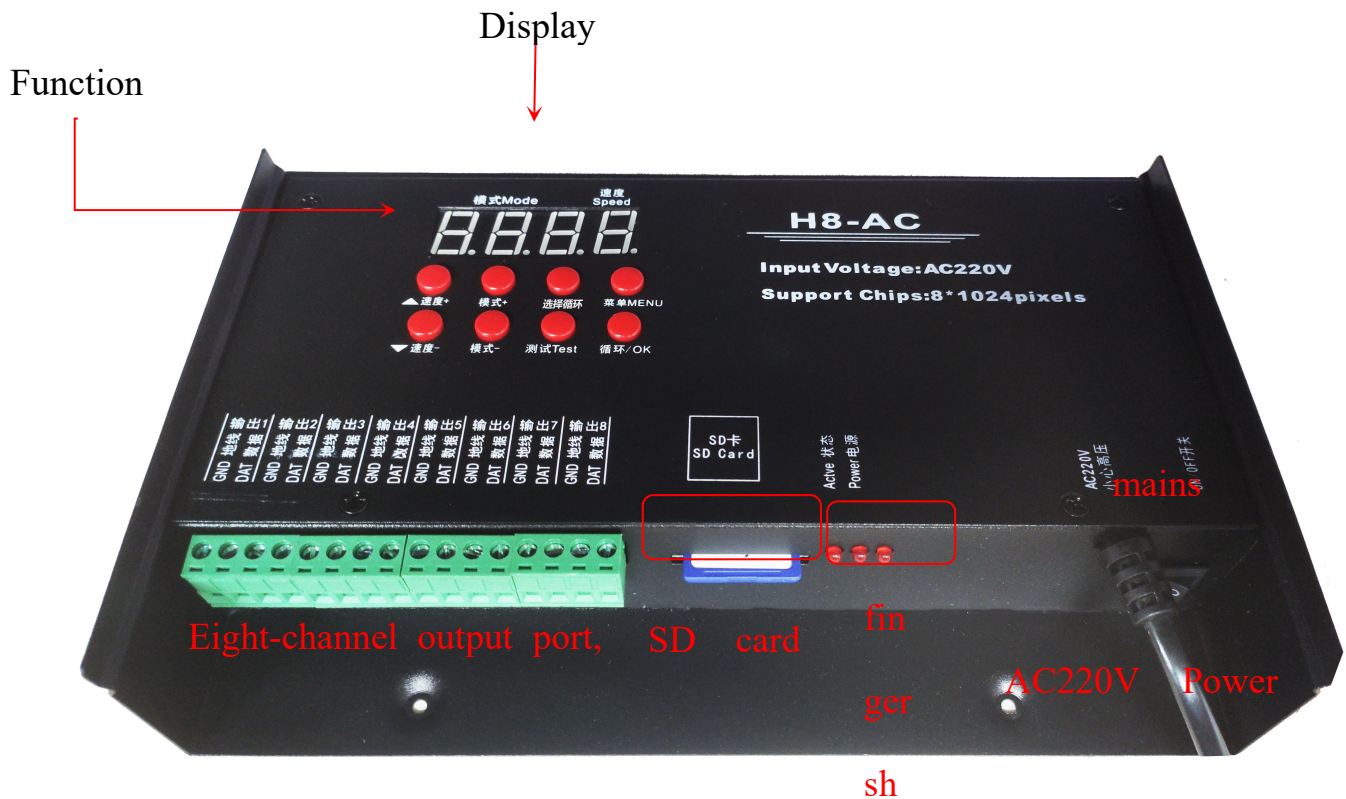
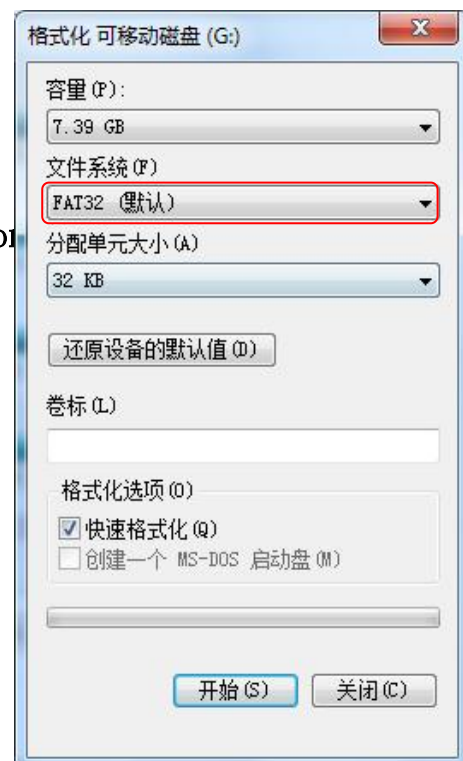


# H8-AC Controller Instructions



Note: Format SD before

1. Power supply voltage: AC220V
2. Control mode: serial SPI signal
3. Sync mode: communication synchronization
4. Size and size: 22013845 units (mm)
5. Weight and size: 1.1 Kg
6. SD format: FAT 32 format
7. SD capacity: 8G
8. Load points: 8 \* 1024 pcs



### 3. The H8-AC system features

1, 32-65536 gray scale control, software Gamma correction processing.

2、 Support a variety of point, line, surface light source, support a variety of rules, special shape processing.

3. The controller can only control the lamps of TTL signal, and each port can be output independently, and each port can carry 1024 lights.

4, use AC220V AC, each with an independent program, eight-port output.



5、 Controller SD card maximum capacity is 8G. Eight ports are independent output without interference.

6、 The controller must be equipped with SD card for single use and multiple synchronous use


7、 Support for conventional RGB lamps and RGBW lamps (UCS2904, SK6812).


8、 Support AC synchronization, the program exports the collection file, copy to the SD card, insert into the controller, the controller automatically identifies the file through the ID.

9、 Add the selection cycle function to select multiple effect cycles.

10、 The controller adds a one-button  set function,  hold down the cycle / OK button and speed + select button, power off and restart.



F: Represents a single built-in mode run; press cycle  / OK to switch to E:  
represents all built-in cycles.

The d: represents a single SD card file run; press cycle  / OK to switch to  
A: represents all SD card cycles

5. Digital display screen:

Menu displ ay	Digital display	liquid-crystal display	Chinese translation
①	1-c P	Set Chip x x x x	Set the chip
②	2100、g-22	Set Bright 100%	Set the brightness, and the gamma value
③	d-0 1	ID :01	Set the ID number
④	4-r g b	Set RGB Mode	Set the lamp channel
⑤	LA24	Set pixes	Set the number of output points
⑥	6100	Set the refresh rate	Set refresh rate
⑦	7000	Synchronization delay setting	Sync time-lapse settings
⑧	r-oF	Setting domain Space	Set the domain space

## VI. Meaning of the keys:

Key name	meaning
Mode + / Mode-	Switching of programs
slug (CHIP)	Press the chip key will display the digital model on the digital screen, and press up and down to switch to the corresponding model of the lamp
test (Test)	A total of three test effects, to detect whether the signal is smooth and whether the power supply is sufficient, press this button to switch
Menu (MENU)	Settings: chip, brightness, ID number, channel, points, refresh rate, delay setting, domain space setting
recurrence (OK)	For the above items, press the cycle / OK key to save and switch the cycle mode

## Vii. Detailed operation steps are described as follows:

### 1. Set chip (Chip): chip is the model of lamps and lanterns. The commonly used chips on the market are as follows:

UCS1903、UCS1904、UCS2909、UCS2903、UCS1912、TM1803、TM1804

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

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

UCS5603 (Breakpoint transmission), P9883 (breakpoint transmission) each controller needs to choose the chip model

Full-color lamps and lanterns are controlled through the chip, no matter what full-color lamps and lanterns are models, so when using the specific chip model of the lamp, know the model and then operate the controller.

The specific operation steps are described as follows:


**Step 1: Press the menu  (MENU) key to enter once**




auxiliary word for ordinal numbers4A total of pages15page

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




Step 3: Press the  speed + / speed-switch the chip model and select the corresponding model of the lamp.

Chip selection corresponding 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 key, save to the controller, the lamp begins to effect.

2. Adjust the brightness (Bright):


When the actual brightness of the actual lamp is bright or low, the brightness value can be appropriately adjusted, can only adjust the overall brightness, the level of 5% - 100%, the larger the 100%, the higher the brightness.

Step 1: press the menu  (MENU) key twice, and the interface displays below




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



Step 3: press the  speed + / -key to switch the number level, select the appropriate lamp brightness


005-100, the larger the number, the higher the brightness.

Step 4: Press the cycle  / OK key to save to the controller, and the lamp will adjust to the selected corresponding brightness.



## 2.1. Set the Gamma value:

Step 1: press the  menu (MENU), key twice, the interface display




Step 2: Press the cycle  OK key twice to enter the gamma adjustment interface.




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

## 3. Set the ID:

When multiple controllers are used synchronously, the user can choose to set the ID number of each controller, or separate each controller. If the ID number is set, set it in sequence. The single use ID number is 0001, because the drawing port number will be set when doing the program. For example, the port range of 1-2 must be the first controller.

Step 1: press the  menu (MENU) key 3 times, and the interface displays below



Step 2: Press the cycle  / OK key to enter the ID setting interface, the flashing flicker can be adjusted



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

**Step 4:** Press the cycle ● / OK key to determine the return to the main interface.

#### 4. Channel switching:

Channel refers to the order of R, G and B of the lamp, with a total of 7 orders; when the color of the actual lamp deviates, the order of RGB must be misplaced, so the order of RGB should be adjusted through the controller.

The specific operation steps are described as follows:

**Step 1:** Press the ● menu (MENU) key 4 times, the interface shows below



**Step 2:** Press the cycle / OK key again to confirm entering the channel selection interface.



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

**Step 4:** Press the cycle ● / OK key, save and return to the main interface.

#### 5. Set the number of points:

**Step 1:** Press the ● menu (MENU) key 5 times, and the interface displays below



Step 2: Then press the cycle ● / OK key to confirm the entry point setting interface, and the number flashing representative can be adjusted.



Step 3: Press the ● speed + / -key, switch the number up to 1024 points, and select the required number.

Step 4: Press the cycle ● / OK key, save and return to the main interface.

## 6. Set the refresh rate:

Step 1: Press the ● menu (MENU) key for 6 times, and the interface displays below



Step 2: Then press the cycle ● / OK key to confirm the refresh rate setting interface, the number flashing representative can be adjusted.



Step 3: Press the ● speed + / -key, switch the number (50-300), and select the required refresh rate value.

Step 4: Press the cycle ● / OK key, save and return to the main interface.

## 7. Synchronous delay setting:

Step 1: press the ● menu (MENU) key 7 times, the interface shows below



Step 2: Then press the cycle ● / OK key to confirm entering the synchronization delay setting interface, and the number flicker representative can be adjusted.



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

Step 4: Press the cycle ● / OK key, save and return to the main interface.

## 8. Set up the domain space:

Step 1: Press the ● menu (MENU) key 8 times, and the interface displays below



Step 2: Press the cycle ● / OK key to confirm the domain space setting interface, the flashing flicker can be adjusted.



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


Step 4: Press the cycle ● / OK key to save the controller at the same time to enter the following interface, the flashing value can be adjusted




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

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



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


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

## **9. Switching mode (MODE):**

It can be divided into SD card program mode and built-in effect mode, the two modes can switch between each other, press and hold down the cycle / OK key for 3 seconds to switch between the two modes. If you don't like the built-in effect of the controller, the programmer needs to design the program to copy into the SD card; if the simple contour effect does not need much style changes, you can directly use the built-in effect, a total of 130 kinds.


**9.1, SD card program mode: it is designed through the program software, according to the requirements of customers, or the designers themselves design.**

The specific operation steps are described as follows:


**Step 1: Press the cycle  / OK key for 3 seconds to switch between the SD card program and the built-in program, which will be displayed as follows**



**Program mode of d: SD card; 01: first program; 5: speed 5**

**Step 2: Press the  mode + / -key to switch the mode files up and down.**



**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 for a single time to switch a single program cycle and all program cycles.



And d: a single cycle representing the SD card program; A: representing the SD card program.

F: represents a single cycle of built-in programs; E: represents the full cycle of built-in programs

## 9.2, built-in effect mode: (controller card and card can call out the built-in effect, simply speaking, has nothing to do with SD card.)

The controller itself comes with the effect program, these built-in effect program is relatively simple, mainly used to test whether the lamp is smooth and the controller is working normally, if you want to be more gorgeous effect, you need to write the program file placed into the SD card. Like some simple contours, you can use a built-in effect.

The specific operation steps are described as follows:

**Step 1: Long press the cycle (OK) key for 3 seconds, until the interface displays**



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

**Step 2: Press the ● mode + / -key to switch the program, with a total of 86 modes**



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



Press the cycle ● / OK key for a single time to switch a single program cycle and all program cycles.



And d: represent the SD card program; A: cycle for the SD card.


F: single cycle representing built-in programs; E: cycle representing all built-in programs.

## 10. Set-up test (Test):

The following cases need to be used to test function: ① Do not know the number of lamps ② do not know the channel order of lamps RGB, RBG, GRB, GBR, BRG, BGR ③ lamps ④ lamp power supply is sufficient ⑤ DMX512 the lamp writing code is normal, whether the code) the questions mentioned in the appeal can be tested through the test function.

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




**Step 2: Press the  speed + / -key to switch the 3 / 4 channel lamps, take 3 channels as an example**

**Step 3: Press the cycle  / OK key, and the interface display**



**Step 4: Press the  speed + / -key to switch the number and select the corresponding port test**



**Step 5: Press cycle  / OK to enter the manual point interface**



**Step 6: Press the  speed + / -key to manually test individually and in turn (1-1024).**



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



**Press the Test Test at the manual point interface**



Press the Test ● Test key again to jump to the next color

- 0 2 -

- 0 3 -

- 0 4 -

- 0 5 -

**Always bright red, always bright green, always bright blue, always bright white**

**The bright color order of the lamp is the channel order of the lamp**

**Step 8: Press the cycle ● / OK key to return to the main interface.**

## **11, new functions: selective cycle, you can choose the effect file loop**

For example: select mode 2, mode 5, two file loops. The operation is as follows

**Step 1: Press ● mode + / -key to select the corresponding file mode d02 mode 2**



**Step 2: Press the select cycle key to add this mode cycle. There will be a dot on the screen, as shown in the figure below:**



Press the Select cycle again, then deselect

**Step 3:** Press the  mode + / -key to select the corresponding file mode d05 mode 5



**Step 4:** Press the select cycle key to add this mode cycle. A dot will appear on the screen, as shown in the figure below:



Press the Select cycle again, then deselect

**Step 5:** Long press to  select the cycle key cycle mode



**Step 6:** Single press the  mode + / -key to cancel the cycle.

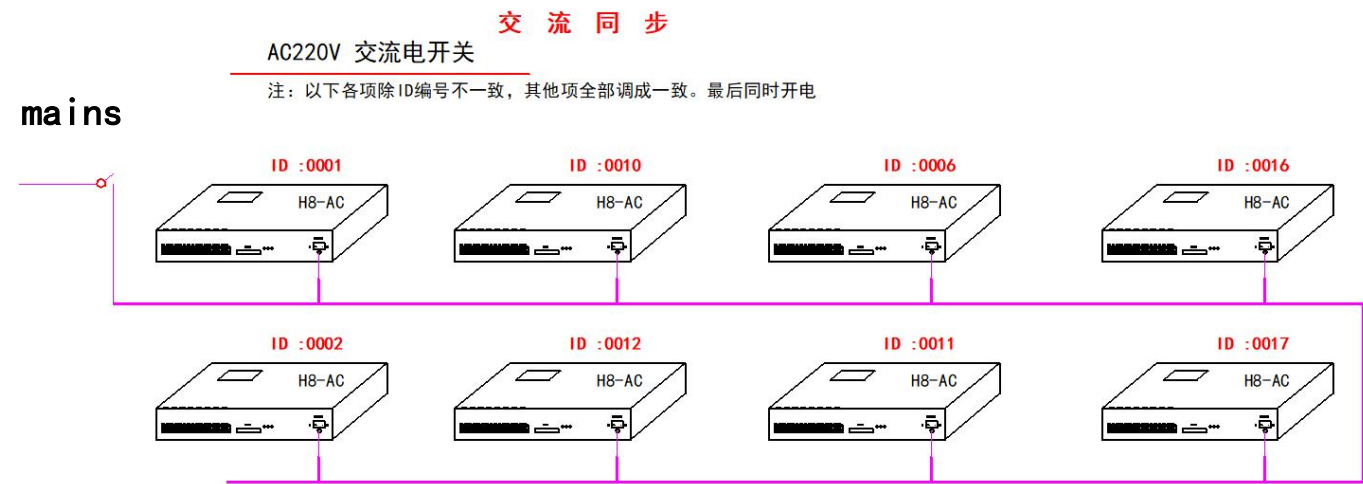
The built-in effect operation mode is the same as the SD card operation mode: Fxxx single mode C. xxx built-in effect selectivity loop

The dxxx single SD card mode A.xxx SD card effect selective loop

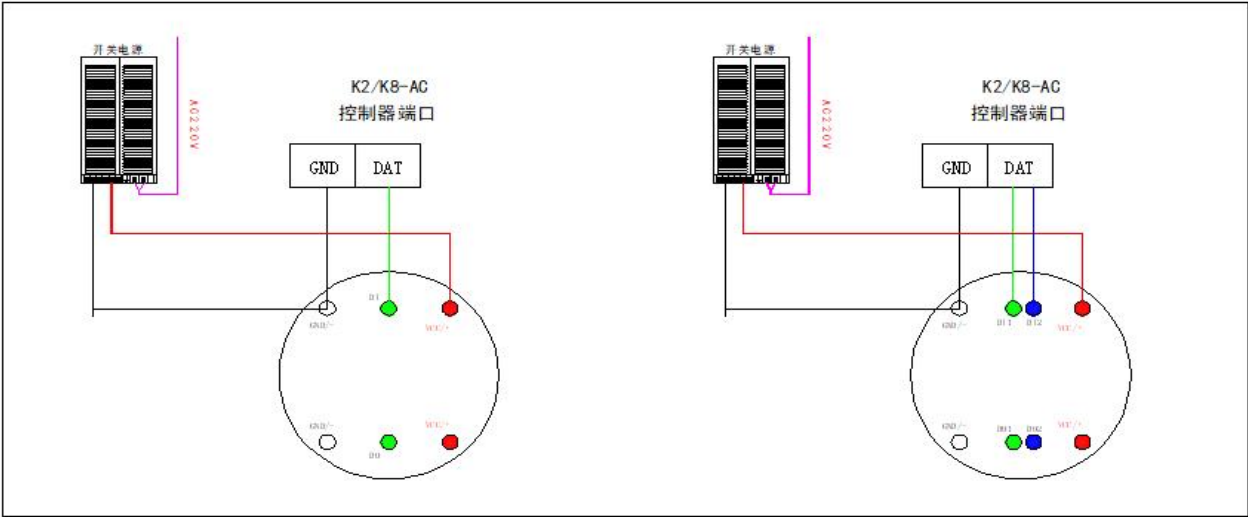
## VIII. Synchrondiagram:

Synchronization condition: A, simultaneous on (all controllers start at the same time on one main line)

- B, maintain consistent speed values for all controllers.
- C. Mode of all controllers to consistent value / single / cycle.
- D, SD card capacity of all controllers, brightness value and channel order.



IX. Schematic diagram of H8-AC wiring:



- Requirements: 1, GND must be connected, to ensure that the ground line is the same.
2. Clear the data lines. The data lines of different chips are different: one conventional data line, and two data lines at breakpoints.
- 3, the positive and negative electrode of the power supply, the positive and negative signal should be marked clearly.