12CH-DMX512 Constant decoder Operation Instruction

Introduction:
Welcome to use the 12CH constant decoder, which take advantage of advanced microelectronic control technology. This technology changes the international fashion DMX512/1990 standard digital control signals into analog control signals. There are 1 ~ 12 output channels; each channel can achieve 256 control levels. This constant decoder is used when DMX512 control equipment control general LED lighting.

Products Performance:
Input Power:DC5V ~ DC24V

Maximum power load: 300W (5V) ,720W (12V),1440W (24V)

Input Signal:DMX512/1990

Output DMX:12 channels

Size: L155MMXW88MMXH32MM

Net Weight:290g

Maximum load current: 5A/CH × 12

Output gray level: 256

Output signal:12 channels Constant PWM

DMX512 socket standard RJ45;

Package Measurement: L173XW700XH50MM

Gross Weight:330g

Basic functions:
There are 12 output channels, can connect with single or RGB lamps;

0–100% dimming output, each channel 256 gray levels

International standard DMX512 input protocol, address code set by DIP switches;

Wide voltage DC input DC5V ~DC24V;

Each occupied by 12 DMX address.

The signal line connection diagram：

1： DATA+　　2： DATA−　　3–6： Empty　　7,8： GND

Decoder using the method

The first DMX address setting:

The decoder set the address bit by coding switch, of which 1–9 is for setting the start address of the Binary numeric code switch of DMX512, the first one is the lowest position, the ninth one is the highest. Bit of address code can be set to 512. DMX512 start address code is the sum of switches 1–9, at the same time turn downside of the code switch (ON set to "1"), then the value of the bit can be gotten; coding switch up (set to "0"), the value of the bit is 0.
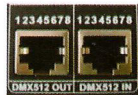
Decoder to use:

Note: FUN = OFF (the tenth code switch up) means to accept DMX512 signal mode

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Example 1:

As the following Schematic 1, DMX512 start address is set to 38,
encoding the No. 6,3,2 position on switch dial to "1", others set to "0",
then the sum of the switch 1~9 code value is 32 + 4 + 2,
that is the DMX512 start address 38

Example2:

As the schematic 2, DMX512 start address is set to 388,
encoding the no. 2,3,6,8 switch dial to "1", others set to "0",
then the sum of the switch 1~8 code value is 4 + 128 + 256 = 388,
that is the DMX512 start address 388.

Operation instruction for the automat effect

Note: It will be Automatic operation mode when the No. 10 switch is turned down.
Effect choice (button switch No.1 to No.4):

1.Push No.1: Automat cycling

2.Push No. 2: Seven−color gradual cycle changing

3.Push No.1 &2: RGB Fade in and out

4.Push No.3: Severn color jumping

5.Push No.1 & 3: RGB jumping

6.Push No.2 & 3: Single color fade

7.Push No. 1 & 2 & 3:Single color left scan

8.Push No.4: Single color right scan

9.Push No.1 & 4: Single color left pile up

10.Push No.2 & 4: Single color right pile up

11.Push No.1 & 2 & 4: Single color left and right scan

12.Push No.3 & 4: Single color left and right pile up

13.Push No.1 & 3 & 4: single color red

14.Push No.2 & 3 & single color green

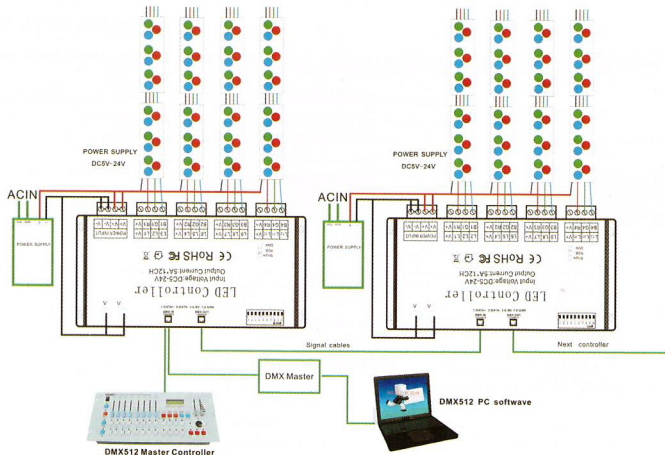15.Push No.1 & 2 & 3 & 4: single color blue
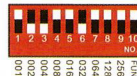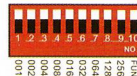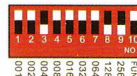
Schematic 1

Schematic 2

2
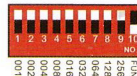
Speed Choices (Button Switch No.5 to No. 8)
1.Push No.5: 0.5 second; 2. Push No.6: 1 second; 3. Push No.7: 1.5 second; 4. Push No.8: 2 second.
Schematic for System Connection:

Installation Notes:

※Works only under DC5V-24V, which is provided by the matched controllable main power, or else the controller will be damaged.

※The UTP wire is connected hand in hand to make the cable, when two or more controller connected.

※The power supply should be off when connecting the electric wires, and it can be turned on till making sure the wires are connected correctly and the indicator of main power in red is lighting.

※Controller should work under the environment of adequately ventilated, dry, not corroded, no flammable gas and rust.

※Please check the wires connection regularly so that the wires of aged, rust-eaten, and damaged insulation spacer can be replaced timely.

Simple troubleshooting and maintenance:

Symptom	Reason Analysis	Solution
NO lighting	1. No power 2. Wrong connection of wire 3. Power protection setting	1. Check power supply 2. Check wire connection 3. Check power failure, power on again
Red indication light is on, green indication light not flash	Didn't make dip switch or dip switch is not in correct	Follow up the instruction to reset dip switch
The Light color is not show in correctly	1. RGB LED is not connection correctly 2. Dip switch is not in correct place	1. Re-connect the RGB and wire 2. Reset dip switch
Can't be synchronization	1. The RJ45 cable is not connected or wrong connection 2. Master and slave controller setting failure, The slaver is set dip switch effects	1. Re-connect the RJ cable 2. Reset master and slave controller to ensure only one master
Led brightness is different at beginning and end	1. Output line is too long 2. The diameter of wire is too thin 3. Overload working	1. Use annular electric supply or shorten circuit 2. Calculate electrical current, change strong wire 3. Change power or increase controller