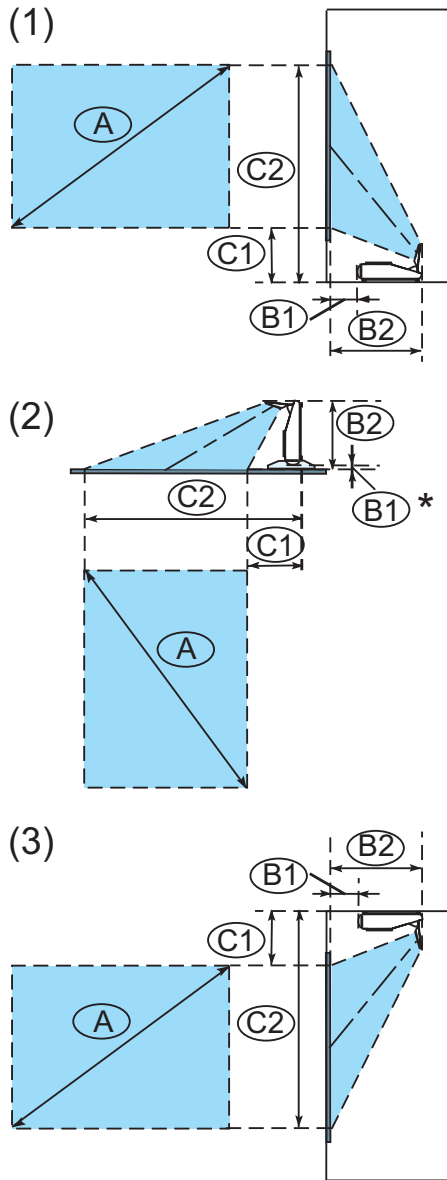
- The tabletop use feet must be used for the tabletop use, otherwise the projector can't stand or falls down broken.
- The mirror protector must be used to protect the lens door when the projector falls to the table.



**Arrangement (continued)**

Refer to the following for the projection distance.

The values shown in the table are calculated for a full size screen: 1024x768.



**Table for 4:3 screen**

(±8%)

Ⓐ		Ⓑ1		Ⓑ2		Ⓒ1		Ⓒ2	
inch	cm	inch	cm	inch	cm	inch	cm	inch	cm
48	* 0.5	*(0.2)	38.3	15	24.4	10	98.2	39	
50	2.0	1	39.8	16	25.2	10	101.9	40	
60	9.6	4	47.4	19	28.9	11	120.4	47	
70	17.2	7	55.0	22	32.6	13	139.3	55	
80	24.8	10	62.6	25	36.2	14	158.2	62	
90	32.4	13	70.2	28	39.9	16	177.1	70	
100	39.9	16	77.7	31	43.6	17	196.0	77	
120	55.0	22	92.8	37	50.9	20	234.0	92	
150	77.7	31	115.5	45	62.0	24	291.0	115	
200	115.5	45	153.3	60	80.4	32	385.7	152	

**Table for 16:9 screen**

(±8%)

Ⓐ		Ⓑ1		Ⓑ2		Ⓒ1		Ⓒ2	
inch	cm	inch	cm	inch	cm	inch	cm	inch	cm
44	* 0.5	*(0.2)	38.3	15	33.6	13	88.9	35	
50	5.4	2	43.2	17	37.3	15	99.9	39	
60	13.7	5	51.5	20	43.5	17	118.3	47	
70	22.0	9	59.8	24	49.6	20	136.8	54	
80	30.2	12	68.0	27	55.7	22	155.3	61	
90	38.5	15	76.3	30	61.8	24	173.9	68	
100	46.6	18	84.4	33	67.9	27	192.3	76	
120	63.1	25	100.9	40	80.1	32	229.5	90	
150	87.8	35	125.6	49	98.4	39	285.3	112	
200	129.0	51	166.8	66	129.0	51	378.2	149	

**NOTE** • It is recommended to adjust the screen size from 60 inch to 100 inch diagonal. The screen image adjusted out of this range, either smaller or larger, may be deteriorated.

• The screen position may be shifted after installation if the projector is suspended on a ceiling or somewhere, since the body of this projector is made of plastics. If readjustment is necessary, consult with your dealer or installer.

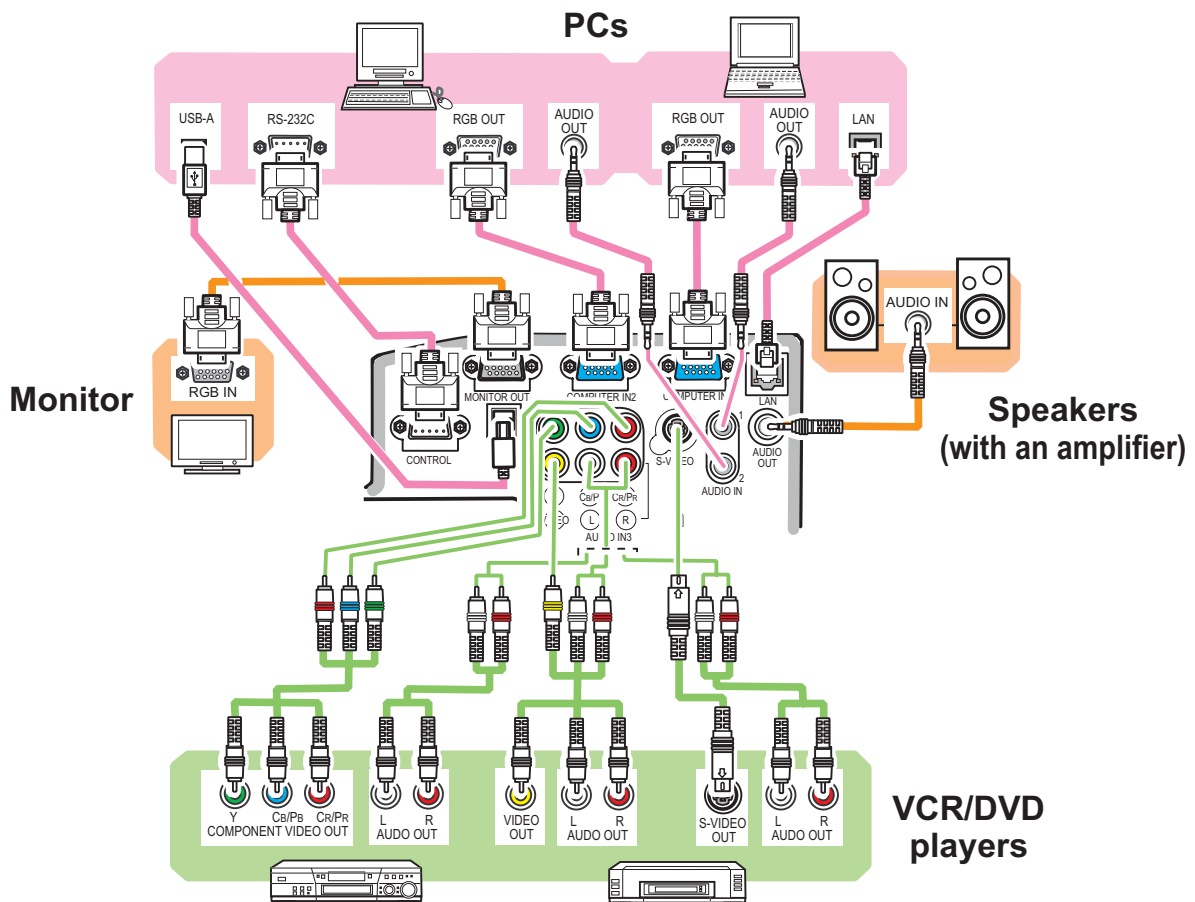
## Arrangement (continued)

**⚠ WARNING** ► Place the projector in a stable horizontal position. If the projector falls or is knocked over it could cause injury and/or damage to the projector. Using a damaged projector could then result in fire and/or electric shock.

- Do not place the projector on an unstable, slanted or vibrational surface such as a wobbly or inclined stand.
  - Do not place the projector on its side or front position. To place the projector on its rear position for the table top use, it is required to use the designated optional parts. Consult with your dealer.
  - Consult with your dealer before a special installation such as suspending from a ceiling or somewhere else.
- Place the projector in a cool place, and ensure that there is sufficient ventilation. The high temperature of the projector could cause fire, burns and/or malfunction of the projector.
- Do not stop-up, block or cover the projector's vents.
  - Keep a space of 30 cm or more around the projector from other objects such as walls.
  - Do not place the projector on metallic thing or anything weak in heat.
  - Do not place the projector on carpet, cushions or bedding.
  - Do not place the projector in direct sunlight or near hot objects such as heaters.
  - Do not place anything near the lens door, lens, mirror, vents. or on the top of the projector.
  - Do not place anything that may be sucked into or stick to the vents on the rear and bottom of the projector. This projector has some intake vents on the rear and bottom.
- Do not place the projector anyplace where it may get wet. Getting the projector wet or inserting liquid into the projector could cause fire, electric shock and/or malfunction of the projector.
- Do not place the projector in a bathroom or the outdoors.
  - Do not place anything containing liquid near the projector.
- ⚠ CAUTION** ► Avoid placing the projector in smoky, humid or dusty place. Placing the projector in such places could cause fire, electric shock and/or malfunction of the projector.
- Do not place the projector near humidifiers, smoking spaces or a kitchen.
- Position the projector to prevent light from directly hitting the projector's remote sensor.

## Connecting with your devices

Before connecting them, make sure that the devices are suitable to connect with this projector, and prepare the required signal cables and adapters. Consult your dealer if the accessory that is not included in this product is required. Refer to the following for connection. If you want to use the cable cover, see the Using the cable cover (📖13).



- ⚠ WARNING** ▶ Use only the accessories contained in this product or recommended by your dealer. Do not modify the projector or accessories.
- ▶ For the cable with a ferrite core only at one end, connect the end with the core to the projector. The cables may be required a specific length or a ferrite core by the regulations.
- ▶ Be careful not to damage the cables. Route the cables so that they are not likely to be walked on or pinched by items placed upon or against them.
- ⚠ CAUTION** ▶ Do not connect or disconnect the projector with devices while they are connected to a power supply, except for the cases directed by the manuals.
- ▶ Be careful not to set a connector into a wrong port or with a wrong way.

(continued on next page)

## Connecting your devices (continued)

**NOTE** • Be sure to read the manuals for devices before connecting them to the projector, and make sure that all the devices are suitable to be connected with this product. Before connecting to a PC, check the signal level, the signal timing, and the resolution.

- Be sure to consult to the administrator of the network. Do not connect **LAN** port to any network that might have the excessive voltage.
- Some signal may need an adapter to input this projector.
- Some PCs have multiple screen display modes that may include some signals which are not supported by this projector.
- Although the projector can display signals with resolution up to UXGA (1600X1200), the signal will be converted to the projector's panel resolution before being displayed. The best display performance will be achieved if the resolutions of the input signal and the projector panel are identical.
- While connecting, make sure that the shape of the cable's connector fits the port to connect with. And be sure to tighten the screws on connectors with screws.
- When connecting a laptop PC to the projector, be sure to activate the PC's external RGB output. (Set the laptop PC to CRT display or to simultaneous LCD and CRT display.) For details on how this is done, please refer to the instruction manual of the corresponding laptop PC.
- When the picture resolution is changed on a PC depending on an input, automatic adjustment function may take some time and may not be completed. In this case, you may not be able to see a check box to select "Yes/No" for the new resolution on Windows. Then the resolution will go back to the original. It might be recommended to use other CRT or LCD monitors to change the resolution.
- In some cases, this projector may not display a proper picture or display any picture on screen. For example, automatic adjustment may not function correctly with some input signals. An input signal of composite sync or sync on G may confuse this projector, so the projector may not display a proper picture.

### About Plug-and-Play capability

Plug-and-Play is a system composed of a PC, its operating system and peripheral equipment (i.e. display devices). This projector is VESA DDC 2B compatible. Plug-and-Play can be used by connecting this projector to a PC that is VESA DDC (display data channel) compatible.

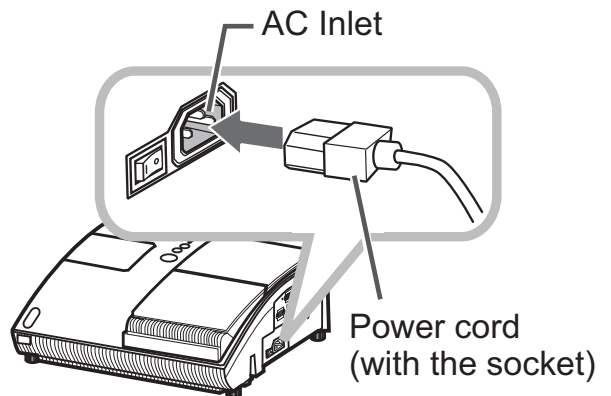
- Take advantage of this feature by connecting an RGB cable to the **COMPUTER IN1** port (DDC 2B compatible). Plug-and-Play may not work properly if any other type of connection is attempted.
- Please use the standard drivers in your PC as this projector is a Plug-and-Play monitor.

## Connecting with a power supply

Before connection, confirm that the power outlet is suitable for this projector and the power cord.

Then follow the procedure below for connection.

1. Insert the end of the power cord with the socket into the AC inlet of the projector.
2. Plug the other end of the power cord into a power outlet.



**⚠ WARNING** ► Be careful of operation for a power supply not to cause an electric shock or a fire.

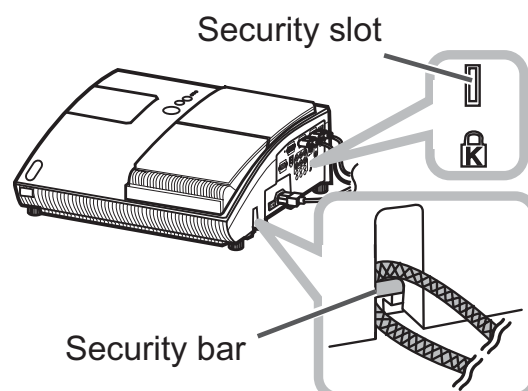
- Do not handle the power cord with the wet hand.
- Use this product with only the type of power supply indicated on the projector.
- Use a power outlet that is close to the projector and easily accessible.
- Connect firmly the power cord not to result in loose connection. Do not use a loose or unsound power outlet.
- Do not overload the outlet, since overloading can result in a risk of fire or electric shock.
- Use only the power cord contained in this product unless it is damaged. If it is damaged, consult your dealer to get new one. Do not modify the power cord.

## Using the security bar and slot

This projector has the security bar for a commercial anti-theft chain or wire up to 10 mm in diameter, and also the security slot for the Kensington lock.

For details, see the manual of the security tool.

**NOTE** • These are not provided as comprehensive theft preventions but supplemental measures.



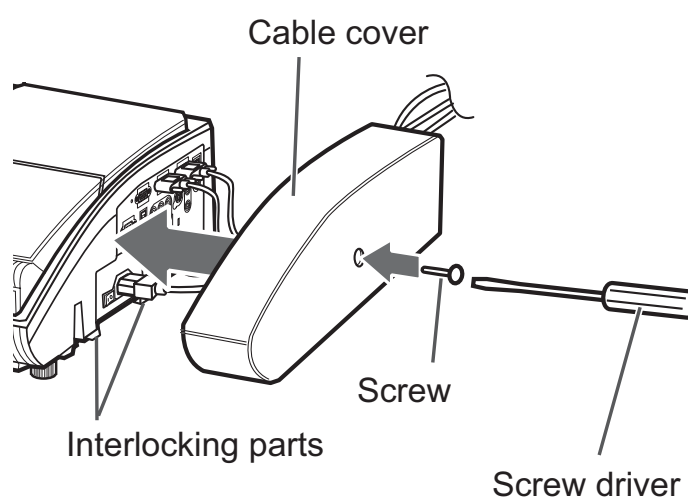
**⚠ WARNING** ► Do not place the anti-theft chain or wire near the projector's exhaust vents, since the chain or wire heated by the hot exhaust gas may cause a burn.

► Do not use the security bar or slot for the purpose of fall prevention, since these are not designed for it.

## Using the cable cover

Utilize the cable cover as the guard and blind for the connecting parts.

1. Connect the signal cables and the power cord to the projector first.
2. Attach the cable cover to the projector, uniting the interlocking parts.
3. Tighten the screw to fix the cable cover.
4. Connect the other ends of the cables to other devices, and plug the power cord to the power outlet.



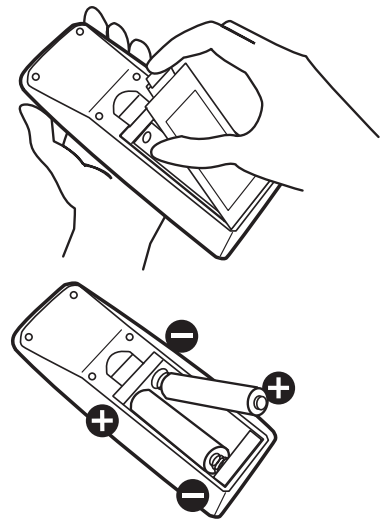
**⚠ CAUTION** ► Be careful not to pinch the cables in the cable cover, to prevent damage to the cables.

## Remote control

## Preparing for the remote control

The accessory remote control needs batteries. Use the batteries included in this product or two new batteries of the specified type: **HITACHI MAXELL**, part number **LR6** or **R6P**. Follow the following procedure.

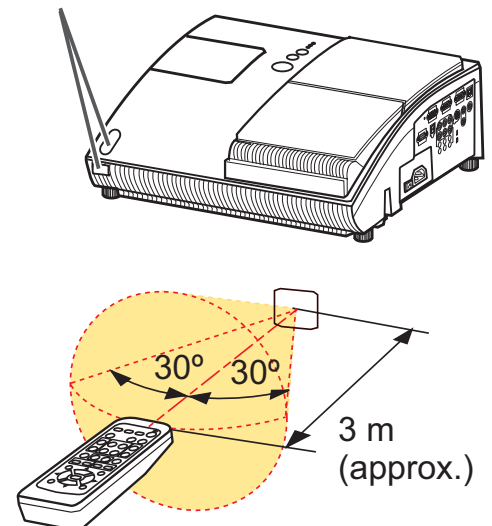
1. Remove the battery cover in the back of the remote control.
2. Put the batteries into the battery holder, according to the polarity markings (+) and (-) inside the holder.
3. Put the battery cover back to the former state.



**NOTE** • Try changing the batteries when the remote control malfunctions.

- This remote control works with the remote sensors on the projector using infrared light (Class 1 LED). The active sensor senses the remote control signal assigned within 60 degrees to right and left, and within 3 meters.
- The remote control signal reflected in the screen or the like may be available.
- Prevent the remote sensors from being hit by a strong ray. It may cause malfunction of the projector and remote control.

Remote sensors



**⚠ WARNING** ► Be careful of handling a battery, as a battery can cause explosion, cracking or leakage, which could result in a fire, an injury, and environment pollution.

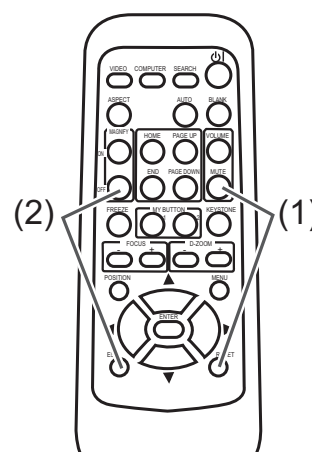
- Use only the specified and new battery. Do not use a battery with damage, such as a scratch, a dent, rust or leakage. Do not mix a new battery with used one.
- When a battery leaked, wipe the leakage out well with a waste cloth. If the leakage adhered to your body, immediately rinse it well with water. When a battery leaked in the battery holder, replace the batteries after wiping the leakage out.
- Make sure the plus and minus terminals are correctly aligned when loading a battery.
- Do not work on a battery; for example recharging or soldering.
- Do not keep the batteries put into the remote control when the remote control is not used for a long while. Keep a battery in a dark, cool and dry place. Never expose a battery to a fire or water.
- Obey the local laws on disposing a battery.

## Changing the frequency of remote control signal

The accessory remote control has the two choices on signal frequency Mode 1:NORMAL and Mode 2:HIGH. If the remote control does not function properly, attempt to change the signal frequency. In order to set the Mode, please keep pressing the combination of two buttons listed below simultaneously for about 3 seconds.

- (1) Set to Mode 1:NORMAL... **MUTE** and **RESET** buttons
- (2) Set to Mode 2:HIGH... **MAGNIFY OFF** and **ESC** buttons

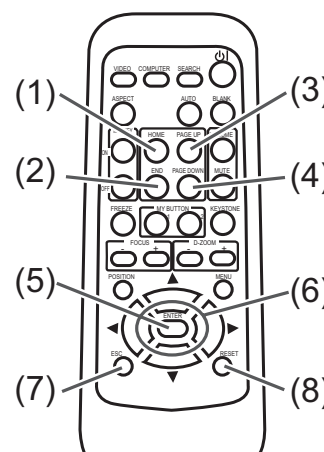
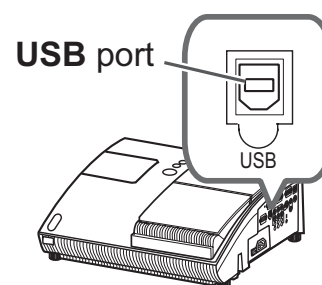
Please remember that the REMOTE FREQ. in the SERVICE item of the OPTION Menu (📖46) of the projector to be controlled should be set to the same mode as the remote control.



## Using as a simple PC mouse & keyboard

The accessory remote control works as a simple mouse and keyboard of the PC, when the projector's **USB** port (B type) connects with the PC's **USB** port (A type) port via a mouse cable.

- (1) **HOME key**: Press **HOME** button.
- (2) **END key**: Press **END** button.
- (3) **PAGE UP key**: Press **PAGE UP** button.
- (4) **PAGE DOWN key**: Press **PAGE DOWN** button.
- (5) **Mouse left button**: Press **ENTER** button.
- (6) **Move pointer**: Use the cursor buttons **▲**, **▼**, **◀** and **▶**.
- (7) **ESC key**: Press **ESC** button.
- (8) **Mouse right button**: Press **RESET** button.



**⚠ WARNING** ▶ Improper use of the simple mouse & keyboard function could damage your equipment. While using this function, please connect this product only to a PC. Be sure to check your PC's manuals before connecting this product to the PC.

**NOTE** • When the simple mouse & keyboard function of this product does not work correctly, please check the following.

- When a USB cable connects this projector with a PC having a built-in pointing device (e.g. track ball) like a notebook PC, open BIOS setup menu, then select the external mouse and disable the built-in pointing device, because the built-in pointing device may have priority to this function.
- Windows 95 OSR 2.1 or higher is required for this function. And also this function may not work depending on the PC's configurations and mouse drivers.
- You cannot do things like press two buttons at once (for instance, pressing two buttons at the same time to move the mouse pointer diagonally).
- This function is activated only when the projector is working properly. This function is not available while the lamp is warming up (the **POWER** indicator blinks green), and while adjusting the volume and display, correcting for keystone, magnifying the screen, using the BLANK function, or displaying the menu screen.



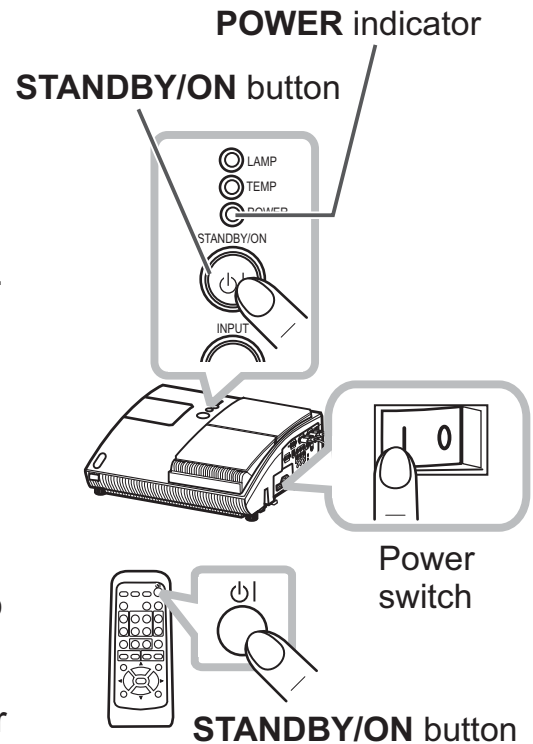
## Power on/off

**Turning on the power**

Turn on the projector and the connected devices. Turn on the projector ahead of other connected devices, unless mentioned in the manuals.

For this projector, follow the procedure below.

1. Press the side marked "I" of the power switch, as the power-on position. The **POWER** indicator lights up in orange.
  - For a couple of seconds after the **POWER** indicator lights up, wait to use the control buttons (on the projector and remote control). The buttons may not work soon.
2. Confirm that there is nothing that the lens door hits while opening. Then, press the **STANDBY/ON** button (on the projector or remote control). The lens door opens, the projection lamp lights up, and the **POWER** indicator begins to blink green.



When the projector starts completely, the indicator will turn steady green.

To display the picture, select an input signal according to the section “Selecting an input signal” (18).

**NOTE** • When the AUTO ON of the OPTION Menu is set to the TURN ON, and the power was turned off by the power switch last time, turning the power switch on makes the projection lamp light on without pushing the **STANDBY/ON** button (42).

**⚠ WARNING** ▶ Never look into the projection lens or mirror while the projection lamp lights, since the projection lamp ray may cause a trouble on your eyes.

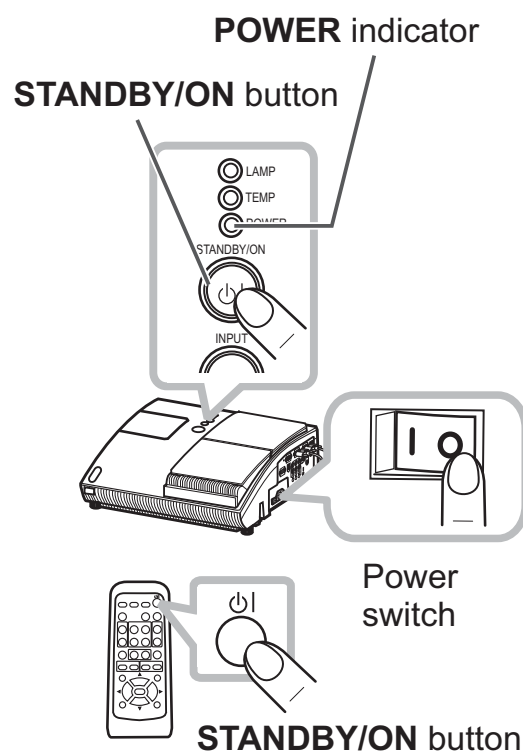
▶ Do not touch around the lamp cover and the exhaust vents during use or just after use, since it is too hot.

**⚠ CAUTION** ▶ Be careful not to pinch your finger with the lens door, as it may cause an injury.

## Turn off the power

Turn the projector off after turning off the other connected devices, unless mentioned in the manuals. For this projector, follow the procedure below.

1. Press the **STANDBY/ON** button (on the projector or remote control).  
The "Power off?" dialog appears on the screen for about 5 seconds.
2. Confirm that there is nothing that the lens door hits while closing.  
Then press the **STANDBY/ON** button again while the message appears.  
The projection lamp goes off, the lens door closes, and the **POWER** indicator begins to blink orange.
  - For cooling the projector down, wait for the **POWER** indicator to stop blinking and turn steady orange.  
The projector can be turned off without waiting for cooling down. However, the manufacture recommends cooling the projector down enough.  
Do not turn the projector on for about 10 minutes or more after turning it off to prevent shortening its life.



3. Press the side marked "○" of the power switch, as the power-off position.  
The **POWER** indicator goes off.

When you will not use the projector for a long while, unplug and separate the power cord from the power outlet, for safety purposes.

**NOTE** • Use the shutdown switch (📖70) only when the projector is not turned off by normal procedure.

- Do not turn the projector on for about 10 minutes or more after turning it off. Turning the projector on again too soon could shorten the lifetime of some consumable parts of the projector.

**⚠ CAUTION** ▶ Be careful not to pinch your finger with the lens door, to prevent an injury.

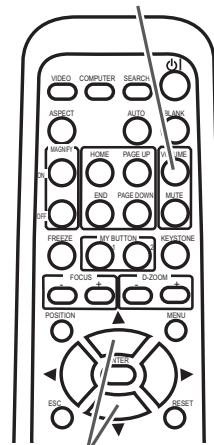
▶ Do not touch the lamp cover or approach the exhaust vents while using the projector and for a while after use, to prevent a burn.

Operating

## Adjusting the volume

1. Press **VOLUME** button on the remote control.
  - A dialog will appear on the screen to aid you in adjusting the volume.
2. Use the **▲/▼** cursor buttons to adjust the volume.
  - To close the dialog and complete the operation, press the **VOLUME** button again. Even if you do not do anything, the dialog will automatically disappear after a few seconds.
  - When **⊗** is selected for current picture input port, the volume adjustment is disable. Please see AUDIO item of SETUP Menu (📖37).

VOLUME button

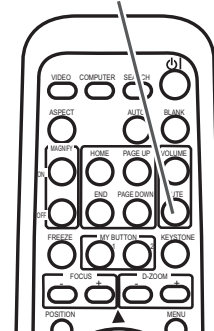


▲/▼ button

## Temporarily muting the sound

1. Press **MUTE** button on the remote control.
  - A dialog will appear on the screen indicating that you have muted the sound. To restore the sound, press the **MUTE** or **VOLUME** button. Even if you do not do anything, the dialog will automatically disappear after a few seconds.
  - When **⊗** is selected for current picture input port, the sound is always muted. Please see AUDIO item of SETUP Menu (📖37).
  - When **⊗** is selected to **VIDEO**, **S-VIDEO** or **COMPONENT** port, the C.C. (Closed Caption) is automatically activated if the C.C. is set to AUTO in the DISPLAY of the C.C. Menu and the input signal from the port supports the C.C. feature (📖60).

MUTE button



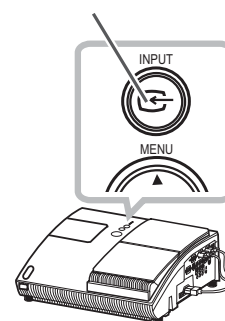
## Selecting an input signal

1. Press **INPUT** button on the projector.
  - Each time you press the button, the projector switches its input port from the current port as below.
 

```

                    graph LR
                        C1[COMPUTER IN 1] --> C2[COMPUTER IN 2]
                        C2 --> V[VIDEO]
                        V --> SV[S-VIDEO]
                        SV --> C[COMPONENT Y, Cb/Pb, Cr/Pr]
                    
```
  - While TURN ON is selected for AUTO SEARCH item in OPTION Menu (📖42), the projector will keep checking the ports in above order repeatedly till an input signal is detected.

INPUT button

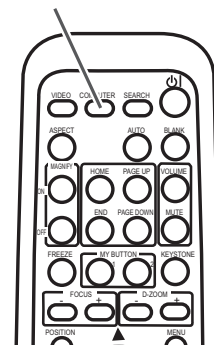


1. Press **COMPUTER** button on the remote control.
  - Each time you press the button, the projector switches its input port from the current port as below.

COMPUTER IN 1 ↔ COMPUTER IN 2

- While TURN ON is selected for AUTO SEARCH item in OPTION Menu, the projector will keep checking every port sequentially till an input signal is detected (📖42). If **COMPUTER** button is pushed when **VIDEO**, **S-VIDEO** or **COMPONENT** port is selected, the projector will check **COMPUTER IN1** port first.

COMPUTER button



(continued on next page)

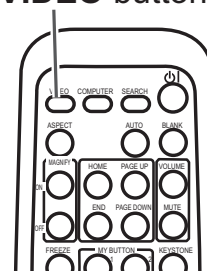
### Selecting an input signal (continued)

1. Press **VIDEO** button on the remote control.
  - Each time you press the button, the projector switches its input port from the current port as below.

COMPONENT (Y, C<sub>B</sub>/P<sub>B</sub>, C<sub>R</sub>/P<sub>R</sub>) → S-VIDEO → VIDEO

- While TURN ON is selected for AUTO SEARCH item in OPTION Menu, the projector will keep checking every port sequentially till an input signal is detected (42). If **VIDEO** button is pushed when **COMPUTER IN1** or **COMPUTER IN2** port is selected, the projector will check **COMPONENT** port first.

VIDEO button



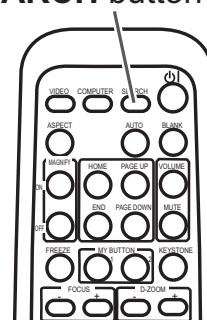
### Searching an input signal

1. Press **SEARCH** button on the remote control.
  - The projector will start to check its input ports as below in order to find any input signals. When an input is found, the projector will stop searching and display the image. If no signal is found, the projector will return to the state selected before the operation.

COMPUTER IN 1 → COMPUTER IN 2 → VIDEO ← S-VIDEO ← COMPONENT (Y, C<sub>B</sub>/P<sub>B</sub>, C<sub>R</sub>/P<sub>R</sub>)

- While TURN ON is selected for AUTO SEARCH item in OPTION Menu (42), the projector will keep checking the ports in above order repeatedly till an input signal is detected.

SEARCH button



### Selecting an aspect ratio

1. Press **ASPECT** button on the remote control.
  - Each time you press the button, the projector switches the mode for aspect ratio in turn.

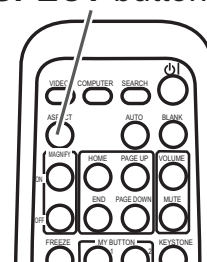
○ For a computer signal  
 NORMAL → 4:3 → 16:9

○ For a video signal, s-video signal or component video signal  
 4:3 → 16:9 → 14:9

○ For no signal  
 4:3 (fixed)

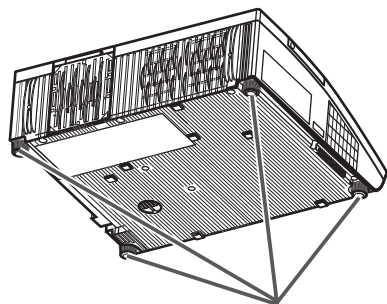
- **ASPECT** button does not work when no proper signal is inputted.
- **NORMAL** mode keeps the original aspect ratio setting.

ASPECT button

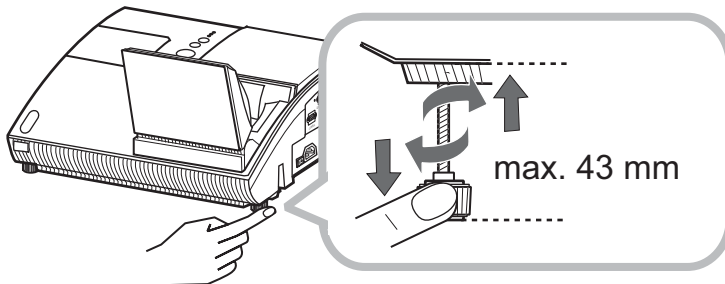


## Adjusting the projection position

This projector has four elevator feet in the bottom. Use them to adjust the projection position.



Elevator feet



**⚠ CAUTION** ▶ Do not lengthen the elevator feet to 43 mm or more. The foot lengthened exceeding the limit may come off from the projector, and result in an injury.  
 ▶ Tilt the projector with these elevating feet only.  
 ▶ Do not tilt the projector over 5 degrees, when it is suspended from a ceiling or somewhere.

## Adjusting the zoom

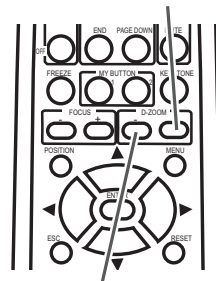
Press the **D-ZOOM +** or **D-ZOOM –** button on the remote control to display D-ZOOM dialog on screen.

Use the **D-ZOOM +** and **D-ZOOM –** buttons to adjust the picture size.

To finish the operation, do not touch these buttons for a few seconds until the dialog is disappeared.

- If you want to expand a part of the image, use the magnify function (📖22).

**D-ZOOM +** button



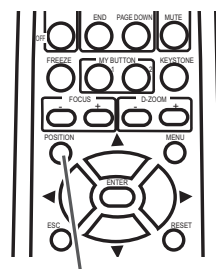
**D-ZOOM –** button

## Adjusting the picture position

Press the **POSITION** button on the remote control while no menu is on screen, to display the D-SHIFT dialog on screen.

Use the **▲**, **▼**, **◀** and **▶** buttons to adjust the picture position. Press the **POSITION** button again to finish this operation.

- This is a function to shift the position of the shrunken picture by the zoom function.
- The function is not available, if any menu is displayed on screen.
- The function is not available, if the D-ZOOM is adjusted to 100 (full screen) on its dialog.

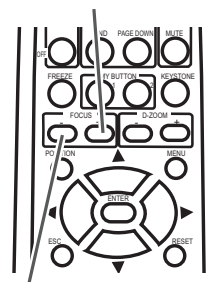


**POSITION** button

## Adjusting the focus

Press the **FOCUS +** or **FOCUS –** button on the remote control, or **FOCUS +** or **FOCUS –** button on the projector while no menu is on screen, to display the FOCUS box on screen. Use the **FOCUS +** and **FOCUS –** buttons to adjust the screen focus. After the focus adjustment, wait for a while until the FOCUS box is disappeared, if you want to display any other menu on screen by pushing the **MENU** button on the projector.

**FOCUS +** button



**FOCUS –** button

## Using the automatic adjustment feature

- 1 Press **AUTO** button on the remote control.
  - Pressing this button performs the following.

### ○ For a computer signal

The vertical position, the horizontal position and the horizontal phase will be automatically adjusted.

Make sure that the application window is set to its maximum size prior to attempting to use this feature. A dark picture may still be incorrectly adjusted. Use a bright picture when adjusting.

### ○ For a video signal and s-video signal

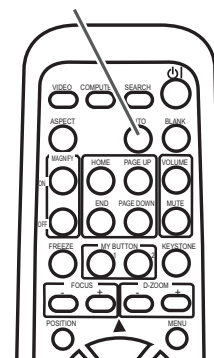
The video format best suited for the respective input signal will be selected automatically. This function is available only when the AUTO is selected for the VIDEO FORMAT item in the INPUT Menu (📖34). The vertical position and horizontal position will be automatically set to the default.

### ○ For a component video signal

The vertical position, horizontal position and horizontal phase will be automatically set to the default.

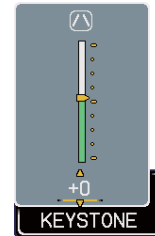
- The automatic adjustment operation requires approx. 10 seconds. Also please note that it may not function correctly with some input. When this function is performed for a video signal, a certain extra such as a line may appear outside a picture.
- The items adjusted by this function may vary when the FINE or DISABLE is selected for the AUTO ADJUST item of the SERVICE item in the OPTION Menu (📖45).

**AUTO** button

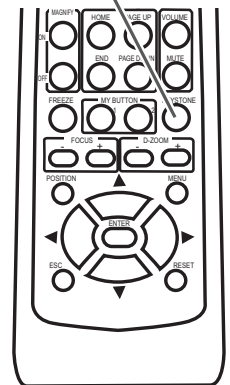


## Correcting the keystone distortions

1. Press **KEYSTONE** button on the remote control. A dialog will appear on the screen to aid you in correcting the distortion.
2. Use the ▲/▼ cursor buttons to adjust the keystone correction.



KEYSTONE button



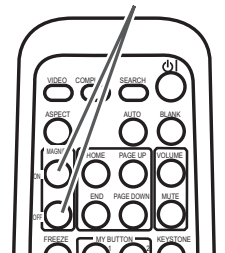
To close the dialog and complete this operation, press **KEYSTONE** button again. Even if you do not do anything, the dialog will automatically disappear after a few seconds.

- The adjustable range of this correction will vary among inputs. For some input, this function may not work well.
- This function will be unavailable when Transition Detector is on (📖51).

## Using the magnify feature

1. Press the **ON** button of **MAGNIFY** on the remote control. The “MAGNIFY” indication will appear on the screen and the projector will go into the MAGNIFY mode. When the **ON** button of **MAGNIFY** is pressed first after the projector is started, the picture will be zoomed twice. The indication will disappear in several seconds with no operation.

MAGNIFY ON/OFF button



2. Use the ▲/▼ cursor buttons to adjust the zoom level. The picture of video, s-video or component video signal can be zoomed in up to 2 times, and the one of computer signal can be zoomed in up to 4 times. To move the zoom area, press the **POSITION** button in the MAGNIFY mode, then use the ▲/▼/◀/▶ cursor buttons to move the area. And to finalize the zoom area, press the **POSITION** button again. To exit from the MAGNIFY mode and restore the screen to normal, press the **OFF** button of **MAGNIFY** on the remote control.

- The projector automatically exits from the MAGNIFY mode when the input signal is changed or when the display condition is changed.
- In the MAGNIFY mode, the keystone distortion condition may vary, it will be restored when the projector exits from the MAGNIFY mode.

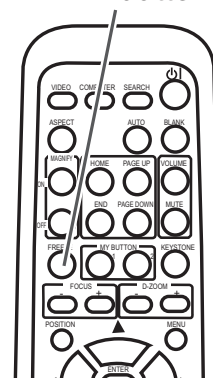
**NOTE** • The zoom level can be finely adjusted. Closely watch the screen to find the level you want.

## Freezing the screen

1. Press the **FREEZE** button on the remote control.
  - The “FREEZE” indication will appear on the screen (however, the indication will not appear when the TURN OFF is selected for the MESSAGE item in the SCREEN Menu (📖41)), and the projector will go into the FREEZE mode, which the picture is frozen.

To exit the FREEZE mode and restore the screen to normal, press the **FREEZE** button again.

**FREEZE** button



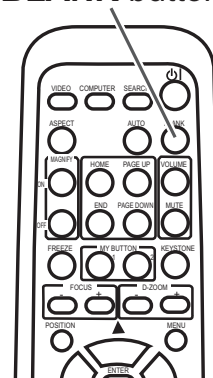
- The projector automatically exits from the FREEZE mode when one of the projector's buttons or remote control buttons of **STANDBY/ON, SEARCH, COMPUTER, VIDEO, BLANK, AUTO, VOLUME, MUTE, KEYSTONE, MENU, MAGNIFY** and **MY BUTTON1/2** (except MY MEMORY or PICTURE MODE is assigned to) (📖44) is pressed.
- If the projector continues projecting a still image for a long time, the LCD panel might possibly be burned in. Do not leave the projector in the FREEZE mode for too long.

## Temporarily blanking the screen

1. Press **BLANK** button on the remote control.
  - The BLANK screen will be displayed instead of the screen of input signal. Please refer to BLANK item in SCREEN Menu (📖38).

To exit from the BLANK screen and return to the input signal screen, press **BLANK** button again.

**BLANK** button



- The projector automatically returns to the input signal screen when one of the projector's buttons or the remote control buttons (except **ASPECT, POSITION, MAGNIFY** or **FREEZE** button, also except MY BUTTON1/2 if MY MEMORY or PICTURE MODE is assigned to) (📖44) is pressed.

**NOTE** • The sound is not connected with the BLANK screen function.

If necessary, set the volume or mute first.

- If you want to make the screen blank and the sound muted at the same time, use AV Mute function that is required to be assigned to one of the MY BUTTON on the remote in advance (📖44).



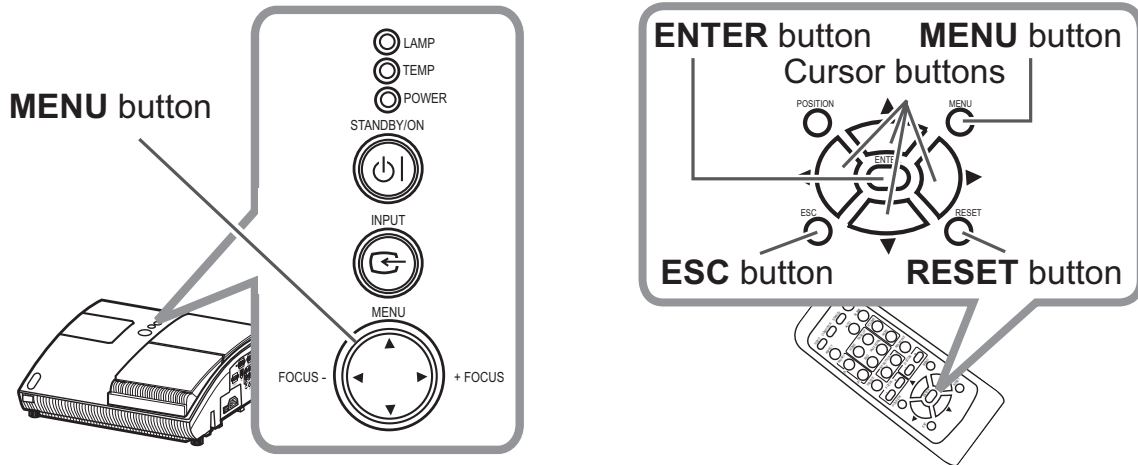
## Using the menu function

This projector has the following menus:

PICTURE, IMAGE, INPUT, SETUP, SCREEN, OPTION, NETWORK, C.C. and EASY MENU.

EASY MENU consists of functions often used, and the other menus are classified into each purpose and brought together as the Advanced Menu.

Each of these menus is operated using the same methods. The basic operations of these menus are as follows.

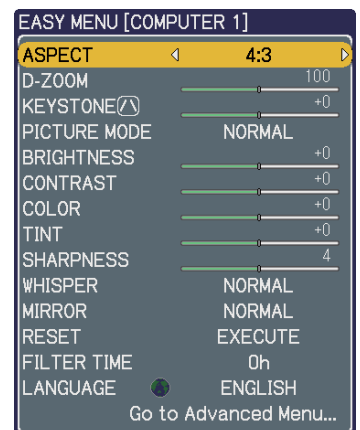


1. Press the **MENU** button on the remote control or the projector.
  - The Advanced Menu or EASY MENU, which has priority just after powered on will appear.

If you want to move the menu position, use the cursor buttons after pressing the **POSITION** button. While the projector is displaying any menu, the **MENU** button on the projector works as the cursor buttons.

### In the EASY MENU

2. If you want to change it to the Advanced Menu, select the Go to Advanced Menu...
3. Use the ▲/▼ cursor buttons to select an item to operate.
4. Use the ◀/▶ cursor buttons to operate the item.



EASY MENU

(continued on next page)

## Using the menu function (continued)

### In the Advanced Menu

2. Use the ▲/▼ cursor buttons to select a menu.
  - If you want to change it to the EASY MENU, select EASY MENU.
    - Then press the ► cursor button, or **ENTER** button to select an item. The lower layer menu of the selected item will appear.
3. Use the ▲/▼ cursor buttons to select an item to operate.
  - Then press the ► cursor button, or **ENTER** button to progress. The operation menu of the selected item will appear.
4. Use the ▲/▼ cursor buttons to operate the item.
  - Some functions cannot be performed when a certain input port is selected, or when a certain input signal is displayed.
  - When you want to reset the operation, press **RESET** button on the remote control during the operation. Note that some items (ex. LANGUAGE, H PHASE, VOLUME) cannot be reset.
  - In the Advanced Menu, when you want to return to the previous display, press the ◀ cursor button or **ESC** button on the remote control.
5. Press **MENU** button on the remote control again to close the menu and complete this operation. Even if you do not do anything, the dialog will automatically disappear after about 10 seconds.



Advanced Menu

EASY MENU

From the EASY MENU, items shown in the table below can be performed.

Select an item using the ▲/▼ cursor buttons. Then perform it according to the following table.



Item	Description																								
<b>ASPECT</b>	Using the ◀/▶ buttons switches the mode for aspect ratio. See the ASPECT item in IMAGE Menu (📖31).																								
<b>D-ZOOM</b>	Using the ◀/▶ buttons adjusts the zoom. See the D-ZOOM item in SETUP Menu (📖36).																								
<b>KEYSTONE</b> (↙↘)	Using the ◀/▶ buttons corrects the vertical keystone distortion. See KEYSTONE (↙↘) item in SETUP Menu (📖36).																								
<b>PICTURE MODE</b>	<p>Using the ◀/▶ buttons switches the picture mode. The picture modes are combinations of GAMMA and COLOR TEMP settings. Choose a suitable mode according to the projected source.</p> <p>                     ↻ → NORMAL ↔ CINEMA ↔ DYNAMIC ↔ BOARD(BLACK) ← ↻                      ↻ → DAYTIME ↔ WHITEBOARD ↔ BOARD(GREEN) ← ↻                 </p> <table border="1"> <thead> <tr> <th></th> <th>COLOR TEMP</th> <th>GAMMA</th> </tr> </thead> <tbody> <tr> <td>NORMAL</td> <td>#2 MID DEFAULT</td> <td>#1 DEFAULT</td> </tr> <tr> <td>CINEMA</td> <td>#3 LOW DEFAULT</td> <td>#2 DEFAULT</td> </tr> <tr> <td>DYNAMIC</td> <td>#1 HIGH DEFAULT</td> <td>#3 DEFAULT</td> </tr> <tr> <td>BOARD(BLACK)</td> <td>#4 Hi-BRIGHT-1 DEFAULT</td> <td>#4 DEFAULT</td> </tr> <tr> <td>BOARD(GREEN)</td> <td>#5 Hi-BRIGHT-2 DEFAULT</td> <td>#4 DEFAULT</td> </tr> <tr> <td>WHITEBOARD</td> <td>#2 MID DEFAULT</td> <td>#5 DEFAULT</td> </tr> <tr> <td>DAYTIME</td> <td>#6 Hi-BRIGHT-3 DEFAULT</td> <td>#6 DEFAULT</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• When the combination of GAMMA and COLOR TEMP differs from pre-assigned modes above, the display on the menu for the PICTURE MODE is “CUSTOM”. Please refer to GAMMA (📖28) and COLOR TEMP (📖29) items in PICTURE Menu.</li> <li>• When this function is performed, a certain extra such as a line may appear.</li> </ul>		COLOR TEMP	GAMMA	NORMAL	#2 MID DEFAULT	#1 DEFAULT	CINEMA	#3 LOW DEFAULT	#2 DEFAULT	DYNAMIC	#1 HIGH DEFAULT	#3 DEFAULT	BOARD(BLACK)	#4 Hi-BRIGHT-1 DEFAULT	#4 DEFAULT	BOARD(GREEN)	#5 Hi-BRIGHT-2 DEFAULT	#4 DEFAULT	WHITEBOARD	#2 MID DEFAULT	#5 DEFAULT	DAYTIME	#6 Hi-BRIGHT-3 DEFAULT	#6 DEFAULT
	COLOR TEMP	GAMMA																							
NORMAL	#2 MID DEFAULT	#1 DEFAULT																							
CINEMA	#3 LOW DEFAULT	#2 DEFAULT																							
DYNAMIC	#1 HIGH DEFAULT	#3 DEFAULT																							
BOARD(BLACK)	#4 Hi-BRIGHT-1 DEFAULT	#4 DEFAULT																							
BOARD(GREEN)	#5 Hi-BRIGHT-2 DEFAULT	#4 DEFAULT																							
WHITEBOARD	#2 MID DEFAULT	#5 DEFAULT																							
DAYTIME	#6 Hi-BRIGHT-3 DEFAULT	#6 DEFAULT																							

(continued on next page)

**EASY MENU (continued)**


Item	Description
<b>BRIGHTNESS</b>	Using the ◀/▶ buttons adjusts the brightness. See BRIGHTNESS item in PICTURE Menu (📖28).
<b>CONTRAST</b>	Using the ◀/▶ buttons adjusts the contrast. See CONTRAST item in PICTURE Menu (📖28).
<b>COLOR</b>	Using the ◀/▶ buttons adjusts the strength of whole color. See COLOR item in PICTURE Menu (📖29).
<b>TINT</b>	Using the ◀/▶ buttons adjusts the tint. See TINT item in PICTURE Menu (📖29).
<b>SHARPNESS</b>	Using the ◀/▶ buttons adjusts the sharpness. See SHARPNESS item in PICTURE Menu (📖30).
<b>WHISPER</b>	Using the ◀/▶ buttons turns off/on the whisper mode. See WHISPER item in SETUP Menu (📖36).
<b>MIRROR</b>	Using the ◀/▶ buttons switches the mode for mirror status. See MIRROR item in SETUP Menu (📖36).
<b>RESET</b>	Performing this item resets all of EASY MENU items except FILTER TIME and LANGUAGE. Pressing the <b>RESET</b> button or the ▶ button displays a dialog. To reset, select RESET using the ▲ button performs resetting.
<b>FILTER TIME</b>	The usage time of the air-filter is shown in the menu. Performing this item resets the filter time which counts usage time of the air-filter. Pressing the <b>RESET</b> button or the ▶ button displays a dialog. To reset the filter time, select RESET using the ▲ button performs resetting. See FILTER TIME item in OPTION Menu (📖43).
<b>LANGUAGE</b>	Using the ◀/▶ buttons changes the display language. See LANGUAGE item in SCREEN Menu (📖38).
<b>Go to Advanced Menu...</b>	Select Go to Advanced Menu... on the menu, and press the ▶ or <b>ENTER</b> button to use the menu of PICTURE, IMAGE, INPUT, SETUP, SCREEN, OPTION, NETWORK or C.C..

PICTURE Menu

From the PICTURE Menu, items shown in the table below can be performed.

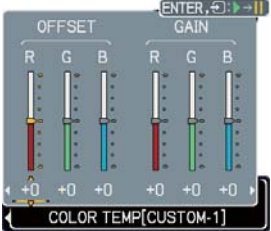
Select an item using the ▲/▼ cursor buttons, and press the ► cursor button or **ENTER** button to execute the item. Then perform it according to the following table.



Item	Description
<b>BRIGHTNESS</b>	Using the ▲/▼ buttons adjusts the brightness. Light ⇔ Dark
<b>CONTRAST</b>	Using the ▲/▼ buttons adjusts the contrast. Strong ⇔ Weak
<b>GAMMA</b>	<p>Using the ▲/▼ buttons switches the gamma mode.</p> <p>#1 DEFAULT ⇔ #1 CUSTOM ⇔ #2 DEFAULT ⇔ #2 CUSTOM                      ⇕ ⇕                      #6 CUSTOM #3 DEFAULT                      ⇕ ⇕                      #6 DEFAULT #3 CUSTOM                      ⇕ ⇕                      #5 CUSTOM ⇔ #5 DEFAULT ⇔ #4 CUSTOM ⇔ #4 DEFAULT</p> <p><b>To adjust CUSTOM</b></p> <p>Selecting a mode whose name includes CUSTOM and then pressing the ► button or the <b>ENTER</b> button displays a dialog to aid you in adjusting the mode. This function is useful when you want to change the brightness of particular tones.</p>  <p>Choose an item using the ◀/▶ buttons, and adjust the level using the ▲/▼ buttons.</p> <p>You can display a test pattern for checking the effect of your adjustment by pressing the <b>ENTER</b> button. Each time you press the <b>ENTER</b> button, the pattern changes as below.</p> <p>No pattern ⇔ Gray scale of 9 steps ⇐</p> <p>⇑ ⇐ Ramp ⇔ Gray scale of 15 steps</p> <p>The eight equalizing bars correspond to eight tone levels of the test pattern (Gray scale of 9 steps), except the darkest in the left end. If you want to adjust the 2nd tone from left end on the test pattern use the equalizing adjustment bar "1". The darkest tone at the left end of the test pattern cannot be controlled with any of equalizing adjustment bar.</p> <ul style="list-style-type: none"> <li>• When this function is performed, lines or other distortion may appear.</li> </ul>


(continued on next page)

PICTURE Menu (continued)

Item	Description
<p><b>COLOR TEMP</b></p>	<p>Using the ▲/▼ buttons switches the color temperature mode.</p> <p>#1 HIGH DEFAULT ⇔ #1 HIGH CUSTOM ⇔ #2 MID DEFAULT  ⇕  #6 Hi-BRIGHT-3 CUSTOM #2 MID CUSTOM  ⇕  #6 Hi-BRIGHT-3 DEFAULT #3 LOW DEFAULT  ⇕  #5 Hi-BRIGHT-2 CUSTOM #3 LOW CUSTOM  ⇕  #5 Hi-BRIGHT-2 DEFAULT ⇔ #4 Hi-BRIGHT-1 CUSTOM ⇔ #4 Hi-BRIGHT-1 DEFAULT</p> <p><b>To adjust CUSTOM</b></p> <p>Selecting a mode whose name includes CUSTOM and then pressing the ► button or the <b>ENTER</b> button displays a dialog to aid you in adjusting the OFFSET and GAIN of the selected mode.</p>  <p>OFFSET adjustments change the color intensity on the whole tones of the test pattern.</p> <p>GAIN adjustments mainly affect color intensity on the brighter tones of the test pattern.</p> <p>Choose an item using the ◀/▶ buttons, and adjust the level using the ▲/▼ buttons.</p> <p>You can display a test pattern for checking the effect of your adjustment by pressing the <b>ENTER</b> button. Each time you press the <b>ENTER</b> button, the pattern changes as below.</p> <p>No pattern ⇔ Gray scale of 9 steps ⇐  ⇑ Ramp ⇔ Gray scale of 15 steps</p> <ul style="list-style-type: none"> <li>• When this function is performed, lines or other distortion may appear.</li> </ul>
<p><b>COLOR</b></p>	<p>Using the ▲/▼ buttons adjusts the strength of whole color.</p> <p>Strong ⇔ Weak</p> <ul style="list-style-type: none"> <li>• This item can be selected only for a video signal, s-video, or component video signal.</li> </ul>
<p><b>TINT</b></p>	<p>Using the ▲/▼ buttons adjusts the tint.</p> <p>Greenish ⇔ Reddish</p> <ul style="list-style-type: none"> <li>• This item can be selected only for a video signal, s-video, or component video signal.</li> </ul>

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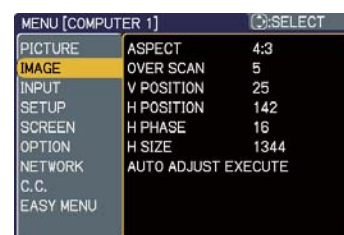
**PICTURE Menu (continued)**


Item	Description
<p><b>SHARPNESS</b></p>	<p>Using the ▲/▼ buttons adjusts the sharpness.                      Strong ⇔ Weak                      • There may be some noise and/or the screen may flicker for a moment when an adjustment is made. This is not a malfunction.</p>
<p><b>MY MEMORY</b></p>	<p>This projector has 4 memories for adjustment data (for all the items of PICTURE Menu).                      Selecting a function using the ▲/▼ buttons and pressing the ► or <b>ENTER</b> button performs each function.</p> <div style="text-align: center;">  <p>LOAD-1 ⇔ LOAD-2 ⇔ LOAD-3 ⇔ LOAD-4                      SAVE-4 ⇔ SAVE-3 ⇔ SAVE-2 ⇔ SAVE-1</p> </div> <p><b><u>LOAD-1, LOAD-2, LOAD-3, LOAD-4</u></b>                      Performing a LOAD function loads the data from the memory linked in the number included in the function's name, and adjusts the picture automatically depending on the data.                      • The LOAD functions whose linked memory has no data are skipped.                      • Remember that the current adjusted condition will be lost by loading data. If you want to keep the current adjustment, please save it before performing a LOAD function.                      • There may be some noise and the screen may flicker for a moment when loading data. This is not malfunction.                      • You can perform the LOAD function using MY BUTTONs. Please see MY BUTTON item in OPTION Menu (📖44).</p> <p><b><u>SAVE-1, SAVE-2, SAVE-3, SAVE-4</u></b>                      Performing a SAVE function saves the current adjustment data into the memory linked in the number included in the function's name.                      • Remember that the current data being stored of a memory will be lost by saving a new data into the memory.</p>

## IMAGE Menu

From the IMAGE Menu, items shown in the table below can be performed.

Select an item using the ▲/▼ cursor buttons, and press the ► cursor button or **ENTER** button to execute the item. Then perform it according to the following table.



Item	Description
<b>ASPECT</b>	<p>Using the ▲/▼ buttons switches the mode for aspect ratio.</p> <p><b>For a computer signal</b>            NORMAL ⇔ 4:3 ⇔ 16:9            ↑—————↑</p> <p><b>For a Video signal, S-video signal or Component video signal</b>            4:3 ⇔ 16:9 ⇔ 14:9            ↑—————↑</p> <p><b>For no signal</b>            4:3 (fixed)</p> <ul style="list-style-type: none"> <li>• The NORMAL mode keeps the original aspect ratio of the signal.</li> </ul>
<b>OVER SCAN</b>	<p>Using the ▲/▼ buttons adjusts the over-scan ratio.</p> <p>Large (It reduces picture) ⇔ Small (It magnifies picture)</p> <ul style="list-style-type: none"> <li>• This item can be selected only for a video, s-video and component video signal.</li> <li>• When this adjustment is too large, certain degradation may appear at the frame area of the picture. In such a case, please adjust small.</li> </ul>
<b>V POSITION</b>	<p>Using the ▲/▼ buttons adjusts the vertical position.</p> <p>Up ⇔ Down</p> <ul style="list-style-type: none"> <li>• Over-adjusting the vertical position may cause noise to appear on the screen. If this occurs please reset the vertical position to the default setting.</li> </ul> <p>Pressing <b>RESET</b> button when V POSITION is selected will reset V POSITION to the default setting.</p> <ul style="list-style-type: none"> <li>• When this function is performed on a video signal, s-video signal, or component video signal, the range of this adjustment depends on OVER SCAN (above) setting. It is not possible to adjust when OVER SCAN is set to 10.</li> </ul>

(continued on next page)



**IMAGE Menu (continued)**

Item	Description
<p><b>H POSITION</b></p>	<p>Using the ▲/▼ buttons adjusts the horizontal position.                      Left ⇔ Right</p> <ul style="list-style-type: none"> <li>• Over-adjusting the horizontal position may cause noise to appear on the screen. If this occurs please reset the horizontal position to the default setting. Pressing <b>RESET</b> button when H POSITION is selected will reset H POSITION to the default setting.</li> <li>• When this function is performed on a video signal, s-video signal, or component video signal, the range of this adjustment depends on OVER SCAN (📖31) setting. It is not possible to adjust when OVER SCAN is set to 10.</li> </ul>
<p><b>H PHASE</b></p>	<p>Using the ▲/▼ buttons adjusts the horizontal phase to eliminate flicker.                      Right ⇔ Left</p> <ul style="list-style-type: none"> <li>• This item can be selected only for a computer signal or component video signal.</li> </ul>
<p><b>H SIZE</b></p>	<p>Using the ▲/▼ buttons adjusts the horizontal size.                      Large ⇔ Small</p> <ul style="list-style-type: none"> <li>• This item can be selected only for a computer signal.</li> <li>• When this adjustment is excessive, the picture may not be displayed correctly. In such a case, please reset the adjustment by pressing the <b>RESET</b> button during this operation.</li> </ul>
<p><b>AUTO ADJUST EXECUTE</b></p>	<p>Executing this item performs the automatic adjustment feature.</p> <p><b>For a computer signal</b>                      The vertical position, the horizontal position and the horizontal phase (📖31, 32) will be automatically adjusted. Make sure that the application window is set to its maximum size prior to attempting to use this feature. A dark picture may still be incorrectly adjusted. Use a bright picture when adjusting.</p> <p><b>For a video signal and s-video signal</b>                      The video format best suited for the respective input signal will be selected automatically. This function is available only when the AUTO is selected for the VIDEO FORMAT item in the INPUT Menu (📖34). The vertical position and horizontal position will be automatically set to the default.</p> <p><b>For a component video signal</b>                      The vertical position, horizontal position and horizontal phase will be automatically set to the default.</p> <ul style="list-style-type: none"> <li>• The automatic adjustment operation requires approx. 10 seconds. Also please note that it may not function correctly with some input. When this function is performed for a video signal, a certain extra such as a line may appear outside a picture.</li> <li>• The items adjusted by this function may vary when the FINE or DISABLE is selected for the AUTO ADJUST item of the SERVICE item in the OPTION Menu (📖45).</li> </ul>

INPUT Menu

From the INPUT Menu, items shown in the table below can be performed.

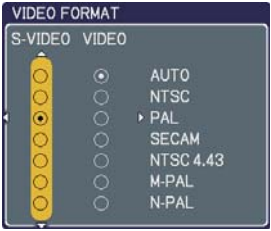

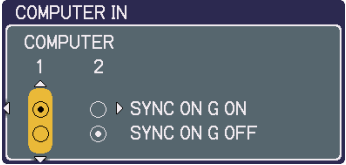
Select an item using the ▲/▼ cursor buttons, and press the ► cursor button or **ENTER** button to execute the item. Then perform it according to the following table.



Item	Description
<p><b>PROGRESSIVE</b></p>	<p>Using the ▲/▼ buttons switches the progress mode.                      TV ⇄ FILM ⇄ TURN OFF                      ↑—————↑</p> <ul style="list-style-type: none"> <li>• This function is performed only for an interlaced signal at the VIDEO or S-VIDEO input, and for 525i (480i) or 625i(576i) signal at the COMPONENT VIDEO input.</li> <li>• When TV or FILM is selected, the screen image will be sharp. FILM adapts to the 2-3 Pull-Down conversion system. But these may cause a certain defect (for example, jagged line) of the picture for a quick moving object. In such a case, please select TURN OFF, even though the screen image may lose the sharpness.</li> </ul>
<p><b>VIDEO NR</b></p>	<p>Using the ▲/▼ buttons switches the noise reduction mode.                      HIGH ⇄ MID ⇄ LOW                      ↑—————↑</p> <ul style="list-style-type: none"> <li>• This function is performed only for the VIDEO or S-VIDEO input, and for 525i (480i) or 625i(576i) signal at the COMPONENT VIDEO input.</li> <li>• When this function is excessive, it may cause a certain degradation of the picture.</li> </ul>
<p><b>COLOR SPACE</b></p>	<p>Using the ▲/▼ buttons switches the mode for color space.                      AUTO ⇄ RGB ⇄ SMPTE240 ⇄ REC709 ⇄ REC601                      ↑—————↑</p> <ul style="list-style-type: none"> <li>• This item can be selected only for a computer signal or component video signal except SCART RGB signal.</li> <li>• The AUTO mode automatically selects the optimum mode.</li> <li>• The AUTO operation may not work well at some signals. In such a case, it might be good to select a suitable mode except AUTO.</li> </ul>
<p><b>COMPONENT</b></p>	<p>Using the ▲/▼ buttons switches the function of the <b>COMPONENT (Y, C<sub>B</sub>/P<sub>B</sub>, C<sub>R</sub>/P<sub>R</sub>)</b> port.                      COMPONENT ⇄ SCART RGB</p> <p>When the SCART RGB is selected, <b>COMPONENT (Y, C<sub>B</sub>/P<sub>B</sub>, C<sub>R</sub>/P<sub>R</sub>)</b> and <b>VIDEO</b> ports will function as a <b>SCART RGB</b> port. A SCART cable is required for a SCART RGB input to the projector. For your reference, see the TECHNICAL part.</p>

(continued on next page)

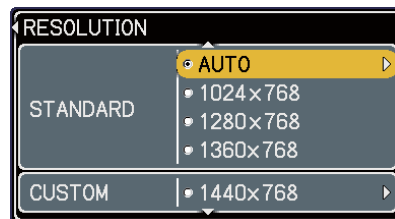
**INPUT Menu (continued)**

Item	Description
<p><b>VIDEO FORMAT</b></p>	<p>The video format for <b>S-VIDEO</b> port and <b>VIDEO</b> port can be set.                      (1) Use the ◀/▶ buttons to select the input port.                      (2) Using the ▲/▼ buttons switches the mode for video format.</p> <p>AUTO ⇔ NTSC ⇔ PAL ⇔ SECAM                      ↻ N-PAL ⇔ M-PAL ⇔ NTSC4.43 ↻</p> <ul style="list-style-type: none"> <li>• This item is performed only for a video signal from <b>VIDEO</b> port or <b>S-VIDEO</b> port.</li> <li>• The AUTO mode automatically selects the optimum mode.</li> <li>• The AUTO operation may not work well for some signals. If the picture becomes unstable (e.g. an irregular picture, lack of color), please select the mode according to the input signal.</li> </ul> 
<p><b>FRAME LOCK</b></p>	<p>Set the frame lock function on/off for each port.                      (1) Using the ▲/▼ buttons to select one of following ports.                      COMPUTER (IN)1 ⇔ COMPUTER (IN)2                      (2) Using the ◀/▶ buttons to turns the frame lock function on/off.                      TURN ON ⇔ TURN OFF</p> <ul style="list-style-type: none"> <li>• This item can be performed only on a signal with a vertical frequency of 50 to 60 Hz.</li> <li>• When the TURN ON is selected, a moving pictures are displayed more smoothly.</li> <li>• This function may cause a certain degradation of the picture. In such a case, please select TURN OFF.</li> </ul> 
<p><b>COMPUTER IN</b></p>	<p>The computer input signal type for <b>COMPUTER IN1</b> and <b>IN2</b> ports can be set.                      (1) Use the ◀/▶ buttons to select the input port to be set.                      COMPUTER (IN)1 ⇔ COMPUTER (IN)2                      (2) Use the ▲/▼ buttons to select the computer input signal type.                      SYNC ON G ON ⇔ SYNC ON G OFF</p> <p>Selecting SYNC ON G ON allows reception of sync on G signal.</p> <ul style="list-style-type: none"> <li>• When SYNC ON G ON is selected, the picture may be distorted with certain input signals. In such a case, remove the signal connector first and select SYNC ON G OFF on the menu, and then reconnect the signal.</li> </ul> 

(continued on next page)

INPUT Menu (continued)

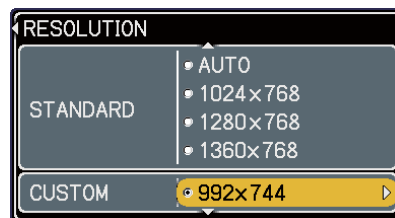
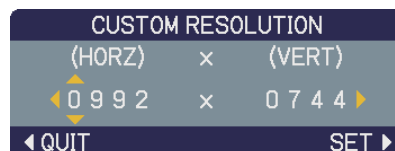
Item	Description
<p><b>RESOLUTION</b></p>	<p>The resolution for the <b>COMPUTER IN1</b> and <b>IN2</b> input signals can be set on this projector.</p> <p>(1) In the INPUT Menu select the RESOLUTION using the ▲/▼ buttons and press the ► button. The RESOLUTION menu will be displayed.</p> <p>(2) In the RESOLUTION menu, select the resolution you wish to display using the ▲/▼ buttons. Selecting AUTO will set a resolution appropriate to the input signal.</p> <p>(3) STANDARD Pressing the ► or <b>ENTER</b> button when selecting a STANDARD resolution will automatically adjust the horizontal and vertical positions, clock phase and horizontal size and automatically select an aspect ratio.</p> <p>(3) CUSTOM (3)-1 To set a custom resolution use the ▲/▼ buttons to select the CUSTOM and the CUSTOM RESOLUTION box will be displayed. Set the horizontal (HORZ) and vertical (VERT) resolutions using the ▲/▼ /◀/► buttons. It is not guaranteed to work this function properly on any resolutions. (3)-2 To save the setting place the cursor on the right-most digit and press the ► button. The horizontal and vertical positions, clock phase and horizontal size will be automatically adjusted. (3)-3 To revert back to the previous resolution without saving changes place the cursor on the left-most digit and press the ◀ button. The screen will then return to the RESOLUTION menu displaying the previous resolution.</p> <p>• For some pictures, this function may not work well.</p>



STANDARD



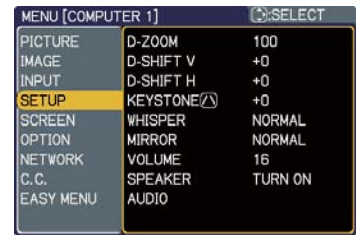
CUSTOM


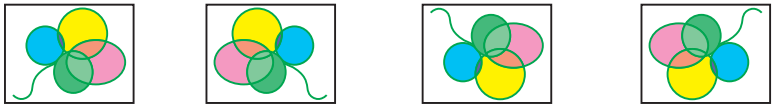


## SETUP Menu

From the SETUP Menu, items shown in the table below can be performed.

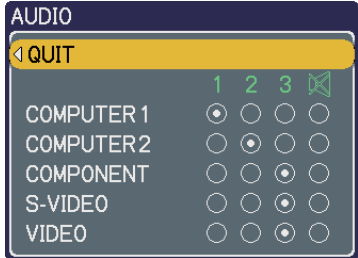
Select an item using the ▲/▼ cursor buttons, and press the ► cursor button or the **ENTER** button to execute the item. Then perform it according to the following table.



Item	Description
<b>D-ZOOM</b>	Using the ▲/▼ buttons adjusts the zoom. Large ⇔ Small
<b>D-SHIFT V</b>	Using the ▲/▼ buttons adjusts the vertical picture position. Up ⇔ Down • The function is not available, if the D-ZOOM is adjusted to 100 (full screen) on its dialog.
<b>D-SHIFT H</b>	Using the ▲/▼ buttons adjusts the horizontal picture position. Right ⇔ Left • The function is not available, if the D-ZOOM is adjusted to 100 (full screen) on its dialog.
<b>KEYSTONE</b> 	Using the ▲/▼ buttons corrects the vertical keystone distortion. Shrink the top of the image ⇔ Shrink the bottom of the image • The adjustable range of this function will vary with the type of input signal. For some input, this function may not work well. • This function will be unavailable when the Transition Detector is on (51).
<b>WHISPER</b>	Using the ▲/▼ buttons turns off/on the whisper mode. BRIGHT ⇔ NORMAL • When NORMAL is selected, acoustic noise and screen brightness are reduced.
<b>MIRROR</b>	Using the ▲/▼ buttons switches the mode for mirror status.  NORMAL ⇔ H:INVERT ⇔ V:INVERT ⇔ H&V:INVERT ↑ If the Transition Detector is TURN ON and MIRROR status is changed, Transition Detector Alarm (51) will be displayed when projector is restarted after the power switch is turned off.
<b>VOLUME</b>	Using the ▲/▼ buttons adjusts the volume. High ⇔ Low

(continued on next page)

SETUP Menu (continued)

Item	Description																																			
<p><b>SPEAKER</b></p>	<p>Using the ▲/▼ buttons turns on/off the built-in speaker.            TURN ON ⇔ TURN OFF            When TURN OFF is selected, the built-in speaker does not work.</p>																																			
<p><b>AUDIO</b></p>	<p>Allocates the audio ports.            (1) Choose a picture input port using the ▲/▼ buttons.            QUIT ⇔ COMPUTER (IN)1 ⇔ COMPUTER (IN)2            ↕ VIDEO ⇔ S-VIDEO ⇔ COMPONENT ⇔ ↕            (2) Select the audio port to be interlocked with the input port using the ◀/▶ buttons.            1 ⇔ 2 ⇔ 3 ⇔ ✕            ↕            • When ✕ is selected for an input, the audio will not be output if the input is chosen as a display source.            • When ✕ is selected to <b>VIDEO</b>, <b>S-VIDEO</b> or <b>COMPONENT</b> port, the C.C.(Closed Caption) is automatically activated, if the C.C. is set to AUTO in the DISPLAY menu of the C.C. Menu and the signal from the input port supports the C.C. feature (📖60).</p>  <p>The screenshot shows the AUDIO menu with the following options and interlocking settings:</p> <table border="1"> <thead> <tr> <th></th> <th>1</th> <th>2</th> <th>3</th> <th>✕</th> </tr> </thead> <tbody> <tr> <td>QUIT</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>COMPUTER 1</td> <td>●</td> <td>○</td> <td>○</td> <td>○</td> </tr> <tr> <td>COMPUTER 2</td> <td>○</td> <td>●</td> <td>○</td> <td>○</td> </tr> <tr> <td>COMPONENT</td> <td>○</td> <td>○</td> <td>●</td> <td>○</td> </tr> <tr> <td>S-VIDEO</td> <td>○</td> <td>○</td> <td>●</td> <td>○</td> </tr> <tr> <td>VIDEO</td> <td>○</td> <td>○</td> <td>○</td> <td>●</td> </tr> </tbody> </table>		1	2	3	✕	QUIT					COMPUTER 1	●	○	○	○	COMPUTER 2	○	●	○	○	COMPONENT	○	○	●	○	S-VIDEO	○	○	●	○	VIDEO	○	○	○	●
	1	2	3	✕																																
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COMPONENT	○	○	●	○																																
S-VIDEO	○	○	●	○																																
VIDEO	○	○	○	●																																

## SCREEN Menu

From the SCREEN Menu, items shown in the table below can be performed.

Select an item using the ▲/▼ cursor buttons, and press the ► cursor button or **ENTER** button to execute the item. Then perform it according to the following table.



Item	Description								
<b>LANGUAGE</b>	<p>Using the ▲/▼ buttons switches the OSD (On Screen Display) language.</p> <p>ENGLISH ⇄ FRANÇAIS ⇄ DEUTSCH ⇄ ESPAÑOL ⇄ ITALIANO                      ⇄                      TÜRKÇE                      ⇄                      POLSKI                      ⇄                      SUOMI                      ⇄                      РУССКИЙ ⇄ SVENSKA ⇄ 한글 ⇄ 繁體中文 ⇄ 简体中文 ⇄ 日本語</p>								
<b>MENU POSITION</b>	<p>Using the ▲/▼/◀/▶ buttons adjusts the menu position.                      To quit the operation, press <b>MENU</b> button on the remote control or keep no operation for about 10 seconds.</p>								
<b>BLANK</b>	<p>Using the ▲/▼ buttons switches the mode for the BLANK screen. The BLANK screen is a screen for the temporarily blanking feature (📖23). It is displayed by pressing <b>BLANK</b> button.</p> <p>MyScreen ⇄ ORIGINAL ⇄ BLUE ⇄ WHITE ⇄ BLACK</p> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th></th> <th>Feature</th> </tr> </thead> <tbody> <tr> <td>MyScreen</td> <td>Screen can be registered by the MyScreen item (📖40).</td> </tr> <tr> <td>ORIGINAL</td> <td>Screen preset as the standard screen.</td> </tr> <tr> <td>BLUE, WHITE, BLACK</td> <td>Plain screens in each color.</td> </tr> </tbody> </table> <p>• To avoid remaining as an afterimage, the MyScreen or ORIGINAL screen will change to the plain black screen after several minutes.</p>		Feature	MyScreen	Screen can be registered by the MyScreen item (📖40).	ORIGINAL	Screen preset as the standard screen.	BLUE, WHITE, BLACK	Plain screens in each color.
	Feature								
MyScreen	Screen can be registered by the MyScreen item (📖40).								
ORIGINAL	Screen preset as the standard screen.								
BLUE, WHITE, BLACK	Plain screens in each color.								

(continued on next page)





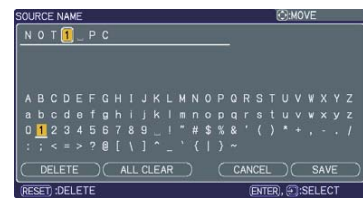
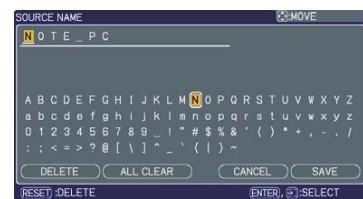
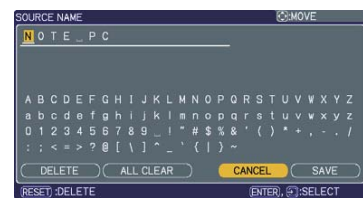
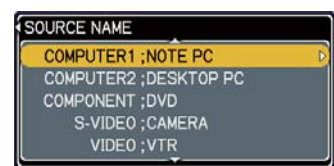
**SCREEN Menu (continued)**

Item	Description
<p><b>MyScreen</b></p>	<p>This item allows you to capture an image for use as a MyScreen image which can be used as the BLANK screen and START UP screen. Display the image you want to capture before executing the following procedure.</p> <ol style="list-style-type: none"> <li>1. Selecting this item displays a dialog titled “MyScreen”. It will ask you if you start capturing an image from the current screen.                     <div data-bbox="1075 504 1465 584" data-label="Image"> </div> <p>Please wait for the target image to be displayed, and press the <b>ENTER</b> button when the image is displayed. The image will freeze and the frame for capturing will appear.</p> <p>To stop performing, press the <b>RESET</b> or <b>ESC</b> button.</p> </li> <li>2. Using the ▲/▼/◀/▶ buttons adjusts the frame position.                     <p>Please move the frame to the position of the image which you want to use. The frame may not be able to be moved for some input signals.</p> <p>To start registration, press the <b>ENTER</b> button.</p> <p>To restore the screen and return to the previous dialog, press the <b>RESET</b> or <b>ESC</b> button.</p> <p>Registration takes several minutes.</p> <p>When the registration is completed, the registered screen and the following message are displayed for several seconds:  <b>“MyScreen registration is finished.”</b></p> <p>If the registration failed, the following message is displayed:  <b>“A capturing error has occurred. Please try again.”</b></p> <ul style="list-style-type: none"> <li>• This function cannot be selected when the TURN ON is selected to the MyScreen Lock item (<a href="#">📖 below</a>).</li> <li>• This function cannot be selected when TURN ON is selected to the MyScreen PASSWORD of SECURITY item in OPTION Menu (<a href="#">📖 48</a>).</li> </ul> </li> </ol>
<p><b>MyScreen Lock</b></p>	<p>Using the ▲/▼ buttons turns on/off the MyScreen lock function.</p> <p>TURN ON ⇔ TURN OFF</p> <p>When the TURN ON is selected, the MyScreen item is locked. Use this function for protecting the current MyScreen.</p> <ul style="list-style-type: none"> <li>• This function cannot be selected when TURN ON is selected to the MyScreen PASSWORD of SECURITY item in OPTION Menu (<a href="#">📖 48</a>).</li> </ul>

(continued on next page)



SCREEN Menu (continued)

Item	Description
<p><b>MESSAGE</b></p>	<p>Using the ▲/▼ buttons turns on/off the message function.                      TURN ON ⇔ TURN OFF</p> <p>When the TURN ON is selected, the following message function works.                      “AUTO IN PROGRESS” while automatically adjusting                      “NO INPUT IS DETECTED”                      “SYNC IS OUT OF RANGE”                      “Searching...” while searching for the input                      “Detecting...” while an input signal is detected                      The indication of the input signal displayed by changing                      The indication of the aspect ratio displayed by changing                      The indication of the PICTURE MODE displayed by changing                      The indication of the MY MEMORY displayed by changing                      The indication of “FREEZE” and “II” while the projector is in the FREEZE mode.</p> <ul style="list-style-type: none"> <li>• If the projector goes into the FREEZE mode while the TURN OFF is selected, the picture on screen is frozen without any messages, which is not a malfunction (📖23).</li> </ul>
<p><b>SOURCE NAME</b></p>	<p>Each input port for this projector can have a name applied to it.</p> <p>(1) Use the ▲/▼ buttons on the SCREEN Menu to select SOURCE NAME and press the ► button. The SOURCE NAME menu will be displayed.</p> <p>(2) Use the ▲/▼ buttons on the SOURCE NAME menu to select the port to be named and press the ► button. Right side of the menu is blank until a name is specified. The SOURCE NAME dialog will be displayed.</p> <p>(3) The current name will be displayed on the first line. Use the ▲/▼/◀/▶ buttons and the <b>ENTER</b> or <b>INPUT</b> button to select and enter characters. The <b>RESET</b> button can be used to erase 1 character at a time. Also if you move the cursor to <b>DELETE</b> or <b>ALL CLEAR</b> on screen and push the <b>ENTER</b> or <b>INPUT</b> button, 1 character or all characters will be erased. The name can be a maximum of 16 characters.</p> <p>(4) To change an already inserted character, press the (▲) button to move the cursor to the first line, and use the ◀/▶ buttons to move the cursor on the character to be changed. After pressing the <b>ENTER</b> or <b>INPUT</b> button, the character is selected. Then, follow the same procedure as described at the item (3) above.</p> <p>(5) To finish entering text, move the cursor to the <b>SAVE</b> on screen and press the <b>ENTER</b> or <b>INPUT</b> button. To revert to the previous name without saving changes, move the cursor to the <b>CANCEL</b> on screen and press the <b>ENTER</b> or <b>INPUT</b> button.</p>





**OPTION Menu (continued)**

Item	Description
<p><b>AUTO OFF</b></p>	<p>Using the ▲/▼ buttons adjusts the time to count down to automatically turn the projector off.                      Long (max. 99 minutes) ⇔ Short (min. 0 minute = DISABLE)</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>When the time is set to 0, the projector is not turned off automatically. When the time is set to 1 to 99, and when the passed time with no-signal or an unsuitable signal reaches at the set time, the projector lamp will be turned off.                      If one of the projector's buttons or the remote control buttons is pressed or one of the commands (except get commands) is transmitted to the <b>CONTROL</b> port during the corresponding time, projector will not be turned off.                      Please refer to the section "Turning off the power" (📖17).</p>
<p><b>LAMP TIME</b></p>	<p>The lamp time is the usage time of the lamp, counted after the last resetting. It is shown in the OPTION Menu.                      Pressing <b>RESET</b> button or the ► button displays a dialog.                      To reset the lamp time, select RESET using the ▲ button.                      RESET ⇔ CANCEL</p> <ul style="list-style-type: none"> <li>• Please reset the lamp time only when you have replaced the lamp, for a suitable indication about the lamp.</li> <li>• For the lamp replacement, see the section "Replacing the lamp" (📖61).</li> </ul>
<p><b>FILTER TIME</b></p>	<p>The filter time is the usage time of the air-filter, counted after the last resetting. It is shown in the OPTION Menu.                      Pressing the <b>RESET</b> button or the ► button displays a dialog.                      To reset the filter time, select the RESET using the ▲ button.                      RESET ⇔ CANCEL</p> <ul style="list-style-type: none"> <li>• Please reset the filter time only when you have cleaned or replaced the air-filter, for a suitable indication about the air-filter.</li> <li>• For the air-filter cleaning, see the section "Maintaining the air-filter" (📖63).</li> </ul>



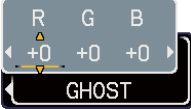
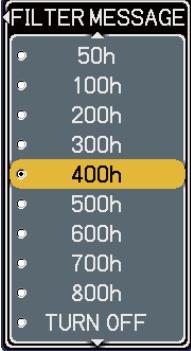
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OPTION Menu (continued)

Item	Description
<p><b>MY BUTTON</b></p>	<p>This item is to assign one of the following functions to <b>MY BUTTON 1</b> and <b>2</b> on the remote control (📖6).</p> <p>Choose 1 or 2 on the MY BUTTON menu using the ◀/▶ button first. Then using the ▲/▼ buttons sets one of the following functions to the chosen button.</p> <ul style="list-style-type: none"> <li>• COMPUTER1: Sets port to COMPUTER IN1.</li> <li>• COMPUTER2: Sets port to COMPUTER IN2.</li> <li>• COMPONENT: Sets port to COMPONENT (Y, C<sub>B</sub>/P<sub>B</sub>, C<sub>R</sub>/P<sub>R</sub>)</li> <li>• S-VIDEO: Sets port to S-VIDEO.</li> <li>• VIDEO: Sets port to VIDEO.</li> <li>• INFORMATION: Displays the INPUT -INFORMATION- (📖46) or NETWORK -INFORMATION- (📖59) or nothing. The displayed dialog is switched as below every time the <b>MY BUTTON</b> is pushed.</li> </ul> <p>When an input signal is found:            INPUT -INFORMATION- ⇄ NETWORK -INFORMATION- ⇄ OFF</p> <p>When an input signal is not found:            NETWORK -INFORMATION- ⇄ OFF</p> <ul style="list-style-type: none"> <li>• MY MEMORY: Loads one of adjustment data stored (📖30). When more than one data are saved, the adjustment changes every time the <b>MY BUTTON</b> is pushed. When no data is saved in memory, the dialog "No saved data" appears. When the current adjustment is not saved to memory, the dialog as shown in the right appears.</li> </ul> <p>If you want to keep the current adjustment, please press the ◀ button to quit. Otherwise loading a data will lose the current adjusted condition.</p> <ul style="list-style-type: none"> <li>• PICTURE MODE: Changes the PICTURE MODE (📖26).</li> <li>• FILTER RESET: Displays the filter time reset confirmation dialogue (📖43).</li> <li>• VOLUME+: Set the volume up.</li> <li>• VOLUME-: Set the volume down.</li> <li>• AV MUTE: Turns the picture and audio on/off.</li> <li>• e-SHOT: Displays the e-SHOT menu (📖58).</li> </ul>
<p><b>SERVICE</b></p>	<p>Selecting this item displays the SERVICE menu. Select an item using the ▲/▼ buttons, and press the ▶ button or the <b>ENTER</b> button to execute the item.</p> <p>FAN SPEED ⇄ AUTO ADJUST ⇄ GHOST ⇄ FILTER MESSAGE ⇄ KEY LOCK ⇄ FOCUS LOCK</p> <p>↑ ↘ FACTORY RESET ⇄ I NFORMATION ⇄ REMOTE FREQ. ⇄ REMOTE RECEIV. ↙ ↓</p>




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OPTION Menu (continued)


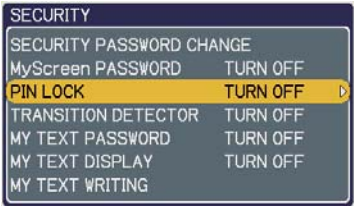



Item	Description
<p><b>SERVICE</b> (continued)</p>	<p><b>FAN SPEED</b> Using the ▲/▼ buttons the rotation speed of the cooling fans. The HIGH is the mode for use at highlands etc. Note that the projector is noisier when the HIGH is selected. HIGH ⇔ NORMAL</p> 
	<p><b>AUTO ADJUST</b> Using the ▲/▼ buttons to select one of the mode. When the DISABLE is selected, the H/V.POSITION, H.SIZE and H.PHASE will be set to the default value if the automatic adjustment function is executed. FINE ⇔ FAST ⇔ DISABLE</p>  <p>↑ FINE: Finer tuning including H.SIZE adjustment. FAST: Faster tuning, setting H.SIZE to prearranged data for the input signal.</p> <ul style="list-style-type: none"> <li>• Depending on conditions, such as input image, signal cable to the projector, environment around the projector, etc., the automatic adjustment may not work correctly. In such a case, please choose DISABLE to disable the automatic adjustment, and make adjustment manually.</li> </ul>
	<p><b>GHOST</b> 1. Select a color element of ghost using the ◀/▶ buttons. 2. Adjust the selected element using the ▲/▼ buttons to disappear ghost.</p> 
	<p><b>FILTER MESSAGE</b> Use the ▲/▼ button to set the timer for the interval to show the message for cleaning up the air-filter. 50h ⇔ 100h ⇔ 200h ⇔ 300h ⇔ 400h ⇔ 500h TURN OFF ⇔ 800h ⇔ 700h ⇔ 600h ↻</p>  <p>After choosing an item except TURN OFF, the message “REMINDER *** HRS PASSED AFTER THE LAST FILTER CHECK” will appear after the timer reaches the interval time set by this feature (68). When the TURN OFF is chosen, the message will not appear. Utilize this feature to keep the air-filter clean, setting the suitable time according to your environment of this projector.</p> <ul style="list-style-type: none"> <li>• Please check and clean the air-filter periodically, even if there is no message. If the air-filter becomes to be blocked by dust or others, the internal temperature will rise, which could cause malfunction, or reduce the lifetime of the projector.</li> <li>• Please be careful with the operating environment of the projector and the condition of the air-filter.</li> </ul>

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OPTION Menu (continued)

Item	Description
<p><b>SERVICE</b> (continued)</p>	<p><b>KEY LOCK</b> Using the ▲/▼ buttons turns on/off the key lock feature. When TURN ON is selected, the buttons on the projector except the <b>STANDBY/ON</b> button are locked. TURN ON ⇔ TURN OFF • Please use to avoid a mischief and touching accidentally. This function does not have any effect on the remote control.</p>
	<p><b>FOCUS LOCK</b> Use the ▲/▼ buttons turns on/off the focus lock feature. When TURN ON is selected, the <b>FOCUS +/-</b> buttons on the remote and projector are disabled. TURN ON ⇔ TURN OFF • Please use the function to avoid a mischief and touching accidentally.</p>
	<p><b>REMOTE RECEIV.</b> (1) Select a remote sensor using ▲/▼ buttons. 1:FRONT ⇔ 2:TOP (2) Switch it using the <b>ENTER</b> or <b>INPUT</b> button. <input type="checkbox"/> (off) ⇔ <input checked="" type="checkbox"/> (on) • A sensor cannot be turned off when the other one is off. Always at least one sensor is on.</p> 
	<p><b>REMOTE FREQ.</b> Use the ▲/▼ button to change the projector's remote sensor setting. 1:NORMAL ⇔ 2:HIGH Items with a checkmark are on. The factory default setting is for both 1:NORMAL and 2:HIGH to be on. If the remote control does not function correctly set this to either only 1 or only 2 (📖15). Neither can be turned off at the same time.</p> 
	<p><b>INFORMATION</b> Selecting this item displays a dialog titled "INPUT -INFORMATION-". It shows the information about the current input.</p>  <p>• The "FRAME LOCK" message on the dialog means the frame lock function is working (📖34). • This item can't be selected for no signal and sync out.</p>
<p><b>FACTORY RESET</b> Selecting RESET using the button ▲ performs this function. By this function, all the items in all of menus will collectively return to the initial setting. Note that the items LAMP TIME, FILTER TIME, LANGUAGE, SECURITY and NETWORK settings are not reset. RESET ⇔ CANCEL</p>	

OPTION Menu (continued)

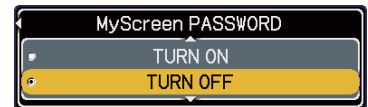
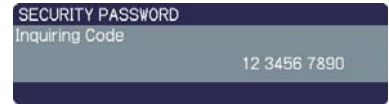
Item	Description
<p><b>SECURITY</b></p>	<p>This projector is equipped with security functions. User registration is required before using the security functions. Please contact your local dealer.</p>
	<p><b>1. Using Security Features</b></p> <p><b>1.1 Inputting the PASSWORD</b></p> <p>1.1-1 Use the ▲/▼ buttons on the OPTION Menu to select SECURITY and press the ► button. The ENTER PASSWORD box will be displayed.</p>  <p>The factory default PASSWORD is <b>4910</b>. This PASSWORD can be changed (1.2 Changing the PASSWORD (below)).</p> <ul style="list-style-type: none"> <li>It is strongly recommended the factory default PASSWORD to be changed as soon as possible.</li> </ul> <p>1.1-2 Use the ▲/▼/◀/▶ buttons to enter the registered PASSWORD. Move the cursor to the right side of the ENTER PASSWORD box and press the ► button to display the SECURITY menu.</p>  <p>If an incorrect PASSWORD is input the ENTER PASSWORD box will be displayed again. If incorrect PASSWORD is input 3 times the projector will turn off. Afterwards the projector will turn off every time an incorrect PASSWORD is input.</p> <p><b>1.2 Changing the PASSWORD</b></p> <p>1.2-1 Use the ▲/▼ buttons on the SECURITY menu to select SECURITY PASSWORD CHANGE and press the ► button to display the ENTER NEW PASSWORD box.</p>  <p>1.2-2 Use the ▲/▼/◀/▶ buttons to enter the new PASSWORD.</p> <p>1.2-3 Move the cursor to the right side of the ENTER NEW PASSWORD box and press the ► button to display the NEW PASSWORD AGAIN box, enter the same PASSWORD again.</p>  <p>1.2-4 Move the cursor to the right side of the NEW PASSWORD AGAIN box and press the ► button and the NOTE NEW PASSWORD box will be displayed for about 20 seconds, please make note of the PASSWORD during this time.</p>  <p>Pressing the <b>ENTER</b> button will close the NOTE NEW PASSWORD box.</p> <ul style="list-style-type: none"> <li>Please do not forget your PASSWORD.</li> </ul>

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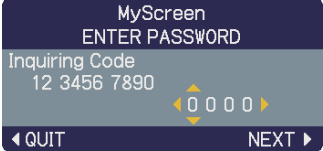

**OPTION Menu (continued)**

Item	Description
<p><b>SECURITY</b> (continued)</p>	<p><b>1.3 If you have forgotten your PASSWORD</b></p> <p>1.3-1 Follow the procedure in 1.1-1 to display the ENTER PASSWORD box.</p> <p>1.3-2 While the ENTER PASSWORD box is displayed, press and hold the <b>RESET</b> button for about 3 seconds or press and hold the <b>INPUT</b> and <b>▶</b> buttons on the projector for about 3 seconds. The 10-digit Inquiring Code will be displayed.</p> <ul style="list-style-type: none"> <li>• If there is no key input for about 55 seconds while the Inquiring Code is displayed the menu will close. If necessary repeat the process from 1.3-1.</li> </ul> <p>1.3-3 Contact your dealer with the 10-digit Inquiring Code. Your PASSWORD will be sent after your user registration information is confirmed.</p>
	<p><b>2. Using the MyScreen PASSWORD Function</b></p> <p>The MyScreen PASSWORD function can be used to prohibit access to the MyScreen function and prevent the currently registered MyScreen image from being overwritten.</p> <p><b>2.1 Turning on the MyScreen PASSWORD Function</b></p> <p>2.1-1 Use the <b>▲/▼</b> buttons on the SECURITY menu to select MyScreen PASSWORD and press the <b>▶</b> button to display the MyScreen PASSWORD on/off menu.</p> <p><b>2.2 Setting the PASSWORD</b></p> <p>2.2-1 Display the MyScreen PASSWORD on/off menu using the procedure in 2.1-1.</p> <p>2.2-2 Use the <b>▲/▼</b> buttons on the MyScreen PASSWORD on/off menu to select TURN ON. The ENTER PASSWORD box (small) will be displayed.</p> <p>2.2-3 Use the <b>▲/▼/◀/▶</b> buttons to enter the PASSWORD. Move the cursor to the right side of the ENTER PASSWORD box (small) and press the <b>▶</b> button to display the PASSWORD AGAIN box, enter the same PASSWORD again.</p>





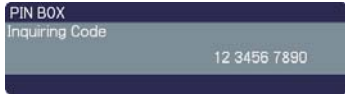
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OPTION Menu (continued)

Item	Description
<p><b>SECURITY</b> (continued)</p>	<p>2.2-4 Move the cursor to the right side of the PASSWORD AGAIN box and press the ► button to display the PASSWORD for about 20 seconds, please make note of the PASSWORD during this time.</p>  <p>Pressing the <b>ENTER</b> button will return to MyScreen PASSWORD on/off menu. When a PASSWORD is set for MyScreen:</p> <ul style="list-style-type: none"> <li>• The MyScreen registration function (and menu) will be unavailable.</li> <li>• The MyScreen Lock menu will be unavailable.</li> <li>• The START UP setting will be locked on MyScreen (and the menu will be unavailable).</li> </ul> <p>Turning the MyScreen PASSWORD off will allow normal operation of these functions.</p> <ul style="list-style-type: none"> <li>• Please do not forget your MyScreen PASSWORD.</li> </ul> <p><b>2.3 Turning the PASSWORD off</b></p> <p>2.3-1 Follow the procedure in 2.1-1 to display the MyScreen PASSWORD on/off menu.</p> <p>2.3-2 Select TURN OFF to display the ENTER PASSWORD box (large). Enter the registered PASSWORD and the screen will return to the MyScreen on/off menu. If an incorrect PASSWORD is input the menu will close. If necessary repeat the process from 2.3-1.</p> <p><b>2.4 If you have forgotten your PASSWORD</b></p> <p>2.4-1 Follow the procedure in 2.1-1 to display the MyScreen PASSWORD on/off menu.</p> <p>2.4-2 Select TURN OFF to display the ENTER PASSWORD box (large). The 10-digit Inquiring Code will be displayed inside the box.</p>  <p>2.4-3 Contact your dealer with the 10-digit Inquiring Code. Your PASSWORD will be sent after your user registration information is confirmed.</p>
	<p><b>3. Using the PIN LOCK Function</b></p> <p>PIN LOCK is a function which prevents the projector from being used unless a registered Code is input.</p> <p><b>3.1 Registering the PIN Code</b></p> <p>3.1-1 Use the ▲/▼ buttons on the SECURITY menu to select PIN LOCK and press the ► button or the <b>ENTER</b> button to display the PIN LOCK on/off menu.</p> 

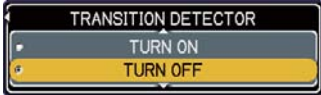
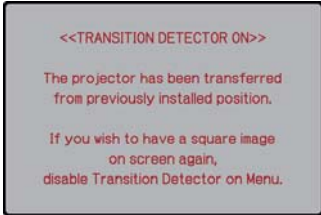


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**OPTION Menu (continued)**

Item	Description
<p><b>SECURITY</b> (continued)</p>	<p>3.1-2 Use the ▲/▼ buttons on the PIN LOCK on/off menu to select TURN ON and the PIN BOX will be displayed.</p>  <p>3.1-3 Input a 4 part PIN Code using the ▲, ▼, ◀, ▶, <b>COMPUTER</b> and <b>INPUT</b> buttons. A PIN Code again box will appear. Reenter the same PIN Code. This will complete the PIN Code registration.</p>  <ul style="list-style-type: none"> <li>• If there is no key input for about 55 seconds while the PIN BOX or the PIN Code again box are displayed the menu will close. If necessary repeat the process from 3.1-1.</li> </ul> <p>Afterwards, anytime the projector is restarted after AC power is turned off the PIN BOX will be displayed. Enter the registered PIN Code. The projector can be used after entering the registered PIN Code. If an incorrect PIN Code is input the PIN BOX will be displayed again. If an incorrect PIN Code is input 3 times the projector will turn off. Afterwards the projector will turn off every time an incorrect PIN Code is input. The projector will also turn off if there is no key input for about 5 minutes while the PIN BOX is displayed. This function will activate only when the projector is started after AC power is turned off.</p> <ul style="list-style-type: none"> <li>• Please do not forget your PIN Code.</li> </ul> <p><b>3.2 Turning Off the PIN LOCK Function</b></p> <p>3.2-1 Follow the procedure in 3.1-1 to display the PIN LOCK on/off menu. Use the ▲/▼ buttons to select TURN OFF and the PIN BOX will be displayed. Enter the registered PIN Code to turn the PIN LOCK function off. If an incorrect PASSWORD is input 3 times, the projector will be shut down.</p> <p><b>3.3 If you have forgotten your PIN Code</b></p> <p>3.3-1 While the PIN BOX is displayed, press and hold the <b>RESET</b> button for 3 seconds or press and hold the <b>INPUT</b> and ▶ buttons for 3 seconds. The 10-digit Inquiring Code will be displayed.</p>  <ul style="list-style-type: none"> <li>• If it passes for about 5 minutes after the PIN BOX is displayed the projector will turn off.</li> </ul> <p>3.3-2 Contact your dealer with the 10-digit Inquiring Code. Your PASSWORD will be sent after your user registration information is confirmed.</p>

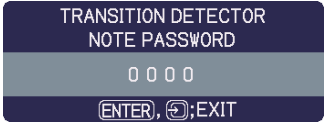
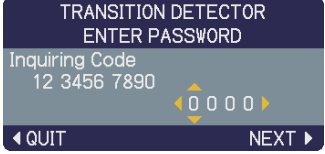
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OPTION Menu (continued)

Item	Description
<p><b>SECURITY</b> (continued)</p>	<p><b>4. Using the Transition Detector Function</b></p> <p>While the Transition Detector function is ON, when power switch is started to supply to the projector, it might react as below.</p> <ul style="list-style-type: none"> <li>• Transition Detector alarm shown below might appear on screen, if the projector has been moved or re-installed.</li> <li>• Transition Detector alarm might appear on screen, if the MIRROR setting has been changed.</li> <li>• Keystone adjustment feature has been prohibited as long as the Transition Detector function is ON.</li> </ul> <p><b>4.1 Turning On the Transition Detector Function</b></p> <p>4.1-1 Use the ▲/▼ buttons on the SECURITY menu to select TRANSITION DETECTOR and press the ► or the <b>ENTER</b> button to display the TRANSITION DETECTOR on/off menu. Select TURN ON and the current angle and mirror setting will be recorded.</p>  <ul style="list-style-type: none"> <li>• This feature may not function properly if the projector is not in a stable position when TURN ON is selected.</li> </ul> <p>4.1-2 When the projector is turned on, if this function is set to TURN ON and if the setting condition of the projector (normal use or ceiling mounted or tabletop use) or mirror setting is changed from previous record, the Transition Detector alarm will be displayed and the projector will not display the input image.</p>  <p>Set the Transition Detector off in the SECURITY menu to display the input signal. If the Transition Detector alarm is displayed for about 5 minutes the lamp will turn off. This function will activate only when the projector is started after turning off the AC power.</p> <p><b>4.2 Setting the Transition Detector PASSWORD</b></p> <p>4.2-1 Use the ▲/▼ buttons on the SECURITY menu to select TRANSITION DETECTOR and press the ► or the <b>ENTER</b> button to display the TRANSITION DETECTOR on/off menu.</p> <p>4.2-2 Use the ▲/▼ buttons on the TRANSITION DETECTOR on/off menu to select TURN ON. The ENTER PASSWORD box (small) will be displayed.</p>  <p>4.2-3 Use the ▲/▼/◀/▶ buttons to enter a PASSWORD. Move the cursor to the right side of the ENTER PASSWORD box (small) and press the ► button to display the PASSWORD AGAIN box, enter the same PASSWORD again.</p> 

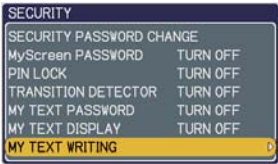
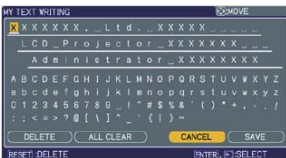



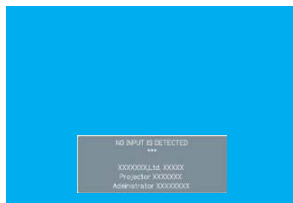

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**OPTION Menu (continued)**

Item	Description
<p><b>SECURITY</b> (continued)</p>	<p>4.2-4 Move the cursor to the right side of the PASSWORD AGAIN box and press the ► button to display the PASSWORD for about 20 seconds, please make note of the PASSWORD during this time.</p>  <p>Pressing the <b>ENTER</b> button will return to the TRANSITION DETECTOR on/off menu.</p> <ul style="list-style-type: none"> <li>• Please do not forget your Transition Detector PASSWORD.</li> </ul>
	<p><b>4.3 Setting the Transition Detector off</b></p>
	<p>4.3-1 Follow the procedure in 4.1-1 to display the TRANSITION DETECTOR on/off menu.</p>
	<p>4.3-2 Select TURN OFF to display the ENTER PASSWORD box (large). Enter the registered PASSWORD and the screen will return to the TRANSITION DETECTOR on/off menu. If an incorrect PASSWORD is input the menu will close. If necessary repeat the process from 4.3-1.</p>
	<p><b>4.4 If you have forgotten your PASSWORD</b></p>
<p>4.4-1 Follow the procedure in 4.1-1 to display the TRANSITION DETECTOR on/off menu.</p>	
<p>4.4-2 Select TURN OFF to display the ENTER PASSWORD box (large). The 10-digit Inquiring Code will be displayed inside the box.</p> 	
<p>4.4-3 Contact your dealer with the 10-digit Inquiring Code. Your PASSWORD will be sent after your user registration information is confirmed.</p>	

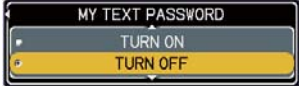




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OPTION Menu (continued)

Item	Description
<p><b>SECURITY</b> (continued)</p>	<p><b>5. Using the MY TEXT PASSWORD function</b></p> <p>This item allows you to display your own message (MY TEXT) on the START UP screen and INPUT-INFORMATION. It can be protected by a password to prevent it from being overwritten.</p> <p><b>5.1 Writing the MY TEXT</b></p> <p>(1) Use the ▲/▼ buttons on the SECURITY menu to select the MY TEXT WRITING menu and press the ► button. The MY TEXT WRITING dialog will be displayed.</p>  <p>(2) The current MY TEXT will be displayed on the first 3 lines. If not yet written, the lines will be blank. Use the ▲/▼/◀/▶ buttons and the ENTER or INPUT button to select and enter characters. The RESET button can be used to erase 1 character at a time. Also if you move the cursor to DELETE or ALL CLEAR on screen and push the ENTER or INPUT button, 1 character or all characters will be erased. The MY TEXT can be input up to 24 characters on each line.</p>   <p>(3) To change an already inserted character, press the ▲/▼ button to move the cursor to one of the first 3 lines, and use the ◀/▶ buttons to move the cursor on the character to be changed. After pressing the ENTER or INPUT button, the character is selected. Then, follow the same procedure as described at the item (2) above.</p>  <p>(4) To finish entering text, move the cursor to the SAVE on screen and press the ENTER or INPUT button. To revert to the previous MY TEXT without saving changes, move the cursor to the CANCEL on screen and press the ENTER or INPUT button.</p> <ul style="list-style-type: none"> <li>• The MY TEXT WRITING function is available only when the MY TEXT PASSWORD function is set to TURN OFF.</li> </ul>
	<p><b>5.2 Displaying the MY TEXT</b></p> <p>(1) Use the ▲/▼ buttons on the SECURITY menu to select the MY TEXT DISPLAY menu and press the ► button to display the MY TEXT DISPLAY on/off menu.</p>  <p>MY TEXT DISPLAY on/off menu</p> <p>(2) Use the ▲/▼ buttons on the MY TEXT DISPLAY on/off menu to select on or off.</p> <p>TURN ON ⇔ TURN OFF</p> <p>When it is set TURN ON, the MY TEXT will be displayed on the START UP screen. Whichever is selected, the MY TEXT will be displayed on the INPUT-INFORMATION- when the INFORMATION on the SERVICE menu is chosen.</p> <ul style="list-style-type: none"> <li>• This function is available only when the MY TEXT PASSWORD function is set to the TURN OFF.</li> </ul>  

(continued on next page)

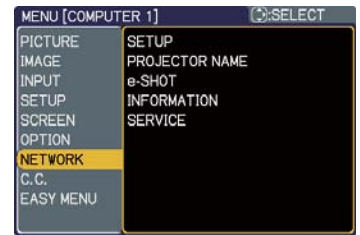
OPTION Menu (continued)

Item	Description
<p><b>SECURITY</b> (continued)</p>	<p><b>5.3 Turning on the MY TEXT PASSWORD</b> The MY TEXT PASSWORD function can prevent the MY TEXT from being overwritten.</p> <p><b>5.3-1 Turning on the MY TEXT PASSWORD function</b> (1) Use the ▲/▼ buttons on the SECURITY menu to select the MY TEXT PASSWORD menu and press the ► button to display the MY TEXT PASSWORD on/off menu.</p>  <p>MY TEXT PASSWORD</p> <p><b>5.3-2 Setting the MY TEXT PASSWORD</b> (1) Display the MY TEXT PASSWORD on/off menu using the procedure in 5.3-1 (2) Use the ▲/▼ buttons on the MY TEXT PASSWORD menu to select TURN ON. The ENTER PASSWORD BOX (small) will be displayed.</p>  <p>ENTER PASSWORD BOX (small)</p> <p>(3) Use the ▲/▼/◀/▶ buttons to enter the PASSWORD. Move the cursor to the right side of the ENTER PASSWORD BOX (small) and press the ► button to display the PASSWORD AGAIN BOX, and then enter the same PASSWORD again.</p>  <p>PASSWORD AGAIN BOX</p> <p>(4) Move the cursor to the right side of the PASSWORD AGAIN BOX and press ► button to display the PASSWORD for about 20 seconds, then please make note of the PASSWORD during this time.</p>  <p>NOTE PASSWORD BOX</p> <p>Pressing the <b>ENTER</b> button on the remote control or <b>INPUT</b> button on the projector will return to the MY TEXT PASSWORD on/off menu. When the PASSWORD is set for the MY TEXT;</p> <ul style="list-style-type: none"> <li>• The MY TEXT DISPLAY menu will be unavailable, which can prohibit changing the DISPLAY setting.</li> <li>• The MY TEXT WRITING menu will be unavailable, which can prevent the MY TEXT from being overwritten.</li> </ul> <p><b>5.3-3 Turning the MY TEXT PASSWORD off</b> (1) Follow the procedure in 5.3-1 to display the MY TEXT PASSWORD on/off menu. (2) Select TURN OFF to display the ENTER PASSWORD BOX (large). Enter the registered PASSWORD and the screen will return to the MY TEXT PASSWORD on/off menu.</p>  <p>ENTER PASSWORD BOX (large)</p> <p>If an incorrect PASSWORD is input, the menu will close. If necessary, repeat the process from 5.3-3(1)</p> <p><b>5.3.4 If you have forgotten your PASSWORD.</b> (1) Follow the procedure in 5.3-1 to display the MY TEXT PASSWORD on/off menu. (2) Select TURN OFF to display the ENTER PASSWORD BOX (large). The 10 digit inquiring code will be displayed inside the box. (3) Contact your dealer with the 10 digit inquiring code. Your PASSWORD will be sent after your user registration information is confirmed.</p>

**NETWORK Menu**

Remember that incorrect network settings on this projector may cause trouble on the network. Be sure to consult with your network administrator before connecting to an existing access point on your network.

Select "NETWORK" from the main menu to access the following functions.

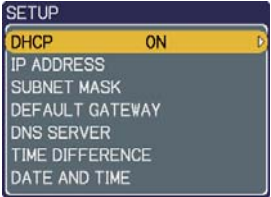
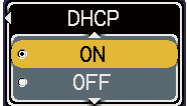


Select an item using the ▲/▼ cursor buttons on the projector or remote control, and press the ► cursor button on the projector or remote control, or **ENTER** button on the remote control to execute the item. Then perform it according to the following table.

See the User's Manual - Network Guide for details of NETWORK operation.

**NOTE** • The factory default setting for DHCP is OFF. If your network has DHCP enabled, and needs to set IP ADDRESS, SUBNET MASK and DEFAULT GATEWAY automatically, please set DHCP to ON. ([📖 Network Settings of the User's Manual - Network Guide](#))


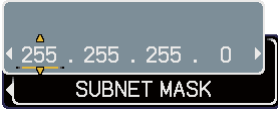


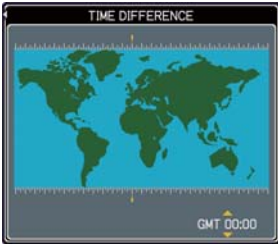

• If you are not utilizing SNTP ([📖 Date/Time Settings of the User's Manual - Network Guide](#)), then you must set the DATE AND TIME ([📖 56](#)) during the initial installation.

Item	Description	
<p><b>SETUP</b></p>		<p>Selecting this item displays the SETUP Menu for the network. Use the ▲/▼ buttons to select an item, and the ► or <b>ENTER</b> button on the remote control to perform the item.</p> 
	<p><b>DHCP</b> (Dynamic Host Configuration Protocol)</p>	<p>Use the ▲/▼ buttons to turn DHCP on/off. ON ⇔ OFF</p> <p>Select OFF when the network does not have DHCP enabled.</p> <ul style="list-style-type: none"> <li>• When the "DHCP" setting changes to "ON", it takes a little time to obtain IP address from DHCP server.</li> <li>• Auto IP function will be assigned an IP address if the projector could not obtain an IP address from server even if DHCP is "ON".</li> </ul> 

(continued on next page)



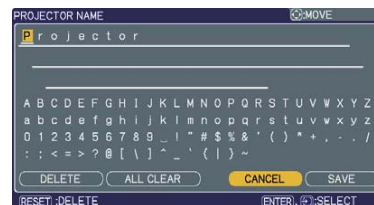
NETWORK Menu (continued)

Item	Description	
<p><b>SETUP</b> (continued)</p>	<p><b>IP ADDRESS</b></p>	<p>Use the ▲/▼/◀/▶ buttons to enter the IP ADDRESS. This function can only be used when DHCP is set to OFF.</p>  <ul style="list-style-type: none"> <li>• The IP ADDRESS is the number that identifies this projector on the network. You cannot have two devices with the same IP ADDRESS on the same network.</li> <li>• The IP ADDRESS "0.0.0.0" is prohibited.</li> </ul>
	<p><b>SUBNET MASK</b></p>	<p>Use the ▲/▼/◀/▶ buttons to enter the same SUBNET MASK used by your PC. This function can only be used when DHCP is set to OFF.</p>  <ul style="list-style-type: none"> <li>• The SUBNET MASK "0.0.0.0" is prohibited.</li> </ul>
	<p><b>DEFAULT GATEWAY</b></p>	<p>Use the ▲/▼/◀/▶ buttons to enter the DEFAULT GATEWAY (a node on a computer network that serves as an access point to another network) address. This function can only be used when DHCP is set to OFF.</p> 
	<p><b>DNS SERVER</b></p>	<p>Use the ▲/▼/◀/▶ buttons to input the DNS SERVER address. The DNS SERVER is a system to control domain names and IP addresses on the Network.</p> 
	<p><b>TIME DIFFERENCE</b></p>	<p>Use the ▲/▼ buttons to enter the TIME DIFFERENCE. Set the same TIME DIFFERENCE as the one set on your PC. If unsure, consult your IT manager. Use the ◀ button to return to the menu after setting the TIME DIFFERENCE.</p> 
	<p><b>DATE AND TIME</b></p>	<p>Use the ▲/▼/◀/▶ buttons to enter the Year (last two digits), Month, Date, Hour and Minute.</p>  <ul style="list-style-type: none"> <li>• The projector will override this setting and retrieve DATE AND TIME information from the Time server when SNTP is enabled. (📖 <b>Date/Time Settings of the User's Manual - Network Guide</b>)</li> </ul>

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NETWORK Menu (continued)

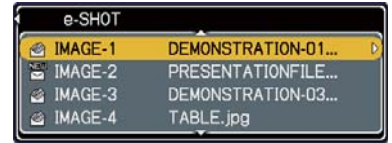
Item	Description
<p><b>PROJECTOR NAME</b></p>	<p>(1) Use the ▲/▼ buttons on the NETWORK Menu to select the PROJECTOR NAME menu and press the ► button. The PROJECTOR NAME dialog will be displayed.</p> <p>(2) The current PROJECTOR NAME will be displayed on the first 3 lines. If not yet written, the lines will be blank. Use the ▲/▼/◀/▶ buttons and the <b>ENTER</b> or <b>INPUT</b> button to select and enter characters. The <b>RESET</b> button can be used to erase 1 character at a time. Also if you move the cursor to <b>DELETE</b> or <b>ALL CLEAR</b> on screen and push the <b>ENTER</b> or <b>INPUT</b> button, 1 character or all characters will be erased. The PROJECTOR NAME can be input up to 64 characters.</p> <p>(3) To change an already inserted character, press the ▲/▼ button to move the cursor to one of the first 3 lines, and use the ◀/▶ buttons to move the cursor on the character to be changed. After pressing the <b>ENTER</b> or <b>INPUT</b> button, the character is selected. Then, follow the same procedure as described at the item (2) above.</p> <p>(4) To finish entering text, move the cursor to the <b>SAVE</b> on screen and press the <b>ENTER</b> or <b>INPUT</b> button. To revert to the previous PROJECTOR NAME without saving changes, move the cursor to the <b>CANCEL</b> on screen and press the <b>ENTER</b> or <b>INPUT</b> button.</p>



(continued on next page)

**NETWORK Menu (continued)**

Item	Description
<p><b>e-SHOT</b></p>	<p>Selecting this item displays the e-SHOT menu.</p> <p>The application software “PJTransfer” is required to store image(s) into the projector.</p> <p>Use the ▲/▼ buttons to select an item which is a still image by the e-SHOT ( <b>e-SHOT (Still Image Transfer) Display of the User's Manual - Network Guide</b>) and the ► or <b>ENTER</b> button to display the image.</p> <ul style="list-style-type: none"> <li>• The item without image stored cannot be selected.</li> <li>• The image names are each displayed in 16 characters or less.</li> </ul> <p><b>To switch the image displayed</b> Use the ▲/▼ buttons.</p> <p><b>To return to the menu</b> Press the ◀ or <b>ESC</b> button on the remote control.</p> <p><b>To erase the image displayed and its source file in the projector.</b></p> <p>(1) Press the <b>RESET</b> button on the remote control while displaying an image to display the e-SHOT - RESET menu.</p> <p>(2) Press the <b>ENTER</b> button on the remote control or the <b>INPUT</b> button on the projector to perform to erase. To stop erasing, press the <b>ESC</b> button on the remote control or the ◀ button on the projector.</p>



(continued on next page)

**NETWORK Menu (continued)**



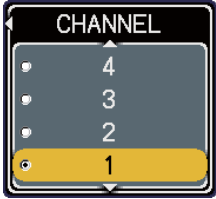
Item	Description																
<p><b>INFORMATION</b></p>	<p>Selecting this item displays the NETWORK -INFORMATION- dialog for confirming the network settings.</p> <div data-bbox="614 439 1310 790" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">NETWORK -INFORMATION-</p> <table border="0" style="width: 100%;"> <tr><td>PROJECTOR NAME</td><td></td></tr> <tr><td>IP ADDRESS</td><td>192.168.1.254</td></tr> <tr><td>SUBNET MASK</td><td>255.255.255.0</td></tr> <tr><td>DEFAULT GATEWAY</td><td>0.0.0.0</td></tr> <tr><td>DNS SERVER</td><td>0.0.0.0</td></tr> <tr><td>MAC ADDRESS</td><td>00-00-87-56-AC-7C</td></tr> <tr><td>TIME DIFFERENCE</td><td>GMT 00:00</td></tr> <tr><td>DATE AND TIME</td><td>2000/1/1 8:15</td></tr> </table> </div> <ul style="list-style-type: none"> <li>• The PROJECTOR NAME is displayed.</li> <li>• Nothing (blank) is shown in the “PROJECTOR NAME” field until you setup the item (📖 57).</li> <li>• When the voltage level of the battery for the built in clock decreases, the set time may become incorrect even though accurate date and time are input. Replace the battery suitably (📖 65).</li> <li>• IP ADDRESS, SUBNET MASK and DEFAULT GATEWAY indicate “0.0.0.0” when DHCP is ON and the projector has not gotten address from DHCP server.</li> </ul>	PROJECTOR NAME		IP ADDRESS	192.168.1.254	SUBNET MASK	255.255.255.0	DEFAULT GATEWAY	0.0.0.0	DNS SERVER	0.0.0.0	MAC ADDRESS	00-00-87-56-AC-7C	TIME DIFFERENCE	GMT 00:00	DATE AND TIME	2000/1/1 8:15
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SUBNET MASK	255.255.255.0																
DEFAULT GATEWAY	0.0.0.0																
DNS SERVER	0.0.0.0																
MAC ADDRESS	00-00-87-56-AC-7C																
TIME DIFFERENCE	GMT 00:00																
DATE AND TIME	2000/1/1 8:15																
<p><b>SERVICE</b></p>	<p>Executing this item restarts and initializes the network functions. Choose the RESTART using the button ▶.</p> <div data-bbox="614 1279 946 1379" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">SERVICE</p> <p style="text-align: center;">▶ RESTART ▶</p> </div> <p>Then use the button ▲ to execute.</p> <div data-bbox="614 1469 871 1603" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">RESTART</p> <p style="text-align: center;">▲ EXECUTE ▲</p> <p style="text-align: center;">▶ CANCEL ▶</p> </div> <p>Network will be once cut off when choose restart. If DHCP is selected on, IP address may be changed. After selecting RESTART, NETWORK Menu may not be controlled approx. 30 seconds.</p>																

## C.C. (Closed Caption) Menu

The closed caption setting can be changed through C.C. Menu in the advance menu. Please select the item that you will change using ▲/▼ cursor buttons.

- The C.C. (Closed Caption) is the function that displays a transcript or dialog of the audio portion of a video, files or other presentation or other relevant sounds. It is required to have NTSC format video or 525i(480i) Component video source supporting C.C. feature to utilize this function.



Item	Description
<p><b>DISPLAY</b></p>	<p>Select Closed Caption DISPLAY setting from following options using ▲/▼ buttons.</p> <p>TURN OFF ⇔ TURN ON ⇔ AUTO</p> <p style="text-align: center;">↑—————↑</p> <p>TURN OFF: Closed Caption is OFF                      TURN ON: Closed Caption is ON                      AUTO: Closed Caption automatically displays when the volume is muted.</p> <ul style="list-style-type: none"> <li>• The caption is not displayed when the OSD menu is active.</li> <li>• The Closed Caption is the function to display the dialogue, narration, and / or sound effects of a television program or other video sources. The Closed Caption availability is depending upon broadcaster and/or content.</li> <li>• The caption is available if the video source is NTSC format and the video format selection is AUTO or NTSC on the INPUT Menu, when either VIDEO or S-VIDEO is selected as input port.</li> <li>• The caption is also available if 525i(480i) video signal is input from <b>COMPONENT</b> port, when it is selected as input port.</li> <li>• It may not work properly, depending on equipment or signal source. In this case, please turn off the Closed Caption.</li> </ul> 
<p><b>MODE</b></p>	<p>Select Closed Caption MODE setting from following options using ▲/▼ buttons.</p> <p>CAPTIONS ⇔ TEXT</p> <p>CAPTIONS: Display Closed Caption                      TEXT: Display Text data, which is for additional information such as news reports or a TV program guide. The information covers the entire screen. Not all of the C.C. program has Text information.</p> 
<p><b>CHANNEL</b></p>	<p>Select Closed Caption CHANNEL from following options using ▲/▼ buttons.</p> <p>1 ⇔ 2 ⇔ 3 ⇔ 4</p> <p style="text-align: center;">↑—————↑</p> <p>1: Channel 1, primary channel / language                      2: Channel 2                      3: Channel 3                      4: Channel 4</p> <p>The channel data may vary, depending on the content. Some channel might be used for secondary language or empty.</p> 

## Maintenance

### Replacing the lamp

The projection lamp has finite product life that is different in each lamp. Please replace the lamp as soon as possible when the pictures appear dark, or when the color tone is poor. Using the lamp for long periods of time may make the lamp burned out or broken. Preparation of a spare lamp and early replacement are recommended. To prepare the new lamp, call your dealer and tell the type number: **DT00891**

1. Turn the projector off and unplug the power cord from the power outlet.
  - And cool the projector down by leaving it for about 45 minutes as it is.

When the projector is mounted on a ceiling or somewhere over your head, or when the lamp may have been broken, be sure to refer replacement to your dealer or service person, since it may be dangerous.

Only in case of replacement by yourself, follow the following procedure.

2. Loosen the screw (marked by arrow) of the lamp cover, and then slide the lamp cover to the side to remove it.
3. Loosen the 2 screws (marked by arrows) of the lamp, and slowly pick up the lamp by the handles.
4. Insert the new lamp, with cautions not to touch the inside of the lamp house. When inserting, pay attention to the socket position first, and to the pins for positioning next.
5. Tighten firmly the 2 screws of the lamp that are loosened in the previous process to lock it in place.
6. Slide the lamp cover into place and firmly tighten the screw of the lamp cover.
7. Plug in and restart the projector (📖12, 16).
  - Then, reset the lamp time (which is the time counter for the lamp use).

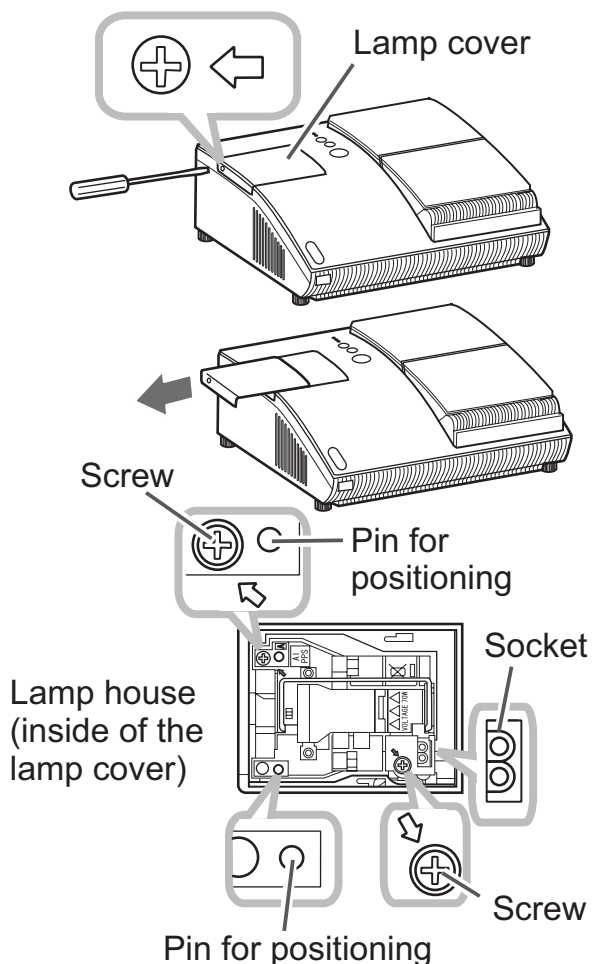
(1) Press the ▲ or ▼ button on the projector or the **MENU** button on the remote control. The “EASY MENU” appears.

(2) Point at the “Go to Advanced Menu ...” in the menu using the ▲ or ▼ button, then press the ► button. “MENU” appears.

(3) Pointed at the “OPTION” in the left column using the ▲ or ▼ button, then press the ► button. The cursor moves to the right column.

(4) Pointed at the “LAMP TIME” using the ▲ or ▼ button, then press the ► button. A dialog appears.

(5) Press the ▲ button to select the “RESET” on the dialog. It performs resetting the lamp time.



**Replacing the lamp (continued)**

**NOTE** • Please reset the lamp time only when you have replaced the lamp, for a suitable indication about the lamp.

 **HIGH VOLTAGE**     **HIGH TEMPERATURE**     **HIGH PRESSURE**

**⚠ WARNING** ► The projector uses a high-pressure mercury glass lamp. The lamp can break with a loud bang, or burn out, if jolted or scratched, handled while hot, or worn over time. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them. In addition, when the bulb bursts, it is possible for shards of glass to fly into the lamp housing, and for gas containing mercury to escape from the projector's vent holes.

**About disposal of a lamp:** This product contains a mercury lamp; do not put it in a trash. Dispose of it in accordance with environmental laws.

- For lamp recycling, go to [www.lamprecycle.org](http://www.lamprecycle.org) (in the US).
- For product disposal, contact your local government agency or [www.eiae.org](http://www.eiae.org) (in the US) or [www.epsc.ca](http://www.epsc.ca) (in Canada).

For more information, call your dealer.



- If the lamp should break (it will make a loud bang when it does), unplug the power cord from the outlet, and make sure to request a replacement lamp from your dealer. Note that shards of glass could damage the projector's internals, or cause injury during handling, so please do not try to clean the projector or replace the lamp yourself.
- If the lamp should break (it will make a loud bang when it does), ventilate the room well, and make sure not to breathe the gas that comes out of the projector vents or get it in your eyes or mouth.
- Before replacing the lamp, turn the projector off and unplug the power cord, then wait for at least 45 minutes for the lamp to cool sufficiently. Handling the lamp while hot can cause burns, as well as damaging the lamp.



- Never unscrew except the appointed (marked by an arrow) screw.
- Do not open the lamp cover while the projector is suspended from a ceiling or somewhere over your head. This is dangerous, since if the lamp's bulb has broken, the shards will fall out when the cover is opened. In addition, working in high places is dangerous, so ask your local dealer to have the lamp replaced even if the bulb is not broken.
- Do not use the projector with the lamp cover removed. At the lamp replacing, make sure that the screws are screwed in firmly. Loose screws could result in damage or injury.



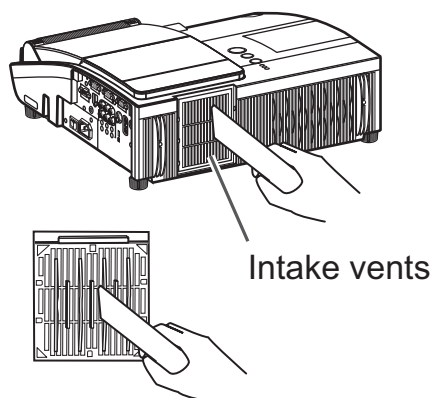
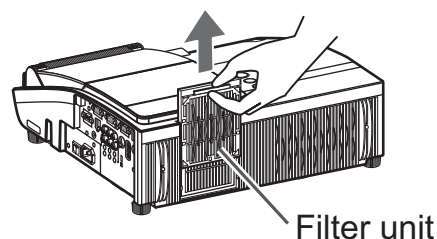
- Use only the lamp of the specified type.
- If the lamp breaks soon after the first time it is used, it is possible that there are electrical problems elsewhere besides the lamp. If this happens, contact your local dealer or service representative.
- Handle with care: jolting or scratching could cause the lamp bulb to burst during use.
- Using the lamp for long periods of time, could cause it dark, not to light up or to burst. When the pictures appear dark, or when the color tone is poor, please replace the lamp as soon as possible. Do not use old (used) lamps; this is a cause of breakage.

## Maintaining the air-filter

Please check and clean the air-filter periodically, for keeping normal ventilation. When the indicators or a message prompts you to clean the air-filter, comply with it as soon as possible.

When it is damaged or too soiled, replace the filter unit. To prepare the new filter unit, call your dealer and tell the type number: **QD60122**

1. Turn the projector off and unplug the power cord from the power outlet. And cool the projector down by leaving it for a while as it is.
2. Use the vacuum cleaner on and around the filter unit.
3. Slide the filter unit upward to take it off from the projector.
4. Use the vacuum cleaner on the intake vents of the projector.
5. Use the vacuum cleaner on the cover side of the filter unit. Do not vacuum the air-filter directly, since the cleaner may inhale the air-filter. When the air-filter is damaged or too soiled, prepare the new filter unit.
6. Make sure that there is the air-filter inside, then slide the filter cover into place.
7. Plug in and restart the projector (📖12, 16).



Then, reset the filter time (which is the time counter for the air-filter use).

(1) Press the ▲ or ▼ button on the projector or the **MENU** button on the remote control. The “EASY MENU” appears.

(2) Point at the “FILTER TIME” in the menu using the ▲ or ▼ button, then press the ► button. A dialog appears.

(3) Press the ▲ button to select the “RESET” on the dialog. It performs resetting the filter time.

(continued on next page)



**Maintaining the air-filter (continued)**

**NOTE** • A filter unit of specified type will come with the replacement lamp for this projector. Replacing the filter unit at the same time with the lamp is recommended.

- Please reset the filter time only when you have cleaned the air-filter, for a suitable indication about the air-filter.
- The projector may display the message such as “CHECK THE AIR FLOW” or turn off the projector, to prevent the internal heat level rising.

**⚠ WARNING** ► Before taking care of the air-filter, make sure the power switch is off and the power cable is not plugged in, then allow the projector to cool sufficiently. Taking care of the air-filter in a high temperature state of the projector could cause an electric shock, a burn or malfunction to the projector.

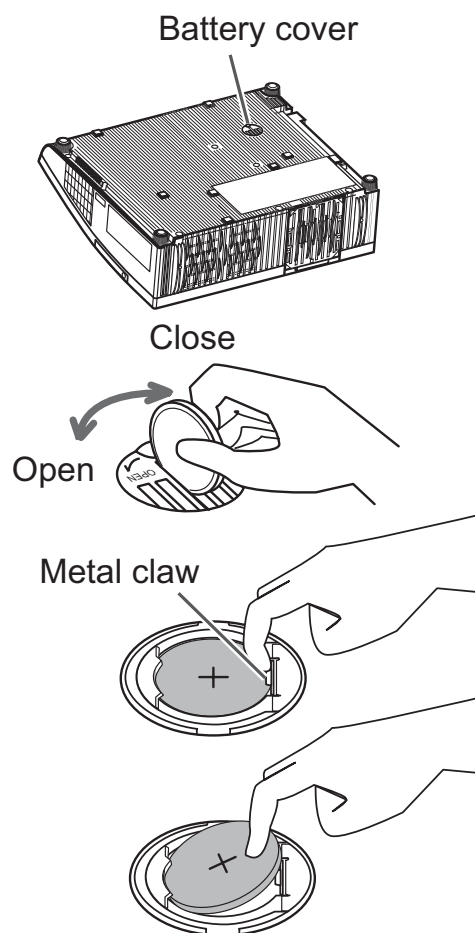
► Use only the air-filter unit of the specified type. Do not use the projector without the air-filter or the filter cover. It could result in a fire or malfunction to the projector.

► Clean the air-filter periodically. If the air-filter becomes clogged by dust or the like, internal temperatures rise and could cause a fire, a burn or malfunction to the projector.

## Replacing the clock battery

This projector has internal clock that uses a battery. When the clock of the network function does not work correctly, please try solution by replacement of the battery: **HITACHI MAXELL**, part number **CR2032**.

1. Turn the projector off and unplug the power cord from the power outlet. And cool the projector down by leaving it for a while as it is.
2. Place gently the projector upside down.
3. Remove the battery cover. Turn the battery cover in the direction indicated as “**OPEN**” till it unlocks using a coin or something similar. When finishing turning the battery cover, pick its knob to remove it.
4. Take the old battery out. Press the metal claw of the battery holder. Then the battery will come up. Remove it.
5. Put the new battery into the battery holder, according to the polarity markings (-) inside the holder, so that the side marked (+) of the battery is facing upward. Push the battery into the battery holder fully to fix.
6. Put the battery cover into place, then turn it in the direction indicated as “**CLOSE**” until it fixed, using a coin or something similar.



**NOTE** • The internal clock will be initialized by removing the battery. For setting the clock, see the User's Manual - Network Guide.

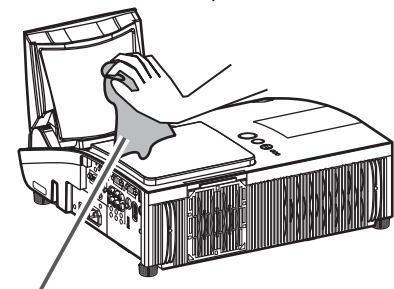
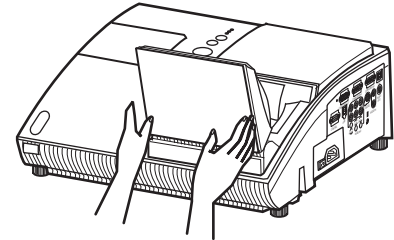
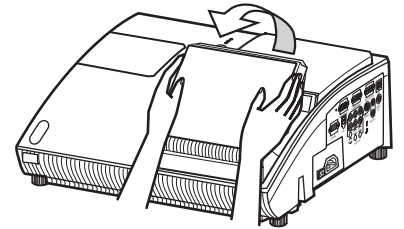
**⚠ WARNING** ► Be careful of handling a battery, as a battery can cause explosion, cracking or leakage, which could result in a fire, an injury, and environment pollution.

- Use only the specified and perfect battery. Do not use a battery with damage, such as a scratch, a dent, rust or leakage.
- When a battery leaked, wipe the leakage out well with a waste cloth. If the leakage adhered to your body, immediately rinse it well with water. When a battery leaked in the battery holder, replace the batteries after wiping the leakage out.
- Make sure the plus and minus terminals are correctly aligned when loading a battery.
- Do not work on a battery; for example recharging or soldering.
- Keep a battery in a dark, cool and dry place. Never expose a battery to a fire or water.
- Obey the local laws on disposing a battery.

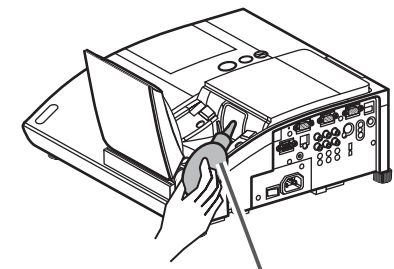
## Caring for the mirror and lens

If the projection mirror or lens is flawed, soiled or fogged, it could cause deterioration of display quality. Please take care of the mirror and lens, being cautious of handling.

1. Turn the projector off and unplug the power cord from the power outlet. And cool the projector down by leaving it for a while as it is.
2. The lens door can be opened manually. Please hold both side of the lens door and slowly open it until it is locked with clicking sound.
3. Wipe softly the mirror and lens with a cleaning cloth for lens on the market, being careful not to give any damage on the mirror and lens. For around edge of the mirror and lens where might be difficult to be wiped out, please use an air blower for cameras on the market to clean up.
4. To close the lens door properly, please take the following procedure.
  - (1) Plug in the projector.
  - (2) Turn on the power switch. Even though the lens door starts to close, it might not be closed properly.
  - (3) Press the **STANDBY/ON** button, so that the lamp starts to light up.
  - (4) After the **POWER** indicator turns to steady green, press the **STANDBY/ON** button twice to turn off the projector. The lens door will close properly.



Cleaning cloth



Blower

**NOTE** • When the lens door is closed manually, it may not shut properly.

**⚠ WARNING** ▶ Before caring for the projection mirror and lens, turn the projector off and unplug the power cord, then cool the projector sufficiently.  
 ▶ Do not use a vacuum cleaner to clean the projection mirror or lens, since it might give some damage.  
 ▶ Do not use cleaners or chemicals other than those specified in this manual. Especially the mirror has to be paid special attention, since these materials might give serious damage on the mirror.

**⚠ CAUTION** ▶ Be careful not to pinch your finger with the lens door, to prevent an injury.

## Other care

### Inside of the projector

In order to ensure the safe use of your projector, please have it cleaned and inspected by your dealer about once every year.

### Caring for the cabinet and remote control

Incorrect care could have adverse influence such as discoloration, peeling paint, etc.

1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.
2. After making sure that the projector is cool adequately, lightly wipe with gauze or a soft cloth.  
If the projector is extremely dirty, dip soft cloth in water or a neutral cleaner diluted in water, and wipe lightly after wringing well. Then, wipe lightly with a soft, dry cloth.

**⚠ WARNING** ▶ Before caring, make sure the power cord is not plugged in, and then allow the projector to cool sufficiently. The care in a high temperature state of the projector could cause a burn and/or malfunction to the projector.

▶ Never try to care for the inside of the projector personally. Doing is so dangerous.

▶ Avoid wetting the projector or inserting liquids in the projector. It could result in a fire, an electric shock, and/or malfunction to the projector.

- Do not put anything containing water, cleaners or chemicals near the projector.
- Do not use aerosols or sprays.

**⚠ CAUTION** ▶ Please take right care of the projector according to the following. Incorrect care could cause not only an injury but adverse influence such as discoloration, peeling paint, etc.

▶ Do not use cleaners or chemicals other than those specified in this manual.

▶ Do not polish or wipe with hard objects.

## Troubleshooting

If an abnormal operation should occur, stop using the projector immediately.



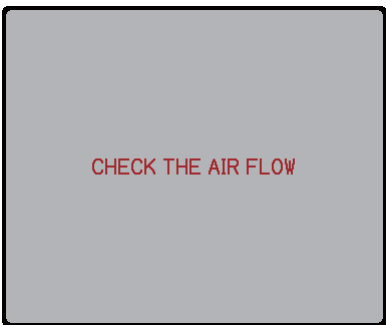

**⚠ WARNING** ▶ Never use the projector if abnormal operations such as smoke, strange odor, excessive sound, damaged casing or elements or cables, penetration of liquids or foreign matter, etc. should occur. In such cases, immediately turn off the power switch and then disconnect the power plug from the power outlet. After making sure that the smoke or odor has stopped, contact to your dealer or service company.

Otherwise if a problem occurs with the projector, the following checks and measures are recommended before requesting repair.

If this does not resolve the problem, please contact your dealer or service company. They will tell you what warranty condition is applied.

### Related messages

When some message appears, check and cope with it according to the following table. Although these messages will be automatically disappeared around several minutes, it will be reappeared every time the power is turned on.

Message	Description
	<p><b>There is no input signal.</b> Please confirm the signal input connection, and the status of the signal source.</p>
	<p><b>The horizontal or vertical frequency of the input signal is not within the specified range.</b> Please confirm the specs for your projector or the signal source specs.</p>
	<p><b>The internal temperature is rising.</b> Please turn the power off, and allow the projector to cool down at least 20 minutes. After having confirmed the following items, please turn the power ON again.</p> <ul style="list-style-type: none"> <li>• Is there blockage of the air passage aperture?</li> <li>• Is the air-filter dirty?</li> <li>• Does the peripheral temperature exceed 35°C?</li> </ul> <p>If the same indication is displayed after the remedy, please set FAN SPEED of the SERVICE item in the OPTION Menu to HIGH.</p>
	<p><b>A note of precaution when cleaning the air-filter.</b> Please immediately turn the power off, and clean or change the air-filter referring to the “Maintaining the air-filter” section of this manual. After you have cleaned or changed the air-filter, please be sure to reset the filter time (📖 43, 63).</p>

## Regarding the indicator lamps

When operation of the **LAMP**, **TEMP** and **POWER** indicators differs from usual, check and cope with it according to the following table.

POWER indicator	LAMP indicator	TEMP indicator	Description
Lighting In <b>Orange</b>	Turned <b>off</b>	Turned <b>off</b>	<b>The projector is in a standby state.</b> Please refer to the section "Power on/off".
Blinking In <b>Green</b>	Turned <b>off</b>	Turned <b>off</b>	<b>The projector is warming up.</b> Please wait.
Lighting In <b>Green</b>	Turned <b>off</b>	Turned <b>off</b>	<b>The projector is in an on state.</b> Ordinary operations may be performed.
Blinking In <b>Orange</b>	Turned <b>off</b>	Turned <b>off</b>	<b>The projector is cooling down.</b> Please wait.
Blinking In <b>Red</b>	(discre- tionary)	(discre- tionary)	<b>The projector is cooling down. A certain error has been detected.</b> Please wait until <b>POWER</b> indicator finishes blinking, and then perform the proper measure using the item descriptions below.
Blinking In <b>Red</b> or Lighting In <b>Red</b>	Lighting In <b>Red</b>	Turned <b>off</b>	<b>The lamp does not light, and there is a possibility that interior portion has become heated.</b> Please turn the power off, and allow the projector to cool down at least 20 minutes. After the projector has sufficiently cooled down, please make confirmation of the following items, and then turn the power on again. • Is there blockage of the air passage aperture? • Is the air-filter dirty? • Does the peripheral temperature exceed 35°C? If the same indication is displayed after the remedy, please change the lamp referring to the section "Lamp".
Blinking In <b>Red</b> or Lighting In <b>Red</b>	Blinking In <b>Red</b>	Turned <b>off</b>	<b>The lamp cover has not been properly fixed.</b> Please turn the power off, and allow the projector to cool down at least 45 minutes. After the projector has sufficiently cooled down, please make confirmation of the attachment state of the lamp cover. After performing any needed maintenance, turn the power on again. If the same indication is displayed after the remedy, please contact your dealer or service company.
Blinking In <b>Red</b> or Lighting In <b>Red</b>	Turned <b>off</b>	Blinking In <b>Red</b>	<b>The cooling fan is not operating.</b> Please turn the power off, and allow the projector to cool down at least 20 minutes. After the projector has sufficiently cooled down, please make confirmation that no foreign matter has become caught in the fan, etc., and then turn the power on again. If the same indication is displayed after the remedy, please contact your dealer or service company.
Lighting In <b>Red</b>	Turned <b>off</b>	Turned <b>off</b>	<b>The lens door is not opened or closed properly.</b> One of the followings has been happened. • The lens door is not opened properly, when the projector is turned on. • The lens door is not closed properly, when the projector is turned off. • The lens door position is shifted, while the projector is working. Restart the projector, after confirming that there is nothing that the lens door hits while opening or closing.

(continued on next page)

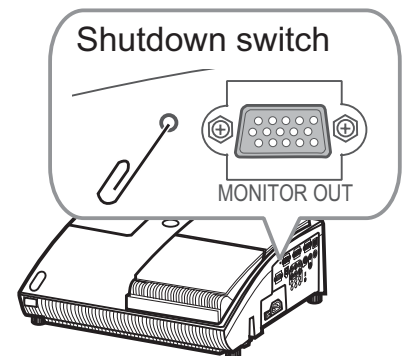
**Regarding the indicator lamps (continued)**

POWER indicator	LAMP indicator	TEMP indicator	Description
<i>Blinking In <b>Red</b> or Lighting In <b>Red</b></i>	<i>Turned off</i>	<i>Lighting In <b>Red</b></i>	<p><b>There is a possibility that the interior portion has become heated.</b></p> <p>Please turn the power off, and allow the projector to cool down at least 20 minutes. After the projector has sufficiently cooled down, please make confirmation of the following items, and then turn the power on again.</p> <ul style="list-style-type: none"> <li>• Is there blockage of the air passage aperture?</li> <li>• Is the air-filter dirty?</li> <li>• Does the peripheral temperature exceed 35°C?</li> </ul> <p>If the same indication is displayed after the remedy, please set FAN SPEED of SERVICE item in OPTION menu to HIGH (📖45).</p>
<i>Lighting In <b>Green</b></i>	<i>Simultaneous blinking in <b>Red</b></i>		<p><b>It is time to clean the air-filter.</b></p> <p>Please immediately turn the power off, and clean or change the air-filter referring to the section “Maintaining the air-filter”. After cleaning or changing the air-filter, please be sure to reset the filter timer. After the remedy, reset the power to ON.</p>
<i>Lighting In <b>Green</b></i>	<i>Alternative blinking in <b>Red</b></i>		<p><b>There is a possibility that the interior portion has become overcooled.</b></p> <p>Please use the unit within the usage temperature parameters (5°C to 35°C). After the treatment, reset the power to ON.</p>
<i>Blinking in <b>Green</b> for approx. 3 seconds</i>	<i>Turned off</i>	<i>Turned off</i>	<p><b>At least 1 Power ON schedule is saved to the projector.</b></p> <p>Please refer to “Schedule Settings” section of User’s Manual-Network Guide.</p>

**NOTE** • When the interior portion has become overheated, for safety purposes, the projector is automatically shut down, and the indicator lamps may also be turned off. In such a case, disconnect the power cord, and wait at least 45 minutes. After the projector has sufficiently cooled down, please make confirmation of the attachment state of the lamp and lamp cover, and then turn the power on again.

**Shutting the projector down**

Only when the projector can not be turned off by usual procedure (📖17), please push the shutdown switch using a pin or similar, and disconnect the power plug from the power outlet. Before turning it on again, wait at least 10 minutes to make the projector cool down enough.



**Resetting all settings**

When it is hard to correct some wrong settings, the FACTORY RESET function of SERVICE item in OPTION Menu (📖46) can reset all settings(except LANGUAGE, FILTER TIME, LAMP TIME, FILTER MESSAGE, NETWORK settings and etc.) to the factory default.

## Phenomena that may be easy to be mistaken for machine defects

About the phenomenon confused with a machine defect, check and cope with it according to the following table.

Phenomenon	Cases not involving a machine defect	Reference page
Power does not come on.	<b>The electrical power cord is not plugged in.</b> Correctly connect the power cord.	12
	<b>The main power source has been interrupted during operation such as by a power outage (blackout), etc.</b> Please disconnect the power plug from the power outlet, and allow the projector to cool down at least 10 minutes, then turn the power on again.	12, 16
	<b>Either there is no lamp and/or lamp cover, or either of these has not been properly fixed.</b> Please turn the power off and disconnect the power plug from the power outlet, and allow the projector to cool down at least 45 minutes. After the projector has sufficiently cooled down, please make confirmation of the attachment state of the lamp and lamp cover, and then turn the power on again.	61
Neither sounds nor pictures are outputted.	<b>The signal cables are not correctly connected.</b> Correctly connect the connection cables.	10
	<b>Signal source does not correctly work.</b> Correctly set up the signal source device by referring to the manual of the source device.	–
	<b>The input changeover settings are mismatched.</b> Select the input signal, and correct the settings.	18, 19
	<b>The BLANK function for pictures and the MUTE function for sounds are working.</b> The BLANK and MUTE, or AV Mute may be active. Refer to the item “Sound does not come out” and “No pictures are displayed” on the next page to turn off the MUTE and BLANK functions.	18, 23

(continued on next page)



***Phenomena that may be easy to be mistaken for machine defects (continued)***

<b>Phenomenon</b>	<b>Cases not involving a machine defect</b>	<b>Reference page</b>
Sound does not come out.	<b>The signal cables are not correctly connected.</b> Correctly connect the audio cables.	10
	<b>The MUTE function is working.</b> Restore the sound pressing <b>MUTE</b> or <b>VOLUME</b> button on the remote control.	18
	<b>The volume is adjusted to an extremely low level.</b> Adjust the volume to a higher level using the menu function or the remote control.	18
	<b>The AUDIO/SPEAKER setting is not correct.</b> Correctly set the AUDIO/SPEAKER in SETUP Menu.	37
No pictures are displayed.	<b>The lens door is not fully opened.</b> Turn the projector off, and then turn it on again to make sure that the door is opened correctly.	16, 66
	<b>The signal cables are not correctly connected.</b> Correctly connect the connection cables.	10
	<b>The brightness is adjusted to an extremely low level.</b> Adjust BRIGHTNESS to a higher level using the menu function.	27, 28
	<b>The computer cannot detect the projector as a plug and play monitor.</b> Make sure that the computer can detect a plug and play monitor using another plug and play monitor.	11
	<b>The BLANK screen is displayed.</b> Press <b>BLANK</b> button on the remote control.	23

(continued on next page)

**Phenomena that may be easy to be mistaken for machine defects (continued)**

Phenomenon	Cases not involving a machine defect	Reference page
Video screen display freezes.	<p><b>The FREEZE function is working.</b> Press <b>FREEZE</b> button to restore the screen to normal.</p>	23
Colors have a faded- out appearance, or Color tone is poor.	<p><b>Color settings are not correctly adjusted.</b> Perform picture adjustments by changing the COLOR TEMP, COLOR, TINT and/or COLOR SPACE settings, using the menu functions.</p>	27, 29, 33
	<p><b>COLOR SPACE setting is not suitable.</b> Change the COLOR SPACE setting to AUTO, RGB, SMPTE240, REC709 or REC601.</p>	33
Pictures appear dark.	<p><b>The brightness and/or contrast are adjusted to an extremely low level.</b> Adjust BRIGHTNESS and/or CONTRAST settings to a higher level using the menu function.</p>	27, 28
	<p><b>The whisper function is working.</b> Select BRIGHT for WHISPER item in the SETUP Menu.</p>	27, 36
	<p><b>The lamp is approaching the end of its product lifetime.</b> Replace the lamp.</p>	61, 62
Pictures appear blurry.	<p><b>Either the focus and/or horizontal phase settings are not properly adjusted.</b> Adjust the focus using the focus ring, and/or H PHASE using the menu function.</p>	21, 32
	<p><b>The lens or mirror is dirty or misty.</b> Clean the lens or mirror referring to the section “Caring for the lens”.</p>	66

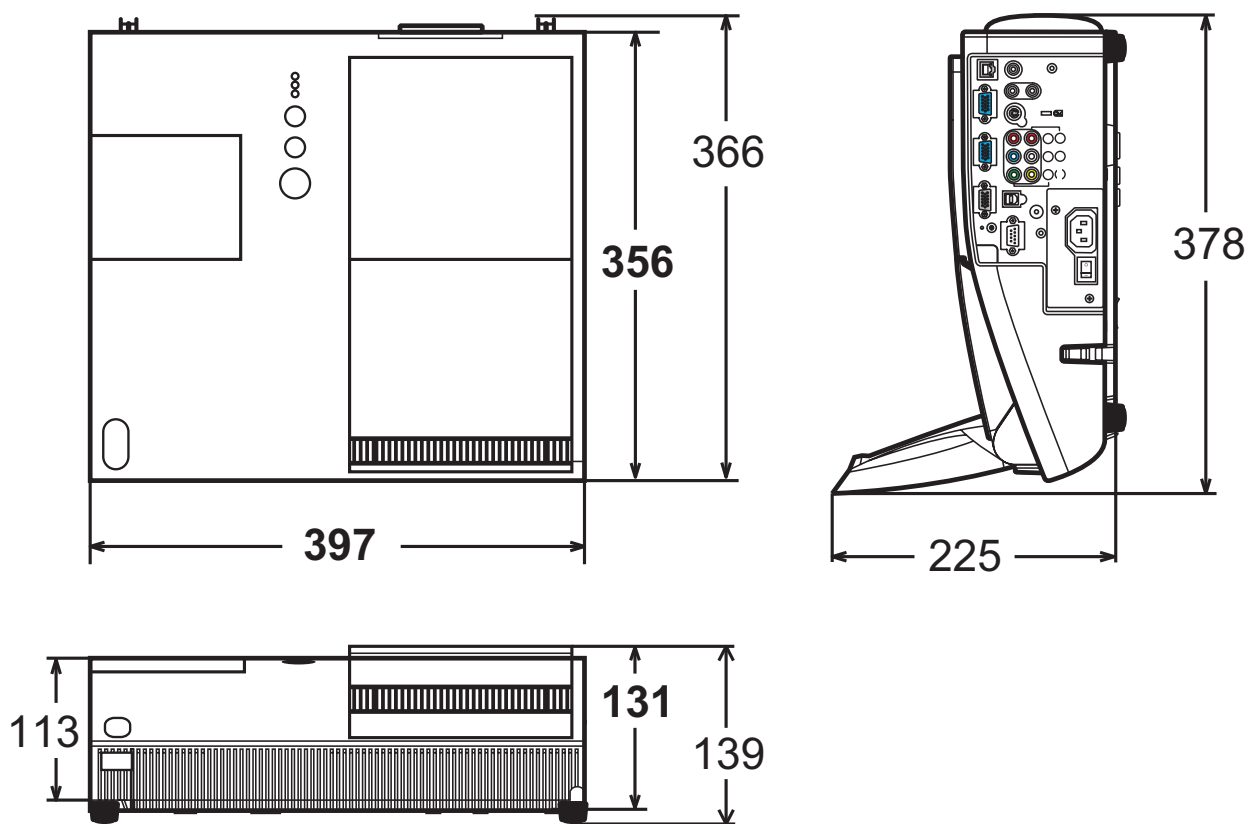
**NOTE** • Although bright spots or dark spots may appear on the screen, this is a unique characteristic of liquid crystal displays, and it does not constitute or imply a machine defect.

## Specifications

## Specifications

Item	Specifications	
Product name	Liquid crystal projector	
Liquid Crystal Panel	Panel size	1.6 cm (0.63 type)
	Drive system	TFT active matrix
	Pixels	786,432 pixels (1024 horizontal x 768 vertical)
Lens	F=2.1 f=5.1 mm	
Lamp	220 W UHB	
Audio output	7 W	
Power supply	AC 100-120V/3.6A, AC 220-240V/1.5A	
Power consumption	340W	
Temperature range	5~35°C (operating)	
Ports	COMPUTER IN1 ..... D-sub 15 pin mini x 1 COMPUTER IN2 ..... D-sub 15 pin mini x 1 Y, C <sub>B</sub> /P <sub>B</sub> , C <sub>R</sub> /P <sub>R</sub> (Component video) ..... RCA x 3 S-VIDEO ..... mini DIN 4 pin x 1 VIDEO ..... RCA x 1 MONITOR OUT ..... D-sub 15 pin mini x 1 AUDIO IN1 ..... Stereo mini x 1 AUDIO IN2 ..... Stereo mini x 1 AUDIO IN3 (L, R) ..... RCA x 2 AUDIO OUT ..... Stereo mini x 1 CONTROL ..... D-sub 9 pin x 1 USB ..... USB-B x 1 LAN ..... RJ45 x 1	
Optional parts	Lamp: DT00891 Filter unit: QD60122 Tabletop use kit: TT100 Soft case: CA100 * For more information, contact to your dealer.	
Weight (mass)	5.8 kg (approx.)	
Size	397 (W) x 131 (H) x 356 (D) mm *Excluding protrusions. Please refer to the following figure.	

Specifications (continued)



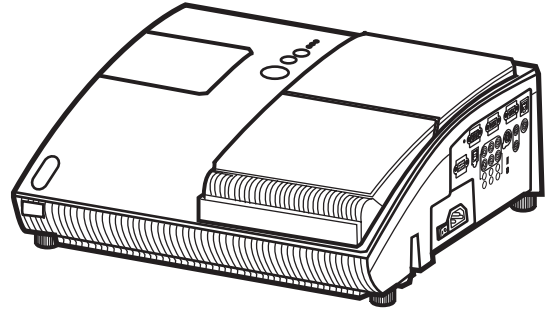
[unit: mm]

## Projector

# ED-A100/ED-A110/CP-A100W

## User's Manual (detailed)

## Network Guide



Thank you for purchasing this projector.

This projector has the network function that brings you the following main features.

✓ **Web control**

The projector can be controlled and monitored by a web browser software on your PC, which can help you to setup and maintain the projector.

✓ **e-SHOT (Still Image Transfer) Display**

The projector can display still images that are transferred via the network.

This manual is only intended to explain Network function only.

For safety, operations or any other issues, refer to the Safety Guide and User's Manual (concise and detailed).

**⚠ WARNING** ► Before using this product, be sure to read all manuals for this product.

After reading them, store them in a safe place for future reference.

**NOTE** • The information in this manual is subject to change without notice.

- The manufacturer assumes no responsibility for any errors that may appear in this manual.
- The reproduction, transfer or copy of all or any part of this document is not permitted without express written consent.

### Trademark acknowledgment

• Windows is a registered trademark of Microsoft Corporation.

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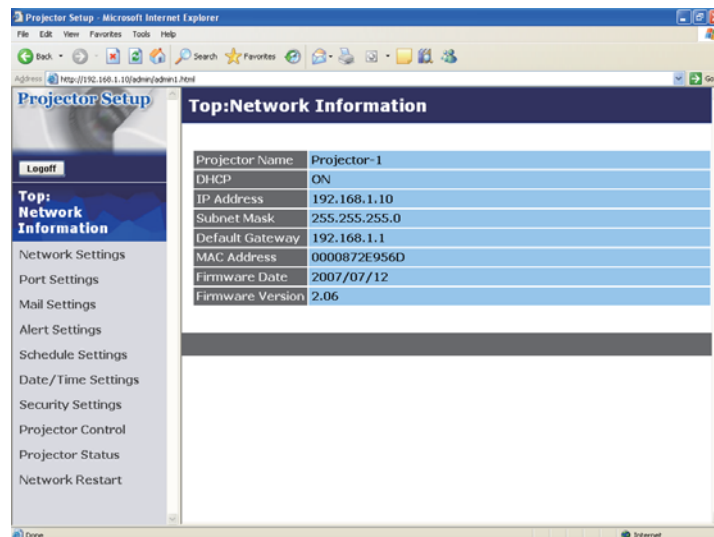
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## 1. Main functions

### 1.1 Configuring and controlling via a web browser

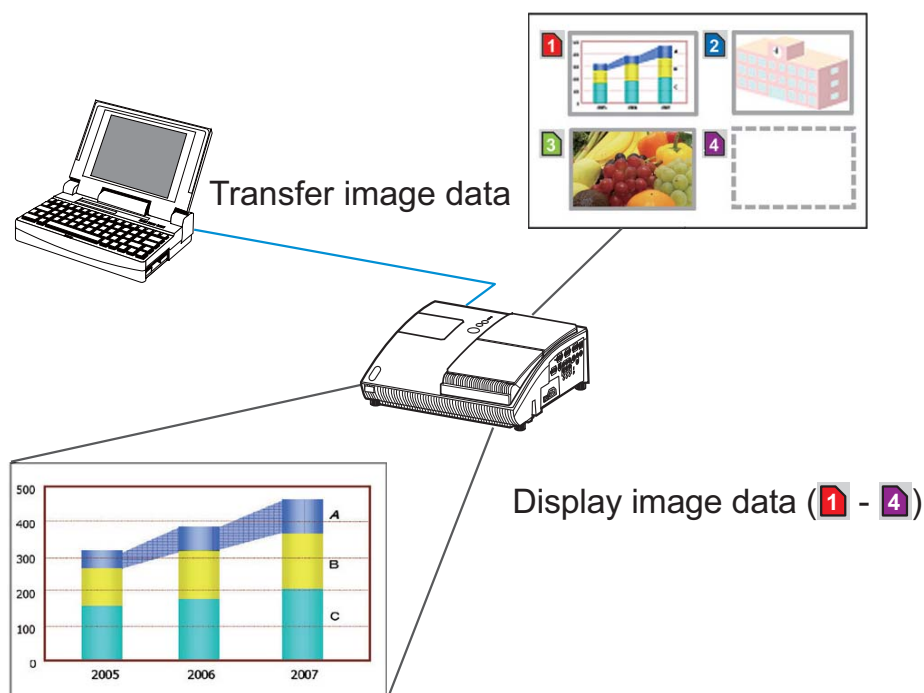
You can adjust or control the projector via a network from a web browser on a PC that is connected to the same network.

Logon the network from the web browser and it offers the menus to configure the network settings, monitor the projector and so on.



### 1.2 e-SHOT (Still image Transfer) Display


Image files can be sent via the network, and up to 4 image data can be stored in the projector and displayed on screen one by one. (📖 38)



### 2. Equipment connection and network setting

#### 2.1 Required equipment preparation

The following equipments are required to connect the projector to your PC through the network.

PC : 1) equipped with the network feature  
2) installed a web browser software (11)

LAN cable : CAT-5 or greater



### 2.2 Manual network connection setting

#### 2.2.1 Equipments connection

Connect the projector and PC with a LAN cable.

\* Before connecting with an existing network, contact the network administrator.

Next, please check the PC setting as explained below.

#### 2.2.2 Network settings

This is the explanation of network connection settings for Windows XP and Internet Explorer.

1) Log on to Windows XP as administrator authority. (\*)

2) Open “Control Panel” from “Start” menu.

3) Open “Network and Internet Connections” in “Control Panel”. (Fig. 2.2.2.a)

\* Administrator authority is the account, which can access to all functions.

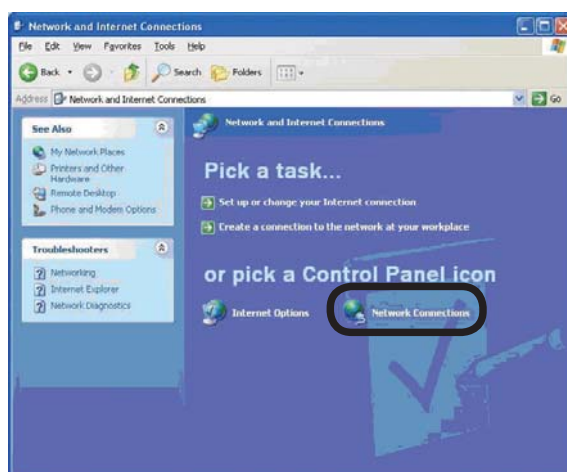


Fig. 2.2.2.a “Network and Internet Connections” window

4) Open “Network Connections”. (Fig.2.2.2.b)

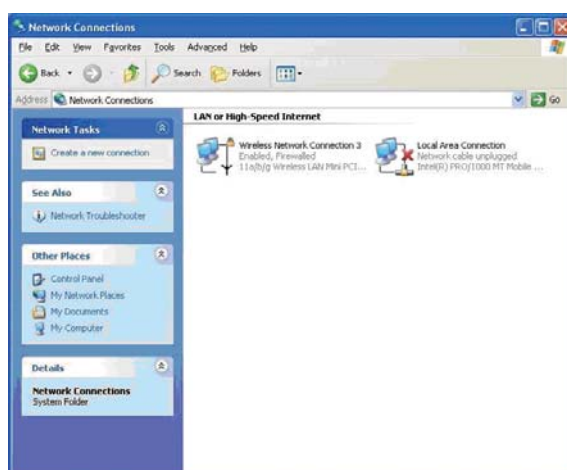


Fig. 2.2.2.b “Network Connections” window

## 2. Equipment connection and network setting

### 2.2 Manual network connection setting (continued)

- 5) Open “Local Area Connection Properties” window you use for network device.  
(Fig. 2.2.2.c)

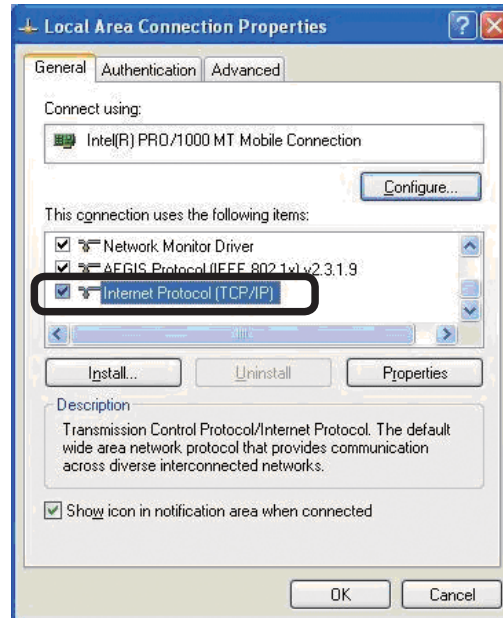


Fig. 2.2.2.c “Local Area Connection Properties” window

- 6) Set used protocol as “TCP/IP” and open “Internet Protocol (TCP/IP) Properties” window.

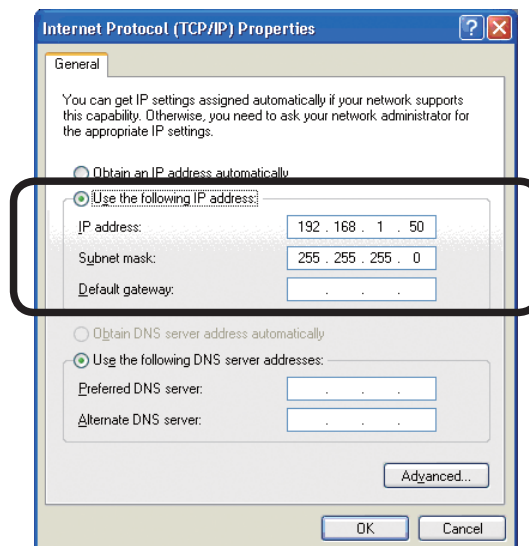


Fig. 2.2.2.d “Internet Protocol (TCP/IP) Properties” window

- 7) Set IP address, subnet mask and default gateway for PC.

### 2.2 Manual network connection setting (continued)

#### [About IP address]

##### ■ Setting manually

The Network address portion included in the IP address set into your PC should be common with projector's one. And the entire IP address in the PC should not be overlapped with other equipments in the same network, including the projector.

For example

The projector's initial settings are as follows.

IP address: 192.168.1.10

Subnet mask: 255.255.255.0

(Network address: 192.168.1 in this case)

Therefore, specify PC's IP address as follows.

IP address: 192.168.1.xxx (xxx shows decimal number.)

Subnet mask: 255.255.255.0

(Network address: 192.168.1 in this case)

Select from 1 to 254 for "xxx" not duplicating with any other equipments.

In this case, projector has "192.168.1.10" IP address, specify from 1 to 254 except 10 for PC.

**NOTE** • "0.0.0.0" cannot be set to the IP address.

- The projector's IP address can be changed by using the configuration utility via a web browser. (📖11)
- If the projector and PC exist in the same network (i.e. network address is common), default gateway can be blank.
- When the projector and PC exist in different networks, default gateway setting is necessary. Contact the network administrator in detail.

##### ■ Setting automatically

When DHCP server exists in network, it is possible to assign IP address to the projector and PC automatically.

\* DHCP is abbreviation for "Dynamic Host Configuration Protocol" and has the function to provide necessary setting for network like IP address from server to client. A server that has DHCP function is called DHCP server.

## 2. Equipment connection and network setting

### 2.2 Manual network connection setting (continued)

#### 2.2.3 “Internet Option” setting

- 1) Click “Internet Options” in “Network and Internet Connections” window (Fig. 2.2.3.a) to open “Internet Properties” window. (Fig.2.2.3.b)

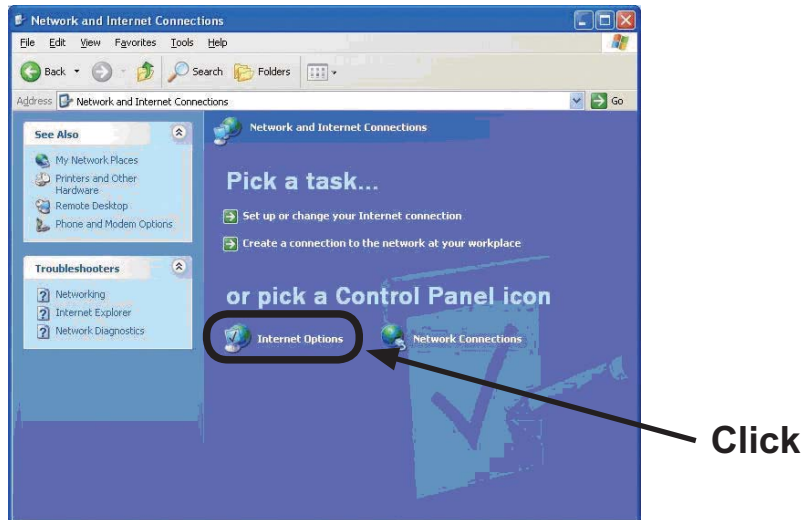


Fig. 2.2.3.a “Network and Internet Connections” window

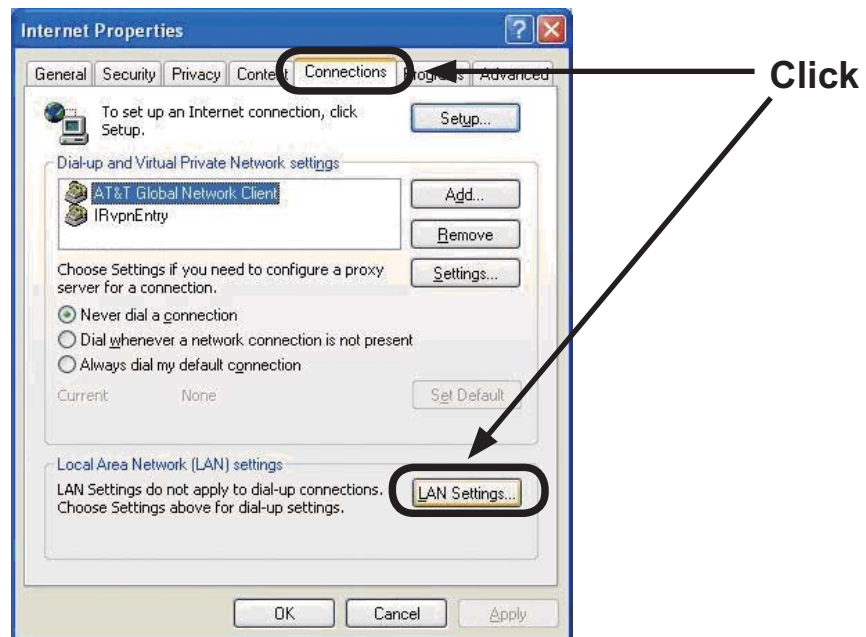


Fig. 2.2.3.b “Internet Properties” window

- 2) Click “Connections” tab and then click [LAN Settings] button to open “Local Area Network (LAN) settings”. (Fig. 2.2.3.c)

### 2.2 Manual network connection setting (continued)

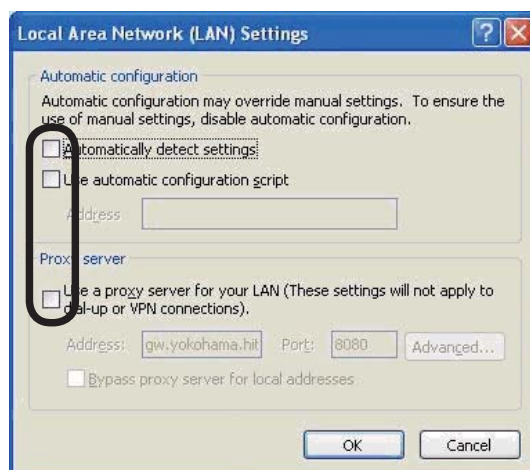


Fig. 2.2.3.c “Local Area Network (LAN) Settings” window

3) Uncheck all boxes in “Local Area Network (LAN) Settings” window. (Fig. 2.2.3.c)

### 2.2.4 Check connection

Check PC and projector are connected properly here. If it is not connected, check cable connections and settings are properly or not.

1) Start browser in PC and specify following URL, then click “Go” button.

URL: http://(Projector IP address)/

For example, if projector IP address is 192.168.1.10, specify

URL: http://192.168.1.10/

2) If Fig. 2.2.4 appears, it succeeds.

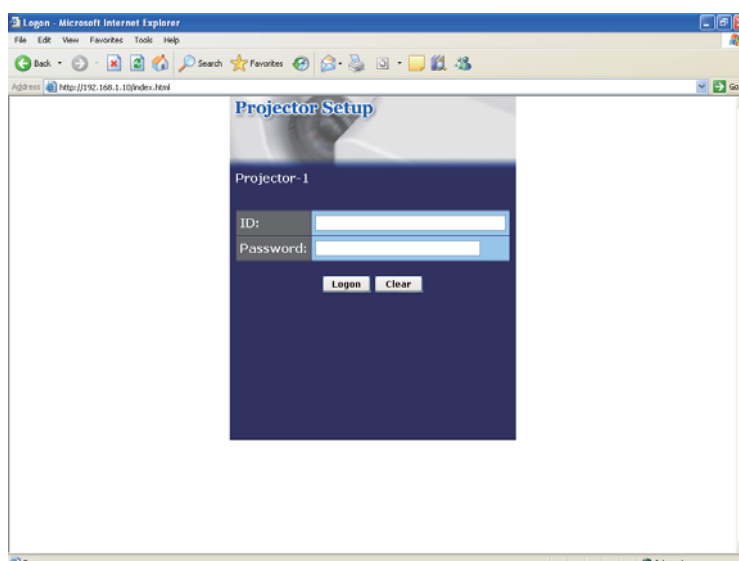


Fig. 2.2.4 “Logon Menu”

## 3. Management with Web browser software

This projector is equipped with the following network functions by using a web browser software.

### **Configuring and Controlling the Projector via a Web Browser**

You can change the settings of or control the projector via a network by using a web browser from a PC that is connected to the same network.

( 11)

### **E-mail Alerts**

The projector can automatically send an alert to specified e-mail addresses when the projector requires maintenance or has encountered an error.

( 32)

### **Projector Management using SNMP**

This projector is SNMP (Simple Network Management Protocol) compliant, allowing you to monitor it from a remote location using SNMP software. In addition, the projector is able to send failure & warning alerts to a specified PC.

( 34)

### **Event Scheduling**

You can schedule the projector to perform various functions according to the date and time.

( 35)

### **e-SHOT (Still Image Transfer) Display**

The projector can display still images that are transferred via the network.

( 38)

### **Command Control via the Network**

The projector can be controlled using RS-232C commands over a network.

( 40)

### 3.1 Configuring and controlling the projector via a web browser

You can adjust or control the projector via a network from a web browser on a PC that is connected to the same network.

**NOTE** • Internet Explorer 5.5 or later is required.

- If JavaScript is disabled in your web browser configuration, you must enable JavaScript in order to use the projector web pages properly. See the Help files for your web browser for details on how to enable JavaScript.
- You can communicate using SSL (Secure Socket Layer) if you are using Windows XP Service Pack 2 or earlier versions of Microsoft Windows. Please specify "https://" when you enter the IP address of the projector on the web browser. You can't communicate the projector using SSL on Windows Vista.
- It is recommended that all web browser updates are installed. It is especially recommended that all users running Internet Explorer on a Microsoft Windows version prior to Windows XP Service Pack 2 install security update Q832894 (MS04-004) or the web browser interface may not be displayed correctly. And when using an earlier version of Internet Explorer, during operations the browser will log out after 50 seconds.

#### 3.1 Configuring and controlling the projector via a web browser (continued)

When configuring or controlling the projector via a web browser, an ID and password are required. There are two types of IDs, Administrator ID and User ID. The following chart describes the differences between Administrator and User IDs.

Item	Description	Administrator	User
<b>Network Information</b>	Displays the projector's current network configuration settings.	√	√
<b>Network Settings</b>	Displays and configures network settings.	√	N/A
<b>Port Settings</b>	Displays and configures communication port settings.	√	N/A
<b>Mail Settings</b>	Displays and configures e-mail addressing settings.	√	N/A
<b>Alert Settings</b>	Displays and configures failure & warning alerts.	√	N/A
<b>Schedule Settings</b>	Displays and configures schedule settings.	√	N/A
<b>Date/Time Settings</b>	Displays and configures the date and time settings.	√	N/A
<b>Security Settings</b>	Displays and configures passwords and other security settings.	√	N/A
<b>Projector Control</b>	Controls the projector.	√	√
<b>Projector Status</b>	Displays and configures the current projector status.	√	√
<b>Network Restart</b>	Restarts the projector's network connection.	√	N/A



## 3.1 Configuring and controlling the projector via a web browser (continued)

### 3.1.1 Logon

Refer to the following for configuring or controlling the projector via a web browser.

**Example:** If the IP address of the projector is set to **192.168.1.10**:

- 1) Enter “**http://192.168.1.10/**” into the address bar of the web browser and press “Enter” key or click “Go” button. The screen in Fig. 3.1.1a will be displayed.
- 2) Enter your ID and password and click [Logon].

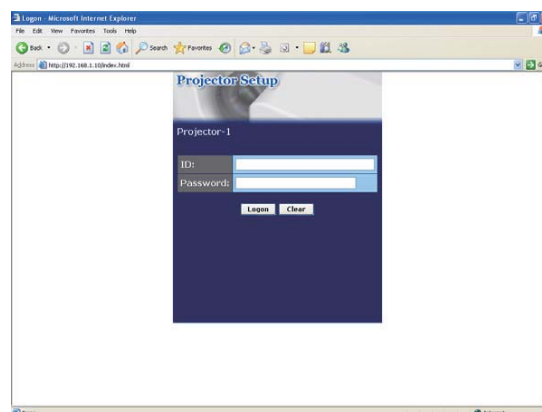


Fig. 3.1.1 a “Logon Menu”

Below are the factory default settings for administrator ID, user ID and passwords.

Item	ID	Password
Administrator	Administrator	<blank>
User	User	<blank>

If the logon is successful, either the Fig. 3.1.1 b or Fig. 3.1.1 c screen will be displayed.

Main menu

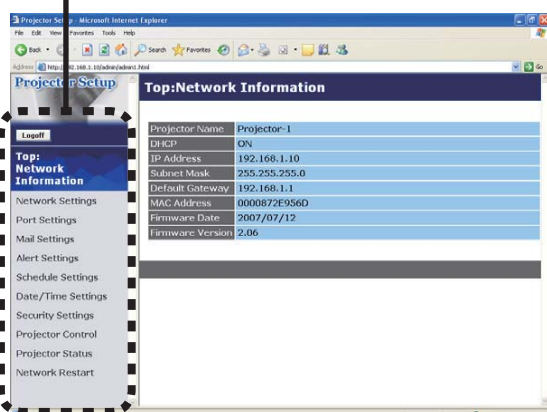


Fig. 3.1.1 b “Logon with Administrator ID”

Main menu

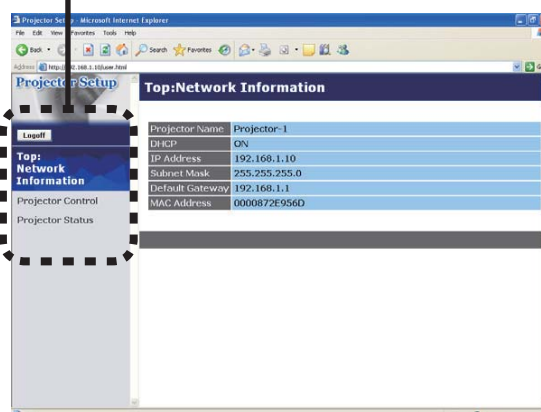


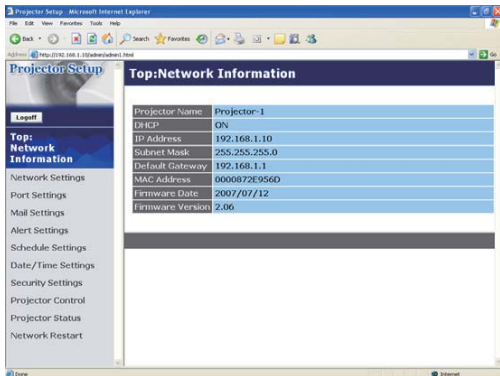
Fig. 3.1.1 c “Logon with User ID”

- 3) Click the desired operation or configuration item on the main menu located on the left-hand side of the screen.

### 3. Management with Web browser software

#### 3.1 Configuring and controlling the projector via a web browser (continued)

##### 3.1.2 Network Information



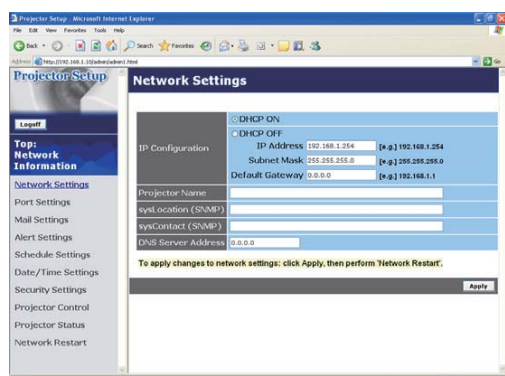
All screen drawings in this manual are shown when you logon with the Administrator ID. Any functions that are available only for the Administrator will not be shown when you logon with the User ID. Refer to the table. (📖 13)

Displays the projector's current network configuration settings.

Item	Description
<b>Projector Name</b>	Displays the projector name settings.
<b>DHCP</b>	Displays the DHCP configuration settings.
<b>IP Address</b>	Displays the current IP address.
<b>Subnet Mask</b>	Displays the subnet mask.
<b>Default Gateway</b>	Displays the default gateway.
<b>MAC Address</b>	Displays the ethernet MAC address.
<b>Firmware Date</b>	Displays the network firmware time stamp. This information is only displayed when logged on using an Administrator ID.
<b>Firmware Version</b>	Displays the network firmware version number. This information is only displayed when logged on using an Administrator ID.

## 3.1 Configuring and controlling the projector via a web browser (continued)

## 3.1.3 Network Settings



Displays and configures network settings.

Item	Description
<b>IP Configuration</b>	Configures network settings.
<b>DHCP ON</b>	Enables DHCP.
<b>DHCP OFF</b>	Disables DHCP.
<b>IP Address</b>	Configures the IP address when DHCP is disabled.
<b>Subnet Mask</b>	Configures the subnet mask when DHCP is disabled.
<b>Default Gateway</b>	Configures the default gateway when DHCP is disabled.
<b>Projector Name</b>	Configures the name of the projector. The length of the Projector Name can be up to 64 alphanumeric characters. Only alphabets, numbers and following symbols can be used. !"#\$%&'()*+,-./:;<=>?@[\\]^_`{ }~ and space
<b>sysLocation (SNMP)</b>	Configures the location to be referred to when using SNMP. The length of the sysLocation can be up to 255 alphanumeric characters. Only numbers '0-9' and alphabet 'a-z', 'A-Z' can be used.
<b>sysContact (SNMP)</b>	Configures the contact information to be referred to when using SNMP. The length of the sysContact can be up to 255 alphanumeric characters. Only numbers '0-9' and alphabet 'a-z', 'A-Z' can be used.
<b>DNS Server Address</b>	Configures the DNS server address.

Click **[Apply]** button to save the settings.

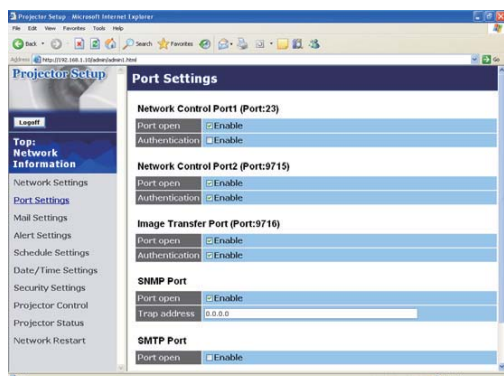
#### 3.1 Configuring and controlling the projector via a web browser (continued)

**NOTE** • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.

- If you connect the projector to an existing network, consult a network administrator before setting server addresses.

## 3.1 Configuring and controlling the projector via a web browser (continued)

## 3.1.4 Port Settings



Displays and configures communication port settings.

Item	Description
<b>Network Control Port1 (Port:23)</b>	Configures command control port 1 (Port:23).
Port open	Click <b>[Enable]</b> check box to use port 23.
Authentication	Click <b>[Enable]</b> check box when authentication is required for this port.
<b>Network Control Port2 (Port:9715)</b>	Configures command control port 2 (Port:9715).
Port open	Click <b>[Enable]</b> check box to use port 9715.
Authentication	Click <b>[Enable]</b> check box when authentication is required for this port.
<b>Image Transfer Port (Port:9716)</b>	Configures the image transfer port (Port:9716).
Port open	Click the <b>[Enable]</b> check box to use port 9716.
Authentication	Click the <b>[Enable]</b> check box when authentication is required for this port.
<b>SNMP Port</b>	Configures the SNMP port.
Port open	Click <b>[Enable]</b> check box to use SNMP.
Trap address	Configures the destination of the SNMP Trap in IP format.
<b>SMTP Port</b>	Configures the SMTP port.
Port open	Click <b>[Enable]</b> check box to use the e-mail function.

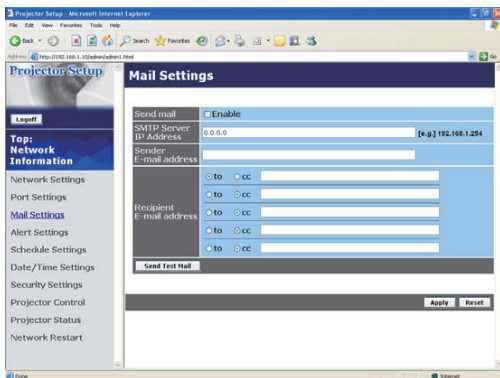
Click **[Apply]** button to save the settings.

**NOTE** • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.

### 3. Management with Web browser software

#### 3.1 Configuring and controlling the projector via a web browser (continued)

#### 3.1.5 Mail Settings



Displays and configures e-mail addressing settings.

Item	Description
<b>Send mail</b>	Click <b>[Enable]</b> check box to use the e-mail function. Configure the conditions for sending e-mail under the Alert Settings.
<b>SMTP Server IP Address</b>	Configures the address of the mail server in IP format. <ul style="list-style-type: none"><li>• The address allows not only IP address but also domain name if the valid DNS server is setup in the <b>Network Settings</b>. The maximum length of host or domain name is up to 255 characters.</li></ul>
<b>Sender E-mail address</b>	Configures the sender e-mail address. The length of the sender e-mail address can be up to 255 alphanumeric characters.
<b>Recipient E-mail address</b>	Configures the e-mail address of up to five recipients. You can also specify <b>[TO]</b> or <b>[CC]</b> for each address. The length of the recipient e-mail address can be up to 255 alphanumeric characters.

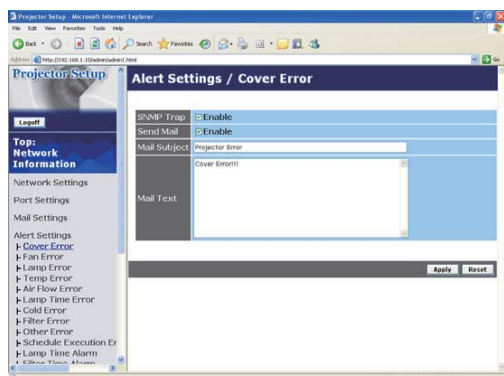
Click **[Apply]** button to save the settings.

**NOTE** • You can confirm whether the mail settings work correctly using **[Send Test Mail]** button. Please enable Send mail setting before clicking **[Send Test Mail]**.

• If you connect the projector to an existing network, consult a network administrator before setting server addresses.

## 3.1 Configuring and controlling the projector via a web browser (continued)

## 3.1.6 Alert Settings



Displays and configures failure & alert settings.

Alert Item	Description
<b>Cover Error</b>	The lamp cover has not been properly fixed.
<b>Fan Error</b>	The cooling fan is not operating.
<b>Lamp Error</b>	The lamp does not light, and there is a possibility that interior portion has become heated.
<b>Temp Error</b>	There is a possibility that the interior portion has become heated.
<b>Lens Door Error</b>	The lens door is not opened or closed properly.
<b>Air Flow Error</b>	The internal temperature is rising.
<b>Lamp Time Error</b>	Lamp time over.
<b>Cold Error</b>	There is a possibility that the interior portion has become overcooled.
<b>Filter Error</b>	Filter time over.
<b>Other Error</b>	Other error. If displaying this error, please contact your dealer.
<b>Schedule Execution Error</b>	Schedule Execution error. (📖21)
<b>Lamp Time Alarm</b>	Lamp time over Alarm Time setting.
<b>Filter Time Alarm</b>	Filter time over Alarm Time setting.
<b>Transition Detector Alarm</b>	Transition Detector Alarm. (📖 <b>OPTION Menu in the User's Manual (detailed) – Operating Guide</b> )
<b>“CHANGE THE LAMP” is displayed.</b>	“CHANGE THE LAMP” is displayed.
<b>Cold Start</b>	The Power switch is turned on. (Off → standby mode)
<b>Authentication Failure</b>	The SNMP access is detected from the invalid SNMP community.


Refer to **“Troubleshooting” in the User's Manual (detailed) – Operating Guide** for further detailed explanation of Error except Other Error and Schedule Execution Error.

#### 3.1 Configuring and controlling the projector via a web browser (continued)

The Alert Items are shown below.

Setting Item	Description
<b>Alarm Time</b>	Configures the time to alert. (Only Lamp Time Alarm and Filter Time Alarm.)
<b>SNMP Trap</b>	Click <b>[Enable]</b> check box to enable SNMP Trap alerts.
<b>Send Mail</b>	Click <b>[Enable]</b> check box to enable e-mail alerts. (Except <b>Cold Start</b> and <b>Authentication Failure</b> .)
<b>Mail Subject</b>	Configures the subject line of the e-mail to be sent. The length of the subject line can be up to 255 alphanumeric characters. (Except <b>Cold Start</b> and <b>Authentication Failure</b> .)
<b>Mail Text</b>	Configures the text of the e-mail to be sent. The length of the text can be up to 1024 alphanumeric characters. (Except <b>Cold Start</b> and <b>Authentication Failure</b> .)

Click **[Apply]** button to save the settings.

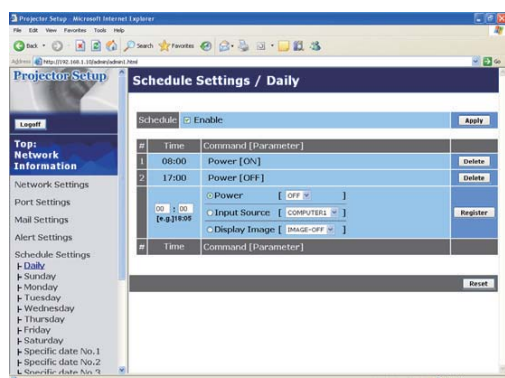
**NOTE** • The trigger of Filter Error e-mail is depending on the FILTER MESSAGE setting in the SERVICE item of the OPTION Menu which defines the period until the filter message is displayed on the projector screen. The e-mail will be sent when the filter timer exceeds 50, 100, 200, 300, 400, 500, 600, 700 or 800 hours based on the configuration. No notification e-mail will be sent if the FILTER MESSAGE is set to TURN OFF. ( **OPTION Menu in the User's Manual (detailed) – Operating Guide**)

- Lamp Time Alarm is defined as a threshold for e-mail notification (reminder) of the lamp timer. When the lamp hour exceeds this threshold that is configured through the Web page, the e-mail will be sent out.
- Filter Time Alarm is defined as a threshold for e-mail notification (reminder) of the filter timer. When the filter hour exceeds this threshold, the e-mail will be sent out.



## 3.1 Configuring and controlling the projector via a web browser (continued)

## 3.1.7 Schedule Settings



Displays and configures schedule settings.

Item	Description
<b>Daily</b>	Configures the daily schedule.
<b>Sunday</b>	Configures the Sunday schedule.
<b>Monday</b>	Configures the Monday schedule.
<b>Tuesday</b>	Configures the Tuesday schedule.
<b>Wednesday</b>	Configures the Wednesday schedule.
<b>Thursday</b>	Configures the Thursday schedule.
<b>Friday</b>	Configures the Friday schedule.
<b>Saturday</b>	Configures the Saturday schedule.
<b>Specific date No.1</b>	Configures the specific date (No.1) schedule.
<b>Specific date No.2</b>	Configures the specific date (No.2) schedule.
<b>Specific date No.3</b>	Configures the specific date (No.3) schedule.
<b>Specific date No.4</b>	Configures the specific date (No.4) schedule.
<b>Specific date No.5</b>	Configures the specific date (No.5) schedule.

#### 3.1 Configuring and controlling the projector via a web browser (continued)

The daily and weekly event items are shown below.

Item	Daily & Weekly Description
<b>Schedule</b>	Click <b>[Enable]</b> check box to enable the schedule.
<b>Schedule List</b>	Displays the current schedule.

The specific date event items are shown below.

Item	Specific date (No.1-5) Description
<b>Schedule</b>	Click <b>[Enable]</b> check box to enable specific date (No.1-5) schedule.
<b>Date (Month/Day)</b>	Configures the month and date.
<b>Schedule List</b>	Displays the current specific date (No.1-5) schedule.

Click **[Apply]** button to save the settings.


To add additional functions and events, click **[Add]** button and set the following items.

Item	Description
<b>Time</b>	Configures the time to execute commands.
<b>Command [Parameter]</b>	Configures the commands to be executed.
<b>Power</b>	Configures the parameters for power control.
<b>Input Source</b>	Configures the parameters for input switching.
<b>Display Image</b>	Configures the parameters for display of transfer image data.

Click **[Register]** button to add new commands to the Schedule List.

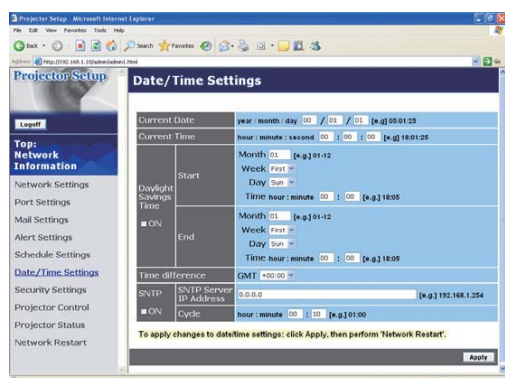
Click **[Delete]** button to delete commands from the Schedule List.

Click **[Reset]** button to delete all commands from the Schedule List.

**NOTE** • After the projector is moved, check the date and time set for the projector before configuring the schedules. Strong shock may make the date and time settings ( 23) get out of tune.

## 3.1 Configuring and controlling the projector via a web browser (continued)

## 3.1.8 Date/Time Settings



Displays and configures the date and time settings.

Item	Description
<b>Current Date</b>	Configures the current date in <b>year/month/day</b> format.
<b>Current Time</b>	Configures the current time in <b>hour:minute:second</b> format.
<b>Daylight Savings Time</b>	Click <b>[ON]</b> check box to enable daylight savings time and set the following items.
<b>Start</b>	Configures the date and time daylight savings time begins.
<b>Month</b>	Configures the month daylight savings time begins (1~12).
<b>Week</b>	Configures the week of the month daylight savings time begins (First, 2, 3, 4, Last).
<b>Day</b>	Configures the day of the week daylight savings time begins (Sun, Mon, Tue, Wed, Thu, Fri, Sat).
<b>Time</b>	<b>hour</b> Configures the hour daylight savings time begins (0 ~ 23).
<b>minute</b>	Configures the minute daylight savings time begins (0 ~ 59).
<b>End</b>	Configures the date and time daylight savings time ends.
<b>Month</b>	Configures the month daylight savings time ends (1 ~ 12).
<b>Week</b>	Configures the week of the month daylight savings time ends (First, 2, 3, 4, Last).
<b>Day</b>	Configures the day of the week daylight savings time ends (Sun, Mon, Tue, Wed, Thu, Fri, Sat).
<b>Time</b>	<b>hour</b> Configures the hour daylight savings time ends (0 ~ 23).
<b>minute</b>	Configures the minute daylight savings time ends (0 ~ 59).

#### 3.1 Configuring and controlling the projector via a web browser (continued)

Item	Description
<b>Time difference</b>	Configures the time difference. Set the same time difference as the one set on your PC. If unsure, consult your IT manager.
<b>SNTP</b>	Click the <b>[ON]</b> check box to retrieve Date and Time information from the SNTP server and set the following items.
<b>SNTP Server IP Address</b>	Configures the SNTP server address in IP format. <ul style="list-style-type: none"> <li>The address allows not only IP address but also domain name if the valid DNS server is setup in the <b>Network Settings</b>. The maximum length of host or domain name is up to 255 characters.</li> </ul>
<b>Cycle</b>	Configures the interval at which to retrieve Date and Time information from the SNTP server ( <b>hours:minutes</b> ).

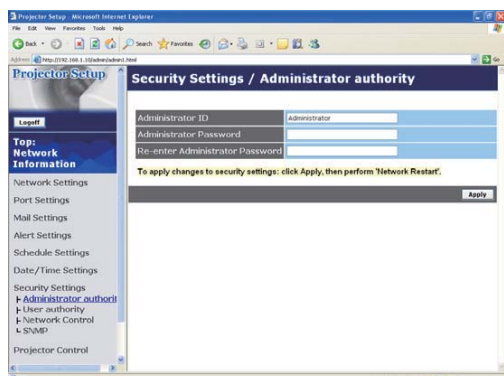
Click **[Apply]** button to save the settings.

**NOTE** • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.

- If you connect the projector to an existing network, consult a network administrator before setting server addresses.
- To enable the SNTP function, the time difference must be set.
- The projector will retrieve Date and Time information from the time server and override time settings when SNTP is enabled.
- The internal clock's time may not remain accurate. Using SNTP is recommended to maintain accurate time.

## 3.1 Configuring and controlling the projector via a web browser (continued)

## 3.1.9 Security Settings



Displays and configures passwords and other security settings.

Item	Description
<b>Administrator authority</b>	Configures the Administrator ID and password.
<b>Administrator ID</b>	Configures the Administrator ID. The length of the text can be up to 32 alphanumeric characters.
<b>Administrator Password</b>	Configures the Administrator password. The length of the text can be up to 255 alphanumeric characters.
<b>Re-enter Administrator Password</b>	Reenter the above password for verification.
<b>User authority</b>	Configures the User ID and password.
<b>User ID</b>	Configures the User ID. The length of the text can be up to 32 alphanumeric characters.
<b>User Password</b>	Configures the User password. The length of the text can be up to 255 alphanumeric characters.
<b>Re-enter User Password</b>	Reenter the above password for verification.

#### 3.1 Configuring and controlling the projector via a web browser (continued)

Item	Description
<b>Network Control</b>	Configures the Authentication password for the command control.
<b>Authentication Password</b>	Configures the Authentication password. The length of the text can be up to 32 alphanumeric characters.
<b>Re-enter Authentication Password</b>	Reenter the above password for verification.
<b>SNMP</b>	Configures the community name if SNMP is used.
<b>Community name</b>	Configures the community name. The length of the text can be up to 64 alphanumeric characters.

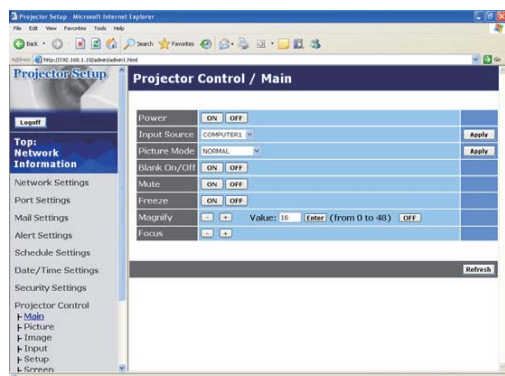
Click **[Apply]** button to save the settings.

**NOTE** • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.

- Only numbers '0-9' and alphabet 'a-z', 'A-Z' can be used.

### 3.1 Configuring and controlling the projector via a web browser (continued)

#### 3.1.10 Projector Control



The items shown in the table below can be performed using the Projector Control menu. Select an item using the up and down arrow keys on the PC. Most of the items have a submenu. Refer to the table below for details.

**NOTE** • The setting value may not match with the actual value if the user changes the value manually. In that case, please refresh the page by clicking [Refresh] button.

Controls the projector.

Item	Description
<b>Main</b>	
<b>Power</b>	Turns the power on/off.
<b>Input Source</b>	Selects the input source.
<b>Picture Mode</b>	Selects the picture mode setting.
<b>Blank On/Off</b>	Turns Blank on/off.
<b>Mute</b>	Turns Mute on/off.
<b>Freeze</b>	Turns Freeze on/off.
<b>Magnify</b>	Controls the magnify setting. In some input signal sources, it might stop “Magnify” even though it does not reach to maximum setting value. The variable range: • For a Computer signal 0-48 • For a video, component or s-video signal 0-16
<b>Focus</b>	Adjusts the focus.
<b>Picture</b>	
<b>Brightness</b>	Adjusts the brightness setting.
<b>Contrast</b>	Adjusts the contrast setting.
<b>Gamma</b>	Selects the gamma setting.
<b>Color Temp</b>	Selects the color temperature setting.
<b>Color</b>	Adjusts the color setting.
<b>Tint</b>	Adjusts the tint setting.
<b>Sharpness</b>	Adjusts the sharpness setting.
<b>MyMemory Save</b>	Saves the MyMemory data.
<b>MyMemory Recall</b>	Recalls the MyMemory data.

#### 3.1 Configuring and controlling the projector via a web browser (continued)

Item	Description
<b>Image</b>	
<b>Aspect</b>	Selects the aspect setting.
<b>Over Scan</b>	Adjusts the over scan setting.
<b>V Position</b>	Adjusts the vertical position.
<b>H Position</b>	Adjusts the horizontal position.
<b>H Phase</b>	Adjusts the horizontal phase.
<b>H Size</b>	Adjusts the horizontal size.
<b>Auto Adjust Execute</b>	Performs the automatic adjustment.
<b>Input</b>	
<b>Progressive</b>	Selects the progressive setting.
<b>Video NR</b>	Selects the video noise reduction setting.
<b>Color Space</b>	Selects the color space.
<b>Component</b>	Selects the component terminal setting.
<b>C-Video Format</b>	Selects the video format setting.
<b>S-Video Format</b>	Selects the s-video format setting.
<b>Frame Lock-Computer1</b>	Turns the frame lock-Computer1 function on/off.
<b>Frame Lock-Computer2</b>	Turns the frame lock-Computer2 function on/off.
<b>Computer in-1</b>	Selects the Computer1 input signal type.
<b>Computer in-2</b>	Selects the Computer2 input signal type.
<b>Setup</b>	
<b>D-Zoom</b>	Adjusts the zoom.
<b>D-Shift V</b>	Adjust the vertical picture position.
<b>D-Shift H</b>	Adjust the horizontal picture position.
<b>Keystone V</b>	Adjusts the vertical keystone distortion setting.
<b>Whisper</b>	Selects the whisper mode.
<b>Mirror</b>	Selects the mirror status.
<b>Volume</b>	Adjusts the volume setting.
<b>Speaker</b>	Turns the built-in speaker on/off.
<b>Audio-Computer1</b>	Assigns the AUDIO-COMPUTER IN1 input port.
<b>Audio-Computer2</b>	Assigns the AUDIO-COMPUTER IN2 input port.
<b>Audio-Component</b>	Assigns the AUDIO-COMPONENT input port.
<b>Audio-S-Video</b>	Assigns the AUDIO-S-VIDEO input port.
<b>Audio-Video</b>	Assigns the AUDIO-VIDEO input port.



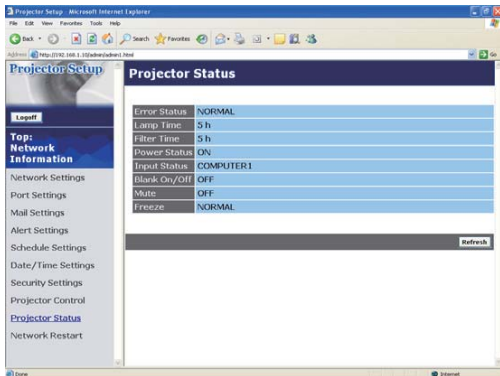
**3.1 Configuring and controlling the projector via a web browser (continued)**

Item	Description
<b>Screen</b>	
<b>Language</b>	Selects the language for the OSD.
<b>Menu Position V</b>	Adjusts the vertical Menu position.
<b>Menu Position H</b>	Adjusts the horizontal Menu position.
<b>Blank</b>	Selects the Blank mode.
<b>Startup</b>	Selects the startup screen mode.
<b>MyScreen Lock</b>	Turns MyScreen lock function on/off.
<b>Message</b>	Turns the message function on/off.
<b>Option</b>	
<b>Auto Search</b>	Turns the automatic signal search function on/off.
<b>Auto on</b>	Turns the auto on function on/off.
<b>Auto off</b>	Configures the timer to shut off the projector when no signal is detected.
<b>My Button-1</b>	Assigns the functions for the MY BUTTON1 buttons on the included remote control.
<b>My Button-2</b>	Assigns the functions for the MY BUTTON2 buttons on the included remote control.
<b>Focus Lock</b>	Turns the focus lock function on/off.
<b>Remote Receiv. Front</b>	Enable/Disable remote receiv. front.
<b>Remote Receiv. Top</b>	Enable/Disable remote receiv. top.
<b>Remote Freq. Normal</b>	Enables/Disables the remote control signal frequency normal.
<b>Remote Freq. High</b>	Enables/Disables the remote control signal frequency high.
<b>Closed Caption</b>	
<b>Display</b>	Selects Closed Caption DISPLAY setting.
<b>Mode</b>	Selects Closed Caption MODE setting.
<b>Channel</b>	Selects Closed Caption CHANNEL setting.

### 3. Management with Web browser software

#### 3.1 Configuring and controlling the projector via a web browser (continued)

##### 3.1.11 Projector Status

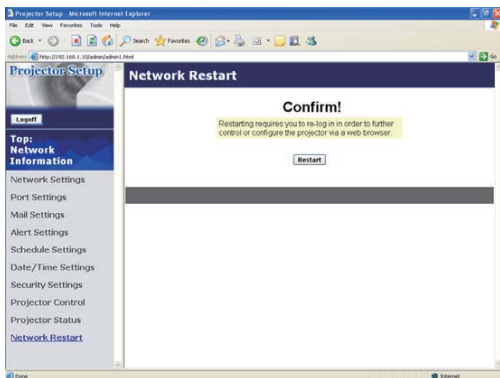


Displays and configures the current projector status.

Item	Description
<b>Error Status</b>	Displays the current error status
<b>Lamp Time</b>	Displays the usage time for the current lamp.
<b>Filter Time</b>	Displays the usage time for the current filter.
<b>Power Status</b>	Displays the current power status.
<b>Input Status</b>	Displays the current input signal source.
<b>Blank On/Off</b>	Displays the current Blank on/off status.
<b>Mute</b>	Displays the current Mute on/off status.
<b>Freeze</b>	Displays the current Freeze status.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.12 Network Restart



Restarts the projector’s network connection.

Item	Description
Restart	Restarts the projector’s network connection in order to activate new configuration settings.

**NOTE** • Restarting requires you to re-log on in order to further control or configure the projector via a web browser. Wait 1 minute or more after clicking **[Restart]** button to log on again.

- The Logon menu (📖13) is displayed after restarting the projector’s network connection if the DHCP is set to ON.

3.1.13 Logoff

When **[Logoff]** is clicked, the Logon menu is displayed. (📖13)

## 3.2 E-mail Alerts

The projector can automatically send an alert message to the specified e-mail addresses when the projector detects a certain condition that is requiring maintenance or detected an error.

**NOTE** • Up to five e-mail addresses can be specified.  
• The projector may be not able to send e-mail if the projector suddenly loses power.

### Mail Settings (📖18)

To use the projector's e-mail alert function, please configure the following items through a web browser.

Example: If the IP address of the projector is set to 192.168.1.10:

- 1) Enter "**http://192.168.1.10/**" into the address bar of the web browser.
- 2) Enter the Administrator ID and password and click **[Logon]**.
- 3) Click **[Port Settings]** on the main menu.
- 4) Click **[Enable]** check box to open the SMTP Port.
- 5) Click **[Apply]** button to save the settings.


**NOTE** • A Network Restart is required after the **SMTP Port** configuration settings have changed. Click **[Network Restart]** and configure the following items.

- 6) Click **[Mail Settings]** and configure each item. Refer to **the item 3.1.5 Mail Settings (📖18)** for further information.
- 7) Click **[Apply]** button to save the settings.

**NOTE** • Click **[Send Test Mail]** button in **[Mail Settings]** to confirm that the e-mail settings are correct. The following mail will be delivered to the specified addresses.

Subject line	:Test Mail	<Projector name>
Text	:Send Test Mail	
	Date	<Testing date>
	Time	<Testing time>
	IP Address	<Projector IP address>
	MAC Address	<Projector MAC address>

#### 3.2 E-mail Alerts (continued)

- 8) Click **[Alert Settings]** on the main menu to configure the E-mail Alerts settings.
- 9) Select and configure each alert item. Refer to the item 3.1.6 Alert Setting ( 19) for further information.
- 10) Click **[Apply]** button to save the settings.

Failure/Warning e-mails are formatted as follows:

Subject line	:	<Mail title>	<Projector name>
Text	:	<Mail text>	
		Date	<Failure/Warning date>
		Time	<Failure/Warning time>
		IP Address	<Projector IP address>
		MAC Address	<Projector MAC address>

## 3.3 Projector Management using SNMP

The SNMP (Simple Network Management Protocol) enables to manage the projector information, which is a failure or warning status, from the computer on the network. The SNMP management software will be required on the computer to use this function.

**NOTE** • It is recommended that SNMP functions be carried out by a network administrator.  
• SNMP management software must be installed on the computer to monitor the projector via SNMP.

### SNMP Settings (📖17)

Configure the following items via a web browser to use SNMP.  
Example: If the IP address of the projector is set to 192.168.1.10:

- 1) Enter “**http://192.168.1.10/**” into the address bar of the web browser.
- 2) Enter the Administrator ID and Password and click [**Logon**].
- 3) Click [**Port Settings**] on the main menu.
- 4) Click [**Enable**] check box to open the **SNMP Port**. Set the IP address to send the SNMP trap to when a Failure/Warning occurs.

**NOTE** • A Network Restart is required after the **SNMP Port** configuration settings have been changed. Click [**Network Restart**] and configure the following items.

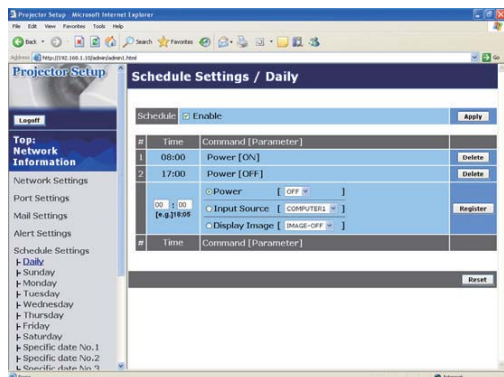
- 5) Click [**Security Settings**] on the main menu.
- 6) Click [**SNMP**] and set the community name on the screen that is displayed.

**NOTE** • A Network Restart is required after the **Community Name** has been changed. Click [**Network Restart**] and configure the following items.

- 7) Configure the settings for Trap transmission of Failures/Warnings. Click [**Alert Settings**] on the main menu and select the Failure/Warning item to be configured.
- 8) Click [**Enable**] check box to send out the SNMP trap for Failures/Warnings. Clear [**Enable**] check box when SNMP trap transmission is not required.
- 9) Click [**Apply**] button to save the settings.

## 3.4 Event Scheduling

The scheduling function enables to setup scheduled events including power on / power off. It enables to be “self-management” projector.



**NOTE** • You can schedule the following control events: Power ON/OFF, Input Source and Transferred Image Display.

- The power on / off event has the lowest priority among the all events that are defined at the same time.
- There are 3 types of Scheduling, 1) daily 2) weekly 3) specific date. (📖 21)
- The priority for scheduled events is as follows 1) specific date 2) weekly 3) daily.
- Up to five specific dates are available for scheduled events. Priority is given to those with the lower numbers when more than one event has been scheduled for the same date and time (e.g., ‘Specific day No. 1’ has priority over ‘Specific day No. 2’ and so on.
- Be sure to set the date and time before enabling scheduled events. (📖 23)

#### 3.4 Event Scheduling (continued)

##### Schedule Settings (📖21)

Schedule settings can be configured from a web browser.

Example: If the IP address of the projector is set to 192.168.1.10:

- 1) Enter “**http://192.168.1.10/**” into the address bar of the web browser.
- 2) Enter the Administrator ID and password and click [**Logon**].
- 3) Click [**Schedule Settings**] on the main menu and select the required schedule item. For example, if you want to perform the command every Sunday, please select [**Sunday**].
- 4) Click [**Enable**] check box to enable scheduling.
- 5) Enter the date (month/day) for specific date scheduling.
- 6) Click [**Apply**] button to save the settings.
- 7) Click [**Add**] to create new event. After configure the time, command and parameters, click [**Register**] to add the new event. To return the previous page, click [**Cancel**] button.
- 8) Click [**Delete**] button when you want to delete a schedule.

There are three types of scheduling.

- 1) Daily: Perform the specified operation at a specified time every day.
- 2) Sunday ~ Saturday: Perform the specified operation at the specified time on a specified day of the week.
- 3) Specific Date: Perform the specified operation on the specified date and time.

**NOTE** • In Standby mode the power indicator will flash green for approx. 3 seconds when at least 1 “Power ON” schedule is saved.

- When the schedule function is used, the power cord must be connected to the projector and the outlet and the power switch must be turned on, [ | ]. The schedule function does not work when the power switch is turned off, [O] or the breaker in a room is tripped. The power indicator will lights orange or green when the projector gets is receiving the power.



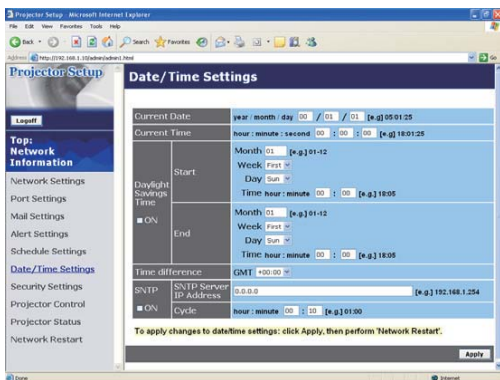
### 3.4 Event Scheduling (continued)

#### Date/Time Settings (📖23)

The Date/Time setting can be adjusted via a web browser.

Example: If the IP address of the projector is set to 192.168.1.10:

- 1) Enter “**http://192.168.1.10/**” into the address bar of the web browser. Enter the Administrator ID and Password and click [**Logon**].
- 2) Click [**Date/Time Settings**] on the main menu and configure each item. Refer to the item 3.1.8 Data/Time Settings for further information.
- 3) Click [**Apply**] button to save the settings.



**NOTE** • A Network Restart is required after the **Daylight Savings Time** or **SNTP** configuration settings have been changed.

- The battery for the built in clock may be dead if the clock loses time even when the date and time have been set correctly. Replace the battery by following the instructions on replacing the battery.

(📖**Internal clock battery in the User's Manual (concise)**)

- The internal clock's time may not remain accurate. Using SNTP is recommended to maintain accurate time.

### 3.5 e-SHOT (Still Image Transfer) Display

The projector can display still images that are transferred via the network.

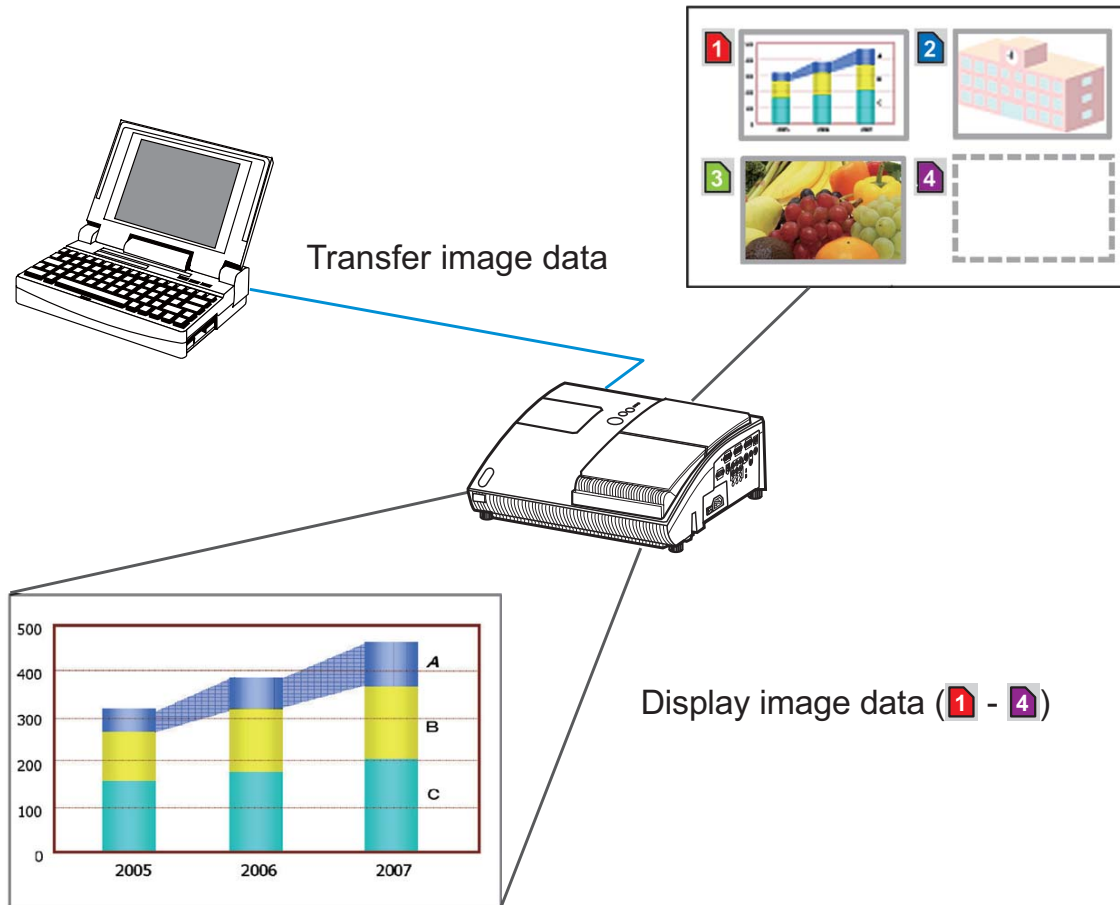


Fig. 3.5 Still Image Transfer

e-SHOT transmission requires an exclusive application for your PC. You can download it from the Hitachi web site (<http://hitachi.us/digitalmedia> or <http://www.hitachidigitalmedia.com>). Refer to the manual for the application for instructions.

To display the transferred image, select the e-SHOT item in the NETWORK Menu. For more information, please see the description of the e-SHOT item of the NETWORK Menu. ([📖 NETWORK Menu in User's Manual \(detailed\) – Operating Guide](#))

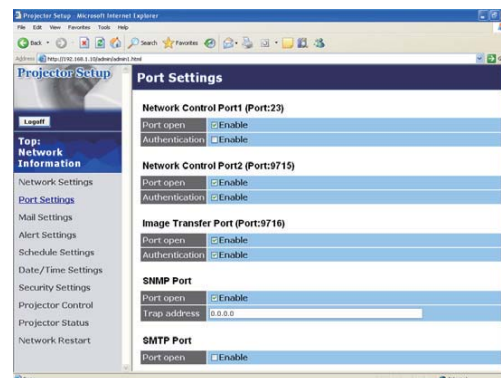
**NOTE** • It is possible to allocate the image file up to 4 in the maximum.  
• The image file also can be displayed by using schedule function from the web browser. Refer to **the item 3.4 Event Scheduling** ([📖 35](#)) in detail.

### 3.5 e-SHOT (Still Image Transfer) Display (continued)

Configure the following items from a web browser when e-SHOT is used.

**Example: If the IP address of the projector is set to 192.168.1.10:**

- 1) Enter "**http://192.168.1.10/**" into the address bar of the web browser.
- 2) Enter the Administrator ID and password and click **[Logon]**.
- 3) Click **[Port Settings]** on the main menu.
- 4) Click the **[Enable]** check box to open the **Image Transfer Port (Port: 9716)**. Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required, otherwise clear the check box.
- 5) Click the **[Apply]** button to save the settings.



When the authentication setting is enabled, the following settings are required.

- 6) Click **[Security Settings]** on the main menu.
- 7) Select **[Network Control]** and enter the desired authentication password.
- 8) Click the **[Apply]** button to save the settings.

**NOTE** • The Authentication Password will be the same for **Network Control Port1 (Port: 23)**, **Network Control Port2 (Port: 9715)**, and **Image Transfer Port (Port: 9716)**.

• The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.

## 3.6 Command Control via the Network

You can configure and control the projector via the network using RS-232C commands.

### Communication Port

The following two ports are assigned for the command control.

TCP #23

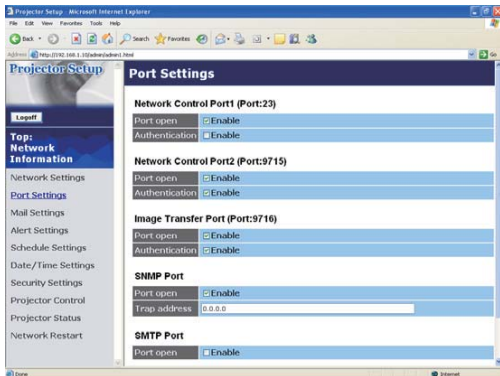
TCP #9715

**NOTE** • Command control is not available via communication port (TCP #9716) (📖17) that is used for the e-SHOT transmission function.

### Command Control Settings (📖17)


Configure the following items from a web browser when command control is used. Example: If the IP address of the projector is set to 192.168.1.10:

- 1) Enter “**http://192.168.1.10/**” into the address bar of the web browser.
- 2) Enter the Administrator ID and password and click [**Logon**].
- 3) Click [**Port Settings**] on the main menu.



- 4) Click [**Enable**] check box to open **Network Control Port1 (Port: 23)** to use TCP #23. Click [**Enable**] check box for [**Authentication**] setting when authentication is required, otherwise clear the check box.
- 5) Click [**Enable**] check box to open **Network Control Port2 (Port: 9715)** to use TCP #9715. Click [**Enable**] check box for [**Authentication**] setting when authentication is required, otherwise clear the check box.
- 6) Click [**Apply**] button to save the settings.

#### 3.6 Command Control via the Network (continued)

When the authentication setting is enabled, the following settings are required.  
( 25)

- 7) Click [**Security Settings**] on the main menu.
- 8) Click [**Network Control**] and enter the desired authentication password.  
\* See NOTE.
- 9) Click [**Apply**] button to save the settings.

**NOTE** • The Authentication Password will be the same for **Network Control Port1 (Port: 23)**, **Network Control Port2 (Port: 9715)**, and **Image Transfer Port (Port: 9716)**.

• The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking [**Network Restart**] on the main menu.

### 3.6 Command Control via the Network (continued)

#### Command Format

Command formats differ among the different communication ports.

- TCP #23

You can use the RS-232C commands without any changes. The reply data format is the same as the RS-232C commands. However, the following reply will be sent back in the event of authentication failure when authentication is enabled.

<Reply in the event of an authentication error>

Reply	Error code	
0x1F	0x04	0x00

- TCP #9715

#### Send Data format

The following formatting is added to the header (0x02), Data length (0x0D), Checksum (1byte) and Connection ID (1 byte) of the RS-232C commands.

Header	Data length	RS-232C command	Check Sum	Connection ID
0x02	0x0D	13 bytes	1 byte	1 byte

- Header → 0x02, Fixed
- Data length → RS-232C commands byte length (0x0D, Fixed)
- RS-232C commands → RS-232C commands that start with 0xBE 0xEF (13 bytes)
- Check Sum → This is the value to make zero on the addition of the lower 8 bits from the header to the checksum.
- Connection ID → Random value from 0 to 255 (This value is attached to the reply data)

### 3.6 Command Control via the Network (continued)

#### Reply Data format

The connection ID (the data is same as the connection ID data on the sending data format) is attached to the RS-232C commands reply data.

<ACK reply>

Reply	Connection ID
0x06	1 byte

<NAK reply>

Reply	Connection ID
0x15	1 byte

<Error reply>

Reply	Error code	Connection ID
0x1C	2 bytes	1 byte

<Data reply>

Reply	Data	Connection ID
0x1D	2 bytes	1 byte

<Projector busy reply>

Reply	Status code	Connection ID
0x1F	2 bytes	1 byte

<Authentication error reply>

Reply	Authentication Error code	Connection ID	
0x1F	0x04	0x00	1 byte

#### 3.6 Command Control via the Network (continued)

##### Automatic Connection Break

The TCP connection will be automatically disconnected after there is no communication for 30 seconds after being established.

##### Authentication

The projector does not accept commands without authentication success when authentication is enabled. The projector uses a challenge response type authentication with an MD5 (Message Digest 5) algorithm.

When the projector is using a LAN, a random 8 bytes will be returned if authentication is enabled. Bind this received 8 bytes and the Authentication Password and digest this data with the MD5 algorithm and add this in front of the commands to send.

Following is a sample if the Authentication Password is set to “password” and the random 8 bytes are “a572f60c”.

- 1) Select the projector.
- 2) Receive the random 8 bytes “a572f60c” from the projector.
- 3) Bind the random 8 bytes “a572f60c” and the Authentication Password “password” and it becomes “a572f60cpassword”.
- 4) Digest this bind “a572f60cpassword” with MD5 algorithm.  
It will be “e3d97429adffa11bce1f7275813d4bde”.
- 5) Add this “e3d97429adffa11bce1f7275813d4bde” in front of the commands and send the data.  
Send “e3d97429adffa11bce1f7275813d4bde”+command.
- 6) When the sending data is correct, the command will be performed and the reply data will be returned. Otherwise, an authentication error will be returned.

**NOTE** • As for the transmission of the second or subsequent commands, the authentication data can be omitted when the same connection.



## Projector

# ED-A100/ED-A110/CP-A100W

## User's Manual (detailed)

## Technical

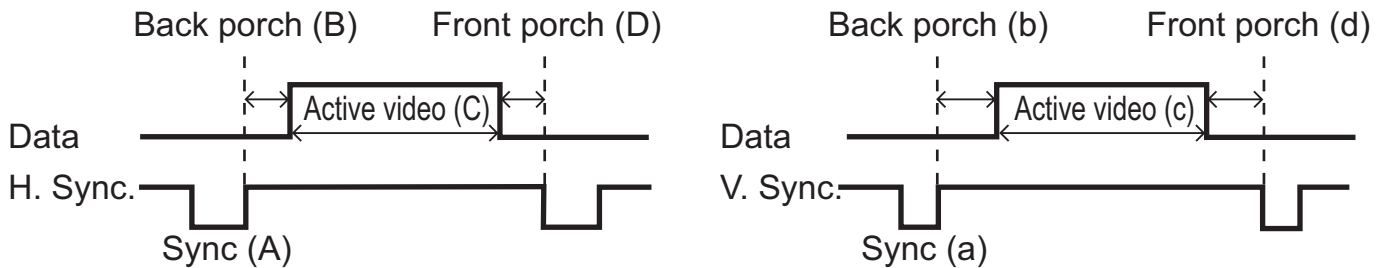
### Example of PC signal

Resolution (H x V)	H. frequency (kHz)	V. frequency (Hz)	Rating	Signal mode
720 x 400	37.9	85.0	VESA	TEXT
640 x 480	31.5	59.9	VESA	VGA (60Hz)
640 x 480	37.9	72.8	VESA	VGA (72Hz)
640 x 480	37.5	75.0	VESA	VGA (75Hz)
640 x 480	43.3	85.0	VESA	VGA (85Hz)
800 x 600	35.2	56.3	VESA	SVGA (56Hz)
800 x 600	37.9	60.3	VESA	SVGA (60Hz)
800 x 600	48.1	72.2	VESA	SVGA (72Hz)
800 x 600	46.9	75.0	VESA	SVGA (75Hz)
800 x 600	53.7	85.1	VESA	SVGA (85Hz)
832 x 624	49.7	74.5		Mac 16" mode
1024 x 768	48.4	60.0	VESA	XGA (60Hz)
1024 x 768	56.5	70.1	VESA	XGA (70Hz)
1024 x 768	60.0	75.0	VESA	XGA (75Hz)
1024 x 768	68.7	85.0	VESA	XGA (85Hz)
1152 x 864	67.5	75.0	VESA	1152 x 864 (75Hz)
1280 x 960	60.0	60.0	VESA	1280 x 960 (60Hz)
1280 x 1024	64.0	60.0	VESA	SXGA (60Hz)
1280 x 1024	80.0	75.0	VESA	SXGA (75Hz)
1280 x 1024	91.1	85.0	VESA	SXGA (85Hz)
1600 x 1200	75.0	60.0	VESA	UXGA (60Hz)
1280 x 768	47.7	60.0	VESA	W-XGA (60Hz)
1400 x 1050	65.2	60.0	VESA	SXGA+ (60Hz)

- NOTE**
- Be sure to check jack type, signal level, timing and resolution before connecting this projector to a PC.
  - Some PCs may have multiple display screen modes. Use of some of these modes will not be possible with this projector.
  - Depending on the input signal, full-size display may not be possible in some cases. Refer to the number of display pixels above.
  - Although the projector can display signals with resolution up to UXGA (1600x1200), the signal will be converted to the projector's panel resolution before being displayed. The best display performance will be achieved if the resolutions of the input signal and projector panel are identical.
  - Automatic adjustment may not function correctly with some input signals.
  - The image may not be displayed correctly when the input sync signal is a composite sync or a sync on G.

## Initial set signals

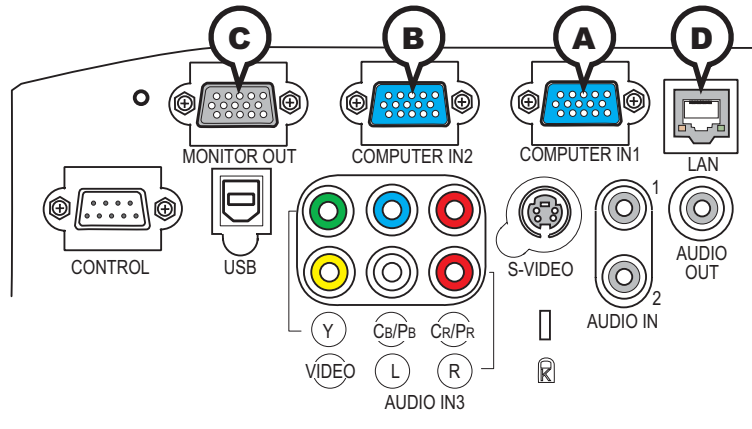
The following signals are used for the initial settings. The signal timing of some PC models may be different. In such case, adjust the items V POSITION and H POSITION in IMAGE Menu.



computer Signal	Horizontal signal timing (μs)			
	(A)	(B)	(C)	(D)
TEXT	2.0	3.0	20.3	1.0
VGA (60Hz)	3.8	1.9	25.4	0.6
VGA (72Hz)	1.3	4.1	20.3	0.8
VGA (75Hz)	2.0	3.8	20.3	0.5
VGA (85Hz)	1.6	2.2	17.8	1.6
SVGA (56Hz)	2.0	3.6	22.2	0.7
SVGA (60Hz)	3.2	2.2	20.0	1.0
SVGA (72Hz)	2.4	1.3	16.0	1.1
SVGA (75Hz)	1.6	3.2	16.2	0.3
SVGA (85Hz)	1.1	2.7	14.2	0.6
Mac 16" mode	1.1	3.9	14.5	0.6
XGA (60Hz)	2.1	2.5	15.8	0.4
XGA (70Hz)	1.8	1.9	13.7	0.3
XGA (75Hz)	1.2	2.2	13.0	0.2
XGA (85Hz)	1.0	2.2	10.8	0.5
1152 x 864 (75Hz)	1.2	2.4	10.7	0.6
1280 x 960 (60Hz)	1.0	2.9	11.9	0.9
SXGA (60Hz)	1.0	2.3	11.9	0.4
SXGA (75Hz)	1.1	1.8	9.5	0.1
SXGA (85Hz)	1.0	1.4	8.1	0.4
UXGA (60Hz)	1.2	1.9	9.9	0.4
W-XGA (60Hz)	1.7	2.5	16.0	0.8
SXGA+ (60Hz)	1.2	2.0	11.4	0.7

computer Signal	Vertical signal timing (lines)			
	(a)	(b)	(c)	(d)
TEXT	3	42	400	1
VGA (60Hz)	2	33	480	10
VGA (72Hz)	3	28	480	9
VGA (75Hz)	3	16	480	1
VGA (85Hz)	3	25	480	1
SVGA (56Hz)	2	22	600	1
SVGA (60Hz)	4	23	600	1
SVGA (72Hz)	6	23	600	37
SVGA (75Hz)	3	21	600	1
SVGA (85Hz)	3	27	600	1
Mac 16" mode	3	39	624	1
XGA (60Hz)	6	29	768	3
XGA (70Hz)	6	29	768	3
XGA (75Hz)	3	28	768	1
XGA (85Hz)	3	36	768	1
1152 x 864 (75Hz)	3	32	864	1
1280 x 960 (60Hz)	3	36	960	1
SXGA(60Hz)	3	38	1024	1
SXGA (75Hz)	3	38	1024	1
SXGA (85Hz)	3	44	1024	1
UXGA (60Hz)	3	46	1200	1
W-XGA (60Hz)	3	23	768	1
SXGA+ (60Hz)	3	33	1050	1

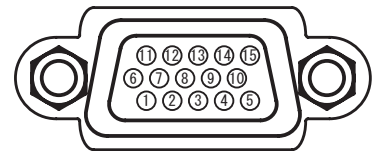
Connection to the ports



**ⒶCOMPUTER IN1, ⒷCOMPUTER IN2, ⒸMONITOR OUT**

D-sub 15pin mini shrink jack

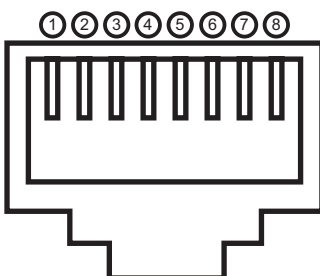
- Video signal: RGB separate, Analog, 0.7Vp-p, 75Ω terminated (positive)
- H/V. sync. signal: TTL level (positive/negative)
- Composite sync. signal: TTL level



Pin	Signal	Pin	Signal
1	Video Red	10	Ground
2	Video Green	11	(No connection)
3	Video Blue	12	Ⓐ: SDA (DDC data) Ⓑ, Ⓒ: (No connection)
4	(No connection)		
5	Ground	13	H. sync / Composite sync.
6	Ground Red	14	V. sync.
7	Ground Green	15	Ⓐ: SCL (DDC clock) Ⓑ, Ⓒ: (No connection)
8	Ground Blue		
9	(No connection)	-	-

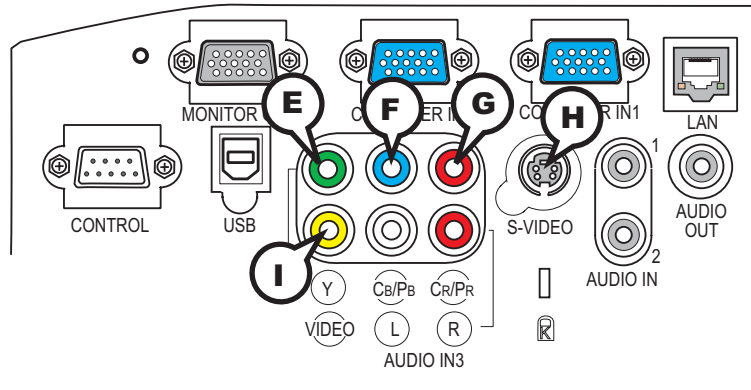
**ⒹLAN**

RJ-45 jack



Pin	Signal	Pin	Signal	Pin	Signal
1	TX +	4	-	7	-
2	TX -	5	-	8	-
3	RX +	6	RX -	-	-

## Connection to the ports (continued)



### Ⓔ Y, Ⓕ C<sub>B</sub>/P<sub>B</sub>, Ⓖ C<sub>R</sub>/P<sub>R</sub> (component video)

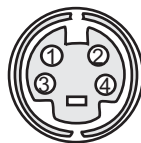
RCA jack x3

- System: 525i(480i), 525p(480p), 625i(576i), 750p(720p), 1125i(1080i)

Port	Signal
Y	Component video Y, $1.0 \pm 0.1V_{p-p}$ , $75\Omega$ terminator with composite sync
C <sub>B</sub> /P <sub>B</sub>	Component video C <sub>B</sub> /P <sub>B</sub> , $0.7 \pm 0.1V_{p-p}$ , $75\Omega$ terminator
C <sub>R</sub> /P <sub>R</sub>	Component video C <sub>R</sub> /P <sub>R</sub> , $0.7 \pm 0.1V_{p-p}$ , $75\Omega$ terminator

### Ⓗ S-VIDEO

Mini DIN 4pin jack

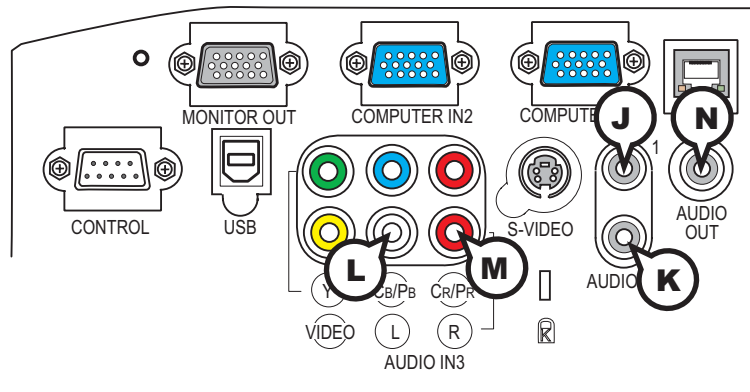


Pin	Signal
1	Color signal $0.286V_{p-p}$ (NTSC, burst), $75\Omega$ terminator Color signal $0.300V_{p-p}$ (PAL/SECAM, burst) $75\Omega$ terminator
2	Brightness signal, $1.0V_{p-p}$ , $75\Omega$ terminator
3	Ground
4	Ground

### Ⓘ VIDEO

RCA jack

- System: NTSC, PAL, SECAM, PAL-M, PAL-N, NTSC4.43
- $1.0 \pm 0.1V_{p-p}$ ,  $75\Omega$  terminator



**(J) AUDIO IN1, (N) AUDIO IN2**

Ø3.5 stereo mini jack

- 200 mVrms 47kΩ terminator

**AUDIO IN3 (L), (M), (R)**

RCA jack x2

- 200 mVrms 47kΩ terminator

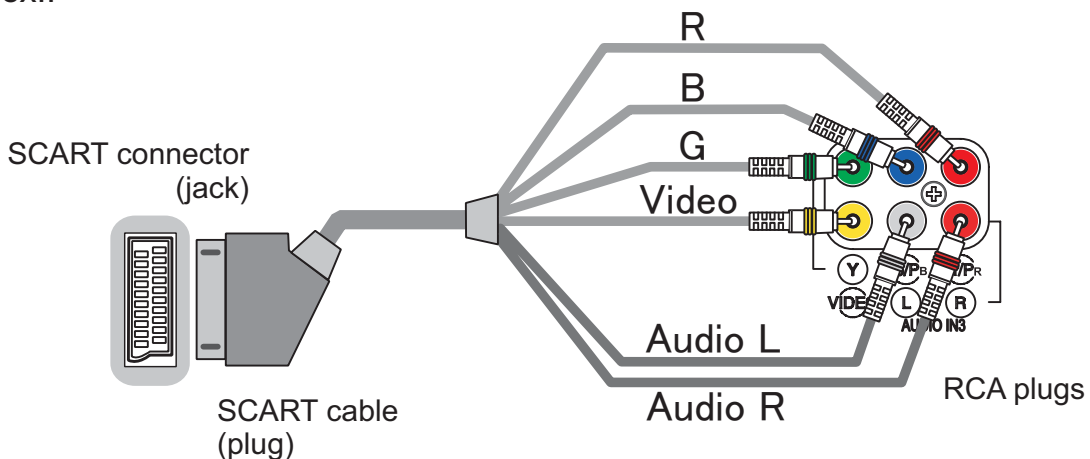
**(K) AUDIO OUT**

Ø3.5 stereo mini jack

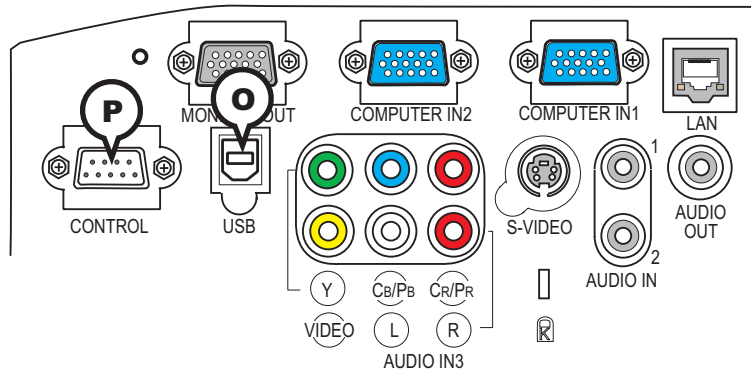
- 200 mVrms 1kΩ output impedance

**To input SCART RGB signal;**

ex.:



To input SCART RGB signal to the projector, use a SCART to RCA cable. Connect the plugs refer to above ex.. For more reference, please consult your dealer.



## ①USB

USB B type jack

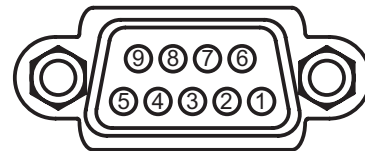
Pin	Signal
1	+5V
2	- Data
3	+ Data
4	Ground



## ②CONTROL

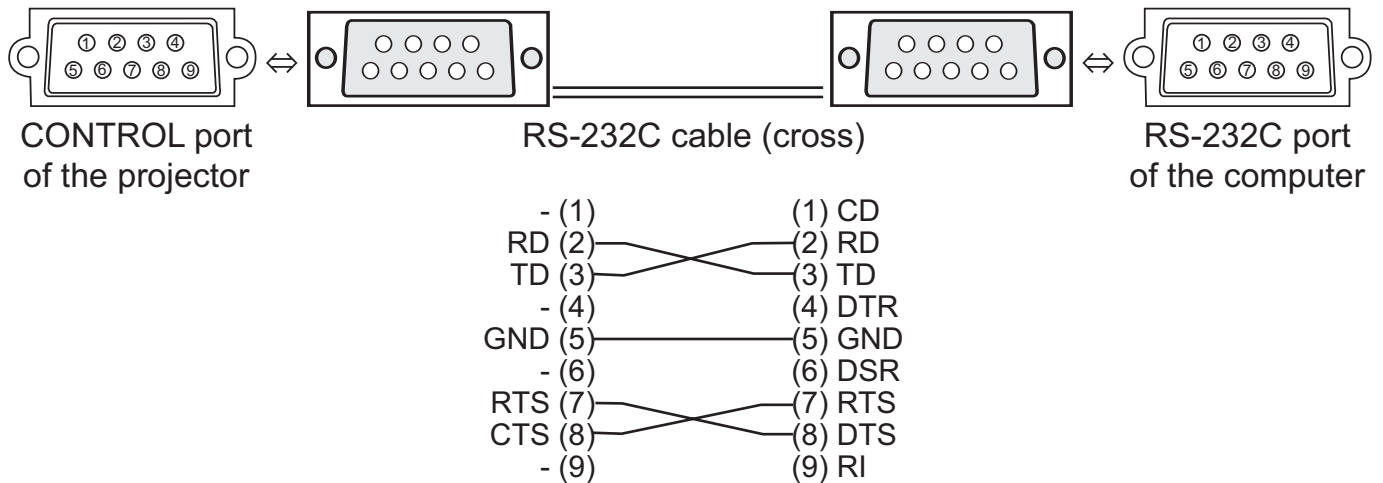
D-sub 9pin plug

• About the details of RS-232C communication, please refer to the following page.



Pin	Signal	Pin	Signal	Pin	Signal
1	(No connection)	4	(No connection)	7	RTS
2	RD	5	Ground	8	CTS
3	TD	6	(No connection)	9	(No connection)

## RS-232C Communication



### Connecting the cable

1. Turn off the projector and the computer.
2. Connect the CONTROL port of the projector with a RS-232C port of the computer by a RS-232C cable (cross). Use the cable that fulfills the specification shown in the previous page.
3. Turn the computer on, and after the computer has started up turn the projector on.

### Communications setting

19200bps, 8N1

#### 1. Protocol

Consist of header (7 bytes) + command data (6 bytes)

#### 2. Header

BE + EF + 03 + 06 + 00 + CRC\_low + CRC\_high

CRC\_low: Lower byte of CRC flag for command data

CRC\_high: Upper byte of CRC flag for command data

#### 3. Command data

Command data chart

byte_0	byte_1	byte_2	byte_3	byte_4	byte_5
Action		Type		Setting code	
low	high	low	high	low	high

Action (byte\_0 - 1)

Action	Classification	Content
1	Set	Change setting to desired value.
2	Get	Read projector internal setup value.
4	Increment	Increment setup value by 1.
5	Decrement	Decrement setup value by 1.
6	Execute	Run a command.

**Requesting projector status (Get command)**

(1) Send the following request code from the PC to the projector.

*Header + Command data ('02H' + '00H' + type (2 bytes) + '00H' + '00H')*

(2) The projector returns the response code '1DH' + data (2 bytes) to the PC.

**Changing the projector settings (Set command)**

(1) Send the following setting code from the PC to the projector.

*Header + Command data ('01H' + '00H' + type (2 bytes) + setting code (2 bytes))*

(2) The projector changes the setting based on the above setting code.

(3) The projector returns the response code '06H' to the PC.

**Using the projector default settings (Reset Command)**

(1) The PC sends the following default setting code to the projector.

*Header + Command data ('06H' + '00H' + type (2 bytes) + '00H' + '00H')*

(2) The projector changes the specified setting to the default value.

(3) The projector returns the response code '06H' to the PC.

**Increasing the projector setting value (Increment command)**

(1) The PC sends the following increment code to the projector.

*Header + Command data ('04H' + '00H' + type (2 bytes) + '00H' + '00H')*

(2) The projector increases the setting value on the above setting code.

(3) The projector returns the response code '06H' to the PC.

**Decreasing the projector setting value (Decrement command)**

(1) The PC sends the following decrement code to the projector.

*Header + Command data ('05H' + '00H' + type (2 bytes) + '00H' + '00H')*

(2) The projector decreases the setting value on the above setting code.

(3) The projector returns the response code '06H' to the PC.

**When the projector cannot understand the received command**

When the projector cannot understand the received command, the error code '15H' is sent back to the PC.

Sometimes the projector cannot properly receive the command. In such a case, the command is not executed and the error code '15H' is sent back to the PC. If this error code is returned, send the same command again.

**When the projector cannot execute the received command.**

When the projector cannot execute the received command, the error code '1CH' + 'xxxxH' is sent back to the PC.

When the data length is greater than indicated by the data length code, the projector ignore the excess data code. Conversely when the data length is shorter than indicated by the data length code, an error code will be returned to the PC.

**NOTE** • Operation cannot be guaranteed when the projector receives an undefined command or data.

- Provide an interval of at least 40ms between the response code and any other code.
- The projector outputs test data when the power supply is switched ON, and when the lamp is lit. Ignore this data.
- Commands are not accepted during warm-up.



## Command Control via the Network

### Communication Port

The following two ports are assigned for the command control.

TCP #23

TCP #9715

### Command Control Settings

Configure the following items from a web browser when command control is used.

Port Settings		
<b>Network Control Port1 (Port: 23)</b>	Port open	Click the <b>[Enable]</b> check box to open <b>[Network Control Port1 (Port: 23)]</b> to use TCP #23. Default setting is "Enable".
	Authentication	Click the <b>[Enable]</b> check box for the <b>[Authentication]</b> setting when authentication is required. Default setting is "Disable".
<b>Network Control Port2 (Port: 9715)</b>	Port open	Click the <b>[Enable]</b> check box to open <b>[Network Control Port2 (Port: 9715)]</b> to use TCP #9715. Default setting is "Enable".
	Authentication	Click the <b>[Enable]</b> check box for the <b>[Authentication]</b> setting when authentication is required. Default setting is "Enable".

When the authentication setting is enabled, the following settings are required.

Security Settings		
<b>Network Control</b>	Authentication Password	Enter the desired authentication password. This setting will be the same for <b>[Network Control Port1 (Port: 23)]</b> and <b>[Network Control Port2 (Port: 9715)]</b> . Default setting is blank.
	Re-enter Authentication Password	

## Command Format

### [TCP #23]

#### 1. Protocol

Consist of header (7 bytes) + command data (6 bytes)

#### 2. Header

BE + EF + 03 + 06 + 00 + CRC\_low + CRC\_high

CRC\_low: Lower byte of CRC flag for command data

CRC\_high: Upper byte of CRC flag for command data

#### 3. Command data

Command data chart

byte_0	byte_1	byte_2	byte_3	byte_4	byte_5
Action		Type		Setting code	
low	high	low	high	low	high

Action (byte\_0 - 1)

Action	Classification	Content
1	Set	Change setting to desired value.
2	Get	Read projector internal setup value.
4	Increment	Increment setup value by 1.
5	Decrement	Decrement setup value by 1.
6	Execute	Run a command.

#### Requesting projector status (Get command)

(1) Send the following request code from the PC to the projector.

*Header + Command data ('02H' + '00H' + type (2 bytes) + '00H' + '00H')*

(2) The projector returns the response code '1DH' + data (2 bytes) to the PC.

#### Changing the projector settings (Set command)

(1) Send the following setting code from the PC to the projector.

*Header + Command data ('01H' + '00H' + type (2 bytes) + setting code (2 bytes))*

(2) The projector changes the setting based on the above setting code.

(3) The projector returns the response code '06H' to the PC.

#### Using the projector default settings (Reset Command)

(1) The PC sends the following default setting code to the projector.

*Header + Command data ('06H' + '00H' + type (2 bytes) + '00H' + '00H')*

(2) The projector changes the specified setting to the default value.

(3) The projector returns the response code '06H' to the PC.

#### Increasing the projector setting value (Increment command)

(1) The PC sends the following increment code to the projector.

*Header + Command data ('04H' + '00H' + type (2 bytes) + '00H' + '00H')*

(2) The projector increases the setting value on the above setting code.

(3) The projector returns the response code '06H' to the PC.

### Decreasing the projector setting value (Decrement command)

(1) The PC sends the following decrement code to the projector.

*Header + Command data ('05H' + '00H' + type (2 bytes) + '00H' + '00H')*

(2) The projector decreases the setting value on the above setting code.

(3) The projector returns the response code '06H' to the PC.

### When the projector cannot understand the received command

When the projector cannot understand the received command, the error code '15H' is sent back to the PC.

Sometimes the projector cannot properly receive the command. In such a case, the command is not executed and the error code '15H' is sent back to the PC. If this error code is returned, send the same command again.

### When the projector cannot execute the received command.

When the projector cannot execute the received command, the error code '1CH' + 'xxxxH' is sent back to the PC.

When the data length is greater than indicated by the data length code, the projector ignore the excess data code. Conversely when the data length is shorter than indicated by the data length code, an error code will be returned to the PC.

### When authentication error occurred.

When authentication error occurred, the error code the '1FH' + '0400H' is sent back to the PC.

**NOTE** • Operation cannot be guaranteed when the projector receives an undefined command or data.

- Provide an interval of at least 40ms between the response code and any other code.
- Commands are not accepted during warm-up.

## [TCP #9715]

### 1. Protocol

Consist of header (1 byte) + data length (1 byte) + command data (13 bytes) + check sum (1 bytes) + connection ID (1 byte).

### 2. Header

02, Fixed

### 3. Data Length

Network control commands byte length (0D, Fixed)

### 4. Command data

Network control commands that start with BE EF (13bytes).

### 5. Check Sum

This is the value to make zero on the addition of the lower 8 bits from the header to the check sum.

### 6. Connection ID

Random value from 0 to 255 (This value is attached to the reply data).

## 7. Reply Data

The connection ID (the data is same as the connection ID data on the sending data format) is attached to the Network control commands reply data.

ACK reply: '06H' + 'xxH'

NAK reply: '15H' + 'xxH'

Error reply: '1CH' + 'xxxxH' + 'xxH'

Data reply: '1DH' + 'xxxxH' + 'xxH'

Projector busy reply: '1FH' + 'xxxxH' + 'xxH'

Authentication error reply: '1FH' + '0400H' + 'xxH'

('xxH' : connection ID)

## Automatic Connection Break

The TCP connection will be automatically disconnected after there is no communication for 30 seconds after being established.

## Authentication

The projector does not accept commands without authentication success when authentication is enabled. The projector uses a challenge response type authentication with an MD5 (Message Digest 5) algorithm. When the projector is using a LAN, a random 8 bytes will be returned if authentication is enabled. Bind this received 8 bytes and the authentication password and digest this data with the MD5 algorithm and add this in front of the commands to send.

Following is a sample if the authentication password is set to "password" and the random 8 bytes are "a572f60c".

- 1) Select the projector.
- 2) Receive the random 8 bytes "a572f60c" from the projector.
- 3) Bind the random 8 bytes "a572f60c" and the authentication password "password" and it becomes "a572f60cpassword".
- 4) Digest this bind "a572f60cpassword" with MD5 algorithm.  
It will be "e3d97429adffa11bce1f7275813d4bde".
- 5) Add this "e3d97429adffa11bce1f7275813d4bde" in front of the commands and send the data.  
Send "e3d97429adffa11bce1f7275813d4bde"+command.
- 6) When the sending data is correct, the command will be performed and the reply data will be returned. Otherwise, an authentication error will be returned.

**NOTE** • As for the transmission of the second or subsequent commands, the authentication data can be omitted when the same connection.



RS-232C communication / Network command table (continued)

Names	Operation Type	Header				Command Data			
						CRC	Action	Type	Setting Code
User Gamma Pattern	Set	Off	BE EF	03	06 00	FB FA	01 00	80 30	00 00
		9 steps gray scale	BE EF	03	06 00	6B FB	01 00	80 30	01 00
		15 steps gray scale	BE EF	03	06 00	9B FB	01 00	80 30	02 00
		Ramp	BE EF	03	06 00	0B FA	01 00	80 30	03 00
	Get	BE EF	03	06 00	C8 FA	02 00	80 30	00 00	
User Gamma Point 1	Get	BE EF	03	06 00	08 FE	02 00	90 30	00 00	
	Increment	BE EF	03	06 00	6E FE	04 00	90 30	00 00	
	Decrement	BE EF	03	06 00	BF FF	05 00	90 30	00 00	
User Gamma Point 2	Get	BE EF	03	06 00	F4 FF	02 00	91 30	00 00	
	Increment	BE EF	03	06 00	92 FF	04 00	91 30	00 00	
	Decrement	BE EF	03	06 00	43 FE	05 00	91 30	00 00	
User Gamma Point 3	Get	BE EF	03	06 00	B0 FF	02 00	92 30	00 00	
	Increment	BE EF	03	06 00	D6 FF	04 00	92 30	00 00	
	Decrement	BE EF	03	06 00	07 FE	05 00	92 30	00 00	
User Gamma Point 4	Get	BE EF	03	06 00	4C FE	02 00	93 30	00 00	
	Increment	BE EF	03	06 00	2A FE	04 00	93 30	00 00	
	Decrement	BE EF	03	06 00	FB FF	05 00	93 30	00 00	
User Gamma Point 5	Get	BE EF	03	06 00	38 FF	02 00	94 30	00 00	
	Increment	BE EF	03	06 00	5E FF	04 00	94 30	00 00	
	Decrement	BE EF	03	06 00	8F FE	05 00	94 30	00 00	
User Gamma Point 6	Get	BE EF	03	06 00	C4 FE	02 00	95 30	00 00	
	Increment	BE EF	03	06 00	A2 FE	04 00	95 30	00 00	
	Decrement	BE EF	03	06 00	73 FF	05 00	95 30	00 00	
User Gamma Point 7	Get	BE EF	03	06 00	80 FE	02 00	96 30	00 00	
	Increment	BE EF	03	06 00	E6 FE	04 00	96 30	00 00	
	Decrement	BE EF	03	06 00	37 FF	05 00	96 30	00 00	
User Gamma Point 8	Get	BE EF	03	06 00	7C FF	02 00	97 30	00 00	
	Increment	BE EF	03	06 00	1A FF	04 00	97 30	00 00	
	Decrement	BE EF	03	06 00	CB FE	05 00	97 30	00 00	
COLOR TEMP	Set	HIGH	BE EF	03	06 00	0B F5	01 00	B0 30	03 00
		CUSTOM-1 (HIGH)	BE EF	03	06 00	CB F8	01 00	B0 30	13 00
		MID	BE EF	03	06 00	9B F4	01 00	B0 30	02 00
		CUSTOM-2 (MID)	BE EF	03	06 00	5B F9	01 00	B0 30	12 00
		LOW	BE EF	03	06 00	6B F4	01 00	B0 30	01 00
		CUSTOM-3 (LOW)	BE EF	03	06 00	AB F9	01 00	B0 30	11 00
		Hi-BRIGHT-1	BE EF	03	06 00	3B F2	01 00	B0 30	08 00
		CUSTOM-4 (Hi-BRIGHT-1)	BE EF	03	06 00	FB FF	01 00	B0 30	18 00
		Hi-BRIGHT-2	BE EF	03	06 00	AB F3	01 00	B0 30	09 00
		CUSTOM-5 (Hi-BRIGHT-2)	BE EF	03	06 00	6B FE	01 00	B0 30	19 00
	Hi-BRIGHT-3	BE EF	03	06 00	5B F3	01 00	B0 30	0A 00	
CUSTOM-6 (Hi-BRIGHT-3)	BE EF	03	06 00	9B FE	01 00	B0 30	1A 00		
	Get	BE EF	03	06 00	C8 F5	02 00	B0 30	00 00	
COLOR TEMP GAIN R	Get	BE EF	03	06 00	34 F4	02 00	B1 30	00 00	
	Increment	BE EF	03	06 00	52 F4	04 00	B1 30	00 00	
	Decrement	BE EF	03	06 00	83 F5	05 00	B1 30	00 00	
COLOR TEMP GAIN G	Get	BE EF	03	06 00	70 F4	02 00	B2 30	00 00	
	Increment	BE EF	03	06 00	16 F4	04 00	B2 30	00 00	
	Decrement	BE EF	03	06 00	C7 F5	05 00	B2 30	00 00	

## RS-232C communication / Network command table (continued)

Names	Operation Type	Header				Command Data			
						CRC	Action	Type	Setting Code
COLOR TEMP GAIN B	Get	BE EF	03	06 00	8C F5	02 00	B3 30	00 00	
	Increment	BE EF	03	06 00	EA F5	04 00	B3 30	00 00	
	Decrement	BE EF	03	06 00	3B F4	05 00	B3 30	00 00	
COLOR TEMP OFFSET R	Get	BE EF	03	06 00	04 F5	02 00	B5 30	00 00	
	Increment	BE EF	03	06 00	62 F5	04 00	B5 30	00 00	
	Decrement	BE EF	03	06 00	B3 F4	05 00	B5 30	00 00	
COLOR TEMP OFFSET G	Get	BE EF	03	06 00	40 F5	02 00	B6 30	00 00	
	Increment	BE EF	03	06 00	26 F5	04 00	B6 30	00 00	
	Decrement	BE EF	03	06 00	F7 F4	05 00	B6 30	00 00	
COLOR TEMP OFFSET B	Get	BE EF	03	06 00	BC F4	02 00	B7 30	00 00	
	Increment	BE EF	03	06 00	DA F4	04 00	B7 30	00 00	
	Decrement	BE EF	03	06 00	0B F5	05 00	B7 30	00 00	
COLOR	Get	BE EF	03	06 00	B5 72	02 00	02 22	00 00	
	Increment	BE EF	03	06 00	D3 72	04 00	02 22	00 00	
	Decrement	BE EF	03	06 00	02 73	05 00	02 22	00 00	
COLOR Reset	Execute	BE EF	03	06 00	80 D0	06 00	0A 70	00 00	
TINT	Get	BE EF	03	06 00	49 73	02 00	03 22	00 00	
	Increment	BE EF	03	06 00	2F 73	04 00	03 22	00 00	
	Decrement	BE EF	03	06 00	FE 72	05 00	03 22	00 00	
TINT Reset	Execute	BE EF	03	06 00	7C D1	06 00	0B 70	00 00	
SHARPNESS	Get	BE EF	03	06 00	F1 72	02 00	01 22	00 00	
	Increment	BE EF	03	06 00	97 72	04 00	01 22	00 00	
	Decrement	BE EF	03	06 00	46 73	05 00	01 22	00 00	
SHARPNESS Reset	Execute	BE EF	03	06 00	C4 D0	06 00	09 70	00 00	
MY MEMORY Load	Set	1	BE EF	03	06 00	0E D7	01 00	14 20	00 00
		2	BE EF	03	06 00	9E D6	01 00	14 20	01 00
		3	BE EF	03	06 00	6E D6	01 00	14 20	02 00
		4	BE EF	03	06 00	FE D7	01 00	14 20	03 00
MY MEMORY Save	Set	1	BE EF	03	06 00	F2 D6	01 00	15 20	00 00
		2	BE EF	03	06 00	62 D7	01 00	15 20	01 00
		3	BE EF	03	06 00	92 D7	01 00	15 20	02 00
		4	BE EF	03	06 00	02 D6	01 00	15 20	03 00
PROGRESSIVE	Set	TURN OFF	BE EF	03	06 00	4A 72	01 00	07 22	00 00
		TV	BE EF	03	06 00	DA 73	01 00	07 22	01 00
		FILM	BE EF	03	06 00	2A 73	01 00	07 22	02 00
	Get	BE EF	03	06 00	79 72	02 00	07 22	00 00	
VIDEO NR	Set	LOW	BE EF	03	06 00	26 72	01 00	06 22	01 00
		MID	BE EF	03	06 00	D6 72	01 00	06 22	02 00
		HIGH	BE EF	03	06 00	46 73	01 00	06 22	03 00
	Get	BE EF	03	06 00	85 73	02 00	06 22	00 00	
ASPECT	Set	4:3	BE EF	03	06 00	9E D0	01 00	08 20	00 00
		16:9	BE EF	03	06 00	0E D1	01 00	08 20	01 00
		14:9	BE EF	03	06 00	CE D6	01 00	08 20	09 00
		NORMAL	BE EF	03	06 00	5E DD	01 00	08 20	10 00
	Get	BE EF	03	06 00	AD D0	02 00	08 20	00 00	

(continued on next page)

RS-232C communication / Network command table (continued)

RS-232C communication / Network command table (continued)

Names	Operation Type	Header				Command Data			
						CRC	Action	Type	Setting Code
OVER SCAN	Get	BE EF	03	06 00	91 70	02 00	09 22	00 00	
	Increment	BE EF	03	06 00	F7 70	04 00	09 22	00 00	
	Decrement	BE EF	03	06 00	26 71	05 00	09 22	00 00	
OVER SCAN Reset	Execute	BE EF	03	06 00	EC D9	06 00	27 70	00 00	
V POSITION	Get	BE EF	03	06 00	0D 83	02 00	00 21	00 00	
	Increment	BE EF	03	06 00	6B 83	04 00	00 21	00 00	
	Decrement	BE EF	03	06 00	BA 82	05 00	00 21	00 00	
V POSITION Reset	Execute	BE EF	03	06 00	E0 D2	06 00	02 70	00 00	
H POSITION	Get	BE EF	03	06 00	F1 82	02 00	01 21	00 00	
	Increment	BE EF	03	06 00	97 82	04 00	01 21	00 00	
	Decrement	BE EF	03	06 00	46 83	05 00	01 21	00 00	
H POSITION Reset	Execute	BE EF	03	06 00	1C D3	06 00	03 70	00 00	
H PHASE	Get	BE EF	03	06 00	49 83	02 00	03 21	00 00	
	Increment	BE EF	03	06 00	2F 83	04 00	03 21	00 00	
	Decrement	BE EF	03	06 00	FE 82	05 00	03 21	00 00	
H SIZE	Get	BE EF	03	06 00	B5 82	02 00	02 21	00 00	
	Increment	BE EF	03	06 00	D3 82	04 00	02 21	00 00	
	Decrement	BE EF	03	06 00	02 83	05 00	02 21	00 00	
H SIZE Reset	Execute	BE EF	03	06 00	68 D2	06 00	04 70	00 00	
AUTO ADJUST	Execute	BE EF	03	06 00	91 D0	06 00	0A 20	00 00	
COLOR SPACE	Set	AUTO	BE EF	03	06 00	0E 72	01 00	04 22	00 00
		RGB	BE EF	03	06 00	9E 73	01 00	04 22	01 00
		SMPTE240	BE EF	03	06 00	6E 73	01 00	04 22	02 00
		REC709	BE EF	03	06 00	FE 72	01 00	04 22	03 00
		REC601	BE EF	03	06 00	CE 70	01 00	04 22	04 00
	Get	BE EF	03	06 00	3D 72	02 00	04 22	00 00	
COMPONENT	Set	COMPONENT	BE EF	03	06 00	4A D7	01 00	17 20	00 00
		SCART RGB	BE EF	03	06 00	DA D6	01 00	17 20	01 00
	Get	BE EF	03	06 00	79 D7	02 00	17 20	00 00	
C-VIDEO FORMAT	Set	AUTO	BE EF	03	06 00	A2 70	01 00	11 22	0A 00
		NTSC	BE EF	03	06 00	C2 74	01 00	11 22	04 00
		PAL	BE EF	03	06 00	52 75	01 00	11 22	05 00
		SECAM	BE EF	03	06 00	52 70	01 00	11 22	09 00
		NTSC4.43	BE EF	03	06 00	62 77	01 00	11 22	02 00
		M-PAL	BE EF	03	06 00	C2 71	01 00	11 22	08 00
		N-PAL	BE EF	03	06 00	32 74	01 00	11 22	07 00
	Get	BE EF	03	06 00	31 76	02 00	11 22	00 00	
S-VIDEO FORMAT	Set	AUTO	BE EF	03	06 00	E6 70	01 00	12 22	0A 00
		NTSC	BE EF	03	06 00	86 74	01 00	12 22	04 00
		PAL	BE EF	03	06 00	16 75	01 00	12 22	05 00
		SECAM	BE EF	03	06 00	16 70	01 00	12 22	09 00
		NTSC4.43	BE EF	03	06 00	26 77	01 00	12 22	02 00
		M-PAL	BE EF	03	06 00	86 71	01 00	12 22	08 00
		N-PAL	BE EF	03	06 00	76 74	01 00	12 22	07 00
	Get	BE EF	03	06 00	75 76	02 00	12 22	00 00	

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## RS-232C communication / Network command table (continued)

Names	Operation Type	Header				Command Data			
						CRC	Action	Type	Setting Code
FRAME LOCK – COMPUTER1	Set	TURN OFF	BE EF	03	06 00	3B C2	01 00	50 30	00 00
		TURN ON	BE EF	03	06 00	AB C3	01 00	50 30	01 00
	Get	BE EF	03	06 00	08 C2	02 00	50 30	00 00	
FRAME LOCK – COMPUTER2	Set	TURN OFF	BE EF	03	06 00	0B C3	01 00	54 30	00 00
		TURN ON	BE EF	03	06 00	9B C2	01 00	54 30	01 00
	Get	BE EF	03	06 00	38 C3	02 00	54 30	00 00	
COMPUTER IN1	Set	SYNC ON G ON	BE EF	03	06 00	CE D6	01 00	10 20	03 00
		SYNC ON G OFF	BE EF	03	06 00	5E D7	01 00	10 20	02 00
	Get	BE EF	03	06 00	0D D6	02 00	10 20	00 00	
COMPUTER IN2	Set	SYNC ON G ON	BE EF	03	06 00	32 D7	01 00	11 20	03 00
		SYNC ON G OFF	BE EF	03	06 00	A2 D6	01 00	11 20	02 00
	Get	BE EF	03	06 00	F1 D7	02 00	11 20	00 00	
D-ZOOM	Get	BE EF	03	06 00	D0 D0	02 00	0A 30	00 00	
	Increment	BE EF	03	06 00	B6 D0	04 00	0A 30	00 00	
	Decrement	BE EF	03	06 00	67 D1	05 00	0A 30	00 00	
D-ZOOM Reset	Execute	BE EF	03	06 00	98 C9	06 00	70 70	00 00	
D-SHIFT V	Get	BE EF	03	06 00	2C D1	02 00	0B 30	00 00	
	Increment	BE EF	03	06 00	4A D1	04 00	0B 30	00 00	
	Decrement	BE EF	03	06 00	9B D0	05 00	0B 30	00 00	
D-SHIFT V Reset	Execute	BE EF	03	06 00	A8 C8	06 00	74 70	00 00	
D-SHIFT H	Get	BE EF	03	06 00	58 D0	02 00	0C 30	00 00	
	Increment	BE EF	03	06 00	3E D0	04 00	0C 30	00 00	
	Decrement	BE EF	03	06 00	EF D1	05 00	0C 30	00 00	
D-SHIFT H Reset	Execute	BE EF	03	06 00	54 C9	06 00	75 70	00 00	
KEYSTONE V	Get	BE EF	03	06 00	B9 D3	02 00	07 20	00 00	
	Increment	BE EF	03	06 00	DF D3	04 00	07 20	00 00	
	Decrement	BE EF	03	06 00	0E D2	05 00	07 20	00 00	
KEYSTONE V Reset	Execute	BE EF	03	06 00	08 D0	06 00	0C 70	00 00	
WHISPER	Set	BRIGHT	BE EF	03	06 00	3B 23	01 00	00 33	00 00
		NORMAL	BE EF	03	06 00	AB 22	01 00	00 33	01 00
	Get	BE EF	03	06 00	08 23	02 00	00 33	00 00	
MIRROR	Set	NORMAL	BE EF	03	06 00	C7 D2	01 00	01 30	00 00
		H:INVERT	BE EF	03	06 00	57 D3	01 00	01 30	01 00
		V:INVERT	BE EF	03	06 00	A7 D3	01 00	01 30	02 00
		H&V:INVERT	BE EF	03	06 00	37 D2	01 00	01 30	03 00
	Get	BE EF	03	06 00	F4 D2	02 00	01 30	00 00	
VOLUME- COMPUTER1	Get	BE EF	03	06 00	CD CC	02 00	60 20	00 00	
	Increment	BE EF	03	06 00	AB CC	04 00	60 20	00 00	
	Decrement	BE EF	03	06 00	7A CD	05 00	60 20	00 00	
VOLUME- COMPUTER2	Get	BE EF	03	06 00	FD CD	02 00	64 20	00 00	
	Increment	BE EF	03	06 00	9B CD	04 00	64 20	00 00	
	Decrement	BE EF	03	06 00	4A CC	05 00	64 20	00 00	
VOLUME- COMPONENT	Get	BE EF	03	06 00	01 CC	02 00	65 20	00 00	
	Increment	BE EF	03	06 00	67 CC	04 00	65 20	00 00	
	Decrement	BE EF	03	06 00	B6 CD	05 00	65 20	00 00	
VOLUME-S-VIDEO	Get	BE EF	03	06 00	75 CD	02 00	62 20	00 00	
	Increment	BE EF	03	06 00	13 CD	04 00	62 20	00 00	
	Decrement	BE EF	03	06 00	C2 CC	05 00	62 20	00 00	

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RS-232C communication / Network command table (continued)

Names	Operation Type	Header				Command Data			
					CRC	Action	Type	Setting Code	
VOLUME-VIDEO		Get	BE EF	03	06 00	31 CD	02 00	61 20	00 00
		Increment	BE EF	03	06 00	57 CD	04 00	61 20	00 00
		Decrement	BE EF	03	06 00	86 CC	05 00	61 20	00 00
MUTE	Set	TURN OFF	BE EF	03	06 00	46 D3	01 00	02 20	00 00
		TURN ON	BE EF	03	06 00	D6 D2	01 00	02 20	01 00
		Get	BE EF	03	06 00	75 D3	02 00	02 20	00 00
SPEAKER	Set	TURN ON	BE EF	03	06 00	FE D4	01 00	1C 20	01 00
		TURN OFF	BE EF	03	06 00	6E D5	01 00	1C 20	00 00
		Get	BE EF	03	06 00	5D D5	02 00	1C 20	00 00
AUDIO-COMPUTER1	Set	AUDIO1	BE EF	03	06 00	6E DC	01 00	30 20	01 00
		AUDIO2	BE EF	03	06 00	9E DC	01 00	30 20	02 00
		AUDIO3	BE EF	03	06 00	0E DD	01 00	30 20	03 00
		Turn off	BE EF	03	06 00	FE DD	01 00	30 20	00 00
		Get	BE EF	03	06 00	CD DD	02 00	30 20	00 00
AUDIO-COMPUTER2	Set	AUDIO1	BE EF	03	06 00	5E DD	01 00	34 20	01 00
		AUDIO2	BE EF	03	06 00	AE DD	01 00	34 20	02 00
		AUDIO3	BE EF	03	06 00	3E DC	01 00	34 20	03 00
		Turn off	BE EF	03	06 00	CE DC	01 00	34 20	00 00
		Get	BE EF	03	06 00	FD DC	02 00	34 20	00 00
AUDIO-COMPONENT	Set	AUDIO1	BE EF	03	06 00	A2 DC	01 00	35 20	01 00
		AUDIO2	BE EF	03	06 00	52 DC	01 00	35 20	02 00
		AUDIO3	BE EF	03	06 00	C2 DD	01 00	35 20	03 00
		Turn off	BE EF	03	06 00	32 DD	01 00	35 20	00 00
		Get	BE EF	03	06 00	01 DD	02 00	35 20	00 00
AUDIO-S-VIDEO	Set	AUDIO1	BE EF	03	06 00	D6 DD	01 00	32 20	01 00
		AUDIO2	BE EF	03	06 00	26 DD	01 00	32 20	02 00
		AUDIO3	BE EF	03	06 00	B6 DC	01 00	32 20	03 00
		Turn off	BE EF	03	06 00	46 DC	01 00	32 20	00 00
		Get	BE EF	03	06 00	75 DC	02 00	32 20	00 00
AUDIO-VIDEO	Set	AUDIO1	BE EF	03	06 00	92 DD	01 00	31 20	01 00
		AUDIO2	BE EF	03	06 00	62 DD	01 00	31 20	02 00
		AUDIO3	BE EF	03	06 00	F2 DC	01 00	31 20	03 00
		Turn off	BE EF	03	06 00	02 DC	01 00	31 20	00 00
		Get	BE EF	03	06 00	31 DC	02 00	31 20	00 00
REMOTE RECEIVE. FRONT	Set	Off	BE EF	03	06 00	FF 32	01 00	00 26	00 00
		On	BE EF	03	06 00	6F 33	01 00	00 26	01 00
		Get	BE EF	03	06 00	CC 32	02 00	00 26	00 00
REMOTE RECEIVE. TOP	Set	Off	BE EF	03	06 00	47 33	01 00	02 26	00 00
		On	BE EF	03	06 00	D7 32	01 00	02 26	01 00
		Get	BE EF	03	06 00	74 33	02 00	02 26	00 00
REMOTE FREQ. NORMAL	Set	Off	BE EF	03	06 00	FF 3D	01 00	30 26	00 00
		On	BE EF	03	06 00	6F 3C	01 00	30 26	01 00
		Get	BE EF	03	06 00	CC 3D	02 00	30 26	00 00
REMOTE FREQ. HIGH	Set	Off	BE EF	03	06 00	03 3C	01 00	31 26	00 00
		On	BE EF	03	06 00	93 3D	01 00	31 26	01 00
		Get	BE EF	03	06 00	30 3C	02 00	31 26	00 00

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## RS-232C communication / Network command table (continued)

Names	Operation Type	Header				Command Data			
						CRC	Action	Type	Setting Code
LANGUAGE	Set	ENGLISH	BE EF	03	06 00	F7 D3	01 00	05 30	00 00
		FRANÇAIS	BE EF	03	06 00	67 D2	01 00	05 30	01 00
		DEUTSCH	BE EF	03	06 00	97 D2	01 00	05 30	02 00
		ESPAÑOL	BE EF	03	06 00	07 D3	01 00	05 30	03 00
		ITALIANO	BE EF	03	06 00	37 D1	01 00	05 30	04 00
		NORSK	BE EF	03	06 00	A7 D0	01 00	05 30	05 00
		NEDERLANDS	BE EF	03	06 00	57 D0	01 00	05 30	06 00
		PORTUGUÊS	BE EF	03	06 00	C7 D1	01 00	05 30	07 00
		日本語	BE EF	03	06 00	37 D4	01 00	05 30	08 00
		简体中文	BE EF	03	06 00	A7 D5	01 00	05 30	09 00
		繁體中文	BE EF	03	06 00	37 DE	01 00	05 30	10 00
		한글	BE EF	03	06 00	57 D5	01 00	05 30	0A 00
		SVENSKA	BE EF	03	06 00	C7 D4	01 00	05 30	0B 00
		РУССКИЙ	BE EF	03	06 00	F7 D6	01 00	05 30	0C 00
		SUOMI	BE EF	03	06 00	67 D7	01 00	05 30	0D 00
		POLSKI	BE EF	03	06 00	97 D7	01 00	05 30	0E 00
TÜRKÇE	BE EF	03	06 00	07 D6	01 00	05 30	0F 00		
	Get	BE EF	03	06 00	C4 D3	02 00	05 30	00 00	
MENU POSITION H	Get	BE EF	03	06 00	04 D7	02 00	15 30	00 00	
	Increment	BE EF	03	06 00	62 D7	04 00	15 30	00 00	
	Decrement	BE EF	03	06 00	B3 D6	05 00	15 30	00 00	
MENU POSITION H Reset	Execute	BE EF	03	06 00	DC C6	06 00	43 70	00 00	
MENU POSITION V	Get	BE EF	03	06 00	40 D7	02 00	16 30	00 00	
	Increment	BE EF	03	06 00	26 D7	04 00	16 30	00 00	
	Decrement	BE EF	03	06 00	F7 D6	05 00	16 30	00 00	
MENU POSITION V Reset	Execute	BE EF	03	06 00	A8 C7	06 00	44 70	00 00	
BLANK	Set	MyScreen	BE EF	03	06 00	FB CA	01 00	00 30	20 00
		ORIGINAL	BE EF	03	06 00	FB E2	01 00	00 30	40 00
		BLUE	BE EF	03	06 00	CB D3	01 00	00 30	03 00
		WHITE	BE EF	03	06 00	6B D0	01 00	00 30	05 00
		BLACK	BE EF	03	06 00	9B D0	01 00	00 30	06 00
	Get	BE EF	03	06 00	08 D3	02 00	00 30	00 00	
BLANK On/Off	Set	TURN OFF	BE EF	03	06 00	FB D8	01 00	20 30	00 00
		TURN ON	BE EF	03	06 00	6B D9	01 00	20 30	01 00
	Get	BE EF	03	06 00	C8 D8	02 00	20 30	00 00	
START UP	Set	MyScreen	BE EF	03	06 00	CB CB	01 00	04 30	20 00
		ORIGINAL	BE EF	03	06 00	0B D2	01 00	04 30	00 00
		TURN OFF	BE EF	03	06 00	9B D3	01 00	04 30	01 00
	Get	BE EF	03	06 00	38 D2	02 00	04 30	00 00	

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RS-232C communication / Network command table (continued)

Names	Operation Type	Header				Command Data			
						CRC	Action	Type	Setting Code
MyScreen LOCK	Set	TURN OFF	BE EF	03	06 00	3B EF	01 00	C0 30	00 00
		TURN ON	BE EF	03	06 00	AB EE	01 00	C0 30	01 00
	Get	BE EF	03	06 00	08 EF	02 00	C0 30	00 00	
MESSAGE	Set	TURN OFF	BE EF	03	06 00	8F D6	01 00	17 30	00 00
		TURN ON	BE EF	03	06 00	1F D7	01 00	17 30	01 00
	Get	BE EF	03	06 00	BC D6	02 00	17 30	00 00	
AUTO SEARCH	Set	TURN OFF	BE EF	03	06 00	B6 D6	01 00	16 20	00 00
		TURN ON	BE EF	03	06 00	26 D7	01 00	16 20	01 00
	Get	BE EF	03	06 00	85 D6	02 00	16 20	00 00	
AUTO ON	Set	TURN OFF	BE EF	03	06 00	3B 89	01 00	20 31	00 00
		TURN ON	BE EF	03	06 00	AB 88	01 00	20 31	01 00
	Get	BE EF	03	06 00	08 89	02 00	20 31	00 00	
AUTO OFF	Get	BE EF	03	06 00	08 86	02 00	10 31	00 00	
	Increment	BE EF	03	06 00	6E 86	04 00	10 31	00 00	
	Decrement	BE EF	03	06 00	BF 87	05 00	10 31	00 00	
LAMP TIME	Get	BE EF	03	06 00	C2 FF	02 00	90 10	00 00	
LAMP TIME Reset	Execute	BE EF	03	06 00	58 DC	06 00	30 70	00 00	
FILTER TIME	Get	BE EF	03	06 00	C2 F0	02 00	A0 10	00 00	
FILER TIME Reset	Execute	BE EF	03	06 00	98 C6	06 00	40 70	00 00	
MY BUTTON-1	COMPUTER1	BE EF	03	06 00	3A 33	01 00	00 36	00 00	
	COMPUTER2	BE EF	03	06 00	FA 31	01 00	00 36	04 00	
	COMPONENT	BE EF	03	06 00	6A 30	01 00	00 36	05 00	
	S-VIDEO	BE EF	03	06 00	5A 32	01 00	00 36	02 00	
	VIDEO	BE EF	03	06 00	AA 32	01 00	00 36	01 00	
	INFORMATION	BE EF	03	06 00	FA 3E	01 00	00 36	10 00	
	MY MEMORY	BE EF	03	06 00	9A 3F	01 00	00 36	12 00	
	PICTURE MODE	BE EF	03	06 00	0A 3E	01 00	00 36	13 00	
	FILTER RESET	BE EF	03	06 00	3A 3C	01 00	00 36	14 00	
	e-SHOT	BE EF	03	06 00	5A 3D	01 00	00 36	16 00	
	VOLUME +	BE EF	03	06 00	CA 3C	01 00	00 36	17 00	
	VOLUME -	BE EF	03	06 00	3A 39	01 00	00 36	18 00	
	AV MUTE	BE EF	03	06 00	AA 38	01 00	00 36	19 00	
	Get	BE EF	03	06 00	09 33	02 00	00 36	00 00	

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## RS-232C communication / Network command table (continued)

Names	Operation Type	Header			Command Data				
					CRC	Action	Type	Setting Code	
MY BUTTON-2	COMPUTER1	BE EF	03	06 00	C6 32	01 00	01 36	00 00	
	COMPUTER2	BE EF	03	06 00	06 30	01 00	01 36	04 00	
	COMPONENT	BE EF	03	06 00	96 31	01 00	01 36	05 00	
	S-VIDEO	BE EF	03	06 00	A6 33	01 00	01 36	02 00	
	VIDEO	BE EF	03	06 00	56 33	01 00	01 36	01 00	
	INFORMATION	BE EF	03	06 00	06 3F	01 00	01 36	10 00	
	MY MEMORY	BE EF	03	06 00	66 3E	01 00	01 36	12 00	
	PICTURE MODE	BE EF	03	06 00	F6 3F	01 00	01 36	13 00	
	FILTER RESET	BE EF	03	06 00	C6 3D	01 00	01 36	14 00	
	e-SHOT	BE EF	03	06 00	A6 3C	01 00	01 36	16 00	
	VOLUME +	BE EF	03	06 00	36 3D	01 00	01 36	17 00	
	VOLUME -	BE EF	03	06 00	C6 38	01 00	01 36	18 00	
	AV MUTE	BE EF	03	06 00	56 39	01 00	01 36	19 00	
	Get	BE EF	03	06 00	F5 32	02 00	01 36	00 00	
MAGNIFY	Get	BE EF	03	06 00	7C D2	02 00	07 30	00 00	
	Increment	BE EF	03	06 00	1A D2	04 00	07 30	00 00	
	Decrement	BE EF	03	06 00	CB D3	05 00	07 30	00 00	
FREEZE	Set	NORMAL	BE EF	03	06 00	83 D2	01 00	02 30	00 00
		FREEZE	BE EF	03	06 00	13 D3	01 00	02 30	01 00
	Get	BE EF	03	06 00	B0 D2	02 00	02 30	00 00	
e-SHOT	Set	OFF	BE EF	03	06 00	3A C3	01 00	00 35	00 00
		IMAGE1	BE EF	03	06 00	AA C2	01 00	00 35	01 00
		IMAGE2	BE EF	03	06 00	5A C2	01 00	00 35	02 00
		IMAGE3	BE EF	03	06 00	CA C3	01 00	00 35	03 00
	IMAGE4	BE EF	03	06 00	FA C1	01 00	00 35	04 00	
Get	BE EF	03	06 00	09 C3	02 00	00 35	00 00		
e-SHOT IMAGE1 Delete	Execute	BE EF	03	06 00	71 C3	06 00	01 35	00 00	
e-SHOT IMAGE2 Delete	Execute	BE EF	03	06 00	35 C3	06 00	02 35	00 00	
e-SHOT IMAGE3 Delete	Execute	BE EF	03	06 00	C9 C2	06 00	03 35	00 00	
e-SHOT IMAGE4 Delete	Execute	BE EF	03	06 00	BD C3	06 00	04 35	00 00	
CLOSED CAPTION DISPLAY	Set	TURN OFF	BE EF	03	06 00	FA 62	01 00	00 37	00 00
		TURN ON	BE EF	03	06 00	6A 63	01 00	00 37	01 00
		AUTO	BE EF	03	06 00	9A 63	01 00	00 37	02 00
	Get	BE EF	03	06 00	C9 62	02 00	00 37	00 00	
CLOSED CAPTION MODE	Set	CAPTIONS	BE EF	03	06 00	06 63	01 00	01 37	00 00
		TEXT	BE EF	03	06 00	96 62	01 00	01 37	01 00
	Get	BE EF	03	06 00	35 63	02 00	01 37	00 00	
CLOSED CAPTION CHANNEL	Set	1	BE EF	03	06 00	D2 62	01 00	02 37	01 00
		2	BE EF	03	06 00	22 62	01 00	02 37	02 00
		3	BE EF	03	06 00	B2 63	01 00	02 37	03 00
		4	BE EF	03	06 00	82 61	01 00	02 37	04 00
	Get	BE EF	03	06 00	71 63	02 00	02 37	00 00	

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