

Maintenance

Warning:

- Never use flammable air duster or other materials when cleaning the air-filter. Flammable substances may ignite causing fire or breakdown when the lamp is illuminated.
- Do not use flammable solvents (benzene, thinner, etc.) and flammable aerosols when cleaning the projector body and lens. Flammable substances may ignite causing fire or breakdown while the lamp is illuminating.

Caution:

Be sure to turn off the lamp and unplug the power cord from the wall outlet before you perform any maintenance on the projector.

Cleaning of the air-filter

Clean the air-filter frequently (about once a month). If the air-filter or ventilation grilles become clogged with dirt or dust, the temperature inside the projector may rise and cause troubles, such as damage to the inside parts and shortening the life of the panels.

- When the temperature inside the projector rises, the STATUS indicator will blink orange and the lamp will be turned off.
1. Loosen two screws that are fixing the right side panel using a Phillips screwdriver (+) and remove the panel from the projector.
 2. Remove the filter from the right side panel.
 - (1) Remove the holder by pushing the tab of the holder on the air-filter in the direction of the arrow.
 - (2) Remove the air-filter (white), spacer, and air-filter (gray).
 3. Clean dirt and dust adhering to the air-filter using a vacuum.
 - **For the air-filter (white)**
If stubborn stains persist, wash the air-filter with water and dry well in the shade.
 - **For the air-filter (gray)**
If stubborn stains persist, wash the air-filter with diluted detergent, rinse with water, and dry well.
 4. Attach the filter to the right side panel.
 - (1) Attach the air-filter (gray), spacer, and air-filter (white) to the side panel, aligning their notches with that of the side panel.
 - (2) Insert the right tab of the holder to the side panel and push the left tab in the direction of the arrow to attach the side panel.
 5. Attach the right side panel to the projector and fix it with two screws.

Important:

- If the air-filter is damaged or becomes extremely dirty, change it with a new air-filter. Contact your dealer for a new air-filter.
- Use the dedicated air-filter only.

Caution:

Be sure to use the projector with an air-filter. If not, dust may get inside the projector causing fire and failure.

Cleaning of the projector and the ventilation slots

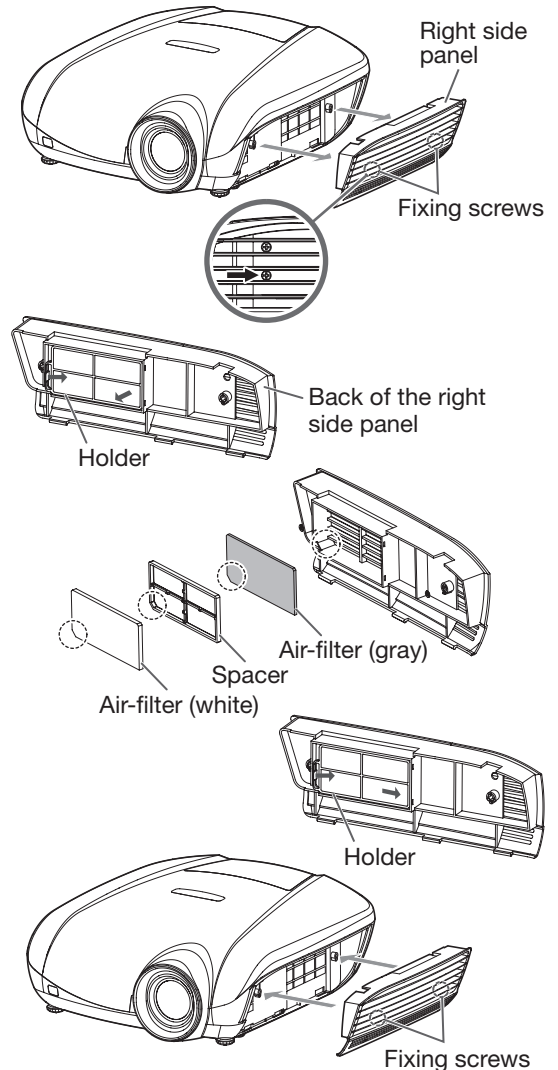
Use a soft cloth to clean the projector and the ventilation grilles. When the grilles become dirty, wipe them with a soft cloth dampened with diluted mild detergent, and then wipe them with a dry cloth.

To protect the surface of the projector from fading or deteriorating:

- Do not spray insecticide on or inside the projector.
- Do not use benzine or thinner to clean it.
- Do not let rubber or plastic materials contact with projector.

Cleaning of the lens




























Use a standard lens-cleaning brush or a piece of lens tissue dampened with lens cleaning fluid. The lens surface is fragile. Use only recommended, nonabrasive lens-cleaning materials. Do not touch the lens with your fingers.



Troubleshooting

Before asking for repair of the projector, check the following. If the symptom persists, stop using the projector, be sure to unplug the power plug, and then contact your dealer.

No image appears on the screen.

Problem	Solution																				
Power can not be turned on.	<ul style="list-style-type: none"> Check whether the indicators are on or off and how they are lightning. <table border="1"> <thead> <tr> <th>POWER</th> <th>STATUS</th> <th>Solution</th> </tr> </thead> <tbody> <tr> <td> Off</td> <td> Off</td> <td> <ul style="list-style-type: none"> Connect the power cord to the projector. Plug the power cord into a wall outlet. Turn on the main power switch. </td> </tr> <tr> <td rowspan="3"> Steady red</td> <td> Off</td> <td> <ul style="list-style-type: none"> If any objects are blocking the air inlet or outlet grill, re move them and carry out the following. <ol style="list-style-type: none"> Turn off the main power switch. Make sure that the projector has cooled off. Turn on the main power switch. Press the POWER button. </td> </tr> <tr> <td> Blinking orange</td> <td> <ul style="list-style-type: none"> If any objects are blocking the air inlet or outlet grille, remove them. Don't expose the air outlet grilles to hot air emitted from a heating appliance. Check whether the filter is clogged with dirt or dust. → Clean the filter, if clogged. (See page 39.) </td> </tr> <tr> <td> Blinking green</td> <td> <ul style="list-style-type: none"> After the STATUS indicator stops blinking, press the POWER button. <ul style="list-style-type: none"> If the main power switch is turned off while the fan is rotating, the lamp may not turn on about 1 minute when the main power switch is turned on next time. The lamp can't turn on again for one minute after it goes out. Press the POWER button several times. </td> </tr> <tr> <td rowspan="2"> Blinking red/green</td> <td> Steady red</td> <td> <ul style="list-style-type: none"> Replace the lamp. (The lamp is at the end of its life.) </td> </tr> <tr> <td> Off</td> <td> <ul style="list-style-type: none"> Attach the lamp cover. </td> </tr> <tr> <td></td> <td> <ul style="list-style-type: none"> Unplug the power cord from the wall outlet and contact your dealer . </td> </tr> </tbody> </table>	POWER	STATUS	Solution	 Off	 Off	<ul style="list-style-type: none"> Connect the power cord to the projector. Plug the power cord into a wall outlet. Turn on the main power switch. 	 Steady red	 Off	<ul style="list-style-type: none"> If any objects are blocking the air inlet or outlet grill, re move them and carry out the following. <ol style="list-style-type: none"> Turn off the main power switch. Make sure that the projector has cooled off. Turn on the main power switch. Press the POWER button. 	 Blinking orange	<ul style="list-style-type: none"> If any objects are blocking the air inlet or outlet grille, remove them. Don't expose the air outlet grilles to hot air emitted from a heating appliance. Check whether the filter is clogged with dirt or dust. → Clean the filter, if clogged. (See page 39.) 	 Blinking green	<ul style="list-style-type: none"> After the STATUS indicator stops blinking, press the POWER button. <ul style="list-style-type: none"> If the main power switch is turned off while the fan is rotating, the lamp may not turn on about 1 minute when the main power switch is turned on next time. The lamp can't turn on again for one minute after it goes out. Press the POWER button several times. 	 Blinking red/green	 Steady red	<ul style="list-style-type: none"> Replace the lamp. (The lamp is at the end of its life.) 	 Off	<ul style="list-style-type: none"> Attach the lamp cover. 		<ul style="list-style-type: none"> Unplug the power cord from the wall outlet and contact your dealer .
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No image appears on the screen.	<ul style="list-style-type: none"> Check that the lens cap is removed. It may take about one minute for the lamp to light up. The lamp fails to light up on rare occasions. In such a case, wait for a few minutes and then try again. If the projector was turned off before the lamp was cooled down sufficiently last time, the fan may start rotating and the POWER button may not work after the main power switch is turned on. After the fan stops rotating, press the POWER button to turn back on the POWER indicator. Check that the intake vent is clean. Set SCART INPUT in the FEATURE menu to OFF. (See page 28.) Check that the lamp cover is closed. (See page 37.) Check that the cables connected to the external devices are not broken. When an extension cable is being used, replace it with the supplied cable for check. When images are displayed correctly, add an RGB signal amplifier to the extension cable. Check the operation manual of the video device for its connection. 																				
Power turns off.	<ul style="list-style-type: none"> This problem may occur when the intake vent and/or exhaust vents are blocked. (In such a case, the STATUS indicator brinks orange.) → Remove the objects blocking the intake vent and/or exhaust vents and then carry out the following procedure. <ol style="list-style-type: none"> Wait for the intake fan and/or exhaust fan to stop. (Wait until the STATUS indicator goes out.) Turn off the main power switch. Wait at least 10 minutes. Turn on the main power switch. Press the POWER button. When the STATUS indicator is steady red, it is indicating that the lamp should be replaced. Replace the lamp in this case. Check that AUTO POWER OFF has been set to OFF. If the lamp has deteriorated, it may go out after a while it illuminates. 																				

Troubleshooting (continued)

No image appears on the screen. (continued)

Problem	Solution
The screen for entering the password appears.	<ul style="list-style-type: none"> PASSWORD FUNCTION in the FEATURE menu has been set to DISPLAY INPUT to enable the password lock. → Enter the password or contact the person in charge of management of the projector. (See page 35.)
“NO SIGNAL” is displayed.	<ul style="list-style-type: none"> Turn on the power of the connected device, or check whether there is something wrong with the connected device. Check whether the external device output signals. (Check this especially when the external device is a notebook computer.) Check that the cable connected to the external device isn't defective. Check that the projector is connected to the external device using the correct terminals. Check that the connected device is correctly selected as the input source. When an extension cord is being used, replace it with the supplied cable and check whether images are projected correctly. If images are projected correctly, use an RGB signal amplifier along with the extension cord.

Images are not displayed correctly.

Problem	Solution
Projected images are shaking. Projected images are displaced.	<ul style="list-style-type: none"> Check that the cable connected to the external device isn't intermittent. Connect the cable's plug with the external device's connector firmly. Press the AUTO POSITION button. Some computers output out-of-spec signals on rare occasion. Adjust the SIGNAL menu. (See page 34.)
Projected images are distorted.	<ul style="list-style-type: none"> Adjust the projector and the screen so that they are perpendicular to each other. (See page 10.)
Projected images are dark.	<ul style="list-style-type: none"> Adjust BRIGHTNESS and CONTRAST in the IMAGE menu. (See page 31.) Replace the lamp. (See page 36.)
Projected images are blurred.	<ul style="list-style-type: none"> Adjust the focus. (See pages 18 and 23.) Clean the lens. Press the ◀ or ▶ button on the remote control to eliminate flicker. Adjust TRACKING and FINE SYNC. in the SIGNAL menu. (See page 34.) Adjust BRIGHTNESS and CONTRAST in the IMAGE menu. (See page 31.) Adjust the projector and the screen so that they are perpendicular to each other. (See page 10.)
Afterimages persist on the screen.	<ul style="list-style-type: none"> This phenomenon is improved by keeping projecting an evenly bright image. (Such “image burn-in” phenomenon where afterimages persist on the screen may occur if a stationary image is kept displayed on the screen for a long time.)
Red, blue, and green dots appear in projected images. Black dots appear in projected images.	<ul style="list-style-type: none"> This phenomenon is unique to LCD projector and isn't a product malfunction. (A small number of pixels always stay on or off, which are not malfunctions. More than 99.99% of the pixels are effective.)
Fine streaks are seen on projected images.	<ul style="list-style-type: none"> This is due to interference with the screen surface and is not a malfunction. Replace the screen or displace the focus a little. Vertical or horizontal streak noise may appear on the projected image, depending on the type of the DVD player or game console you use. In such a case, you can reduce such streak noise by enabling the LPF. (See page 29.)
Projected images become wavy.	<ul style="list-style-type: none"> Connect the plugs of the cables to external devices securely. Keep the projector away from devices that emit interfering radio waves.
Hue is not appropriate.	<ul style="list-style-type: none"> Check that the cables connected to the external devices are not broken.
Tint in projected images is incorrect.	<ul style="list-style-type: none"> Check that COMPUTER INPUT in the SIGNAL menu is correctly set. (See page 29.) Check that the cable connected to the external device isn't broken.

Troubleshooting (continued)

Images are not displayed correctly. (continued)

Problem	Solution
Different color tint.	<ul style="list-style-type: none"> When comparing images projected by two projectors, tints in the displayed images may be different because of variation between their optical components. This is not a malfunction. When comparing the image projected by this projector with those displayed on the television or PC monitor, tints in the displayed images may be different because of difference in the range of color reproducibility. This is not a malfunction.
Only the motion areas in the images supplied from the computer aren't displayed.	<ul style="list-style-type: none"> This is caused by the computer being used. Contact the manufacturer of your computer.
Projected images are obscured.	<ul style="list-style-type: none"> Match the output resolution of your computer with the resolution of the projector. For the method to change the output resolution of the computer, contact the manufacturer of your computer. (See page 45.)
Image remains freezing.	<ul style="list-style-type: none"> When image from VCR is projected, it may remain freezing during speed search. This is not a malfunction.
Noise appears around the image.	<ul style="list-style-type: none"> In some images such as DVD, noise may appear around the recorded image. In this case, decrease the setting value of OVER SCAN of the SIGNAL menu. (See page 29.)

Others

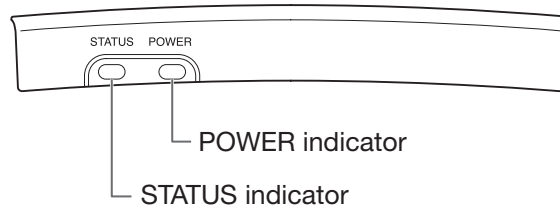
Problem	Solution
The exhaust vents emit warm air.	<ul style="list-style-type: none"> This air comes out after cooling the inside of the projector. You may feel hot, but this is not a malfunction.
The menu can't be used.	<ul style="list-style-type: none"> The microcomputers inside the projector may be wrongly operating because of noise. <ul style="list-style-type: none"> → Turn off the main power, wait about 10 minutes, and turn on the main power again.
"TEMPERATURE!!" is displayed.	<ul style="list-style-type: none"> This indication appears when the ambient temperature rises high. When the ambient temperature stays high, the lamp goes out. <ul style="list-style-type: none"> → Eliminate any causes of the rise in the ambient temperature. This indication appears when the air inlet or outlet grille is blocked. When they are kept blocked, the lamp goes out. <ul style="list-style-type: none"> → Remove the objects blocking the air inlet or outlet grille. Clean the filter, if clogged. (See page 39.)
The ☉ mark appears.	<ul style="list-style-type: none"> This mark appears when ineffective operation is carried out. This isn't a product malfunction.
The remote control doesn't function easily or at all.	<ul style="list-style-type: none"> Check that the batteries are loaded in the remote control or the batteries are not weak. (See page 6.) Check that the remote control sensor isn't exposed to direct sunlight or fluorescent light. (See page 9.) Use the remote control within its operation range. (See page 9.) Use the remote control at least 10 cm away from the projector.
The buttons on the control panel (except for the POWER button) don't function.	<ul style="list-style-type: none"> PASSWORD FUNCTION in the FEATURE menu has been set to MENU ACCESS to enable the password lock. <ul style="list-style-type: none"> → Cancel the password lock or contact the person in charge of management of the projector. (See page 35.)
Mechanical operating noise (clicking sound) is heard.	<ul style="list-style-type: none"> The iris produces sound while operating. This is not a malfunction.

If the following problem occurs after the lamp is replaced, check the following first.

Problem	Solution
The projector does not turn on.	<ul style="list-style-type: none"> Fit the lamp cover securely. (See pages 36 and 37.) Reset the lamp operating time. (See page 37.)
The STATUS indicator blinks.	<ul style="list-style-type: none"> Reset the lamp operating time. (See page 37.)

Indicators

This projector has two indicators, each of which shows the operation condition of the projector. The following offer solutions to possible problems. If these problem persist, turn the projector off and consult your dealer.



Normal condition

POWER	STATUS	CONDITION	NOTE
Steady red	Off	Stand-by	
	Blinking green	Lamp stand-by for power-off	The power cannot be turned on by pressing the POWER button.
Steady green	Blinking green	Lamp stand-by for power-on	The power cannot be turned off by pressing the POWER button.
	Steady green	The power is on. (Normal condition)	

Abnormal condition

POWER	STATUS	CONDITION	POSSIBLE SOLUTION
Steady green or Steady red	Blinking orange	Abnormal temperature <ul style="list-style-type: none"> The ventilation grilles are clogged with dust or dirt. The room temperature is high. 	<ul style="list-style-type: none"> Clean the ventilation grilles. Relocate the projector to a cooler place.
Steady red	Blinking green	The protection circuit is working or the lamp is in an abnormal condition.	<ul style="list-style-type: none"> Wait until the STATUS indicator goes out, then press the POWER button. If the above solution is not effective, replace the lamp.
Steady green	Blinking green/red	Lamp operation time warning. (Total lamp operation time reached 3000 hours* ¹ while the power was on.)	Replace the lamp. Change with a new lamp if this problem recurs.
Steady red	Blinking red Steady red	Lamp operation time warning. (Total lamp operation time reached 3000 hours* ¹ while the power was off.) Lamp operation time warning. (Total lamp operation time reached 4000 hours* ^{1*2} while the power was off.)	
Blinking green/red	Off	The lamp cover isn't closed.	Close the cover correctly.
	Steady or Blinking	Abnormal.	Contact your dealer.

*1: Duration when LAMP MODE of the INSTALLATION menu is set to LOW. When it is set to STANDARD, this duration will be shorted.

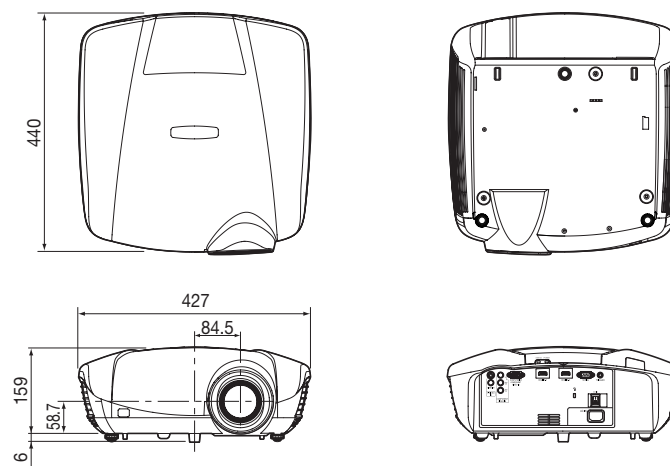
*2: When LAMP MODE is set to STANDARD, this duration will be shorted up to 2000 hours.

Specifications

The specifications and outside appearance of the projector are subject to change without prior notice.

Type	LCD projector		
Model	HC6800		
Display technology	0.74-inch LCD panel: 3 pieces (for R, G, B) (aspect ratio 16:9) Pixel: 1920 x 1080 = 2073600 pixels Total 6220800 pixels		
Projection lens	F 1.8 - 2.3 f= 23.5 - 37.6 mm		
Light-source lamp	170 W		
Image size (projection distance)	50" min. to 300" max. (projection distance 1.5 to 9.5 m (max. Zoom))		
Maximum resolution	Computer signal	Maximum resolution: 1600 x 1200 dots Panel resolution: 1920 x 1080 dots	
	Video signal	NTSC/PAL/SECAM/4.43NTSC/PAL-M/PAL-N/PAL-60	
	Component signal	480i, 480p, 576i, 576p, 720p, 1080i, 1080p Panel resolution: 1920 x 1080 dots	
Computer input	[Signal type] Analog RGB	[Terminal type] Mini D-SUB 15-pin	[Line] 1
Video input	[Signal type] HDMI	[Terminal type] HDMI	[Line] 2
	Video input	RCA	1
	S-video input	S	1
	Component video input	RCA x3 (Y _C B _C R/YP _B Pr)	1
	Control terminal/ others	SERIAL	RS-232C (D-SUB 9-pin)
	TRIGGER	DC 12 V, max. 200 mA (stereo mini jack)	
Operating temperatures	+41°F (+5°C) to +95°F (+35°C)		
Rated voltage	AC100 - 240 V, 50/60 Hz		
Power consumption	2.5 A		
Dimensions	427 mm (W) x 159 mm (H) x 440 mm (D) * Not including protrusion.		
Weight	7.5 kg		
Others	S-video input	Luminance signal: V _{p-p} =1.0 V 75 Ω (negative sync) Chrominance signals: V _{p-p} =0.286 V 75 Ω (burst signal)	
	Video input	V _{p-p} =1.0 V 75 Ω (negative sync)	
	Component video input	Y _C B _C R: V _{p-p} =1.0 V 75 Ω (Y) (negative sync) V _{p-p} =0.7 V 75 Ω (C _B , C _R)	
	Analog input	RGB: V _{p-p} =0.7 V 75 Ω (negative sync) Y _C B _C R: V _{p-p} =1.0 V (Y) (negative sync) V _{p-p} =0.7 V (C _B , C _R) HD/CS: TTL-level (negative or positive polarity) VD: TTL-level (negative or positive polarity)	
	Digital input (HDMI)	HDMI interface (TMDS single link)	

Dimension drawings (unit: mm)



Specifications (continued)

Specification of RGB signals in each computer mode of the projector

Signal mode	Resolution (H x V)	Horizontal frequency (kHz)	Vertical frequency (Hz)	Normal mode (H x V)*1	
TV60, 480i (525i)	–	15.73	59.94	1920 x 1080	*2
TV50, 576i (625i)	–	15.63	50.00	1920 x 1080	*2
1080i 60 (1125i 60)	–	33.75	60.00	1920 x 1080	*2
1080i 50 (1125i 50)	–	28.13	50.00	1920 x 1080	*2
480p (525p)	–	31.47	59.94	1920 x 1080	*2
576p (625p)	–	31.25	50.00	1920 x 1080	*2
720p 60 (750p 60)	–	45.00	60.00	1920 x 1080	*2
720p 50 (750p 50)	–	37.50	50.00	1920 x 1080	*2
1080p 60 (1125p 60)	–	67.50	60.00	1920 x 1080	*2
1080p 50 (1125p 50)	–	56.25	50.00	1920 x 1080	*2
1080p 24 (1125p 24)	–	27.00	24.00	1920 x 1080	*2
PC98	640 x 400	24.82	56.42	1728 x 1080	
CGA70	640 x 400	31.47	70.09	1728 x 1080	
VGA60	640 x 480	31.47	59.94	1440 x 1080	*2
VGA72	640 x 480	37.86	72.81	1440 x 1080	
VGA75	640 x 480	37.50	75.00	1440 x 1080	
VGA85	640 x 480	43.27	85.01	1440 x 1080	
SVGA56	800 x 600	35.16	56.25	1440 x 1080	
SVGA60	800 x 600	37.88	60.32	1440 x 1080	*2
SVGA72	800 x 600	48.08	72.19	1440 x 1080	
SVGA75	800 x 600	46.88	75.00	1440 x 1080	
SVGA85	800 x 600	53.67	85.06	1440 x 1080	
XGA60	1024 x 768	48.36	60.00	1440 x 1080	*2
XGA70	1024 x 768	56.48	70.07	1440 x 1080	
XGA75	1024 x 768	60.02	75.03	1440 x 1080	
XGA85	1024 x 768	68.68	85.00	1440 x 1080	
MAC13	640 x 480	35.00	66.67	1440 x 1080	
MAC16	832 x 624	49.72	74.55	1440 x 1080	
MAC19	1024 x 768	60.24	75.02	1440 x 1080	
HP75	1024 x 768	62.94	74.92	1440 x 1080	
SXGA60	1280 x 1024	63.98	60.02	1350 x 1080	*2
UXGA60	1600 x 1200	75.00	60.00	1440 x 1080	*2

*1: When ASPECT in the FEATURE menu is set to AUTO.

*2: Available for the signal from the HDMI IN terminal.

Important:

- Some computers aren't compatible with the projector.
- The projector's maximum resolution is 1920 x 1080 pixels. It may not display images of higher resolutions than 1920 x 1080 correctly.
- If the resolution and frequency of your computer aren't shown on the table, find the compatible resolution and frequency by changing the resolution of your computer.

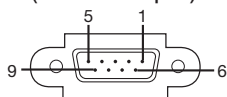
- This projector doesn't support 480p signals from video devices having 4 lines (R, G, B, CS*) or having 5 lines (R, G, B, H, V).

* : Composite Sync

Specifications (continued)

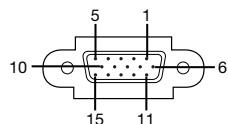
Connectors

SERIAL (D-SUB 9-pin)



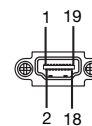
Pin No.	Name	I/O
1	-	-
2	TXD	IN
3	RXD	OUT
4	-	-
5	GND	-
6	-	-
7	-	-
8	-	-
9	-	-

COMPUTER IN/COMPONENT VIDEO IN (Mini D-SUB 15-pin)



Pin No.	Spec.
1	R(REDF)/Pr/Cr
2	G(GREEN)/Y
3	B(BLUE)/Pb/Cb
4	GND
5	GND
6	GND
7	GND
8	GND
9	DDC 5V
10	GND
11	GND
12	DDC Data
13	HD/CS
14	VD
15	DDC Clock

HDMI IN (HDMI 19-pin)



PIN No.	Spec.	PIN No.	Spec.
1	TMDS Data2+	11	TMDS Clock Shield
2	TMDS Data2 Shield	12	TMDS Clock-
3	TMDS Data2-	13	CEC
4	TMDS Data1+	14	-
5	TMDS Data1 Shield	15	SCL
6	TMDS Data1-	16	SDA
7	TMDS Data0+	17	DDC Ground
8	TMDS Data0 Shield	18	+5 V Power
9	TMDS Data0-	19	Hot Plug Detect
10	TMDS Clock+		

Replacement part (option/not included in the box)

Spare lamp

VLT-HC6800LP

 **mitsubishi electric corporation**
1 Zusho Baba, Nagaokakyo-City, Kyoto Japan