http://www.seekway.com.cn/e/
http://www.3dled.net/e/

P03 Decoder

USER MANUAL

Jiangmen Seekway Technology LTD

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Introduction

1. The decoder follows the DMX512 protocol.
2. Decoder can adjust the color (R, G, B).
3. With RS485 signal converter circuit.
4. Over current protect
5. Address of decoder can be freely set.
6. Modular design, flexible combination.
7. Can be main-controller. Build-in 7-color fixing, strobe and gradually changing, full color flowing, 7-color trailing, 8-color flowing, shading, etc.

Basic Specification

Channel	Each pixel occupies three channels (RGB), totally 512 address for optional.
Gray level	256
Power output	MAX 10A/port
Voltage	DC 12V~24V (depend on the load)
Size	125L*55W*45H

Connection

1. DMX signal connection: (Signal from XLR and the module plug are the same. Alternative)

Way one: 3P XLR
Pin 1: GND
Pin 2: DMX-
Pin 3: DMX+
Male connector (DMX512 IN) receives DMX signal from console
Female connector (DMX512 OUT) transfers the signal to the next decoder.

Way two: 8-core network cable
Pin 1: DMX+
Pin 2: DMX-
Pin 7 & Pin 8: GND
The module plug in the left is DMX IN, the plug in the right is DMX OUT.

RJ45 Module plug

2. Drive output connection: common anode driver.
   Connect the wire to the terminal of VCC, R, G, B

3. Power connection:
   Connect the “V+” and “V-” power cable to the “DC+” and “DC-” of the decoder.
   “DC+” is VCC, “DC-” is GND.

Addressing for decoder

1. Totally 512 channels/addresses, one decoder can drive 170 pixels. (each pixel occupies three channels)
2. When the address is from 513~1024, the decoder will go into master mode.
3. In the same system, only one main-controller can exist.
4. The dial switch is programmed in binary.

1	2	4	8	16	32	64	128	256	512	Binary	
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Address	Binary algorithm
△	▼	△	▼	△	△	△	△	△	△	10	2+8
▼	△	△	△	△	▼	▼	△	△	△	97	1+32+64

Operation

Controlled mode

1. When the decoder goes into controlled mode (address 1~512), the decoder is controlled by DMX512 console. Through the console, different kinds of effect can be programmed.
2. As each pixel occupies 3 channels, therefore, if the address of 1st pixel is 10, then the next one is 10+3=13, another one is 13+3=16, by parity of reasoning.

Master mode

1. When both of the 9th and 10th digit of the dial switch are under ON（▼）condition, the decoder will go into master mode. (Address 513~1024 is as master mode)

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Effect
								▼	▼	**Black**

2. Under master control, effects could be 7-color fixing, strobe, hopping, gradually changing, full-color flowing, 7-color trailing, 8-color flowing and so on.
   When as master controller, DMX512 amplifier should be added to increase the drive ability.

3. Under master control, effects could be selected through the 7th and 8th digit of the dial switch, while R, G, B could be choose through the 1st, 2nd, 3rd digit under 7-color fixing, strobe and gradually changing mode.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Effect
▼	△	△	△			△	△	▼	▼	Red
△	▼	△	△			△	△	▼	▼	Green
△	△	▼	△			△	△	▼	▼	Blue
▼	▼	△	△			△	△	▼	▼	Yellow
△	▼	▼	△			△	△	▼	▼	Cyan
▼	△	▼	△			△	△	▼	▼	Purple
▼	▼	▼	△			△	△	▼	▼	White
▼	△	△	▼			△	△	▼	▼	Red strobe
△	▼	△	▼			△	△	▼	▼	Green strobe
△	△	▼	▼			△	△	▼	▼	Blue strobe
▼	▼	△	▼			△	△	▼	▼	Yellow strobe
△	▼	▼	▼			△	△	▼	▼	Cyan strobe
▼	△	▼	▼			△	△	▼	▼	Purple strobe
▼	▼	▼	▼			△	△	▼	▼	White strobe
△	△	△	△			△	▼	▼	▼	Gradually changing
▼	△	△	△			△	▼	▼	▼	Full color flowing
△	▼	△	△			△	▼	▼	▼	7-color trailing
△	△	△	△			△	▼	▼	▼	8-color flowing
▼	△	△	△			▼	▼	▼	▼	Shade in red
△	▼	△	△			▼	▼	▼	▼	Shade in green
△	△	▼	△			▼	▼	▼	▼	Shade in blue

▼	▼	△	△	▼	▼	▼	▼	Shade in yellow
△	▼	▼	△	▼	▼	▼	▼	Shade in cyan
▼	△	▼	△	▼	▼	▼	▼	Shade in purple
▼	▼	▼	△	▼	▼	▼	▼	Shade in white
On or off is OK			△	▼	△	▼	▼	7-color hopping

4. Select the time through the 4th, 5th and 6th digit of dial switch, totally eight speeds for option.

	4th	5th	6th	time	specification
Time	△	△	△	Fast V slow	Stop
	▼	△	△		1
	△	▼	△		2
	▼	▼	△		3
	△	△	▼		4
	▼	△	▼		5
	△	▼	▼		6
	▼	▼	▼		7

5. When disconnect DMX console, any of the P03 could be a master controller, which can drive the latter P03.

   Note: There can only be one master-controller existing in a system!!!