# Product Specification

CL-404R controller

Product name：4 ports controller(Built-in power supply)

Product mode：CL-404R

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.

Product picture：
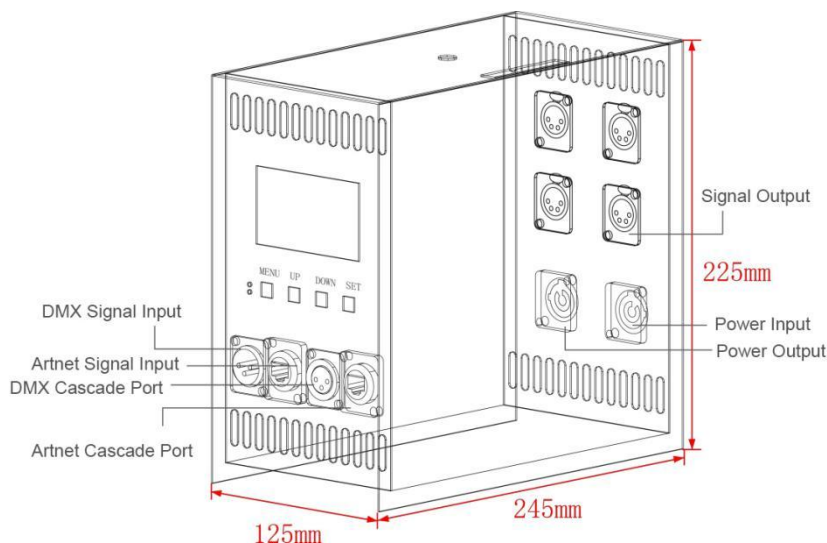
◆ Product features：

➢ 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;

◆ 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	—	—	MAD-SHOW (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	—

◆ Connection

①connect controller input port

Power in（Blue color is power input）

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

②Connect lamps

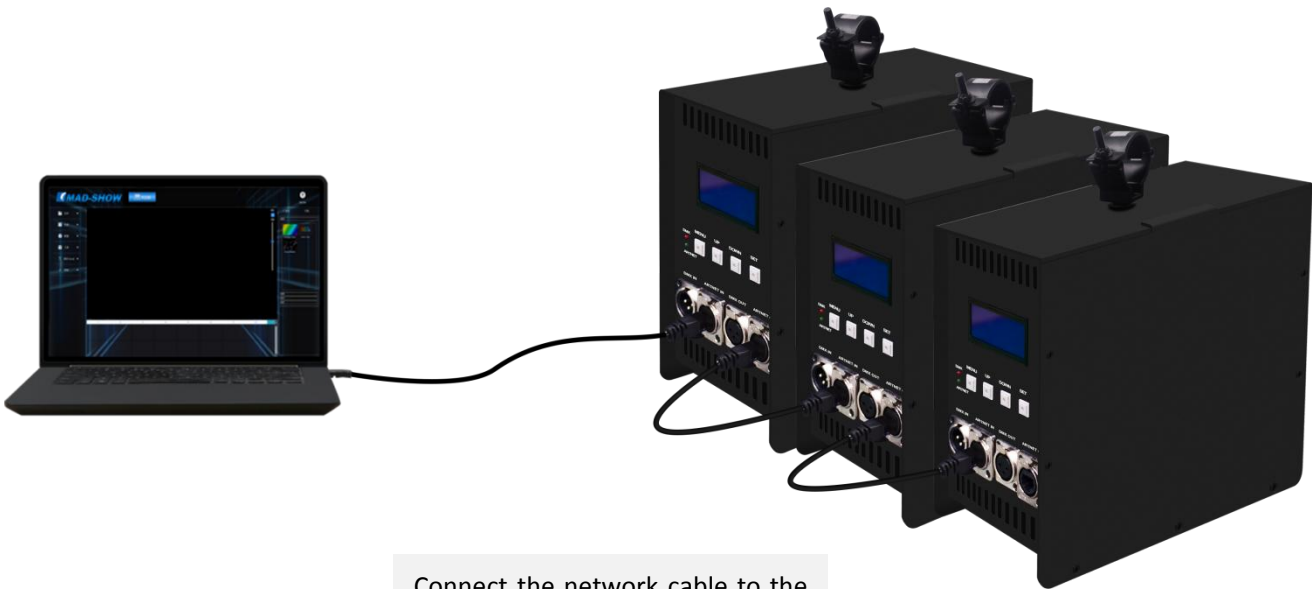Connect the XLR cable to the output of the controller and the input of the tube

③Console connect controller

The console can be directly connected to the DMX signal input port
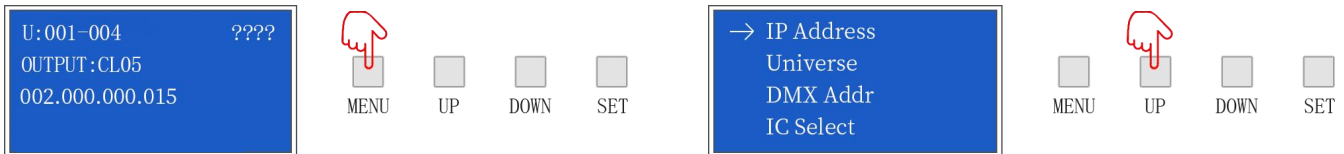
◆ **Multiple units can be used in cascade**

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!

◆ Control mode

ARTNET mode：①After 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；
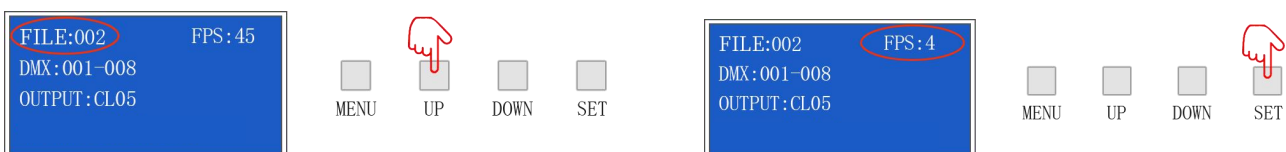
```
U:001-004        ????
OUTPUT:CL05
002.000.000.015
```
MENU UP DOWN SET

```
→ IP Address
  Universe
  DMX Addr
  IC Select
```
MENU UP DOWN SET

②Click "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).

```
Controller IP:
002.000.000.015
Computer IP:
```
MENU UP DOWN SET

```
→ IP Address
  Universe
  DMX Addr
  IC Select
```
MENU UP DOWN SET

SD card mode：①After 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;

```
U:001-004        ????
OUTPUT:CL05
002. 000. 000. 015
```
MENU UP DOWN SET

```
  ARTNET
→ SD MODE
  RING MODE
```
MENU UP DOWN SET

②Click "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.

```
FILE:002      FPS:45
DMX:001-008
OUTPUT:CL05
```
MENU UP DOWN SET

```
FILE:002      FPS:4
DMX:001-008
OUTPUT:CL05
```
MENU UP DOWN SET

◆ DMX Channel Table Description

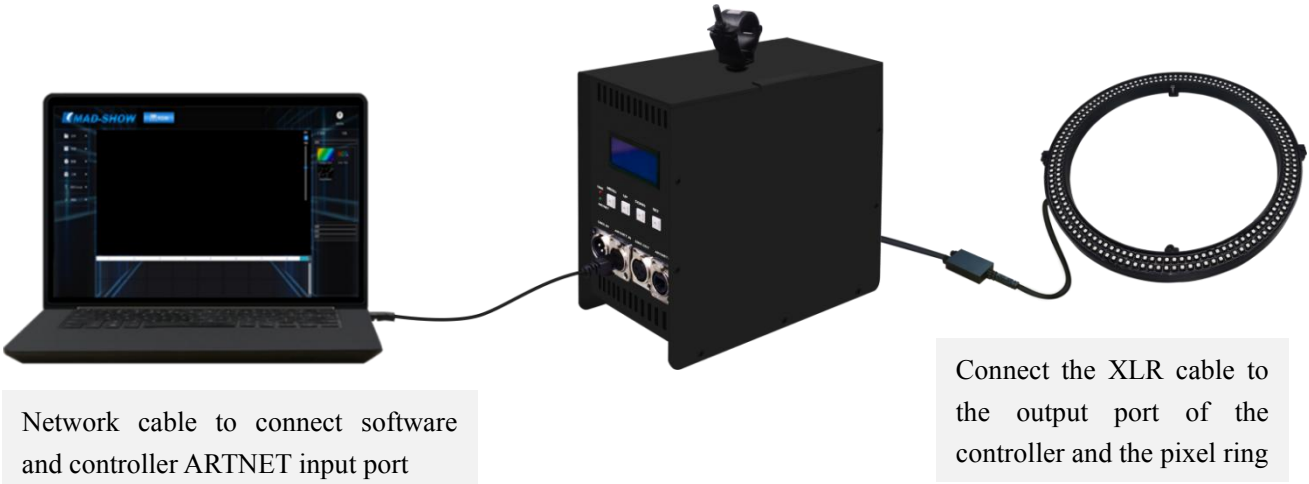| Channel	Name	Figure	Instructions
1	Mode selection	000-247	Call internal 31 effects (one effect for every 8 addresses, and 0-7 for SD card effect 1)
		248-255	Switch to ART_NET mode
2	Speed	000-255	0 is the slowest speed, 255 is the fastest speed, SD card mode is valid
3	Brightness	000-255	0 is the 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:①After 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;
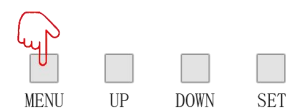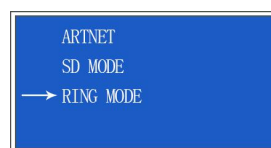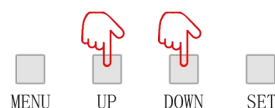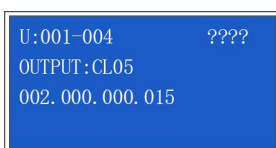
DMX MODE_XLR is the external console mode; DMX MODE_RJ45 is the software analog console mode; ARTNET RING is the software control mode; select the corresponding control mode, click "SET" to save, the interface returns to the mode option, and then long press "MENU" to complete the setting .

```
→ DMX MODE_XLR
  DMX MODE_RJ45
  ARTNET RING
```

MENU   UP   DOWN   SET

```
>>>>
DMX MODE_XLR
DMX:001-240
```

MENU   UP   DOWN   SET
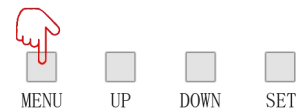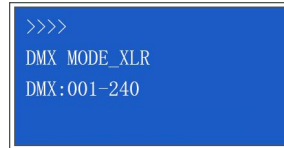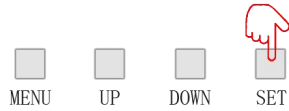
◆ **Ring mode wiring**

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

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

◆ Application

1. Stage performance;
2. The site of the product/press conference;
3. Concert lighting control;
4. Bar and KTV lighting control
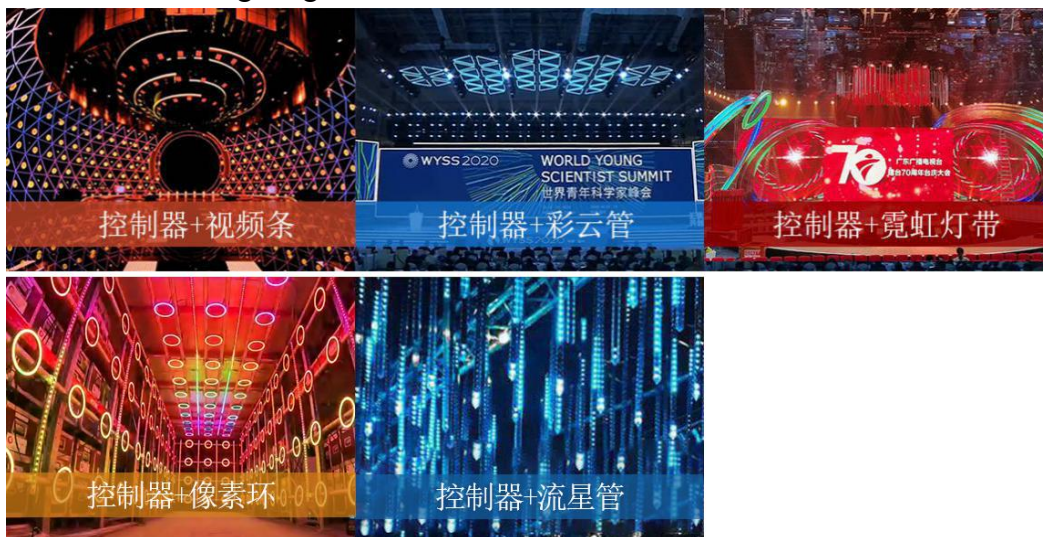
◆ Common problems

(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

```
Subnet Mask:
255.000.000.000
Computer IP:
002.000.000.002
```
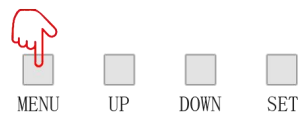MENU UP DOWN SET

```
Subnet Mask:
255.255.255.000
Computer IP:
192.168.001.001
```
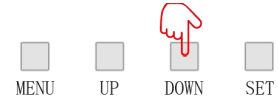MENU UP DOWN SET

(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.
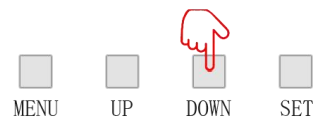
```
U:001-004      ????
OUTPUT:CL05
002.000.000.015
```
MENU UP DOWN SET

```
IP Address
Universe
DMX Addr
→ IC Select
```
MENU UP DOWN SET

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

```
→ CL05
  CL16
  DMX
  WS2811
```
MENU UP DOWN SET

③Click"SET"enter the parameter setting，press"UP"or"DOWN"choose the same IC with lamps
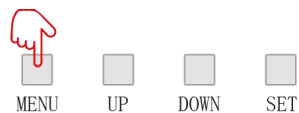
```
→ IP Address
  Universe
  DMX Addr
  IC Select
```
MENU UP DOWN SET
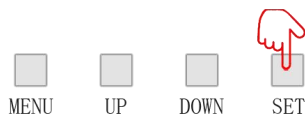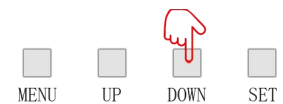
④press"SET"to save the setting,check whether the lamp is work normally, long press "MENU" to return to the initial interface.

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

```
IC Select
Pixel
LED/Pixel
→ Channels
```
MENU UP DOWN SET

```
U:001-004      ????
OUTPUT:CL05
002.000.000.015
```
MENU UP DOWN SET

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

```
RGB      BRG
RBG      BGR
→ GRB    RGBW
GBR      GRBW
```
MENU UP DOWN SET
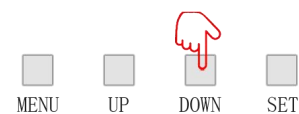
③click"SET"enter the parameter setting,press"UP"or"DOWN"choose the same channel order with lamps

| → IP Address |
| Universe |
| DMX Addr |
| IC Select |

MENU　　UP　　DOWN　　SET
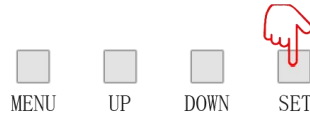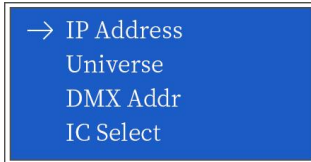
④click"SET"save setting,check whether the lamp is work normally, long press "MENU" to return to the initial interface.
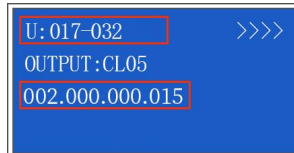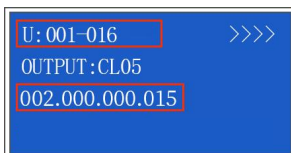
Setting other parameters of the controller, please refer to the above steps

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.

| U: 001-016 　　　>>>> |
| OUTPUT:CL05 |
| 002.000.000.015 |

MENU　　UP　　DOWN　　SET

| U: 017-032 　　　>>>> |
| OUTPUT:CL05 |
| 002.000.000.015 |

MENU　　UP　　DOWN　　SET

Attention

1.Pay attention to the use environment and be waterproof and moisture-proof;

2.There is high voltage inside, non-professionals should not disassemble the machine, otherwise the consequences will be at your own risk;

3.The company does not guarantee man-made damage and natural damage;

4.If any abnormality is found during use, please contact us;