EXO BEAM 10
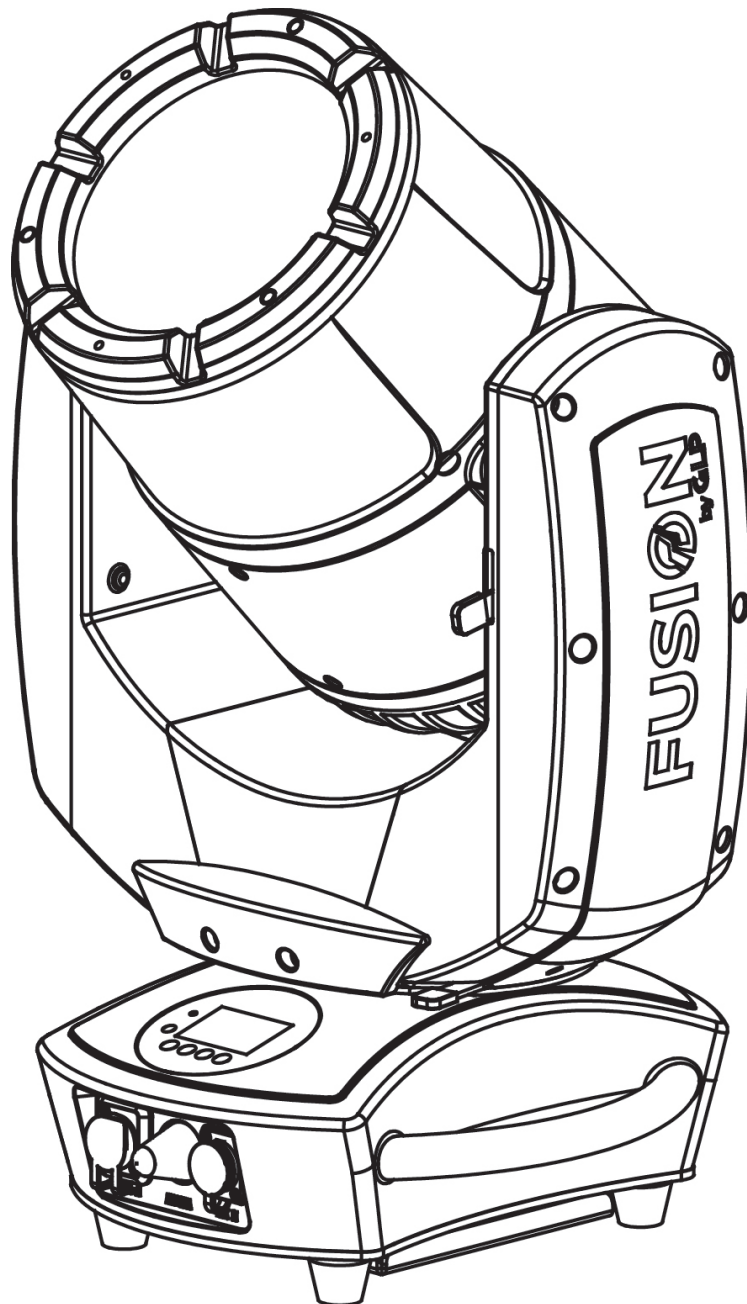
Product Introduction:

1.1 Before unpack the fixture, pls make sure that the packing is in good condition, following items will be found in the box:

-The fixture

-This users guide

-1.5m power cable with powercon

1.2 Specification

Source

- Light source: Advanced 90w white led
- Led life: 20.000 hours
- Luminous Flux: 361903lx@3m/130285lx@5m
- Control: Remote on/off via DMX

Optical System

- Beam angle: 1°

X/Y

- Pan: 630° (4.3 sec) or 540° (3.9 sec),Tilt:360° (2.2 sec)
- 16-bit resolution
- Auto repositioning

Features

- DMX channels: 16
- Super fast, smooth and silent movement
- Nice maping effect with dimming and color fading at the same time
- white color mixing to create vivid, saturated and uniform color effect
- zoom from 1°
- Full range 0-100% dimmer
- Various strobe
- RDM function to change DMX address, display flip, X/Y Reverse and so on
- Software upgrade via DMX
- Hibernation when lost DMX for preset time
- Indicate temperature info of base, arm and lamp
- Fan speed auto change according to temperature
- Aluminum cooling system

Display

- 2.4inch super nice OLED display with friendly English menu
- Auto lock
- Flip
- Back-up communicating IC
- Pre-set wireless and battery holder

1.3 Description of the Device

1. Project lens
2. Head
3. Arm
4. Base
5. Display
6. Foot stand
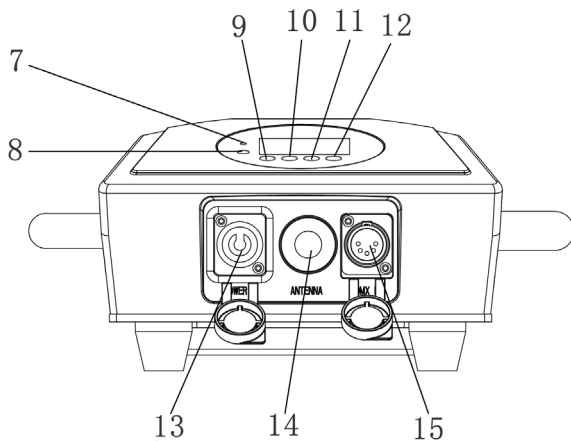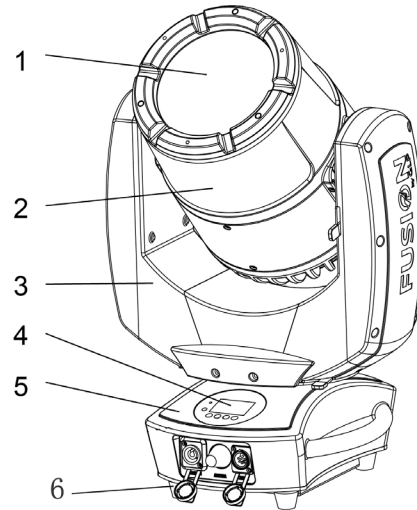
7. Wireless indicating light
8. Battery
9. Mode/Esc
10. Down
11. Up
12. Enter
13. PowerCon input
14. Vacuum vent valve
15. 5pin dmx input
16. 5pin dmx output
17. Vacuum vent valve
18. PowerCon output
19. Antenna

1.4 Colors and Gobos

1	●	Primary Red
2	●	Blue
3	●	Primary Green
4	●	Amber
5	●	Cyan
6	●	Magenta
7	●	5RGB-13 cool white
8	●	CTO 3200K
9	●	CTC 6000K
10	●	Pink
11	●	Fern Green
12	●	Yellow
13	●	Orange
14	●	Dark Blue
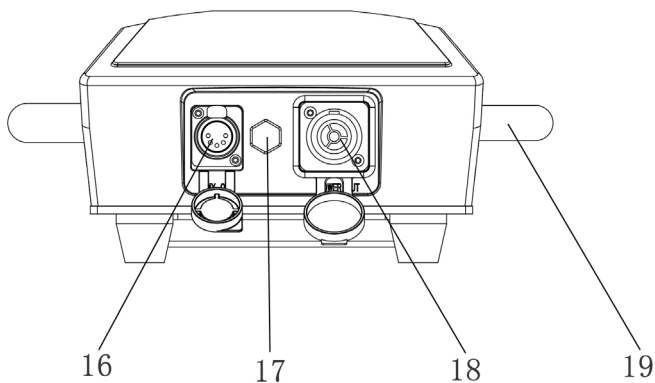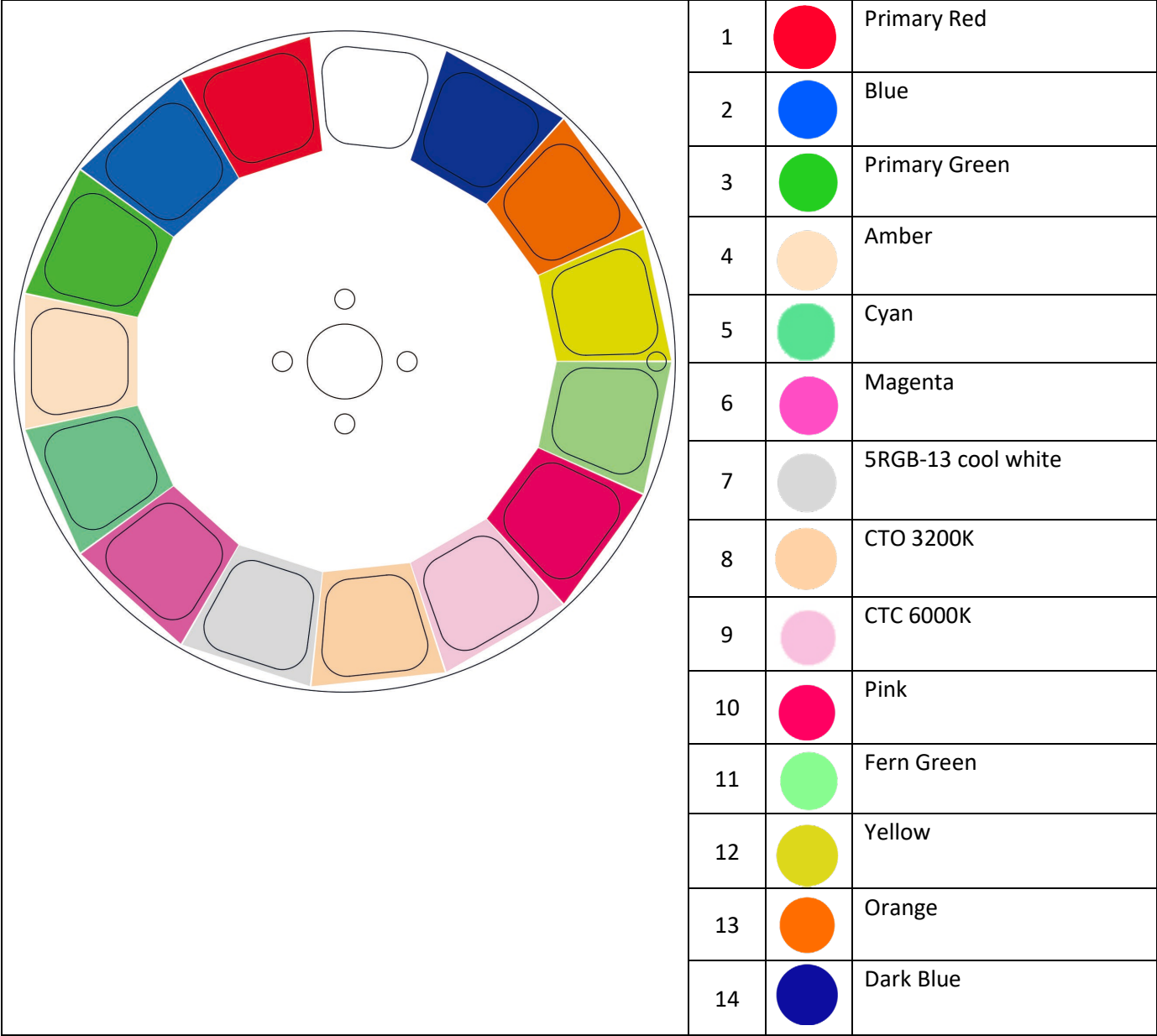
Rotating & static gobo wheel
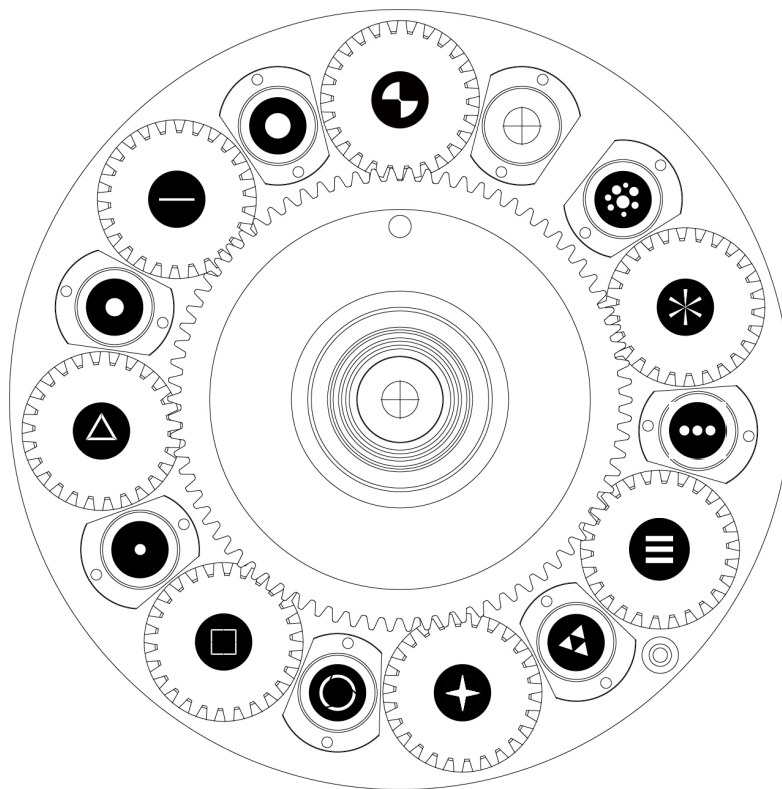
2. Safety and maintenance Information

2.1 Safety Info

⚠	Before operate this unit, please carefully read this users guide and keep if needed in future. It's necessary to respect following rules.
🗑	The disposal of the device after lifecycle could damage the environment, need to take it to special company for recycling or return to authorized dealer.
CE	The products referred to in this manual conform to the European Community Directives and are therefore marked with CE logo.
⚠	Keep this device away from children and unauthorized users, the manufacturer will not take responsibility for the damage due to any disregard of the information provided in this manual and wrong operation.
⚠	Before operate the device, pls make sure the fixture is in good housing, ensure pan and tilt can rotate in its complete range.
◖--0.5m 〆	Pls make sure minimal 0.5m distance need to kept between the fixture to any flammable material.
🔌	The device can only run with 100-240v voltage, 50/60Hz power, don't connect to any other wrong power. Disconnect the device from main power before open the shield or maintenance.
⌂	The device is designed only for indoor usage, pls keep it away from moisture. Do not expose the device under the sun or directly to any other lighting source.
⚠	Never look directly into the projecting lens when the fixture is power on, the light may trigger epileptic seizures in photosensitive persons or persons with epilepsy. Especially at beam effect, extreme caution and observance of these safety instructions is mandatory.

⚠	Don't put or install the device on a surface that subject to vibration or bumps.
Ta=45℃	The device is supposed to work in the temperate range -20° C and +45° C, do not use the device when the temperate exceed this range.
🗗	The lens, shield need to be replaced when obviously broken, never use the device when the shield is not completed closed.
⏚	Safety I class device, need to be earth connected.
🪝	When the fixture is hanged overhead, the safety rope must be fixed to the bottom of the device to the appropriate fixing point.
⚠	Always carry the device by the handles, do not take the head or arm directly for transportation.

2.2 Maintenance

2.2.1 Operation only allowed to qualified person, damages due to unprofessional operation or remove of any parts inside will not be considered in warranty service. There are no serviceable parts inside the device or package, service only leaves to authorized dealers.

2.2.3 Never allow the optical components contact with oil, fat or any other liquid.

2.2.4 A regular clearance of the device is needed for long-term usage, this is very helpful to maintain the lifetime and brightness need to use a soft and lint-free cloth to clean the optical system, fan and air flowing tunnel.

2.2.5. Trouble Shooting

Problems	Possible reasons	Checking or solutions
Device not power up	Powercon or power cable damaged	Change a good power cable to try
	Faulty power supply	Replace new power supply
Pan/Tilt error or vibrate	Faulty Pan/Tilt PCB	Replace PT007 PCB
	Faulty opto sensor	Replace opto sensor OP001
	Cable loosen	Check the cable connect to OP001
LED off	Temperature protection	Check the temperature from menu
	Fan not working	Check the fan speed info from menu
	Faulty LED	Replace new LED
	Dimmer and strobe set at 0	Set dimmer and strobe channel at 255
	Faulty power supply	Replace new power supply
Device not response to DMX	Faulty communication IC	Replace the IC with back-up one in the display PCB
	Faulty display PCB	Replace new display PCB
	Wrong DMX addressing	Check the address and setting
	Faulty DMX cable	Change to a good DMX cable

2.2.6 Replacement of the fuse

Need to replace with same type and rating, which originally installed in the device.
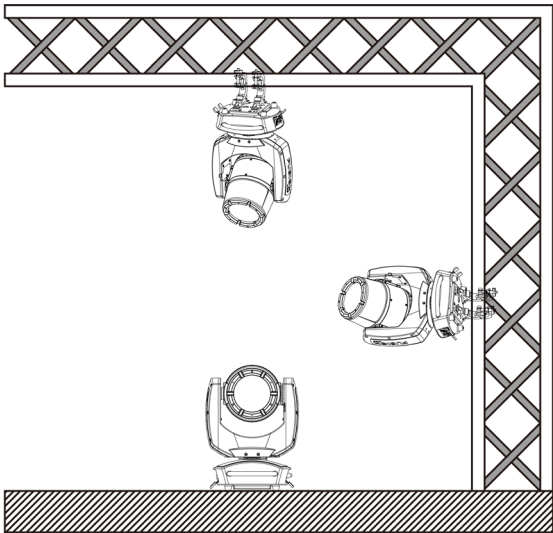
Step One: Unplug power cable from main power.

Step Two: Unscrew the fuse holder out of the housing with a screwdriver.

Step Three: Remove the broken fuse and replace with an exact same type of new fuse.

Step Four: Insert the fuse holder back to the housing and screw tight and reconnect power.

3. Installation

3.1 The device could be either put on a solid and even surface, or mounted upside down or sideways like left picture.

3.2 The mounting place must be sufficient stable and be able to support a weight of 10 times of the unit's weight. When the fixture is hanged, always additionally secure the device with the safety chain, fasten the safety rope at a suitable position so that the maximum fall of the projector will be 20 cm

3.3 How to do mounting installation.
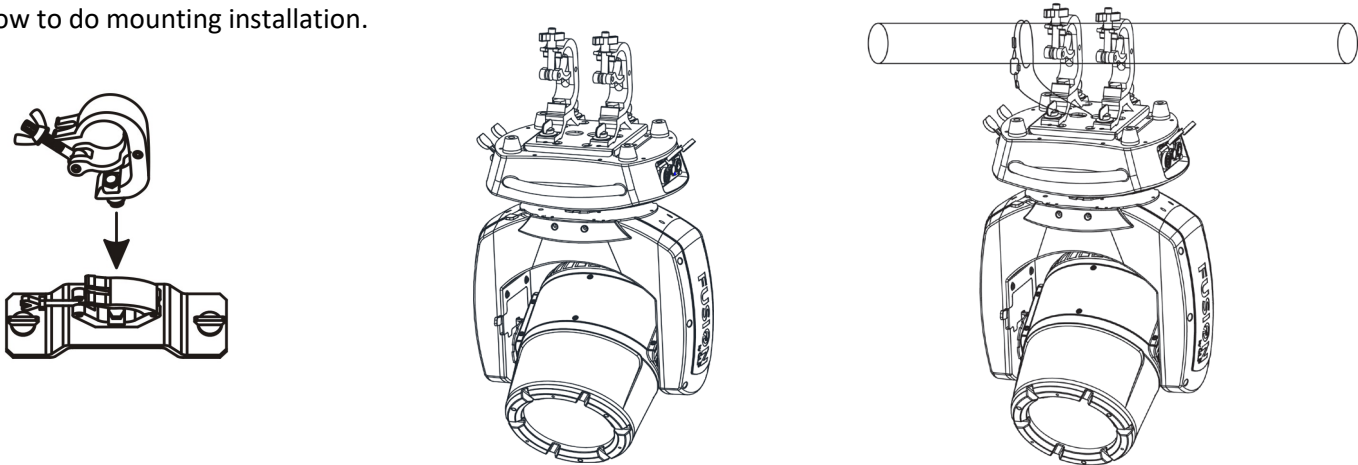
Step one: Installation the clamp onto the omega bracket;

Step two: Install the clamp and bracket on the bottom of panel, fasten the quick-locks;

Step three: Install the whole device onto appropriate truss and fasten the clamps, tight the safety rope with the truss or other fixing point at a suitable position that drop down distance not exceed 20 cm.

4. Control menu

4.1 Menu tree

Default setting shadowed. mark with ①can be basic reloaded, ② be program reloaded, ③can be private reloaded.

0	DMX Address①	XXX	
1	Control Mode	Standard	
2	Protocol Setup	DMX	
		WDMX	
3	Fixture Settings	Pan Invert	OFF/ON
		Pan Invert	OFF/ON
		Pan Degree	630/540
		Position Feedback	OFF/ON
		Pan Disable	OFF

			Reset Disabled		
			Current Disabled		
		Tilt Disable	OFF		
			Reset Disabled		
			Current Disabled		
		Zoom lnvert	OFF/ON		
		Dimmer Curve	Soft/Linear		
		No Signal	Blackout		
			Hold		
			Captured Scene		
		Capture Scene	Press ENTER 3S to Capture Scene	stored	
		PWM	600Hz		
			2200Hz		
			3000Hz		
			4800Hz		
			9600Hz		
			25kHz		
		Display Mode	Auto/On/Off		
		Display Orientation	Normal/Upside Down		
		Max. Temperature	60~90℃/140~ (90℃)(194℉)		
		Fan Mode	Regulated/High/Medium/Low		
		Load Settings	Preset1	Press ENTER(3s) to confirm	
			Preset2	Press ENTER(3s) to confirm	
			Preset3	Press ENTER(3s) to confirm	
		Lock	Set passcode off/on		
3	Manual Control	Reboot	Press ENTER(3s) to Reboot		
		Manual DMX	Control	XXX	
			...	XXX	
			Capture Scene	Press ENTER(3s) to Confirm	
4	Information	Firmware Version	Master........V.1.0.00 Motordriver........V.1.0.00 LED Driver......V.1.0.00		
		Fixture Details	RDM ID......676C005BXXXX Serial......... 2301XXXXXXX MAC..... F8912A1E01C0 RDM..... 8912A1E01CC0		
		Device Life	Power Cycles ..... 20 Hours Total .. 10000h Hours User ... 10000h		
		DMX Link Status	DMX framesec DMX datapacket		
		Temperatures	LED temper		

		Fan Speeds	Fan1 Motor Fan1 LED Fan			
		Error log				
5	Service	Test All	Running			
		Test Pan only	Running			
		Test Tilt only	Running			
		Default Settings	Press enetr 3s			
		Service Advanced	Press enter 6s	Pan Disable	OFF/ON	
				Tilt Disable	OFF/ON	
				Units	%C/%f	
				Offsets	Pan	XXX
					Prismz	...
				Reset Counter	Device Hours	XXX
					Power Cycles	XXX
					Max. Temperature	XXX
					Temperature Unit	XXX
				Save settings	Preset 1	Stored
					Preset 2	
					Preset 3	
				Factory Backup	Pres enter 3s	

5. DMX connection and DMX protocol

5.1 DMX addressing:

5.1.1 The device is controlled by universal DMX 512 protocol, DMX address is the start channel used to receive instructions from the external controller. For independent control, each fixture must be assigned its unique address control channels. For example, this device has four channel modes: 19/98/18/20, if we set the mode at standard 19 channels mode, and there are several models need to be independently controlled, we just simply address first fixture at 1, and second fixture at 20, third one at 39, etc.

If the devices have the same address, they will behave synchronically.

DMX addressing is limited, don't set the address so high that without enough control channels for the fixtures.

Display is flashing when no DMX signal is received.
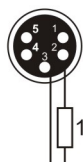
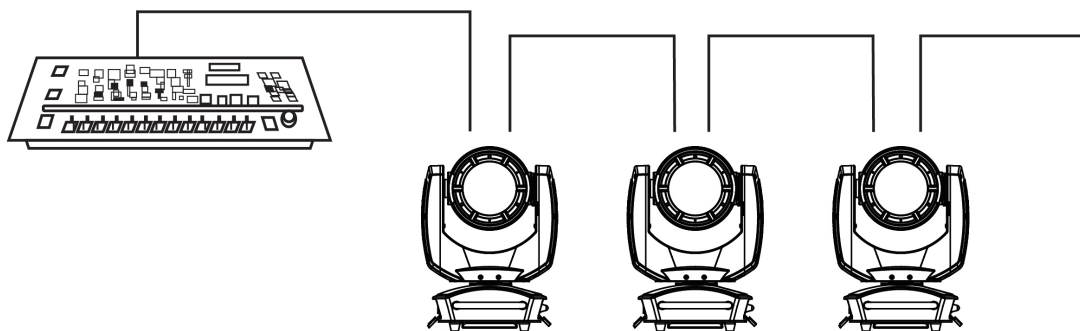5.1.2 This device is equipped with 5-pins DMX in and out sockets only.

Pin 1 = GND   Pin 4 = N.A.
Pin 2 = SIG(-) Pin 5 = N.A.
Pin 3 = SIG(+)

5.1.3 The termination is prepared by soldering a 120Ω resistor between pins 2 and 3.

120Ω

R

P2 P3

5.1.4 Connection: use DMX cable with 5 pin XLR-plugs to connect the controller with the fixture or one fixture with another.

5.2 DMX chart

Channel St	name	function	Min DMX	Max DMX
1	Pan	Pan Coarse	0	255
2	Pan fine	Pan fine	0	255
3	Tilt	Tilt Coarse	0	255
4	Tilt fine	Tilt fine	0	255
5	Color	Indexed		
		Position 1 (Open)	0	3
		Position 2	4	7
		Position 3	8	11
		Position 4	12	15
		Position 5	16	19
		Position 6	20	23
		Position 7	24	27
		Position 8	28	31
		Position 9	32	35
		Position 10	36	39
		Position 11	40	43
		Position 12	44	47
		Position 13	48	51
		Position 14	52	55
		Position 15	56	59
		Indexing		
		Color wheel indexing 0 – 360°, Split colors	60	167
		Wheel Spin		
		CW Fastest to Slow	168	211
		Stop	212	212
		CCW Slow to Fastest	213	255

6	Gobo	Indexed		
		Position 1 (Open)	0	8
		Position 2	9	15
		Position 3	16	22
		Position 4	23	29
		Position 5	30	36
		Position 6	37	43
		Position 7	44	50
		Position 8	51	57
		Position 9	58	64
		Position 10	65	71
		Position 11	72	78
		Position 12	79	85
		Position 13	86	92
		Position 14	93	99
		Position 15	100	106
		Position 16	107	113
		Position 17	114	120
		Position 18	121	127
		Wheel Spin		
		Stop	128	128
		CW Fastest to Slow	129	191
		Stop	192	192
		CCW Slow to Fastest	193	255
7,8	Gobo rotation	Gobo index 0 － 360°	0	32767
		Gobo rotation CW fast － slow	32768	49151
		Gobo rotation stop	49152	49152
		Gobo rotation CCW slow － fast	49153	65535
9	Shutter	Closed	0	15
		Pulse, random, slow － fast	16	47
		Ramp-up, random, slow － fast	48	79
		Ramp-down, random, slow － fast	80	111
		Ramp-up-down, random, slow － fast	112	143
		Strobe with b/o pause 5 － 0.1 sec.	144	199
		Strobe 1 - 10Hz	200	239
		Open	240	255
10	Dimmer coarse	Dimmer Coarse	0	255
11	Dimmer Fine	Dimmer Fine	0	255
12	Focus	Focus In to Focus Out	0	255
13	Focus Fine	Focus Fine	0	255
14	Prism 1	Close		
		Prism Close	0	3
		Continuous		
		Positioning from 0-360 degrees	4	127
		Wheel Spin		
		Stop	128	128

		CW Fastest to Slow		129	191
		Stop		192	192
		CCW Slow to Fastest		193	255
15	Prism 2	Close			
		Prism Close		0	3
		Continuous			
		Positioning from 0-360 degrees		4	127
		Wheel Spin			
		Stop		128	128
		CW Fastest to Slow		129	191
		Stop		192	192
		CCW Slow to Fastest		193	255
16	Control	No function		0	0
		Dimmer curve extra soft*		10	15
		Dimmer curve linear* No function		16	21
		Display off*		22	27
		Display auto-off* Display on*		28	33
		Display orientation normal*		34	39
		Display orientation invert* No function		40	45
		No DMX = blackout*		46	51
		No DMX = hold*		52	57
		No DMX = stand-alone* No DMX = DMX shot* No function		58	63
		Fan regulated*		64	69
		Fan high*		70	75
		Fan medium*		76	81
		Fan low*		82	87
		No function		88	93
		Position feedback off*		94	99
		Position feedback on*		100	105
		Effect shortcuts off*		106	111
		Effect shortcuts on*		112	117
		Tilt invert off*		118	123
		Tilt invert on*		124	129
		Pan invert off*		130	135
		Pan invert on*		136	141
		Zoom invert off*		142	147
		Zoom invert on*		148	153
		Focus tracking off*		154	159
		Focus tracking near*		160	165
		Focus tracking medium* Focus tracking far*		166	171
		No function		172	177
		Framing Control = PI Mode, (position/Index)*		178	183
		Framing Control = LR Mode, (left/right)*		184	189
		No function		190	195
		PWM 2200 Hz **		196	201
		PWM 3000 Hz **		202	207

		PWM 4800 Hz **	208	213
		PWM 9600 Hz **	214	219
		No function	220	225
		PWM 25 kHz **	226	231
		Set fixture to factory defaults** No function	232	237
		Reset pan/tilt *	238	243
		Reset head*	244	249
		Reset all*	250	255

6.1 RDM, stand for "Remote Device Management", with this function, users can realize remote control of the device, such as remotely changing DMX address, reverse pan/tilt setting, check a lot of useful information such as temperature, power consumption, fan speed. Etc. Every single device has a unique RDM code before left factory to distinguish from each other, usually not suggest users change this code freely.

6.2 Software upgrade function via DMX cable, if there is any new firmware for this device come out, it can be upgraded simply via a software upgrade box, no need to change any mechanical parts. The upgrade box is not included in the package, if need any further assistance pls just contact authorized dealers.

6.3 Hibernation, the device will enter sleeping mode if activated after a period of disconnecting DMX signal to save the power consumption, and will return immediately as soon as the DMX signal is sent again.

6.4 Display back-up communication IC, there is a back-up communication IC installed in the display PCB, so users could replace at once if the working one is broken, no need to wait long time from service.

6.5 Display flip, by choose the upside down from the menu, the display will flip automatically, this function is useful to read menu conveniently when device is hanged.

7. Dimensions Drawing
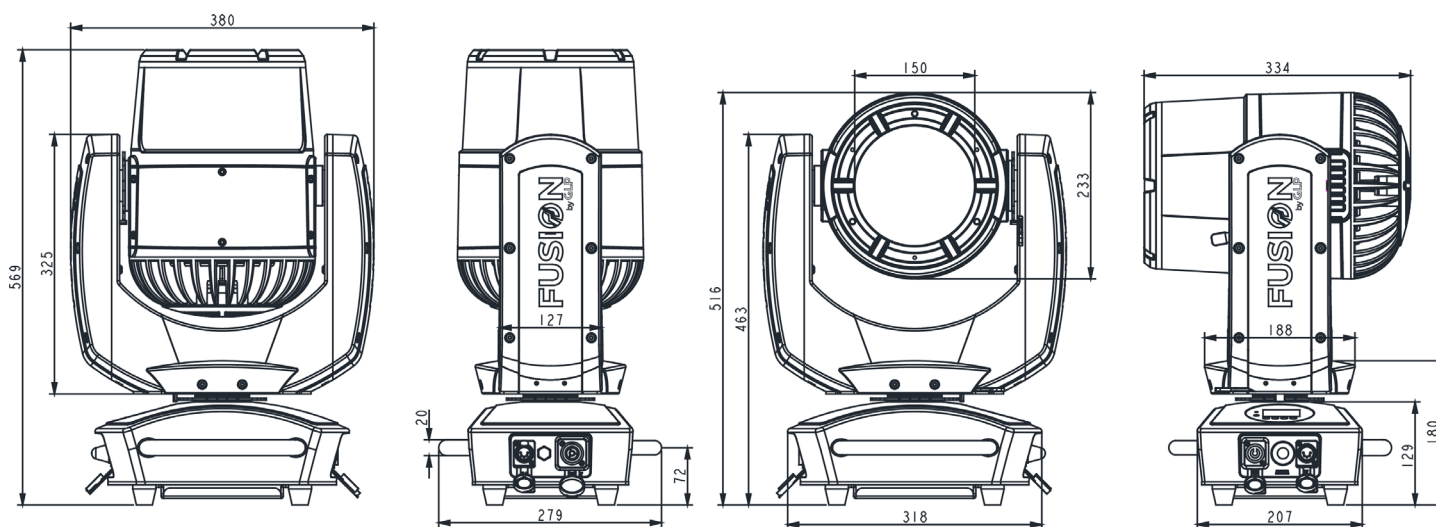
8. Technical specification

Power supply	100-240 V AC, 50/60 Hz ~
Power consumption	185W(input), 200W(output)
LED	Advanced 90w white led
DMX channels	16 modes
Beam angle	1°
Luminous flux	361903lx@3m/130285lx@5m
Fuse	T 3.15 A, 250 V
Device dimensions	380x207x516mm
Net Weight	25.5KG