

## Product Specifications

Model : HC03

Name: SD Card Aluminum Shell Magic Color Controller



### Product Description

SD card aluminum shell magical color controller is suitable for UCS1903, UCS6803 (TM1804, TM1809, TM2801 etc.) output applications to drive LED directly, and can be widely applied to the light box advertising, stage sets, home decoration; It has many advantages such as low price, easy connection and simplicity to use; It has a memory function; You can select mode, adjust brightness and various dynamic changes in lighting effects through the radio frequency remoter. In addition, we can compile kinds of customer requested change effect to the SD card by software, to realize user-defined dynamic change mode. At the same time it can synchronously control more controllers, continuously expand the output channels, in order to achieve more dimming or various program synchronization change effect.

It has a TF card with computer software, simple effect files and Electronic file specification. Please kindly check.

### Product Description

- Working temperature: -20-60°C
- Supply voltage: DC5V, 12V~24V available
- Current: <60mA
- Controller dimension: L122×W71×H24mm
- Remoter dimension: L90×W36×H15mm
- Packing size: L135×W80×H55mm
- Net weight: 200g
- Effects model: 123
- Maximum control points: 2048points
- Available IC Model: TM1803, TM1804, TM1809, UCS1903

TM1812, WS2811, LPD6803, LPD8806, SM16716 etc.

### External Dimension

(controller)



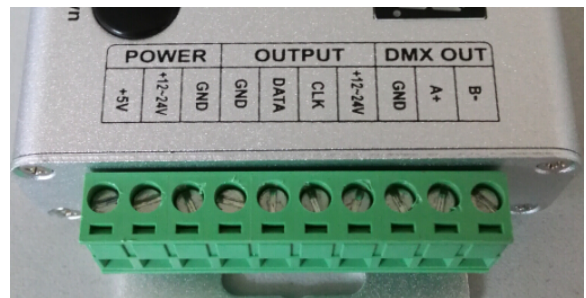
(remoter)



### Interface Specifications



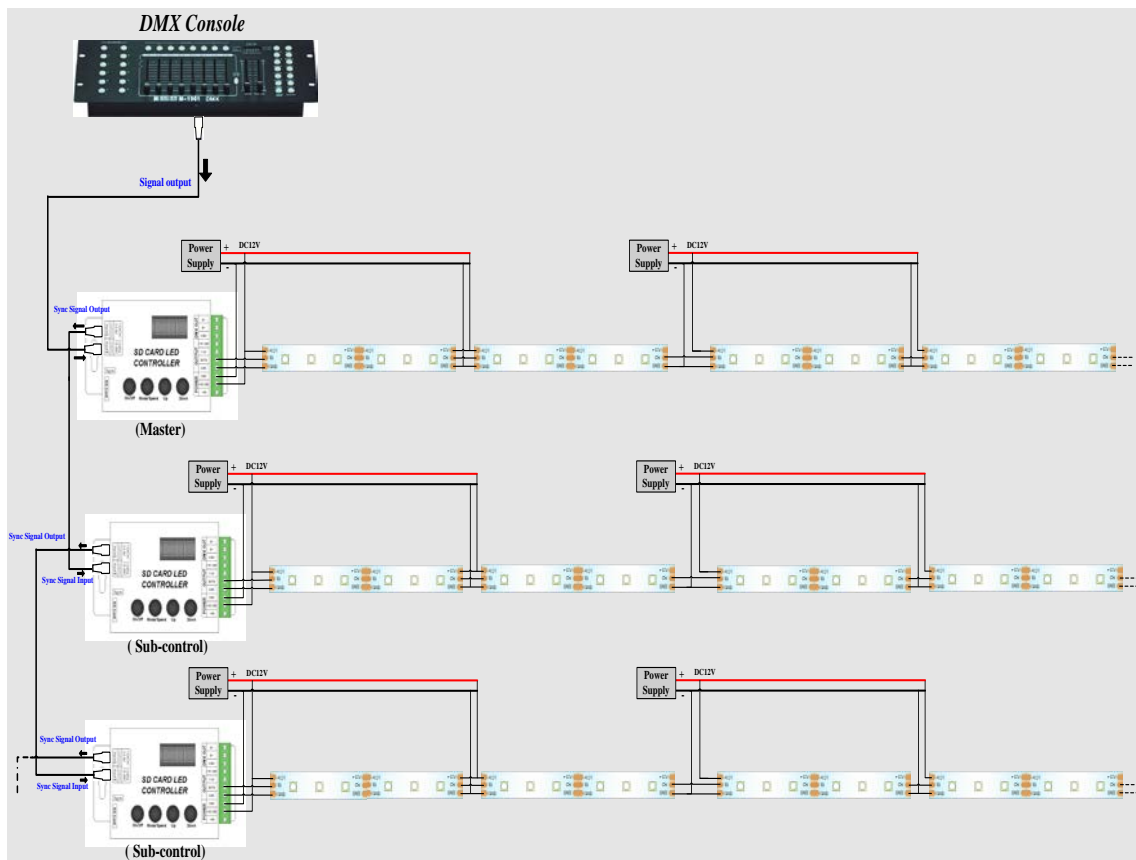
Signal input - network card holder and small SD card socket



Output connector—10 single-pole screw terminal

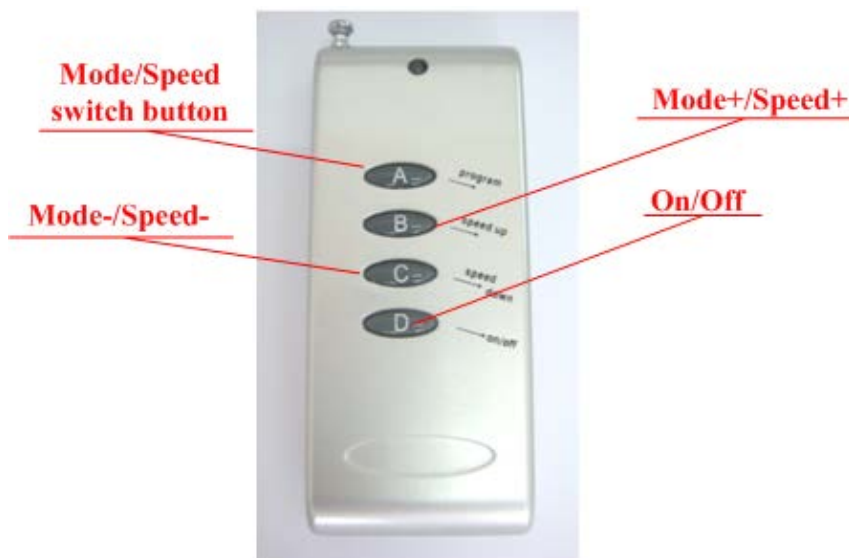
### Direction for use

- Connect the load wire at first, following by the power wire; **Please ensure short circuit can not occur between connecting wire before you turn on the power. Then set the steps as follows.**



- ★ **On/off:** It can turn on or turn off the output..
- ★ **Mode/Speed :** Mode adjustment / speed adjustment function switch (The first LED displays H for model adjustment, shows S for the speed adjustment.)
- ★ **UP:** Mode+ / Speed+ button. When in mode regulator function, it is for "Mode+". When in speed regulator function, it is for "Speed+".
- ★ **DOWN:** Mode- / Speed- button. When in mode regulator function, it is for "Mode-". When in speed regulator function, it is for "Speed-".
- ★ **Remark:** Speed of each mode are independent and can be recorded

● Adopt wireless control method, 4keys in total, function of each key as below:



- ★ **A:** Mode adjustment / speed adjustment function switch (The first LED displays H for model

adjustment, shows S for the speed adjustment.)

- ★ **B:** Mode+/Speed+ button. When in mode regulator function, it is for "Mode+". When in speed regulator function, it is for "Speed+".
- ★ **C:** Mode-/Speed- button. When in mode regulator function, it is for "Mode-". When in speed regulator function, it is for "Speed-".
- ★ **D: On/Off button:** It can open or close output.

After power on, the controller will search the ".LED" file in the LED folder stored in SD card, file selection is based on the order of "LED1\_01.LED-----LED2\_01.LED-----LED99\_01.LED".The file is named in specified way, in that when you choose the file, changing the name of the serial number will be able to change the corresponding changes order of the pattern file among all documents.

**Note:** when the power is on, the digital tube will display "F-\*\*" shortly in a dusky brightness. "\*\* \*" indicates the current effective file numbers in SD card. (00-99) 00 said no effective file can be played. The operating file numbers can not exceed the max effective file numbers in SD card, otherwise, the default will show the last valid file number.

### Mode 1: SD card file single repetition mode

When it showed "S-\*\*" in high light, that means single repetition mode is on. "\*\*" means the current active file (1-99)

Short press Mode/Speed button, switch it to "SP\*\*" interface , that can modify the speed (0-99) d in this mode. LED will flash quickly or slowly

Note: This mode support mono signal IC UCS1903, TM1804, TM1809, TM1812, WS2811 etc.

This mode support double signal IC LPD6803, SM16716, LPD8806 etc.

### Mode 2: SD card file all repetition mode

When it showed "SA\*\*" in high light, that means all repetition mode is on. "\*\*" means the current active file at last (1-99)

Repetition method 1---》 ---2》 ---\*\* ---1---》 ---2》 --- \*\* .....

Short press Mode/Speed button, switch it to "SP\*\*" interface, that can modify the speed (0-99) in this mode. LED will flash quickly or slowly

Note: This mode support mono signal IC UCS1903 , TM1804, WS2811 etc.

Note: This mode support mono signal IC LPD6803 , SM16716, LPD8806 etc.

### Mode 3: Built-in effects mode

When it showed "H\*\*\*\*" in high light, that means all repetition mode is on. "\*\*\*\*" means the current active built-in effect (1-123)

123 is built-in repetition mode(repeat from 8 to122) , when there is no effective SD files, the system will change to this mode automatically.

Note: This mode only support mono signal IC UCS1903, TM1804, TM1809, TM1812, WS2811 etc.

Press Off on this model, then press button UP and DOWN can set strip IC numbers, when you restart the controller, the running effect will be based on the newest setting numbers.

Short press Mode/Speed button, switch to "SP\*\*" interface, that can adjust the speed(0-99) in this mode, LED go out.

### MOde 4: DMX controlling mode

When it showed "A\*\*\*\*" in high light, that means DMX controlling mode is on. "\*\*\*\*" means the current

controlling setting address. The DMX512 controlling signal will be input to controller through the RJ-45 network interface. If the controller received DMX signal from current address, it can control the quantity of SD card filer. The last number of DMX512 is for controlling the speed of the current mode

For example: setting address as A001, DMX512 date are as following 8,9,10..... Then the played file is 8, speed is 9.

For example: setting address as A004, DMX512 date are as following 1 2 3 4 5 6..... Then the played file is 4, speed is 5

Each data change will display the current data, display the file data change: **F-\*\***. The speed data change : **SP-\*\***.

When there is no DMX signal, pattern automatically jump to mode 1. When there is signal, LED will rapidly and uniformly flash, will not change along with speed .

Note: this mode can support the single signal IC such as UCS1903, TM1804, TM1809, TM1812, WS2811, etc..

This mode can support the double signal IC, such as LPD6803 , SM16716, LPD8806 etc

### Mode 5: Synchronization SD card file mode

When you need to achieve multiple controller synchronization through the correct net cable connection. The controller can be used as the main control and synchronous main control and slave device.

Only the main control be set to mode1 or mode 2 can the slave device be controlled.

The main controller RJ-45 signal ↓ connect to next controller 1 signal ↑ ,shows "**SS\*\***" means controlled.

Controller 1 RJ-45 signal ↓ connect to 2 signal ↑ ,in turn under the joint, can be composed of multiple synchronous broadcasting network.

Note: each file in the SD card requires the same frames, when they need to form a similar screen effects, you have to set to multiple ports when you write effect file on computer . Each port should be put into different controller.

●Built-in effect as following:

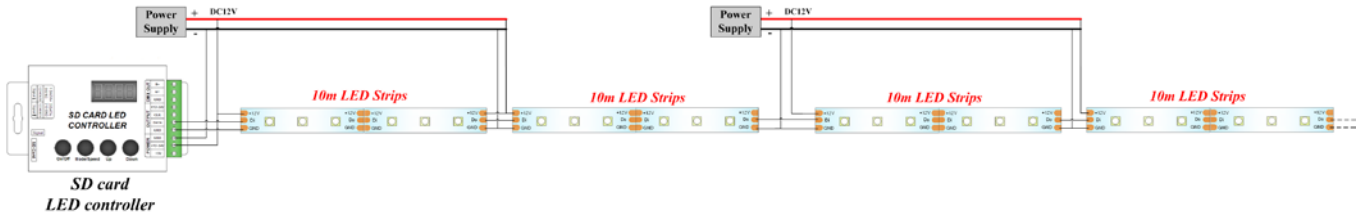
Mode number	Effect description	Mode number	Effect description
1	Static red	2	Static green
3	Static blue	4	Static blue
5	Static cyan	6	Static purple
7	Static white	8	Three color jumpy change
9	Seven color jumpy change	10	Seven color stroboflash
11	Red horse race lamp to right direction	12	Purple horse race lamp to left direction
13	Blue horse race lamp to right direction	14	Cyan horse race lamp to left direction
15	Seven color cycling horse race lamp to right direction	16	Seven color cycling horse race lamp to left direction
17	Seven color horse race lamp back-for-ward direction	18	Seven color horse race lamp to left direction
19	Seven color jumping horse race lamp to right	20	Three color gradually change
21	Seven color gradually change	22	Red background scan lamp back-for-ward direction
23	Green background scan lamp back-for-ward direction	24	Blue background scan lamp back-for-ward direction
25	Yellow background scan lamp back-for-ward	26	Cyan background scan lamp back-for-ward direction
27	Purple background scan lamp back-for-ward	28	White background scan lamp back-for-ward direction
29	Seven color scan lamp back-for-ward direction	30	Red water move to right direction

Mode number	Effect description	Mode number	Effect description
31	Red water move to left direction	32	Green water move to right direction
33	Green water move to left direction	34	Blue water move to right direction
35	Blue water move to left direction	36	Yellow water move to right direction
37	Yellow water move to left direction	38	Cyan water move to right direction
39	Cyan water move to left direction	40	Purple water move to right direction
41	Purple water move to left direction	42	White water move to right direction
43	White water move to left direction	44	Seven color cycling water move to right direction
45	Seven color breathing lamp back-for-ward direction	46	Red trail to left single direction
47	Purple trail to left single direction	48	Blue trail to left single direction
49	Cyan trail to left single direction	50	White trail to left single direction
51	Green trail to left single direction	52	Yellow trail to left single direction
53	Seven color jumping trail to left single direction	54	Seven color queue trail to left single direction
55	Seven color alternation trail to left single direction	56	Red trail to right single direction
57	Purple trail to right single direction	58	Blue trail to right single direction
59	Cyan trail to right single direction	60	White trail to right single direction
61	Green trail to right single direction	62	Yellow trail to right single direction
63	Seven color jumping trail to right single direction	64	Seven color queue trail to right single direction
65	Seven color alternation trail to right single direction	66	Red water trail to right direction
67	Purple water trail to right direction	68	Blue water trail to right direction
69	Cyan water trail to right direction	70	White water trail to right direction
71	Green water trail to right direction	72	Yellow water trail to right direction
73	Seven color jumping water trail to right direction	74	Seven color queue water trail to right direction
75	Seven color alternation water trail to right direction	76	Red trail to left double direction
77	Purple trail to left double direction	78	Blue trail to left double direction
79	Cyan trail to left double direction	80	White trail to left double direction
81	Green trail to left double direction	82	Yellow trail to left double direction
83	Seven color jumping trail to left double direction	84	Seven color queue trail to left double direction
85	Seven color alternation trail to left double direction	86	Red trail to right double direction
87	Purple trail to right double direction	88	Blue trail to right double direction
89	Cyan trail to right double direction	90	White trail to right double direction
91	Green trail to right double direction	92	Yellow trail to right double direction
93	Seven color jumping trail to right double direction	94	Seven color queue trail to right double direction
95	Seven color alternation trail to right double direction	96	Full color wave to right direction
97	Seven color water move to left direction	98	Purple background trail to right double direction
99	Blue background trail to right double direction	100	White background trail to right double direction
101	Cyan background trail to right double direction	102	Green background trail to right double direction
103	Yellow background trail to right double direction	104	Seven color background trail to right double
105	Seven color open the door	106	Seven color open the door
107	Seven color overlay to right direction	108	Seven color overlay to left direction
109	Seven color overlay to left and right direction	110	Seven color background overlay to double direction
111	Subsection back and forth seven color move	112	Subsection background seven color move back and
113	Subsection seven color move back and forth	114	Subsection background seven color single direction
115	Subsection single direction seven color swabbing	116	Subsection back and forth seven color swabbing
117	Seven color water divide right and left	118	Seven color swab from middle section to both side
119	Seven color expand and contract from middle section to both side	120	Subsection seven color expand and contract to single direction
121	Subsection seven color overlay to single direction	122	White trail to right direction
123	Automatically Cycle		

## Typical Applications

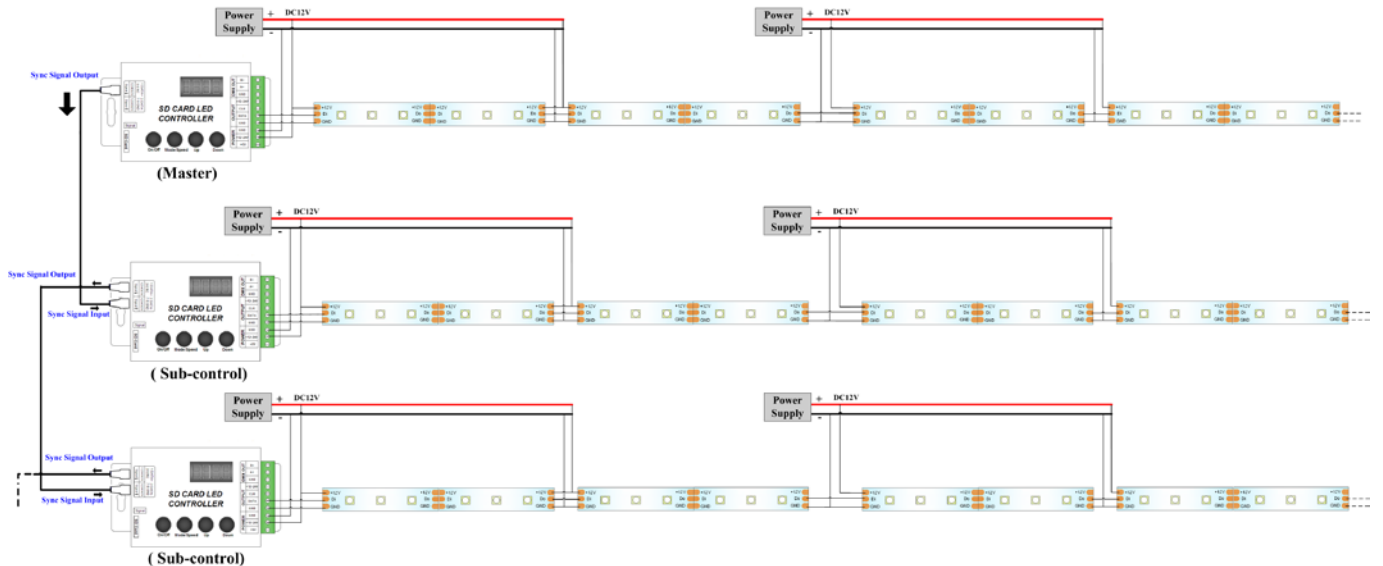
### Application Circuit 1:

#### (Serial Connection)



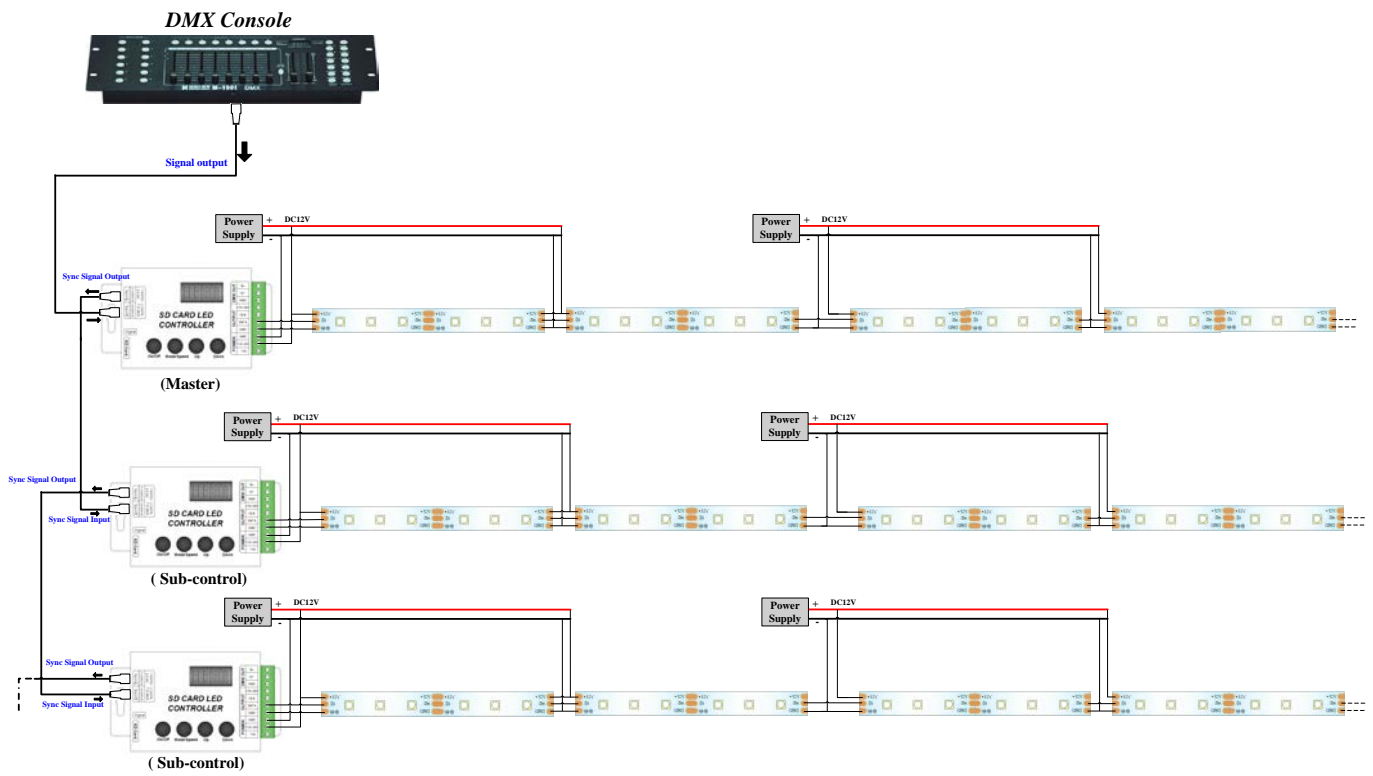
**Application Circuit 2:** Multiple controllers synchronization function application (each controller can be power supply separately, also can share power supply)

#### (Bus Connection)



(a.Cascade Connection, the master controller just output the signal to the first branch controller, and the next branch controller signal is from the previous branch controller,etc)

**Application Circuit 3:** Connect DMX512 to console, to be a controller for outside operation



## Caution

- 1、 This products Input voltage is DC5V,DC12-24V,other input voltage are not allowed.
- 2、 Lead wire should be connected correctly,according to the wire color and the connecting diagram offers.
- 3、 Overload are prohibited.