



## LED full color controller CT310

### General Introduction

CT310 is a full-color LED control system which uses on indoor and outdoor decorative lighting. It has more than 30 color changing patterns, speed of each pattern can be adjusted separately. There is a LCD screen to display the program info. It has a dimmer mode, user can get wished color from this mode. Its also can work with a DMX512 controller/console. It can be connected to the power amplifier (RP306) to expand unlimited power to control thousands of modules synchronous changing.

### Features

Meets DMX512(1990), can be used as a DMX512 decoder  
 LCD screen for easy programming and showing currently state  
 Wireless remote controller(Optional) for changing color pattern, speed and brightness  
 256 levels brightness, totally 16.77 million colors, real full color (up to 65536 levels)  
 36 changing modes, separate speed regulation for each mode  
 0-100 different changing speed level for each mode  
 Automatic parameter memory, parameter re-load function  
 RGB individual dimming function  
 Two kinds DMX512 control signal input/output interface:  
 XLR-3 Male & Female, RJ45  
 Can be unlimited extend power by power amplifier RP306  
 Convenient for wiring and installation  
 Good function at anti-jamming and auto-resumption.

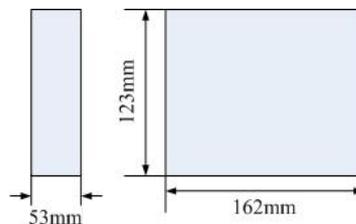
### Technical Parameter

Input Voltage:	12~24 VDC
Input Signal:	DMX512(1990)
Transmission speed:	250Kbps
Output channel:	3 Channels
Output current:	8A/Channel(totally 24A)
Standby Power:	<3W
Remote control distance:	50m
Working temperature:	0~70°C
Description:	Within 36 modes, ,such as flash, fade,etc.

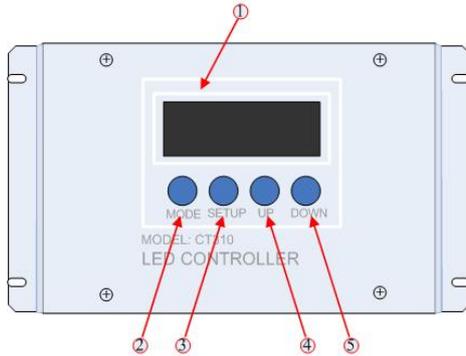
### Packing

Size: 162(mm)\*123(mm)\*53(mm)  
 G.W.: 1KG

### Dimension Diagram



### CT310 Top Panel Instruction



① LCD screen

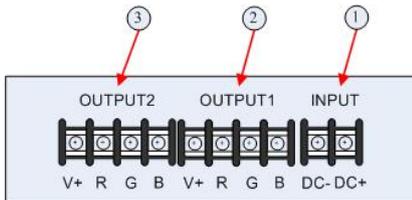
② MODE: Change mode by pressing this button

③ SETUP: Press this button to set the program according to user's need

④ UP: Press this button to increase the parameter value of currently item ( keep pressing to increase continuously) ,or choose next chaning mode or reload default setting.

⑤ DOWN: Press this button to decrease the parameter value of currently item ( keep pressing to decrease continuously), or choose last chaning mode or reload default setting.

### Front Panel Instruction



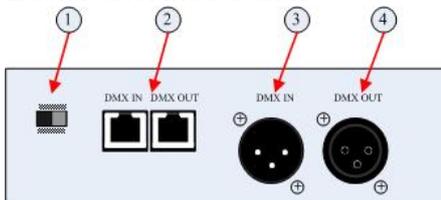
① Power input terminals : 12V/24V DC. Make sure the riight connection.

② Drive output terminals 1: Connect to LED modules.

③ Signal output terminals 2: Connect to LED modules.

Remark: the signal of output port 1 is same with output port 2.

### Back Panel Instruction



① Switch of DMX512 signal terminator, turn to "on" to terminate DMX512 signal.

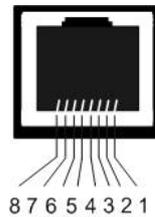
② RJ45 input/output interface: connect to DMX512 signal cable

③ XLR-3 male input/output interface: connect to DMX512 signal cable

④ XLR 3 Female output interface: connect to DMX512 signal cable

**CT310 Signal Interface Instruction**

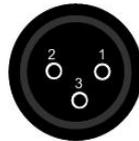
## 1. RJ45 interface



1: DATA+  
2: DATA-  
3-6: NC  
7-8: GND

## 2. XLR 3 interface

1: GND  
2: DATA-  
3: DATA+



**Button Function of Remote Controller**  
**A: Mode ; B: SETUP; C: UP; D : DOWN**

The usage of this remote controller is same with the buttons on panel, please refer to "CT310 Top Panel Instruction" for details.

**Note: Remote control function is an optional function, and there's no remote controller and remote receiver in standard package.**

**CT310 Mode Introduction**

Press " Mode" or "UP"and "DOWN" to chang the pattern:

- |                     |                               |
|---------------------|-------------------------------|
| 1: Black(all off)   | 19: 7-color gradual change    |
| 2: Static Red       | 20: RGB gradual change        |
| 3: Static Greed     | 21: RG gradual change         |
| 4: Static Blue      | 22: RB gradual change         |
| 5: Static yellow    | 23: GB gradual change         |
| 6: Static purple    | 24: 7-color fade in, fade out |
| 7: Static cyan      | 25: RGB fade in, fade out     |
| 8: Static white     | 26: White fade in, fade out   |
| 9: 7-color jumping  | 27: RG fade in, fade out      |
| 10: 7-color flicker | 28: RB fade in, fade out      |
| 11: 6-color jumping | 29: GB fade in, fade out      |
| 12: 6 color flicker | 30: Red fade in, fade out     |
| 13: RGB jumping     | 31: Green fade in, fade out   |
| 14: RGB flicker     | 32: Blue fade in, fade out    |
| 15: RG jumping      | 33: RGB color adjustable      |
| 16: RB jumping      | 34: DMX512 decoder            |
| 17: GB jumping      | 35: DMX512 control mode       |
| 18: White jumping   | 36: Automatic mode            |

### CT310 Controller Programming Instructions

Mode 1-8 are static color mode without adjusting functions; Mode 9-32 ( preset changing mode), can be set the program speed, run times in the automatic mode, or reload default value.

Press " SETUP" in stand by status:

Times	Description	Operation	Parameter	Remark
1	RUN SPEED	Press "UP"/"DOWN" to change parameter value	0-100	Press " MODE" to exit
2	RUN TIMES		0-100	
3	LOAD DEFAULT	Press "UP"/"DOWN" to load default	factory default	

Remark: " RUN TIMES" is the running times of this mode under automatic mode.

#### RGB color adjustable mode program instruction:

User can adjust the brightness of R,G,B separately, and the value will display on LCD screen:

Step 1: Press " MODE" to select Mode 33

Step 2: Press " SETUP" to set brightness of Red, change value by "UP" / " DOWN"

Step 3: Press " SETUP" again to set brightness of Green, change value by "UP" / " DOWN"

Step 4: Press " SETUP" again to set brightness of Blue, change value by "UP" / " DOWN"

Step 5: Press " SETUP" again to reload default value, press " UP" or "DOWN", the R,G,B brightness will reload factory default.

Step 6: Press " MODE" to exit.

#### DMX512 decoder program instruction:

The controller can be set as a DMX512 decoder(3 channels), and select desire DMX512 address as follow

Step 1: Press "MODE" to select mode 34: DMX512 decoder

Step 2: Press " SETUP" to set DMX512 address, change value by "UP" / " DOWN"

Step 3: Press " MODE" to exit

#### DMX512 mode program instruction:

The controller can be set as a 3 channels controller which was controlled by a DMX512 controller.

Set the DMX address as follows:

Step 1: Press "MODE" to select mode 35: DMX512 mode

Step 2: Press " SETUP" to set DMX512 address, change value by "UP" / " DOWN"

Step 3: Press " MODE" to exit

to select the led color changing mode according to the dmx512 parameter value in this mode.

the DMX512 value with corresponding mode as following:

0: Black(all off)	8: 7-color jumping	16: GB jumping	24: RGB fade in, fade out
1: Static Red	9: 7-color flicker	17: White jumping	25: White fade in, fade out
2: Static Greed	10: 6-color jumping	18: 7-color gradual change	26: RG fade in, fade out
3: Static Blue	11: 6 color flicker	19: RGB gradual change	27: RB fade in, fade out
4: Static yellow	12: RGB jumping	20: RG gradual change	28: GB fade in, fade out
5: Static purple	13: RGB flicker	21: RB gradual change	29: Red fade in, fade out
6: Static cyan	14: RG jumping	22: GB gradual change	30: Green fade in, fade out
7: Static white	15: RB jumping	23: 7-color fade in, fade out	31: Blue fade in, fade out

**Automatic mode program instruction:**

User can select some of 9-32 modes or all of them to run automatically under this mode according to each mode's speed and run times value.

To reload factory default:

Step 1: Press " " mode to select mode 36

Step 2: Press " SETUP" , then press ' UP' / ' DOWN' to reload default

Step 3: Press " MODE" to exit

**CT310 Wiring Diagram**

