

THUNDER 2000-RGBW



This product manual contains important information about the safe installation and use of this projector. Please read and follow these instructions carefully and keep this manual in a safe place for future reference.

User manual

Please read the instructions carefully before use

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STATEMENT

The product has well capability and intact packing when leave factory. All of the user should comply with warning item and manual, any misuse cause of the damages are not included in our guarantee, and also can not be responsible for any malfunction & problem owing to ignore the manual.

1.Safety Instruction

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.

Unpack and check carefully there is no transportation damage before using the unit.

Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.

It's important to ground the yellow/green conductor to earth in order to avoid electric shock.

The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked. Disconnect main power before replacement or servicing.

Make sure there are no flammable materials close to the unit while operating as it is fire hazard.

Use safety cable when fixes this unit. DO NOT handle the unit by taking its head only, but always by taking its base.

Maximum ambient temperature is T_a : 40°C. DO NOT operate it where the temperature is higher than this Unit surface temperature may reach up to 85°C. DO NOT touch the housing bare-hand during its operation. Turn off the power and allow about 15 minutes for the unit to cool down before replacing or serving.

In the event of serious operating problem, stop using the unit immediately. Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.

DO NOT touch any wire during operation as high voltage might be causing electric shock.

WARNING:

To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.

DO NOT open the unit within five minutes after switching off.

The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.

CAUTION:

There are no user serviceable parts inside the unit. DO NOT open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact your nearest dealer.

INSTALLATION:

The unit should be mounted via its screw holes on the bracket. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. And make sure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times of the unit's weight. Also always use a safety cable that can hold 12 times of the weight of the unit when installing the fixture.

The equipment must be fixed by professionals. And it must be fixed at a place where is out of the touch of people.

2. Technical Specification

Power Voltage: AC 100-240V, 50/60Hz

Power Consumption: 1400W

Light Sources: 1.56W white 392pcs 2835 Leds, 1W RGB 3in1 784pcs 5050 Leds

Pixel matrix: White 2*14 Groups, Color 2*7 Groups

Lumen full output: R 5480Lm G 11760Lm B 1560Lm W 45000Lm All 63880Lm

CRI: Ra≥90

Light source life: 20000 hours

Beam angle: 110°

Dimmer: 0-100% linear dimmer

Control

DMX Channel: 8/11/13/24/30/74/97CH

Control Modes: DMX512, Auto, Master-Slave, Music

Display: Illuminated graphic LCD

Protocol: Art-Net, DMX-512, RDM

RDM: Bidirectional communication

Cooling: Temperature controlled, overheating protection

Construction

Display: LCD Display

DMX In/Out socket: 3-pin XLR waterproof in/out

Power Socket: Waterproof powercon in/out

Protection Rating: IP65

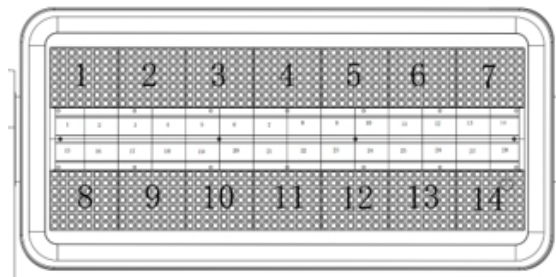
Size

Packing Size: 404*202*350MM

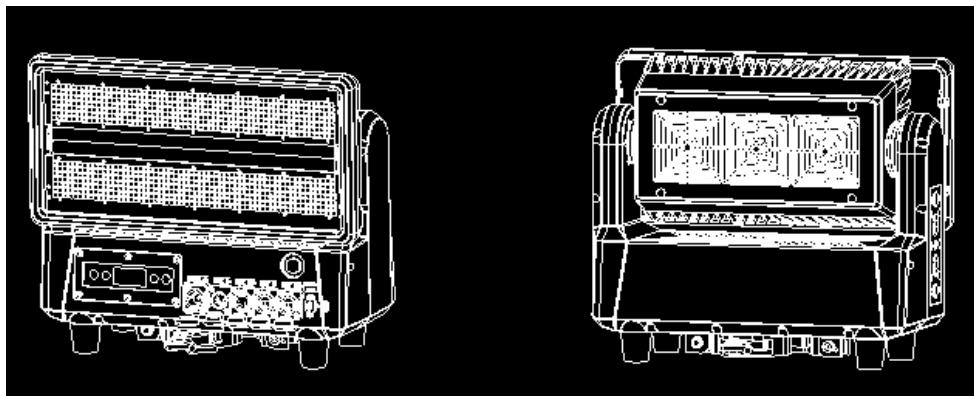
Weight

Gross Weight: 15Kgs

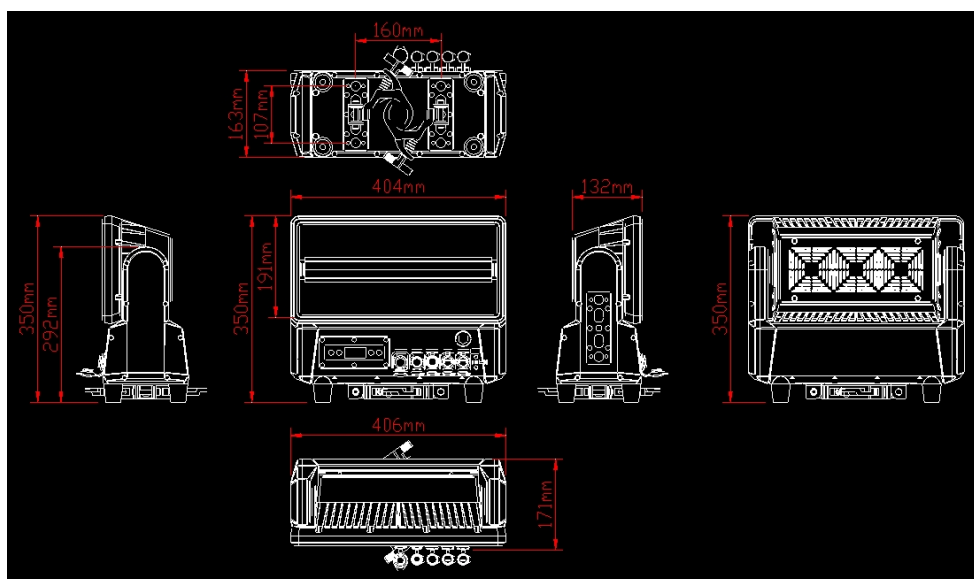
LEDs Arrangement



Product View

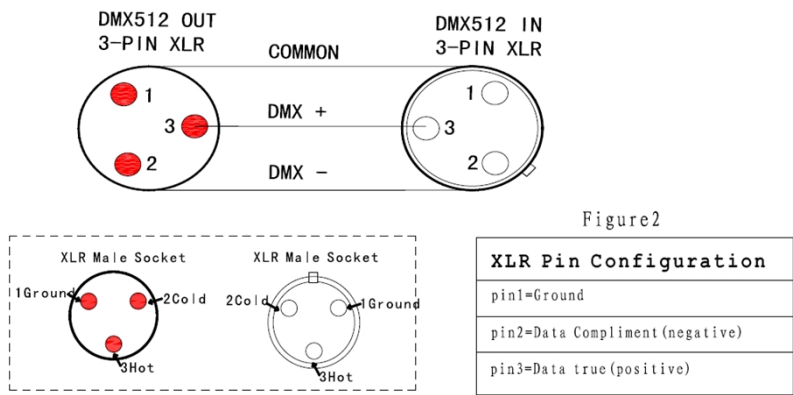


Product Dimensions



3.How to Control The Device

The DMX512 is widely used in intelligent lighting control,with a DMX 512 controller.connect several lights together,dmx in and dmx out, 3 pin XLR connectors: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)



Display:

- MENU To select the programming functions
- DOWN To go backward in the selected functions
- UP To go forward in the selected functions
- ENTER To confirm the selected functions

Set DMX Address Code

- Press "**Menu**" to "Set DMX Address",and press "**ENTER**" keys to enter into
- Show "Set DMX Address DMX Address:001",Press the "**UP** and **DOWN**" keys to amended
- Press "**ENTER**" keys to save and Exit,Press the "**MENU**" Keys does not save and Exit
- Functions setting via LCD display panel as below:

	Main Level	Programming Levels
1	Protocol	DMX512

2	DMX Address	1–512*		
3	DMX Channel	8CH		
		11CH		
		13CH		
		24CH		
		30CH		
		74CH		
		97CH		
4	Static	Fixed Color	R	
			G	
			B	
			GB	
			RB	
			RG	
			RGB	
		Manual Color Mixer	Red	0-255
			Green	
			Blue	
5	Plate FX	Plate FX 1 Plate FX 2 Plate FX 3	Speed	1-100
			Plate Intensity	000-255
		Plate FX 4 Plate FX 5 Plate FX 6 Plate FX 7 Plate FX 8 Plate FX 9	Background Color	R
				G
				B
				GB
				RB
				RG
				RGB

				Off
			Foreground Color	R
				G
				B
				GB
				RB
				RG
				RGB
				Off
6	Beam Intensity	000-255		
7	Beam Flash Duration	000-255		
8	Beam Flash Rate	000-255		
9	Tilt	000-255		
10	Tilt Offset	000-255		
11	Tilt Invert	No		
		Yes		
12	Pixel Invert	Plate1 Invert	No	
			Yes	
		Plate2 Invert	No	
			Yes	
		Tube1 Invert	No	
			Yes	
		Tube2 Invert	No	
			Yes	
13	LED Array Swap	Plate Swap	No	
			Yes	
		Beam Swap	No	

			Yes
14	Master/Slave	Master	
		Slave	
15	Dimmer Mode	OFF	
		DIM1–3	
16	White Balance	Off	
		Manual	Red Green Blue 125-255
17	LED Frequency	600Hz 1200Hz 2000Hz 4000Hz 6000Hz 25000Hz	
18	Fan Mode	Auto	
		On	
19	Display Invert	No	
		Yes	
20	Backlight	10s	
		30s	
		2Min	
		Always On	

21	Key Lock	On	
		Off	
22	Ethernet Setting	Universe	0–255 (ArtNet)
			1–255 (sACN)
		IP Address	2.192.0.1
23	Information	Fixture Hours:	___Hours
		LED Hours:	__H
		Disp Ver:	V_._
		Drv-Y Ver:	V_._
		LED-A Ver:	V_._
		LED-C Ver:	V_._
		Net Ver:	V_._
		UID	_____
24	Update Firmware	Only this Unit	_____.CHL
			...
		Multiple Units	_____.CHL
			...
		Other Fixture Type	_____.CHL
			...
25	Factory Reset	No	
		Yes	

4. DMX Channel Table

DMX 512 97CHs

CH	Function	Value	Percent/Setting
1	Tilt	000-255	0-100%
2	Fine tilt	000-255	0-100%
3	Master dimmer	000-255	0-100%
4	Plate dimmer	000-255	0-100%
5	Beam dimmer	000-255	0-100%
6	Plate flash duration	000-009	Classic shutter mode:disables duration control
		010-250	Slow to fast
		251-255	100% On,no flash/strobe
7	Plate flash rate	000-009	100%
		010-250	Slow to fast
		251-255	100%
8	Beam flash duration	000-009	Classic shutter mode:disables duration control
		010-250	Slow to fast
		251-255	100% On,no flash/strobe

9	Beam flash rate	000-009	100%
		010-250	Slow to fast
		251-255	100%
10	Plate pixel 1 red	000-255	0-100%
11	Plate pixel 1 green	000-255	0-100%
12	Plate pixel 1 blue	000-255	0-100%
13	Plate pixel 2 red	000-255	0-100%
14	Plate pixel 2 green	000-255	0-100%
15	Plate pixel 2 blue	000-255	0-100%
16	Plate pixel 3 red	000-255	0-100%
17	Plate pixel 3 green	000-255	0-100%
18	Plate pixel 3 blue	000-255	0-100%
19	Plate pixel 4 red	000-255	0-100%
20	Plate pixel 4 green	000-255	0-100%
21	Plate pixel 4 blue	000-255	0-100%

22	Plate pixel 5 red	000-255	0-100%
23	Plate pixel 5 green	000-255	0-100%
24	Plate pixel 5 blue	000-255	0-100%
25	Plate pixel 6 red	000-255	0-100%
26	Plate pixel 6 green	000-255	0-100%
27	Plate pixel 6 blue	000-255	0-100%
28	Plate pixel 7 red	000-255	0-100%
29	Plate pixel 7 green	000-255	0-100%
30	Plate pixel 7 blue	000-255	0-100%
31	Plate pixel 8 red	000-255	0-100%
32	Plate pixel 8 green	000-255	0-100%
33	Plate pixel 8 blue	000-255	0-100%
34	Plate pixel 9 red	000-255	0-100%
35	Plate pixel 9 green	000-255	0-100%
36	Plate pixel 9 blue	000-255	0-100%

37	Plate pixel 10 red	000-255	0-100%
38	Plate pixel 10 green	000-255	0-100%
39	Plate pixel 10 blue	000-255	0-100%
40	Plate pixel 11 red	000-255	0-100%
41	Plate pixel 11 green	000-255	0-100%
42	Plate pixel 11 blue	000-255	0-100%
43	Plate pixel 12 red	000-255	0-100%
44	Plate pixel 12 green	000-255	0-100%
45	Plate pixel 12 blue	000-255	0-100%
46	Plate pixel 13red	000-255	0-100%
47	Plate pixel 13 green	000-255	0-100%
48	Plate pixel 13 blue	000-255	0-100%
49	Plate pixel 14 red	000-255	0-100%
50	Plate pixel 14 green	000-255	0-100%
51	Plate pixel 14 blue	000-255	0-100%

52	Beam pixel 1	000-255	0-100%
53	Beam pixel 2	000-255	0-100%
54	Beam pixel 3	000-255	0-100%
55	Beam pixel 4	000-255	0-100%
56	Beam pixel 5	000-255	0-100%
57	Beam pixel 6	000-255	0-100%
58	Beam pixel 7	000-255	0-100%
59	Beam pixel 8	000-255	0-100%
60	Beam pixel 9	000-255	0-100%
61	Beam pixel 10	000-255	0-100%
62	Beam pixel 11	000-255	0-100%
63	Beam pixel 12	000-255	0-100%
64	Beam pixel 13	000-255	0-100%
65	Beam pixel 14	000-255	0-100%
66	Beam pixel 15	000-255	0-100%

67	Beam pixel 16	000-255	0-100%
68	Beam pixel 17	000-255	0-100%
69	Beam pixel 18	000-255	0-100%
70	Beam pixel 19	000-255	0-100%
71	Beam pixel 20	000-255	0-100%
72	Beam pixel 21	000-255	0-100%
73	Beam pixel 22	000-255	0-100%
74	Beam pixel 23	000-255	0-100%
75	Beam pixel 24	000-255	0-100%
76	Beam pixel 25	000-255	0-100%
77	Beam pixel 26	000-255	0-100%
78	Beam pixel 27	000-255	0-100%
79	Beam pixel 28	000-255	0-100%
80	Beam FX	000-005	No function
		006-042	Ramp up

		043-085	Ramp down
		086-128	Ramp up-down
		129-171	Random
		172-214	Lightning
		215-255	Spikes
81 82 83	Plates foreground Plate foreground dimmer Plate background	000-000	No function
		001-002	White(2700K)
		003-004	White(3200K)
		005-006	White(4200K)
		007-008	White(5600K)
		009-010	White(8000K)
		011	Blue R:0 G:0 B:255 W:0
		012-048	Green+/Blue R:0 G:+ B:255 W:0
		049	Cyan R:0 G:255 B:255 W:0
		050-086	Green/Blue- R:0 G:255 B:- W:0

		087	Green	R:0	G:255
			B:0	W:0	
		088-124	Red+/Green	R:+	G:255
			B:0	W:0	
		125	Yellow	R:255	G:255
			B:0	W:0	
		126-162	Red/Green-	R:255	G:-
			B:0	W:0	
		163	Red	R:255	G:0
			B:0	W:0	
		164-200	Red/Blue+	R:255	G:0
			B:+	W:0	
		201	Magenta	R:255	G:0
			B:255	W:0	
		202-238	Red-/Blue	R:-	G:0
			B:255	W:0	
		239	Blue	R:0	G:0
			B:255	W:0	
		240-247	Color index,fast to slow		
		248-255	Color snap,fast to slow		
		000-255	0-100%		
		000-000	No function		
		001-002	White(2700K)		
		003-004	White(3200K)		

		005-006	White(4200K)
		007-008	White(5600K)
		009-010	White(8000K)
		011	Blue R:0 G:0 B:255 W:0
		012-048	Green+/Blue R:0 G:+ B:255 W:0
		049	Cyan R:0 G:255 B:255 W:0
		050-086	Green/Blue- R:0 G:255 B:- W:0
		087	Green R:0 G:255 B:0 W:0
		088-124	Red+/Green R:+ G:255 B:0 W:0
		125	Yellow R:255 G:255 B:0 W:0
		126-162	Red/Green- R:255 G:- B:0 W:0
		163	Red R:255 G:0 B:0 W:0
		164-200	Red/Blue+ R:255 G:0 B:+ W:0
		201	Magenta R:255 G:0 B:255 W:0
		202-238	Red-/Blue R:- G:0 B:255 W:0

		239	Blue R:0 G:0 B:255 W:0
		240-247	Color index,fast to slow
		248-255	Color snap,fast to slow
84	Plate background dimmer	000-255	0-100%
85	Plate 1(pixels 1-7)	000-002	Plate FX All select(all on) see Plate Patterns
	FX select (see Pixel Mapping)	003-255	
86	Plate 1(pixels 1-7) FX movement speed & direction (see Pixel Mapping)	000-005	No function
		006-124	Left to right,fast to slow
		125-130	No function
		131-249	Right to left,slow to fast
		250-255	No function
87	Plate 1(pixels 1-7)	000-002	Snap from cell to cell
	FX crossfade (see Pixel Mapping)	003-255	Fade duration:short to long
88	Plate 2(pixels 8-14)	000-002	Plate FX All select(all on) see Plate Patterns
	FX select (see Pixel Mapping)	003-255	

89	Plate 2(pixels 8-14) FX movement speed & direction (see Pixel Mapping)	000-005	No function
		006-124	Left to right,fast to slow
		125-130	No function
		131-249	Right to left,slow to fast
		250-255	No function
90	Plate 2(pixels 8-14)	000-002	Snap from cell to cell
	FX crossfade (see Pixel Mapping)	003-255	Fade duration:short to long
91	Beam 1(pixels 1-14)	000-002	Beam FX All select(all on) see Beam Patterns
	FX select (see Pixel Mapping)	003-255	
92	Beam 1(pixels 1-14) FX movement speed & direction (see Pixel Mapping)	000-005	No function
		006-124	Left to right,fast to slow
		125-130	No function
		131-249	Right to left,slow to fast
		250-255	No function
93	Beam 1(pixels 1-14)	000-002	Snap from cell to cell Fade duration:short to long

	FX crossfade (see Pixel Mapping)	003-255	
94	Beam 2(pixels 15-28) FX select (see Pixel Mapping)	000-002	Beam FX All select(all on) see Beam Patterns
		003-255	
95	Beam 2(pixels 15-28)FX movement speed & direction (see Pixel Mapping)	000-005	No function
		006-124	Left to right,fast to slow
		125-130	No function
		131-249	Right to left,slow to fast
		250-255	No function
96	Beam 2(pixels 15-28) FX crossfade (see Pixel Mapping)	000-002	Snap from cell to cell Fade duration:short to long
		003-255	
97	Control*	000-005	No function
		006-010	Off (dimmer mode)
		011-015	Dimmer 1
		016-020	Dimmer 2
		021-025	Dimmer 3

		026-030	600 Hz
		031-035	1200 Hz
		036-040	2000 Hz
		041-045	4000 Hz
		046-050	6000 Hz
		051-055	25 KHz
		056-060	Fan mode auto
		060-065	Fan mode on
		066-070	Tilt reset
		071-075	Plate 1 invert off
		076-080	Plate 1 invert on
		081-085	Plate 2 invert off
		086-090	Plate 2 invert on
		091-095	Beam 1 invert off
		096-100	Beam 1 invert on

		101-105	Beam 2 invert off
		106-110	Beam 2 invert on
		111-115	Plate swap on
		116-120	Plate swap off
		121-125	Beam swap on
		126-130	Beam swap off
		131-255	No function

DMX 512 74CHs

CH	Function	Value	Percent/Setting
1	Tilt	000-255	0-100%
2	Fine tilt	000-255	0-100%
3	Dimmer	000-255	0-100%
4	Strobe	000-009	Open
		010-079	Strobe,slow to fast
		080-149	Pulse,slow to fast
		150-219	Random Strobe,slow to fast
		220-255	Open
5	Plate pixel 1 red	000-255	0-100%
6	Plate pixel 1 green	000-255	0-100%
7	Plate pixel 1 blue	000-255	0-100%
8	Plate pixel 2 red	000-255	0-100%
9	Plate pixel 2 green	000-255	0-100%

10	Plate pixel 2 blue	000-255	0-100%
11	Plate pixel 3 red	000-255	0-100%
12	Plate pixel 3 green	000-255	0-100%
13	Plate pixel 3 blue	000-255	0-100%
14	Plate pixel 4 red	000-255	0-100%
15	Plate pixel 4 green	000-255	0-100%
16	Plate pixel 4 blue	000-255	0-100%
17	Plate pixel 5 red	000-255	0-100%
18	Plate pixel 5 green	000-255	0-100%
19	Plate pixel 5 blue	000-255	0-100%
20	Plate pixel 6 red	000-255	0-100%
21	Plate pixel 6 green	000-255	0-100%
22	Plate pixel 6 blue	000-255	0-100%
23	Plate pixel 7 red	000-255	0-100%
24	Plate pixel 7 green	000-255	0-100%
25	Plate pixel 7 blue	000-255	0-100%
26	Plate pixel 8 red	000-255	0-100%
27	Plate pixel 8 green	000-255	0-100%
28	Plate pixel 8 blue	000-255	0-100%
29	Plate pixel 9 red	000-255	0-100%
30	Plate pixel 9 green	000-255	0-100%
31	Plate pixel 9 blue	000-255	0-100%
32	Plate pixel 10 red	000-255	0-100%
33	Plate pixel 10 green	000-255	0-100%
34	Plate pixel 10 blue	000-255	0-100%
35	Plate pixel 11 red	000-255	0-100%
36	Plate pixel 11 green	000-255	0-100%
37	Plate pixel 11 blue	000-255	0-100%
38	Plate pixel 12 red	000-255	0-100%

39	Plate pixel 12 green	000-255	0-100%
40	Plate pixel 12 blue	000-255	0-100%
41	Plate pixel 13red	000-255	0-100%
42	Plate pixel 13 green	000-255	0-100%
43	Plate pixel 13 blue	000-255	0-100%
44	Plate pixel 14 red	000-255	0-100%
45	Plate pixel 14 green	000-255	0-100%
46	Plate pixel 14 blue	000-255	0-100%
47	Beam pixel 1	000-255	0-100%
48	Beam pixel 2	000-255	0-100%
49	Beam pixel 3	000-255	0-100%
50	Beam pixel 4	000-255	0-100%
51	Beam pixel 5	000-255	0-100%
52	Beam pixel 6	000-255	0-100%
53	Beam pixel 7	000-255	0-100%
54	Beam pixel 8	000-255	0-100%
55	Beam pixel 9	000-255	0-100%
56	Beam pixel 10	000-255	0-100%
57	Beam pixel 11	000-255	0-100%
58	Beam pixel 12	000-255	0-100%
59	Beam pixel 13	000-255	0-100%
60	Beam pixel 14	000-255	0-100%
61	Beam pixel 15	000-255	0-100%
62	Beam pixel 16	000-255	0-100%
63	Beam pixel 17	000-255	0-100%
64	Beam pixel 18	000-255	0-100%
65	Beam pixel 19	000-255	0-100%
66	Beam pixel 20	000-255	0-100%
67	Beam pixel 21	000-255	0-100%

68	Beam pixel 22	000-255	0-100%
69	Beam pixel 23	000-255	0-100%
70	Beam pixel 24	000-255	0-100%
71	Beam pixel 25	000-255	0-100%
72	Beam pixel 26	000-255	0-100%
73	Beam pixel 27	000-255	0-100%
74	Beam pixel 28	000-255	0-100%

DMX 512 30CHs

CH	Function	Value	Percent/Setting
1	Tilt	000-255	0-100%
2	Fine tilt	000-255	0-100%
3	Master dimmer	000-255	0-100%
4	Plate dimmer	000-255	0-100%
5	Beam dimmer	000-255	0-100%
6	Plate flash duration	000-009	Classic shutter mode:disables duration control
		010-250	Slow to fast
		251-255	100% On,no flash/strobe
7	Plate flash rate	000-009	100%
		010-250	Slow to fast
		251-255	100%
8	Beam flash duration	000-009	Classic shutter mode:disables duration control
		010-250	Slow to fast
		251-255	100% On,no flash/strobe
9	Beam flash rate	000-009	100%
		010-250	Slow to fast

		251-255	100%
10	Plates red	000-255	0-100%
11	Plates green	000-255	0-100%
12	Plates blue	000-255	0-100%
13	Beam FX	000-005	No function
		006-042	Ramp up
		043-085	Ramp down
		086-128	Ramp up-down
		129-171	Random
		172-214	Lightning
		215-255	Spikes
14	Plates foreground	000-000	No function
		001-002	White(2700K)
		003-004	White(3200K)
		005-006	White(4200K)
		007-008	White(5600K)
		009-010	White(8000K)
		011	Blue R:0 G:0 B:255 W:0
		012-048	Green+/Blue R:0 G:0 B:255 W:0
		049	Cyan R:0 G:255 B:255 W:0
		050-086	Green/Blue- R:0 G:255 B:- W:0
		087	Green R:0 G:255 B:0 W:0
		088-124	Red+/Green R:0 G:255 B:0 W:0

		125	Yellow B:0 W:0	R:255	G:255
		126-162	Red/Green- B:0 W:0	R:255	G:-
		163	Red B:0 W:0	R:255	G:0
		164-200	Red/Blue+ B:+ W:0	R:255	G:0
		201	Magenta B:255 W:0	R:255	G:0
		202-238	Red-/Blue B:255 W:0	R:-	G:0
		239	Blue B:255 W:0	R:0	G:0
		240-247	Color index,fast to slow		
		248-255	Color snap,fast to slow		
15	Plates foreground dimmer	000-255	0-100%		
16	Plates background	000-000	No function		
		001-002	White(2700K)		
		003-004	White(3200K)		
		005-006	White(4200K)		
		007-008	White(5600K)		
		009-010	White(8000K)		
		011	Blue B:255 W:0	R:0	G:0
		012-048	Green+/Blue B:255 W:0	R:0	G:+
		049	Cyan B:255 W:0	R:0	G:255

		050-086	Green/Blue- R:0 G:255 B:- W:0
		087	Green R:0 G:255 B:0 W:0
		088-124	Red+/Green R:+ G:255 B:0 W:0
		125	Yellow R:255 G:255 B:0 W:0
		126-162	Red/Green- R:255 G:- B:0 W:0
		163	Red R:255 G:0 B:0 W:0
		164-200	Red/Blue+ R:255 G:0 B:+ W:0
		201	Magenta R:255 G:0 B:255 W:0
		202-238	Red-/Blue R:- G:0 B:255 W:0
		239	Blue R:0 G:0 B:255 W:0
		240-247	Color index,fast to slow
		248-255	Color snap,fast to slow
17	Plates background dimmer	000-255	0-100%
18	Plate 1(pixels 1-7)	000-002	Plate FX All select(all on) see Plate Patterns
	FX select (see Pixel Mapping)	003-255	
19	Plate 1(pixels 1-7)	000-005	No function
	FX movement	006-124	Left to right,fast to slow
	speed & direction	125-130	No function

	(see Pixel Mapping)	131-249	Right to left,slow to fast
		250-255	No function
20	Plate 1(pixels 1-7)	000-002	Snap from cell to cell
	FX crossfade (see Pixel Mapping)	003-255	Fade duration:short to long
21	Plate 2(pixels 8-14)	000-002	Plate FX All select(all on) see Plate Patterns
	FX select (see Pixel Mapping)	003-255	
22	Plate 2(pixels 8-14) FX movement speed & direction (see Pixel Mapping)	000-005	No function
		006-124	Left to right,fast to slow
		125-130	No function
		131-249	Right to left,slow to fast
		250-255	No function
23	Plate 2(pixels 8-14)	000-002	Snap from cell to cell
	FX crossfade (see Pixel Mapping)	003-255	Fade duration:short to long
24	Beam 1(pixels 1-14)	000-002	Beam FX All select(all on) see Beam Patterns
	FX select (see Pixel Mapping)	003-255	
25	Beam 1(pixels 1-14) FX movement speed & direction (see Pixel Mapping)	000-005	No function
		006-124	Left to right,fast to slow
		125-130	No function
		131-249	Right to left,slow to fast
		250-255	No function
26	Beam 1(pixels 1-14)	000-002	Snap from cell to cell Fade duration:short to long
	FX crossfade (see Pixel Mapping)	003-255	
27	Beam 2(pixels 15-28) FX select (see Pixel Mapping)	000-002	Beam FX All select(all on) see Beam Patterns
		003-255	

28	Beam 2(pixels 15-28)FX movement speed & direction (see Pixel Mapping)	000-005	No function
		006-124	Left to right,fast to slow
		125-130	No function
		131-249	Right to left,slow to fast
		250-255	No function
29	Beam 2(pixels 15-28) FX crossfade (see Pixel Mapping)	000-002	Snap from cell to cell Fade duration:short to long
		003-255	
30	Control*	000-005	No function
		006-010	Off (dimmer mode)
		011-015	Dimmer 1
		016-020	Dimmer 2
		021-025	Dimmer 3
		026-030	600 Hz
		031-035	1200 Hz
		036-040	2000 Hz
		041-045	4000 Hz
		046-050	6000 Hz
		051-055	25 KHz
		056-060	Fan mode auto
		060-065	Fan mode on
		066-070	Tilt reset
		071-075	Plate 1 invert off
		076-080	Plate 1 invert on
		081-085	Plate 2 invert off
		086-090	Plate 2 invert on
		091-095	Beam 1 invert off
		096-100	Beam 1 invert on
		101-105	Beam 2 invert off

		106-110	Beam 2 invert on
		111-115	Plate swap on
		116-120	Plate swap off
		121-125	Beam swap on
		126-130	Beam swap off
		131-255	No function

DMX 512 24CHs

CH	Function	Value	Percent/Setting
1	Tilt	000-255	0-100%
2	Fine tilt	000-255	0-100%
3	Master dimmer	000-255	0-100%
4	Plate dimmer	000-255	0-100%
5	Beam dimmer	000-255	0-100%
6	Plate flash duration	000-009	Classic shutter mode:disables duration control
		010-250	Slow to fast
		251-255	100% On,no flash/strobe
7	Plate flash rate	000-009	100%
		010-250	Slow to fast
		251-255	100%
8	Beam flash duration	000-009	Classic shutter mode:disables duration control
		010-250	Slow to fast
		251-255	100% On,no flash/strobe
9	Beam flash rate	000-009	100%
		010-250	Slow to fast
		251-255	100%

10	Plates red	000-255	0-100%
11	Plates green	000-255	0-100%
12	Plates blue	000-255	0-100%
13	Beam FX	000-005	No function
		006-042	Ramp up
		043-085	Ramp down
		086-128	Ramp up-down
		129-171	Random
		172-214	Lightning
		215-255	Spikes
14	Plates foreground	000-000	No function
		001-002	White(2700K)
		003-004	White(3200K)
		005-006	White(4200K)
		007-008	White(5600K)
		009-010	White(8000K)
		011	Blue R:0 G:0 B:255 W:0
		012-048	Green+/Blue R:0 G:0 B:255 W:0
		049	Cyan R:0 G:255 B:255 W:0
		050-086	Green/Blue- R:0 G:255 B:- W:0
		087	Green R:0 G:255 B:0 W:0
		088-124	Red+/Green R:0 G:255 B:0 W:0
		125	Yellow R:255 G:255 B:0 W:0

		126-162	Red/Green- B:0	R:255 W:0	G:-
		163	Red B:0	R:255 W:0	G:0
		164-200	Red/Blue+ B:+	R:255 W:0	G:0
		201	Magenta B:255	R:255 W:0	G:0
		202-238	Red-/Blue B:255	R:- W:0	G:0
		239	Blue B:255	R:0 W:0	G:0
		240-247	Color index,fast to slow		
		248-255	Color snap,fast to slow		
15	Plates foreground dimmer	000-255	0-100%		
16	Plates background	000-000	No function		
		001-002	White(2700K)		
		003-004	White(3200K)		
		005-006	White(4200K)		
		007-008	White(5600K)		
		009-010	White(8000K)		
		011	Blue B:255	R:0 W:0	G:0
		012-048	Green+/Blue B:255	R:0 W:0	G:+
		049	Cyan B:255	R:0 W:0	G:255
		050-086	Green/Blue- B:-	R:0 W:0	G:255

		087	Green B:0 W:0	R:0 G:255
		088-124	Red+/Green B:0 W:0	R:+ G:255
		125	Yellow B:0 W:0	R:255 G:255
		126-162	Red/Green- B:0 W:0	R:255 G:-
		163	Red B:0 W:0	R:255 G:0
		164-200	Red/Blue+ B:+ W:0	R:255 G:0
		201	Magenta B:255 W:0	R:255 G:0
		202-238	Red-/Blue B:255 W:0	R:- G:0
		239	Blue B:255 W:0	R:0 G:0
		240-247	Color index,fast to slow	
		248-255	Color snap,fast to slow	
17	Plates background dimmer	000-255	0-100%	
18	Plates 1 & 2	000-002	Plate FX All select(all on) see Plate Patterns	
	FX select (see Pixel Mapping)	003-255		
19	Plates 1 & 2 FX movement speed & direction (see Pixel Mapping)	000-005	No function	
		006-124	Left to right,fast to slow	
		125-130	No function	
		131-249	Right to left,slow to fast	
		250-255	No function	

20	Plates 1 & 2	000-002	Snap from cell to cell
	FX crossfade (see Pixel Mapping)	003-255	Fade duration:short to long
21	Beams 1 & 2	000-002	Beam FX All select(all on) see Beam Patterns
	FX select (see Pixel Mapping)	003-255	
22	Beams 1 & 2 FX movement speed & direction (see Pixel Mapping)	000-005	No function
		006-124	Left to right,fast to slow
		125-130	No function
		131-249	Right to left,slow to fast
		250-255	No function
23	Beams 1 & 2	000-002	Snap from cell to cell Fade duration:short to long
	FX crossfade (see Pixel Mapping)	003-255	
24	Control*	000-005	No function
		006-010	Off (dimmer mode)
		011-015	Dimmer 1
		016-020	Dimmer 2
		021-025	Dimmer 3
		026-030	600 Hz
		031-035	1200 Hz
		036-040	2000 Hz
		041-045	4000 Hz
		046-050	6000 Hz
		051-055	25 KHz
		056-060	Fan mode auto
		060-065	Fan mode on
		066-070	Tilt reset
		071-075	Plate 1 invert off

		076-080	Plate 1 invert on
		081-085	Plate 2 invert off
		086-090	Plate 2 invert on
		091-095	Beam 1 invert off
		096-100	Beam 1 invert on
		101-105	Beam 2 invert off
		106-110	Beam 2 invert on
		111-115	Plate swap on
		116-120	Plate swap off
		121-125	Beam swap on
		126-130	Beam swap off
		131-255	No function

DMX 512 13CHs

CH	Function	Value	Percent/Setting
1	Tilt	000-255	0-100%
2	Fine tilt	000-255	0-100%
3	Plate dimmer	000-255	0-100%
4	Beam dimmer	000-255	0-100%
5	Plate flash duration	000-009	Classic shutter mode:disables duration control
		010-250	Slow to fast
		251-255	100% On,no flash/strobe
6	Plate flash rate	000-009	100%
		010-250	Slow to fast
		251-255	100%

7	Beam flash duration	000-009	Classic shutter mode:disables duration control
		010-250	Slow to fast
		251-255	100% On,no flash/strobe
8	Beam flash rate	000-009	100%
		010-250	Slow to fast
		251-255	100%
9	Plates red	000-255	0-100%
10	Plates green	000-255	0-100%
11	Plates blue	000-255	0-100%
12	Beam FX	000-005	No function
		006-042	Ramp up
		043-085	Ramp down
		086-128	Ramp up-down
		129-171	Random
		172-214	Lightning
		215-255	Spikes
13	Control*	000-005	No function
		006-010	Off (dimmer mode)
		011-015	Dimmer 1
		016-020	Dimmer 2
		021-025	Dimmer 3
		026-030	600 Hz
		031-035	1200 Hz
		036-040	2000 Hz
		041-045	4000 Hz
		046-050	6000 Hz
		051-055	25 KHz
		056-060	Fan mode auto

		060-065	Fan mode on
		066-070	Tilt reset
		071-075	Plate 1 invert off
		076-080	Plate 1 invert on
		081-085	Plate 2 invert off
		086-090	Plate 2 invert on
		091-095	Beam 1 invert off
		096-100	Beam 1 invert on
		101-105	Beam 2 invert off
		106-110	Beam 2 invert on
		111-115	Plate swap on
		116-120	Plate swap off
		121-125	Beam swap on
		126-130	Beam swap off
		131-255	No function

DMX 512 11CHs

CH	Function	Value	Percent/Setting
1	Tilt	000-255	0-100%
2	Fine tilt	000-255	0-100%
3	Dimmer	000-255	0-100%
4	Plate flash duration	000-009	Classic shutter mode:disables duration control
		010-250	Slow to fast
		251-255	100% On,no flash/strobe
5	Plate flash rate	000-009	100%
		010-250	Slow to fast
		251-255	100%

6	Beam flash duration	000-009	Classic shutter mode:disables duration control
		010-250	Slow to fast
		251-255	100% On,no flash/strobe
7	Beam flash rate	000-009	100%
		010-250	Slow to fast
		251-255	100%
8	Plates red	000-255	0-100%
9	Plates green	000-255	0-100%
10	Plates blue	000-255	0-100%
11	Beam	000-255	0-100%

DMX 512 8CHs

CH	Function	Value	Percent/Setting
1	Tilt	000-255	0-100%
2	Fine tilt	000-255	0-100%
3	Dimmer	000-255	0-100%
4	Strobe	000-009	Open
		010-079	Strobe,slow to fast
		080-149	Pulse,slow to fast
		150-219	Random Strobe,slow to fast
		220-255	Open
5	Red	000-255	0-100%
6	Green	000-255	0-100%
7	Blue	000-255	0-100%
8	Beam	000-255	0-100%

5.Trouble Shooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

a. The unit does not work, no light and the fan does not work

1. Check the connection of power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED.

b. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if link properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
4. Try to use another DMX controller.
5. Check if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

6.Fixture Cleaning

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

- **Clean with soft cloth using normal glass cleaning fluid.**
- **Always dry the parts carefully.**
- **Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.**