User Manual

Name: Controller with remote

Model：REC-RF100

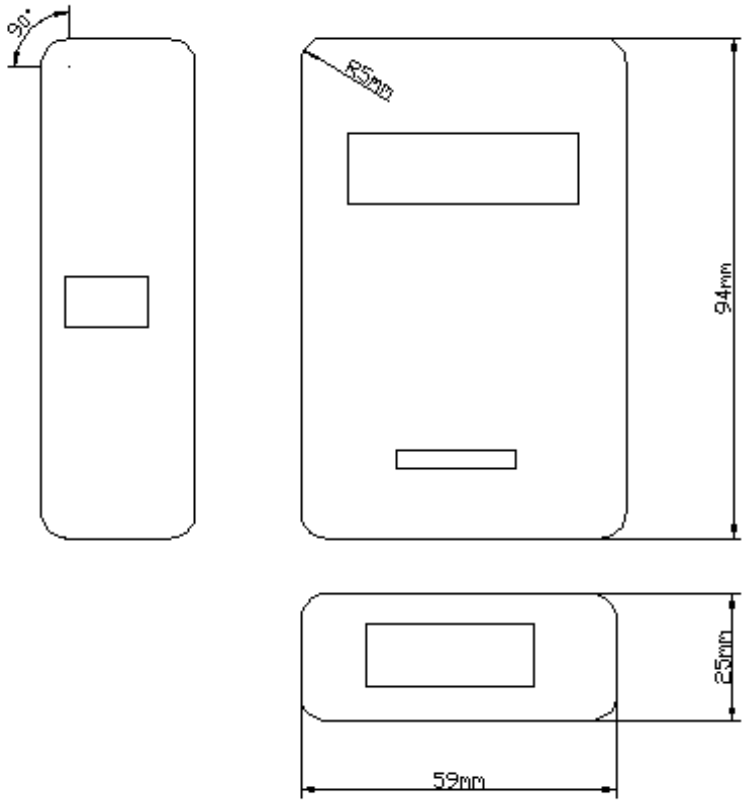
Summarization

Magic color controller suitable for SPI signal direct drive LED applications; With 256 * 256 * 256 level gray, length setting function and power off memory function, built-in a variety of patterns to choose, and can through the RF remote control to adjust all kinds of dynamic lighting change effect. Can be applied to light box advertising, the stage, home decoration, etc. But this controller belong to upgrade edition, can support ten different IC strip, support the strip line sequence switch function, at the same time support the maximum pixel points is 2048.

Technical parameters

- working temperature: 20-60℃
- supply voltage: DC5V
- external dimension: L94xW59xH25 mm
- packing size: L145xW95xH50 mm
- net weight: 126.3g
- gross weight: 166.8g
- rated power: 2.2W
- support the maximum pixel point: 2048
- output: one groups SPI signal
- frequency 433MHz

External Dimension

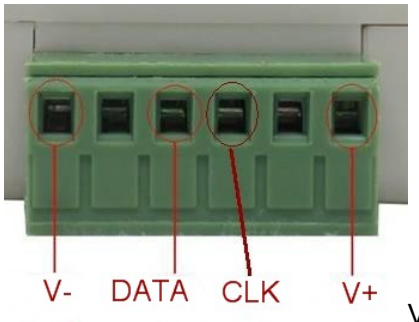


Interface Specification

Power input interface:

Adopt conventional DC power socket as power input interface, input voltage is 5V.

Load output interface:



V+ connect strip positive, V- connect strip negative, DATA connect strip data port, CLK connect clock port.

Direction for use

1. There are eight buttons on controller panel, and every button function as follows:

ON/OFF button, it can open or close load output ;

Play/pause button, can play or pause led effect, convenient observation led static effect, dynamic model (8- 83) are effective;

Adding button, at load close state, can adjust strip IC type,pixel point number,RGB line sequence;

Reducing button, at load close state, can adjust strip IC type, pixel point number,RGB line sequence;

Mode choosing button, mode add 1; at load close state, can switch IC type, pixel point number, RGB line sequence.

Mode choosing button, mode minus 1; at load close state, can switch IC type, pixel point number, RGB line sequence.

Speed-down button, dynamic model (8- 83) are effective, there are 100 steps in all.

Speed up button, dynamic model (8- 83) are effective.

2. There are six buttons on remote controller panel, and every button function as follows:

ON/OFF: you can turn on or off load output at any time;

pause: mode button, you can choose playing or pausing mode, and observe the static effect of LED in pausing mode.

S+: change speed increase button;

S-: Change speed slow down button, a total of 100 steps;

M+: Program choosing button, Upward choice, a total of 83 program;

M-: Program choosing button, down choice.

3. Operating instructions:

Connect the load wire at first, following by the power wire, press key, close the controller, at this time, the screen shows"-POWER OFF-", press key, screen up rank shows"Pixel Number:", down rank value means the controller current support pixel point, press key can adjust point number;

Press key again, screen up rank shows"IC Type:", down rank information means the current support IC type, through key can choose the corresponding type.

Press key again, screen up rank shows"Led Sequence:", down rank information means strip RGB line sequence, because in the market, a lot of strips specification are different, some the sequence is RGB, some is RBG,GRB and so on, so this controller provide the RGB line sequence modify. Through key can choose the corresponding RGB line sequence.

4.Standard color changes as follows:

Modes	Program instruction	Modes	Program instruction
1	Static red	43	B/Y/C flow change forward direction
2	Static green	44	G/B color draw curtain
3	Static blue	45	B/Y color lower curtain
4	Static yellow	46	Seven color wave forward direction
5	Static purple	47	Seven color wave backward direction
6	Static Cyan	48	Blue color trail backward direction
7	Static white	49	Red color trail forward direction
8	Red horse race lamp to right	50	Red color trail backward direction
9	Red horse race lamp to left	51	Green color trail forward direction
10	Green horse race lamp to right	52	Green color trail backward direction
11	Green horse race lamp to left	53	Blue color trail forward direction
12	blue horse race lamp to right	54	Yellow color trail forward direction
13	Blue horse race lamp to left	55	Cyan color trail forward direction
14	Red horse lower curtain	56	Purple color trail forward direction
15	Green horse draw curtain	57	White color trail forward direction
16	Three mix color brush forward direction	58	White color trail backward direction
17	Three mix color horse race to brush	59	Seven color trail backward direction
18	Three base color horse race to brush lower curtain	60	Seven color trail forward direction
19	Three mix color horse race to brush draw curtain	61	C/R/C gradual change forward direction
20	Seven color race to brush color forward direction	62	P/R/P gradual change forward direction
21	Seven color race to brush color backward direction	63	P/R/P gradual change backward direction
22	Seven color horse race to brush draw curtain	64	Y/G/Y gradual change forward direction
23	Seven color horse race to brush lower curtain	65	Y/G/Y gradual change backward direction
24	Three base color brush forward direction	66	C/G/C gradual change forward direction
25	Three base color brush backward direction	67	C/G/C gradual change backward direction
26	Three mix color brush forward direction	68	P/B/P gradual change forward direction
27	Three mix color brush backward direction	69	P/B/P gradual change backward direction
28	Seven color brush backward direction	70	C/B/C gradual change forward direction
29	Seven color brush forward direction	71	C/B/C gradual change backward direction
30	Three base color brush draw curtain	72	W/R/W gradual change forward direction
31	Three base color brush lower curtain	73	W/R/W gradual change backward direction
32	Seven color brush draw curtain	74	G/R/G gradual change forward direction
33	Seven color brush lower curtain	75	G/R/G gradual change backward direction
34	Three base color flash	76	Y/R/Y gradual change forward direction
35	Seven color flash	77	Y/R/Y gradual change backward direction
36	Three base color jumpy change	78	R/Y/R gradual change
37	Three mix color jumpy change	79	R/P/R gradual change
38	Seven color jumpy change	80	G/C/G gradual change

39	G/B/Y flow change forward direction	81	G/Y/G gradual change
40	B/Y/C flow change backward direction	82	B/P/B gradual change
41	Three mix color flow change forward direction	83	Auto play 1-82
42	Three mix color flow change backward direction		

5. Controller support strip IC type as follow:

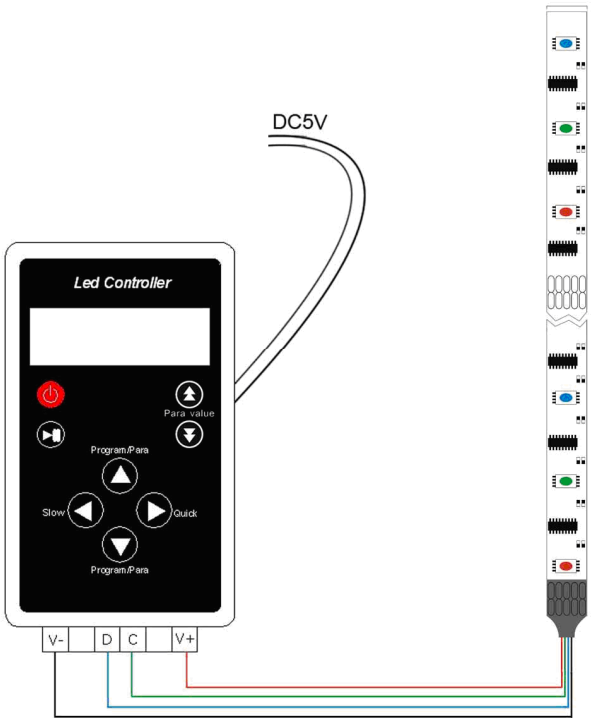
No.	Model	Signal line
1	LPD6803	DATA、CLK
2	TM1803	DATA
3	UCS1903	DATA
4	WS2811	DATA
5	TM1812	DATA
6	TM1809	DATA
7	WS2801	DATA、CLK
8	TLS3001	DATA
9	TLS3008	DATA
10	P9813	DATA、CLK
11	LPD8806	DATA、CLK

If the strip have 2 signal line, then need to connect the ground line, clock line, data line with controller V-、CLK、DATA; if the strip have 1 signal line, then need to connect the ground line, data line with controller V-、DATA is OK.

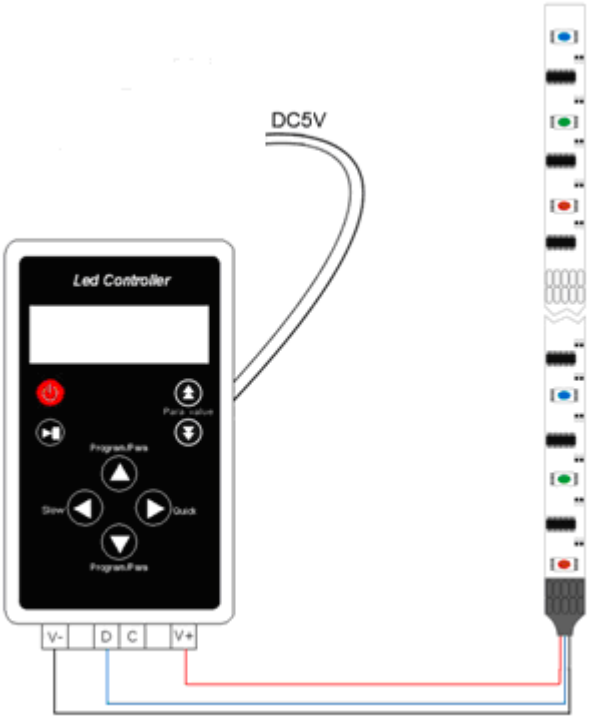
Note: If the Strip V+ port voltage is the same with controller input voltage, then you can direct connect it with controller V+ port, if it is different, then need to connect to other power supply.

Typical Application

Connect double signal line situation:



Connect single signal line situation:



FCC Certification Requirements

Caution: Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user’s authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.