

Laser Light Source Projector

User Manual



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Important safety instructions

Your projector has been designed and tested, and meets the latest safety standards for information technology equipment. However, in order to ensure the safe use of the product, it is essential to follow the instructions mentioned in the manual and marked on the product.

- Please read the manual before using the projector and keep it for future reference.
- Please do not look at the projection lens during use, as strong light beam may hurt your eyes.
- In some countries/regions, the power supply voltage is unstable. The projector can operate normally within the voltage range of 100 to 240 (volt) of the AC power supply, but in the areas that the voltage fluctuation exceeds 10 and the power supply voltage may fluctuate or be cut off, it is recommended that you connect the projector through a power stabilizer, a surge protector or an uninterruptible power supply (UPS).
- When the projector is working, do not use any object to block the projection lens, otherwise the object will be heated and deformed, or even fired.
- Please do not place the projector on an unstable shelf or a table, otherwise the projector may fall and maybe seriously damaged.
- Do not disassemble the projector before the power to the projector is not cut off. Dangerous high voltage components are arranged in the projector. Electric shock and death may occur in case of contact with human body. Therefore, you can open or remove the cover of the projector in any case. Only qualified professional maintenance personnel can maintain the projector.
- Please do not place liquid near or on the projector. If liquid splashes into the projector, the projector may not work properly. If the projector is wet, the power cord of the projector shall be unplugged, and then you shall call the authorization service center of the projector for the maintenance of the projector.

I. Introduction

The projector series of the product is characterized of high brightness and high-definition resolution, and widely applied to digital high-definition cinemas, large exhibition halls, private cinemas, large-screen splicing, etc. It is also suitable for digital advertisement display, large-scale stadium display, city image and project construction. Bright and clear images can be displayed through the projector by virtue of high brightness output while clear and sharp images are played on personal computers, cameras and blue-ray players from different signal sources, so that users can enjoy the visual shocks. Not only that, the projector is conveniently and flexibly applied to large screen splicing demonstration and used to display more applications of pictures through full control of PC.



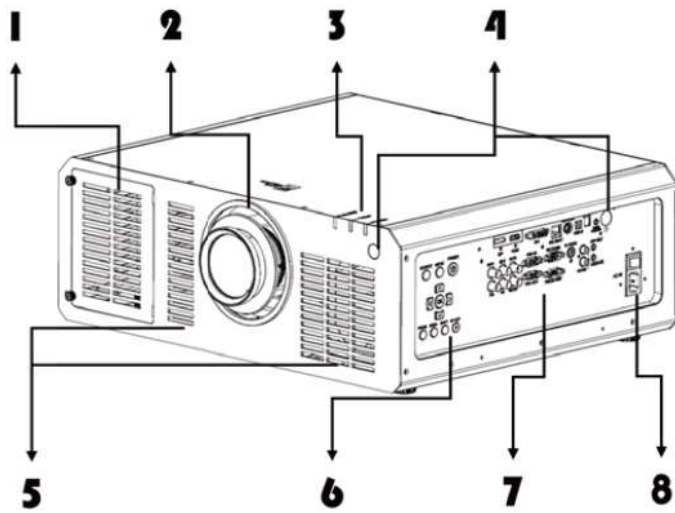
1. Characteristics of Projector

- With single chip laser DLP™ projector for providing high-definition images;
- The service life is 20,000 hours;
- Support vertical and lateral projections;
- Due to vertical digital keystone correction function, ideal symmetrical images can be easily obtained;
- Variety of lenses can be changed with one key to adapt to complicated installation conditions;
- Due to built-in color correction function, consistency of images can be guaranteed;
- Rich control interfaces are suitable for multi-control protocols;
- Support 3D-ready/3D color management/up, down, left, right format input
- Liquid cooling system is applied to DLP® display chip and laser light source to dissipate heat efficiently and ensure stable operation of the projector;
- HD-BaseT supports 100m-long high definition signal transmission without signal loss;
- Support direct power-off protection, so that the projector can be turned on or off immediately;
- Due to automatic temperature control, ambient temperature can be detected in real time, fan speed can be adjusted automatically, and the projector can work with 38db low noise;
- Support adjustment on up and down displacement + 100% large-scale lens displacement and large-scale adjustment of images, so that the projector can be more flexibly installed.

2. External Overview of Projector

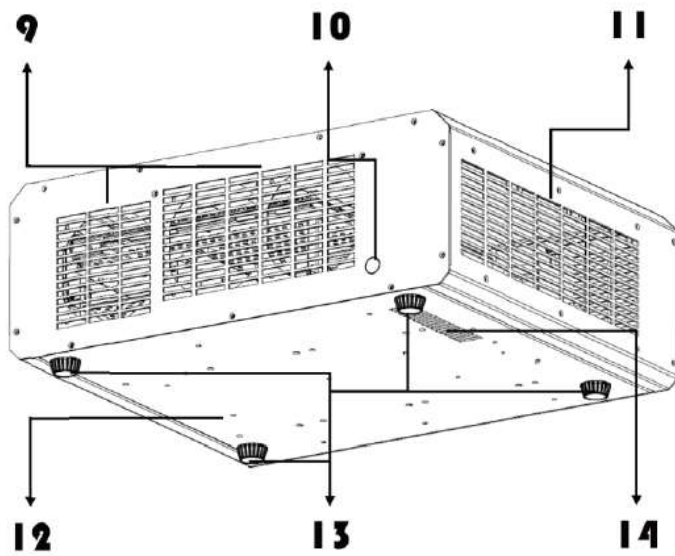
Front/Top/Right





- 1 HEPA high-efficiency filter screen
- 2 Projection lens
- 3 Indicator light
- 4 Remote control receiver (front/side)
- 5 Air inlet
- 6 Keypad
- 7 Interface panel
- 8 Power interface/switch

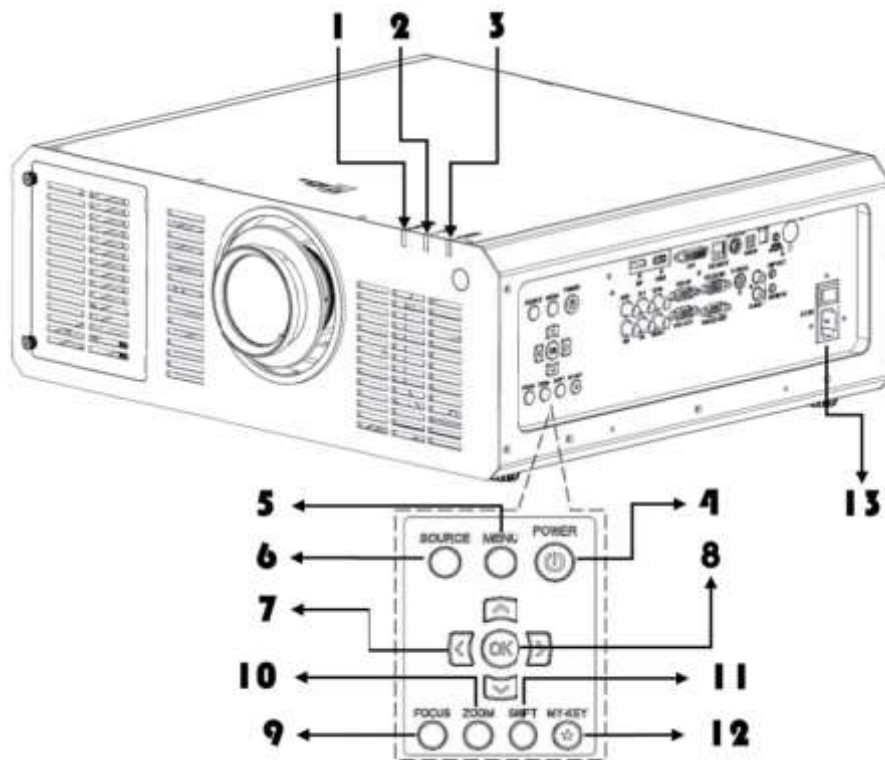
Back/Bottom/Left



- 9 Air outlet
- 10 Remote controller receiver
- 11 Air inlet
- 12 Hoisting hole
- 13 Adjustment pin
- 14 Air outlet

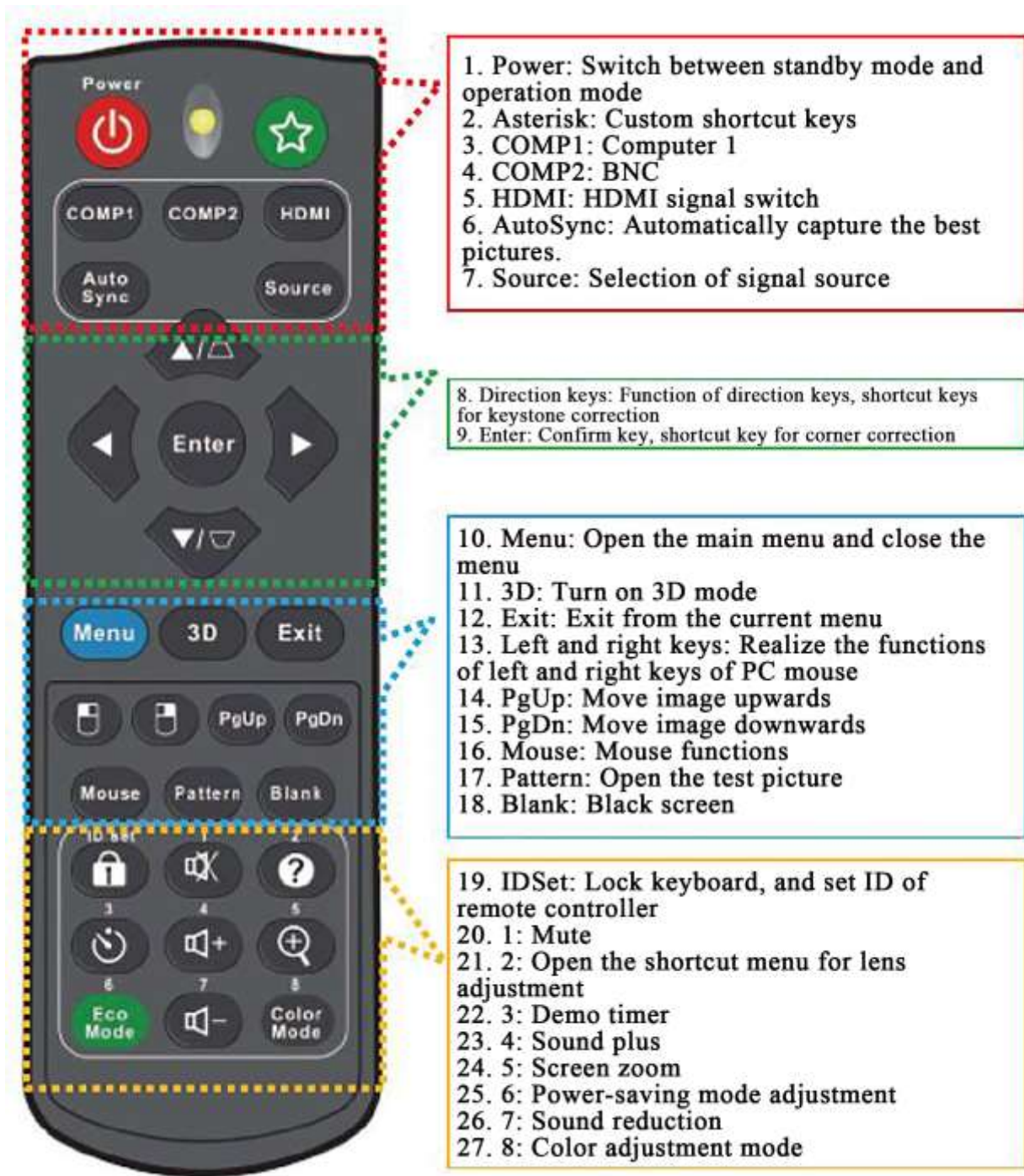
3. Control and Function

Projector



1.	Warning indicator light	8.	Confirm key
2.	Temperature indicator light	9.	Focus key
3.	Power supply indicator light	10.	Zoom key
4.	Power supply key	11.	Lens displacement key
5.	OSD menu	12.	Custom key
6.	Signal selection	13.	Power switch
7.	Direction/selection key		

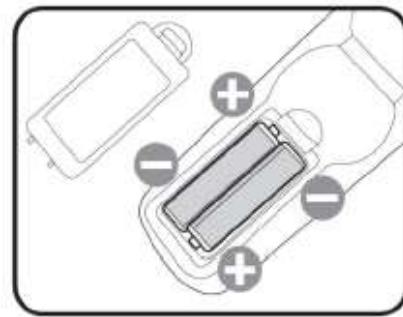
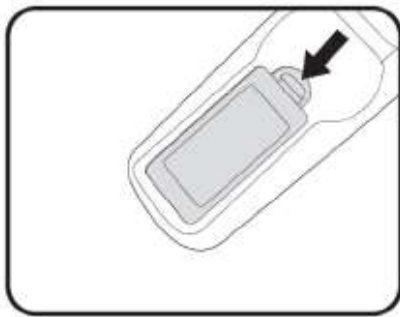
Remote controller



Infrared (IR) remote control sensors are located at front/right/rear sides of the projector. When the remote controller is held, it is necessary to maintain an orthogonal angle between the remote controller and the infrared remote-control sensor within 30 degrees, so that the projector can work normally. The distance between the remote controller and the sensor must not exceed 8m (about 26 feet). Obstacles which will block the infrared beam shall not be located between the remote controller and the infrared sensor on the projector.

- Replace the battery of the remote controller

- Open the battery cover as follows: Turn over the remote controller with the back facing up, press and hold the handle on the battery cover with your fingers, and push the battery cover according to the direction indicated by the arrow in figure. Open the battery cover.
- Take out the existing battery (if necessary), and then put in two AAA batteries according to the battery polarity indicated on the battery compartment. Align (+) to the positive pole and align (-) to the negative pole.
- Reinstall the battery cover on the battery compartment and push it back to its original position. Stop pushing the battery cover after hearing a click.



- **Avoid overheating and overwetting**
- **If the battery is not placed correctly, the remote controller or the battery may be damaged.**
- **The used batteries shall be treated according to the battery manufacturer's instructions.**
- **Do not throw the battery into the fire, which may cause explosion hazard.**
- **If the battery is dead or you will not use the remote controller for a long time, please take out the battery to prevent battery leakage from damaging the remote controller.**

II. Installation of Projector

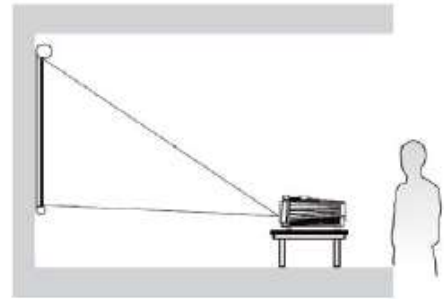
You can choose the installation location according to your room layout or personal preference. Factors to be considered include: the size and location of the screen, the location of an appropriate power socket, and the location of the projector and other equipment as well as the distance between them.

1. Placement Method

According to the design, there are four locations where the projector can be placed:

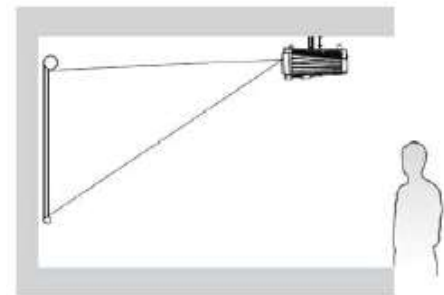
➤ Front Desktop

When projection is carried out on the position, the projector shall be located on the table at front of the screen. This is the most common way to place projectors, which is fast to install and easy to move.



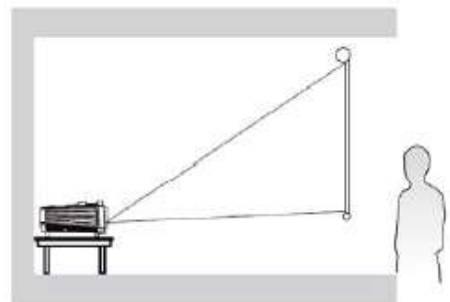
➤ Front Ceiling

When projection is carried out on the position, the projector is hung upside down on the ceiling at front of the screen. You can purchase a kit for suspension installation of the projector on ceiling from the dealer, and then install the projector on the ceiling. After the projector is started, the mode of Front Ceiling can be set in Basic Setting Menu > Projector Position Menu.



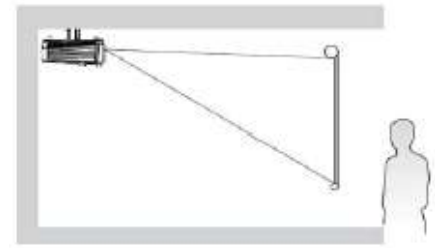
➤ Rear Desktop

When projection is carried out on the position, the projector shall be located on the table behind the screen. Please pay attention that a dedicated rear projection screen shall be prepared for this installation location. After the projector is started, the mode of Rear Desktop can be set in Basic Setting Menu > Projector Position Menu.



➤ Rear Ceiling

When projection is carried out on the position, the projector shall be hung upside down on the ceiling behind the screen. Please pay attention that a dedicated rear projection screen and a kit for suspension installation of the projector on ceiling shall be prepared for this installation location. After the projector is started, the mode of Rear Ceiling can be set in Basic Setting Menu > Projector Position Menu.



2. Projection Size/Projection Distance Relation

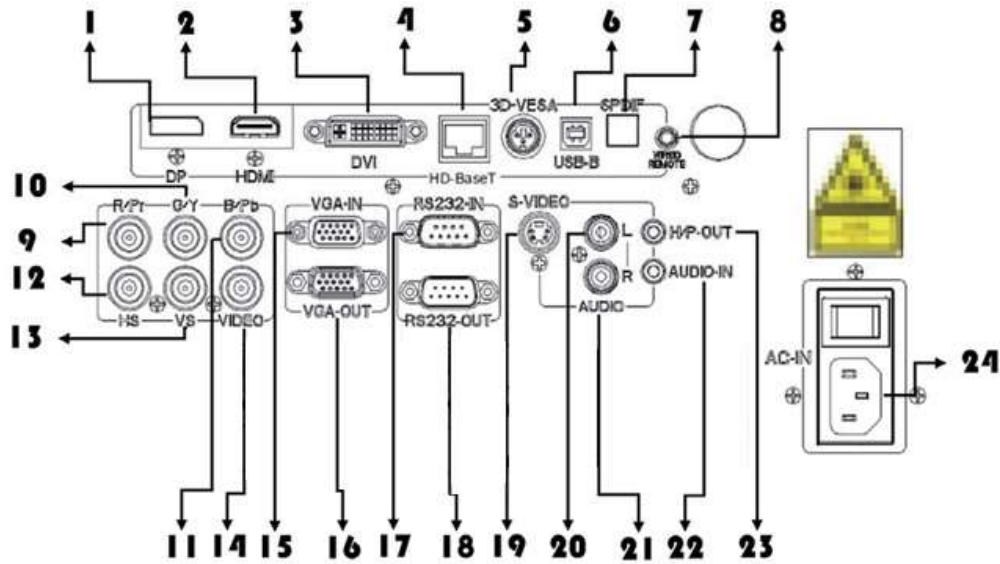
Projection Size/Projection Distance Comparison Table for Standard Lens with 0.65"1080P DMD and upper offset 100%.

Projection Size (inch)	0.65"1080P DMD (16:9)	
	Projection Distance (mm)	
	Wide	Tele
300	9321	16933
200	6119	11274
150	4638	8444
100	3077	5615
90	2765	5049
80	2452	4483
70	2140	3917
60	1828	3351
50	1516	2785
40	1203	2219

III. Connection

When the signal source is connected to the projector, the following shall be confirmed:

- Shut down all equipment before any connection.
- Select the correct signal line for each signal source.
- Make sure the cable is firmly inserted.

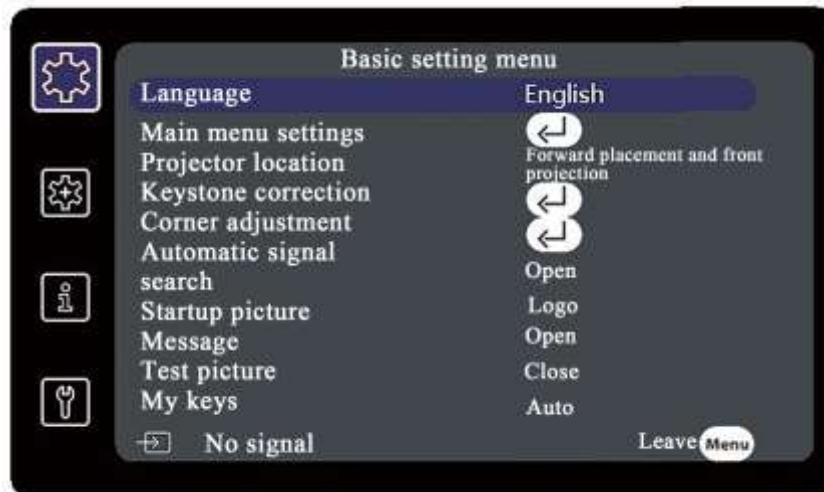


1.	DP high-definition digital input interface	15.	D-SUB computer input
2.	HDMI high-definition digital input interface	16.	D-SUB computer output
3.	DVI-D digital input interface	17.	RS232 input
4.	HD-BaseT input interface	18.	RS232 output
5.	3D-VESA synchronous output interface	19.	S-VIDEO video input interface
6.	USB-B control interface	20.	Left RCA audio input
7.	SPDIF sound output interface	21.	Right RCA audio input
8.	WIREDREMOTE wire control interface	22.	3.5mm audio input
9-13	BNC video input interface	23.	3.5mm audio output
14.	VIDEO video input interface	24.	Power input interface

IV. Menu System

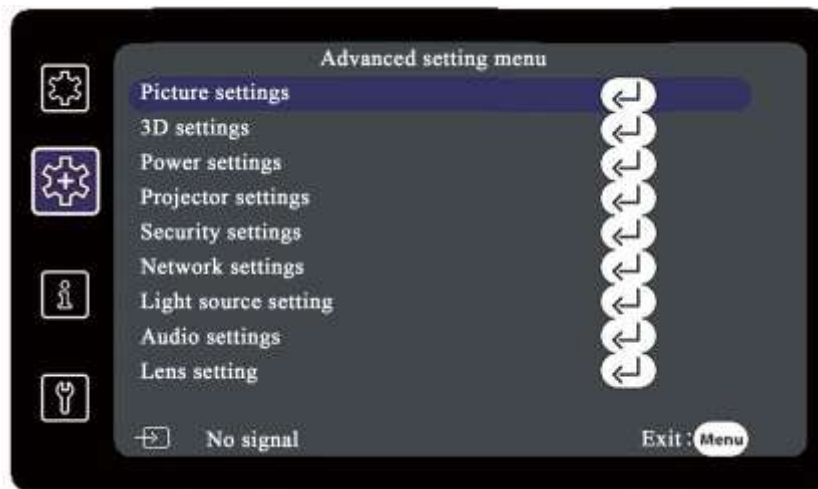
Please pay attention that OSD (on screen display) menu will vary depending on the type of signal selected.

1. Basic Settings Menu



First level	Second level	Third level	Four level	Options
Basic setting menu	Language			English/ Simplified Chinese/Traditional Chinese
	Menu settings	Menu display time		Always display/10s/20s/30s/40s/50s/60s
		Menu position		Upper left corner/upper right corner/middle/lower left corner/lower right corner
	Projector location			Front Desktop/Rear Ceiling/Front Ceiling/Rear Desktop
	Keystone distortion correction			Vertical/Horizontal -40-40
	Corner adjustment			Upper left corner/upper right corner/lower left corner/lower right corner
	Automatic signal search			On/off
	Startup picture			Trademark/black/white/blue
	Information			On/off
	Test picture			Off/1/2/3/4/5
My keys			Automatic/Projector Position/Menu Position/Color Temperature/Brightness/Contrast Ratio/3D Setting/Information/Automatic Signal Search/Still/Information Menu/Image Scale/Lens Displacement/Lens Focus/Lens Zoom/Power Off	

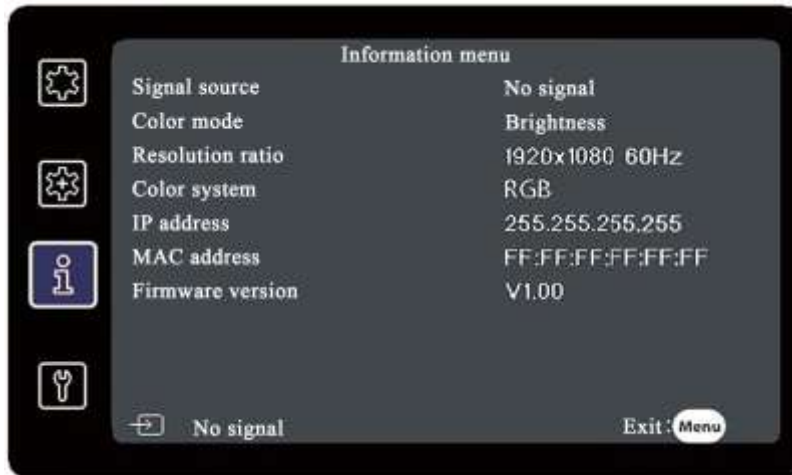
2. Advanced Setting Menu



First level	Second level	Third level	Four level	Options	
Advanced setting menu	Image setting	Color mode		Highlight/Standard/Movie/Splicing Mode	
		Brightness		0 - 100	
		Contrast ratio		0 - 100	
		Image scale		Auto/4:3/16:6/16:9/16:10/2.35:1	
		HDMI setting	HDMI format	Auto/RGB/YUV	
			HDMI range	Auto/Normal/Enhanced	
		Position		Horizontal/Vertical -5 - 5	
		Zoom		0.8x - 2.0x	
		Color temperature	Color temperature		Warm/Normal/Cold/Neutral
			Red gain		0 - 200
			Green gain		0 - 200
			Blue gain		0 - 200
			Red shift		0 - 100
			Green shift		0 - 100
			Blue shift		0 - 100
		Color intensity setting		Red/Green/Blue/Yellow 0-1024	
		Color		-50 - 50	
		Tone		-50 - 50	
		Sharpness		0 - 31	
		Reduction of image interference		0 - 31	
		Phase		0 - 31	
		Gray scale		1 - 13	
		White light saturation		Off/1/2/3/4/5/6/7/8/9/10	
		Overscan		Off/1/2/3/4/5	
		Closed caption		Off/CC1/CC2/CC3/CC4	
		Color management	Essential color		Red/Green/Blue/Cerulean Blue /Magenta/Yellow/
			Tone		-99 - 99
Saturation			0 - 199		
Gain			5 - 195		
Reset of color settings		Cancel/reset			
Advanced setting menu	3D settings	3D format		Off/Split from Up to Down/Side by Side/Frame Encapsulation/Frame Sequence	
		3D signal turning		Invalid/valid	
		Type of 3D Glasses		DLP/3D VESA	

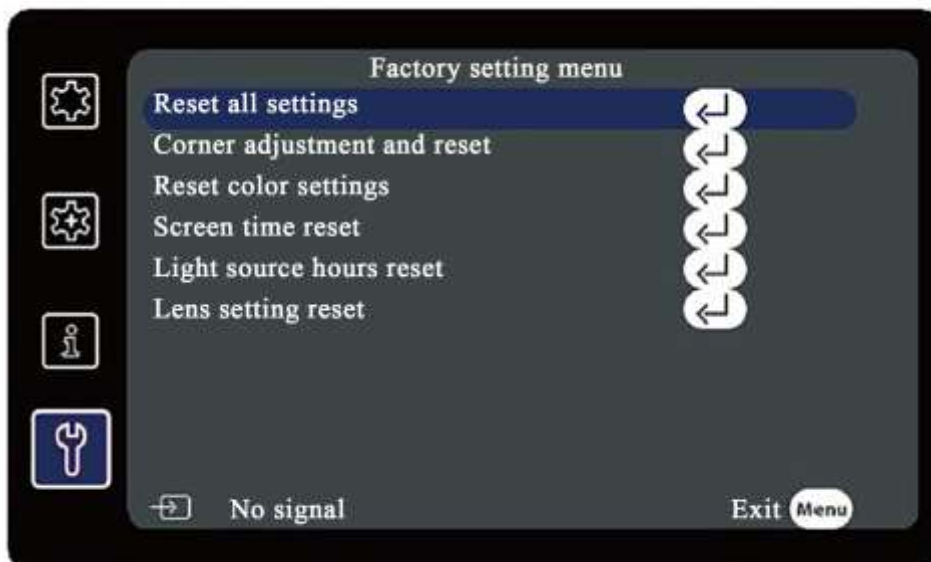
	Power settings	High altitude mode		Invalid/valid
		Screen mode	Screen mode	Invalid/valid
			Screen replacement tips	Invalid/valid
			Screen prompt time	100/200/300/400/500
			Service time of screen	0 - 20000
			Screen time reset	Cancel/reset
		Direct startup	Invalid/valid	
		Automatic shutdown	Invalid/valid	
		Fast shutdown	Invalid/valid	
		Green mode	Invalid/valid	
	HDMI CEC	Invalid/valid		
	Projector settings	Panel key lock		Off/On
		Codes of remote controller		1/2/3/4/5/6/7/8
		DCR		Off/On
		Baud rate		1200/2400/4800/9600/14400/19200/38400/57600/115200
		Remote controller receiver		Invalid/Front and Back/Left and Right/All
		Demo timer	Timer intervals	1-240 min
			Timer display	Always display/1 min/2 min/3 min
			Timer position	Upper left corner/upper right corner/lower left corner/lower right corner
	Counting type of timer		Count backwards/count clockwise	
	Security settings	Start counting		Off/On
		Modify passwords		
		Startup passwords		Off/On
		Delete passwords		
	Light source setting	PPID		xxxxxxxxxx
		Light source mode		Normal/Power saving
		Hours of light source		0 - 20000
	Audio settings	Light source hours reset		Cancel/reset
		Mute		Invalid/valid
		Volume		0 - 20
Lens setting	HDMI sound output mode		All/PCM/SPDIF	
	Lens displacement		Up/Down/Left/Right	
	Lens focus		Left/right	
	Lens zoom		Up/Down	
	Parameter setting	Type	Lens Displacement/Lens Focus/Lens Zoom	
		Motor operation mode	Auto/Manual	
		Control mode	Keyboard/remote controller	
		Position	Up/Down/Left/Right	
Operation time		0-255 ms		
Waiting time		0-255 ms		
Lens setting reset		Cancel/reset		

3. Information Menu



First level	Second level	Third level	Four level	Options
Information menu	Signal source			VGA/BNC/DVI_D/DP/HDMI/HD-BASET/Composite Video/S-terminal
	Color mode			Highlight/Standard/Movie/Splicing Mode
	Resolution ratio			1920x1080 60Hz
	Color system			RGB/YUV
	IP address (optional)			xxx.xxx.xxx.xxx
	MAC address (optional)			xx.xx.xx.xx.xx.xx
	Firmware version			Vx.xx

4. Factory Settings Menu



First level	Second level	Third level	Four level	Options
Factory setting menu	Reset all settings			Cancel/reset
	Corner adjustment and reset			Cancel/reset
	Reset color settings			Cancel/reset
	Screen time reset			Cancel/reset
	Light source hours reset			Cancel/reset
	Lens setting reset			Cancel/reset

V. Indicator Lights

Projector status light	Power light	Warning light	Temperature light
Standby mode	The red light always goes on.	Close	Close
Non energy-saving standby mode	The blue light is turned on for 1s and turned off for 5s.	Close	Close
Startup	The blue light flashes once every 1s.	Close	Close
Normal operation mode	The blue light always goes on.	Close	Close
Normal shutdown	The blue light flashes once every 1s.	Close	The red light flashes once every 1s.
The bulb fails to turn on/off.	The blue light always goes on.	The red light flashes once for 1s and waits for 2s.	Close
Service life of bulb ends up.	The blue light always goes on.	The red light always goes on.	The red light always goes on.
Fan error	The blue light always goes on.	The red light flashes twice for 1s and waits for 2s.	Close
Main board temperature error	The blue light always goes on.	The red light flashes once for 1s and waits for 2s.	The red light always goes on.
LD temperature error	The blue light always goes on.	The red light flashes twice for 1s and	The red light always goes on.

		waits for 2s.	
DMD error	The blue light flashes twice for 1s and waits for 2s.	The red light always goes on.	The red light flashes once for 1s and waits for 2s.
DAD error	The blue light flashes twice for 1s and waits for 2s.	The red light always goes on.	The red light flashes twice for 1s and waits for 2s.
CW/PW error	The blue light flashes once for 1s and waits for 2s.	The red light always goes on.	Close
PMD1000	The blue light flashes once for 1s and waits for 2s.	The red light always goes on.	Close
No Lens	The blue light always goes on.	The red light flashes once for 1s and waits for 2s.	The red light flashes once for 1s and waits for 2s.
Secret IC	The blue light always goes on.	The red light flashes once for 1s and waits for 2s.	The red light flashes twice for 1s and waits for 2s.
Filter Hours	The blue light always goes on.	The red light always goes on.	Close
MTBF	The blue light flashes 3 times for 1s and waits for 2s.	The red light flashes 3 times for 1s and waits for 2s.	The red light flashes 3 times for 1s and waits for 2s.

VI. Product Specification

1. Technical Indicators

➤ Optics

Resolution ratio

XGA: 1024*768

1080P: 1920*1080

WUXGA:1920*1200

Projection lens

Standard lens: $F = 2.0 \sim 2.95$, $f = 20.68 \sim 37.23\text{mm}$, magnification = 1.8, and projection ratio = 1.4 ~ 2.52

(0.65 chip) alternative lens: TR: 0.65; TR: 0.8:1; TR:1.46-2.99; TR:2.9-4.7

➤ Input interface

VGA computer input 1 (D-SUB/15 pin) × 1,

BNC*5/ (RGBHV) × 1,

Video BNC × 1,

S-terminal (Mini DIN 4 pin) × 1,

DVI-D × 1,

HDMI × 1,

DP × 1

HD BaseT × 1

Audio input left/right (RCA*2) × 1,

Audio input (3.5mm) × 1,

Remote controller receiver × 3

➤ **Control port**

RS232 serial interface (9 pins, male) input× 1,

RS232 serial interface (9 pins, male) output× 1,

3D VESA× 1

Drive-by-wire remote controller (mini port) × 1

USB (TypeB) × 1

➤ **Environmental requirements**

Operating temperature = 0°C-40°C (at sea level)

Operating relative humidity = 10%-90% (no condensing)

Operating height = 0-1499m at 0°C-35°C

1500-3000m at 0°C-30°C (on high altitude mode)

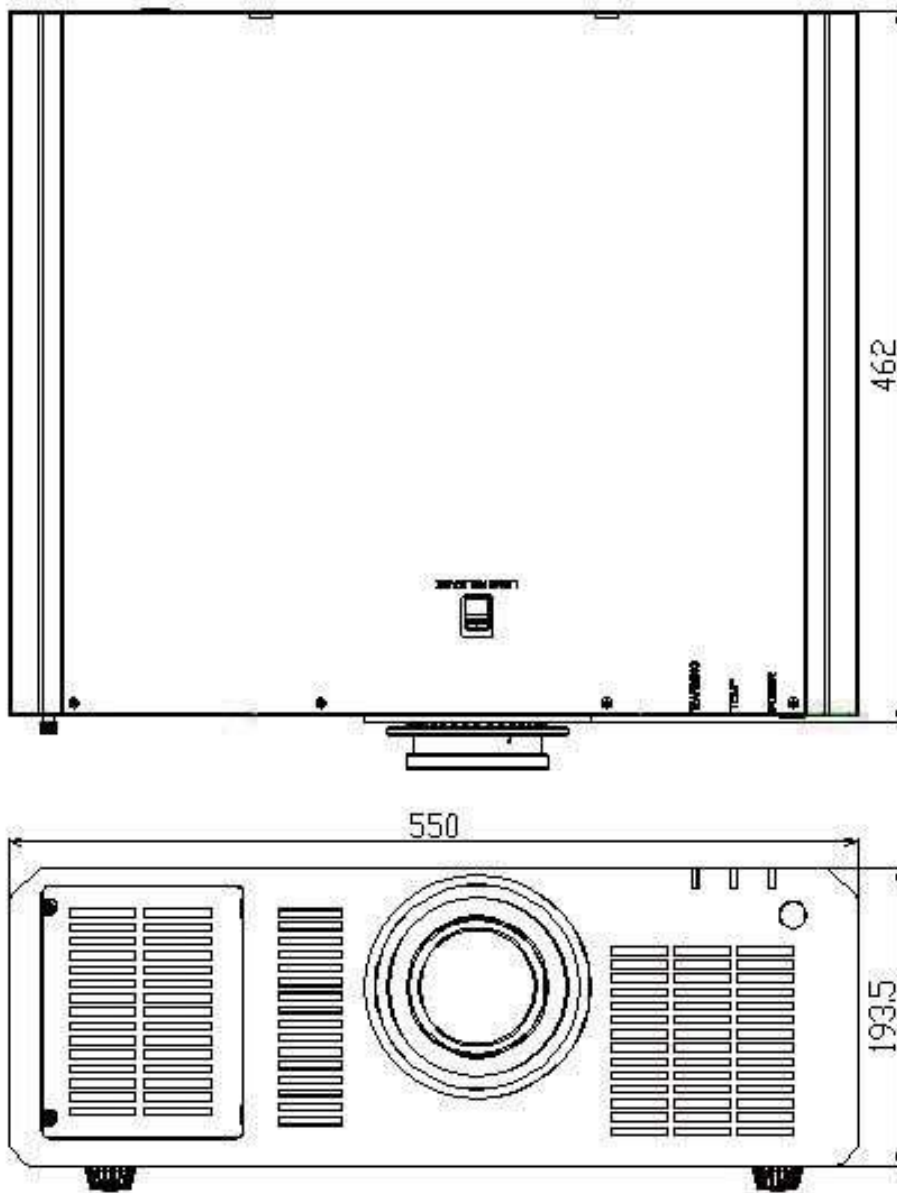
➤ **Machinery**

Weight ≤26Kg

2. Overall Dimensions

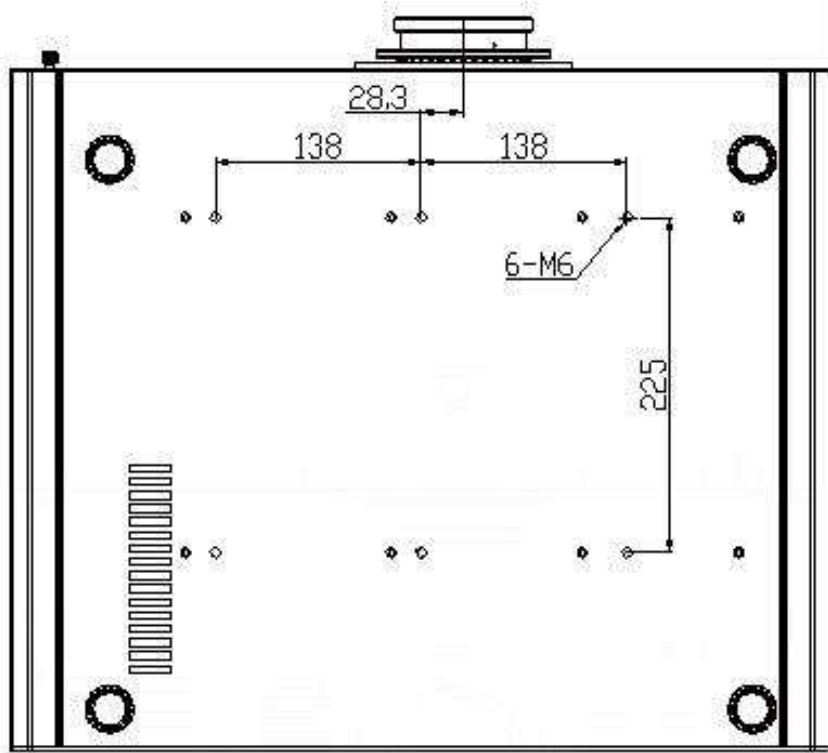
462mm (length) x550mm (width) x193.5mm (height)

Excluding such protruding parts as lens and foot stand



3. Suspended Ceiling Type Installation

Ceiling mounting screw: M6x6pcs (maximum screw-in depth of thread = 12 mm)



Unit: mm

Note: The contents of the user manual are subject to change without prior notice, and real objects shall prevail.

