

LE-T22 / LE-T32

Light Engine

User Manual

[Note] The pictures of light engine and control unit used in this manual are for reference only. If there is something different from the actual product, please subject to the actual product.

Table of Contents

1. Safety Instructions	2
2. Connections and Installation	3
2.1. Package Contents.....	3
2.2. Installation and Connections - Light Engine Assembly.....	3
2.3. Installation and Connections - Connect the control unit.....	6
3. On Screen Menu Overview	8
4. Troubleshooting	14

Ver. 06

Date: 2018.07.06

1. Safety Instructions

Always follow these safety instructions when setting up and using the product:

1 Operation

- 1.1 Please use the product in the recommended operating environment.
- 1.2 Do not place product in tilted position.
- 1.3 Do not place the product on an unstable trolley, stand or table.
- 1.4 Do not use this product near water or source of heat.
- 1.5 Use attachments only as recommended.
- 1.6 Use the type of power source indicated on this product. If you are not sure of the type of power available, consult your distributor or local electricity company for advice.
- 1.7 Connect this Product to power with voltage between 100 V ~ 240 V only. Your product may fail to start up for voltage lower than 100 V and blow the fuse of your machine for voltage greater than 240 V.
- 1.8 Specification of working voltage gap:
 - 1.8.1 Your product is subject to risks of fuse blowing if the surge voltage is greater than 250 V.
- 1.9 Always take the following precautions when handling the plug. Failure to do so may result in sparks or fire:
 - Ensure the plug is free of dust before inserting it into a socket.
 - Ensure that the plug is inserted into the socket securely.
- 1.10 Do not overload wall sockets, extension cords or multi-way plug boards to avoid potential risks.
- 1.11 Do not block the slots and openings in the case of this product. They provide ventilation and prevent this product from overheating.
- 1.12 Except as specifically instructed in this User Manual, do not attempt to operate this product by yourself. Opening or removing covers may expose you to dangerous voltages and other hazards. Refer all servicing to licensed service personnel.
- 1.13 Unplug this product from the wall outlet and refer servicing to licensed service personnel when the following situations happen:
 - If the power cords are damaged or frayed.
 - If liquid is spilled into the Product or the Product has been exposed to rain or water.

2 Installation

- 2.1 For security considerations, please ask technician personnel approved by agents to install it.

3 Storage

- 3.1 Do not place the Product where the cord can be stepped on as this may result in fraying or damage to the lead or the plug.
- 3.2 Never push objects of any kind through cabinet slots. Never allow liquid of any kind to spill into the Product.
- 3.3 Unplug this product during thunderstorms or if it is not going to be used for an extended period.
- 3.4 Do not place this product or accessories on top of vibrating equipment or heated objects, such as a car, etc.

4 Cleaning

- 4.1 Unplug all the cables before cleaning. Use a damp cloth for cleaning. Do not use liquid or aerosol cleaners.

■ Precautions

Warning: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

If the light engine will not be used for an extended time, unplug it from the power socket.

	Note Risk of Electric Shock Please do not open it by	
Caution: To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to licensed service personnel.		
	This symbol indicates that this equipment may contain dangerous voltage which could cause electric shock.	 This symbol indicates that there are important operating and maintenance instructions in this User Manual with this unit.

This is a Class A product. In a residential environment it may cause radio interference, in which case the user may be required to take adequate measures. The typical use is in a conference room, reception room or hall.

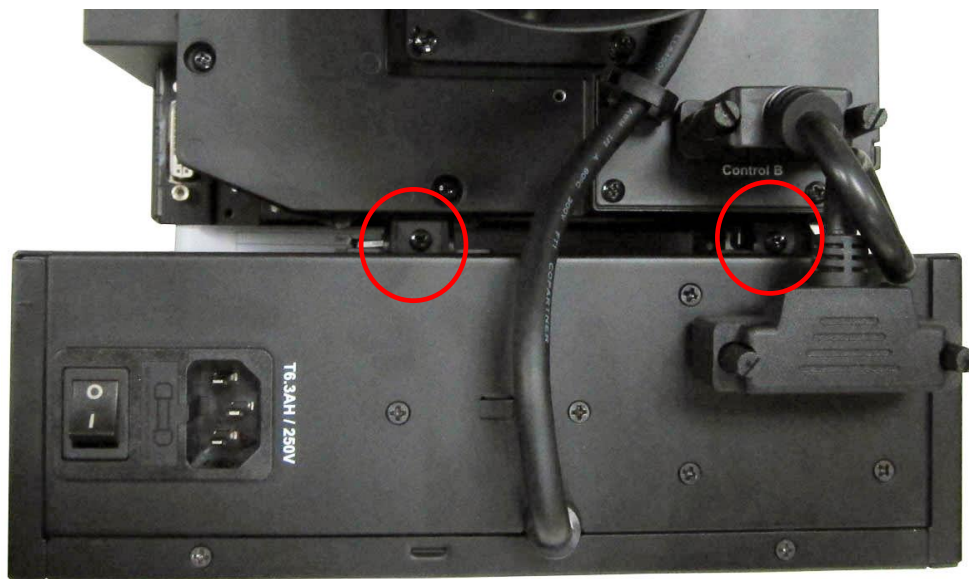
2. Connections and Installation

2.1. Package Contents

- 2.1.1. Light Engine x 1
- 2.1.2. Power Module x 1
- 2.1.3. Light Module x 1
- 2.1.4. AC Power Cord x 1 (Appearance may vary depending on country)
- 2.1.5. Spare Fuse x 1 (Located in the groove of socket)

2.2. Installation and Connections - Light Engine Assembly

- 2.2.1. Connect the power module and fix with locking screw

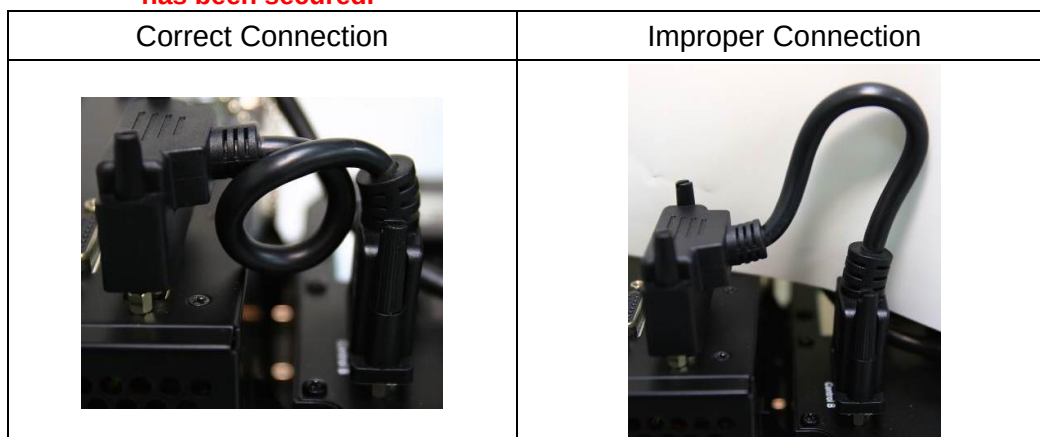


- 2.2.1. Connection Cable: 15 Pin D-Sub Cable x 1

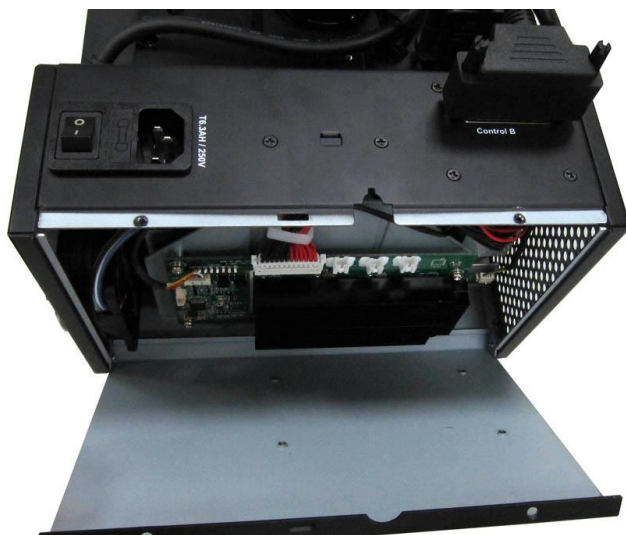


2.2.2. Connection Cable: 26-25 Pin D-Sub Cable x 1

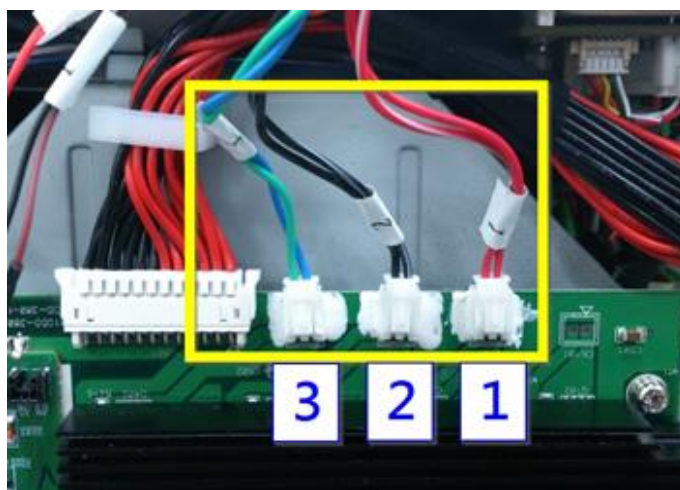
<Note> The connection cable must be looped once to prevent the cable from over-bending and causing communication anomalies. The device can be activated once the cable has been secured.



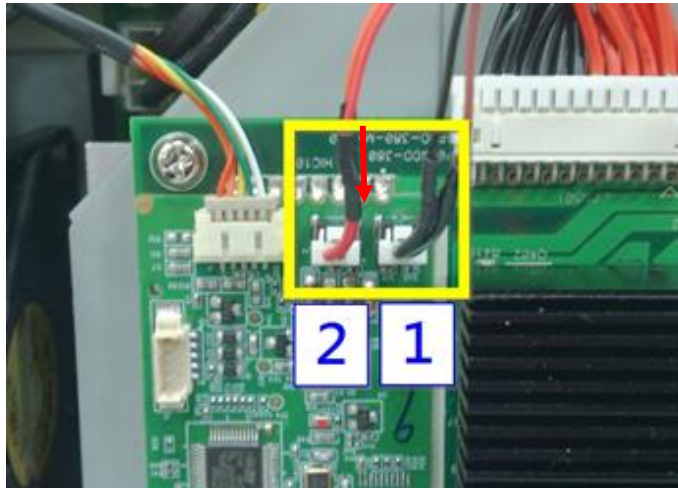
2.2.3. Open the power module and connect the lighting cable



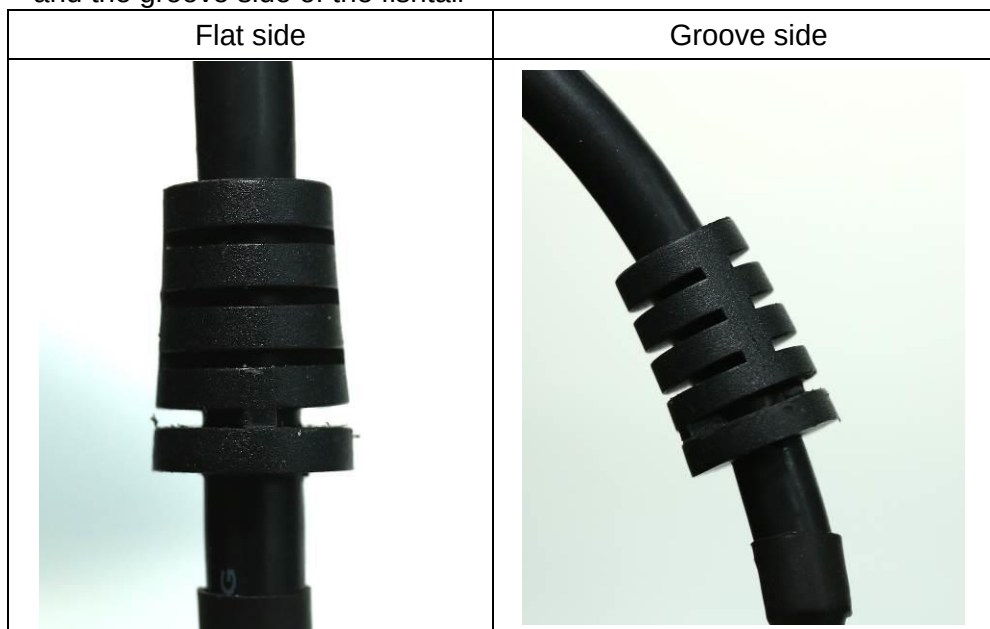
2.2.4. Lighting cables are marked with 1.2.3, please connect them in a sequential manner



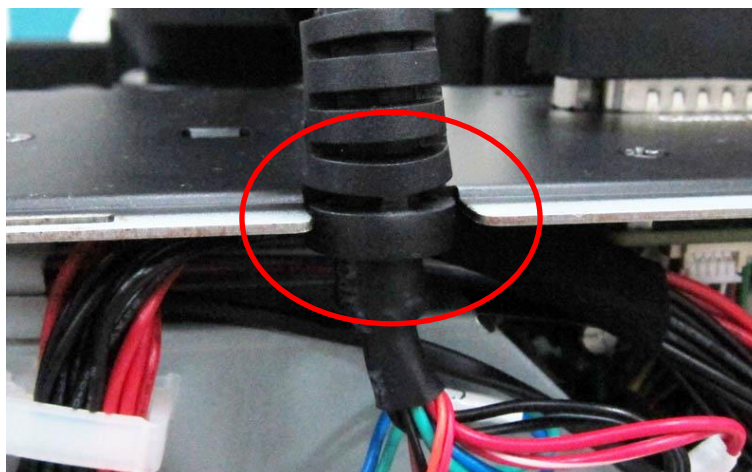
2.2.5. Installing NT cables are marked with 1, 2, smaller housing (NTC) cables



2.2.6. To secure the fishtail of the driver cable onto the metal plate, first determine the flat side and the groove side of the fishtail



2.2.7. Insert the groove side into the panel. If the fishtail is inverted, it will interfere when closing the device cover



2.2.8. Remove the lens cover.

<Note> The image cannot be projected if the lens cover is not removed

2.3. Installation and Connections - Connect the control unit

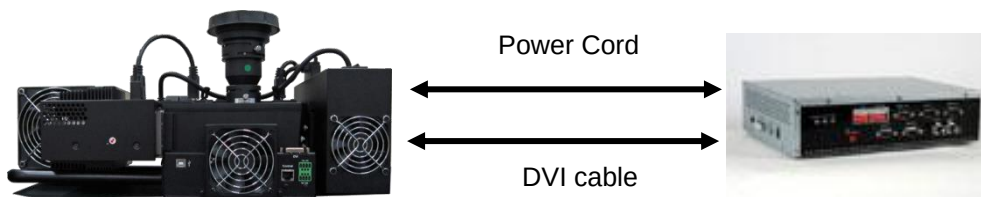
2.3.1. Connect the light engine and the control unit

Case 1: Connect CU105, and use the accessory DVI cable to connect the control box output port to the core's DVI port
Use the long DVI cable (a part of the control unit), male to female AC power cord (a part of the control unit)

Set CU DIP Switch to ON

Light Engine

Control Unit



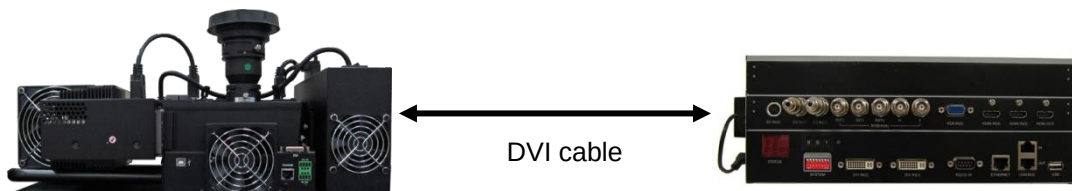
< Note > This connection method only supports LE-T32

Case 2: Connect CU106/CU106W, and use the accessory DVI cable to connect the control box output port to the core's DVI port
Use the long DVI cable (a part of the control unit)

Set CU DIP Switch to ON

Light Engine

Control Unit

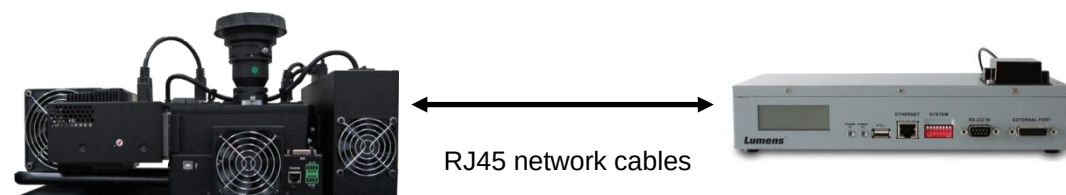


Case 3: Use RJ-45 to connect CU-S10

Set CU DIP Switch to OFF

Light Engine

Control Unit

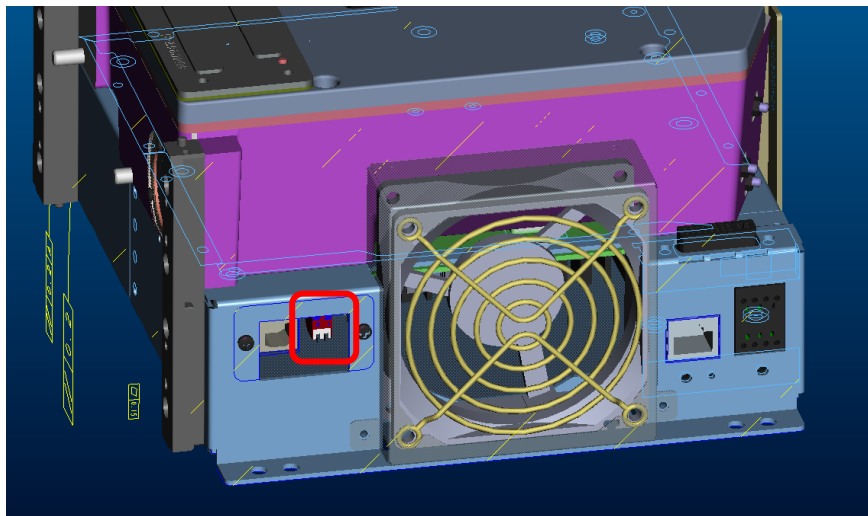


<Remark 1> We suggest using the UL20276 spec. as the DVI/HDMI cable for connecting the source signal cable of the control unit

<Remark 2> We suggest using HDMI cables approved by the HDMI Association

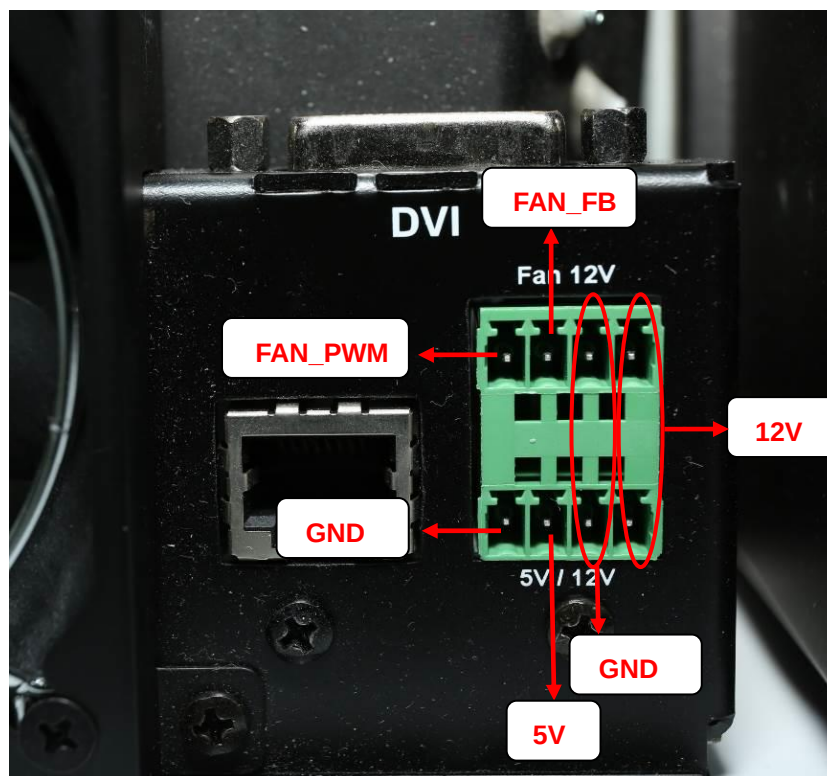
<Remark 3> It's advised that the RJ45 network cables should meet or exceed Cat5e specification

2.3.2. Location and description of CU DIP Switch



DIP 1	DIP 2	Function Descriptions
On	On	Equipped with a CU controlled by DVI
Off	Off	Equipped with a CU controlled by RJ-45

2.3.3. Definition of fan connector of the case



3. On Screen Menu Overview

The setting menu is used only with CU-S10.

Press the [Menu] key of your Remote and the screen menu displays.

<Remark> Please contact with Lumens for adjustment and default values

Major Items	Item	Value/Selection	Description
Color-Warp	Top Left	(-300 ~ 300, -300 ~ 300)	Adjust the horizontal and vertical position of the upper left point
	Middle Left	(-300 ~ 300, -300 ~ 300)	Adjust the horizontal position of the left middle point
	Bottom Left	(-300 ~ 300, -300 ~ 300)	Adjust the horizontal and vertical position of the lower left point
	Top Center	(-300 ~ 300, -300 ~ 300)	Adjust the vertical position of the upper middle point
	Center	(-300 ~ 300, -300 ~ 300)	Adjust the horizontal and vertical position of the middle point
	Bottom Center	(-300 ~ 300, -300 ~ 300)	Adjust the vertical position of the lower middle point
	Top Right	(-300 ~ 300, -300 ~ 300)	Adjust the horizontal and vertical position of the upper right point
	Middle Right	(-300 ~ 300, -300 ~ 300)	Adjust the horizontal position of the right middle point
	Bottom Right	(-300 ~ 300, -300 ~ 300)	Adjust the horizontal and vertical position of the lower right point
	Warp Zoom	NA	Manual adjustment geometry parameters
	Warp Reset	NA	Set the geometry parameters to default values
Color - Uniformity	Center R	-128 ~ 127	Adjust brightness uniformity of center and border
	Center G	-128 ~ 127	
	Center B	-128 ~ 127	
	Hor. R	-128 ~ 127	
	Hor. G	-128 ~ 127	
	Hor. B	-128 ~ 127	
	Ver. R	-128 ~ 127	
	Ver. G	-128 ~ 127	
	Ver. B	-128 ~ 127	
Color - Color Adj.	R-R	-127 ~ 0	Reduce Brightness of pure red
	R+G	0 ~ 1023	Increase green color in pure red
	R+B	0 ~ 1023	Increase blue color in pure red
	G-G	-127 ~ 0	Reduce Brightness of pure green

Major Items	Item	Value/Selection	Description
	G+R	0 ~ 1023	Increase red color in pure green
	G+B	0 ~ 1023	Increase blue color in pure green
	B-B	-127 ~ 0	Reduce Brightness of pure blue
	B+R	0 ~ 1023	Increase red color in pure blue
	B+G	0 ~ 1023	Increase green color in pure blue
	W-W	0 ~ 1023	Adjust white Saturation
	W-R	0 ~ 1023	Reduce red color in pure white
	W-G	0 ~ 1023	Reduce green color in pure white
	W-B	0 ~ 1023	Reduce blue color in pure white
	C-C	0 ~ 1023	Adjust cyan Saturation
	C+R	0 ~ 1023	Increase red color in cyan
	G-C-B	0 ~ 1023	Adjust ratio of blue and green colors in cyan
	M-M	0 ~ 1023	Adjust magenta Saturation
	M+G	0 ~ 1023	Increase green color in magenta
	B-M-R	0 ~ 1023	Adjust ratio of red and blue colors in magenta
	Y-Y	0 ~ 1023	Adjust yellow Saturation
	Y+B	0 ~ 1023	Increase blue color in yellow
	R-Y-G	0 ~ 1023	Adjust ratio of red and green colors in yellow
	Curve		
	R Curve	-64 ~ 64	Adjust red color in gray
	G Curve	-64 ~ 64	Adjust green color in gray
	B Curve	-64 ~ 64	Adjust blue color in gray
	Black Adjust		
	Black+R	0 ~ 127	Increase red color in black
	Black+G	0 ~ 127	Increase green color in black
	Black+B	0 ~ 127	Increase blue color in black
	128 W+G	-2 ~ 2	Adjust green color in gray level
	128 W+B	-2 ~ 2	Adjust blue color in gray level
Color-Projection	Orientation	Normal	Make the projection image normal

Major Items	Item	Value/Selection	Description
		HV Flip	Make the projection image have a horizontal and vertical flip
		H Flip	Make the projection image have a horizontal flip
		V Flip	Make the projection image have a vertical flip
	Gamma	Mode 1	Adjust the Gamma mode 1
		Mode 2	Adjust the Gamma mode 2
		Mode 3	Adjust the Gamma mode 3
	Light Mode	HL	110% laser power
		Normal	95% laser power
		ECO	75% laser power
Color – Dropper (Only display when using CU-S10 Dropper key)	Dropper	NA	Display current pixel position and RGB values
	HueHue	-128~127	Hue values corresponding to the selected pixels
	HueSat	-128~127	Saturation values corresponding to the selected pixels
	Reset Color2	NA	Reset all HueHue/HueSat parameter settings
Color - Lamp	Lum Adj.	30 ~ 100	Brightness adjustment: the lower limit is 30
Color- Pattern	Pattern Index	0 ~ 27	Adjust testing pattern. The upper limit of test picture value is for reference only. It varies with the FW adjustments
Signal-Main	H-Position	-9600 ~ 0	Horizontal Height
	V-Position	-5400 ~ 0	Vertical Height
	H-Size	1920 ~ 11520	H Size
	V-Size	1080 ~ 6480	V Size
	Layout Memory	NA	by enter to select, then Pop out the Layout Memory OSD
	Layout Index	0 ~ 7	
	Load	NA	
	Save	NA	
	Discard	NA	
	Confirm	NA	
Signal - DVI	Brightness	-64 ~ 63	Adjust the brightness of the source
	Contrast	-64 ~ 63	Adjust the contrast of the source
	R Offset	-64 ~ 63	Adjust the offset for deep R, G area of source
	B Offset	-64 ~ 63	Adjust the offset for deep B, G area of source

Major Items	Item	Value/Selection	Description
	R Gain	-64 ~ 63	Adjust the offset for light R, G area of source
	B Gain	-64 ~ 63	Adjust the offset for light B, G area of source
System - OutMem	Output Index	0 ~ 15	Set up output settings (Memory in engine)
	Load	NA	Load
	Save	NA	Save
	Discard	NA	Discard
	Confirm	NA	Confirm
System - Utility	Output Lock	Default	Set the output time
		60Hz	
	Source Prompt	Info.	Enable the input source prompt
		All Off	Disable all the input source prompt
		No Signal	Prompt "No Signal ..." message only when primary input signal is lost
	Internal DVI-EQ	Normal	
		Advanced	
	DVI-EQ Mode	Auto	
		Manual	
	DVI-EQ Data	16.5 dB	It can be adjusted when the DVI-EQ Mode is set to Manual
		14 dB	
		12 dB	
		10.5 dB	
		8.5 dB	
		6.5 dB	
		4.5 dB	
		0 dB	
	DVI-EQ CLK	3 dB	It can be adjusted when the DVI-EQ Mode is set to Manual
		1.5 dB	
		0 dB	
	TV Distortion		
	Up	0 ~ 7	

Major Items	Item	Value/Selection	Description
	Left	0 ~ 7	
	Down	0 ~ 7	
	Right	0 ~ 7	
	Load Factory	NA	
System - Information	Active	NA	Display the source information on the video played
	Laser	NA	Display laser use duration
	Color Wheel	NA	Color wheel use life
	Engine	NA	Light Engine use life
	Cube Temperature	NA	Body temperature, two digits for ENV Temp
	CU FW Ver.	NA	Firmware version of Control unit
	Engine FW Ver.	NA	Engine Firmware Version
	DLP FW Ver.	NA	DLP Firmware Version
System - Host	iSystem Balance	NA	Trigger iSystem Balance
	iSystem Mode	Off	1. Auto option checks the change of each engine's brightness every 10 minutes; when the change is more than 5%, it runs the brightness balance function (iSystem Balance must be performed previously) 2. When Intelligent mode is set to Auto/Manual , Projector mode can only be set to Normal or Economic mode . However, Brightness cannot be selected
		Manual	
		Auto	
	Screen lock		This option only display after entering 5544465 in the Host CU
	Screen lock	Off	When the time is up, the screen will be locked as no picture; enter password to unlock
		On	
	Time	1 ~ 9999	Unit: hour(s) When the Screen Lock is enabled, it can't be set
	Change Password	NA	Change password
	Online Cube List	NA	Display status of connected Cube
			Brightness: Display brightness differences between connected Cube Target: Enable target values of iSystem function
Advance - Misc	IndexDly/ Phosphor IndexDly	0~719	
	Error Message	Off	1. Enable or disable error messages of fan and lamp MSG
		On	2. If both fan and lamp failed then display the whole row concurrently

Major Items	Item	Value/Selection	Description
	Language		3. After other OSD screens disappear, the PROMPT displays until timeout 4. If the situation persists the display time of PROMPT will be re-defined 5. The ON status of LAMP will timeout in 10 minutes
		Chinese	
		English	
	Network Setting	Ethernet	DHCP
			IP Address
			Subnet Mask
			Gateway
			Apply
			Mac Address
		Wi-Fi	Network Name
			Change Password
			Apply
			Clear All User
		Date & Time	Year
			Month
			Day
			Hour
			Minute
			Apply
	Thermal	DMD Fan	The system is turned off or the Error Message is prompted in case of DMD Fan failure
		PWR Fan	The system is turned off or the Error Message is prompted in case of PWR Fan failure
		Laser Fan	The system is turned off or the Error Message is prompted in case of Laser Fan failure
		Cube Fan	Adjust the rotation speed of the fan of the case
		DMD Temp	DMD Temp
		ENV Temp	Environment Temp
		A2D Temp	AC to DC power Temp

4. Troubleshooting

You can find recommended solutions for common questions in this chapter. If the problems cannot be solved by yourself, please contact the customer service staff

4.1. Problems: Light engine cannot be illuminated

Recommended solutions:

Refer to the chapter [Connections and Installation], and check if all the cables and lighting cables were installed

4.2. Problems: Main image disappears suddenly during starting up and operation, lights off.

Recommended solutions:

1. Check if the DVI cable detaches.
2. It shall be re-illuminated and re-confirmed if the problem would occur once again.