

**Low Voltage Multifunctional  
 LED Controller / DMX Decoder**



*Capable of driving many kinds of RGB LED lamps and luminaries*



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 Home & Building Applications

CHKD	Ford					MATL:	McNell	24.09.2008		
						FINISH	Wilson			
DRW:	Carter		TOLERANCE	Peterson	DATE					
APPD:	Jackson				Sheet No. 1 from 8	Part No.:				<b>1210133</b>

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**INTRODUCTION**

LT-300 is a multifunctional full-color controller/decoder. With advanced micro processor technology, it converts the widely used DMX512/1990 signal to analog signal. LT-303 also has 34 different pre-programmed color pattern choices, each of the RGB LED has 0-100 regulation levels, users can change LED luminous colors, LED hues and LED brightness according to their needs randomly and can provide as many as 16 millions of light colors. It also contains a DMX512 decoder (three channels) that sends digital controlling signals to produce different color changing patterns. With integrated LCD screen, users can set up various operating parameters easily. The controller has basic power driver modules inside not only can meet the needs of general controlling power, but can be connected to LT-390 to have unlimited expansion power, and can control all LED synchronous products.

**FEATURES**

- Meets DMX512/1990 protocols
- 256-level brightness, full-color control
  - 3 output channels
- Can drive up to 8A current on each channel
  - Low Input Voltage: DC12V/DC24V
  - Can set the DMX addresses freely
  - LCD screen for easy programming
- Modular design, can be combined with LED luminaries neatly
- Over 30 pre-programmed patterns for plug and play solution

**TECHNICAL CHARACTERISTICS**

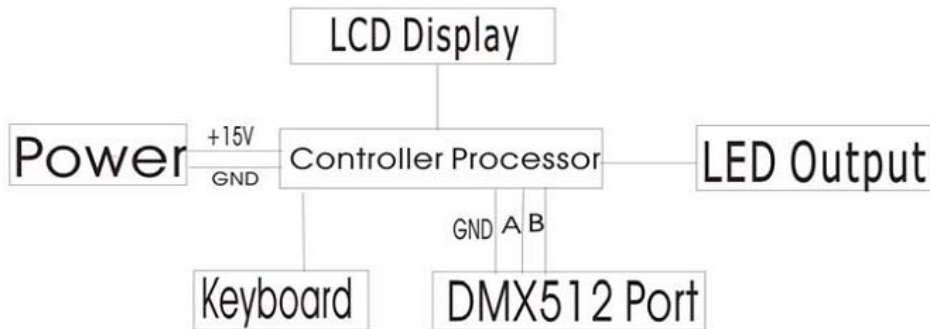
<b>Decode Channel:</b>	1~3
<b>Input Signal:</b>	DMX-512/1990 digital signal
<b>Input Voltage:</b>	DC 12V / DC 24V
<b>Output Power:</b>	1~600W ( 24V ) 1~300W ( 12V )
<b>Driver Current:</b>	8A each channel (total current 24A)
<b>Operating Temperature:</b>	0°C ~ 70°C
<b>Dimension:</b>	190 mm x 120 mm x 50 mm

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**INTERNAL BLOCK DIAGRAM**



**CONTROLLER PROGRAMMING INSTRUCTIONS**



LT-300 controller has:

- ( 1 ) LCD Display
- ( 2 ) Function key MODE
- ( 3 ) Function key SETUP
- ( 4 ) Funktion key UP
- ( 5 ) Funktion key DOWN

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**CONTROLLER PROGRAMMING INSTRUCTIONS**

1. Press **MODE** to select each pre-set program:

<i>MODE</i>	<i>Color Program</i>	<i>MODE</i>	<i>Color Program</i>
1	BLACK (NO LIGHT)	19	COLOR SMOOTH
2	STATIC RED	20	RGB SMOOTH
3	STATIC GREEN	21	RG SMOOTH
4	STATIC BLUE	22	RB SMOOTH
5	STATIC YELLOW	23	GB SMOOTH
6	STATIC PURPLE	24	COLOR GRADUAL
7	STATIC CYAN	25	RGB GRADUAL
8	STATIC WHITE	26	WHITE GRADUAL
9	COLOR CHANGE	27	RG GRADUAL
10	COLOR CHANGE 2	28	RB GRADUAL
11	6 COLOR CHANGE	29	GB GRADUAL
12	6 COLOR CHANGE 2	30	R GRADUAL
13	RGB CHANGE	31	G GRADUAL
14	RGB CHANGE 2	32	B GRADUAL
15	RG CHANGE	33	ADJUST MODE
16	RB CHANGE	34	AUTO PROGRAM
17	GB CHANGE	35	DMX512 MODE
18	WHITE CHANGE	36	DMX512 DECODER

2. Press **SETUP** in turn (1-8 mode are static state without modulation function)

<i>Number</i>	<i>Parameter show</i>	<i>Remarks</i>	
		<i>Min</i>	<i>Max</i>
1	RUN SPEED	0	100
2	RUN TIMES	0	100
3	LOAD DEFAULT	Default factory settings	

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**CONTROLLER PROGRAMMING INSTRUCTIONS**

1. **MODE 1~8** (Preset static color modes): No additional programming required.
2. **MODE 9~32** (Preset color changing modes):
  - a) Press SETUP to set program speed.
  - b) RUN SPEED: Press UP or DOWN to select desire value to change the program speed. 100 being the fastest, 001 being the slowest, and 000 is stop.
  - c) Press MODE to exit
3. **MODE 33** (ADJUST MODE): manual brightness adjustment.
  - a) Press SETUP to set red, green and blue LED brightness
  - b) R VALUE: Press UP or DOWN to select desire value to change the red LED brightness. 100 being the brightest, 001 being the dimmest, and 000 is no light.
  - c) G VALUE: Press UP or DOWN to select desire value to change the green LED brightness. 100 being the brightest, 001 being the dimmest, and 000 is no light.
  - d) B VALUE: Press UP or DOWN to select desire value to change the blue LED brightness. 100 being the brightest, 001 being the dimmest, and 000 is no light.
  - e) LOAD DEFAULT: Press UP or DOWN to load default settings.
  - f) Press MODE to exit
4. **MODE 34** (AUTO PROGRAM) sets controller in auto mode to change all the color patterns.
  - a) Press SETUP to load factory default values.
  - b) LOAD DEFAULT: Press UP or DOWN to load factory default values
  - c) Press MODE to exit
5. **MODE 35** (DMX512 MODE) refers to control all the patterns (the first address) and the speed (the second address)
  - a) Press SETUP to set DMX address
  - b) Press UP or DOWN to set DMX addresses
  - c) Press MODE to exit
6. **MODE 36** (DMX512 DECODER) sets controller in DMX decoder mode, needs to set up the address
  - a) Press SETUP to set DMX address
  - b) Press UP or DOWN to set DMX addresses
  - c) Press MODE to exit

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**WIRING CONNECTION INSTRUCTIONS**

**WARNING:** Do not connect controller directly to 110/220VAC mains voltage. Follow directions in this user manual to prevent damage to controller and to avoid any accident



**INPUT Terminals**

DC+ : Connect to +12V or +24V DC voltage

DC- : Connect to -12V or -24V

**NOTE: Output voltage is equal to Input voltage applied !**

**OUTPUT Terminals**

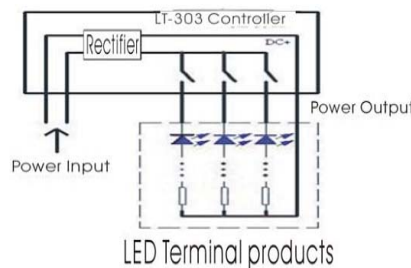
COM: Connect to common wire of LED anode terminal (DC+)

RED: Connect to red LED wire

GREEN: Connect to green LED wire

BLUE: Connect to blue LED wire

**NOTE: Controller is for common anode connection**



**INSTALLATION NOTES**

1. Avoid placing the controller near lighting strike location, strong magnetic and high voltage area.
2. The controller should be installed indoors. If controller has to be placed outdoor, make sure it is covered in waterproof box.
3. Make sure of the right connection to avoid burning the fuse due short circuit.
4. Controller is for common anode LED connection

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**TROUBLE SHOOTING**

<i>Problem</i>	<i>Possible Reasons</i>	<i>Solutions</i>
No Light	The plugs are not tighten well	Tighten the connectors plugs
	Check if controller is in BLACK mode ( MODE 1 )	Change to other modes
	The fuse blew in the controller	Replace the fuse
	LCD does not light up	Check if switch is ON
	The wire is connected in wrong order	Check the wire connection

**IMPORTANT: If all solutions failed to correct the problems, please contact your nearest dealer for warranty repair service. Do not disassemble, remodel or repair the controller. Disassembling, remodeling, or repairing can cause serious injury and will void product warranty. Please contact your local dealer for any repair service.**

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### Warranty Discription

#### EDCON WARRANTY

Manufacturer warrants to the Purchaser that each Product manufactured and sold by it will be free from defects in material and workmanship in its intended use (normal wear and tear excepted) for the period of one year from date of Purchasers purchase (the invoice date) from Manufacturer. Manufacturers warranty flows only to Purchaser. If any Product covered by this warranty is returned by Purchaser in accordance with Manufacturers Products Return Policy, including without limitation its return authorization provisions, within the applicable warranty period set forth above, and upon examination Manufacturer determines to its satisfaction that such Product was defective in material or workmanship at the time of delivery to the Purchaser. Manufacturer will, at its option, repair or replace the Product or the defective part thereof, or reimburse Purchaser for the purchase price. For purposes of clarity, "repair or replace the Product or the defective part thereof" does not include any reinstallation costs or expenses. If Manufacturer chooses to replace the Product and is not able to do so because it has been discontinued or is not available, Manufacturer may replace it with a comparable product. The Products Return Policy is posted on Manufacturers Internet web site at <http://www.edcon-components.com>. The foregoing notwithstanding, Manufacturer will not be responsible for damage to any Product resulting from misuse, negligence, acts of God or accident or resulting from repairs or alterations made by any person or firm not duly authorized by Manufacturer in writing. Purchaser shall convey with each Product distributed to end users the MANUFACTURERS WARRANTY included by Manufacturer with such Product, and, if Manufacturer determines that the appropriate remedy for a defective product is refund of Purchasers purchase price, Purchaser shall refund to the end user (or arrange for the refund to the end user of) the full purchase price paid by the end user for such defective Product. The Products Return Policy is posted on Manufacturers Internet web site at <http://www.edcon-components.com>. The foregoing notwithstanding, Manufacturer will not be responsible for damage to any Product resulting from misuse, negligence, acts of God or accident or resulting from repairs or alterations made by any person or firm not duly authorized by Manufacturer in writing. Purchaser shall convey with each Product distributed to end users the MANUFACTURERS WARRANTY included by Manufacturer with such Product, and, if Manufacturer determines that the appropriate remedy for a defective product is refund of Purchasers purchase price, Purchaser shall refund to the end user (or arrange for the refund to the end user of) the full purchase price paid by the end user for such defective Product.

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