

W-308C-TTL manual



I. Introduction

W-308C is an eight-output color-changing light controller that can be connected and removed. It supports computer online, Art-Net protocol MADRIX, jinx and other software, can be used for real-time aiming and 3D layout online, and can be connected to DMX console control. It is widely used in KVT, bars, banquet halls, exhibition halls and other color-changing light control systems.

2. Specifications and parameters

working temperature:	-20°C--75°C	
working voltage:	AC (alternating current) 85V~240V	
maximum power:	≤3W	
weight:	Gross weight: 1.1kg	Net weight: 0.9kg
size:	Outer box: 31 x 24.7 x 6cm Machine: 28.5×10.5×4.5cm	

3. Performance characteristics

1. Load-bearing lamps: 8 output ports, up to 8192 pixels can be controlled, each port can control up to 1024 points, support TTL lamps, breakpoint continuation, etc., RGB\RGBW\RGBCW multi-color channel lamps, 8 ports can be independently controlled to support lamps in different channel order at the same time.

2. Working mode: computer online, SD card offline, cascaded synchronous control, DMX lighting console, MADRIX, jinx and other software supporting Artnet protocol can be connected online.

3. Online point drawing, 3D layout, wireless network transmission through wireless router, and star structure cabling of switch.

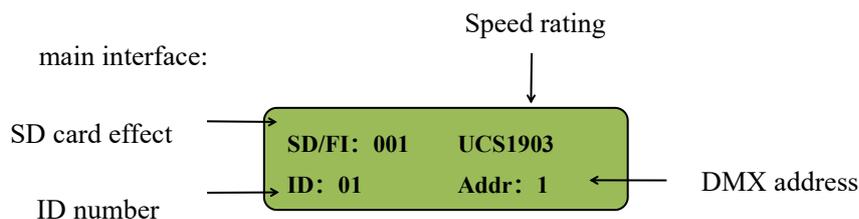
4. Built-in number points and internal control test functions.

5. It can be inserted into W, and the 3-channel program can carry the RGBW four-channel lamp.

6. Support online fixed parameters and firmware upgrade.

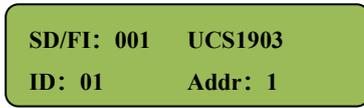
7. Long press OK button to fix the parameter (black dot on the display).

4. Instructions for use



5. Controller button operation

1. After power-on, the startup interface is as shown in the figure below.



The MENU key can be used to switch directories in sequence

2、 Press the MENU key once to switch to the ID menu (ID=01), ▲ ▼ and switch up and down keys. (The range is Number 1-255); press OK to stay and return to the main screen.



3、 Press the MENU key twice to switch to the chip menu (CHIP=UCS1903), ▲ ▼ and switch the chip model with the up and down keys; hold the OK key to return to the main interface.



The specific chip model is shown in the figure below:

1-UCS1903	2-LB1934A	3-DMX512-800K	4-DMX512-500K	5-DMX512-250K
6-TM1814	7-UCS2904B	8-TM1804	9-TM1914A	10-GS8206
11-P9883S	12-SM16703P	13-Sk6812RGBW	14-SK6812RGB	15-WS2811
16-WS2812B	17-TM1923	18-UCS8903	19-UCS8904	20-HW1603
21-UCS5603	22-UCS8603			

4、 Press the MENU key three times to switch to the Speed (Speed) menu ▲ ▼ The speed level (1-16) can be switched up and down by pressing the keys; OK key is held and

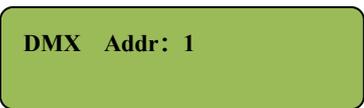
returns to the main screen.



5、 Press the MENU key four times to switch to the brightness (Bright) menu, ▲ ▼ Use the up and down keys to switch brightness levels (1%-100%). The OK key keeps and returns to the main screen.



6、 Press the MENU key 5 times to switch to the DMX address menu, ▲ ▼ Press the up and down keys to switch DMX512 addresses 1-512; press OK to keep and return to the main screen.



7、 Press the MENU key six times to switch to the File Single Loop menu, ▲ ▼ Press and hold the key to switch between file modes (Single single / LOOP loop); OK key to stay and return to the main screen.



8、 Press the MENU key seven times to switch to the Channel Selection menu, ▲ ▼ The channel 3-RGB/4-RGBW can be switched between the upper and lower keys to select three colors or four colors; OK key is pressed to keep and return to the main interface.



9、 Press the MENU key 8 times to switch to the Port Test (port test) menu, ▲ ▼ press the up and down keys to select the port ALL (all ports) 1-8 ports selection, press the OK key

to enter the test interface;

Port Test: ALL



Use the up and down keys to select port ALL for all ports 1-8

Press OK button to enter test mode:

Port Test: ALL
1-P2P 1



Use the up and down keys to select a number in the range of 1-1024

Press OK to enter the second test:

Port Test: ALL
2-Red

Red constant test

Press OK to enter the third test:

Port Test: ALL
3-Green

Green Check

Press OK to enter the fourth test:

Port Test: ALL
4-Blue

Blue light test

Press OK to enter the fifth test:

Port Test: ALL
5-White

White light constant test

Press OK to enter the sixth test:

Port Test: ALL
6-Gradient

Color gradient overtest

Press OK to enter the seventh test:

Port Test: ALL
7-RGB Jump

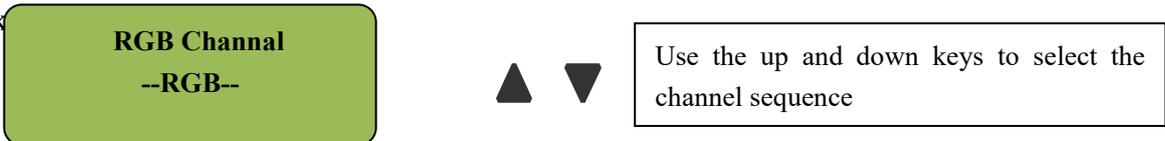
Color jump test

Press OK to save and exit.

10、 Press the MENU key nine times to switch to the Gamma (Gamma) value menu,
Use the up and down keys to switch the gamma value; OK key to keep and return to the main screen.



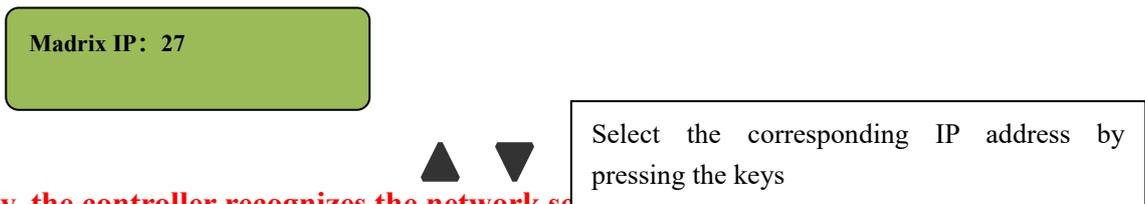
11、 Press the MENU key 10 times to switch to the Menu: RGB (channel mode) menu. Press the up and down keys to select the channel order RGB, RBG, GBR, GRB, BGR, BRG; press the OK key to save and exit.



Press OK to save and exit.

12、 Madrix (Sir Mac) Settings:

Press the MENU key 11 times to switch to Madrix IP: 27 (IP address) menu,



Currently, the controller recognizes the network segment: 192.168.2.XXX

Press the OK key to enter the next menu: port space setting and port point setting



press ▲ ▼ Select the corresponding domain space and port load point number by pressing the up and down keys, and confirm by pressing the OK key.



After the completion of the storage, press the "Menu" key to continue selecting other Settings.

Note: The starting domain space follows the ID number. For example, if four domain spaces are set, the first machine has a total of 32 domain spaces, and the starting domain space of the second machine is 33, followed by 32 domain spaces, and so on.

13. Fixed control parameters: (Please pay special attention here. There is a lock parameter function on the controller. Long press the "OK" key, and * the left side of the display will light up to represent lock)

Method 1: Automatic identification ID: W-308C is completely unlocked, connected to the main control W-100C, and the sub-control automatically identifies the ID number and continues to assign numbers. The chip automatically identifies the model of the main control chip; in addition, the main control can set the parameters of the sub-control separately and write them directly. This scheme is applicable to most situations: as shown in Figure 1

Method Two: Separate Control for Individual Fixtures: First, disconnect the main control network cable. Set up individual fixtures and select an ID number. Choose the chip model and long press the "OK" button to lock the fixture parameters. Once all fixture parameters are set, connect them to the output end of the main control W-100C. At this point, the chip model on the main control does not need to match the fixture (this method is only used when the fixtures cannot connect properly or require different settings). As shown in Figure 2

SD/FI: 001	Speed: 1
ID: 01	Addr: 1

graph 1

*FI: 001	Speed: 1
ID: 01	Addr: 1

graph 2

- Lock the control parameters: Long press OK to lock the * displayed in the upper left

corner as shown in Figure 2

- Unlock the sub-control parameters: After the sub-control is locked, long press the OK key to unlock as shown in Figure 1

Use of split control lock:

- 1、 The master and sub-control are connected, but the sub-control cannot recognize the ID number
- 2、 Different channels or different chip lights appear in the same site
- 3、 The order of the split control does not follow the hand-in-hand mode and there is a confusion of ID numbers

Offline cascaded playback

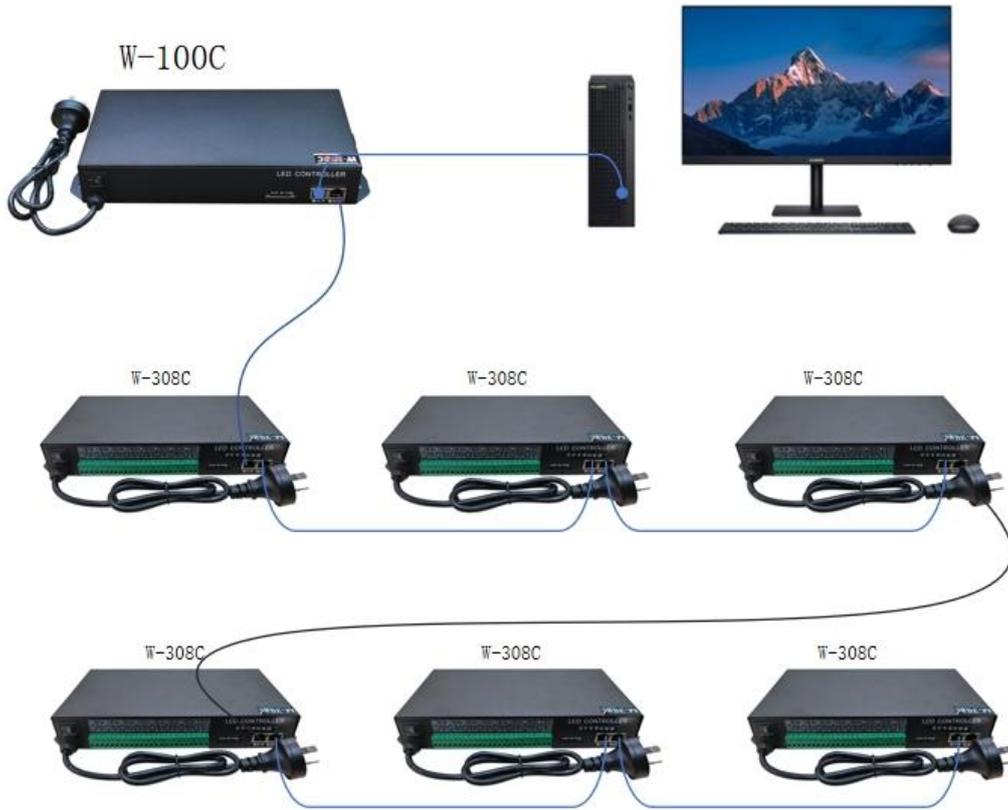
1. When several W-308C units are offline and cascaded for synchronization, the first W-308C should be set to "ID=1". The other W-308C units will default to automatic recognition. The program files need to be exported in partitions. When exporting the offline files from the software, select "Partition by Unit". The files will be exported according to the number of parts on the drawing, and the corresponding controller should copy the program files from the respective folders.

ID=01 (main control) Automatic identification 02 automatic identification



03 Automatic recognition 04

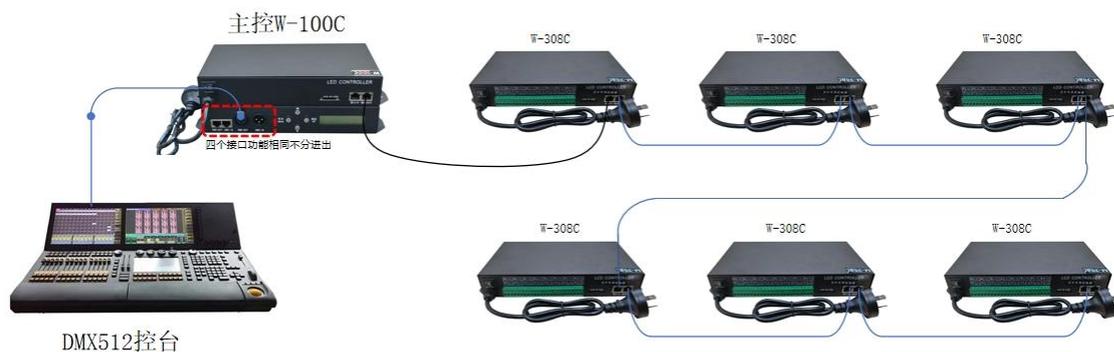
7. Online playback



8. Console control: There are two schemes. One is to cascade into the console



Option 2: Add a main control console



Step 1: Press "Menu" in turn to reach interface 5, which is displayed as follows: DMX Addr: 1

Step 2: Press ▲ ▼ Press the keys to add or subtract the value, which represents the control address; press "OK" to save the address.

Step 3: Open the console and connect according to the corresponding address. The connection channel is as follows:

classical pathway:	Brightness 0-255,4 values are one level, a total of 63 levels
second channel:	R Red (0-255)
Third channel:	G Green (0-255)
Fourth channel:	B Blue (0-255)
The fifth channel:	W White (0-255) is only for RGBW lamps
Channel 6:	The file effect number is 4 values for a file, and there are 64 files in total
The seventh channel:	Playback speed (1-16 levels)
The eighth channel:	In reverse, 0-123 is forward, 124-131 is stop, and 132-255 is reverse.
The ninth channel	strobeflash
Channel 10 background color 01	Red 000-255 components
Channel 11 Background 02	Green 000-255 parts
Channel 12 Background 03	Blue 000-255 component

9. Online point drawing Settings:

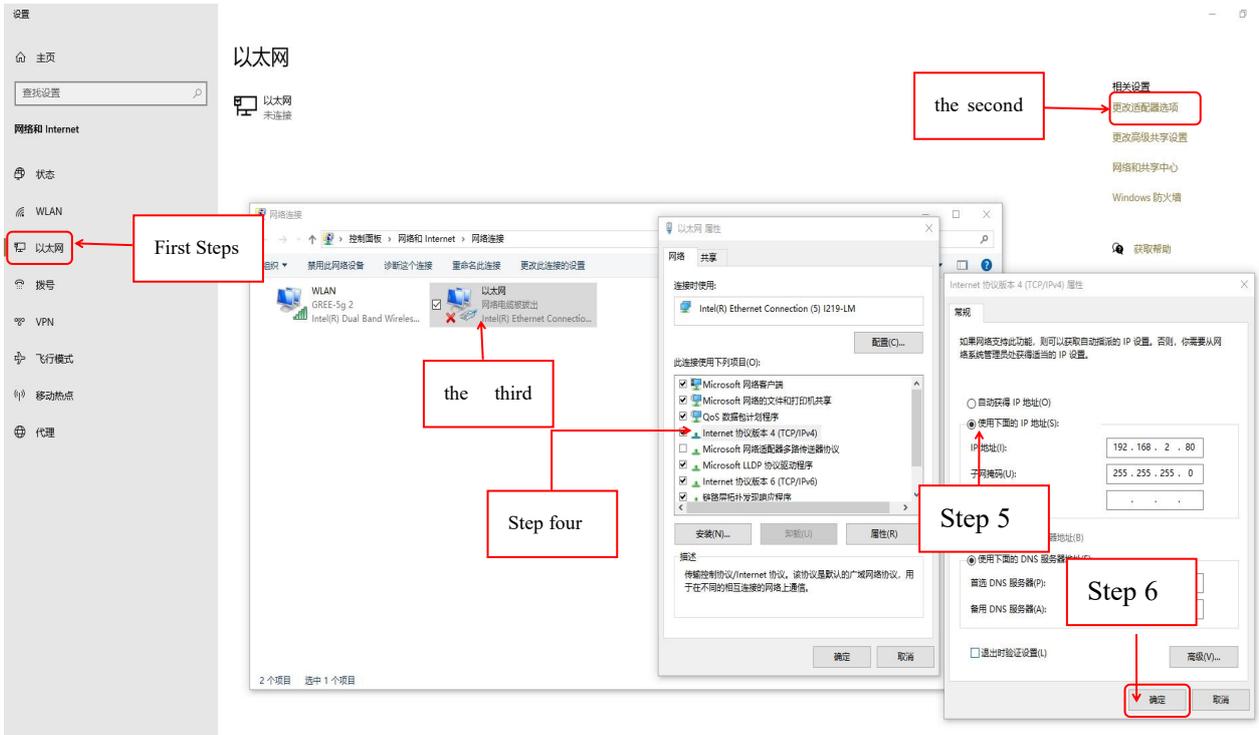
Step 1: Computer Settings

"Network and INternet Settings" --> "Ethernet" --> "Change adapter options" --> double click "Ethernet"

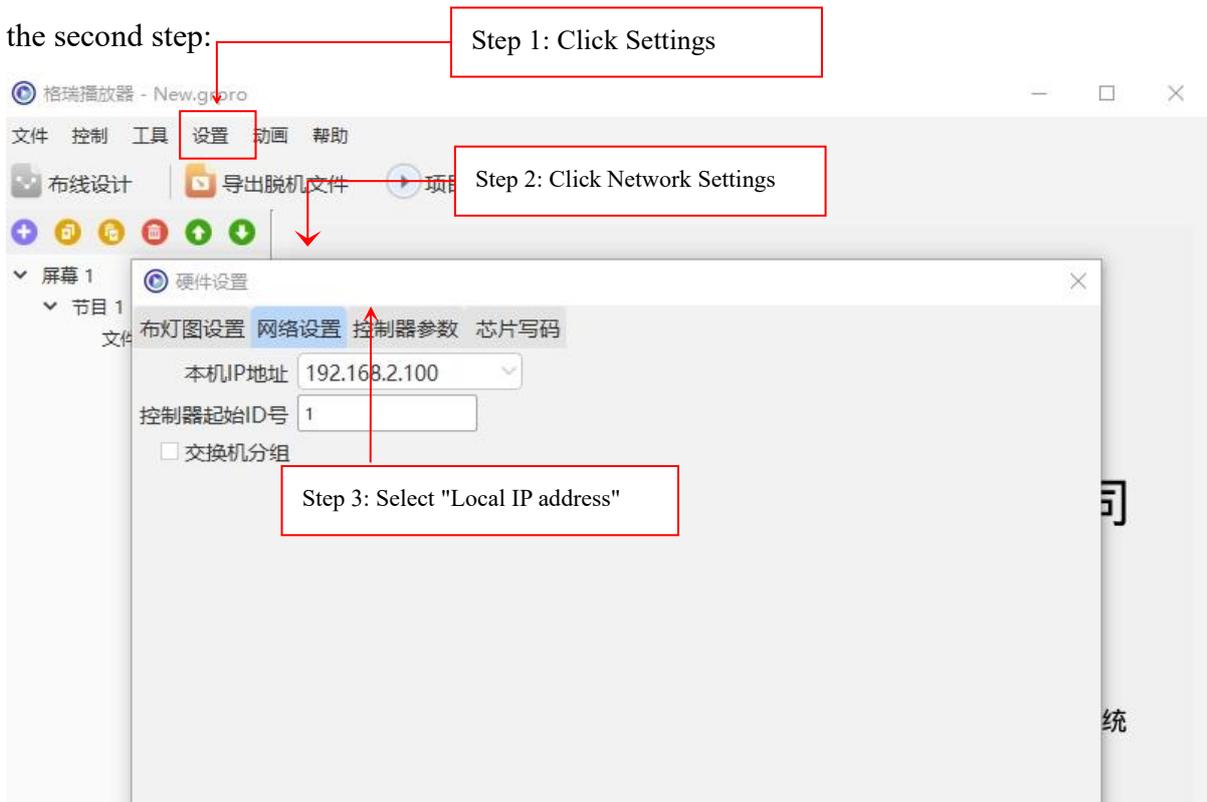
--> Select Internet protocol version 4 (TCP/IP) --> double click to open--> "Use the following IP address"

--> Enter the corresponding IP address--> Click OK

The diagram is as follows:

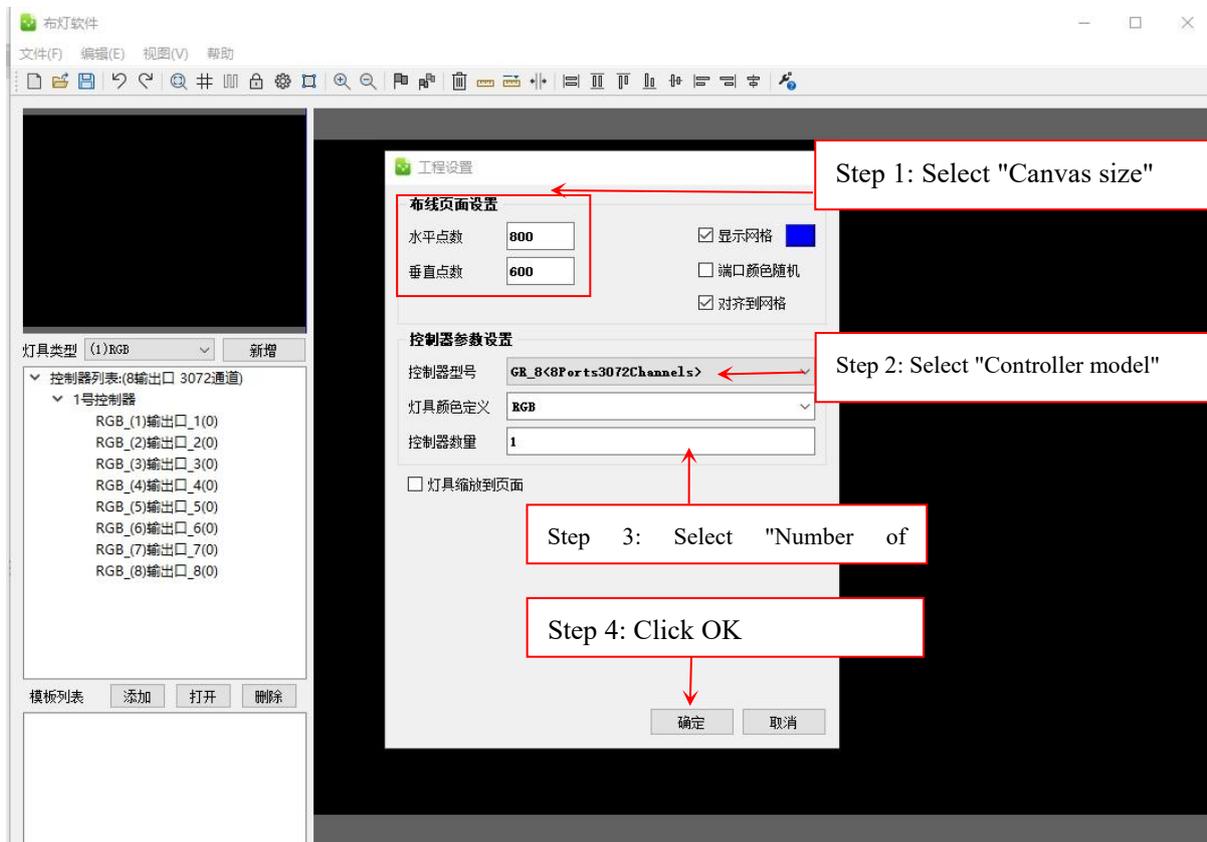


the second step:

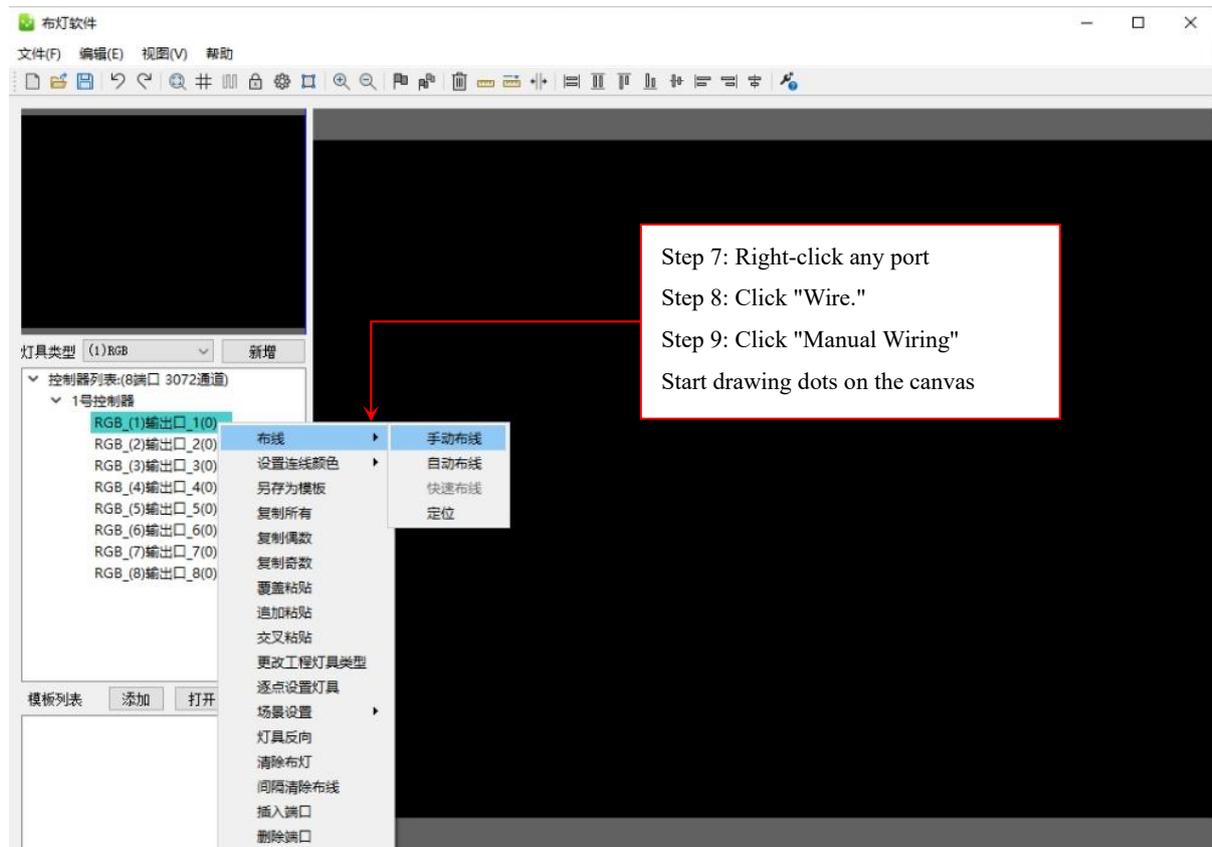
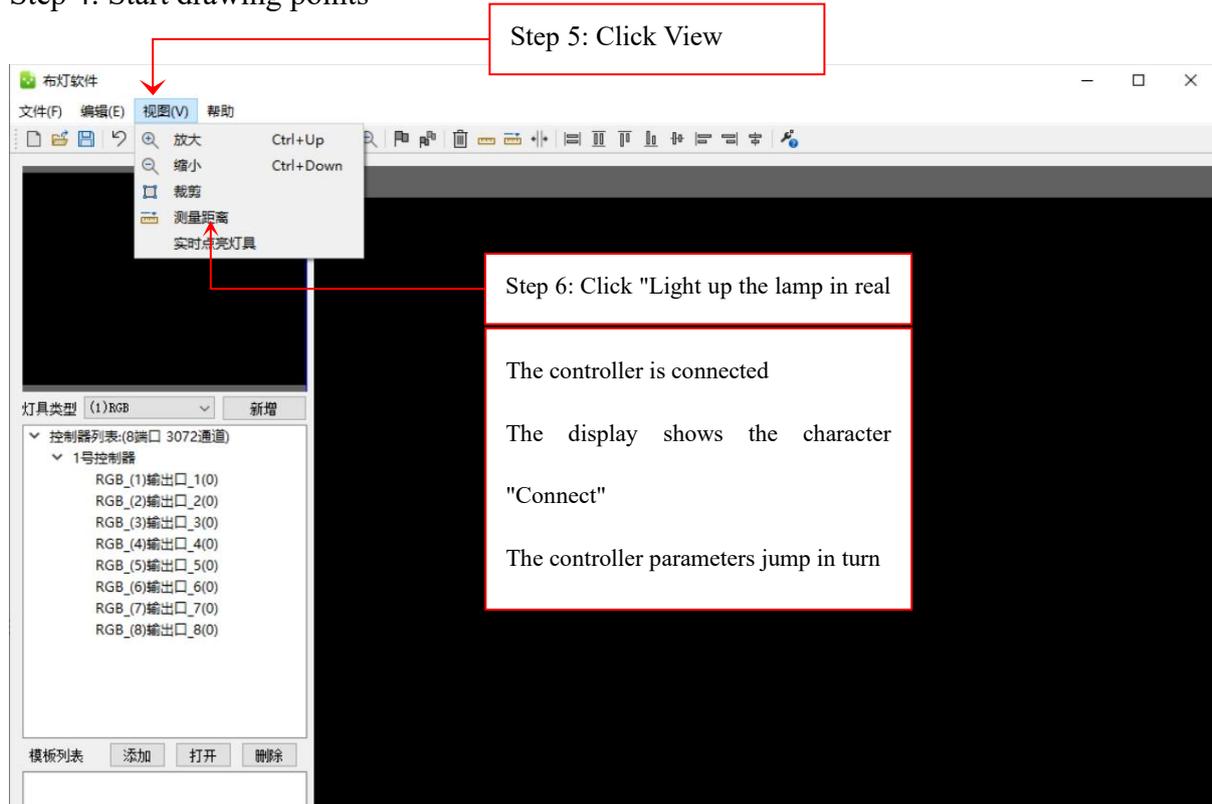


Step 3: Wiring design

Canvas Settings--> Controller model--> Number of controllers

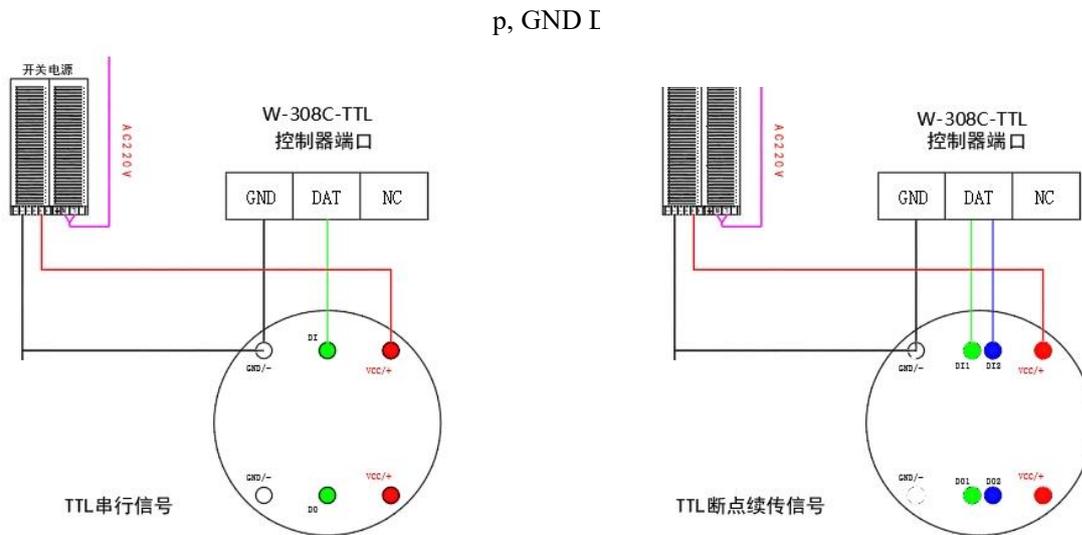


Step 4: Start drawing points



After completing the drawing, save the drawing. If you want to generate an offline file, you need to use the offline software.

10. TTL lamp wiring diagram:



pay attention to:

1. Different lamp models have different wiring methods, which need to be connected according to the information provided by the manufacturer and operated by the power supply lamp.
2. SD card program playback, copy the program first format the SD card, put the Off001.ARM file into the card.
3. Do not operate SD card and wiring with power on.

10、 Support secondary protocol development

protocol : UDP

Default IP:192.168.2.xx

Default port: 33445

Instruction format: hexadecimal

(1) Instruction sending format:

Basic instruction format: header code (CC) + instruction code + length + device ID + information

Command response format: header code (AA) + command code + length + device ID + information

(2) Functional instructions:

A. Search command: CC 01 04 Device ID (1~255)

Device response: AA+01+14+ Device ID (1~255) + 8 bytes (character type) product model + 8 bytes (character type) version number

Example: Search for information about the 8th device

Instruction: CC 01 04 08

Answer: AA 01 14 08 C8 xx

B. Functional instructions: restart

Device reboot command: CC 05 05 ID 00

Device responds to command: AA 05 05 ID 00

CC header code Space Instruction code Space Instruction length Space ID number Space 00

C. Functional instructions: Effect file call

Effect file call instruction: CC 50 05 ID (0 means all devices) Effect serial number (1~255)

Device responds to command: AA 50 05 ID xx

CC header code, Space, Instruction code, Space, Instruction length, Space, ID number, Space, Effect sequence number

Example: How to send the instruction when calling the 10th file of the third controller??

Message sent: CC 50 05 03 0A

Directive response: AA 50 05 03 0A

D. Functional instructions: brightness value call

Brightness call instruction: CC 51 05 ID (0 means all devices) Effect number (1~100% ratio)

Device responds to command: AA 51 05 ID xx

CC 51 05 ID (0 means all devices) Brightness (0~100)

Example: Call the third controller to set the brightness to 75, how to send the instruction??

Instructions sent: CC 51 05 03 4B

Directive response: AA 51 05 03 4B

E. Functional instructions: speed value call

Speed call instruction: CC 52 05 ID (0 means all devices) speed gear (1~15)

Device responds to command: AA 52 05 ID xx

CC 52 05 ID (0 means all devices) speed (0~15)

Example: How to send the command at the speed of 8 when calling the third controller??

Message sent: CC 52 05 03 08

Directive response: AA 52 05 03 08

F. Functional instructions: single mode--loop mode

Mode single-loop call instruction: CC 53 05 ID (0 means all devices) Mode (0 is a single effect loop, 1 is a full effect loop)

Device responds to command: AA 53 05 ID 0/1

Example: How to send the instruction when calling the file loop of the third controller??

Message sent: CC 53 05 03 1

Directive response: AA 53 05 03 1

Hexadecimal notation:

The hexadecimal expression of the file value is: 0---255

figure	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
hexadecimal	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
figure	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
hexadecimal	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
figure	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
hexadecimal	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F
figure	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
hexadecimal	30	31	32	33	34	35	36	37	38	39	3A	3B	3C	3D	3E	3F
figure	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
hexadecimal	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F
figure	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
hexadecimal	50	51	52	53	54	55	56	57	58	59	5A	5B	5C	5D	5E	5F
figure	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
hexadecimal	60	61	62	63	64	65	66	67	68	69	6A	6B	6C	6D	6E	6F

The same applies elsewhere

figure	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
hexadecimal	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	AA	AB	AC	AD	AE	AF

The same applies elsewhere

figure	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
hexadecimal	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9	FA	FB	FC	FD	FE	FF

