LT-300
LED RGB/DMX/RDM Controller

FC CE RoHS COMPLIANT warranty 5 years SGS ISO9001:2008 UKAS

LT-300 multi-function full-color LED RGB/DMX/RDM controller is dedicated to control color changes of LED lights with 4-pin 3 channels (common anode), this compact product has a small LCD screen, up to 39 color changing modes. This unit can run standalone.

LT-300 with the standard RDM remote device management protocol, supports DMX512 signal bi-directional communication, achieves remote management of reading and writing DMX address (DMX master controller must recognize the RDM protocol).

1. Product Parameter:

LT-300 LED RGB/DMX/RDM Controller

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Input Voltage:	12~24Vdc	DMX512 Socket:	XLR-3, RJ45, Green Terminal
Max Current Load :	8A×3CH	Working Temp.:	-30℃~65℃
Max Output Power:	288W/576W(12V/24V)	Dimensions:	L163×W128×H40(mm)
Changing Mode:	39 Modes	Package Size:	L260×W132×H46(mm)
Signal Protocol Standard:	DMX512/1990	Weight (G.W.):	790g
	RDM/2009		

2. Function Features:

2.1 Built-in a LCD screen, easy to set up parameters.

2.2 Built-in perpetual calendar, real-time display system clock, can be set up to play different programs in any time, Monday to Sunday or holiday.

2.3 28 lighting modes, such as, single color brightness, color change, color smooth, and color strobe, etc.

2.4 Multi-level changing speed, brightness and RGB grey scale adjustment for your choices, 256 brightness levels per RGB(1677 million static colors).

2.5 Feel free to define many changing modes into a step, 8 independent cycle steps maximum.

2.6 Support different input ports like standard XLR-3, RJ45 and green terminal.

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3. Configuration Diagram:

FUN: Short press to enter DMX decode mode (29);
      Long press to ID learning process
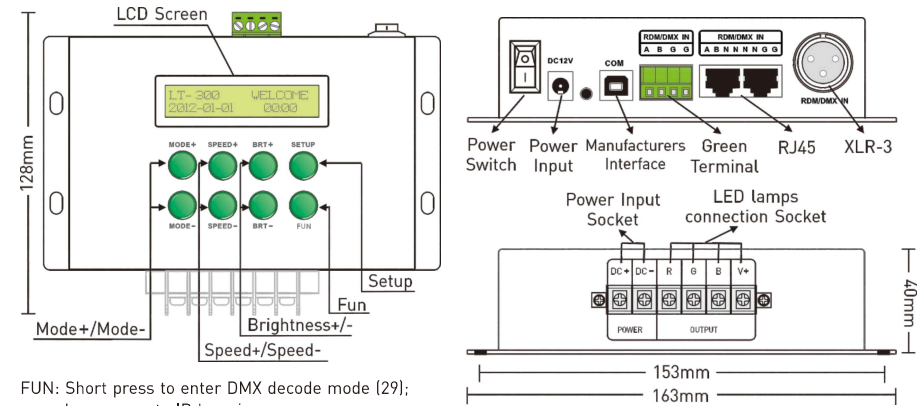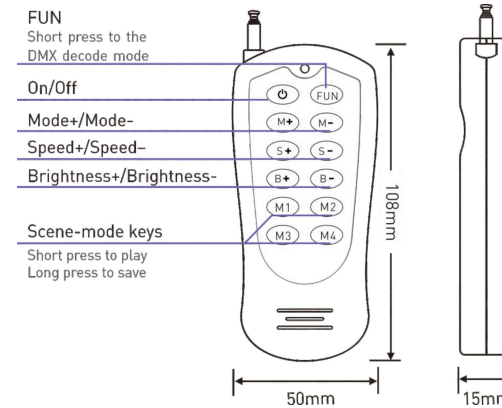
Controller

RF Remote Control

Buzzer on/off: Long press "On/Off" button on the remote.

ID Learning Method:

Long press 🟢 FUN button on the controller for 2 seconds, there is a buzzer beep, keep pressing.

Learning ID: Press any key on the remote in 3 seconds.

Canceling ID: Press any key on the remote over 3 seconds.

4. Operating Instructions:

8 function keys on the controller : MODE+/MODE-, SPEED+/SPEED-, BRT+/BRT- (brightness), SETUP, FUN (DMX shortcut key)

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Table of Changing Modes.

No.	Mode	Display	No.	Mode	Display
1	Black	01 BLACK 2012-01-01 12:00	15	Red/Green Smooth	15 RG SMOOTH SPEED:8 BRT:8
2	Static Red	02 STATIC RED SPEED:8 BRT:8	16	Red/Blue Smooth	16 RB SMOOTH SPEED:8 BRT:8
3	Static Green	03 STATIC GREEN SPEED:8 BRT:8	17	Green/Blue Smooth	17 GB SMOOTH SPEED:8 BRT:8
4	Static Blue	04 STATIC BLUE SPEED:8 BRT:8	18	Red/Yellow Smooth	18 RY SMOOTH SPEED:8 BRT:8
5	Static Yellow	05 STATIC YELLOW SPEED:8 BRT:8	19	Green/Cyan Smooth	19 GC SMOOTH SPEED:8 BRT:8
6	Static Purple	06 STATIC PURPLE SPEED:8 BRT:8	20	Blue/Purple Smooth	20 BP SMOOTH SPEED:8 BRT:8
7	Static Cyan	07 STATIC CYAN SPEED:8 BRT:8	21	Green/Yellow Smooth	21 GY SMOOTH SPEED:8 BRT:8
8	Static White	08 STATIC WHITE SPEED:8 BRT:8	22	Blue/Cyan Smooth	22 BC SMOOTH SPEED:8 BRT:8
9	RGB Blink	09 RGB BLINK SPEED:8 BRT:8	23	Red/Purple Smooth	23 RP SMOOTH SPEED:8 BRT:8
10	Color Blink	10 COLOR BLINK SPEED:8 BRT:8	24	Blue/White Smooth	24 BW SMOOTH SPEED:8 BRT:8
11	RGB Change	11 RGB CHANGE SPEED:8 BRT:8	25	YPC Smooth	25 YPC SMOOTH SPEED:8 BRT:8
12	Color Change	12 COLOR CHANGE SPEED:8 BRT:8	26	RGB Smooth	26 RGB SMOOTH SPEED:8 BRT:8
13	RGB Fade	13 RGB FADE SPEED:8 BRT:8	27	Color Smooth	27 COLOR SMOOTH SPEED:8 BRT:8
14	Color Fade	14 COLOR FADE SPEED:8 BRT:8			

1-27 General Modes

Press "SPEED+"/"SPEED-" to adjust speed.

Press "BRT+"/"BRT-" to adjust brightness.

[Note]

For mode 2-8, static color will be showed when speed=1 or speed=8, speed=2~7 is strobe effect.

28: RGB Brightness Adjust Mode (1677 million static colors)

28	RGB dimming	28 RGB DIMMING R255 G255 B255

Press "SPEED+" / "SPEED-" key to switch R/G/B.
Press "BRT+" / "BRT-" key to adjust RGB value(range: 0~255).

29	DMX decode	29 DMX DECODE DMX ADDRESS:001
30	DMX mode	30 DMX MODE DMX ADDRESS:001

29~30: DMX512 Control Modes

31	Play1 off	31 PLAY1 OFF 2012-01-01 12:00	35	Play5 off	35 PLAY5 OFF 2012-01-01 12:00
32	Play2 off	32 PLAY2 OFF 2012-01-01 12:00	36	Play6 off	36 PLAY6 OFF 2012-01-01 12:00
33	Play3 off	33 PLAY3 OFF 2012-01-01 12:00	37	Play7 off	37 PLAY7 OFF 2012-01-01 12:00
34	Play4 off	34 PLAY4 OFF 2012-01-01 12:00	38	Play8 off	38 PLAY8 OFF 2012-01-01 12:00

31-38: Automatic Change Modes

39	Play1-Play8	39 PLAY1-PLAY8 2012-01-01 12:00

39: Automatic Time Running Mode

Press "MODE+" / "MODE-" button to switch modes.

5. "SETUP" Key Instruction:

5.1 In the mode 1-27, press [SETUP] button for 3 seconds to enter submenu, see the form below.

NO.	Submenu Function (press mode+/- to switch)	LCD Display	Setting Method
1	Running times adjustment	RUN TIMES:255 000=NOT RUNNING	Press BRT+ BRT- to adjust running times. (Range: 0~255). (Only work for the modes 31~38)
3	Speed multiple adjustment	SPEED MULTIPLE: 001	Press BRT+ BRT- to adjust speed multiple. (Range: 0~255)
4	Restore to default mode	LOAD DEFAULT SET PRESS BRT+ - KEY	Press BRT+ BRT- to restore the default.

press [SETUP] to save and exit submenu.

5.2 In the mode 29-30, press [SETUP] button for 3 seconds to enter submenu, see the form below.

NO.	Submenu Function	LCD Display	Setting Methods
1	Set DMX address	DMX ADDRESS:512 (Range: 0~512)	Press MODE+ MODE- to adjust the hundred numbers. 512 Press SPEED+ SPEED- to adjust the ten digit numbers. 512 Press BRT+ BRT- to adjust the single digit numbers. 512

press [SETUP] to save and exit submenu.

Table of 29-30 Functional Modes.

Function Modes	Channel	Function	
29 DMX Decoder Mode	1st channel	0-255(R) : Red LED 0-100% dimming	
	2nd channel	0-255(G) : Green LED 0-100% dimming	
	3rd channel	0-255(B) : Blue LED 0-100% dimming	
30 DMX Manage Mode	1st channel	0-255: Select 1-29 modes, 256(0-255) values divided into 32 portion (8 value per portion). The 29th mode occupy 3 portions (24 value).	
		When 1st channel select the 1-27 modes	When 1st channel select 28/29 modes
		2nd channel select speed change(16 levels). 0-255: 256 values divided into 16 portion.	2nd channel 0-255(R) : Red LED 0-100% dimming
		3rd channel select brightness change. (16 levels) 0-255: 256 values divided into 16 portion.	3rd channel 0-255 (G): Green LED 0-100% dimming.
		4th channel ———————	4th channel 0-255 (B): Blue LED 0-100% dimming.

5.3 In the mode 31-38, press [SETUP] button for 3 seconds to enter submenu, see the form below.

NO.	Submenu Function (Press MODE+/- to switch)	LCD Display	Setting Methods
1	Setting switch state	31 PLAY1 OFF OPEN1 SAVE1	Press [SPEED+] [SPEED-] to switch items. OPEN1 / OFF SAVE1 Press [BRT+] [BRT-] to switch 2 options: ON/OFF Select "ON" to 39 automatic time running mode. OPEN1 / OFF SAVE1 Load the operation times of 1-30 modes, press [BRT+] [BRT-] to confirm. Save the setting about the operation times, press [BRT+] [BRT-] to confirm.
2	Setting operation week	RUN WEEK :MTWTFSS TIME :18:00-06:00	Press [SPEED+] [SPEED-] to switch items. MTWTFSS (day of the week) 00:00-00:00 (time) M Monday T Tuesday W Wednesday T Thursday F Friday S Saturday S Sunday Press [BRT+] [BRT-] to adjust value. (if you do not choose the Monday to Sunday, the screen will appear "_" the one mark)
3	Operate time and date 1	DATE01 :0101-0103 TIME :00:00-00:00	Press [SPEED+] [SPEED-] to switch items. 01 01-01 03 (date) 00:00-00:00 (time) Press [BRT+] [BRT-] to adjust value.
4	Operate time and date 2	DATE02 :0501-0503 TIME :00:00-00:00	Press [SPEED+] [SPEED-] to switch items. 05 01-05 01 (date) 00:00-00:00 (time) Press [BRT+] [BRT-] to adjust value.
5	Operate time and date 3	DATE03 :1001-1007 TIME :00:00-00:00	Press [SPEED+] [SPEED-] to switch items. 10 01-10 07 (date) 00:00-00:00 (time) Press [BRT+] [BRT-] to adjust value.
6	System clock setting	DATE/TIME SETUP 2012-01-01 12:00	Press [SPEED+] [SPEED-] to switch items 2012-01-01 12:00 Press [BRT+] [BRT-] to adjust value.
7	Modes restore default value	LOAD DEFAULT SET PRESS BRT+ - KEY	Press [BRT+] [BRT-] to restore default value of the current setting automatic mode.

press [SETUP] to save and exit submenu.

5.4 In the mode 39, press [SETUP] button for 3 seconds to enter submenu.

LOAD DEFAULT SET
PRESS BRT+ - KEY   Press [BRT+] [BRT-] to restore default value of mode 39.

When set the 39th mode, according to the present switch condition and running time of automatic change modes 31-38, run the corresponding mode. The submenu only has the items that restore to default status (Please carefully choose the item).

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6. Wiring Diagram:

6.1 Connect to low power LED light, take LED RGB module as an example.
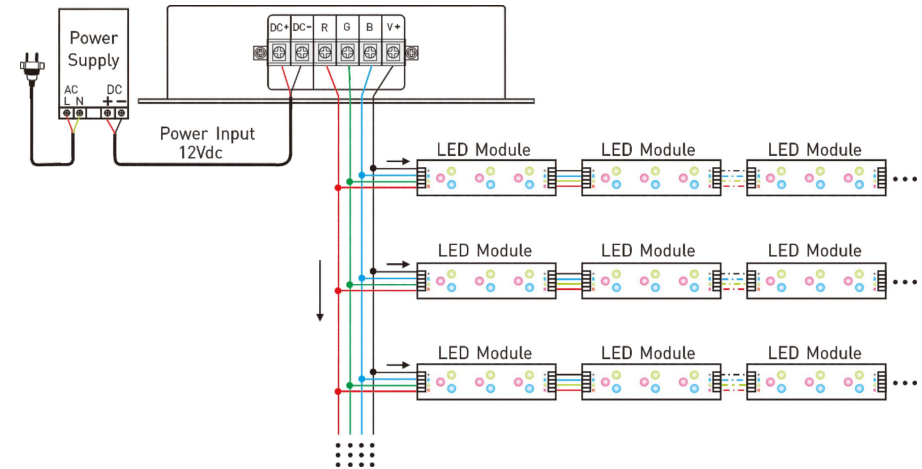
6.2 If one controller is not enough, can add extra power repeater to expand the power output.

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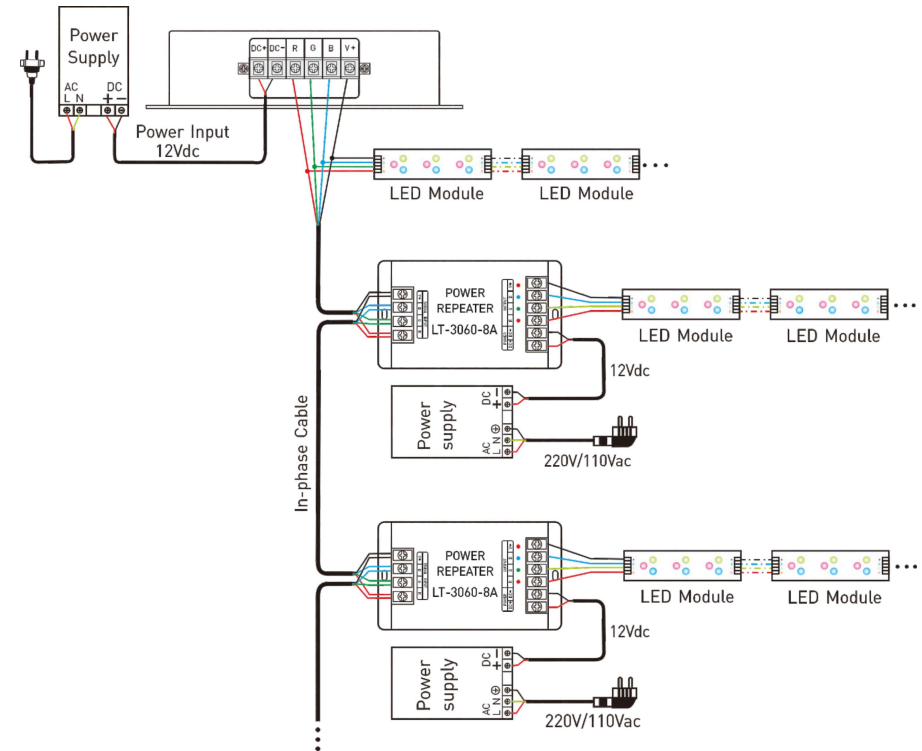
6.3 Connect to the DMX512 device.

📝 LT-300 works with any brand DMX console. Check the following wiring diagram when connecting to Artnet-DMX, our LT-800 DMX controller and the DMX manual console.

LT-300 is equipped with 3 types DMX terminals for users' selection. The following diagram takes XLR-3 as a example, same connecting method for the rest two: green terminal(with amplifier function) & RJ45.
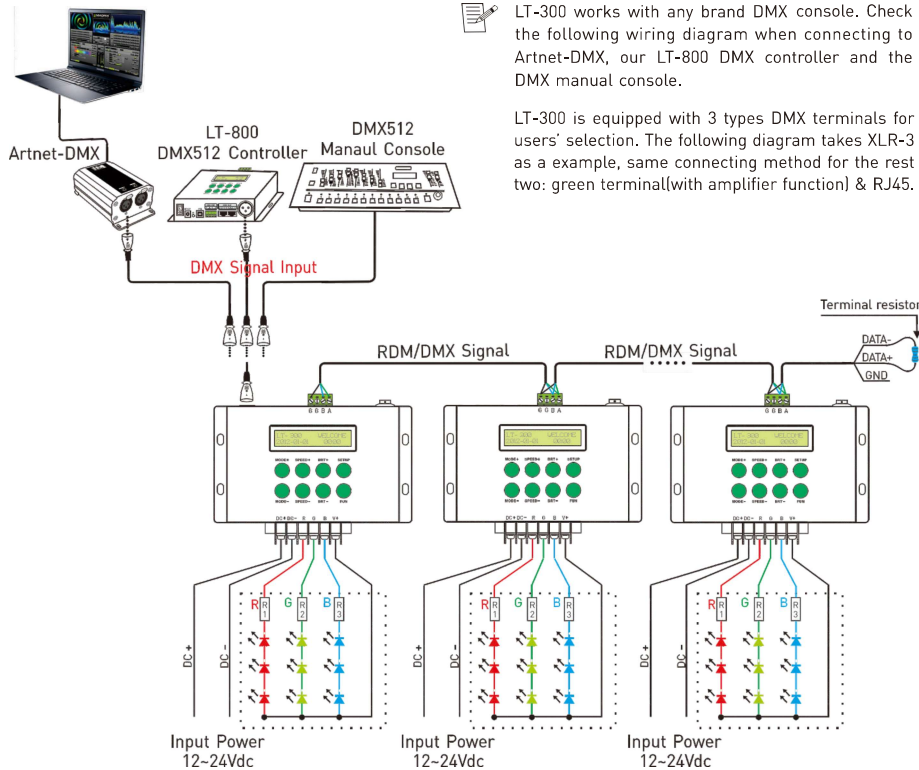
∗ If the recoil effect occurs because of longer signal line or bad line quality, please try to connect 0.25W 90-120Ω terminal resistor at the end of each line.

∗ An amplifier is needed when more than 32 decoders are connected, signal amplification should not be more than 5 times continuously.

7.   Attention:

7.1 The product shall be installed and serviced by the qualified person.

7.2 This product is non-waterproof. Please avoid the sun and rain. When installed outdoors please ensure it is mounted in a water proof enclosure.

7.3 Good heat dissipation will prolong the working life of the controller. Please ensure good ventilation.

7.4 Please check if the output voltage of the LED power supply used comply with the working voltage of the product.

7.5 Please ensure that adequate sized cable is used from the controller to the LED lights to carry the current. Please also ensure that the cable is secured tightly in the connector.

7.6 Ensure all wire connections and polarities are correct before applying power to avoid any damages to the LED lights.

7.7 If a fault occurs, please return the product to your supplier. Do not attempt to fix this product by yourself.

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8.   Warranty Agreement:

8.1 We provide lifelong technical assistance with this product:

● A 5-year warranty is given from the date of purchase. The warranty is for free repair or replacement if cover manufacturing faults only.

● For faults beyond the 5-year warranty, we reserve the right to charge for time and parts.

8.2 Warranty exclusions below:

● Any man-made damages caused from improper operation, or connecting to excess voltage and overloading.

● The product appears to have excessive physical damage.

● Damage due to natural disasters and force majeure.

● Warranty label, fragile label and unique barcode label have been damaged.

● The product has been replaced by a brand new product.

8.3 Repair or replacement as provided under this warranty is the exclusive remedy to the customer. We shall not be liable for any incidental or consequential damages for breach of any stipulation in this warranty.

8.4 Any amendment or adjustment to this warranty must be approved in writing by our company only.

★This manual only applies to this model. We reserve the right to make changes without prior notice.