

## Notice

All specifications are subject to change without notice.  
All information included in this specification sheet is as of September 2010.

## Product Outline

This product is suitable to project large image in the limited space. A lens is optional for the type of a venue. The installation flexibility is achieved with the lens shift function. This projector has a capability to project various picture signals onto a screen. This projector requires only a minimal amount of space for installation and can produce a large projected image from even a short distance.

Moreover, the projector has the following features to extend its potentiality and broad use

1. The HDMI port can support various image equipment which have digital interface to get clearer picture on a screen
2. The super bright lamp and high quality optical system can fulfill the demands of professional uses.
3. The selectable optional lens units and the super wide range of the lens shift feature will give much more chances to install the product wherever you want
4. The lens shutter can hide your inside operations and will help your presentation
5. The wealth of I/O ports is believed to support any business scene.
6. This projector's network supports the PJLink™ standard.
7. PJLink™ is a unified standard for operating and controlling data projectors.  
PJLink™ enables central control of projectors manufactured by different vendors and projectors can be operated by a controller. PJLink™ compliant equipment can be managed and controlled at any time and in any place, regardless of manufacturer. For the command of PJLink™, see &User's Manual (Technical)  
For specifications of PJLink™, see the web site of the Japan Business Machine and Information System Industries Association. JBMIA PJLink  
<http://pjlink.jbmia.or.jp/english/>
8. The unique Electric Dust Catcher Air filter system is expected to prevent air dust from getting into the projector and offers you less maintenance frequency.

Projector features Introduction Important safety instruction (for moving)

\*For details, see the & User's Manual (concise) or Safety Guide.

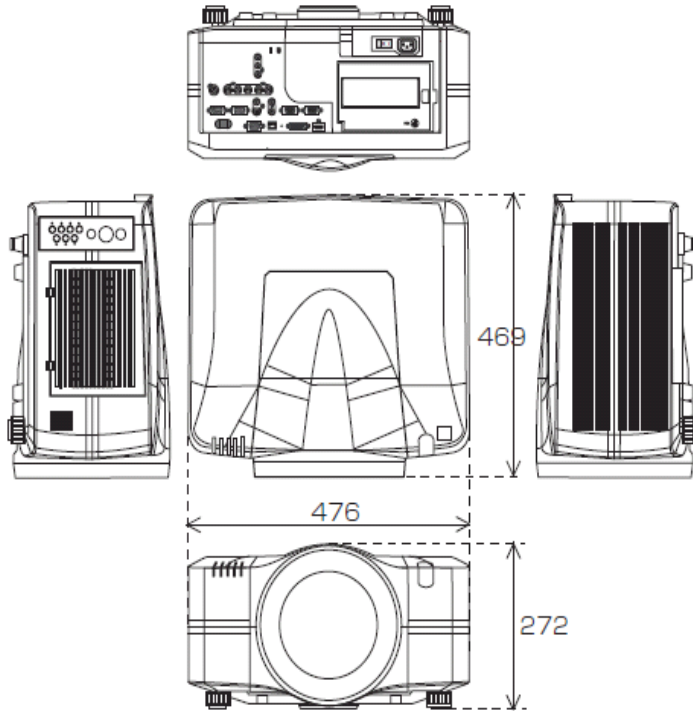
Hitachi LCD Projector Professional Series Product Lineup

<http://av.hitachi.com/projector/categories/professional/lineup.html>

# Specifications

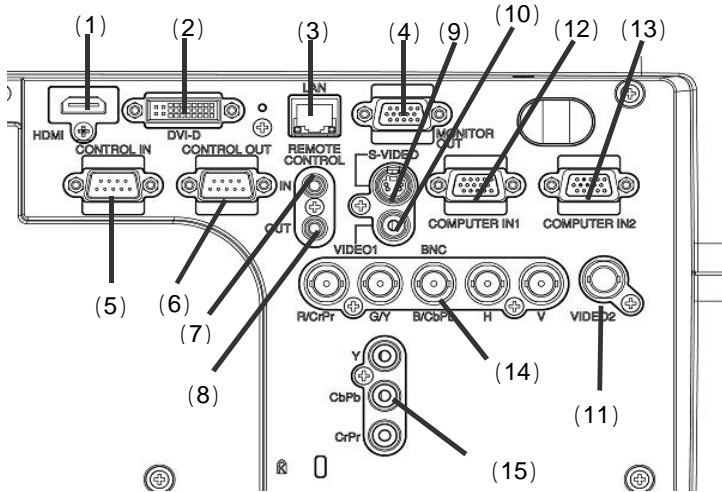
Model	CP-X10000J	CP-WX11000J	CP-SX12000J	
Optical Structure	3 LCD panels, one projection lens, RGB shutter method			
Brightness (Light Output)	7,500 ANSI lumens	6,500 ANSI lumens	7,000 ANSI lumens	
Resolution	1,024 x 768 (XGA)	1,366 x 800 (WXGA)	1,400 x 1,050 (SXGA+)	
Contrast Ratio	2500:1			
LCD Panel	Panel Size	1.3 inch x 3 panels	1.22 inch x 3 panels	
	Aspect Ratio	4:3	17:10	
	Number of Pixels	786,432 pixels (Horizontal 1,024 x Vertical 768)	1,092,800 pixels (Horizontal 1,366 x Vertical 800)	1,470,000 pixels (Horizontal 1,400 x Vertical 1,050)
Lens (Option)	Zoom	Motorized Zoom USL-801,SL-802: x 1.2/ SL-803: x 1.5/ SD-804: x 1.3/ LL-805,UL-806: x 1.8		
	Focus	Powered Focus		
F Number / Focal Length(f)	USL-801: F=2.4 ~ 2.5, f=14 ~ 17mm SL-802 :F=2.5 ~ 2.9, f=34 ~ 41mm SL-803 :F=2.1 ~ 2.7, f=40 ~ 59mm SD-804 :F=1.6 ~ 2.1, f=60 ~ 78mm LL-805 :F=2.2 ~ 3.4, f=77 ~ 139mm UL-806 :F=2.3 ~ 3.5, f=136 ~ 247mm			
Colors	1.074 billion colors			
Display Size	40 inch ~ 700 inch			
Lamp	AC100 - 120V/ AC220 - 240V 50/ 60Hz Power			
Powr Supply	AC100V(50Hz/60Hz), 6.4A			
Input/ Output Terminal	PC Input	Digital Signal	HDMI x 1/ DVI-D x 1	
		Analog Signal	15-pin D-sub Connector x 2/ BNC Terminal x 1	
	Video Input	Component ( Y ,Pb/Cb,Pr/Cr)	RCA Jack x 1/ BNC Terminal x 1 (Shared with Analog RGB)	
		S-Video	Mini DIN 4-pin Connector x 1	
		Composit	RCA Jack x 1/ BNC x 1	
	Audio Input/ Output	---		
	Computer Mon. O	Analog Signal	15-pin D-sub Connector x 1	
	Control Input	RS-232C x 1 (D-sub 9-pin x 1)		
	Control Output	RS-232C x 1 (D-sub 9-pin x 1)		
	Network	RJ-45 port/ 100 base-T		
	Wired Remote Control Input	Stereo Mini Jack x 1		
Wired Remote Control Output	Stereo Mini Jack x 1			
Speaker	---			
Lens Shift	Powered			
Keystone	V: +/- 40°, H: +/- 20°	V: +/- 15°, H: +/- 5°	V: +/- 15°, H: +/- 5°	
Cabinet	Material: Plastic molded, Color: Dark gray			
Dimension (Width x Height x Depth)	476mm(W) x 272mm(H) x 469mm(D) (18.74" x 10.71" x 18.46") [excluding protruding part]			
Weight	13.1kg (28.9lbs.) without lens			
Package Size	582mm(W) x 426mm(H) x 559mm(D) (22.91" x 16.77" x 22.00")			
Total Weight in ceiling mount installation	Bracket for High Ceiling Mount (HAS-304H +HAS-10000)	With USL-801 lens attached: approx. 24.9kg (Unit 13.1kg + Bracket 7.8kg + Lens 4.0kg) With SL-802 lens attached: approx. 25.3kg (Unit 13.1kg + Bracket 7.8kg + Lens 4.4kg) With SL-803 lens attached: approx. 25.7kg (Unit 13.1kg + Bracket 7.8kg + Lens 4.8kg) With SD-804 lens attached: approx. 24.8kg (Unit 13.1kg + Bracket 7.8kg + Lens 3.9kg) With LL-805 lens attached: approx. 24.7*kg (Unit 13.1kg + Bracket 7.8kg + Lens 3.8kg) With LL-806 lens attached: approx. 24.7*kg (Unit 13.1kg + Bracket 7.8kg + Lens 4.5kg)		
	Bracket for Low Ceiling Mount (HAS-204L +HAS-10000)	With USL-801 lens attached: approx. 22.3kg (Unit 13.1kg + Bracket 5.2kg + Lens 4.0kg) With SL-802 lens attached: approx. 22.7kg (Unit 13.1kg + Bracket 5.2kg + Lens 4.4kg) With SL-803 lens attached: approx. 23.1kg (Unit 13.1kg + Bracket 5.2kg + Lens 4.8kg) With SD-804 lens attached: approx. 22.2kg (Unit 13.1kg + Bracket 5.2kg + Lens 3.9kg) With LL-805 lens attached: approx. 22.1kg (Unit 13.1kg + Bracket 5.2kg + Lens 3.8kg) With LL-806 lens attached: approx. 22.8kg (Unit 13.1kg + Bracket 5.2kg + Lens 4.5kg)		
Installation Method	Table Top/ Ceiling Mount			
Operation Temperature	5 ~ 35 deg. C (41 - 95 deg. F)			
Humidity (ambient environment)	20 ~ 80%(non condensing)			
Standard Accessories	Analog RGB Cable (2m) x 1, Power Cord (3m) x 1, Wireless Remorte Control Unit x 1, "AA" Batteries x 2, Operating Guide (14 Languages), Security Label			
Option	Optional Lens Ultra Short Throw Lens: USL-801 Short Throw Lens: SL-802, SL-803 Standard Throw Lens: SD-804 Long Throw Lens: LL-805 Ultra Long Thorow Lens: UL-806 CP-X10000J 001 (DT01001) Filter Unit: CP-X10000J 002 (MU06351) Cable Cover: CC10000 Lens Adaptor: CP-X10000J 003 (KU00041) Bracket for Ceiling Mount: HAS-10000 Bracket for Low Ceiling Mount: HAS-20			
Wireless Remote Control Unit Specification	Range: approx. 3m, Incidence Angle: Vertical and Horizontal within 30 degree. Battery Type: "AA" x 2			
System Requirements for Network Function Operation	Web Browser: Internet Explorer® 5.5 or later LAN Cable: CAT-5 or greater			

## Dimension



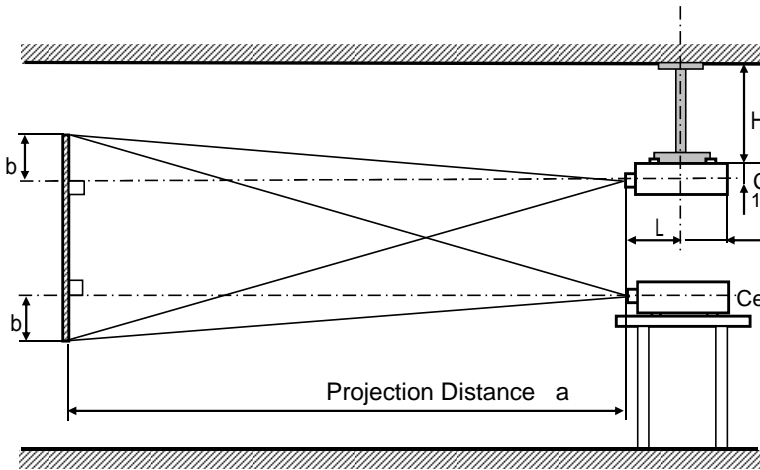
[Unit: mm]

## Terminal



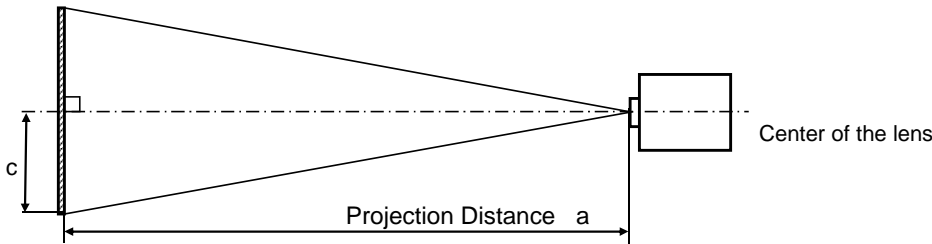
- (1) HDMI Terminal
- (2) DVI-D Terminal
- (3) LAN Connector
- (4) MONITOR OUT Terminal
- (5) CONTROL IN Terminal
- (6) CONTROL OUT Terminal
- (7) REMOTE CONTROL IN Terminal
- (8) REMOTE CONTROL OUT Terminal
- (9) S-VIDEO Terminal
- (10) VIDEO 1 Terminal
- (11) VIDEO 2 Terminal
- (12) COMPUTER IN1 Terminal
- (13) COMPUTER IN2 Terminal
- (14) BNC (G/Y, B/Cb/Pb, R/Cr/Pr, H, V) Terminal
- (15) COMPONENT (Y, Cb/Pb, Cr/Pr) Terminal

# Projection Distance



H: Distance between Ceiling and the bracket  
 With HAS-204L attached: 163mm  
 With HAS-304L attached: 917mm ~ 1517mm

L: Distance between Lens tip to the center of the bracket  
 With USL-80: 223mm  
 With SL-802: 228mm  
 With SL-803: 257mm  
 With SD-804: 238mm  
 With LL-805: 246mm  
 With UL-806: 264mm



Lens Model	USL-801				SL-802				SL-803			
	4:3		17:10		4:3		17:10		4:3		17:10	
	a		a		a		a		a		a	
Screen Size [inch]	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
40	0.4	0.4	0.4	0.5	0.9	1.2	1.0	1.3	1.1	1.7	1.2	1.8
60	0.6	0.7	0.6	0.8	1.5	1.8	1.6	1.9	1.7	2.6	1.9	2.8
70	0.7	0.8	0.7	0.9	1.7	2.1	1.9	2.3	2.0	3.0	2.2	3.3
100	1.0	1.2	1.1	1.3	2.5	3.0	2.7	3.3	3.0	4.4	3.2	4.7
120	1.2	1.5	1.3	1.6	3.0	3.7	3.3	4.0	3.6	5.3	3.9	5.7
150	1.5	1.8	1.7	2.0	3.8	4.6	4.1	5.0	4.5	6.6	4.8	7.1
200	2.1	2.5	2.2	2.7	5.1	6.1	5.5	6.6	6.0	8.9	6.5	9.6
250	2.6	3.1	2.8	3.3	6.4	7.7	6.9	8.3	7.5	11.1	8.1	12.0
300	3.1	3.7	3.4	4.0	7.7	9.3	8.3	10.0	9.1	13.3	9.8	14.4
350	3.7	4.3	3.9	4.7	9.0	10.8	9.7	11.7	10.6	15.6	11.4	16.8
400	4.2	5.0	4.5	5.4	10.3	12.4	11.1	13.4	12.1	17.8	13.1	19.2
500	5.2	6.2	5.7	6.7	12.9	15.5	13.9	16.7	15.2	22.3	16.4	24.0
600	6.3	7.5	6.8	8.1	15.4	18.6	16.7	20.1	18.2	26.8	19.6	28.8
700	7.4	8.7	7.9	9.4	18.0	21.7	19.4	23.5	21.3	31.2	22.9	33.7
K1	0.0106	0.0126	0.0114	0.0135	0.0259	0.0311	0.0279	0.0336	0.0305	0.0447	0.0329	0.0482
K2	-0.062	-0.057	-0.06	-0.056	-0.086	-0.08	-0.087	-0.08	-0.098	-0.087	-0.099	-0.087

Lens Model	SD-804				LL-805				UL-806			
	4:3		17:10		4:3		17:10		4:3		17:10	
	a		a		a		a		a		a	
Screen Size [inch]	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
40	1.7	2.3	1.8	2.4	2.2	4.2	2.4	4.5	3.9	7.4	4.3	8.0
60	2.6	3.5	2.8	3.7	3.4	6.3	3.7	6.8	6.0	11.2	6.5	12.1
70	3.1	4.0	3.3	4.4	4.0	7.4	4.3	8.0	7.1	13.1	7.6	14.1
100	4.4	5.8	4.8	6.3	5.7	10.7	6.2	11.5	10.2	18.8	11.0	20.3
120	5.4	7.0	5.8	7.6	6.9	12.8	7.5	13.8	12.3	22.6	13.3	24.4
150	6.7	8.8	7.3	9.5	8.7	16.1	9.4	17.3	15.4	28.3	16.6	30.5
200	9.0	11.8	9.8	12.7	11.7	21.5	12.6	23.2	20.6	37.8	22.2	40.8
250	11.3	14.8	12.2	16.0	14.6	26.9	15.8	29.0	25.8	47.3	27.9	51.0
300	13.6	17.8	14.7	19.2	17.6	32.3	19.0	34.9	31.1	56.8	33.5	61.2
350	15.9	20.7	17.2	22.4	20.6	37.7	22.2	40.7	36.3	66.3	39.1	71.5
400	18.2	23.7	19.7	25.6	23.5	43.1	25.4	46.5	41.5	75.8	44.7	81.7
500	22.8	29.7	24.6	32.1	29.5	54.0	31.8	58.2	51.9	94.8	56.0	102.2
600	27.4	35.6	29.6	38.5	35.4	64.8	38.2	69.9	62.3	113.8	67.2	122.7
700	32.0	41.6	34.6	44.9	41.3	75.6	44.5	81.6	72.8	132.8	78.4	143.2
K1	0.046	0.0596	0.0496	0.0644	0.0593	0.1083	0.0639	0.1168	0.1043	0.1901	0.1124	0.2049
K2	-0.154	-0.126	-0.154	-0.133	-0.18	-0.176	-0.18	-0.176	-0.232	-0.225	-0.232	-0.225

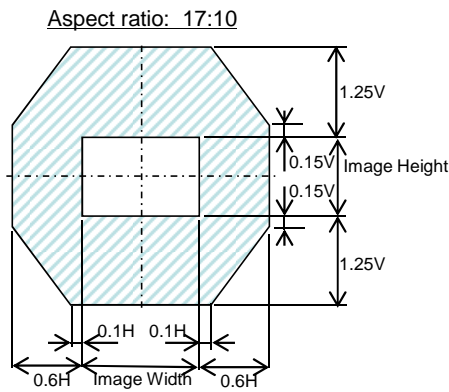
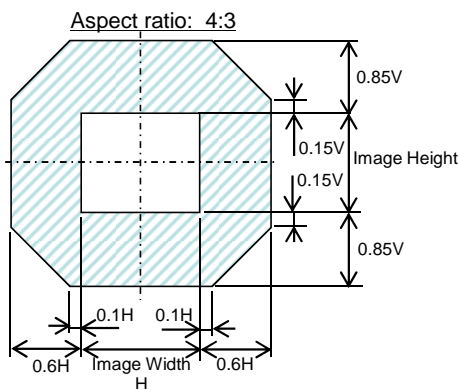
## Projection Distance (continued)

- \* The above figures are design values only. Actual distances will be within +/- 10% of those provided.
- \* Projection distances other than those in the above table can be obtained by the following formula.  
Projection Distance = (K1) x Diagonal Screen Size + (K2)
- \* The projection distance for panel aspect ratio 4:3 is the value when an XGA (1024x768) or SXGA (1400x1050) signal is input.  
The projection distance for panel aspect ratio 17:10 is the value when a WXGA (1366x800) signal is input.
- \* The projection distances for screen sizes 16:10, 16:9, and 4:3 can be obtained by the following formulas depending on the panel aspect ratio.  
For panel aspect ratio 4:3  
For screen size 16:9: Projection distance = (K1) x 0.8171 x diagonal screen size + (K2)  
For panel aspect ratio 17:10  
For screen size 16:10: Projection distance = (K1) x 1.0453 x diagonal screen size + (K2)  
For screen size 16:9: Projection distance = (K1) x 0.9669 x diagonal screen size + (K2)  
For screen size 4:3: Projection distance = (K1) x 1.1834 x diagonal screen size + (K2)

## Lens Shift Range

Lens Model	Vertical Lens Shift Range				Horizontal Lens Shift Range			
	4:3		17:10		4:3		17:10	
Aspect Ratio	b		b		c		c	
Screen Size [inch]	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
40	-23	84	-40	91	-7	88	-10	97
60	-34	125	-59	137	-10	132	-15	146
70	-40	146	-69	159	-12	154	-17	170
100	-56	209	-99	228	-17	220	-24	243
120	-68	251	-119	273	-20	264	-29	292
150	-85	313	-149	342	-25	330	-36	365
200	-113	418	-198	456	-34	440	-49	487
250	-141	522	-248	570	-42	550	-61	608
300	-169	627	-297	684	-51	660	-73	730
350	-198	731	-347	797	-59	770	-85	851
400	-226	835	-396	911	-68	881	-97	973
500	-282	1044	-495	1139	-85	1101	-122	1216
600	-339	1253	-594	1367	-102	1321	-146	1460
700	-395	1462	-693	1595	-119	1541	-170	1703

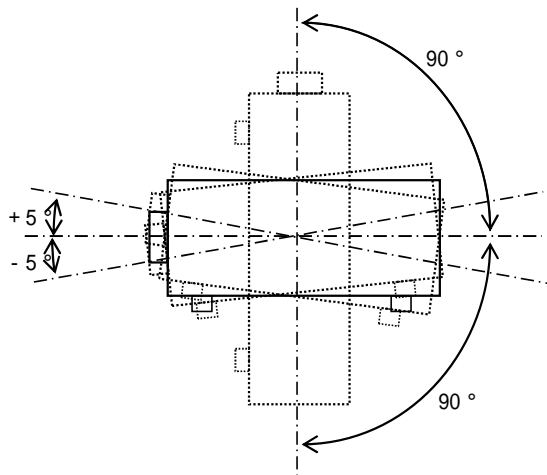
The image can be adjusted in the below range with lens shift.



## Installable Angle

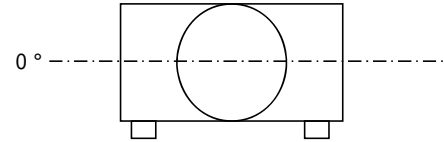
### Vertical

The allowance of +/- 5 degree angle or 90 degree upward/ downward.

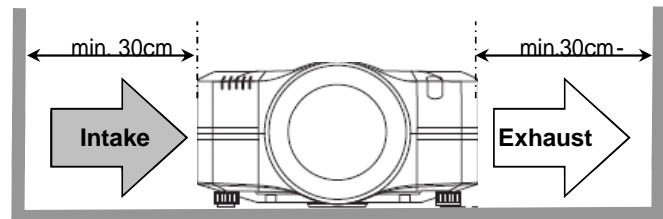
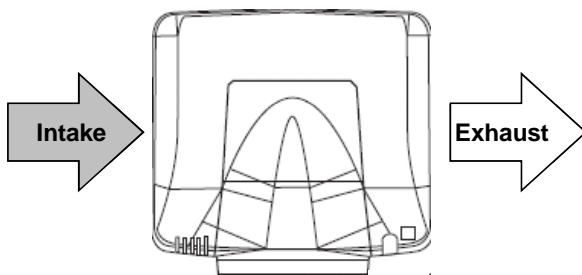


### Horizontal

The unit should be kept in the flat position.



## Intake/Exhaust Direction



### Installation Environment

Do not place the product on an unstable surface such as an uneven, tilted, or vibrating place.

Do not place the product near water - for example, near a bathtub, washbowl, kitchen sink, or laundry tub; in a wet basement, near a swimming pool, beach or outdoors.

Do not place the product in a dusty, smoky, or humid place - for example, on a passage, in a smoking space, in a kitchen, or outdoors.

Do not place the product near heat sources - for example, radiators, heat registers, stoves, or other product (including amplifiers) that produces heat.

Do not place the product in a magnetic field.

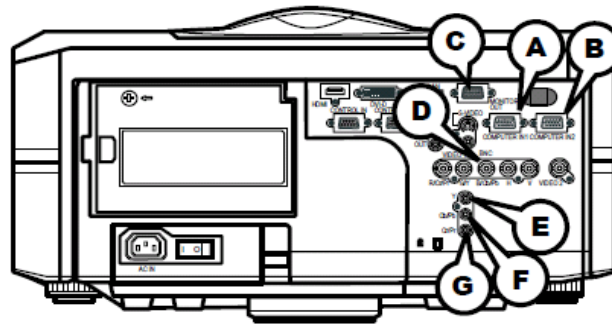
Do not place the product in a place where radio interference may be caused.

Do not place the product in a place where any strong lights hit the remote sensors.

### Installation (Ceiling Mount)

Consult with your dealer about installation beforehand.

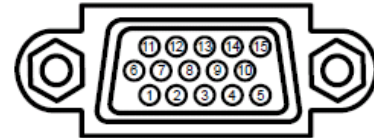
Use only the mounting accessories the manufacturer specified, and leave installing and removing the product with the mounting accessories to the service personnel.



**Ⓐ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



At RGB signal

Pin	Signal	Pin	Signal
1	Video Red	9	(No connection)
2	Video Green	10	Ground
3	Video Blue	11	(No connection)
4	(No connection)	12	Ⓐ,Ⓑ: SDA (DDC data), Ⓒ : (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		

**ⒹBNC (G/Y, B/Cb/Pb, R/Cr/Pr, H, V)**

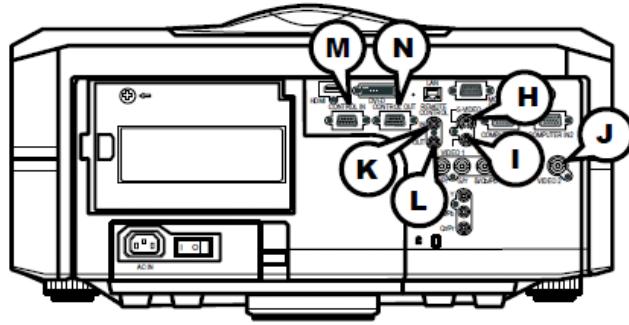
- BNC jack x 5
- Video : Analog 0.7Vp-p, 75Ω terminator
- H/V, sync, : TTL level (positive/negative)
- Composite sync, : TTL level

**COMPONENT VIDEO ⒺY, ⒻCb/Pb, ⒼCr/Pr**

RCA jack x3

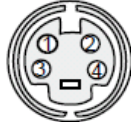
- System: 480i@60, 480p@60, 576i@50, 576p@50, 720p@50/60, 1080i@50/60, 1080p@50/60

Port	Signal
Y	Component video Y, 1.0±0.1Vp-p, 75Ω terminator with composite sync
Cb/Pb	Component video Cb/Pb, 0.7±0.1Vp-p, 75Ω terminator
Cr/Pr	Component video Cr/Pr, 0.7±0.1Vp-p, 75Ω terminator



**ⓂS-VIDEO**

Mini DIN 4pin jack



Pin	Signal
1	Color signal 0.286Vp-p (NTSC, burst), 75Ω terminator Color signal 0.300Vp-p (PAL/SECAM, burst) 75Ω terminator
2	Brightness signal, 1.0Vp-p, 75Ω terminator
3	Ground
4	Ground

**ⓂVIDEO 1**

RCA jack

- System: NTSC, PAL, SECAM, PAL-M, PAL-N, NTSC4.43
- 1.0±0.1Vp-p, 75Ω terminator

**ⓂVIDEO 2**

BNC jack

- System: NTSC, PAL, SECAM, PAL-M, PAL-N, NTSC4.43
- 1.0±0.1Vp-p, 75Ω terminator

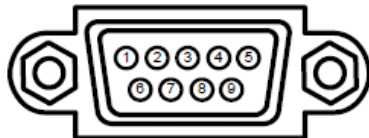
**REMOTE CONTROL ⓂIN ⓂOUT**

∅3.5 stereo mini jack

- To be connected with the remote control that came with the projector.

**CONTROL ⓂIN ⓂOUT**

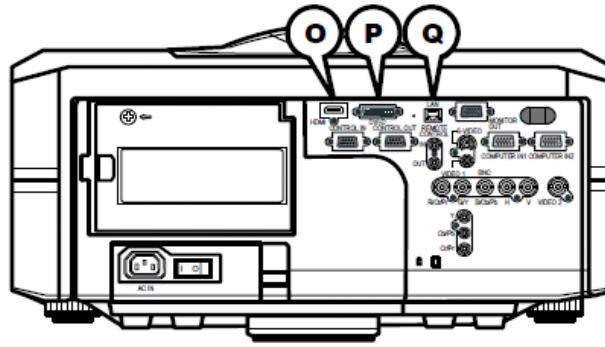
D-sub 9pin plug



- About the details of RS-232C communication, please refer to the following RS-232C Communication in this manual.

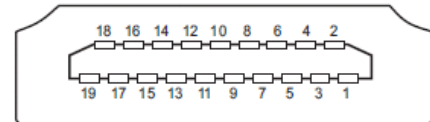
Pin	Signal	Pin	Signal	Pin	Signal
1	(No connection)	4	(No connection)	7	RTS
2	RD	5	Ground	8	CTS
3	TD	6	(No connection)	9	(No connection)





**Ⓞ HDMI**

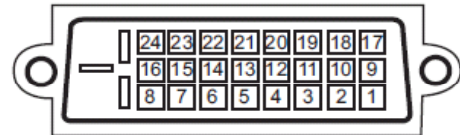
• Type : Digital video connector



Pin	Signal	Pin	Signal	Pin	Signal
1	T.M.D.S. Data2 +	8	T.M.D.S. Data0 Shield	15	SCL
2	T.M.D.S. Data2 Shield	9	T.M.D.S. Data0 -	16	SDA
3	T.M.D.S. Data2 -	10	T.M.D.S. Clock +	17	DDC/CEC Ground
4	T.M.D.S. Data1 +	11	T.M.D.S. Clock Shield	18	+5V Power
5	T.M.D.S. Data1 Shield	12	T.M.D.S. Clock -	19	Hot Plug Detect
6	T.M.D.S. Data1 -	13	CEC		
7	T.M.D.S. Data0 +	14	Reserved(N.C. on device)		

**Ⓟ DVI-D**

DVI-D jack (digital to digital)

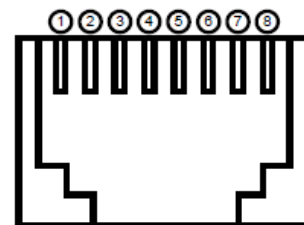


Pin	Signal	Pin	Signal	Pin	Signal
1	T.M.D.S. Data2 -	9	T.M.D.S. Data1 -	17	T.M.D.S. Data0 -
2	T.M.D.S. Data2 +	10	T.M.D.S. Data1 +	18	T.M.D.S. Data0 +
3	T.M.D.S. Data2/4 Shield	11	T.M.D.S. Data1/3 Shield	19	T.M.D.S. Data0/5 Shield
4	-	12	-	20	-
5	-	13	-	21	-
6	DDC Clock	14	+5V Power	22	T.M.D.S. Clock Shield
7	DDC Data	15	Ground (for +5V)	23	T.M.D.S. Clock +
8	-	16	Hot Plug Detect	24	T.M.D.S. Clock -

**Ⓞ LAN**

RJ-45 jack

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



## Signals

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	91.2	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	65.3	60.0	VESA	SXGA+ (60Hz)
1280 x 800	49.7	60.0	VESA	1280 x 800 (60Hz)

## Notice for the life of lamp and optical parts

- 1) Lamp and other optical parts (LCD panel, polarizer, polarized beam splitter) are worn out with the longer usage. For its serving long period of time, those parts require repair.
  - 2) 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 it. 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 hole.
- Type number of the optional lamp unit: DT-01001  
Do not turn projector on again for ten minutes after shutdown. Neglect can shorten the lifetime of the lamp.
- 3) In case of 6 hours per day usage everyday, optical parts need to be replaced even shorter than warranty period.
  - 4) LCD panel needs to be replaced in shorter period when the continuous usage of 6 hours or more.