

M-A8 controller remote control version manual

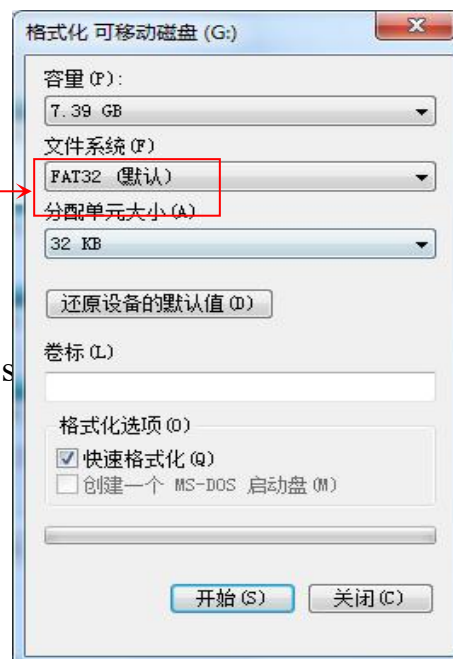
I. Introduction of controller:



Note: Format the SD before using it

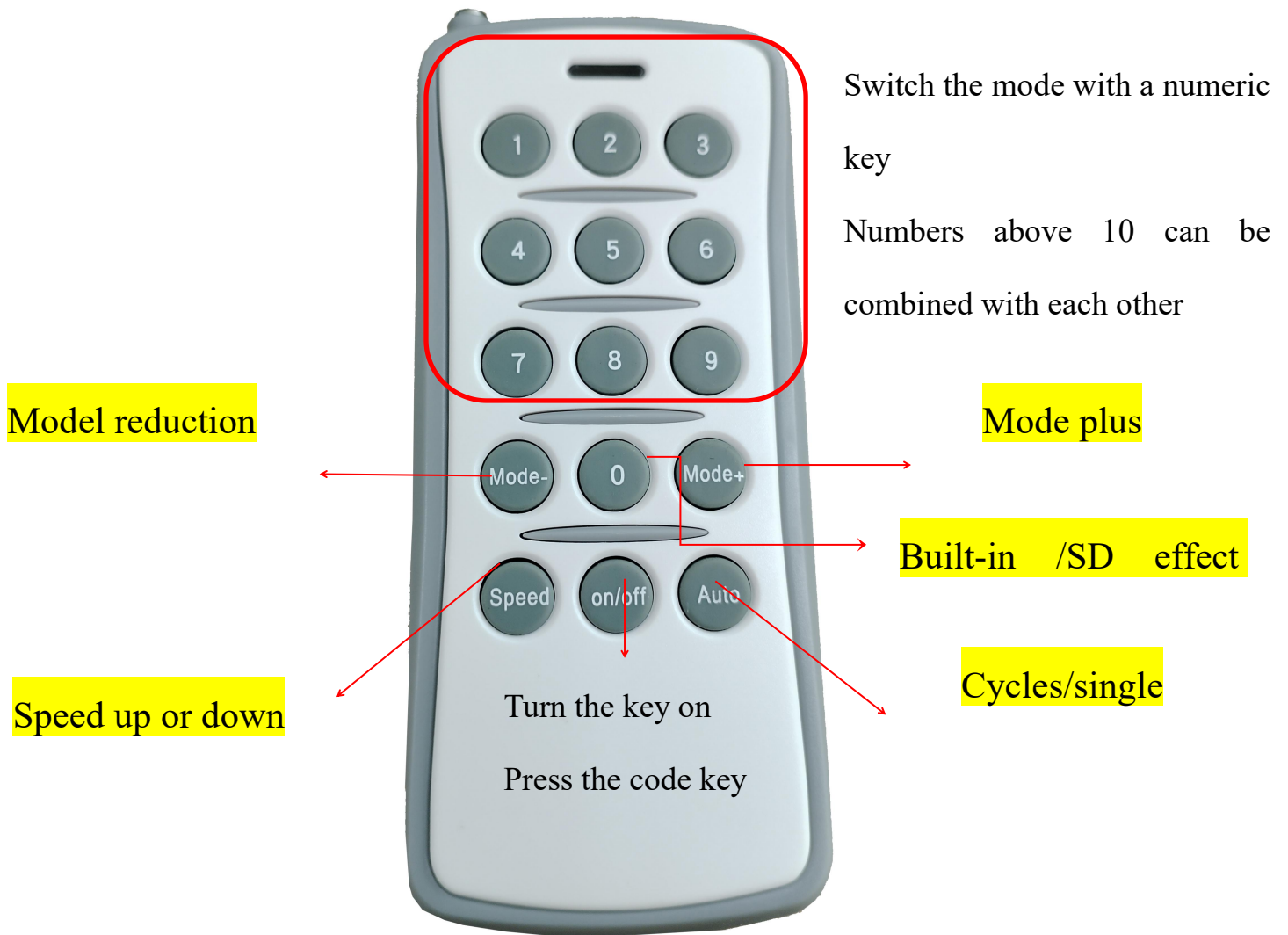
I. Detailed parameters:

1. Power supply voltage: AC220V
2. Number of loads: DMX 8*512; TTL 8*1024 points
3. Synchronization mode: cascaded synchronization/GPS s
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



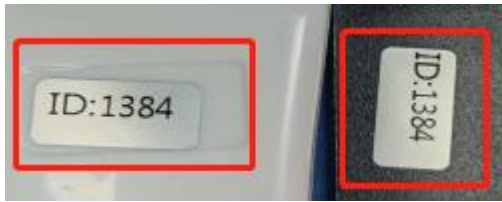
9. SD card capacity: 8G

ten , Remote control instructions



1. The controller and remote have already been calibrated at the factory, with "code alignment labels" attached as shown in the figure below: ID: 1384. A remotely calibrated device can only be used for this specific controller. The remote cannot be used on controllers without the "code alignment label." When using a remote on different labeled controllers, we need to recalibrate,

as shown in the figure above: press the on/off button of the remote while the controller is powered on for 3 seconds to align the codes, then it will work.



2. Remote control: First of all, the controller should set the chip before it can be controlled by remote control. If the chip does not correspond to the lamp, there will be no response

Remote control panel operation instructions:

| | |
|---------------|---|
| On/off | Open key: All the lights will be turned off and all the lights will be turned on. |
| Speed | Speed key: the speed of the lamp is cycled from small to large. |
| Auto | File loop, single switch |
| Mode- | Model reduction |
| Mode++ | Mode plus |

3. Digital combination keys: If it is 1-9, you can directly press the above keys to switch, but when the mode value is greater than or equal to 10,

So you use the combination numbers, and then you can just combine them directly on top of the numbers, 11,56, etc.

4. Remote control distance controller Use within 20 meters in open areas, and try not to have any obstructions, otherwise the remote control signal will be affected

V. Features of M-A8 system

1. Gray level control from level 32 to level 65536, and software Gamma correction processing.
- 2、 Supports various point, line and surface light sources, supports various rules and irregular processing.
3. The controller port can be DMX 8*512pixels; TTL 8*1024pixels.
4. Use AC220V AC power, with multiple units cascaded and synchronized. During cascade synchronization, only the first controller is operated; subsequent controllers act as sub-controllers. When using Simple LED program software for multi-unit synchronization, multiple program files are exported. The last digit of each file name corresponds to the sequential copy onto the respective controller. The controller identifies the corresponding 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, reverse connection and other conditions.
- 6、 The controller has built-in effects and can test the load lamps (RGB/RGBW lamps are supported).
- 7、 The controller has DMX512 write address function and address test, single port or all ports carry DMX512 IC write address, and the lamp is tested for address. The controller provides LCD display screen, which can display the model, ID and working status of the control.
- 8、 When a single unit is used or multiple units are used simultaneously, the controller must be equipped with an SD card. The program must be copied to the SD card and then set the corresponding ID number of the controller. The controller will automatically read the corresponding part of the program content in the program.
- 9、 The communication between controllers uses the international standard 485 protocol.

10、 The controller has a new one-click reset function. On the main interface, press the loop (OK) key and speed + select keys at the same time.

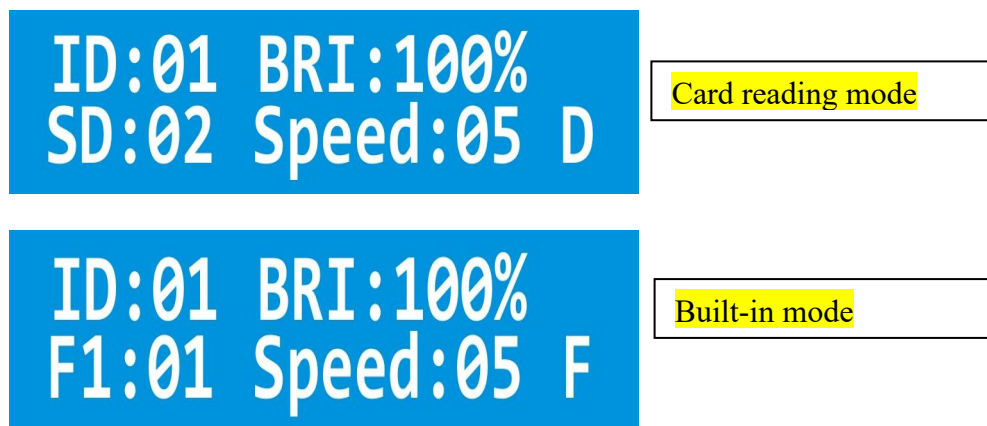
6. Meaning of digital display screen and key:

| Menu displayed | Digital display | liquid-crystal display | Chinese translation |
|----------------|-----------------|------------------------|------------------------------------|
| ① | 1-c P | Set Chip x x x x | Set the chip |
| ② | 2-b r,g-22 | Set Bright 100% | Set the 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 | Timing 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 serial number |

| Key name | meaning |
|--------------|--|
| velocity +/- | Switch speed directly on the main screen, and select up and down buttons in other states. |
| pattern +/- | Switch the controller built-in program and SD card program directly on the main interface. |
| coding (ADR) | Lamp address, make the lamp sequence normal. |

| | |
|------------------------|---|
| test (Test) | There are five kinds of test effects in total, to check whether the signal is smooth and the power supply is sufficient, and whether the code is correct. |
| recurrence (OK) | After setting the above items, you must press the OK (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 |

Vii. Main interface display instructions:



- ① ID: 01 represents the number of the current controller is 01, which is the first controller, and the maximum is 255.
- ② BRI: 99% BRI is the abbreviation of bright, which represents 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, it is the fifth built-in mode.
- SD: 05 SD is the abbreviation of SD card and represents the SD card file mode, which is to play the fifth file on the SD card.
- ④ Speed:03 is the English word for speed, which means that the current speed is level 3; you

can directly switch by pressing the up and down keys, and the larger the number is, the faster it is.

- ⑤ F: represents a single built-in mode run; E: represents all built-in program loops.
D: represents the running of a single SD card file; A: represents the loop of all SD card programs.

Viii. Operation steps

1. Set the 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,TM1804
TM1809, TM1914 (continuation of breakpoint), WS2811, WS2812, WS2818 (continuation of
breakpoint)
SM16703, SK6812, SK6814, GS8206 (continuation of breakpoint), GS8205 (continuation of
breakpoint)
UCS5603 (Breakpoint continuation) and P9883 (Breakpoint continuation) Each controller needs to
select the chip model
UCS512C series, B series, D series; SM16512, TM512AC

The chip selection operation steps are as follows:

Step 1: Press the menu button once to set the chip interface



Step 2: Press the Loop (OK) key to enter the chip selection interface



Step 3: Press the 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 the cycle (OK) button and save it to the controller. The lamp will start to work.

2. Switch mode (MODE):

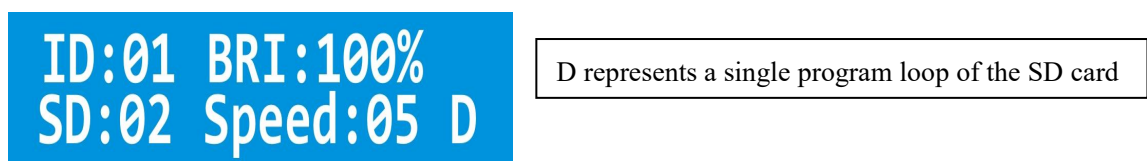
It can be divided into SD card program mode and built-in effect mode, which can switch between each other. If you don't like the built-in effects that come with the controller, the programmer needs to design a program and copy it onto the SD card; if simple outline effects don't require much variation, you can use the built-in effects directly, totaling 86 types.

SD card program mode: it is designed through the program software, according to the customer's requirements, or the designer's own design.

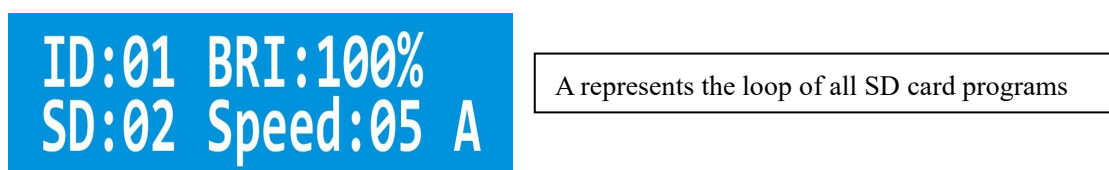
Hold the OK key on the main screen for 3 seconds to switch between the two modes.

Operating steps in SD card mode:

Step 1: Press the Loop (OK) key for 3 seconds. The interface displays the following to enter SD card mode.



Step 2: Click the Loop (OK) button to switch between SD card program single file loop and all files loop



Step 3: Press the mode +/-key to switch modes. (You can only switch freely in a single mode)

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

Built-in effect mode:

(The controller can be plugged in or not, and the built-in effect can be called up. In short, it has nothing to do with the SD card.)

The controller itself has built-in effect programs, which are relatively simple and mainly used to test whether the lamp is smooth and whether the controller works normally. If you want more gorgeous effects, you need to write program files and place them 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 the OK key for 3 seconds until the interface is displayed



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

F stands for a single built-in program loop

Step 2: Press the MODE (+/-) key to switch between built-in programs, a total of 86 modes (only in the case of a single mode can you freely switch).



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

Step 3: Press the speed +/-key to switch the program speed from 1 to 5, and the higher the number, the faster the speed.



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

Step 4: Press the OK key to switch between single file loop and all file loop of the built-in program.



ID:01 BRI:100%
F1:02 Speed:05 E

E represents the built-in loop of all programs

3. Adjust brightness (Bright): Only the overall brightness can be adjusted, from 5% to 100%. The higher the percentage is, the higher the brightness is.

The brightness adjustment steps are as follows:

Step 1: Press the menu key twice to appear the interface



2.Set Bright
BRI:100% GM=2.2

Step 2: Press the Loop (OK) key to enter the brightness adjustment interface



Bright 100%

Step 3: Press the speed +/-key (1) to switch the digital level.



Bright 99%

Switch the digital level by pressing the MODE (+/-) key (10 decimal). The higher the value, the higher the brightness 5% ----100%.



Bright 90%

Step 4: Press the OK (OK) button to save to the controller, and the lamp will be adjusted to the selected corresponding brightness.

4. Set the gamma value:

Step 1: Press the menu (MENU) and press the key twice. The interface is displayed



2.Set Bright
BRI:100% GM=2.2

Step 2: Press the cycle /OK key twice to enter the interface for adjusting the gamma value



Bright 100%
gamma2.2

Step 3: 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, press the loop/OK to save and return to the main interface.

6. Setting channels: (Channels refer to the front and back order of R, G and B of the lamp, a total of 7 orders)

Step 1: Press the menu key four times to display the interface



4.Set RGB Mode
RGB

Step 2: Press the cycle (OK) key to enter the channel adjustment interface



channel1 :RGB

Step 3: Press the speed +/-key to switch channels (RGB, RBG, GBR, GRB, BGR, BRG, RGBW)

Step 4: Press the OK (OK) button to save and return to the main interface

7、 Set time: (battery is required to start the timing function)

Step 1: Press the menu (MENU) and press key 5 times. The interface will be displayed



5.RTC:1970-00-00
00:00:00

Step 2: Press the Loop (OK) key to enter the time setting interface



RTC:1970

Step 2: Set the x year, x month, x day, x hour, x minute and x second according to the speed +/-key and cycle (OK) key in turn,

Then press the loop (OK) to save to the controller and return to the main screen.

8. Set ID: When multiple controllers are used synchronously, users can choose to set the ID number for each controller themselves or write separate programs for each controller. If you need to set an ID number, do

so in the order they are used. For single-use controllers, the ID number is set to 1, as the program will also set the port number on the drawing side. 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 the menu key six times to display the interface



6.ID:01

Step 2: Press the Loop (OK) key to enter the ID Settings interface



device id:1

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

Step 4: Press the Loop (OK) button to save and return to the main screen.

9. Set the AC frequency:

Step 1: Press the menu key seven times to display the interface



7.AC Delay:150ms

Step 2: Press the cycle (OK) key to enter the AC frequency setting interface



AC Delay:150ms

Step 3: Switch the number (0-999) according to the speed +/-key (1 base) mode +/-key (10 base) and select the number corresponding to the controller.

Step 4: Press the Loop (OK) button to save and return to the main screen.

10. Write code operation

(For DMX512 lamps, the manufacturer may write the address of the lamp individually during the test, but when it comes to the actual construction site, different installation methods and installation sequences will lead to duplication or deviation of the original lamp address code, so the controller is needed to carry out unified coding operation on the installed lamps)

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

The specific coding operation steps are as follows:

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

1.UCS512B3

Step 2: Press the speed +/-key to switch the chip

| Ste | Write the 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: Hi512A0 | 12: SM16512 | 18:GS8512-- |

3: Press the OK key of the loop to enter the channel selection. The interface TD=3 represents 3 channels

1.UCS512B3
TD=3

At this time, you can press the speed +/-keys to switch between channels, and press the write code (ADR) key to return to the previous operation.

Step 4: After confirmation, press the loop OK button to enter port selection. CH=1-8 represents all ports

1.UCS512B3
TD=3 CH=1-8

Step 5: Press the speed +/-keys to select the port to write the address code. CH=1: the first port, CH=2: the second port

In turn, there are a total of 8 ports; in cascaded synchronization, all controllers after the first controller are selected according to the first controller.

Press the Write Code (ADR) key to return to the previous operation.

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

Press the OK key to start writing code

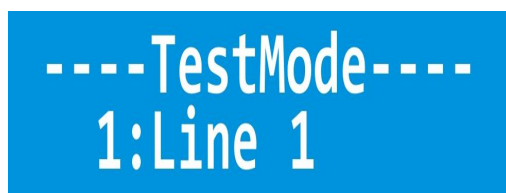
WriteAddr CH:1-8
UCS512B3 TD:3

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

In the process of writing code, pay attention to whether the lamp has changed the writing state. After writing code, automatically switch back to the test interface.

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 it, the controller will add a one-key code writing function. The specific operation is as follows:

Long press the 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 test operation below.



Note: Check whether the lamp is running down one point at a time in order or manually switching to add one point at a time. If the order is normal, it is successful; if not, continue writing code or find out why the code is not written successfully.

Step 8: Press the OK key to return to the main interface.

Common reasons for unsuccessful coding:

- ①、The direction of the lamp is not right. Although DMX512 is parallel bidirectional transmission signal, the direction of writing code is unidirectional.
- ②、The wiring problem of the lamp, the wrong sequence of wires, check the controller port and the sequence of the lamp wire.
- 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, exceeding the effective distance range of the chip.

11. Test Settings (Test):

The test function is needed in the following situations: ① Not knowing the number of lamps ② Not

knowing the sequence of lamp channels RGB, RBG, GBR, GRB, BGR, BRG, RGBW ③ whether there are any bad pixels ④ Whether the power supply to the lamps is sufficient ⑤DMX512 Whether the code writing for the lamps is normal or if it's garbled) All the issues mentioned above can be detected through the test function.

Channel 3: refers to the lamp with R, G and B mixed; Channel 4: refers to the lamp with R, G, B and W mixed.

Specific operating steps of the test function:

①, point by point test

Step 1: Press the Test (Test) key to enter the lamp channel test interface



RGB Mode:RGB

Indicates the test of a 3-channel lamp.

Step 2: Press the speed +/-key to switch the test status of the lamps in the 3/4 channel (take the 3-channel test as an example).

Step 3: Enter the interface by pressing the Loop (OK) key



RGB Mode:RGB
PORT:ALL

ALL indicates that all ports are tested.

Step 4: Press the speed +/-key to switch between individual ports.

Step 5: Enter the test interface by pressing the Loop (OK) button



----TestMode----
1:Line 1

Step 6: Press the speed +/-key to manually test a single point, and press the menu key to automatically measure a point.

When running automatically, press the menu key at will, and the bouncing number stops at 1,

Then press the speed +/-key to manually add or subtract numbers (manual mode).

②. Test the RGB channel

Step 7: Press the Test (Test) key, and the interface is displayed



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



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

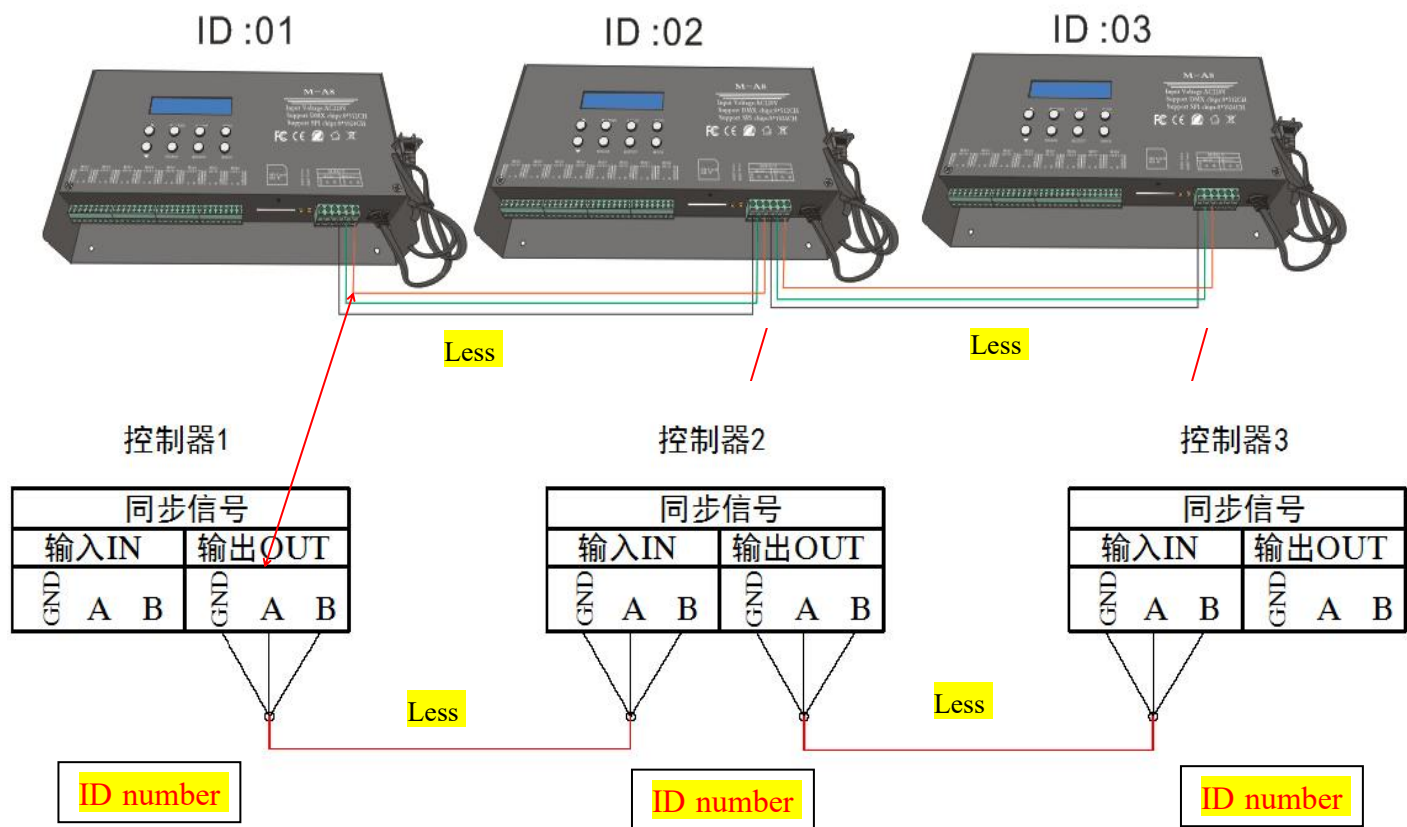


Press the Test (Test) key to display the interface

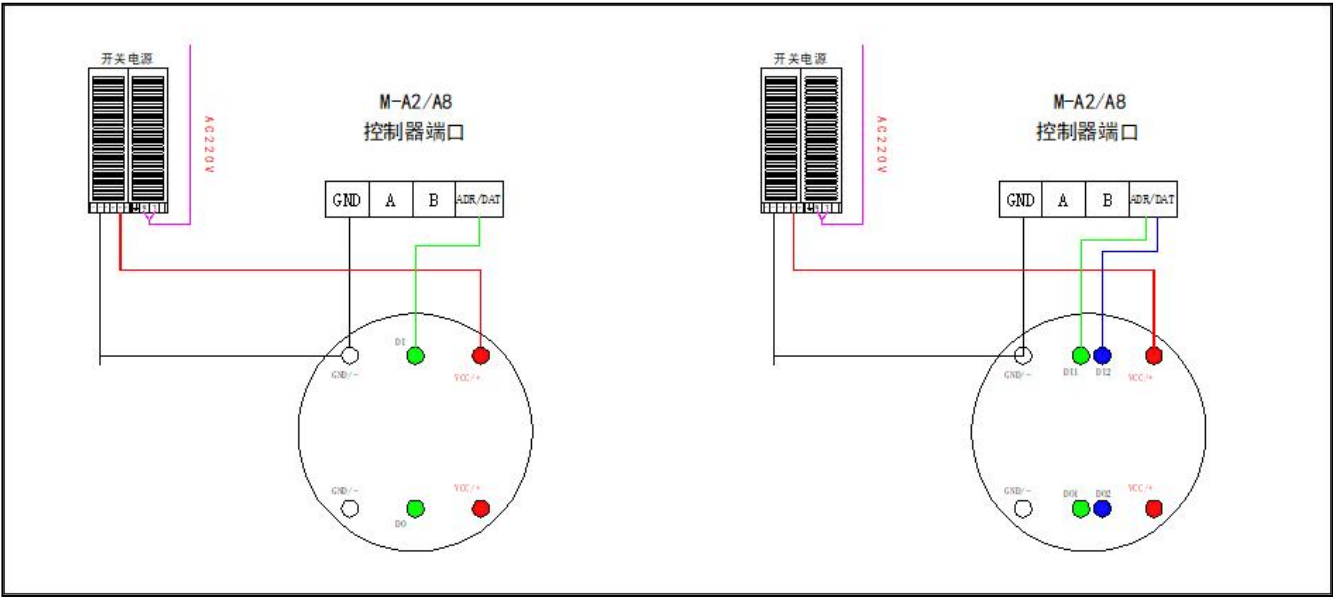


Step 8: After the test is completed, press the loop (OK) key and return to the main interface. (Note: Mode 2, 3, 4 and 5 can be used to test the channel sequence of the lamp.)

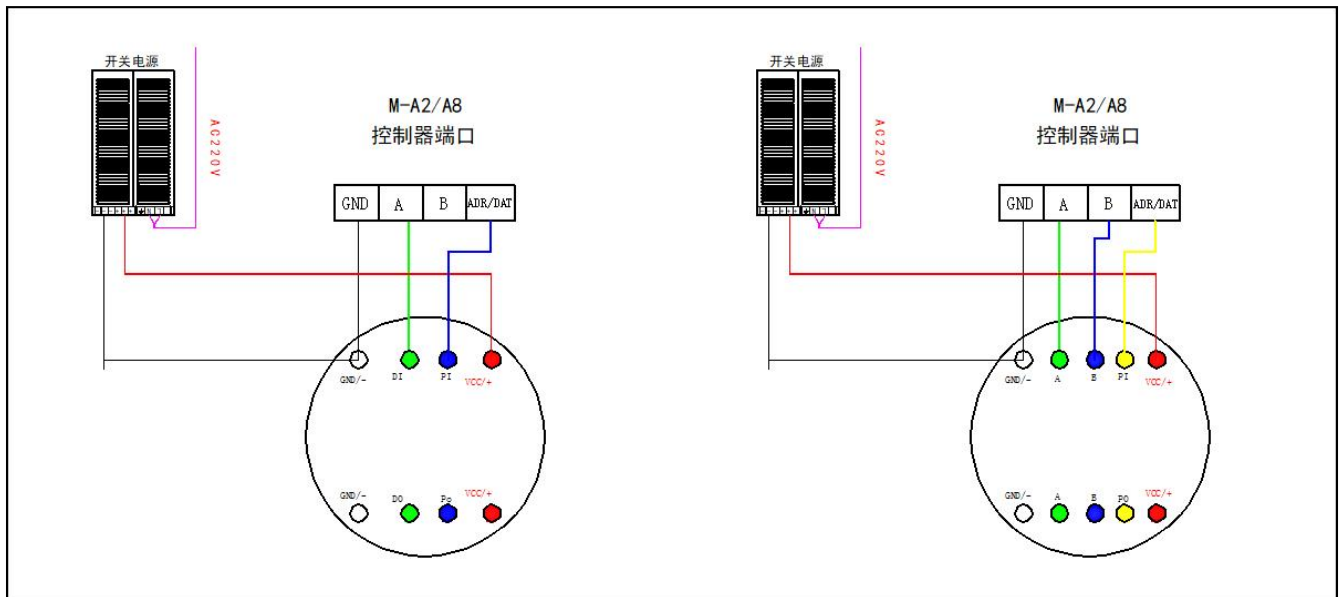
9. Cascaded schematic diagram:



Port wiring diagram: TTL series



Port wiring diagram: DMX512 series



X. Common precautions

1. Each controller is the main controller with card control; after cascading, only the first one 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 programs is consistent with the form of main control and sub-control, but it cannot be used at the same time with M-C8 and D8.
3. The controller is synchronized with GPS, and currently only supports the GPS positioning signal of Beidou satellite. When using it, the GPS module antenna should be placed in an open area outside to ensure the stability of GPS receiving signal without being covered.