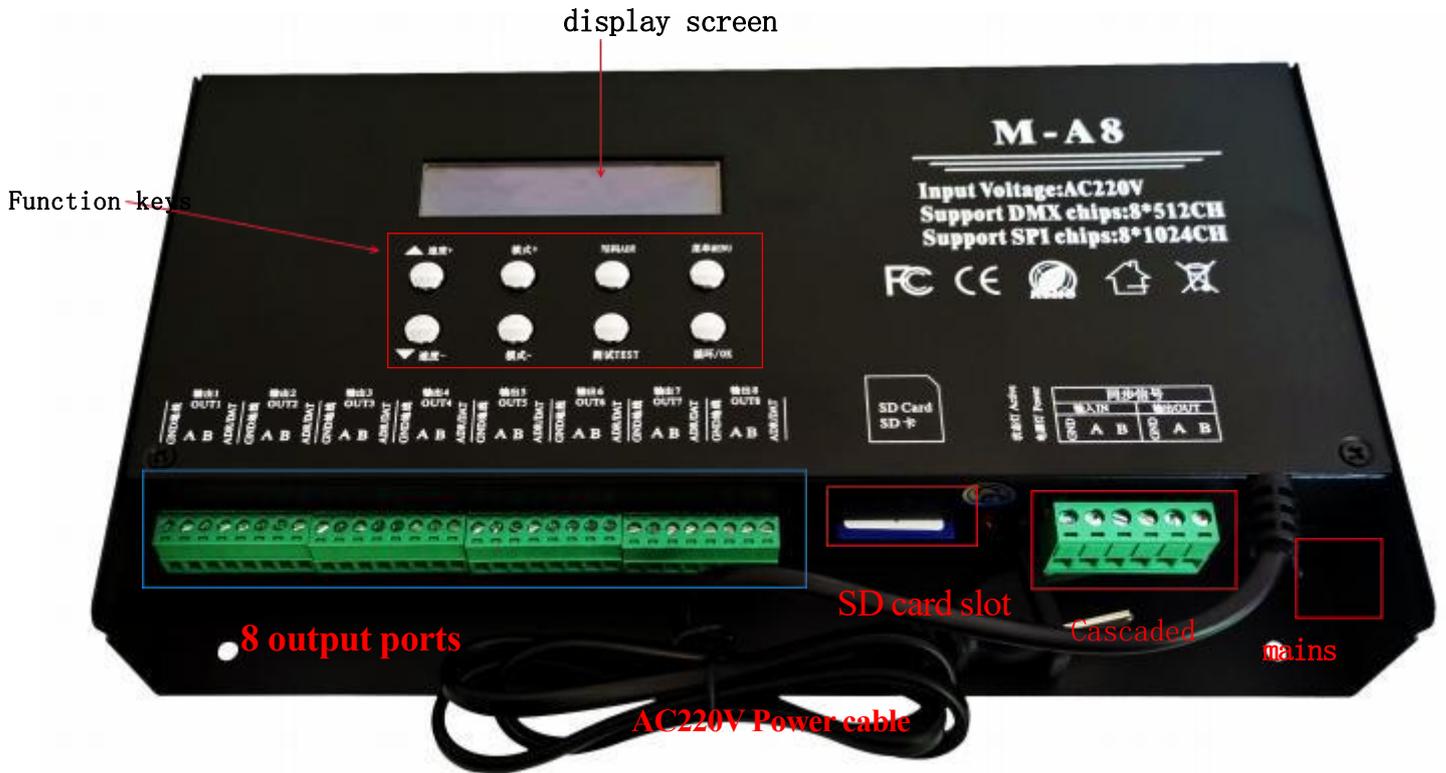


M-A8 manual

Picture (summary):



Detailed parameters:

Note: Format before using SD

1. Power supply voltage: AC220V
2. Number of loads: DMX 8*512; TTL8*102 4 points
3. Synchronization mode: cascaded synchronization /
4. Installation method: outdoor rainproof
5. Size: 250 x 155 x 43 units (mm)
- 6, weight: 1.35Kg
7. Load mode: SD card program
8. SD card format: FAT32 format
9. SD card capacity: 8G



I. Features of M-A8 system

1. Gray control from level 32 to level 65536, and software Gamma correction processing.
2. Support various point, line and surface light sources, support various rules and irregular processing.
3. The controller port can carry DMX 8*512pixels; TTL 8*1024pixels.
4. Use AC power from AC 220V, with multiple units cascaded in synchronization. During cascading synchronization, only the first controller is operated; subsequent controllers act as sub-controllers. Use Simple LED program software; when multiple units are used in synchronization, export multiple program files. The last digit of the file name will be sequentially copied to the corresponding controller, which identifies the relevant program content based on the ID number.
5. The output port of the controller provides three protections to ensure that the output port of the controller is not burned out in case of short circuit or reverse connection of the controlled lamp.
6. The controller has built-in effects and can test lamps with loads (RGB/RGBW lamps are supported).
7. The controller has DMX512 address writing function and address testing, single port or all ports load DMX512 IC address writing, and address testing for lamps. The controller provides LCD screen display, which can display the model, ID, and working status of the control.
8. When using a single unit or multiple units simultaneously, the controller must be equipped with SD card, and the program must be copied to SD card

In the card, then set the corresponding ID number of the controller, and the controller automatically reads the corresponding part of the program content.

9. Communication between controllers adopts the international standard 485 protocol.

10. The controller has added a one-key reset function, which can be pressed simultaneously on the main interface ● The loop (OK) key and ●Speed + Select button.

2. Meaning of digital display and buttons:

Menu displayed	Digital display	liquid-crystal display	Chinese translation
①	1-c P	Set Chip x x x x	Set up the chip
②	2-br、g-22	Set Bright100%	Set brightness and gamma value
③	3-r F	Set RF Mode	Set the RF band
④	4-r g b	Set RGB Mode	Set up the lighting channel
⑤	5-R T C	RTC:1970-00-00	Scheduled function
⑥	6:d-0 1	ID:01	Set the ID number
⑦	7: c 150	AC Delay: 150MS	a-c cycle
⑧	8:50 HZ	WorkMode:50HZ	service frequency
⑨	9: V 605	VER 6.05	Version sequence

Key name	meaning
velocity +/-	Switch the speed directly on the main screen, and the up and down selection button in other states.
pattern +/-	Directly switch the controllers built-in program on the main interface, as well as the SD card program switch.
coding (ADR)	Compile the address of the lamp to make the lamp sequence normal.
test (Test)	There are 5 kinds of test effects, to check whether the signal is smooth and whether the power supply is sufficient, and whether the code is correct.
recurrence (OK)	After setting the above items, you must press the OK key to confirm, save, return and exit.
Menu (MENU)	Settings: chip, brightness, RF band, channel, time, ID number, synchronization frequency, operating frequency, version number

3. Main screen display instructions:



① ID: 01 represents the current controller number is 01, which is the first controller, and the maximum is 255.

② BRI: 99% BRI is the abbreviation of bright, which stands for brightness. That is, the current control brightness is 99%, and the maximum is 100%

③ F1: 05 F1 is the first two letters of file, which represents the built-in mode, that is, the fifth built-in mode.

SD: 05 SD is the abbreviation of SDCard, which stands for SDCard file mode, that is, playing the fifth file on the SD card.

④ Speed: 03 is the English word for speed, which represents the current speed of 3 levels; you can switch directly by pressing the up and down keys, and the larger the number, the faster it is.

⑤ F: represents a single built-in mode run; E: represents all built-in program loops.

D: represents a single SD card file running; A: represents all SD card program loops.

4. Operation steps

1. Setting chip (CHIP): The chip is the model of the lamp used. The commonly used chip models in the market are as follows:

UCS1903、UCS1904、UCS2909、UCS2903、UCS1912、TM1803、T M1804

TM1809, TM1914 (continue at breakpoint), WS2811, WS2812, WS2818 (continue at breakpoint)

SM16703, SK6812, SK6814, GS8206 (continue at breakpoint), GS8205 (continue at breakpoint)

UCS5603 (Resume at breakpoint) and P9883 (Resume at breakpoint) Each controller uses the chip model to be selected

UCS512C series, B series, D series; SM16512, TM512AC

The chip selection operation steps are as follows:

Step one: Press  Menu key 1 to set the chip interface



Step two: Press  Enter the chip selection interface by pressing the loop (OK) key



Step 3: Press  Speed +/-key to switch the chip number and select the corresponding model of the lamp.

Chip selection correspondence table			
01: MDX512 500K	02: MDX512 250K	03: UCS1903	04: SK6812
05: SM6703	06: TM1804	07: UCS2904	08: WS2811
09: WS2812	10: TM1914	11: P9883S	12: GS8206
13: GS8205	14: UCS5603	15: DXM512-W	16: TM1923
17: TM1814			

Step 4: Press  Press the loop (OK) key, save to the controller, and the lamp starts to work.

2. Switch mode (MODE):

It can be divided into SD card program mode and built-in effect mode, with the ability to switch between the two modes. If you don't like the built-in effects that come with the controller, you need to have the programmer design and copy the program to the SD card; if you only need simple outline effects without much variation, you can use the built-in effects directly, totaling 86 types.

SD card program mode: It is designed through program software, according to customer requirements or designed by designers themselves.

Hold down on  Cycle the OK key for 3 seconds to switch between the two modes.
the main
screen

Operation steps in SD card mode:

Step 1: Press the loop (OK) key for 3 seconds, and the interface shows as follows to enter SD card mode.

D stands for SD card



ID:01 BRI:100%
SD:02 Speed:05 D

Step 2: Click to switch between SD card program single file



ID:01 BRI:100%
SD:02 Speed:05 A

A represents the SD card

Step 3: Mode +/-key, switch mode. (Free switching is only possible in a single mode)

(In loop mode, the +/-button is disabled, so you must switch to single play.)

Built-in effect mode:

(The controller can be plugged or unplugged to produce built-in effects, which simply has nothing to do with SD cards.)

The controller itself has built-in effect programs, which are relatively simple and are mainly used to test whether the lamp is smooth and whether the controller is working normally. If you want more gorgeous effects, you need to write a program file and place it on the SD card. Some simple contours can be used with built-in effects.

The specific operation steps are as follows:

Step 1: Long press Cycle the OK key for 3 seconds until the interface is displayed



ID:01 BRI:100%
F1:01 Speed:05 F

F stands for built-in

Step 2: Press Mode (+/ -) keys to switch between built-in programs up and down.

There are a total of 86 modes (only free switching is allowed in a single mode).



ID:01 BRI:100%
F1:86 Speed:05 F

Step 3: Press  Speed +/--key, switch the program speed 1-5, the larger the number, the faster the speed.



ID:01 BRI:100%
F1:02 Speed:04 F

Step 4: Press  Cycle the OK key to switch between single file loops and full file loops for built-in programs.



E stands for built-in

3. Adjust the brightness (Bright): Only the overall brightness can be adjusted, ranging from 5% to 100%. The higher the percentage, the higher the brightness. The steps for adjusting the brightness are as follows:

Step one: Press  Press menu key twice to appear the interface



Step 2:  Enter the brightness adjustment interface by pressing the loop (OK) key



Step 3: Press the speed +/-key (binary) to switch the digital level.



press  Mode (+/-key in decimal) to switch the digital level; the higher the value, the higher the brightness 5%—100%.



Step 4: Press  Press the OK key and save it to the controller. The lamp will be adjusted to the selected brightness.

4. Set the gamma value:

Step 1: Press  the menu (MENU) key twice, and the interface will be displayed

2.Set Bright
BRI:100% GM=2.2

Step 2: Cycle /OK 2 times to enter the gamma value adjustment interface
Press



Step 3: Press Press the speed +/-key (base 1) to switch the gamma value (1.0-5.0) Press the mode +/-key (base 10) to adjust the corresponding value Cycle / OK to save and return to the main screen.

6. Set the channel:(channel refers to the front and back order of R, G and B lights, there are 7 kinds of order in total)

Step 1: Press Press the menu key four times, the interface will be displayed



Step 2: Press Enter the channel adjustment interface by pressing the loop (OK) key



Step 3: Press Speed +/-key, switch channels (RGB, RBG, GBR, GRB, BGR, B RG, RGBW)

Step 4: Press Press the OK key, save and return to the home screen

7. Set time:(battery is required, start timing function)

Step 1: Press Press the menu (MENU) key 5 times to display the interface



Step two: Press Press the loop (OK) key to enter the time setting interface



Step 2: Press Speed +/-key and Set the loop (OK) key to x year x month x day x hour x minute x second,

And The loop (OK) is saved to the controller and returns to the main then press interface.

8. Setting ID: When multiple controllers are used in sync, users can choose to set their own ID numbers for each controller or write separate programs for each controller. If setting ID numbers is required, do so in sequence. For single-use controllers, the ID number is set to 1, as the program will set the port number. For example, ports in the range of 1-8 are definitely the first controller.

The steps to set the ID are as follows:

Step 1: Press menu key 6 times, and the interface will be displayed
Press



Step 2: Enter the ID Settings screen by pressing the Loop (OK) key
Press



Step 3: Switch the number (1-99) according to the 0 speed +/-key (base 1) 0 mode +/-key (base 10) and select the corresponding number of the controller.

Part 4: Press the ① cycle (OK) key to save and return to the home screen.

9. Set the AC frequency:

Step 1: Press Press menu key 7 times, and the interface will be displayed



Step 2: Enter the AC frequency setting interface by pressing the loop (OK) key
Press



Step 3: Speed +/-key (base 1)
Press

Mode +/-key numbers (0-999), select
(base 10) switch

The corresponding number of the controller.

Part four: Press the loop (OK) key to save and return to the main screen.
The Notes

10. Write code operations

(For DMX512 lamps, manufacturers may write addresses for individual lamps during production testing, but when the lamps are installed on the actual construction site, different installation methods and installation sequences may cause the original address codes of the lamps to repeat or shift. Therefore, it is necessary to use a controller to perform unified coding operations on the installed lamps)

Before operation, you need to determine the chip model of the lamp, the chip writing channel, and check whether the wiring of the controller is correct and whether the direction of the lamp is correct. After determining these, start the operation writing code.

The specific coding operation steps are as follows:

Step 1: Write code (ADR) key, enter the chip selection state
Press



Step 2: Speed +/-key, switch chip
Press

Write the code chip selection table		
01: UCS512B3	07: Hi512A4	13: SM16512P
02: UCS512C*	08: Hi512D	14: SM17500
03: UCS512D	09: TM512AC	15: SM17512
04: UCS512E	10: TM512AD	16: SM17522
05: UCS512F	11: TM512AL	17: GS8512

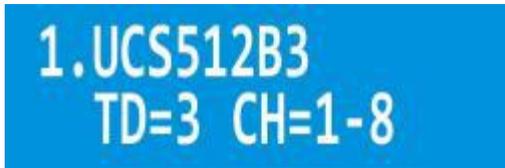
06: F 12A0	12: SM16512	18:GS8512--
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Step 3: Press the OK key of the loop, and enter the channel selection. The interface TD=3 represents 3 channels



At this point, you can press the speed +/-up and down keys to switch channels, and press the write code (ADR) key to return to the upper level operation.

Step 4: After confirming that there is no error, press Enter the port selection by pressing the OK key in a loop. CH=1-8 represents all ports



Step 5: Press Speed +/-Up and down keys Select the port to write the address code
CH=1: first port, CH=2: second port

In turn, there are a total of 8 ports; in the case of cascaded synchronization, all the controllers behind follow the selection of the first controller.

The Write Code (ADR) key returns to the previous level of operation.
pr
es
s

Step 6: After the channel and port are determined to be correct:

Cycle the OK key and start writing code
pr
es
s



The representative is writing code, the writing code port is port 1 to 8, and the writing code chip is UCS512B3. TD represents channel, which is 3 channels.

Pay attention to whether the lamp has changed the writing state during the writing process. The writing is automatically switched back to the test interface after completion.

Step 7: After the above code writing operation is completed, if there is no need to reset the chip channel after changing the lamp or repairing, control

The device has added a one-click writing function. The specific operation is as follows:

Long press  Write code (ADR) key The controller interface will automatically display all the contents of the last write code operation, start the automatic write code operation, and complete the automatic adjustment to the test point interface, which is consistent with the following test operation.



---TestMode---
1:Line 1

Note: Check whether the lamp is running down point by point in order or manually switching to add points one by one. If the order is normal, it is successful; if not, continue writing code or find out the reason for the failure of writing code.

Step 8: Press  Cycle OK to return to the home screen.

Common reasons for writing code unsuccessfully:

- ① The direction of the lamp is wrong. Although DMX512 is parallel bidirectional signal transmission, the writing direction is unidirectional.
2. The wiring of the lamp is wrong. Check the wiring of the controller port and the lamp.
- ③ The power supply of the lamp is insufficient, resulting in the inability to drive the chip to write code.
- ④ The signal line of the lamp is too long and exceeds the effective distance range of the chip.

11. Test Settings (Test):

The following situations require the use of the testing function: ① Not knowing the number of lights ② Not knowing the sequence of light channels RGB, RBG, GBR, GRB, BGR, BRG, RGBW ③ whether there are any faulty lights ④ Whether the power supply to the lights is sufficient ⑤ Whether the coding of the lights is normal or if there are any errors) All the issues mentioned above can be tested using the testing function.

3 channels: refers to the lamp mixed by R, G and B; 4 channels: refers to the lamp mixed by R, G, B and W. The specific operation steps of the test function are as follows:

①, point by point test

Step one:  Test (Test) key to enter the lamp channel test interface
Press



Indicates the test of a 3-channel lamp.

Step 2: Press  Speed +/-key switch 3/4 channel lamp test status (using 3-channel test as an example).

Step three: Press  Enter the interface by pressing the loop (OK) key



ALL indicates that all ports are tested.

Step 4: Speed +/-Key Switches a
Press single port. Enter the
Step 5: test interface by pressing the
Press loop (OK) key



Step six: Press Speed +/-Key Manual single point test, press
 Menu Key to automatically measure points. When running
points automatically, press it at will Menu key, the
bouncing number stops at 1 and then press Speed +/-
key to manually add or subtract numbers (manual mode).

② Test the RGB channel

Step 7: Press the Test (Test) button. The interface displays



glow

Press the Test (Test) key, and the interface is displayed



Green Flash

Press the Test (Test) key, and the interface is displayed



blue light

Press the Test (Test) button, and the interface is displayed

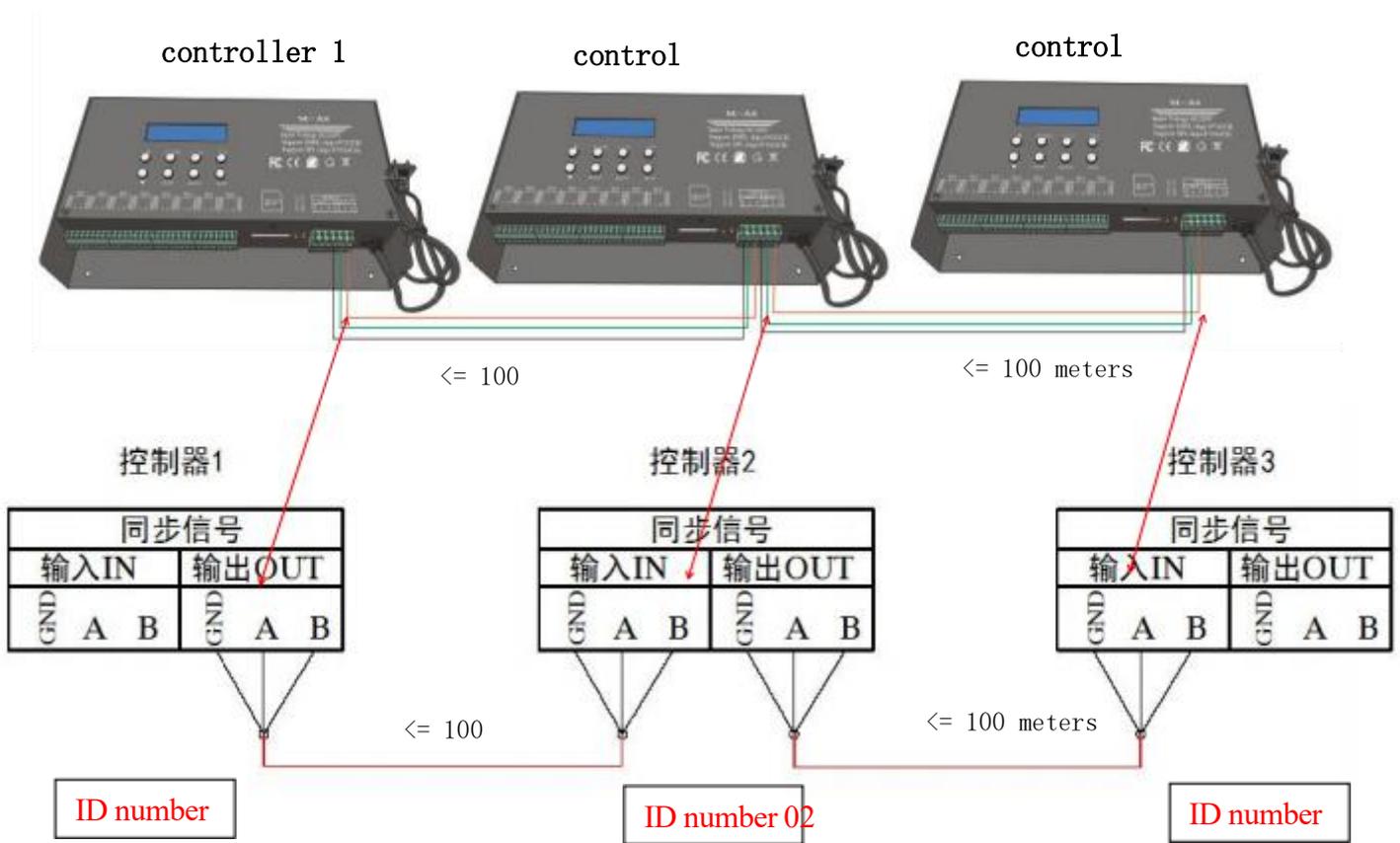


white light

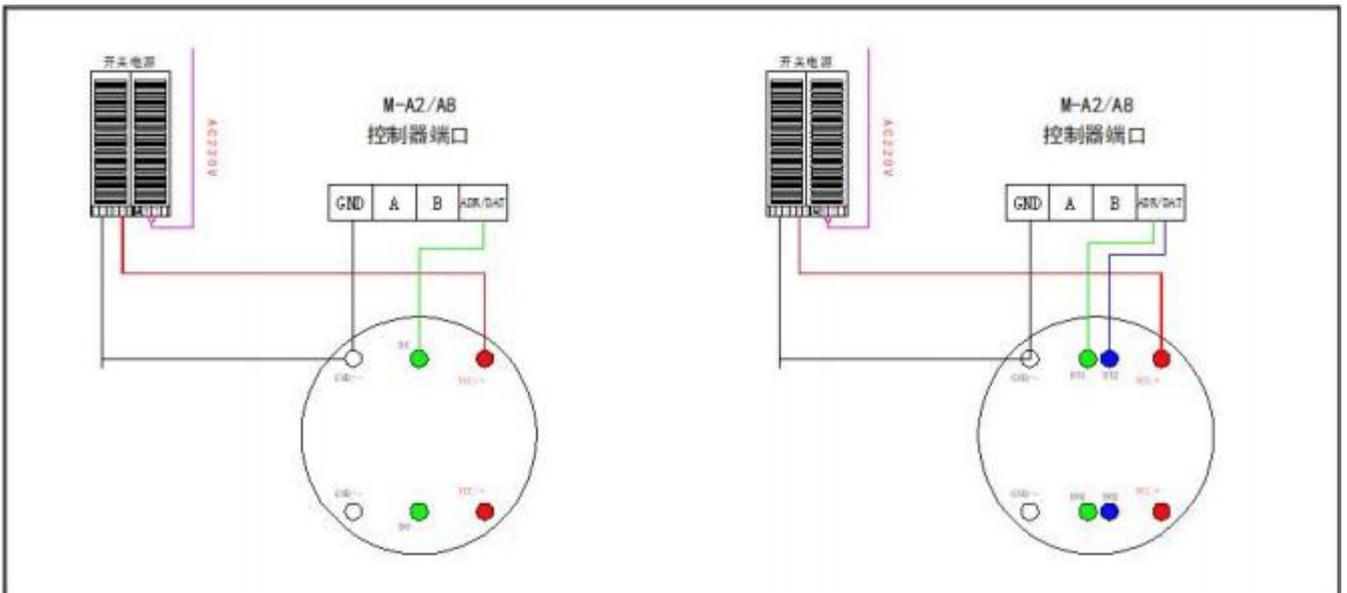
Step 8: Test the completion in the order of the passage of the lamp)

- Press the loop (OK) key to return to the main interface.
(Note: This can be tested in modes 2, 3, 4, and 5

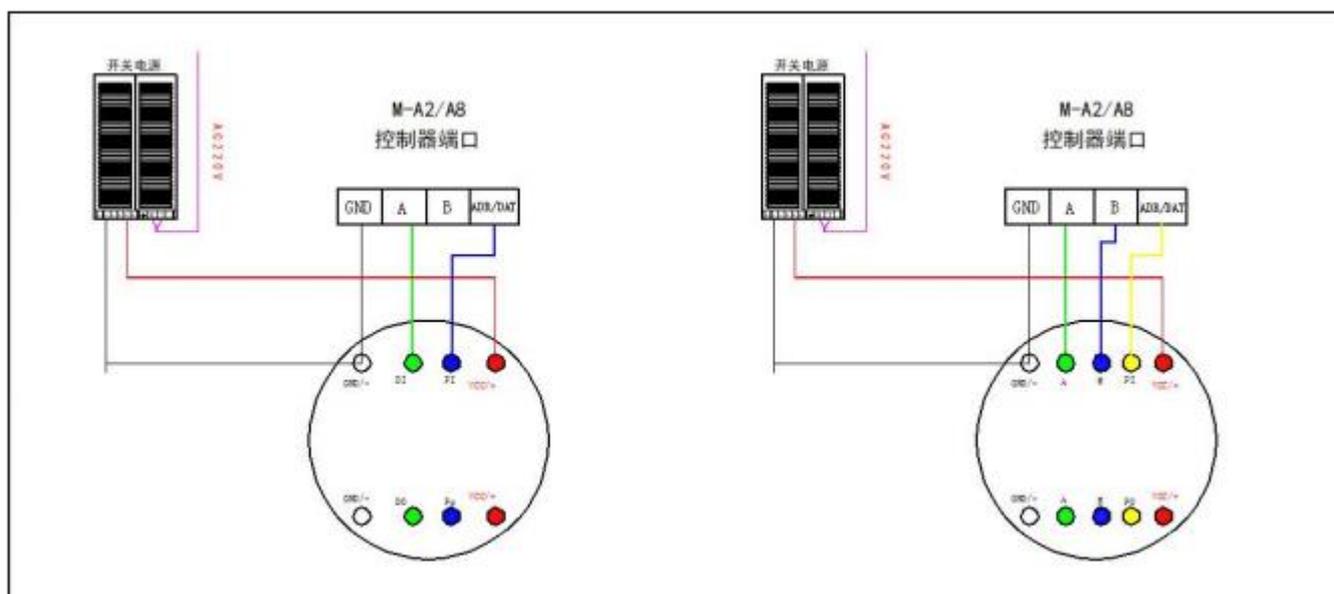
5. Cascade diagram:



Port wiring diagram: TTL series



Port wiring diagram: DMX512 series



7. GPS wiring diagram:



VIII. Common Precautions

1. Each controller is the master controller with card control; after cascading, only the first controller needs to be controlled, and the buttons of the subsequent controllers do not need to be operated; however, before cascading, the ID number of each controller needs to be set.
2. The way the controller makes the program is consistent with the form of the main control and sub-control, but it cannot be used at the same time with M-C8 and D8.

3. Controller GPS synchronization. At present, only GPS positioning signal of Beidou satellite is supported. When using it, the GPS module antenna is best placed in an open area outside to ensure the stability of GPS reception signal without being covered.