

# LT-310 Functional Full-color Controller

V3.00 Version

## Manual



**(Please kindly read this manual before use )**

## Forword

Thanks for choosing LTECH Multifunctional LED Controller. We strongly recommend you to read this manual carefully before the installation and usage. Make sure you have completely understood the instructions so as to ensure normal working of the controller, be familiar with all of the operating skills.

Before opening the package, please check if there's damage or defect during transportation, if damage occurs, please don't use it and inform your supplier immediately.

## Safety Warnings

In order to ensure a perfect quality of the product and a safe usage, please kindly follow the instructions.

Suppliers don't take charge of any problems or damages that occur due to mishandling such as an operation not permitted in this manual.



To avoid careless damages and bringing you loss, please read the following statements carefully.

- 1、 To reduce the risk of electrical shock or fire, don't expose this unit to rain or moisture.
- 2、 Please avoid install this controller in lightening, intense magnetic and high-voltage fields..
- 3、 The controller for indoor use only, make sure to put it in a

waterproof housing for outdoor use.

- 4、 Make sure correct connection to avoid fire and damage caused by short circuit.
- 5、 Always be sure to mount this unit in an area that will allow proper ventilation to ensure a fitting temperature..
- 6、 Please check if local voltage and power adapter meet the controller requirements, and if power positive or negative pole definition is the same as controller.
- 7、 Choose an install place where can withstand 10 times the weight of the product to ensure a solid installation
- 8、 Wipe the cover with soft cloth dipped a little neutral detergent, be sure not to use any sandpaper, polishing powder, alcohol, gasoline etc.
- 9、 Don't connect cables with power on, make sure a correct connection and no short circuit checked with instrument before power on.
- 10、 Don't alter or tear up the label on controller for future system maintenance.
- 11、 Please don't open controller cover and operate if problems occur, let alone soldering, modify soldering on the controller circuit or dismantle CMOS chips

If you need spare parts, please choose authentic version.

If you have any questions, please contact your supplier.

This manual applies to this model product only, for more information, please contact our staff.

## **Brief introduction**

LT-310B-DC12V-DC24V Multifunctional Full-color Controller is professionally used to control RGB color changes of Led lights with 4 pin-cable 3 channels (common plus), It has up to 25 color change patterns, such as locked single color, color jumping, screening, color smooth and so on color modes. The controller has 2 function-setting buttons to configure the running patterns and changing speed, the speed parameter of each pattern can be stored separately, realizing stepless color dimmer with a special user friendly color choice function, all the configuration can be stored automatically, don't need re-configuration.

With high power output, also with unlimited power extension (connected with power extension module LT-390), the controller can have a high driving power as much as tens of thousands or even hundreds of thousands of watt, so it can control any quantity of LED lights such as LED signage, LED neon light, LED tube, LED border light, LED project light, LED wall washer and so on LED isochronous terminal products.

☒ . **Performance parameter:**

**Part No**

**LT-310B-DC12V-DC24V**

Input Vol: DC12V-DC24V

Mode : 25 color change patterns

Output Vol: equal to input vol

Protection: overload/heat protection

Output Load Cur: 8A/route×3

Operating Tem: -35 — 70

Power Consumption: <1W

Dimension: L135×W95×H40(mm)

Total Output Power:

Package Dimension :

1~600W(24V)

L155×W105×H55(mm)

1~300W(12V)

Weight : 0.4KG

☒ **.Features:**

1. 25 color jumping, color smooth, color gradual etc modes, each mode's parameter can be configured separately.
2. Stepless color dimming and color choice with unique pause function.
3. Used separately or connected to LT-390 power extension module, unlimited quantity of net working controllers, to have an unlimited power extension output
4. An easy and flexible net working, all led lights can be controlled by operating the function button on main controller
3. Auto store parameter, don't need repeat configuration next time.
4. Restore default parameter(ex-factory parameter)

☒ **. Instructions**

There are 2 function-setting buttons: MODE and SPEED.

1. Press MODE key to select change patterns. The parameters of change patterns are automatically memorized. It will go to automatic cycle (25 patterns), all the change patterns cycle continuously after pressing MODE key more than 3 seconds.

Press again, go to the first pattern (Static black) and back to normal cycle, from 1 to 24, not include the 25<sup>th</sup> pattern, ex-factory default is auto cycle.

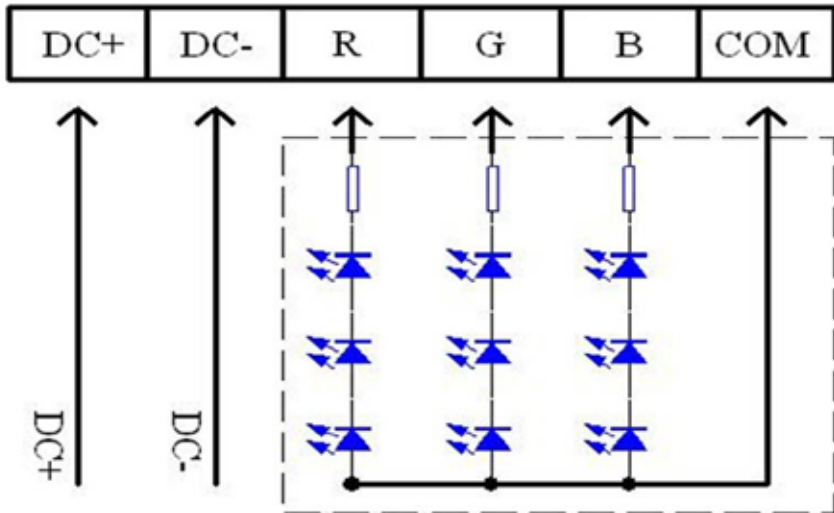
2. SPEED button is for adjusting the change speed. Every change pattern saves its own speed parameters independently. The speed of all the change patterns will come back to default after pressing SPEED more than 3 seconds. It has 1-8 speed levels.
3. Current pattern is paused when pressing two buttons together at the same time, no matter if it's color jumping or color smooth, it keeps its current color and grey level, press **any button** again, it works continuously.

Below are the 25 change patterns:

| Serial number | Display       | Description              |
|---------------|---------------|--------------------------|
| 1             | BLACK         | Static black             |
| 2             | STATIC RED    | Static red               |
| 3             | STATIC GREEN  | Static green             |
| 4             | STATIC BLUE   | Static blue              |
| 5             | STATIC YELLOW | Static yellow            |
| 6             | STATIC PURPLE | Static PURPLE            |
| 7             | STATIC CYAN   | Static cyan              |
| 8             | STATIC WHITE  | Static white             |
| 9             | COLOR CHANGE  | 7 color jumping          |
| 10            | COLOR CHANGE2 | 7 color jumping(flicker) |
| 11            | RGB CHANGE    | 3 color jumping          |
| 12            | RGB CHANGE2   | 3 color jumping(flicker) |
| 13            | RG CHANGE     | RG jumping               |

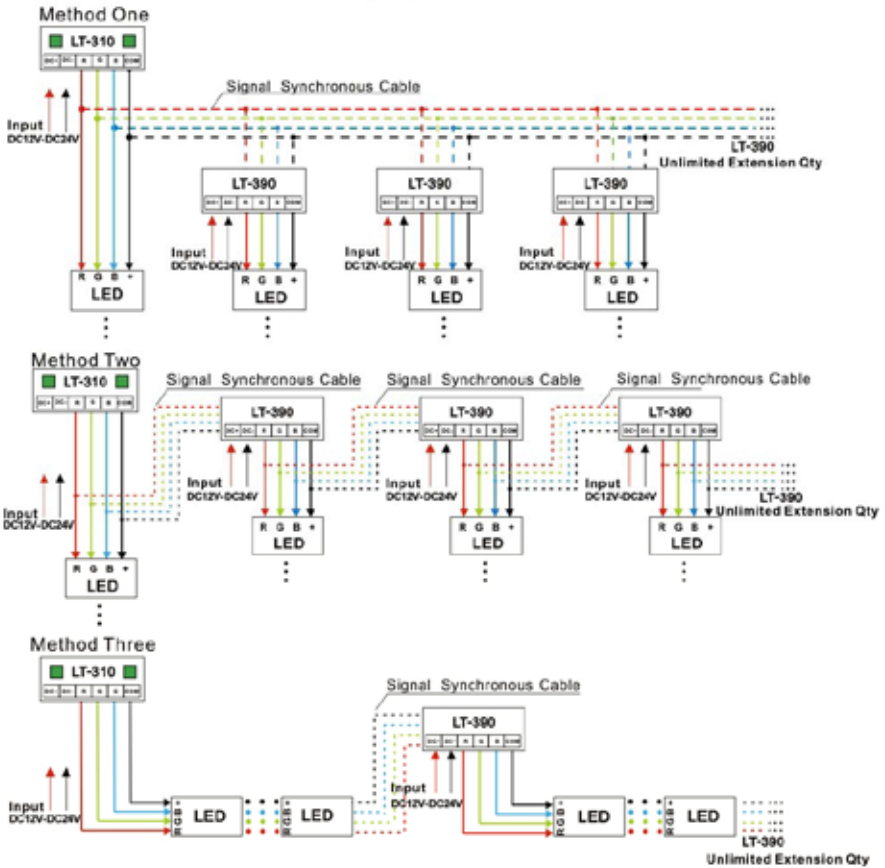
|    |               |                             |
|----|---------------|-----------------------------|
| 14 | RB CHANGE     | RB jumping                  |
| 15 | GB CHANGE     | GB jumping                  |
| 16 | WHITE CHANGE  | White screen flicker        |
| 17 | COLOR SMOOTH  | 7 colors gradual change     |
| 18 | RGB SMOOTH    | 3 colors gradual change     |
| 19 | RG SMOOTH     | RG gradual change           |
| 20 | RB SMOOTH     | RB gradual change           |
| 21 | GB SMOOTH     | GB gradual change           |
| 22 | COLOR GRADUAL | 7 colors fade in/ fade down |
| 23 | RGB GRADUAL   | 3 colors fade in/ fade down |
| 24 | WHITE GRADUAL | White fade in/fade down     |
| 25 | AUTO PROGRAM  | Auto cycle                  |

☒ . Wire connection diagram :



. System Installation Diagram :

### Networking System Connection



- \* The 3 methods above are the most popular connection ways, user can choose any one or mix-using.
- \* LT-390 Power Extension Module works normally with its signal synchronous connection cable connected to any place of the output control cable.
- \* Better keep the output control cable within 20 meters to avoid voltage decline.
- \* The distance for the signal synchronous connection cable is unlimited by theory, and won't affect or weaken its synchronous performance