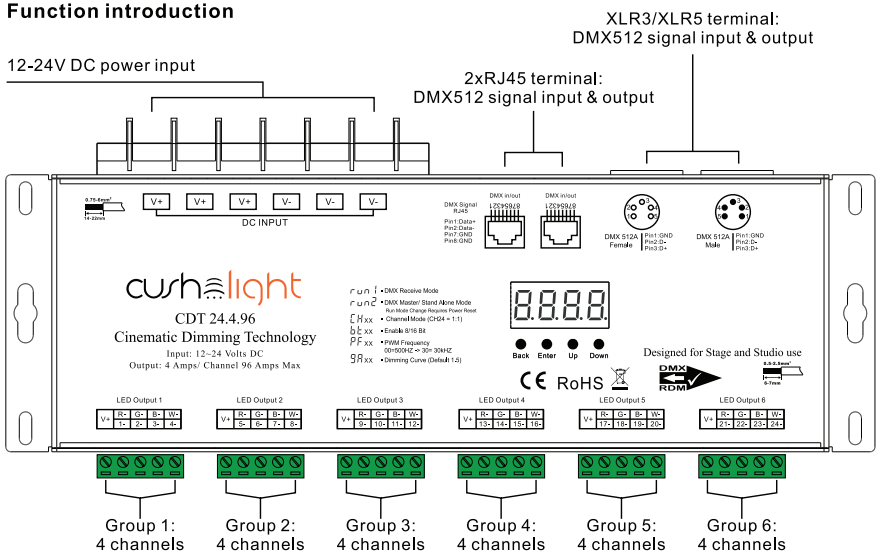
24CH RDM DMX512 Decoder

FC CE RoHS COMPLIANT

cushlight
CDT 24.4.96A

Important: *Read All Instructions Prior to Installation*

Function introduction



Product Data

Input Voltage	Output Current	Output Power	Remarks	Size(LxWxH)
12-24VDC	24x4A	24x(48-96)W	Constant voltage	264.5X83X42mm

- Master & Decoder mode, RDM function
- Metal housing, digital display to show data directly, easily set and display DMX address.
- Multiple kinds of DMX in/out ports: RJ45, XLR, pluggable terminal blocks.
- Total 24 PWM common anode output channels. DMX channel modes: 1, 2, 3, 4, 12, 18, 24.
- PWM output resolution ratio: 8bit or 16bit.
- Output PWM frequency from 500Hz ~ 30kHz.
- Output dimming curve gamma value from 0.1 ~ 9.9.
- Galvanic isolation.

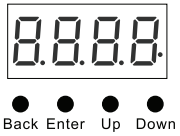
Safety & Warnings

- DO NOT assemble with power applied to device.
- DO NOT expose the device to moisture.

Operation

Before you set other settings, please set the device to be Master or Decoder mode.

run1 = DMX Decoder mode, run2 = DMX Master mode (stand alone).



Keep on clicking Down button, to get run1 or run2, then click Enter, then click Down button to choose 1 or 2, then click Back button.
After choosing run1 or run2, please power the device off and power on again.

I. **For run2 DMX Master mode:** After powering on the device, use “Up” or “Down” buttons to navigate the menu:

01.01 Adjusts brightness for each output PWM channel. First 01 indicates PWM output channel 1 and is selectable from 01 to 24 by clicking “Up” or “Down” button. Second 01 indicates brightness level. Click “Enter” button, the display flashes, then click “Up” or “Down” button to select from 00 - 99 - FL (0% - 99% - 100% brightness), then click “Back” button to confirm.
CH. Brightness

CA01 Indicates chasing effects, total 4 effects selectable from 01-04. Click “Up” or “Down” button to select the menu, then click “Enter” button to enter into the effect, then click “Up” or “Down” button to select from 01-04.

CA01: Fade-up (0%-100%) and fade-down (100%-0%) of output 1, then output 2, 3, ... 24, 1, ... , cycling chasing

CA02: Fade-up (0%-100%) of output 1, then simultaneous fade-down (100%-0%) of output 1 and fade-up (0%-100%) of output 2, simultaneous down of output 2 and up of output 3, ... , simultaneous down of output 23 and up of output 24, simultaneous down of output 24 and up of output 1, ... , cycling chasing

CA03: Fade-up (0%-100%) of output 1, then output 2, output 3, ... , output 24, output 1, ... , cycling chasing

CA04: Fade-down (100%-0%) of output 1, then output 2, output 3, ... , output 24, output 1, ... , cycling chasing

SP09 Indicates chasing speed, it is adjustable from 01-09, 01 is the slowest, 09 is the fastest.

II. For run1 DMX decoder mode: After powering on the decoder, use “Up” or “Down” buttons to navigate the menu:

A.XXX **DMX signal indicator:** When DMX signal input is detected, the red indicator after the A turns on.

A.XXX Indicates DMX address factory defaults setting is 001.

CHXX Indicates DMX channel quantity. Factory defaults setting is Ch24.

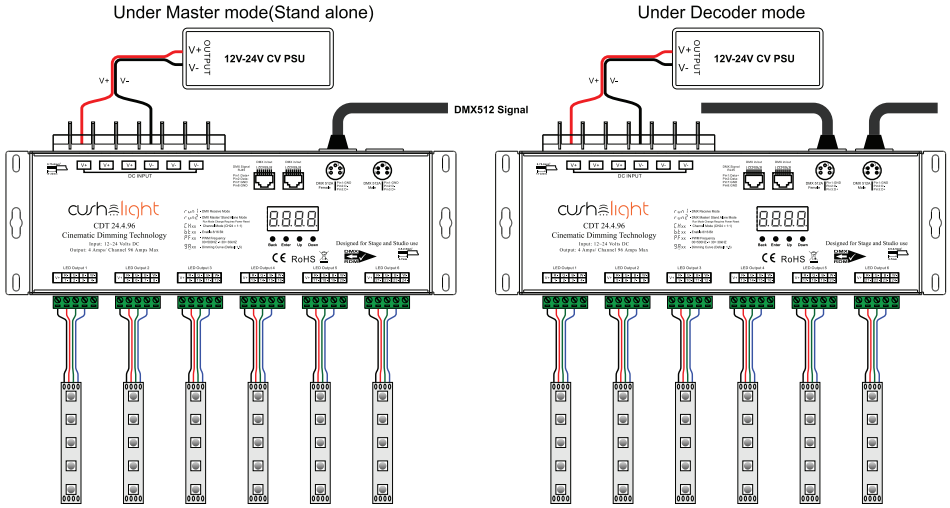
bt XX Indicates Bit Mode (8bit or 16bit). Factory defaults setting is 8bit.

PF XX Indicates PWM frequency. Factory defaults setting is 25kHz.

gaXX Indicates output dimming curve gamma value. Factory defaults setting is ga 1.5

run1 Indicates device is in DMX decoder mode.

Wiring diagram



1. DMX address setting:

Select menu A.XXX, click “Enter” button, display flashes, then click or hold “Up” / “Down” button to set DMX address (click is slow, hold is fast), then click “Back” button to confirm.

2. DMX channel quantity setting:

Select menu CHXX, click “Enter” button, display flashes, then click “Up” / “Down” button to set DMX channel quantity, then click button “Back” to confirm. For example, with DMX address set at 001;

	LED Output	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Number of Addresses	Address Number (starting from 001)																								
Channel 1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Channel 2		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Channel 3		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Channel 4		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Channel 12		1	2	1	2	3	4	3	4	5	6	5	6	7	8	7	8	9	10	9	10	11	12	11	12
Channel 18		1	2	3	3	4	5	6	6	7	8	9	9	10	11	12	12	13	14	15	15	16	17	18	18
Channel 24		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

3. PMW output resolution Bit setting:

Select menu btXX, click “Enter” button, display flashes, then click “Up” / “Down” button to select 8 or 16 bit, then click “Back” button to confirm.

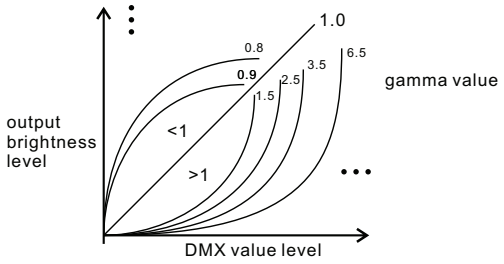
DMX Console Slider number	8bit	16bit	DMX Console Slider number	8bit	16bit	DMX Console Slider number	8bit	16bit	DMX Console Slider number	8bit	16bit
DMX Channel			**DMX Channel**			**DMX Channel**			**DMX Channel**		
1	output 1 dimming	output 1 dimming	13	output 13 dimming	output 7 dimming	25		output 13 dimming	37		output 19 dimming
2	output 2 dimming	output 1 micro dimming	14	output 14 dimming	output 7 micro dimming	26		output 13 micro dimming	38		output 19 micro dimming
3	output 3 dimming	output 2 dimming	15	output 15 dimming	output 8 dimming	27		output 14 dimming	39		output 20 dimming
4	output 4 dimming	output 2 micro dimming	16	output 16 dimming	output 8 micro dimming	28		output 14 micro dimming	40		output 20 micro dimming
5	output 5 dimming	output 3 dimming	17	output 17 dimming	output 9 dimming	29		output 15 dimming	41		output 21 dimming
6	output 6 dimming	output 3 micro dimming	18	output 18 dimming	output 9 micro dimming	30		output 15 micro dimming	42		output 21 micro dimming
7	output 7 dimming	output 4 dimming	19	output 19 dimming	output 10 dimming	31		output 16 dimming	43		output 22 dimming
8	output 8 dimming	output 4 micro dimming	20	output 20 dimming	output 10 micro dimming	32		output 16 micro dimming	44		output 22 micro dimming
9	output 9 dimming	output 5 dimming	21	output 21 dimming	output 11 dimming	33		output 17 dimming	45		output 23 dimming
10	output 10 dimming	output 5 micro dimming	22	output 22 dimming	output 11 micro dimming	34		output 17 micro dimming	46		output 23 micro dimming
11	output 11 dimming	output 6 dimming	23	output 23 dimming	output 12 dimming	35		output 18 dimming	47		output 24 dimming
12	output 12 dimming	output 6 micro dimming	24	output 24 dimming	output 12 micro dimming	36		output 18 micro dimming	48		output 24 micro dimming

4. Output PMW frequency setting:

Select menu PFXX, click “Enter” button, display flashes, then click “Up” / “Down” button to choose 00~30, then click “Back” button to confirm. 00 = 500Hz, 01 = 1kHz, 02 = 2kHz.....30 = 30kHz.

5. Output dimming curve gamma value setting:

Select menu gaXX, click “Enter” button, display flashes, then click “Up” / “Down” button to choose 0.1~9.9, then click “Back” button to confirm.



The supported RDM PIDs are as follows:

DISC_UNIQUE_BRANCH
DISC_MUTE
DISC_UN_MUTE
DEVICE_INFO
DMX_START_ADDRESS
IDENTIFY_DEVICE
SOFTWARE_VERSION_LABEL
DMX_PERSONALITY
DMX_PERSONALITY_DESCRIPTION
SLOT_INFO
SLOT_DESCRIPTION
MANUFACTURER_LABEL
SUPPORTED_PARAMETERS

Restore to Factory Default Setting: Press and hold down both “Back” and “Enter” keys until the digital display turns off, then release the keys, system will reset and the digital display will turn on again, all settings will be restored to factory default.

Default settings are as follows:

DMX Address Code: A.001

DMX Address Quantity: ch24

PWM Resolution Mode: bt8

PWM Frequency: pf25

Gamma: ga1.5