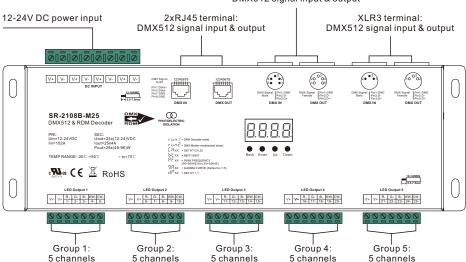
# Ultra-Pro 25CH RDM DMX512 Decoder



Important: Read All Instructions Prior to Installation

#### **Function introduction**

XLR5 terminal: DMX512 signal input & output



#### **Product Data**

Input Voltage	Voltage Current Power		Remarks	Size(LxWxH)	
12-24VDC	25x4A	25x(48-96)W	Constant voltage	293.2X92.2X36mm	

- · Master & decoder mode, RDM function
- · Metal housing, digital display to show data directly, easily to set and show DMX address.
- With multiple kinds of DMX in/out ports: RJ 45, XLR, pluggable terminal blocks.
- Total 25 PWM output channels, common anode.
- DMX channel quantity 1CH, 2CH, 3CH, 4CH, 5CH, 10CH, 15CH, 20CH, 25CH can be set.
- Output PWM frequency from 500HZ ~ 35K HZ settable.
- Output dimming curve gamma value from 0.1 ~ 9.9 settable.
- Decoding mode can be set.
- · Galvanic isolation

# Safety & Warnings

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

#### Operation

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

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.



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I. For run2 DMX Master mode: After set the device as run2 (Master mode), if keep on clicking Up button, you will find below menu on display:

Means brightness for each output PWM channel. First 01 means PWM output channel 1 and it is selectable from 01 to 25 by clicking "UP" or "Down" button. Second 01 means brightness level, click "Enter" button, the display flashes, then click "UP" or "Down" button to select from 00-99-FL, which means 0%-99%-100% brightness. then click "Back" button to confirm.

means 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, output 3, ....., output 25, output 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 24 and up of output 25, simultaneous down of output 25 and up of output 1, ....., cycling chasing

CA03: Fade-up (0%-100%) of output 1, then output 2, output 3, ....., output 25, output 1, ....., cycling chasing CA04: Fade-down (100%-0%) of output 1, then output 2, output 3, ....., output 25, output 1, ....., cycling chasing

means chasing speed, it selectable from 01-09, 01 is the slowest, 09 is the fastest.

II. For run1 DMX decoder mode: After set the device as run1 (Decoder mode), if keep on clicking Up button, you will find below menu on display:

DMX signal indicator : When DMX signal input is detected, the indicator on the display following after 📮 turns on red

XXX Means DMX address. factory default setting is 001.

Means DMX channels quantity, factory default setting is Ch25.

Reans output PWM frequency. factory default setting is 25KHz.

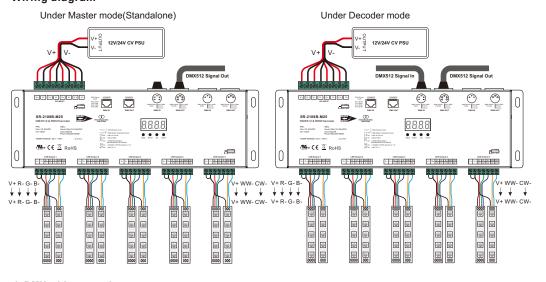
Reans output dimming curve gamma value, factory default setting is ga1.5.

Means Decoding mode, factory default setting is dp1.1.

Means the device at run1 mode (DMX decoder mode).

By holding button Back + Enter together at the same time over 5 seconds until the display go off, it will restore default settings.

# Wiring diagram



# 1. DMX address setting:

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

#### 2. DMX channel quantity setting:

Select menu HXX, click button "Enter", display flashes, then click button "Up" / "Down" to set DMX channel quantity, then click button "Back" to confirm.

For example the DMX address is already set as 001.

CH01=1 DMX address for all the output channels, which are all address 001.

CH02=2 DMX addresses, output channels 1, 3, 6, 8, 11, 13, 16, 18, 21, 23 are address 001, output channels 2, 4, 7, 9, 12, 14, 17, 19, 22, 24 are address 002. Output channels 5, 10, 15, 20, 25 are not controlled.

CH03=3 DMX addresses, output channels 1, 6, 11, 16, 21 are address 001, output channels 2, 7, 12, 17, 22 are address 002, output channels 3, 8, 13, 18, 23 are address 003. Output channels 4, 5, 9, 10, 14, 15, 19, 20, 24, 25 are not controlled.

CH04=4 DMX addresses, output channels 1, 6, 11, 16, 21 are address 001, output channels 2, 7, 12, 17, 22 are address 002, output channels 3, 8, 13, 18, 23 are address 003, output channels 4, 9, 14, 19, 24 are address 004. Output channels 5, 10, 15, 20, 25 are not controlled.

CH05=5 DMX addresses, output channels 1, 6, 11, 16, 21 are address 001, output channels 2, 7, 12, 17, 22 are address 002, output channels 3, 8, 13, 18, 23 are address 003, output channels 4, 9, 14, 19, 24 are address 004, output channels 5, 10, 15, 20, 25 are address 005.

CH10=10 DMX addresses, output channels 1,3 are address 001, output channels 2, 4 are address 002, output channels 6, 8 are address 003, output channels 7, 9 are address 004, output channels 11, 13 are address 005, output channels 12, 14 are address 006, output channels 16, 18 are address 007, output channels 17, 19 are address 008, output channels 21, 23 are address 009, output channels 22, 24 are address 010. Output channels 5, 10, 15, 20, 25 are not controlled.

CH15=15 DMX addresses, output channels 1, 2, 3 are addresses 001, 002, 003 respectively, output channels 6, 7, 8 are addresses 004, 005, 006 respectively, output channels 11, 12, 13 are addresses 007, 008, 009 respectively, output channels 16, 17, 18 are addresses 010, 011, 012 respectively, output channels 21, 22, 23 are addresses 013, 014, 015 respectively. Output channels 4, 5, 9, 10, 14, 15, 19, 20, 24, 25 are not controlled.

CH20=20 DMX addresses, output channels 1, 2, 3, 4 are addresses 001, 002, 003, 004 respectively, output channels 6, 7, 8, 9 are addresses 005, 006, 007, 008 respectively, output channels 11, 12, 13, 14 are addresses 009, 010, 011, 012 respectively, output channels 16, 17, 18, 19 are addresses 013, 014, 015, 016 respectively, output channels 21, 22, 23, 24 are addresses 017, 018, 019, 020 respectively. Output channels 5, 10, 15, 20, 25 are not controlled.

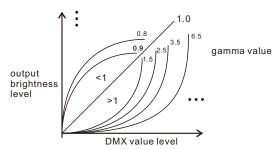
CH25=25 DMX addresses, outputs 1-25 are addresses 001-025 respectively.

## 3. Output PWM frequency setting:

Select menu RXX, click button "Enter", display flashes, then click button "Up" / "Down" to choose 00~35, then click button "Back" to confirm. 00=500HZ, 01=1kHZ, 02=2kHZ.....25=25kHZ, 35=35kHZ.

## 4. Output dimming curve gamma value setting:

Select menu  $\frac{1}{2}$   $\frac{1$ 



### 5. DMX decoding mode setting:

Select menu XX, click button "Enter", display flashes, then click button "Up" / "Down" to choose the decoding mode, then click button "Back" to confirm. "dPxx" means the DMX address quantity used for control of corresponding PWM output channel quantity. 1st "x" is DMX address quantity, 2nd "x" is PWM channel quantity.

Fine dimming: the fine dimming effect can only be visible when the dimming curve gamma value is set lower than 1.4. and the lower the value is, the more visible the fine dimming effect will be.

#### DMX address is 001, CH01

DMX Console Slider number	dp1.1	dp2.1	dp2.2	dp3.1
1	all output dimming	all output dimming	all output dimming	all output dimming
2		all output fine dimming	all output strobe effects	all output fine dimming
3				all output strobe effects

#### DMX address is 001, CH02

DMX Console Slider number DMX channel		dp2.1	dp2.2	dp3.2	dp4.3
1	output1,3,6,8,11,13 16,18,21,23dimming	output1,3,6,8,11,13 16,18,21,23dimming	output1-4,6-9,11-14, 16-19,21-24dimming		output1-4,6-9,11-14, 16-19,21-24dimming
2	output2,4,7,9,12,14 17,19,22,24dimming	output1,3,6,8,11,13,16 18,21,23fine dimming	output1+2,3+4,6+7,8+9,11 +12,13+14,16+17,18+19, 21+22,23+24color tuning	output1,3,6,8,11,13 16,18,21,23dimming	output1,3,6,8,11,13 16,18,21,23dimming
3		output2,4,7,9,12,14 17,19,22,24dimming		output2,4,7,9,12,14 17,19,22,24dimming	output2,4,7,9,12,14 17,19,22,24dimming
4		output2,4,7,9,12,14,17 19,22,24fine dimming			strobe effects

#### DMX address is 001, CH03

DMX Console Slider number DMX channel	dp1.1	dp2.1	dp4.3	dp5.3				
1	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming	output1-3,6-8,11-13 16-18,21-23dimming	output1-3,6-8,11-13 16-18,21-23dimming				
2	output2,7,12, 17,22dimming	output1,6,11, 16,21fine dimming	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming				
3	output3,8,13, 18,23dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming				
4		output2,7,12, 17,22fine dimming	output3,8,13, 18,23dimming	output3,8,13, 18,23dimming				
5		output3,8,13, 18,23dimming		strobe effects				
6		output3,8,13, 18,23fine dimming						

#### DMX address is 001, CH04

DMX Console Slider number DMX channel	dp1.1	dp2.1	dp5.4	dp6.4
1	output1,6,11,	output1,6,11,	output1-4,6-9,11-14,	output1-4,6-9,11-14,
	16,21dimming	16,21dimming	16-19,21-24dimming	16-19,21-24dimming
2	output2,7,12,	output1,6,11,	output1,6,11,	output1,6,11,
	17,22dimming	16,21fine dimming	16,21dimming	16,21dimming
3	output3,8,13,	output2,7,12,	output2,7,12,	output2,7,12,
	18,23dimming	17,22dimming	17,22dimming	17,22dimming
4	output4,9,14,	output2,7,12,	output3,8,13,	output3,8,13,
	19,24dimming	17,22fine dimming	18,23dimming	18,23dimming
5		output3,8,13,	output4,9,14,	output4,9,14,
		18,23dimming	19,24dimming	19,24dimming
6		output3,8,13, 18,23fine dimming		strobe effects
7		output4,9,14, 19,24dimming		
8		output4,9,14, 19,24fine dimming		

# DMX address is 001, CH05

DMX Console Slider number DMX channel	dp1.1	dp2.1	dp6.5	dp7.5
1	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming	output1-25 dimming	output1-25 dimming
2	output2,7,12, 17,22dimming	output1,6,11, 16,21fine dimming	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming
3	output3,8,13, 18,23dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming
4	output4,9,14, 19,24dimming	output2,7,12, 17,22fine dimming	output3,8,13, 18,23dimming	output3,8,13, 18,23dimming
5	output5,10,15, 20,25dimming	output3,8,13, 18,23dimming	output4,9,14, 19,24dimming	output4,9,14, 19,24dimming
6		output3,8,13, 18,23fine dimming	output5,10,15, 20,25dimming	output5,10,15, 20,25dimming
7		output4,9,14, 19,24dimming		strobe effects
8		output4,9,14, 19,24fine dimming		
9		output5,10,15, 20,25dimming		
10		output5,10,15,		

DMX address is 001, CH10

DIMIX address is	001, 01110	
DMX Console Slider number DMX channel	dp1.1	dp2.1
1	output 1,3 dimming	output 1,3 dimming
2	output 2,4 dimming	output 1,3 fine dimming
3	output 6,8 dimming	output 2,4 dimming
4	output 7,9 dimming	output 2,4 fine dimming
5	output 11,13 dimming	output 6,8 dimming
6	output 12,14 dimming	output 6,8 fine dimming
7	output 16,18 dimming	output 7,9 dimming
8	output 17,19 dimming	output 7,9 fine dimming
9	output 21,23 dimming	output 11,13 dimming
10	output 22,24 dimming	output 11,13 fine dimming
11		output 12,14 dimming
12		output 12,14 fine dimming
13		output 16,18 dimming
14		output 16,18 fine dimming
15		output 17,19 dimming
16		output 17,19 fine dimming
17		output 21,23 dimming
18		output 21,23 fine dimming
19		output 22,24 dimming
20		output 22,24 fine dimming

# DMX address is 001, CH15

DIVIX address is	5 00 1, 011 13	
DMX Console Slider number	dp1.1	dp2.1
DMX channel	output 1 dimming	output 1 dimming
2	output 2 dimming	output 1 fine dimming
3	output 3 dimming	output 2 dimming
4	output 6 dimming	output 2 fine dimming
5	output 7 dimming	output 3 dimming
6	output 8 dimming	
		output 3 fine dimming
7	output 11 dimming	output 6 dimming
8	output 12 dimming	output 6 fine dimming
9	output 13 dimming	output 7 dimming
10	output 16 dimming	output 7 fine dimming
11	output 17 dimming	output 8 dimming
12	output 18 dimming	output 8 fine dimming
13	output 21 dimming	output 11 dimming
14	output 22 dimming	output 11 fine dimming
15	output 23 dimming	output 12 dimming
16		output 12 fine dimming
17		output 13 dimming
18		output 13 fine dimming
19		output 16 dimming
20		output 16 fine dimming
21		output 17 dimming
22		output 17 fine dimming
23		output 18 dimming
24		output 18 fine dimming
25		output 21 dimming
26		output 21 fine dimming
27		output 22 dimming
28		output 22 fine dimming
29		output 23 dimming
30		output 23 fine dimming

# DMX address is 001, CH20

DMX Console Slider number	dp1.1	dp2.1
DMX channel		
1	output 1 dimming	output 1 dimming
2	output 2 dimming	output 1 fine dimming
3	output 3 dimming	output 2 dimming
4	output 4 dimming	output 2 fine dimming
5	output 6 dimming	output 3 dimming
6	output 7 dimming	output 3 fine dimming
7	output 8 dimming	output 4 dimming
8	output 9 dimming	output 4 fine dimming
9	output 11 dimming	output 6 dimming
10	output 12 dimming	output 6 fine dimming
11	output 13 dimming	output 7 dimming
12	output 14 dimming	output 7 fine dimming
13	output 16 dimming	output 8 dimming
14	output 17 dimming	output 8 fine dimming
15	output 18 dimming	output 9 dimming
16	output 19 dimming	output 9 fine dimming
17	output 21 dimming	output 11 dimming
18	output 22 dimming	output 11 fine dimming
19	output 23 dimming	output 12 dimming
20	output 24 dimming	output 12 fine dimming
21		output 13 dimming
22		output 13 fine dimming
23		output 14 dimming
24		output 14 fine dimming
25		output 16 dimming
26		output 16 fine dimming
27		output 17 dimming
28		output 17 fine dimming
29		output 18 dimming
30		output 18 fine dimming
31		output 19 dimming
32		output 19 fine dimming
33		output 21 dimming
34		output 21 fine dimming
35		output 22 dimming
36		
		output 22 fine dimming
37		output 23 dimming
38		output 23 fine dimming
39		output 24 dimming
40		output 24 fine dimming

#### DMX address is 001, CH2

	DMX address is 001, CH25										
DMX Console Slider number DMX channel	dp1.1	dp2.1	dp2.2	dp3.2	dp4.2	dp4.3	dp5.3	dp5.4	dp6.4	dp6.5	dp7.5
1	output 1 dimming	output 1 dimming	output 1&2 dimming	output 1&2 dimming	output 1&2 dimming	output 1&2 &3 dimming	output 1&2 &3 dimming	output 1&2 &3&4 dimming	output 1&2 &3&4 dimming	output 1&2 &3&4&5 dimming	output 1&2 &3&4&5 dimming
2	output 2 dimming	output 1 fine dimming	adjust 1&2 color temperature	output 1 dimming	output 1 dimming	output 1 dimming	output 1 dimming	output 1 dimming	output 1 dimming	output 1 dimming	output 1 dimming
3	output 3 dimming	output 2 dimming	output 3&4 dimming	output 2 dimming	output 2 dimming	output 2 dimming	output 2 dimming	output 2 dimming	output 2 dimming	output 2 dimming	output 2 dimming
4	output 4 dimming	output 2 fine dimming	adjust 3&4 color temperature	output 3&4 dimming	strobe effects	output 3 dimming	output 3 dimming	output 3 dimming	output 3 dimming	output 3 dimming	output 3 dimming
5	output 5	output 3	output 6&7	output 3	output 3&4	output 6&7	strobe effects	output 4	output 4	output 4	output 4
6	dimming output 6	dimming output 3	dimming adjust 6&7	dimming output 4	&6 dimming output 3	&8 dimming output 6	output 6&7	dimming output 6&7&8	dimming strobe effects	dimming output 5	dimming output 5
	dimming output 7	fine dimming output 4	color temperature output 8&9	dimming output 6&7	dimming output 4	dimming output 7	&8 dimming output 6	&9 dimming output 6	output 6&7&8	dimming output 6&7	dimming
7	dimming output 8	dimming output 4	dimming adjust 8&9	dimming output 6	dimming	dimming output 8	dimming output 7	dimming output 7	&9 dimming output 6	&8&9&10 dimming output 6	strobe effects output 6&7
8	dimming	fine dimming	color temperature	dimming	strobe effects	dimming	dimming	dimming	dimming	dimming	&8&9&10 dimming
9	output 9 dimming	output 5 dimming	output 11&12 dimming	output 7 dimming	output 6&7 &9 dimming	output 11&12 &13 dimming	output 8 dimming	output 8 dimming	output 7 dimming	output 7 dimming	output 6 dimming
10	output 10 dimming	output 5 fine dimming	adjust 11&12 color temperature	output 8&9 dimming	output 6 dimming	output 11 dimming	strobe effects	output 9 dimming	output 8 dimming	output 8 dimming	output 7 dimming
11	output 11 dimming	output 6 dimming	output 13&14 dimmina	output 8 dimming	output 7 dimming	output 12 dimming	output 11&12&13 dimming	output 11&12&13 &14 dimming	output 9 dimmina	output 9 dimmina	output 8 dimmina
12	output 12	output 6	adjust 13&14	output 9	strobe effects	output 13	output 11	output 11	strobe effects	output 10	output 9
13	dimming output 13	fine dimming output 7	color temperature output 16&17	dimming output 11&12	output 8&9	dimming output 16&17	dimming output 12	dimming output 12	output 11&12&13	dimming output 11&12&13	dimming output 10
	dimming output 14	dimming output 7	dimming adjust 16&17	dimming output 11	&12 dimming output 8	&18 dimming output 16	dimming output 13	dimming output 13	&14dimming output 11	&14&15 dimming output 11	dimming
14	dimming output 15	fine dimming output 8	color temperature output 18&19	dimming output 12	dimming output 9	dimming output 17	dimming	dimming output 14	dimming output 12	dimming output 12	strobe effects output 11&12&13
15	dimming	dimming	dimming adjust 18&19	dimming	dimming	dimming	strobe effects	dimming	dimming output 13	dimming	&14&15 dimming
16	output 16 dimming	output 8 fine dimming	color temperature	output 13&14 dimming	strobe effects	output 18 dimming	output 16&17 &18 dimming	output 16&17&18 &19dimming	dimming	output 13 dimming	output 11 dimming
17	output 17 dimming	output 9 dimming	output 21&22 dimming	output 13 dimming	output 11&12 &15 dimming	output 21&22 &23dimming	output 16 dimming	output 16 dimming	output 14 dimming	output 14 dimming	output 12 dimming
18	output 18 dimming	output 9 fine dimming	adjust 21&22 color temperature	output 14 dimming	output 11 dimming	output 21 dimming	output 17 dimming	output 17 dimming	strobe effects	output 15 dimming	output 13 dimming
19	output 19	output 10	output 23&24	output 16&17	output 12	output 22	output 18	output 18	output 16&17&18	output 16&17&18	output 14
20	dimming output 20	dimming output 10	dimming adjust 23&24	dimming output 16	dimming strobe effects	dimming output 23	dimming strobe effects	dimming output 19	&19 dimming output 16	&19&20 dimming output 16	dimming output 15
	dimming output 21	fine dimming output 11	color temperature	dimming output 17	output 13&14	dimming	output 21&22	dimming output 21&22&23	dimming output 17	dimming output 17	dimming strobe effects
21	dimming output 22	dimming output 11		dimming output 18&19	&18 dimming output 13		&23 dimming output 21	&24dimming output 21	dimming output 18	dimming output 18	output 16&17&18
22	dimming	fine dimming		dimming	dimming		dimming output 22	dimming output 22	dimming	dimming output 19	&19&20 dimming output 16
23	output 23 dimming	output 12 dimming		output 18 dimming	output 14 dimming		dimming	dimming	output 19 dimming	dimming	dimming
24	output 24 dimming	output 12 fine dimming		output 19 dimming	strobe effects		output 23 dimming	output 23 dimming	strobe effects	output 20 dimming	output 17 dimming
25	output 25 dimming	output 13 dimming		output 21&22 dimming	output 16&17 &21 dimming		strobe effects	output 24 dimming	output 21&22&23 &24 dimming	output 21&22&23 &24&25dimming	output 18 dimming
26	Comming	output 13 fine dimming		output 21 dimming	output 16 dimming				output 21 dimming	output 21 dimming	output 19 dimming
27		output 14		output 22	output 17				output 22	output 22	output 20
28		dimming output 14		dimming output 23&24	dimming strobe effects				dimming output 23	dimming output 23	dimming strobe effects
		fine dimming output 15		dimming output 23	output 18&19				dimming output 24	dimming output 24	output 21&22&23
29		dimming output 15		dimming output 24	dimming output 18				dimming	dimming output 25	&24&25 dimming output 21
30		fine dimming		dimming	dimming				strobe effects	dimming	dimming
31		output 16 dimming			output 19 dimming						output 22 dimming
32		output 16 fine dimming			strobe effects						output 23 dimming
33		output 17 dimming			output 21&22 dimming						output 24 dimming
34		output 17			output 21 dimming						output 25 dimming
35		fine dimming output 18			output 22						strobe effects
36		dimming output 18			dimming strobe effects						
		fine dimming output 19			output 23&24						
37		dimming output 19			dimming output 23						
38		fine dimming			dimming						
39		output 20 dimming			output 24 dimming						
40		output 20 fine dimming			strobe effects						
41		output 21 dimmina									
42		output 21									
43		fine dimming output 22									
44		dimming output 22									
		fine dimming output 23									
45		dimming output 23									
46		fine dimming									
47		output 24 dimming									
48		output 24 fine dimming									
49		output 25 dimming									
50		output 25									
	l	fine dimming									

# 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
MODULATION\_FREQUENCY
MODULATION\_FREQUENCY\_DESCRIPTION
CURVE
CURVE\_DESCRIPTION

# The data definitions for strobe channel are as follows:

{0, 7},//undefined {8, 65},//slow strobe-->fast strobe {66, 71},//undefined {72, 127},//slow push fast close {128, 133},//undefined {134, 189},//slow close fast push {190, 195},//undefined {196, 250},//random strobe {251, 255},//undefined

## RDM Discovery Indication:

When using RDM to discover the device, the digital display will flash and the connected lights will also flash at the same frequency to indicate. Once the display stops flashing, the connected light also stops flashing.

## 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: a001
DMX Address Quantity: SW1=0: ch25, SW1=1: ch01
PWM Resolution Mode: bt16
PWM Frequency: pf25
Gamma: ga1.5
Decoding Mode: dp1.1