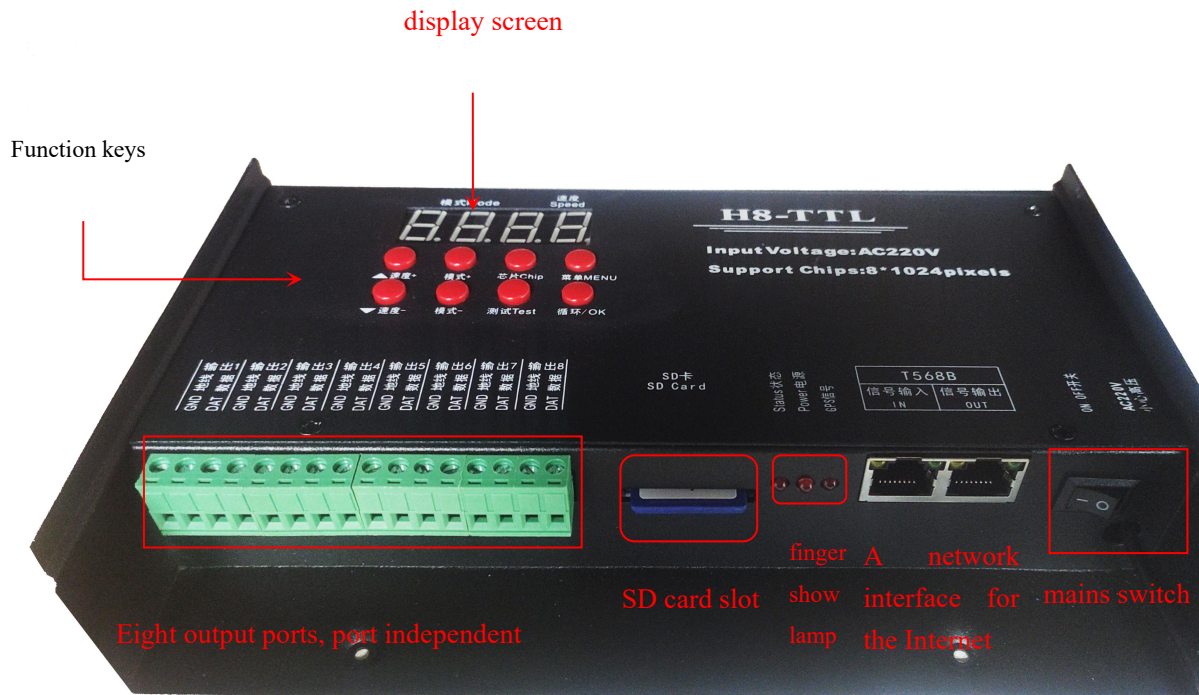


H8-TTL controller specification

一、 Controller introduction



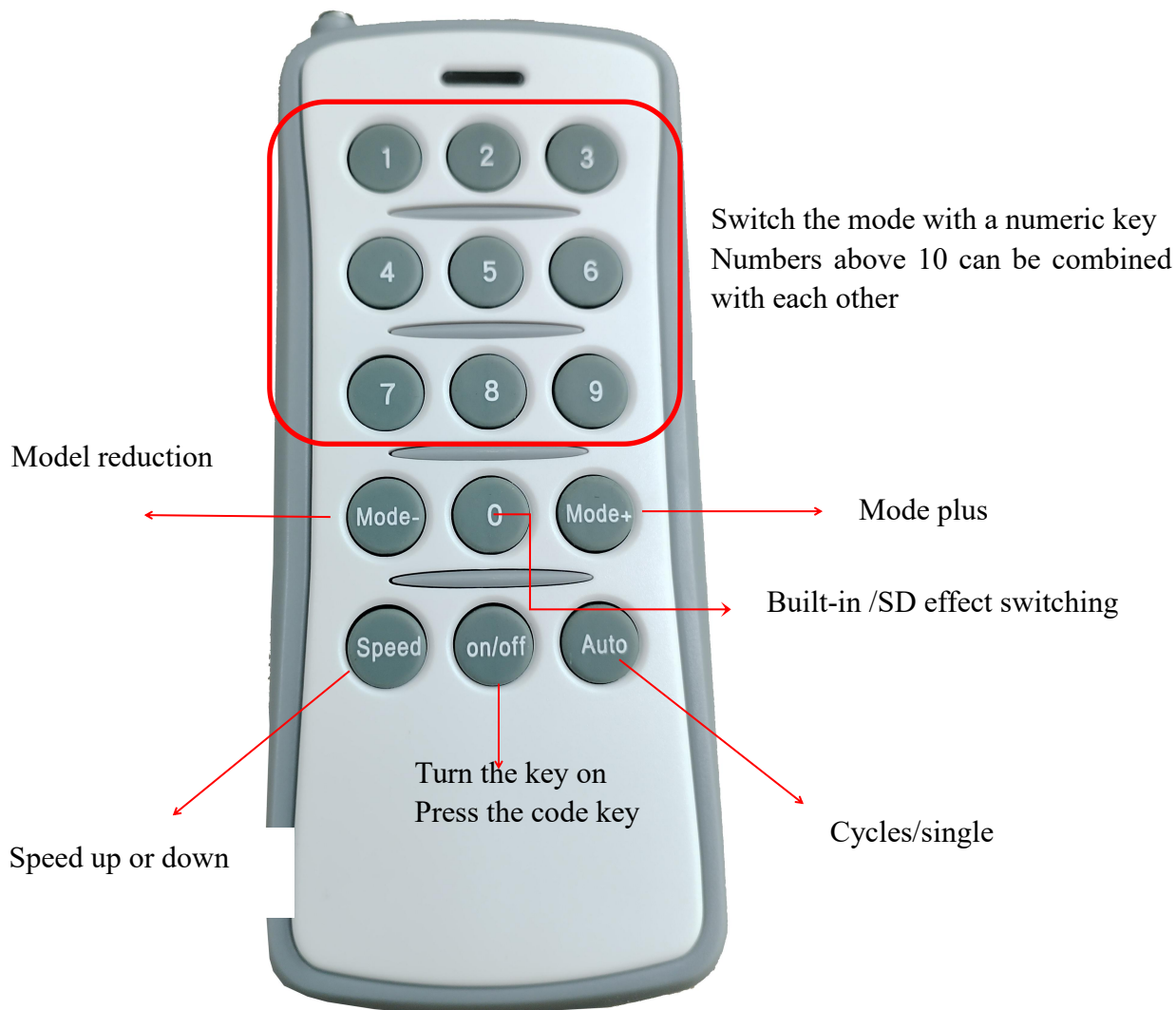
2. Detailed parameters:

1. Power supply voltage: AC220V
2. Control mode: TTL signal serial
3. Synchronization mode: cascaded synchronization
4. Size: 162 x 127 x 42 unit (mm)
- 5, weight size: 1.25Kg
6. SD format: FAT32 format
- 7, SD capacity: 1G

Note: Format before using SD

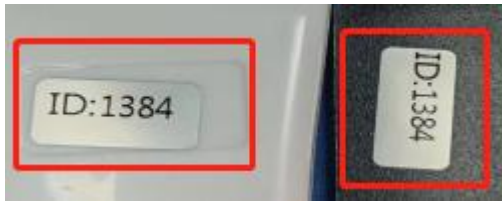


Remote control instructions



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

4. Remote control distance controller can be used within 20 meters in open areas, and there should be no obstructions to avoid affecting the remote control signal.

3. Features of H8-TTL 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 can only control the lamps with TTL signal, each port outputs independently, and each port can carry 1024 lamps.
4. Use AC220V AC power, one independent program for each unit, eight port output.
- 5、 The maximum capacity of the controller SD card is 8G. There are eight independent outputs, which do not interfere with each other.
- 6、 **The controller must be equipped with an SD card for both single and multiple simultaneous use**
- 7、 Supports conventional RGB lamps and RGBW lamps (UCS2904, SK6812).
- 8、 **The controller has a new one-key reset function. At the same time, hold down the cycle/OK key and speed + up selection button to restart after power failure.**

4、 Meaning of digital display screen and keys: Meaning of keys:

Menu displayed	Digital display	liquid-crystal display	Chinese translation
①	1-c P	Set Chip x x x x	Set the chip
②	2-100	Set Bright 100%	Set the brightness and gamma value
③	d-01	Set ID	Set the controller number
④	4-RGB	Set RGB Mode	Set the channel
⑤	LA24	Set pixes	Set the number of points
⑥	6-100	Set the refresh rate	Set the refresh rate
⑦	7000	Synchronization delay setting	Synchronous delay

			Settings
⑧	R-oF	Setting domain Space	Set the domain space
Key name	meaning		
Speed + / Speed-	Up and down keys to select, up and down numbers to switch, up and down channels to select		
Mode+/Mode-	Switching of procedures		
slug (CHIP)	Press the chip button and the digital screen will display the number model. Press up or down to switch to the corresponding model of the lamp		
test (Test)	There are five test effects in total to check whether the signal is smooth and whether the power supply is sufficient. Switch according to this button		
Menu (MENU)	Settings: chip, brightness, number, channel, point count, refresh rate, delay setting, domain space setting		
recurrence (OK)	After setting the above items, save them by pressing the cycle/OK key and switch to the cycle mode		

5. The detailed operation steps are as follows:

1. Set the chip (CHIP): The chip is the model of the lamp used, and the commonly used chips in the market can be controlled:

The full color lamp is controlled by the chip. No matter what kind of full color lamp is used, there are models. Therefore, when using it, we should first identify the specific chip model of the lamp and know the model before operating the controller.

The specific operation steps are as follows:

Step 1: Press the menu (MENU) button once or press the chip (Chip) button once to enter



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



Step 3: Switch the chip model according to speed+/speed-and select the corresponding model of the

lamp.

Chip selection correspondence table			
01: 1903	02: 6812	03: 1670	04: 1804
05: 2904	06: 2811	07: 2812	08: 1914
09: 9883	10: 8206	11: 8205	12: 5603
13: 1923	14: 1814		

Step 4: Press the cycle/OK button and save it to the controller. The lamp will start to work.

2. Adjust brightness (Bright):

When the actual lamp brightness is too bright or too low, the brightness value can be adjusted appropriately. Only the overall brightness can be adjusted, and the grade is 5%--100%. The higher the percentage, the higher the brightness.

Step 1: Press the MENU (MENU) key twice. The interface is displayed as follows



Step 2: Press the cycle /OK button to enter the brightness adjustment interface.



Step 3: Switch the digital level by pressing the speed +/-key, and select the appropriate lamp brightness from 005 to 100. The larger the number, the higher the brightness.

Step 4: Save to the controller by pressing the cycle/OK button, and the lamp will be adjusted to the selected corresponding brightness.

2.1 Setting the gamma value:

Step 1: Press the menu (MENU) twice, the interface is displayed



Step 2: Press the Loop/OK key twice to enter the gamma value adjustment interface.



Step 4: Press the speed +/-key to switch the gamma value, adjust the value and press the loop/OK key to save and return to the main interface.

3. 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 an ID number needs to be set, it should be done in sequence. When using a single controller, the ID number is 0001, as the program setup will include setting the port numbers on the drawing side. For example, ports within the range of 1-2 are definitely the first controller.

Step 1: Press the MENU (MENU) key three times. The interface is displayed as follows



Step 2: Press the Loop/OK key to enter the ID setting interface. The digital flashing indicates that it can be adjusted



Step 3: Press the speed +/-key, switch the number, and select the number corresponding to the controller.

Step 4: Press the Loop /OK button to return to the main interface

4. Channel switching:

Channel refers to the front and back order of R, G and B of the lamp, there are a total of 7 orders; when the design program file and the actual color of the lamp are different, it is definitely the wrong order of RGB, so the controller should be used to adjust the order of R G B.

The specific operation steps are as follows:

Step 1: Press the MENU (MENU) button four times. The interface is displayed as follows



Step 2: Press the cycle /OK key to confirm that you have entered the channel selection interface.



Step 3: Press the speed +/-key to switch channels (1rgb, 2rbg, 3gbr, 4grb, 5bgr, 6brg, 7rgbw) and select the corresponding channel of the lamp.

Step 4: Press the Loop /OK button to save and return to the main interface.

5. Set the number of points:

Step 1: Press the MENU (MENU) button five times. The interface is displayed as follows



Step 2: Press the cycle/OK key again to confirm that you have entered the point setting interface. The digital flashing indicates that you can adjust it.



Step 3: Press the speed +/-key to switch between up to 1024 points and select the desired number.

Step 4: Press the Loop /OK button to save and return to the main interface.

6. Set refresh rate:

Step 1: Press the MENU (MENU) button six times. The interface is displayed as follows



Step 2: Press the cycle /OK key to confirm that you have entered the refresh rate setting interface. The digital flashing indicates that it can be adjusted.



Step 3: Press the speed +/-key to switch the number (50-300) and select the refresh rate value you need.

Step 4: Press the Loop/OK button to save and return to the main interface.

7. Synchronous delay setting:

Step 1: Press the MENU (MENU) key seven times. The interface is displayed as follows



Step 2: Press the cycle /OK key to confirm that you have entered the synchronous delay setting interface, and the digital flashing indicates that it can be adjusted.



Step 3: Press the speed +/-key, switch to the number (0-999), and select the desired value.

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

8. Set domain space:

Step 1: Press the MENU (MENU) button 8 times. The interface is displayed as follows



Step 2: Press the cycle /OK key to confirm that you have entered the domain space setting interface. The digital flashing indicates that you can adjust it.



Step 3: Press the speed +/-key, switch the number (oF, 01,02), and select the desired value.

Step 4: Save to the controller by pressing the cycle/OK key and enter the following interface. The numerical flashing indicates that it can be adjusted



Step 5: Press the speed +/-key and select the desired value.

Step 6: Press the Loop/OK key to save to the controller and enter the following interface



Step 7: Press the speed +/-key and select the desired value.

Step 8: Press the Loop /OK key to save to the controller and return to the main interface

9. Switch mode (MODE):

It can be divided into SD card program mode and built-in effect mode. The two modes can switch between each other, and holding the Loop/OK button for 3 seconds will switch between the two modes. If you do not like the built-in effects that come with the controller, programmers need to design programs and copy them onto the SD card; if simple outline effects do not require many variations, you can use the built-in effects directly, totaling 130 types.

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

The specific operation steps are as follows:

Step 1: Press the Loop/OK key for 3 seconds to switch between the SD card program and the built-in program.

The interface will display as follows



d: SD card program mode; 01: the first program; 5: speed 5

Step 2: Press the mode +/-key to switch between mode files.



Step 3: Press the speed +/-key to adjust the controller speed (1-8). The larger the number, the faster the speed.



Press the cycle /OK key once to switch between a single program loop and all program loops.



D: represents a single cycle of the SD card program; A: represents all cycles of the SD card program.

F: represents a single loop of the built-in program; E: represents all loops of the built-in program

9.2, Built-in effect mode: (The built-in effect can be adjusted whether the controller is inserted or not. Simply put, 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 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 the cycle (OK) button for 3 seconds until the interface is displayed



F: controller built-in program mode; 01: first program; 5: speed 5

Step 2: Press the mode +/-key to switch between the 86 modes



Step 3: Press the speed +/-key to switch the program speed (1-8).



Press the cycle /OK key once to switch between a single program loop and all program loops.



D: represents a single cycle of the SD card program; A: represents all cycles of the SD card program.

F: represents a single loop of the built-in program; E: represents all loops of the built-in program.

10. Set up test (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, GRB, GBR, BRG, BGR ③ Whether there are bad pixels in the lamps ④ Whether the power supply to the lamps is sufficient ⑤DMX512 Whether the lamp codes are written correctly and whether they are in disorder) All the issues mentioned above can be tested using the test function.

Step 1: Press the Test key to enter the test interface



Step 2: Switch the lights of the 3/4 channel by pressing the speed +/-key. Take the 3-channel as an example

Step 3: Press the Loop /OK key, and the interface is displayed



Step 4: Press the speed +/-key to select the corresponding port for testing



Step 5: Press the Loop /OK key to enter the manual measurement point interface



Step 6: Press the speed +/-key to manually test each one in sequence (1-1024).



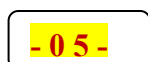
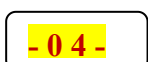
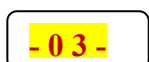
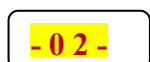
Step 7: Press the MENU (MENU) key to automatically measure the point, and press this key again to return to the manual measurement interface



To test the RGB channel sequence of the lamp, press the Test key in the manual measurement point interface



Press the Test key again to jump to the next color



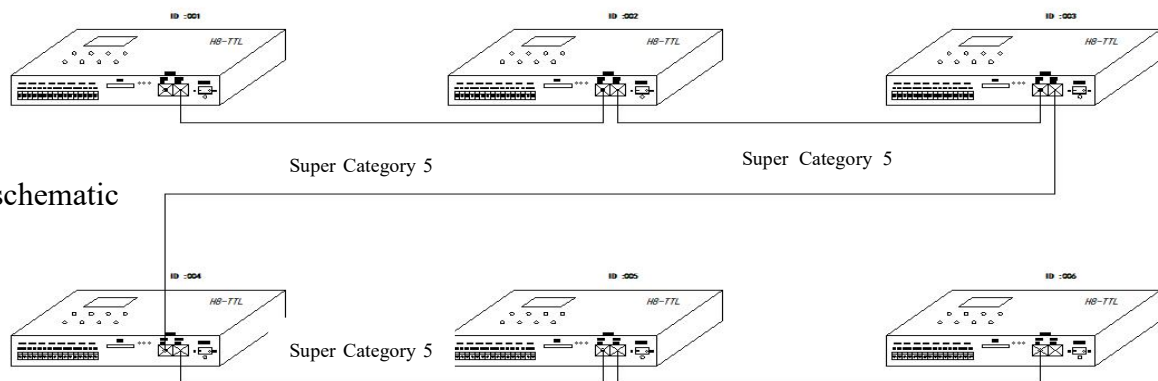
Always red, always green, always blue, always white

The sequence of colors in which the lamps are lit is the sequence of the lamp's passage

Step 8: After the test is completed, press the cycle /OK key to return to the main interface.

6. H8-TTL wiring diagram:

Cascade schematic diagram:

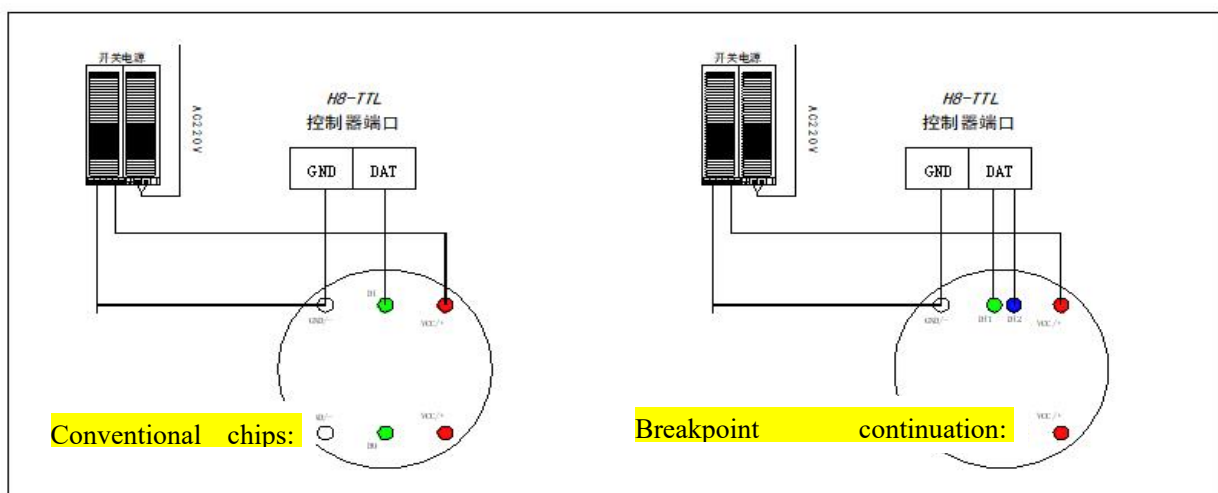
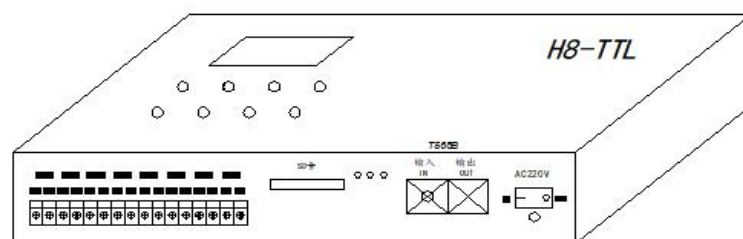


Note: A, the cascaded synchronization uses crystal head network cable (568B parallel straight-through).

B、 Each controller copies the same program, and the SD card capacity should be consistent.

C、 Use an ultra-5 shielded network cable.

D、 The controller sets the ID number of each unit. After cascading, the first one is the master control, and the first one can be adjusted.



Requirements: 1. GND must be connected to ensure the same ground wire.

2. Distinguish the data lines, different chips have different data lines: one conventional data line, two data lines for continuous transmission at breakpoints.

3. The positive and negative poles of the power supply and the positive and reverse signals should be clearly marked.