

8. Technical Specifications

Power Input: 110-120VAC(3.2A)/220-240VAC(1.6A),50/60Hz

DMX In: 3-pin male XLR connector

DMX Out: 3-pin female XLR connector

Output(Optional) 12VDC, 6A/CH Total 12A Max.

15VDC, 6A/CH Total 10A Max.

18VDC, 6A/CH Total 8A Max.

24VDC, 6A/CH Total 6A Max.

Dimension: 286X191X74mm

Weight: 3.0kg

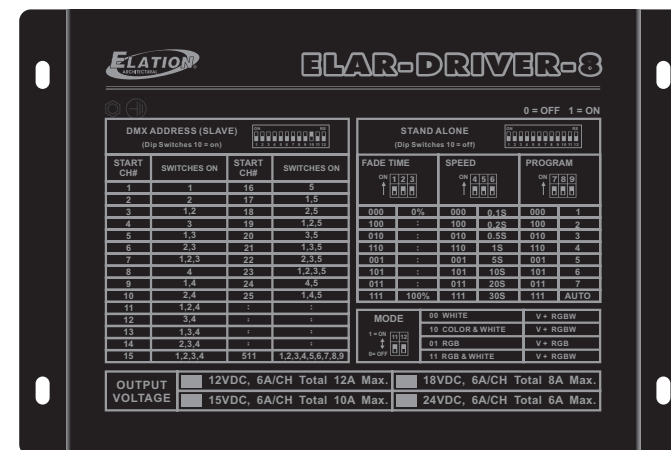
*Please Note:

Accessory of small screw driver is provided by us free.

Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.



Elar-Driver-8



Instruction Manual

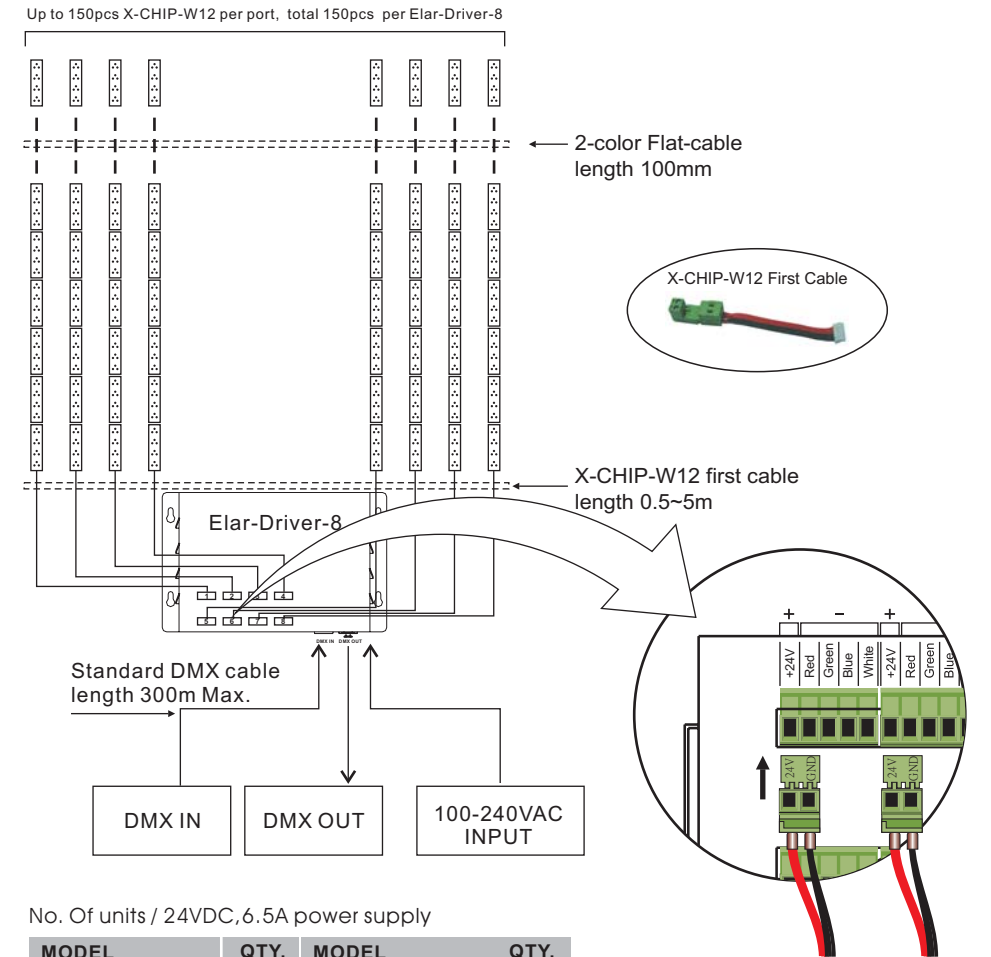
24-004-2253-00 Rev1.0

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2.Elar-Driver-8 with X-Chip-W12

Note: when the Elar-Driver-8 is used to drive X-Chip-W12(s), only the WHITE mode and the RGB&WHITE mode are valid, and other modes are not available.



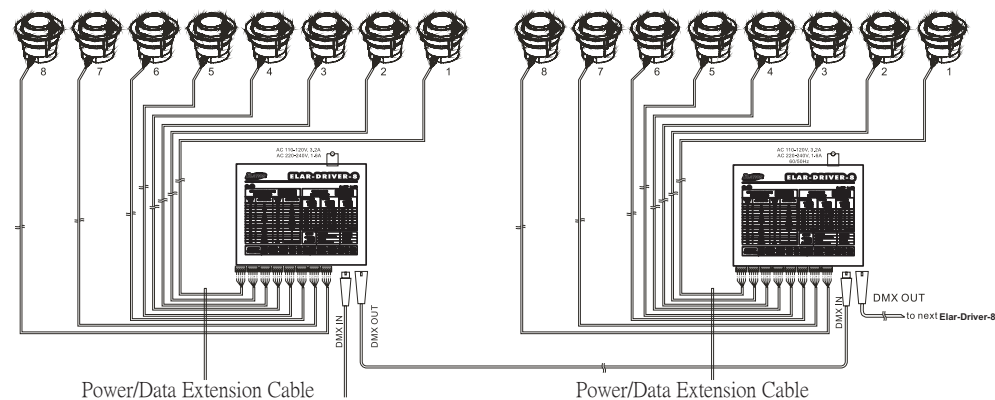
MODEL	QTY.	MODEL	QTY.
X-CHIP-100 DIP	120	X-CHIP-W15 - Amber	120
X-CHIP-100 SMD	120	X-CHIP-W12 - 6000K	150
X-CHIP-300 DIP	120	X-CHIP-W12 - 3200K	150
X-CHIP-300 SMD	120	X-CHIP-W12 - Amber	150
X-CHIP-W15 - 6000K	120	X-CHIP-II	84
X-CHIP-W15 - 3200K	120		

* Black cable (GND) shall be connected to Red / Green / Blue / White (-).

7. System Connection Diagram

A proper system connection must be established before performing this unit into application.

1. Elar-Driver-8 with X-Eye-STDs

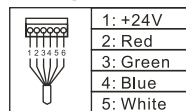


Sold Separately!



Power/Data Extension Cable

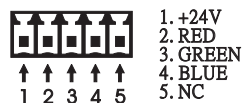
Pin Configuration



Sold Separately!



X-Eye-STD



1. General Information

1.1. Unpacking

Every Elar-Driver-8 has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton appears to be damaged, carefully inspect your controller for any damage and be sure all equipment necessary to operate the unit has arrived intact. In case damage has been found or parts are missing, please contact us or your nearest dealer/distributor for further instructions.

To optimize performance of this product, please read instructions in this manual and on the case of this product carefully to familiarize yourself with the basic operations. Once manual has been thoroughly read, we recommend you should file it for future reference.

Caution! There are no user serviceable parts inside this unit. Do not attempt any repairs yourself, doing so will void your manufactures warranty. In the unlikely event your unit may require service, please contact ELATION customer support.

Do not discard the packing carton in the trash. Please recycle when ever possible.

1.2. Safety Warnings

- The ground connection should be essential for this unit.
- Do not make any inflammable liquids, water or metal objects enter the unit.
- To prevent or reduce the risk of electric shock, DO NOT OPEN THE TOP COVER.
- This unit must be operated by adults, do not allow children to play with it.
- There are no user serviceable parts inside this unit. Do not attempt any repairs yourself.
- Should you experience any problem during use, please contact your local dealer immediately.
- Do not discard the shipping cartoon in the trash. Please recycle when ever possible.
- Always consult authorized personnel for any repairs and maintenance.
- When unpacking, please check the unit is not damaged. Should something wrong happen to this product, contact the local dealer immediately.
- All rights reserved. No part of the manual included with this product may be reproduced, transmitted, transcribed or translated into any language in any form, by any means, without authorized permission.

2.Main Features

- The Elar-Driver-8 as a hybrid&universal LED lighting driver.
- 12 digit dipswitch for functional setup.
- USITT DMX512(1990) multiplexed digital control, via 3 pin XLR connector.
- DMX Control Mode and Stand Alone Mode available .
- 0~100% fade time.
- 0.1S~30S chasing speed.
- Built-in programs1~7 and a sequence of 7 programs(Auto).
- Output modes available, including
 - Pure White (Intensity)
 - Color (RGB) with white (saturation)
 - RGB color only
- 110-120VAC(3.2A)/220-240VAC(1.6A) power input standards optional via voltage selector.
- With built-in 4 different PSU for user selection, available in 12VDC, 15VDC, 18VDC and 24VDC.
- Power failure memory.

3.Power & DMX Setup

3.1. Power Supply:

Before plugging your unit in, be sure the source voltage in your area matches the required voltage for your Elar-Driver-8 power supply. The Elar-Driver-8 is available in a 120V and 230V version. Due to variations in line voltage from venue to venue, be sure to plug your power supply into a wall outlet with matching power before attempting to operate.

3.2. Data Cable (DMX Cable) Requirements:

The Elar-Driver-8 can be controlled via DMX-512 protocol and your DMX controller requires a standard 3-pin XLR connector for data input and data output(Figure1). Connect the Elar-Driver-8 and your fixtures together using standard 3 pin DMX cables. The Elar-Driver-8 uses DMX-512 protocol to operate your fixtures.

If you are constructing your own data cables, be sure to use standard two conductor shielded cable (This cable may be purchased at almost all professional sound and lighting stores). Your cables should be made with a 3-pin male and female XLR connector on either end of the cable. Also remember that DMX lines must be daisy chained and can't be split.



Figure 1

*Note:

Be sure to follow figures two and three when making your own cables. Do not use the ground lug on the XLR connector. Do not connect the cable's shield conductor to the ground lug or allow the shield conductor to come in contact with the XLR's outer casing. Grounding the shield could cause a short circuit and erratic behavior.



Figure 2

6.Appendix

234	88	44	100	Blue @ Full Proportional Red and Green
235	76	38	100	
236	64	32	100	
237	50	25	100	
238	44	19	100	
239	38	13	100	
240	32	7	100	
241	25	12	100	
242	19	18	100	
243	13	24	100	
244	7	30	100	
245	12	36	100	
246	18	42	100	
247	24	48	100	
248	31	62	100	
249	37	74	100	
250	43	86	100	
251	49	98	100	
252	62	100	100	Blue and Green @ Full Proportional Red
253	74	100	100	
254	86	100	100	
255	100	100	100	Red,Green,Blue @ FULL (White)

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181	100	0	61	Red @ Full Proportional Blue
182	100	0	58	
183	100	0	55	
184	100	0	52	
185	100	0	49	
186	100	0	46	
187	100	0	43	
188	100	0	40	
189	100	0	37	
190	100	0	34	
191	100	0	31	
192	100	0	28	
193	100	0	25	
194	100	0	22	
195	100	0	19	
196	100	0	16	
197	100	0	13	
198	100	0	10	
199	100	0	7	
200	100	6	12	Red @ Full Proportional Green and Blue
201	100	12	24	
202	100	18	36	
203	100	24	48	
204	100	30	60	
205	100	36	72	
206	100	42	84	
207	100	50	100	Red & Blue @ Full, Green @ 50%
208	88	62	100	Blue @ Full Proportional Red and Green
209	76	74	100	
210	64	86	100	
211	50	100	100	Green & Blue @ Full, Red @ 50%
212	44	100	88	Green @ Full Proportional Red and Blue
213	38	100	76	
214	32	100	64	
215	26	100	52	
216	19	100	44	
217	13	100	38	
218	7	100	32	
219	12	100	25	
220	18	100	19	
221	24	100	13	
222	30	100	7	
223	38	100	12	
224	44	100	18	
225	50	100	24	
226	62	100	31	
227	74	100	37	
228	86	100	43	
229	100	100	50	Red and Green @ Full, Blue @ 50%
230	100	88	62	Red @ Full Proportional Green and Blue
231	100	76	74	
232	100	64	86	
233	100	50	100	Red and Blue @ Full, Green @ 50%

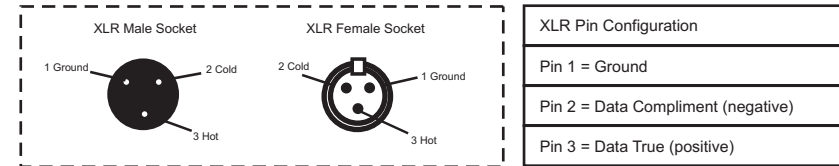


Figure 3

*Special Note:

Line Termination. When longer runs of cable are used, you may need to use a terminator on the last unit to avoid erratic behavior. A terminator is a 120 ohm 1/4 watt resistor which is connected between pins 2 and 3 of a male XLR connector (DATA + and DATA -). This unit is inserted in the female XLR connector of the last unit in your daisy chain to terminate the line. Using a cable terminator will decrease the possibilities of erratic behavior.

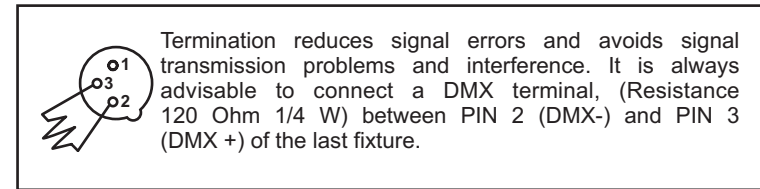


Figure 4

DMX Signal Cable. 120 ohm impedance DMX signal cable **MUST** be used for signal connection.

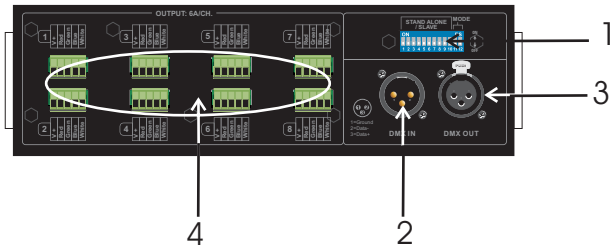
5-Pin XLR DMX Connectors.

Some manufactures use 5-pin XLR connectors for DATA transmission in place of 3-pin. 5-pin XLR fixtures may be implemented in a 3-pin XLR DMX line. When inserting standard 5-pin XLR connectors in to a 3-pin line a cable adaptor must be used, these adaptors are readily available at most electric stores. The chart below details a proper cable conversion.

3-Pin XLR to 5-Pin XLR Conversion		
Conductor	3-Pin XLR Female(Out)	5-pin XLR Male(In)
Ground/Shield	Pin 1	Pin 1
Data Complement(-signal)	Pin 2	Pin 2
Data True(+signal)	Pin 3	Pin 3
Not Used		Pin 4 - Do Not Used
Not Used		Pin 5 - Do Not Used

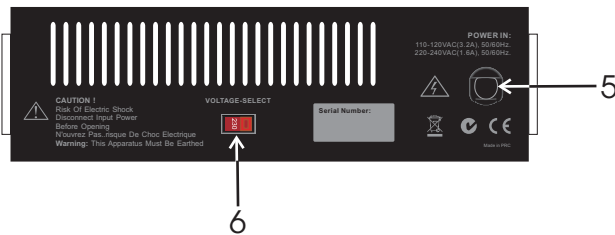
4. Product Layout & Functions

4.1. Front Panel Layout



1. Dip Switch: Assign 12 dip-switches to set some function modes for user's desired effects.
2. DMX Input: 3-Pin XLR connector. Connect a universal DMX controller into this input for receiving DMX values or DMX signals.
3. DMX Output: 3-Pin XLR connector. Connect to next DMX fixtures for sending DMX values or DMX signals.
4. Output(Optional): 8 terminal outputs, available in;
 - 12VDC, 6A/CH Total 12A Max.
 - 15VDC, 6A/CH Total 10A Max.
 - 18VDC, 6A/CH Total 8A Max.
 - 24VDC, 6A/CH Total 6A Max.

4.2. Rear Panel Layout



5. Power Input: 110-120VAC(3.2A)/220-240VAC(1.6A), 50/60Hz.
6. Voltage Selector: To select AC120V or AC230V by sliding the selector.

5. Operation Guide

5.1. DMX Address Setting-DMX Control Mode

DMX is short for Digital Multiplex. This is a universal binary language used as a form of communication between intelligent fixtures. Each dip switch represents a binary value.

- Dip Switch 1 address equals 1
- Dip Switch 2 address equals 2
- Dip Switch 3 address equals 4
- Dip Switch 4 address equals 8
- Dip Switch 5 address equals 16
- Dip Switch 6 address equals 32
- Dip Switch 7 address equals 64
- Dip Switch 8 address equals 128
- Dip Switch 9 address equals 256

DMX ADDRESS (SLAVE) (Dip Switch 10 = on)			
START CH#	SWITCHES ON	START CH#	SWITCHES ON
1	1	11	1,2,4
2	2	12	3,4
3	1,2	13	1,3,4
4	3	14	2,3,4
5	1,3	15	1,2,3,4
6	2,3	-	-
7	1,2,3	-	-
8	4	-	-
9	1,4	-	-
10	2,4	511	1,2,3,4,5,6,7,8,9

In this mode, the dip-switch 10 is flipped to the "ON" position. And this switch sometimes used to activate a fixture special functions.

Hint: When DMX address is "0", the output is **FULL ON**.

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119	0	46	100	Blue @ Full Proportional Green
120	0	43	100	
121	0	40	100	
122	0	37	100	
123	0	34	100	
124	0	31	100	
125	0	28	100	
126	0	25	100	
127	0	22	100	
128	0	19	100	
129	0	16	100	
130	0	13	100	
131	0	10	100	
132	0	7	100	

133	0	0	100	Blue @ Full only
134	0	0	100	
135	0	0	100	
136	0	0	100	

137	3	0	100	Blue @ Full Proportional Red
138	6	0	100	
139	9	0	100	
140	12	0	100	
141	15	0	100	
142	18	0	100	
143	21	0	100	
144	24	0	100	
145	27	0	100	
146	30	0	100	
147	33	0	100	
148	36	0	100	
149	39	0	100	
150	42	0	100	
151	45	0	100	
152	48	0	100	
153	51	0	100	
154	54	0	100	
155	57	0	100	
156	60	0	100	
157	63	0	100	
158	66	0	100	
159	69	0	100	
160	72	0	100	
161	75	0	100	
162	78	0	100	
163	81	0	100	
164	84	0	100	
165	87	0	100	
166	90	0	100	
167	93	0	100	

168	100	0	100	Red & Blue @ Full(PURPLE)
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169	100	0	97	Red @ Full Proportional Blue
170	100	0	94	
171	100	0	91	
172	100	0	88	
173	100	0	85	
174	100	0	82	
175	100	0	79	
176	100	0	76	
177	100	0	73	
178	100	0	70	
179	100	0	67	
180	100	0	64	

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57	31	100	0	Green @ Full Proportional Red
58	28	100	0	
59	25	100	0	
60	22	100	0	
61	19	100	0	
62	16	100	0	
63	13	100	0	
64	10	100	0	
65	7	100	0	

66	0	100	0	Green @ Full only
67	0	100	0	
68	0	100	0	
69	0	100	0	

70	0	100	3	Green @ Full Proportional Blue
71	0	100	6	
72	0	100	9	
73	0	100	12	
74	0	100	15	
75	0	100	18	
76	0	100	21	
77	0	100	24	
78	0	100	27	
79	0	100	30	
80	0	100	33	
81	0	100	36	
82	0	100	39	
83	0	100	42	
84	0	100	45	
85	0	100	48	
86	0	100	51	
87	0	100	54	
88	0	100	57	
89	0	100	60	
90	0	100	63	
91	0	100	66	
92	0	100	69	
93	0	100	72	
94	0	100	75	
95	0	100	78	
96	0	100	81	
97	0	100	84	
98	0	100	87	
99	0	100	90	
100	0	100	93	

101	0	100	100	Green & Blue @ Full(CYAN)
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102	0	97	100	Blue @ Full Proportional Green
103	0	94	100	
104	0	91	100	
105	0	88	100	
106	0	85	100	
107	0	82	100	
108	0	79	100	
109	0	76	100	
110	0	73	100	
111	0	70	100	
112	0	67	100	
113	0	64	100	
114	0	61	100	
115	0	58	100	
116	0	55	100	
117	0	52	100	
118	0	49	100	

A DMX value(address) is set by combining the different dipswitches that will add up to the value you wish to achieve, for example:

Setting DMX address for 21.
Flip switches 1,3,&5 to the "ON" position

$$\begin{array}{r} 1=1 \\ 3=4 \\ \text{Dipswitches\# } 5=16 \\ \hline \text{Value} \\ =21 \end{array}$$

Setting DMX address for 201.
Flip switches 1,4,7, & 8 to the "ON" position

$$\begin{array}{r} 1=1 \\ 4=8 \\ 7=64 \\ 8=128 \\ \hline \text{Value} \\ =201 \end{array}$$

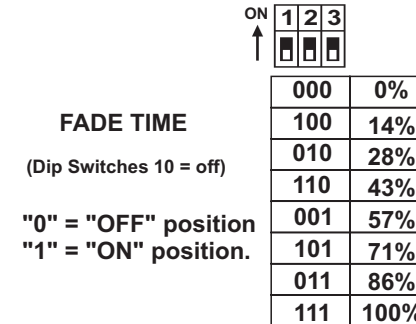
5.2. Stand Alone Mode

User can activate the Stand Alone Mode by flipping the dip switch 10 to the "OFF" position. And this mode includes sub-modes with many functions, such as fade time, chasing speed, built-in programs.



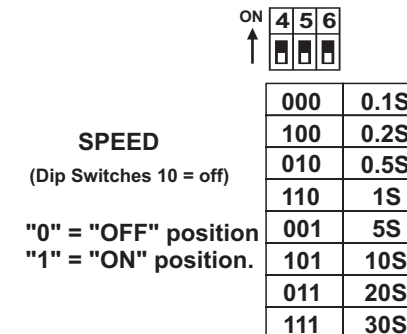
5.2.1. Fade time setup

In Stand Alone Mode, **fade time** can be set up by flipping dip switches 1,2&3 to "ON" or "OFF" position separately at the range of 0~100%.



5.2.2. Chasing speed adjustment

In Stand Alone Mode, **chasing speed** can be adjusted by flipping dip switches 4,5&6 to "ON" or "OFF" position separately at the range of 0.1S~30S.



5.2.3. Built-in programs selection

In Stand Alone mode, **built-in programs 1~7 and Auto program** can be and selected and chased by flipping dip switches 7, 8 & 9 to "ON" or "OFF" position separately.



PROGRAM

(Dip Switches 10 = off)

"0" = "OFF" position
"1" = "ON" position.

AUTO=a sequence of 7 patterns

000	1
100	2
010	3
110	4
001	5
101	6
011	7
111	AUTO

5.2.4. Output Mode Setting

4 different output modes are available by flipping dip switches 11 and 12 to "ON" or "OFF" position separately.

MODE 1 = ON ↓ 0 = OFF	00 WHITE	V RGBW
	10 COLOR & WHITE	V RGBW
	01 RGB	V RGB
	11 RGB & WHITE	V RGBW

NOTE:

-In WHITE Mode, R.G.B and W will output in the same way. And One DMX channel will control one output socket.

Channel	Function
1	R.G.B and White

-In COLOR & WHITE Mode, two DMX channels will control one output socket. And the first will control R.G.B output(Please refer to the following **Color Mix Table (Preset)** for more information), the second will control the WHITE output.

Channel	Function
1	Spectrum color mix
2	White

See Color Mix Table in appendix section.

-In RGB Mode, three DMX channels will control one output socket. And the first will control the Red output, the second for the Green output, the third for the Blue output, and the White disable.

Channel	Function
1	Red
2	Green
3	Blue

White disable.

-In RGB & WHITE Mode, four DMX channels will control one output socket. And the first will control the Red output, the second for the Green output, the third for the Blue output, and the fourth for the White output.

Channel	Function
1	Red
2	Green
3	Blue
4	White

6.Appendix

(R.G.B.)Color Mix and DMX value Table(Preset)

DMX Value	Red Intensity 0% ~ 100%	Green Intensity 0% ~ 100%	Blue Intensity 0% ~ 100%	Notes(Color)	
0	0	0	0	Blackout	
1	100	0	0	Red @ Full only	
2	100	0	0		
3	100	3	0	Red @ Full Proportional Green	
4	100	6	0		
5	100	9	0		
6	100	12	0		
7	100	15	0		
8	100	18	0		
9	100	21	0		
10	100	24	0		
11	100	27	0		
12	100	30	0		
13	100	33	0		
14	100	36	0		
15	100	39	0		
16	100	42	0		
17	100	45	0		
18	100	48	0		
19	100	51	0		
20	100	54	0		
21	100	57	0		
22	100	60	0		
23	100	63	0		
24	100	66	0		
25	100	69	0		
26	100	72	0		
27	100	75	0		
28	100	78	0		
29	100	81	0		
30	100	84	0		
31	100	87	0		
32	100	90	0		
33	100	93	0		
34	100	100	0		Red & Green @ Full(YELLOW)
35	97	100	0		Green @ Full Proportional Red
36	94	100	0		
37	91	100	0		
38	88	100	0		
39	85	100	0		
40	82	100	0		
41	79	100	0		
42	76	100	0		
43	73	100	0		
44	70	100	0		
45	67	100	0		
46	64	100	0		
47	61	100	0		
48	58	100	0		
49	55	100	0		
50	52	100	0		
51	49	100	0		
52	46	100	0		
53	43	100	0		
54	40	100	0		
55	37	100	0		
56	34	100	0		