KUDUX
LED TECHNOLOGY

SPI LED CONTROLLER

KCL-40R – 4 PORTS



! Please read the manual before installing and using this lighting

Keep it for future reference.

Remark:

Errors and omissions for every information given in this manual except.

All information is subject to change without prior notice.

Manual instruction

V1.1

Thank you for purchasing our device.

We make every effort to ensure the best quality of our products and to meet your expectations.

If you have any remarks or comments, please share them with us.

We will be grateful for any suggestions that will help us make products that are even better and devices that satisfy your needs.

Contents:

1. Introduction 4
2. Safety information 4
3. Overview 4
4. Product picture 4
5. Product features 5
6. Parameter list 5
7. Connection 6
8. Multiple units can be used in cascade. 7
9. Control mode. 8
10. DMX Channel Table Description 9
11. Ring mode wiring. 10
12. Corresponding DMX channel function description 11
13. Common problems 11
14. Attention 13
15. Contact: 13

1. Introduction

Thank you for having chosen this professional controller. You will see you have acquired a powerful and versatile device. Please check carefully that there is no damage caused by transportation. Should there be any, consult your dealer and don't install this device.

For your own safety, please read this user manual carefully before installing the device.

In order to install, operate, and maintain the controller safety and correctly. We suggest that the installation and operation should be done by the verified technician and follow the instruction Strictly. Every person involved with the installation, operation and maintenance of this device must:

- be qualified.
- carefully follow the instructions of this manual.

2. Safety information

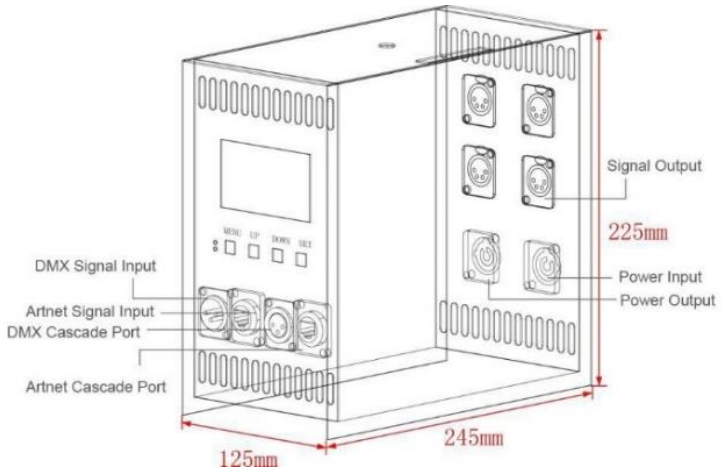
To guard against electric shock

- Do not remove the rear cover: there are no user-serviceable parts inside.
- Always ground (earth) the fixture electrically.
- Use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault protection.
- Do not expose the fixture to rain or moisture.

3. Overview

Based on the ARTNET protocol Ethernet network driver, the controller can convert the network data packets in the ARTNET protocol into standard DMX512 data or SPI data. The controller has three control modes: ARTNET, SD card and pixel ring, which can perform effect recording and can be used offline; it has 4 output ports, and each port support 680 pixels. This product can be widely used in stage performance lighting control system, stage performance, bar lighting and other occasions, and it is more convenient to use with our pixel tube.

4. Product picture





5. Product features

- Input Voltage： AC110—220V
- 4ports output, each port 680pixels
- Three signal modes ARTNET mode, SD card mode and ring mode
- The independent ring mode can control the unique pixel ring
- Support recording effect, it can record 31 different lighting effect, support offline control
- Built-in power supply, simple wiring, easy to use

6. Parameter list

Parameter	Unit	Min	Typical	Max
Working voltage(AC)	V	110	220	220
Power	W	—	—	1000W
Output port	PCS	—	4	4
Output voltage（V）	V	—	24	—
Port loading points	PIX	4*170	—	4*680
Support IC type	—	—	WS2811/SK6812/UCS1903/UCS8903/UCS9812/ DMX512	—
Supporting software	—	—	MADRIX/MAD-MAPPER	—
Control mode	—	—	ART-NET/DMX	—
Working mode	—	—	Video bar/pixel ring/SD card	—
Controller IP address	—	—	2.0.0.X	—
Subnet mask	—	—	255.0.0.0	—
Computer IP address	—	—	2.0.0.2	—
cascaded units	PCS	—	—	64
Product weight	KG	—	3.5	—
Product color		—	Black	—
Product material		—	Aluminum	—
Gross weight	KG	—	4.1	—
Product size(L*W*H)	MM	—	245*225*125	—
Packing size(L*W*H)	MM	—	380*335*200	—

7. Connection

① connect controller input port





Power in (Blue color is power input)

The network cable connects the computer and the controller signal input port

② Connect lamps



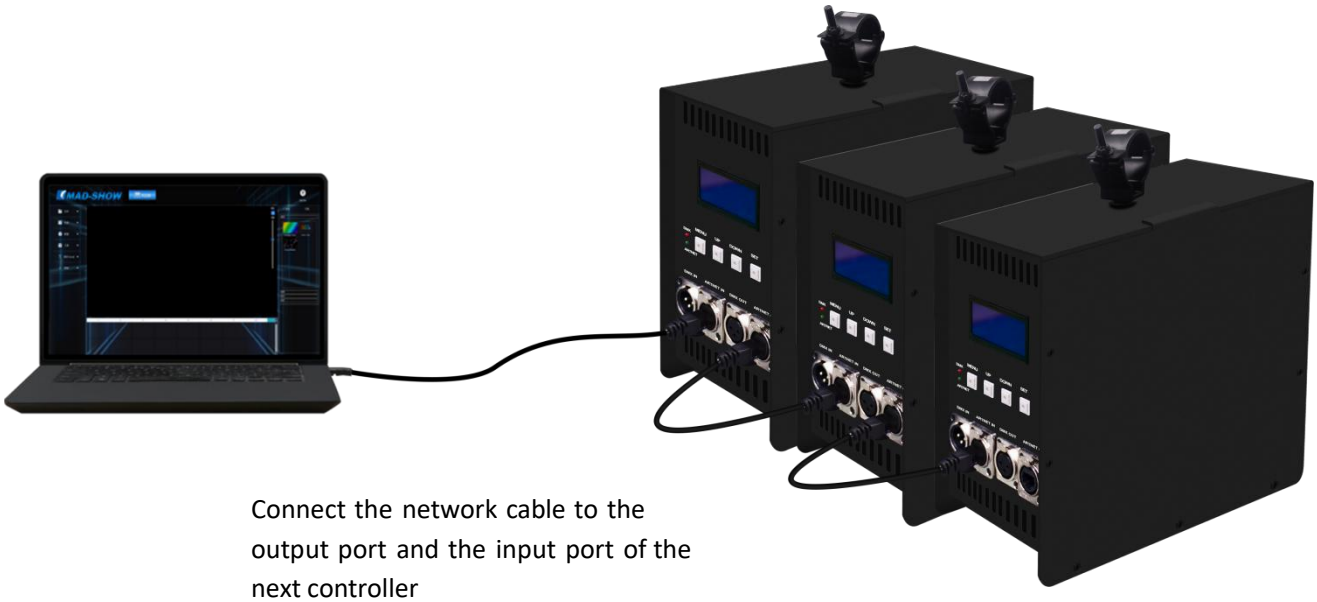
Connect the XLR cable to the output of the controller and the input of the tube

③ Console connect controller



The console can be directly connected to the DMX signal input port

8. Multiple units can be used in cascade.



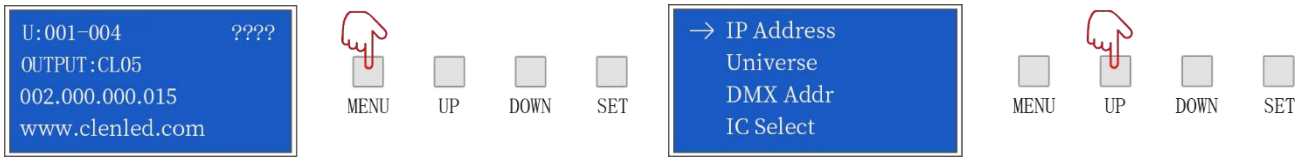
Connect the network cable to the output port and the input port of the next controller

Note: When multiple controllers are cascaded, each controller IP setting cannot be the same!

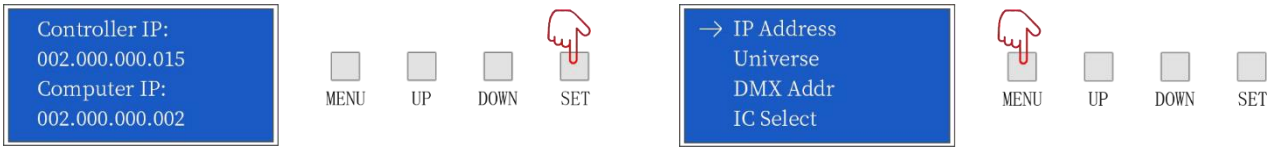
9. Control mode.

ARTNET mode：

① After the controller is powered on, it enters the "ART-NET" mode by default,long press "MENU" for 3 seconds to enter the parameter setting, and click "UP" or "DOWN" to select the parameter that needs to be modified；

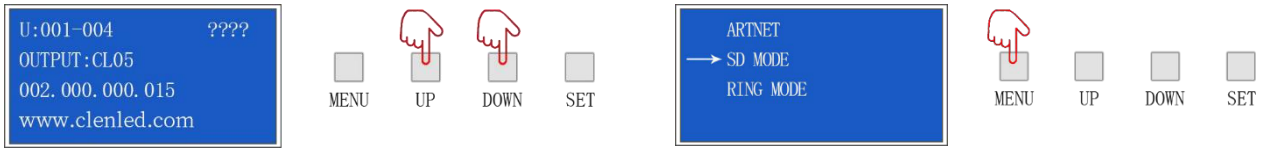


② Click "SET" to enter the parameter list to modify the parameters ("UP""DOWN" switch parameter values), click "SET" again to save, and long press "MENU" to return to the initial interface. The controller port output is an independent port output, one port maximum 680 pixels (IC UCS8903 has a maximum of 340 pixels).

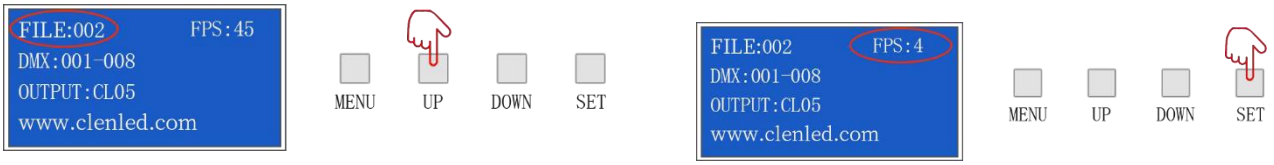


SD card mode：

① After the controller is powered on, it enters the "ART-NET" mode by default, and simultaneously presses "UP" and "DOWN" for 3 seconds to enter the SD card mode;



② Click "UP" or "DOWN" to switch the built-in effects; click "MENU" or "SET" to switch the effect speed; total 31 built-in effects can be selected; long press "UP" and "DOWN" for 3 seconds to exit the SD card model.

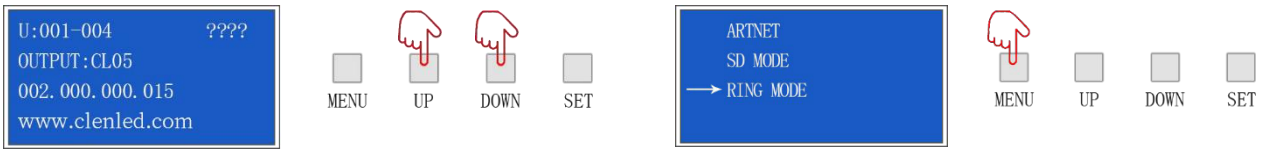


10. DMX Channel Table Description

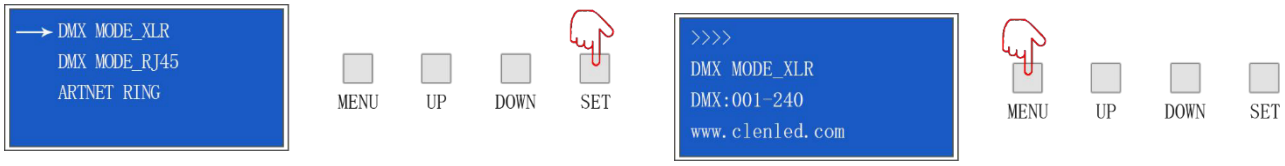
Channel	Name	Figure	Instructions
1	Mode selection	000-247	Call internal 31 effects (one effect for every 8 addresses, and 0-7 for SD card effect 1)
		248-255	Switch to ART_NET mode
2	Speed	000-255	0 is the slowest speed, 255 is the fastest speed, SD card mode is valid
3	Brightness	000-255	0 is the brightness off, 255 is the brightest, SD card mode is valid
4	R- mask	000-255	Subtract red from the effect. 000 is the original effect, and 255 means subtract all red from the effect
5	G-mask	000-255	Subtract green from the effect. 000 is the original effect, and 255 is subtracting all green from the effect
6	B-mask	000-255	Subtract the blue in the effect. 000 is the original effect. 255 means subtract all the blue in the effect
7	invalid	000-007	
	Normally on	008-015	Constant bright white, color selection by mask (brightness, mask channel available)
	stroboscopic	016-255	The higher the value, the faster the strobe (speed, brightness, mask channel is effective)
8	invalid	000-200	
	Record	201-255	When the value of channel 4.5.6 is 255, the recording is valid and the ART_NET effect is recorded to the file specified by channel 1

Ring mode

① After the controller is powered on, it enters the "ART-NET" mode by default. At the same time, long press "UP" and "DOWN" for 3 seconds to enter the mode option, click "DOWN" to select the RING mode, and long press "MENU" to enter the RING mode;



DMX MODE_XLR is the external console mode; DMX MODE_RJ45 is the software analog console mode; ARTNET RING is the software control mode; select the corresponding control mode, click "SET" to save, the interface returns to the mode option, and then long press "MENU" to complete the setting .



11. Ring mode wiring.



Network cable to connect software and controller ARTNET input port

Connect the XLR cable to the output port of the controller and the pixel ring

Software control mode wiring



The console is directly connected to the controller DMX signal input port

Console control mode wiring

12.Corresponding DMX channel function description

Channel	Name	Figure	Description
1	Brightness	000-255	Top total brightness adjustment
2	Red	000-255	Top red brightness adjustment
3	Green	000-255	Top green brightness adjustment
4	Blue	000-255	Top blue brightness adjustment
5	Effect	000-255	64 effects evenly distributed
6	Speed	000-255	Adjust the speed of the effect. The larger the number, the faster the speed.
7	Flicker	000-255	The top color flicker, the larger the number, the faster the flicker
8	Angle	000-255	Choose a playback angle
9	Brightness	000-255	Bottom total brightness adjustment
10	Red	000-255	Bottom red brightness adjustment
11	Green	000-255	Bottom green brightness adjustment
12	Blue	000-255	Bottom blue brightness adjustment

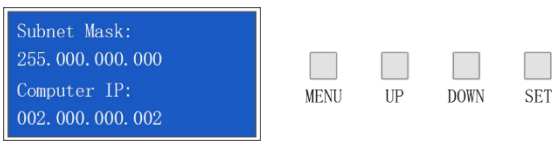
13. Common problems

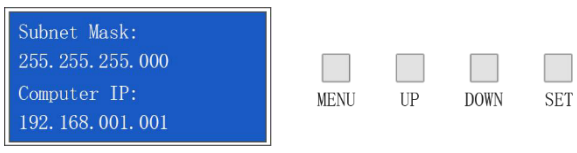
(1) **Question： After the wiring is completed, the controller cannot be connected?**

Answer：Check whether the wiring is correct and whether the plug is loose; after confirming that the connection is correct, check whether the controller computer IP (Computer IP) is consistent with the subnet mask. The corresponding computer IP and subnet mask are as follows：

IP:002.000.000.002 Subnet mask will be 255.000.000.000

IP:192.168.001.001 Subnet mask will be 255.255.255.000

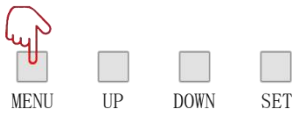


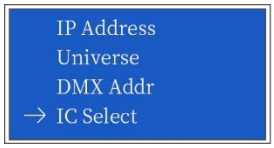


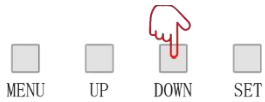
(2) **Question:The controller is connected, but only the first lamp lights up? (Controller IC model setting)**

Answer： Check if the controller IC settings are correct.



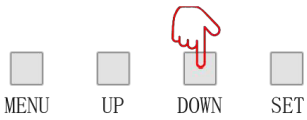




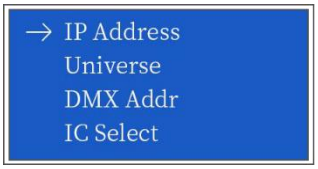


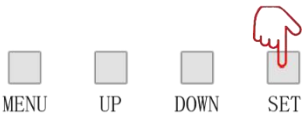
① long press“MENU”enter the parameter setting ②click“UP”or“DOWN”select IC module





③ Click“SET”enter the parameter setting， press“UP”or“DOWN”choose the same IC with lamps

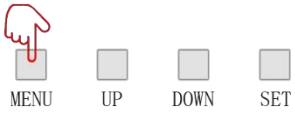




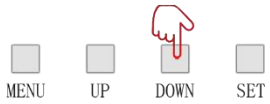
④ press“SET”to save the setting,check whether the lamp is work normally, long press "MENU" to return to the initial interface.

(3) **Question： The lighting effect is inconsistent with the playback order? (**Controller channel order setting)



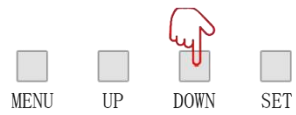




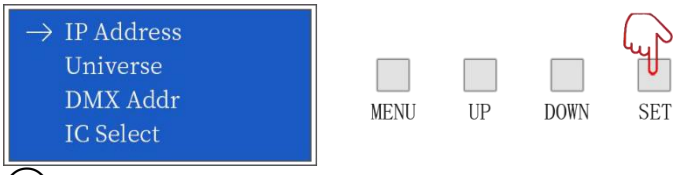


① long press“MENU”enter the parameter setting ②click“UP”or“DOWN”choose channel order





③ click“SET”enter the parameter setting,press“UP”or“DOWN”choose the same channel order with lamps



④ click“SET”save setting,check whether the lamp is work normally, long press "MENU" to return to the initial interface.

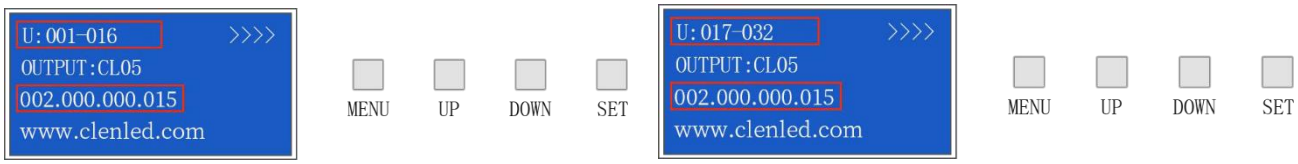
Setting other parameters of the controller, please refer to the above steps

Question： After the controllers are cascaded, some controllers have no signal? (Controller Computer IP, Universe settings)

Answer： Check whether the wiring is correct and whether the plug is loose; check the computer IP (Computer IP) of each controller when the connection is correct. When multiple controllers are cascaded, the computer IP of each controller cannot be the same.

After the controllers are cascaded, the playback effect of each controller is the same?

When multiple controllers are cascaded, each controller space (Universe) should be added, for example, the first one is 1-16, the second one is 17-32, and so on.



14. Attention

- The company does not guarantee man-made damage and natural damage;
- If any abnormality is found during use, please contact us;

15.Contact:

Please check who is our dealer in your country at our website.

www.kudux.com

or write direct to us by email: office@kudux.com