W-308C-DMX 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 online real-time target, 3D layout, and can be connected to DMX control console for control. It is widely used in KVT, bars, banquet halls, exhibition halls and other color-changing light control systems.

Ii. Specifications and parameters

working temperature:	-20℃--75℃
working voltage:	AC (alternating current) 85V-240V
maximum power:	≤3W
weight:	Hair 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 independent ports can support different channel order lamps at the same time.

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

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

4. Built-in counting and internal control testing functions.

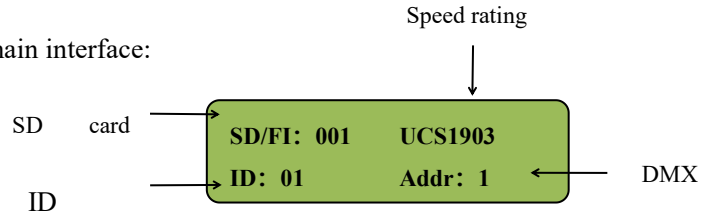
5. You can insert W and use 3-channel program to carry RGBW four-channel lamps.

6. Support online fixed parameters and firmware upgrade.

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

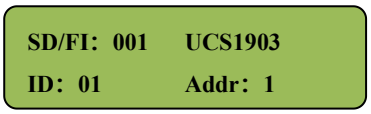
4. Instructions for use

main interface:



5. Controller button operation

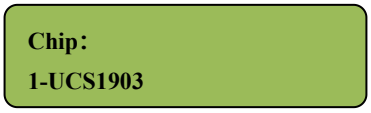
1. After power on, the startup interface is as shown in the figure below.



Press MENU key to switch directories in sequence

2、Press the MENU key once to switch to the ID menu (ID=01), and press the up and down keys to switch. (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 press the up and down keys to switch the chip model; press OK to keep and return to the main interface.



The specific chip model is shown in the following figure:

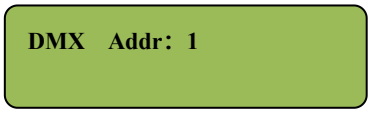
1-UCS1903	2-LB1934A	3-DMX512-800K	4-DMX512-500K	5-DMX512-250K
6-TM1814	7-UCS2904B	8-TM1804	9-TM1914A	10-GS8206
11-P9883S	12-SM16703P	13-Sk6812RGBW	14-SK6812RGB	15-WS2811
16-WS2812B	17-TM1923	18-UCS8903	19-UCS8904	20-HW1603
21-UCS5603	22-UCS8603			

4、Press the MENU key three times to switch to the Speed (Speed) menu ▲ ▼ Up and

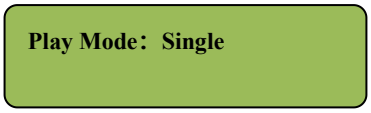
down keys switch speed levels (1-16); OK key to hold and return to the main screen.

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

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



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



8、Press the MENU key 7 times to switch to the channel selection menu, ▲ ▼ Up and down keys switch channel 3-RGB/4-RGBW three-color four-color selection; OK key 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;

Use the up and down keys to select port

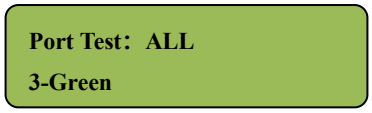
Press OK button to enter the test state:

Use the up and down keys to select the

Press OK to enter the second test:

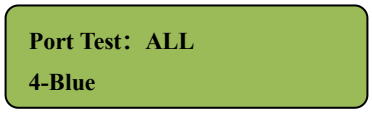
Red always on test

Press OK to enter the third test:



Green light test

Press OK to enter the fourth test:

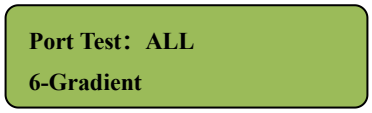


Blue constant test

Press OK to enter the fifth test:

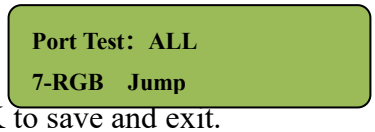
White constant light test

Press OK to enter the sixth test:



Color gradients are over-tested

Press OK to enter the seventh test:

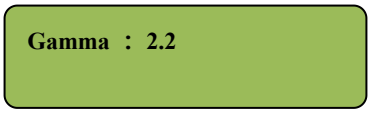


Color jump test

Press OK to save and exit.

10、Press the MENU key nine times to switch to the Gamma (gamma) value menu,

Up and down keys switch the gamma value; OK key to keep and return to the main screen.



11、Press the MENU key 10 times to switch to 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 t

Press OK to save and exit.

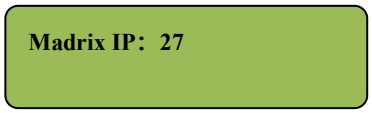
12、Madrix (Sir Mai) Settings:

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

The network segment identified by the controller is: 192.168.2.XX

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

press Press the up and down keys to select the corresponding domain space and port load point number, and press the OK key to confirm.

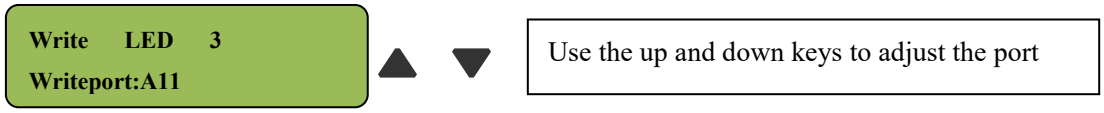


Save is complete. Press the "Menu" key to continue selecting other Settings.

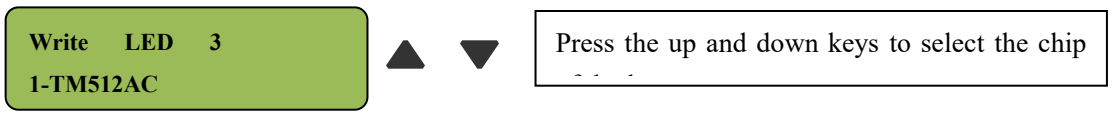
Note: The starting domain space follows the ID number. For example, if four domain Spaces are set, the first machine has a total of 32 domain Spaces, the starting domain space of the second machine is 33, and then 32 domain Spaces are extended, and so on.

13. DMX512 Write code parameter setting

Press the MENU key 12 times to switch to writing code or press the "MENU" and "▲" keys at the same time to directly enter the writing code interface)

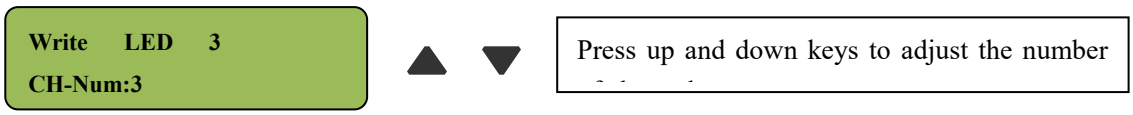


Press OK to save and go to the next item



Press OK to save and enter the following item

Press OK to save and go to the next item



Press OK to write the code

The coding chip is as follows;

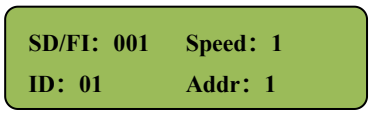
1-TM512AC	2-UCS512C*	3-UCS512D	4-UCS512E	5-SM16500
6-SM17500	7-SM17512	8-SM17522	9-SM18522	10-HI512D4
11-HI512ES	12-GS851X	13-GS852X	14-SM16512	15-UCS512B3

13. Fixed control parameters: (Here, special attention should be paid to the lock parameter

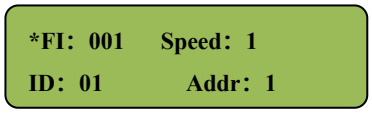
function on the controller. Long press the "OK" key, and the * on the left of the display screen will light up to represent the lock)

Method 1: Automatic ID Recognition: W-308C is fully unlocked and connected to the main control W-100C. The sub-control automatically recognizes the ID number and continues numbering afterward. The chip automatically identifies the model of the main control chip. Additionally, the main control can set sub-control parameters separately and write them directly. This solution is applicable in most scenarios, as shown in Figure 1

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



graph 1



graph 2

- Lock the sub-control parameter: long press OK to lock the upper left corner with * displayed as shown in Figure 2

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

Usage of sub-control lock:

1、The main control and sub-control are connected, but the sub-control cannot identify the ID number

2、Different channels or different chip lights appear in the same site

3、The order of sub-control does not follow the hand-in-hand mode and the ID number is confused

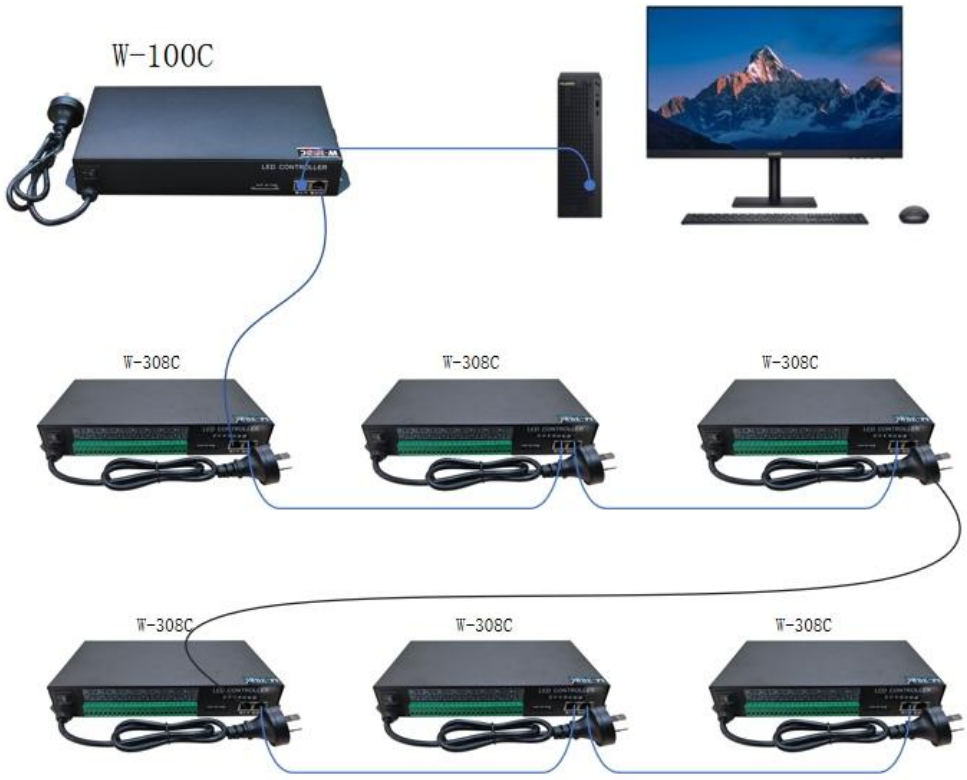
Offline cascaded playback

When synchronizing several W-308C units in a offline cascaded configuration, set the first W-308C to "ID=1". The other W-308C units will default to automatic recognition. The program files need to be exported in partitions. When exporting files offline, select "Partition by unit" so that the folders are exported according to the number of parts on the drawings. Copy the corresponding program files from the respective folders to the controller.

ID=01 (master control) automatic identification 02 automatic identification

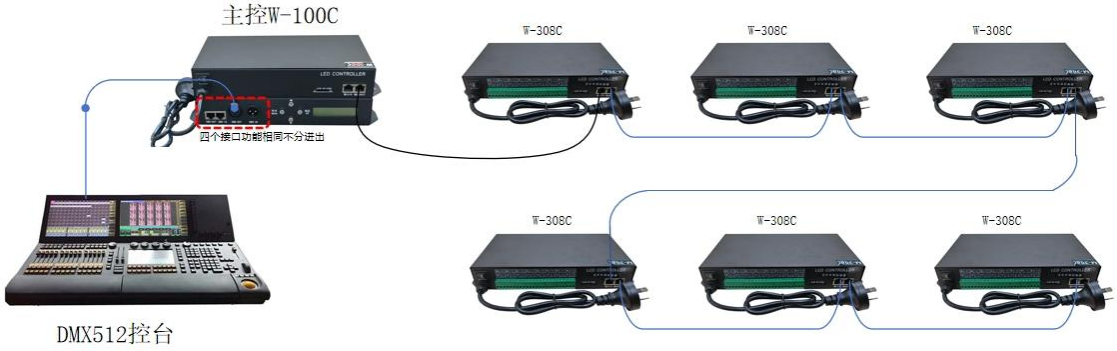
03 Automatic recognition 04

7. Online playback



8. Control of the console: There are two schemes. Scheme 1: Cascade into the console

Option 2: Add the main control console



Step 1: Press "Menu" in sequence until you reach screen 5, which shows as follows: DMX Addr: 1

Step 2: Press ▲ ▼ Press up and down keys to add or subtract values, which represent 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, four values are one level, a total of 63 levels
second channel:	R Red (0-255)
The third channel:	G Green (0-255)
The fourth channel:	B Blue (0-255)
The fifth channel:	**W White (0-255) is only for RGBW lamps**
The sixth channel:	File effect number, 4 values are a file, a total of 64 files
The fourth channel:	Playback speed (1-16 levels)
The eighth channel:	Forward and reverse, 0-123 is forward, 124-131 is stop, and 132-255 is reverse.
The ninth channel	stroboflash
Channel 10 Background 01	Red 000-255 parts
Channel 11 Background 02	Green 000-255 parts
Channel 12 Background 03	Blue 000-255 parts

9. Online dot setting:

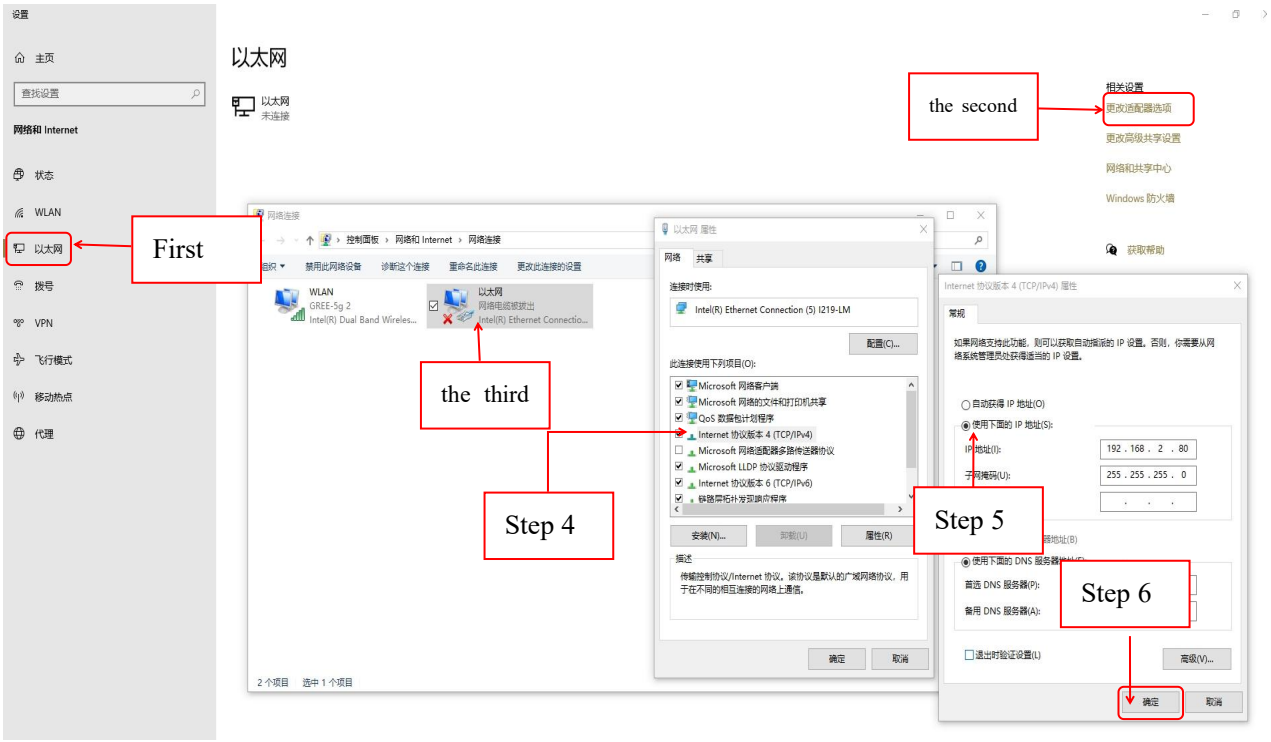
Step 1: Computer Settings

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

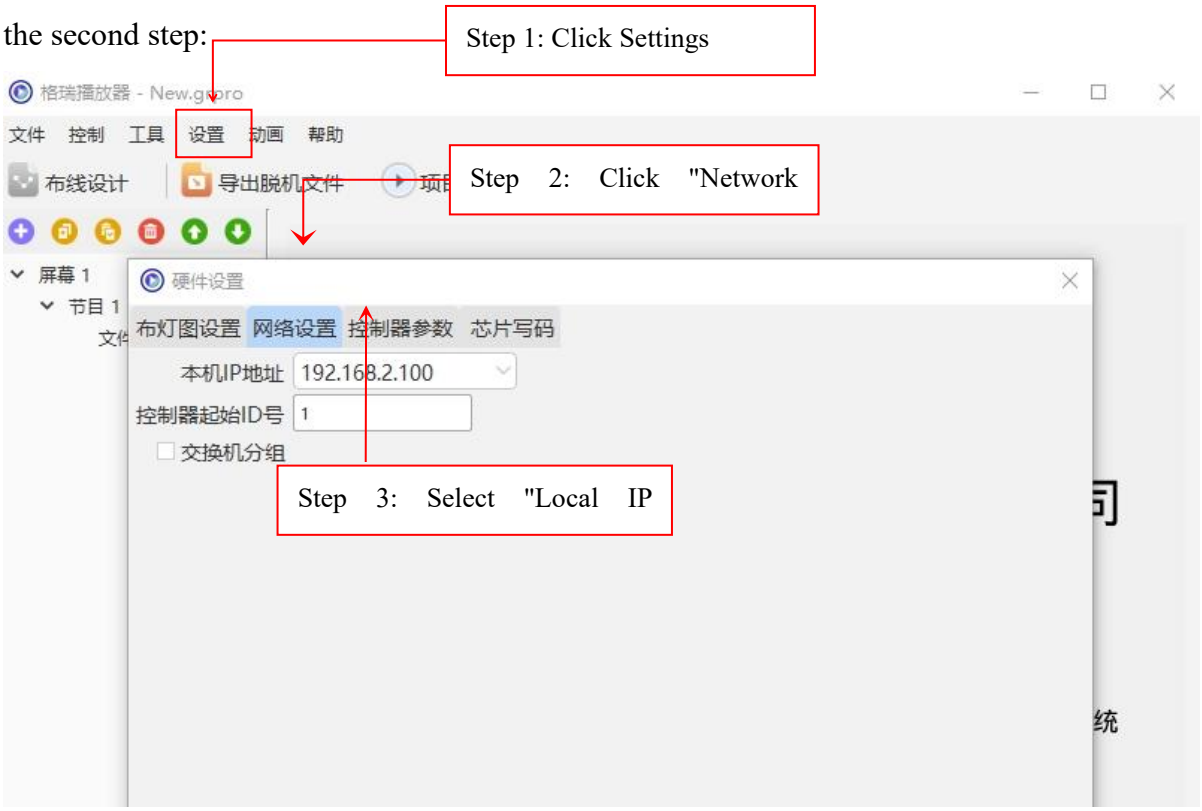
--> Select version 4 of the Internet protocol (TCP/IP) --> double-click to open--> "Use the following IP address"

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

The diagram is as follows:

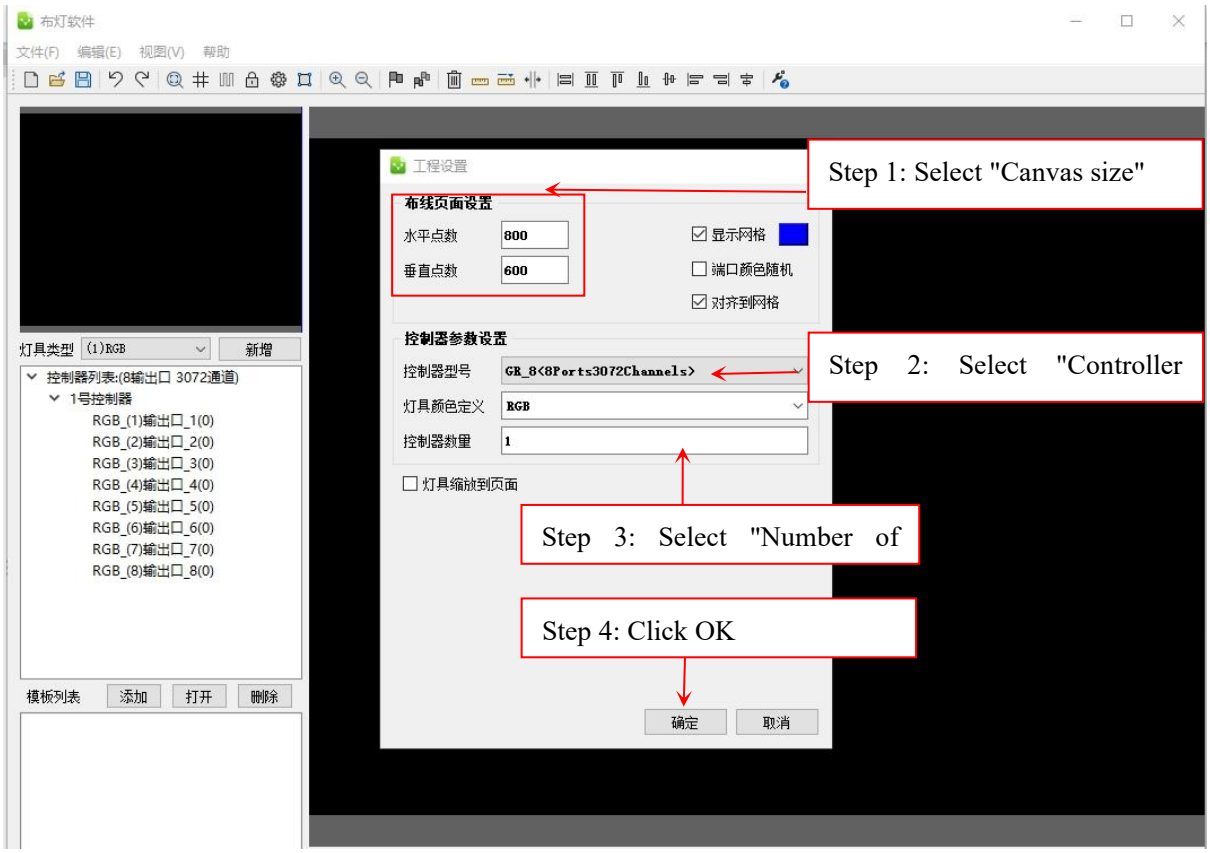


the second step:

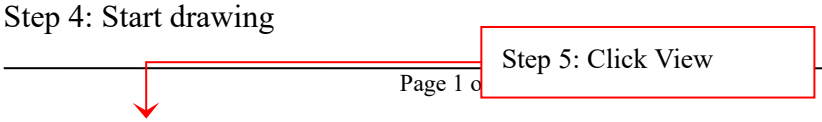


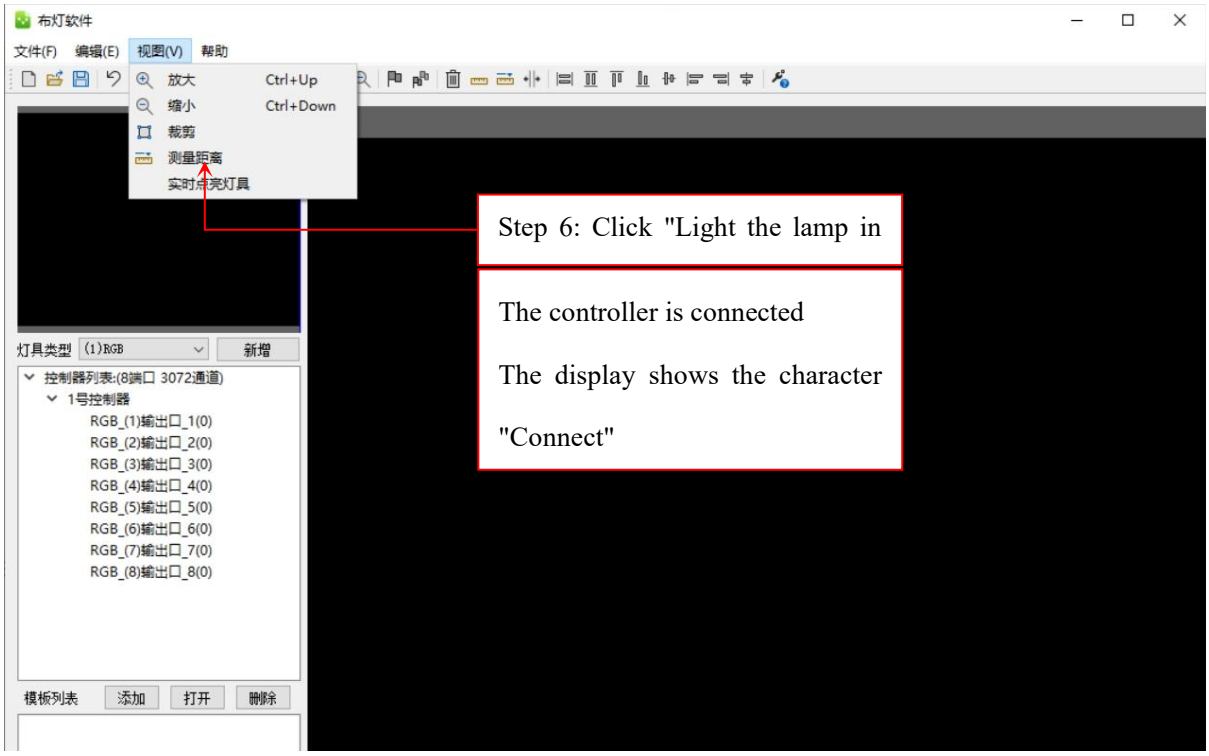
Step 3: Wiring design

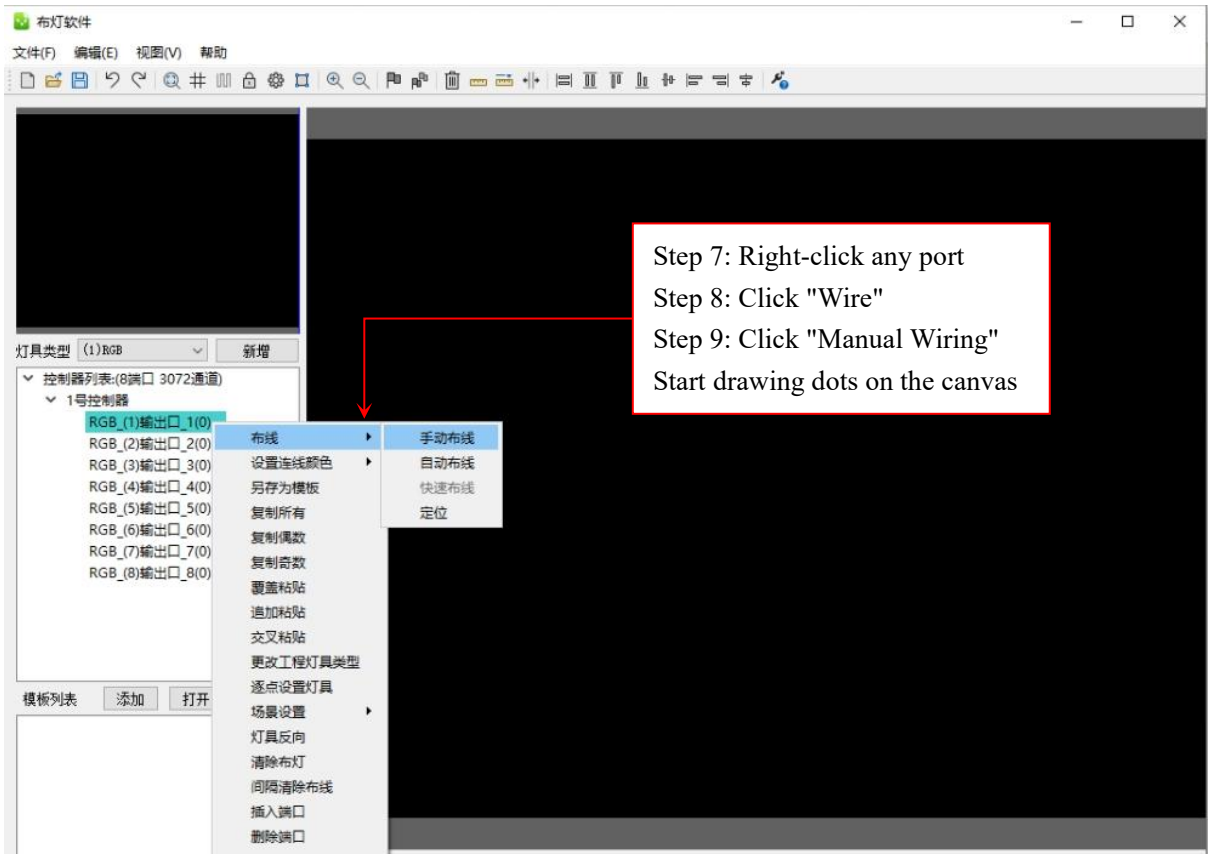
Canvas Settings--> Controller model--> Number of controllers



Step 4: Start drawing

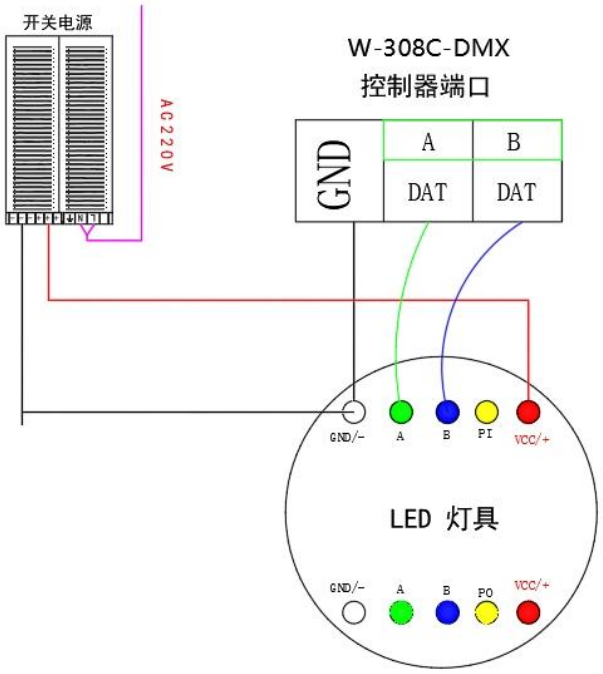




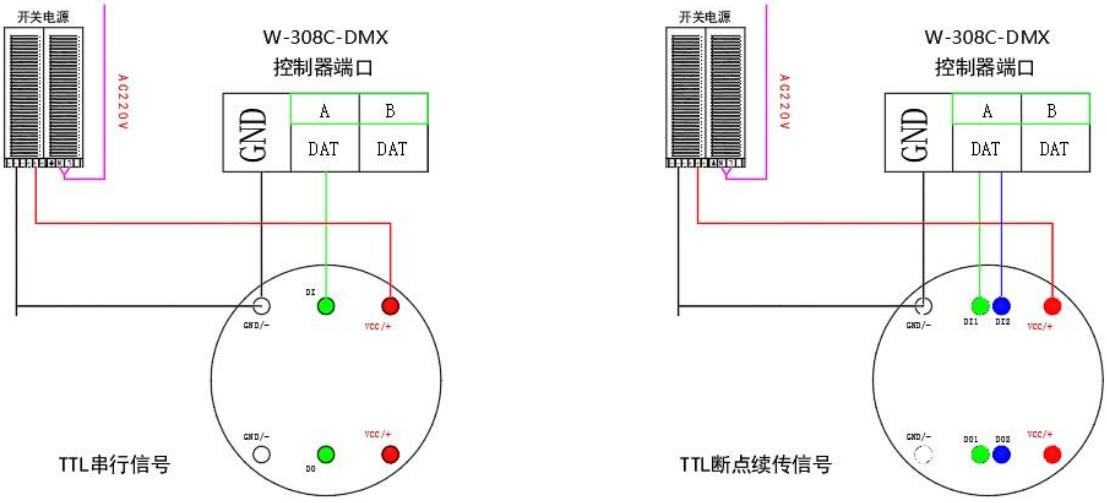


Save the drawings after marking. If you want to generate offline files, you need to use offline software.

10. DMX512 Lighting fixture wiring diagram:



Schematic diagram of connecting TTL lamps:



pay attention to:

1. Different lamp models have different wiring [illegible]ng should be carried out according to the information provided by the manufacturer and the power supply lamp operation.

2. SD card program playback, copy the program must 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**