DMX512 Constant Voltage Decoder
User's Manual

(Please read through this manual carefully before use)

➢ Brief Introduction

24CH RGB 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. Adopting unique programming technology, Creating exclamatory, perfect color fade & smooth effect, simultaneously let LED color more affluent.

➢ Specifications

Model	24CH Decoder
Input voltage	DC12V～DC24V
Max load current	3A/CH×24
Max output power	860W/1720W(12V/24V)
Output Scale level	256 levels
Input signal	DMX512/1990
Output DMX Channel	24Ch CV PWM
working temperature	-30℃～65℃
Dimension	L260×W110×H40mm
Package Size	L270×W115×H45mm
Weight (G.W)	800g

➢ Basic Features

1. 24 output channels, 3A /channel which can connect RGB full-color lights
2. 0-100% smooth brightness adjusting, 256 grey steps per channel
3. Universal standard DMX512 input protocol; addresses can be set up by DIP switch.
4. Working voltage from DC12V~DC24V.
5. 10 auto testing modes and 8 speed adjusting modes.

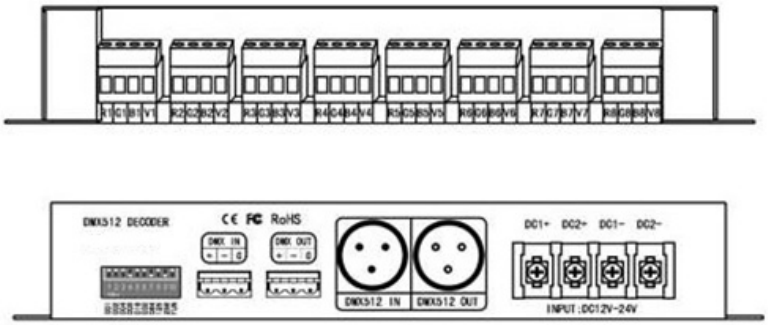
➢ Safety warnings

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.

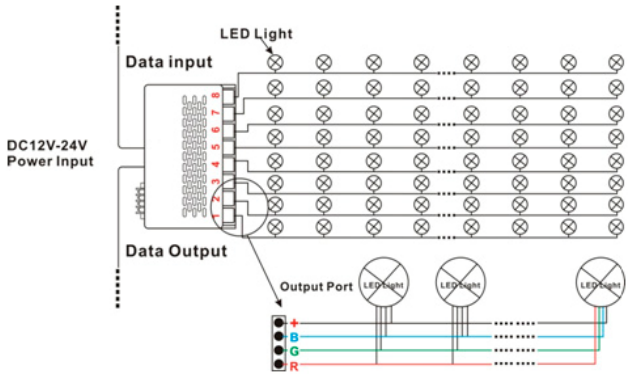
The manual is only suitable for this model; any update is subject to change without prior notice.

➢ 1. Interfaces

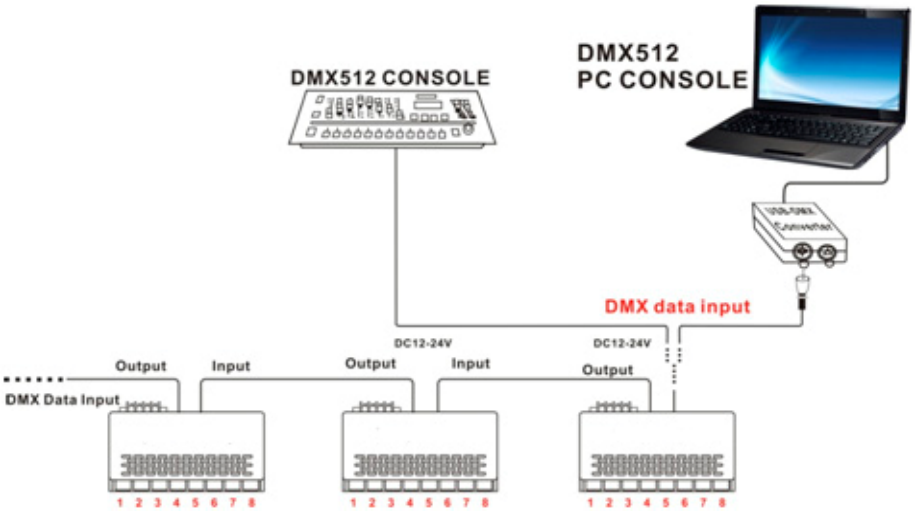


➢ 2. Conjunction Diagram

1. Connect to LED strip:



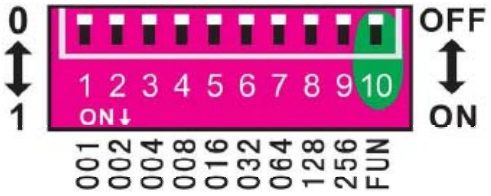
2. Connect to DMX system:



NOTE: According to DMX512 protocol, in order to ensure a steady DMX data transmission, you should weld a metalster(Metal Thin Film resistor，90-120Ω 1/4 W)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.

Operating instructions

FUN at "OFF" is DMX512 signal mode FUN at "ON" is auto testing mode



Picture 1

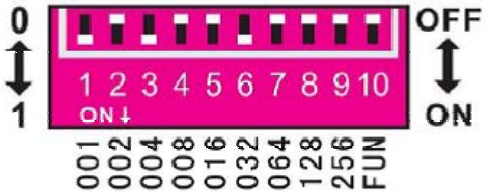
1. DMX initial address setting

FUN at "OFF" (the10th DIP switch is upward) is DMX512 signal mode, pic 1

DIP Switch	Value	Remark
1	001	This decoder adopts Dip switch to set the address, the Dip switches from 1 to 9 are a kind of binary value coding switches which used for setting 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 , 511 addresses totally. DMX512 initial address is 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.
2	002	
3	004	
4	008	
5	016	
6	032	
7	064	
8	128	
9	256	

Example 1: Set initial address to 37

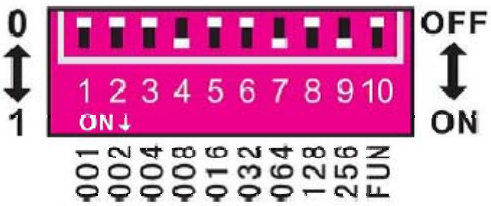
Set the 1st , 3rd, 6th, bit of the DIP switch downward to "1" , the rest to "0" (picture 2), the summation from 1 to 9 is 1+4+ 32, so the DMX512 initial address code is 37.



Picture 2

Example 2: Set initial address to 328

Set the 4th, 7th, 9th, bit of the DIP switch downward to "1" , the rest to "0" (as picture 3), the summation from 1 to 9 is 8+64+ 256, so the DMX512 original address code is 328.



Picture 3

3. Testing function

Such as FUN at "ON" (the 10th DIP switch is downward) is testing function.
DIP switch 1-9 at "OFF" is Black

DIP1	DIP2	DIP3	DIP4	DIP5	DIP6	DIP7	DIP8	DIP9
Red	Green	Blue	Yellow	Purple	Cyan	White	Scan	Color changing

DIP8/DIP9 at "ON" (the 8th/9th DIP swithc is dowanward) is changing mode.
DIP switch 1-7 has 8 levels speed changing, DIP 7 is the fastest speed.
DIP switch 1-7 at "OFF" is speed 0

DIP1	DIP2	DIP3	DIP4	DIP5	DIP6	DIP7
Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 6	Speed 7
As the above pic, if several DIP switch at "ON", it is subject to the maximum value. if all DIP switch at "ON", it is color fade effect of testing function, the speed is 7.						

➢ Exception Handles

Malfunction	Causation	Solution
No light	1. No power from plug 2. Anode/Cathode error 3. Incorrect connection of output connectors. 4. Wiring too long, such as over 300 meters	1. Check the socket 2. Reconnect correctly. 3. Reconnect correctly 4. Add DMX signal transmitter or splitter.
Incorrect color	5. Incorrect RGB output wire connection 6. DIP address is wrong	5. Re-connect RGB wires correspondently 6. Reset the DIP
One or more colors on without changing	7. Output disconnected or Incorrect 8. Wiring too long, such as over 300 meters	7. Check the connectors, Reconnect correctly 8. Add DMX signal transmitter or splitter.
Flickers during normal using.	9. Output disconnected or Incorrect 10. Wiring too long, such as over 300 meters	9. Check the connectors, Reconnect correctly 10. Add DMX signal transmitter or splitter.

➢ After-Sales

From the day you purchase our products within 2 years, if being used properly in accordance with the instruction, and quality problems occur, we provide free repair or replacement services except the following cases:

1. Any defects caused by wrong operations.
2. Any damages caused by inappropriate power supply or abnormal voltage.
3. Any damages caused by unauthorized removal, maintenance, modifying circuit, incorrect connections and replacing chips.
4. Any damages due to transportation, breaking, flooded water after the purchase.
5. Any damages caused by earthquake, fire, flood, lightning strike etc force majeure of natural disasters.
6. Any damages caused by negligence, inappropriate storing at high temperature and humidity environment or near harmful chemicals.
7. Product has been updated.