LE-U22/LE-U32
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

Ver. 05

Date: 2018.09.17

1. Safety Instructions

Always follow these safety instructions when setting up and using the LE-U32 Light Engine:

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 the LE-U32 Light Engine. 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 LE-U32 Light Engine. They provide ventilation and prevent the LE-U32 Light Engine 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 the LE-U32 Light Engine 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.

<table>
<tr><td colspan="4">  Note
Risk of Electric Shock
Please do not open it by yourself.  </td></tr>
<tr><td colspan="4">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.</td></tr>
<tr><td>  </td><td>This symbol indicates that this equipment may contain dangerous voltage which could cause electric shock.</td><td>  </td><td>This symbol indicates that there are important operating and maintenance instructions in this User Manual with this unit.</td></tr>
</table>

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.

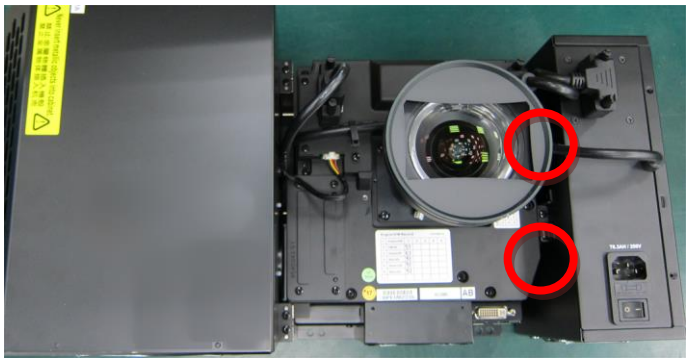
2. Connections and Installation

2.1. Package Contents

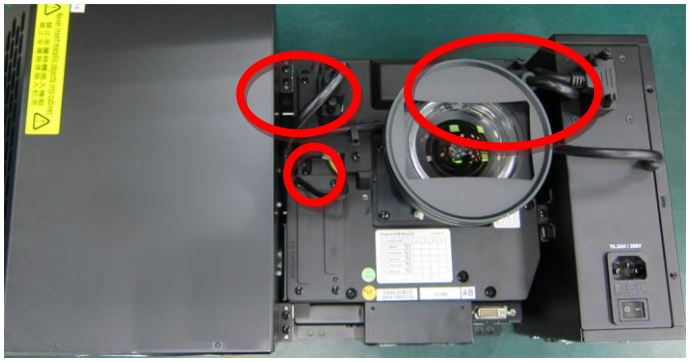
2.1.1. Light Engine x 1
2.1.2. Power Module x 1
2.1.3. Light Module x 1
2.1.4. AC Power Cord x 1 (Appearance may vary depending on country)
2.1.5. Spare Fuse x 1 (Located in the groove of socket)

2.2. Installation and Connections - Light Engine Assembly

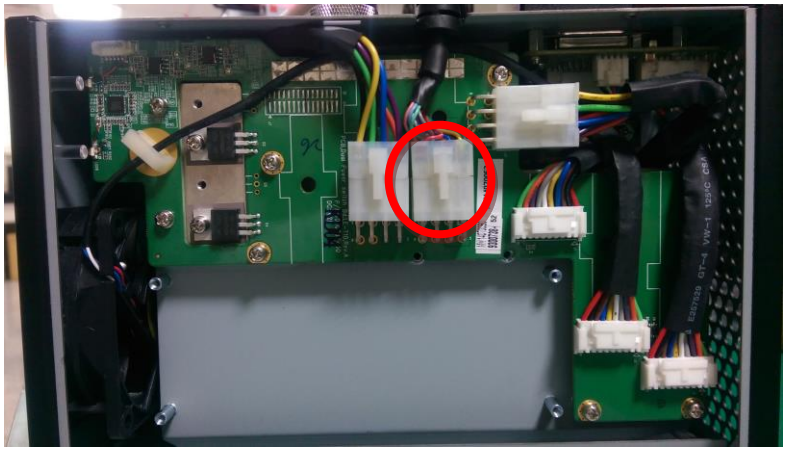
2.2.1. Connect the power module and fix with locking screw



2.2.2. Make sure connection cables are connected, two cables in total



2.2.3. Open the power module and connect the lighting cable



2.2.4. Remove the lens cover

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

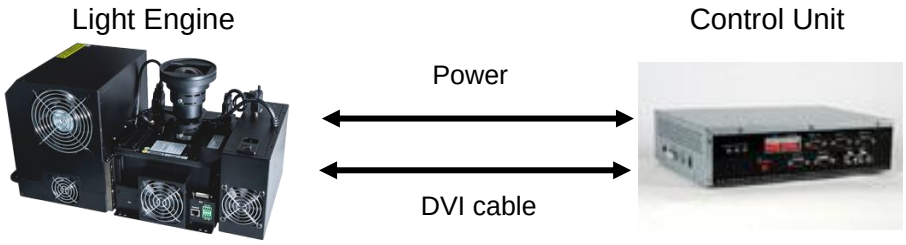
2.3. Installation and Connections - Connect the control unit

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)

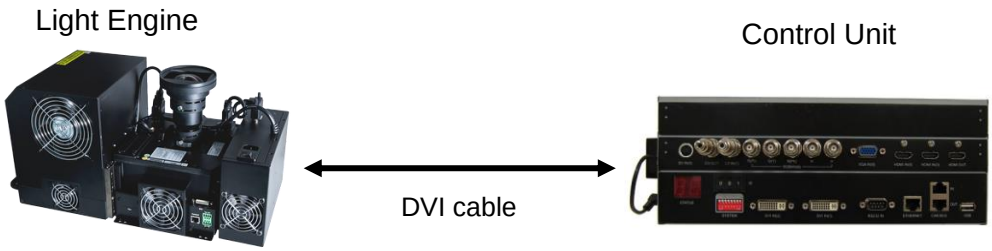
Set CU DIP Switch to ON



Case 2: Connect CU106/CU106W, and use the accessory DVI cable to connect the control box output port to the core's DVI port

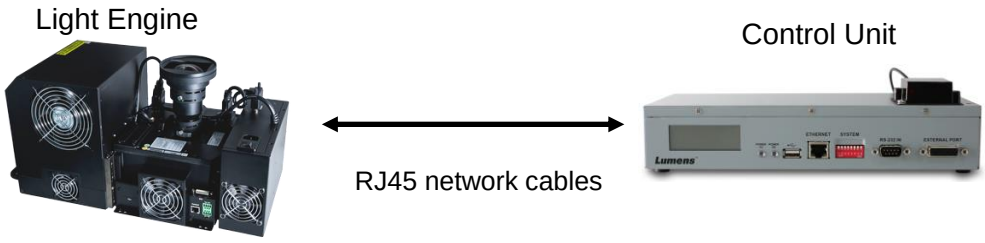
Use the long DVI cable (a part of the control unit)

Set CU DIP Switch to ON



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

Set CU DIP Switch to OFF

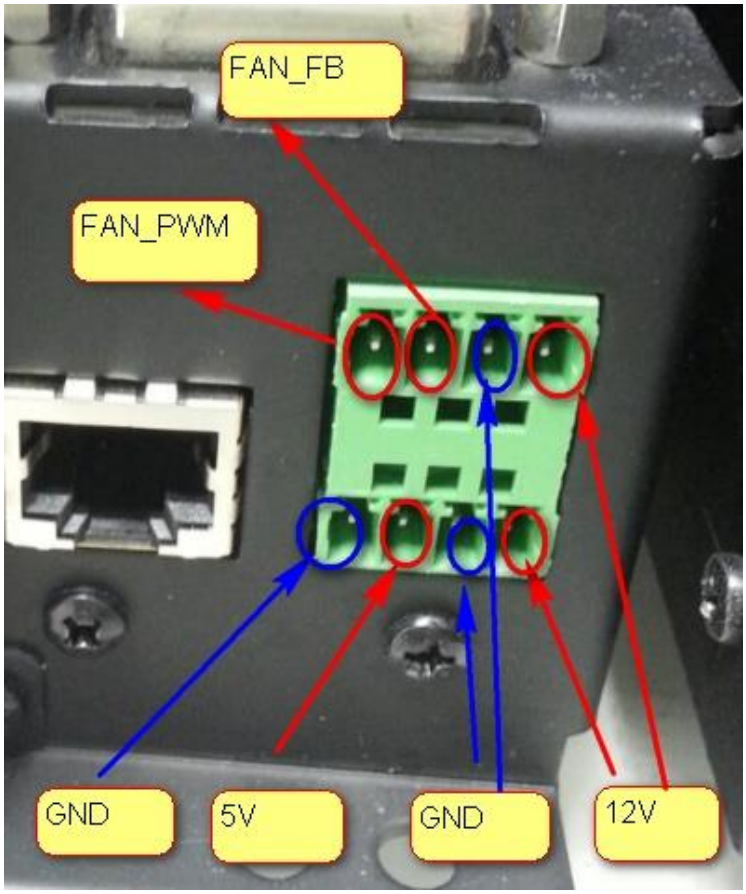


<Remark 1> We suggest using the UL20276 spec. as the DVI/HDMI cable for connecting the source signal cable of the control unit

<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. 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

Major Items	Item	Value/Selection	Description
	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
	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

Major Items	Item	Value/Selection	Description
	B Curve	-64 ~ 64	Adjust blue color in gray
	Black Adjust		
	Black+R	0 ~ 127	Increase red color in the black image
	Black+G	0 ~ 127	Increase green color in the black image
	Black+B	0 ~ 127	Increase blue color in the black image
Color-Projection	Orientation	Normal	Make the projection image normal
		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
	Color Mode	Brilliant	LED color gamut
		Normal	General color gamut, when the ***color temperature mode*** is set as high brightness mode, the ***color mode*** is always set as ***normal***
	Color Temp.	9300K	
		7500K	
		6500K	
		3200K	
		9300K HL	
		7500K HL	
		6500K HL	
		3200K HL	
		User	Adjust Color Temp manually
		User HL	Adjust Color Temp manually

Major Items	Item	Value/Selection	Description
	Target Temp	2200 ~ 9300K	This item can be changed only in “User Color Temp” mode
	ECO	Off	Reduce LED output power
		On	
Color - Lamp	Lum Adj.	30 ~ 100	Brightness adjustment: the lower limit is 30
Color- Pattern	Pattern Index	0 ~ 27	1. Adjust testing pattern. The upper limit of test picture value is for reference only. It varies with the FW adjustments 2. Add Pattern (with effect of Gamma = 1) Number 200: Gray7 Number 201: Gray10 Number 202: Gray30 Number 203: Gray60 Number 204: Blue60
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
	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

Major Items	Item	Value/Selection	Description
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	

Major Items	Item	Value/Selection	Description
		0 dB	
	TV Distortion		
	Up	0 ~ 7	
	Left	0 ~ 7	
	Down	0 ~ 7	
	Right	0 ~ 7	
	Load Factory	NA	
System - Information	Active	NA	Display the source information on the video played
	LEDs Lamp	NA	Display use time and frequency of LED lamp
	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. The Auto/Manual option turns on the Adaptive mode, which will determine color coordinates of target values based on color gamut of connected engine 2. 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)
		Manual	
		Auto	
	Calibrating Value	Default	1. After selected, the corresponding calibrating values come into effect only after the "iSystem Balance" is activated manually 2. Default - use the factory calibrating values of CL200 directly if no HOST is connected 3. Available for selection only if iSystem is Auto or Manual (the unit needs to be restarted first)
		On Screen	
	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	

Major Items	Item	Value/Selection	Description	
	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	Error Message	Off	1. Enable or disable Fan and Lamp error MSG 2. If both Fan and Lamp failed then display the whole row concurrently 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	
		On		
	Language	Chinese		
		English		
	Dynamic Mode(LED)	Off	Enable Dynamic Mode	
		On		
	Network Setting	Ethernet	DHCP	Ethernet Settings Default IP address: 192.168.128.128
			IP Address	
			Subnet Mask	
			Gateway	
			Apply	
			Mac Address	
		Wi-Fi	Network Name	Wi-Fi Settings Network Name: CU-S10 Default password: 12345678
			Change Password	
			Apply	
			Clear All User	
		Date & Time	Year	Date & Time Settings
			Month	
			Day	

Major Items	Item	Value/Selection	Description	
			Hour	
			Minute	
			Apply	
	Thermal	DMD Fan	The system is turned off or the Error Message is prompted in case of DMD Fan failure	
		HP Fan	The system is turned off or the Error Message is prompted in case of Heat Pipe Fan failure	
		Cube Fan	Adjust the rotation speed of the fan of the case	
		DMD Temp	DMD Temp	
		ENV Temp	Environment Temp	
	On Screen Calibrate			
	Discard	NA	Abandon	
	Confirm	NA	Confirm	

4. DIP Switch Setting

4.1. 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

5. 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

5.1. 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

5.2. 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