



DMX512 Constant Voltage Decoder User Manual



(Please read through this manual carefully before use)

1 Brief Introduction

RGBW DMX decoding driver works to convert universal DMX512/1990 digital signal to PWM signal, which controlled by DMX512 console, with 256 levels grey scale output per channel. Realize 0-100% brightness or various changing effect. And can control single color, RGB, RGBW LED lights. Adopting unique programming technology, Creating exclamatory, perfect color fade & smooth effect, simultaneously let LED color more

2 Specifications

Model	HL-DMX6 0 4 - 6 A
Input voltage	DC12-24V
Max load current	6A/CH×4
Max output power	290W/580W(12V/24V)
Output Scale level	256 levels
Input signal	DMX512/1990
Output signal	4 constant voltage channels
Output DMX Channel	4Ch or 5Ch (5th CH is shutter strobe)
working temperature	-30℃~65℃
Dimension	L150×W63×H43(mm)
Weight (G.W)	410g

3 Basic Features

- 1.4 output channels, can control single color, RGB, RGBW led light
- 2.0-100% brightness, 256-level brightness control;
- 3.nput standard DMX512 protocol, address can be set by DIP.
- 4.Input voltage is DC12V~DC24V;
- 5.Decoder comes with manual dimming, 10 testing modes, 8 speeds;
- 6.With 4 DMX512 addresses or with 5 DMX512 addresses.
- 7.Power loss memory function.

Two versions for decoder

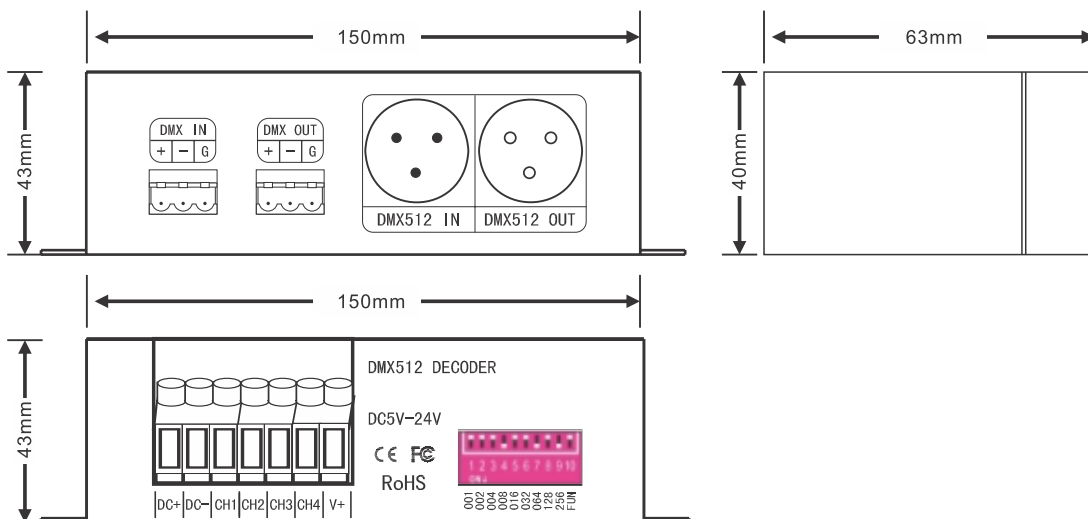
NO.	4 DMX ADD Version	5 DMX ADD Version
1	The 1st address controls LEDs on CH1	The 1st address controls LEDs on CH1
2	The 2nd address controls LEDs on CH2	The 2nd address controls LEDs on CH2
3	The 3th address controls LEDs on CH3	The 3th address controls LEDs on CH3
4	The 4th address controls LEDs on Ch4	The 4th address controls LEDs on CH4
5		0-127 of the 5th address controls the brightness, 128-255 for strobe

Note: The default shipment is 4 addresses, please inform in advance if need 5 addresses version.

4 Safety warnings

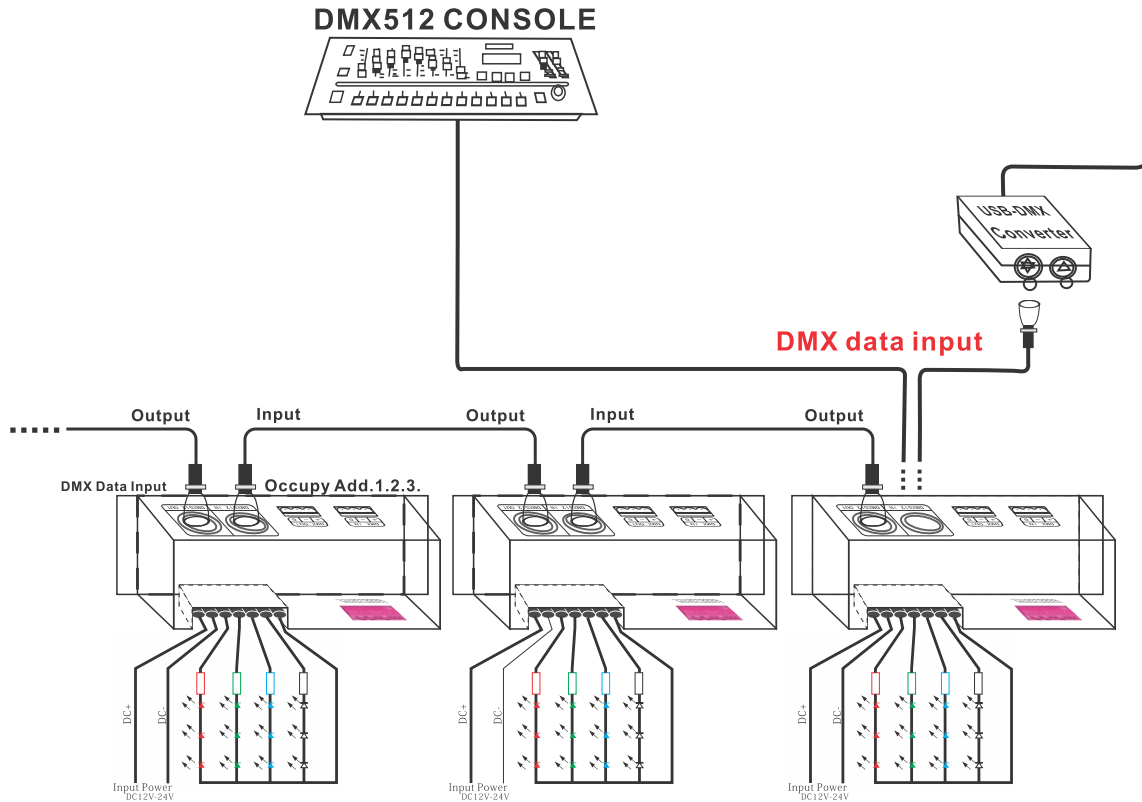
- Please don't install this controller in lightening, intense magnetic and high-voltage fields.
- 1.To reduce the risk of component damage and fire caused by short circuit, make sure correct connection.
 - 2.Always be sure to mount this unit in an area that will allow proper ventilation to ensure a fitting temperature.
 - 3.Check if the voltage and power adapter suit the controller.
(please select DC12-24V power supply with constant voltage)
 - 4.Don't connect cables with power on; make sure a correct connection and no short circuit checked with instrument before power on.
 - 5.Please don't open controller cover and operate if problems occur.
- The manual is only suitable for this model; any update is subject to change without prior notice.

5 Interfaces



6 Conjunction Diagram

PC CONSOLE



NOTE: According to DMX512 protocol, in order to ensure a steady data transmission, you should add a metalster(Metal Thin Film resistor,90-120Ω 1/4W)at the end of each layout of DMX data cable(between Foot 2 and Foot 3,Data+and Data-),please also refer to your dmx console manual to select a correct resistor.

7 Operating instructions

1) Decoder address setting

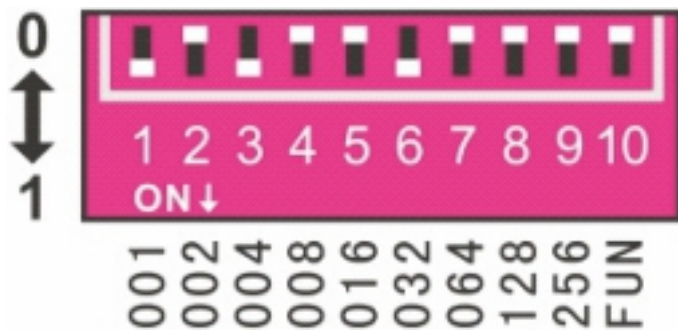
This decoder occupies 3 addresses, adopted Dip switch to set the address, the Dip switches from 1 to 9 are a kind of binary value coding switches used to set DMX512 initial address code, the correlative bits is the 1-9 bits of the DIP switch, the 1st bit is LSC, the 9th bit MSC , 512 addresses totally.

DMX512 initial address code is equal to the total amount of the Dip switches' number from 1 to 9, press Dip switch downward (ON: at position "1"), user can get the number of its position, if pressing upward (at position "0"), the number of its position is 0.

Accept DMX512 signal only when the DIP switch FUN=OFF (at position "0")

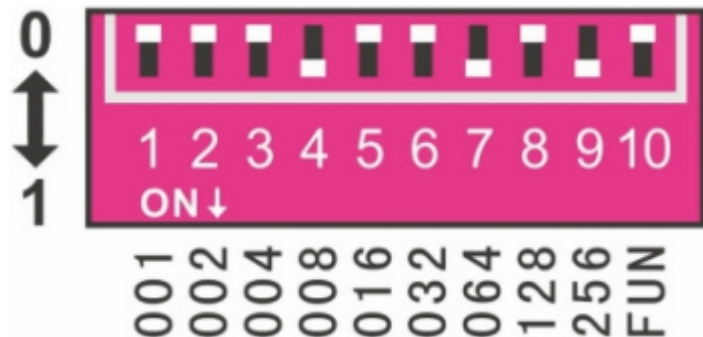
Example 1: Set to 37

Set the 6th, 3rd, 1st bit of the DIP switch downward to "1", others to "0" (picture 1), the total sum from 1 to 9 is $32+4+1$, so the DMX512 initial address code is 37.



Example 2:

Set DMX512 original address code as 328: Set the 9th, 7rd, 4st bit of the DIP switch downward to "1", the rest to "0" (as picture 2), the total sum from 1 to 9 is 256+64+8, so the DMX512 original address code is 328.



VI. Instructions for other functions

1. Testing function:

The 10th DIP switch is FUN, acting as the function key.

DMX512 Decoder works when FUN is at OFF, receiving DMX512 signals.

Decoder testing mode works when FUN is at position "ON" as Picture 3:

SWITCH1-9 OFF : BLACK

SWITCH1 IS ON : RED

SWITCH2 IS ON: GREEN

SWITCH3 IS ON: BLUE

SWITCH4 IS ON: YELLOW

SWITCH5 IS ON: PURPLE

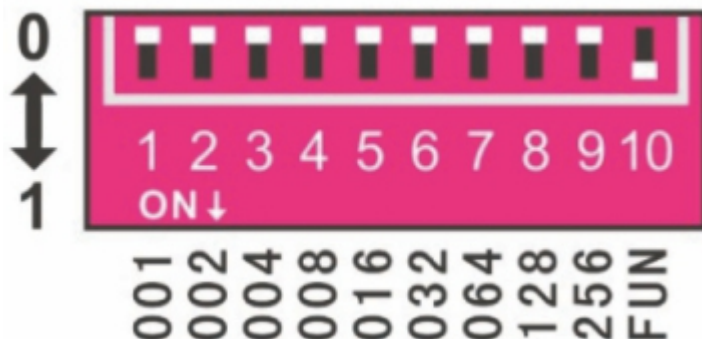
SWITCH6 IS ON: CYAN

SWITCH7 IS ON: WHITE

Picture 3

SWITCH8 IS ON: 7 CLOLOR
JUMPING (8 SPEED LEVELS)

SWITCH9 IS ON: 7 COLOR
SMOOTH (8 SPEED LEVELS)



2. Color jumping & color smooth speed

When decoder is at testing mode, DIP Switch 8 is at "ON", it's the 7 Color Jumping, when DIP Switch 9 is at "ON", it's the 7 Color Smooth, with 8 speed levels for each effect.

SWITCH 1-7 OFF : SPEED 0

SWITCH 1=ON : SPEED 1

SWITCH 2=ON : SPEED 2

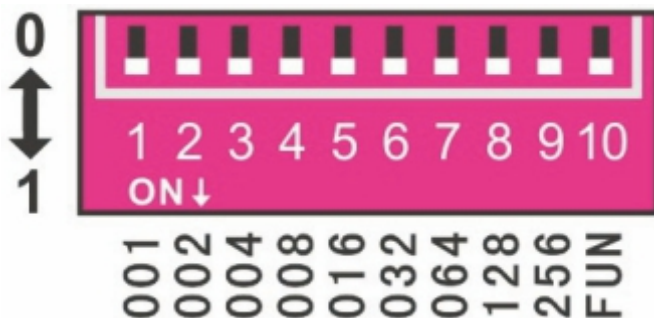
SEITCH 3=ON : SPEED 3

SWITCH 4=ON : SPEED 4

SWITCH 5=ON : SPEED 5

SWITCH 6=ON : SPEED 6

SEITICH7=ON : SPEED 7;



As Picture 4. When several DIP SWITCH at "ON" at the same time, comply with the largest value switch; In Picture4, it shows the decoder status is color smooth at testing function, and is at Speed 7.