



**HAVOCH330**

**330W LED Moving Head Hybrid**

**USER MANUAL**



**For your safety, please read this user manual carefully before use.**

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Version 1.1 (February 2024)

## 1. 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
- 3m DMX cable
- 1.5m power cable with powercon
- Omega bracket for hanging installation
- Safety chain

## 1.2 Specification

### Source

- Light source: Advanced 380w white led
- Led life: 60.000 hours
- Luminous Flux: 8790 lumen, 93000 lux@5m
- Control: Remote on/off via DMX
- Ballast: switching mode power supply

### Optical System

- Beam angle: 4° to 48 °

### X/Y

- Pan: 540° (3.9 sec), Tilt: 265° (2.4 sec)
- 16-bit resolution
- Auto repositioning

### Colors

- Linear CMY
- 9+open, interchangeable, indexable and bidirectional rainbow effect
- Color bounce

### Gobos

- Outside  $\varnothing$  20mm, inside  $\varnothing$  16mm
- 8+open custom interchangeable position for rotating gobo wheel
- 13+open fixed gobos
- Real indexable and gobo shaking
- Distinctive gobo animation effect

## Features

- DMX channels: 30
- Linear CMY
- Color wheel: 9 colors
- Fixed gobo wheel:13+1 gobos
- Rotating gobo wheel:8+1 gobos
- Motorized focus
- Full range 0-100% dimmer
- Various strobe
- Rotating 2 facets prism
- Frost
- Beam from 4° to 48 °
- RDM function to change DMX address, display flip, X/Y Reverse and so on
- Software upgrade via DMX or USB
- Hibernation when lost DMX for preset time
- Indicate temperature info of base, led
- Fan speed auto change according to temperature

## Display

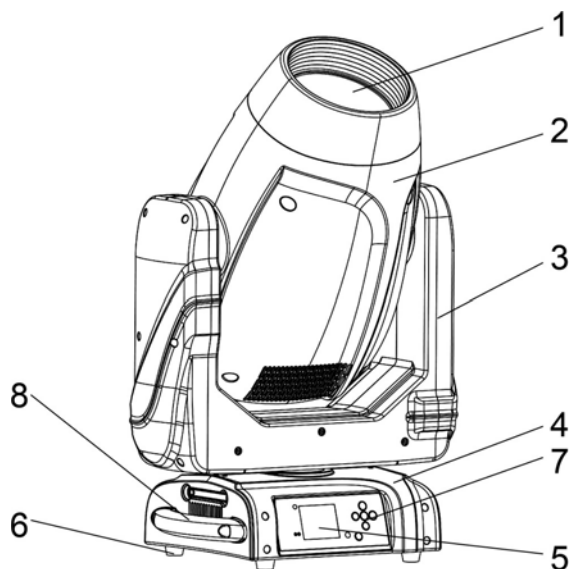
- 2.4inch super nice LCD display
- Auto lock and flip

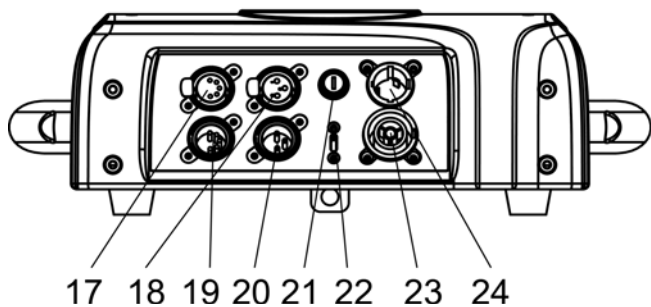
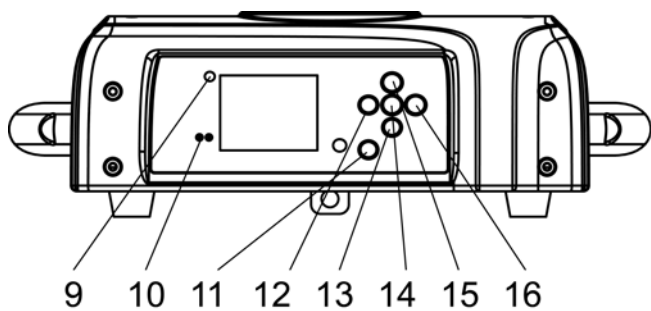
## Power

- Max power consumption:520W
- Powercon in , 3+5 pins DMX
- Power supply: Electronic auto-ranging
- Input voltage range: 100–240V, 50-60Hz

## 1.3 Description of the Device

1. Project lens
2. Head
3. Arm
4. Base
5. Display
6. Foot stand
7. Operation button
8. Handel

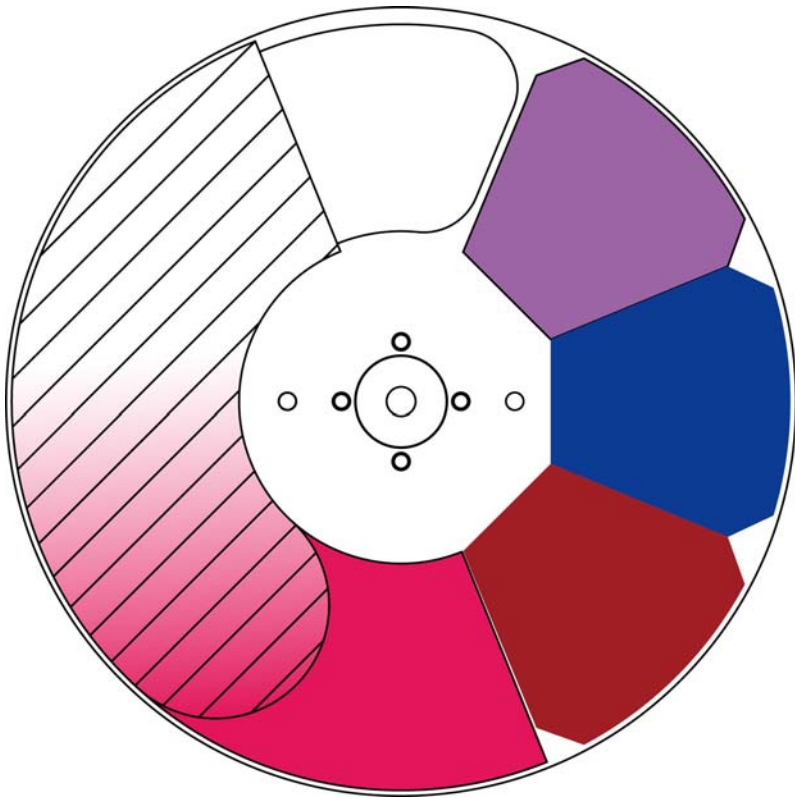







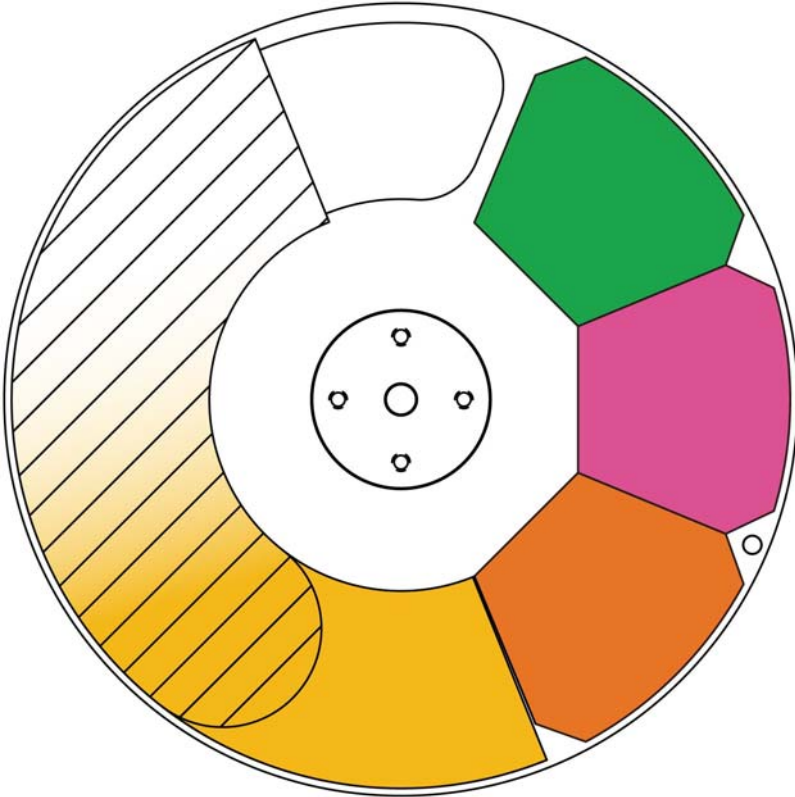
- 9. Wireless indicator
- 10. Ethernet
- 11. Battery indicator
- 12. Left button
- 13. Down button
- 14. Enter button
- 15. Up button
- 16. Right button
- 17. 5-pin DMX out
- 18. 3-pin DMX out
- 19. 5-pin DMX in
- 20. 3-pin DMX in
- 21. Fuse
- 22. USB
- 23. Power out
- 24. Power in

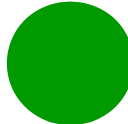


1.4 Colors and Gobos

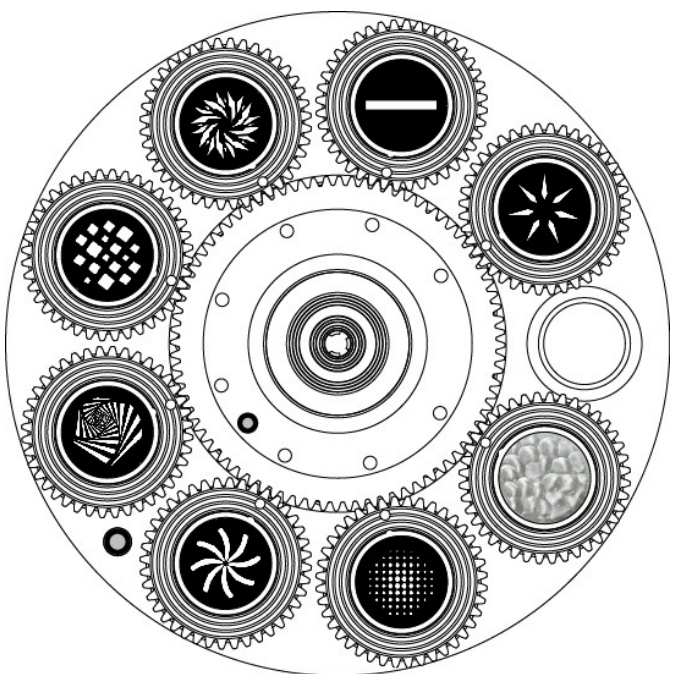
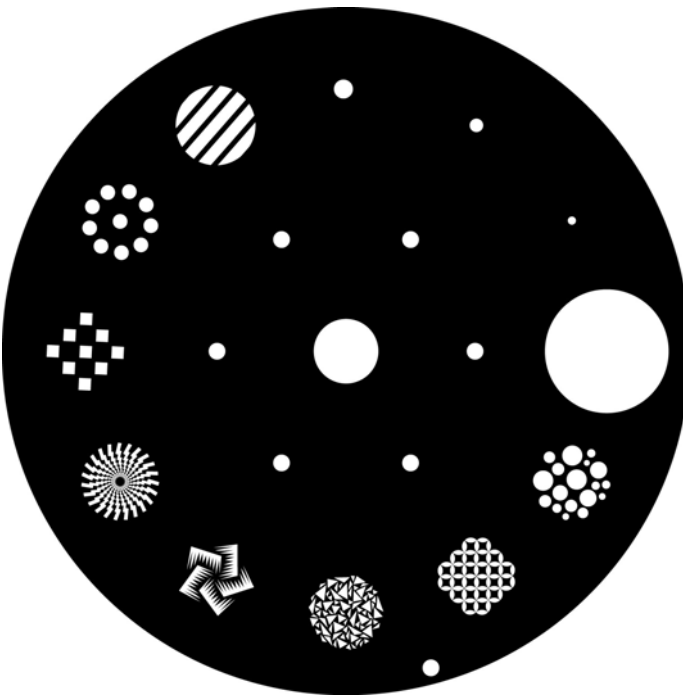
		Open	
	1	High rendering finger color sheet 6000K	
	2	3200K	
	3	2400K	
4	CYAN		



	Open	
1	CTB-011/468	
2	BARK BLUE	
3	red	
4	MAGENTA	

















	Open	
1	green	
2	Dark pink	
3	Light orange	
4	YELLOW	

Rotating Gobo Wheel	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.
	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.
 ---7m 	Pls make sure minimal 7m 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.
<b>IP 65</b>	For outdoor events.
	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.
<b>Ta=45°C</b>	The device is supposed to work in the temperate range -15°C to +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 Faulty power supply	Change a good power cable to try Replace new power supply
Pan/Tilt error or vibrate	Faulty Pan/Tilt PCB Faulty opto sensor Cable loosen	Replace PT013 PCB Replace opto sensor OP005 Check the cable connect to OP005
Lamp off	Temperature protection Fan not working Faulty Lamp Dimmer and strobe set at 0 Faulty power supply	Check the temperature from menu Check the fan speed info from menu Replace new Lamp Set dimmer and strobe channel at 255 Replace new power supply
Device not response to DMX	Faulty display PCB Wrong DMX addressing Faulty DMX cable	Replace new display PCB Check the address and setting 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.

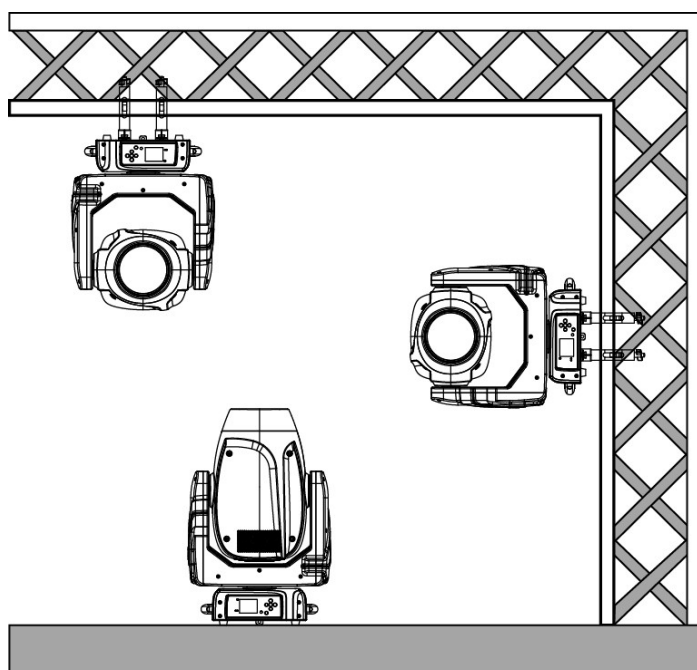
Step One: Unplug power cable from main power.

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

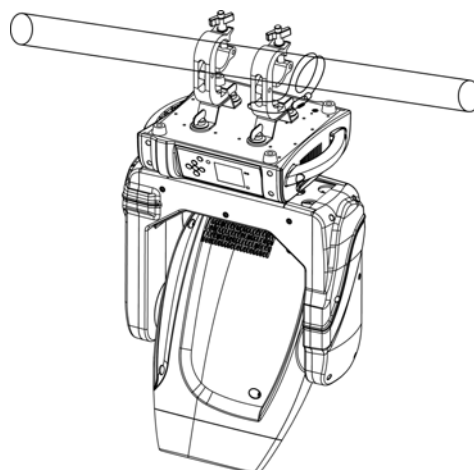
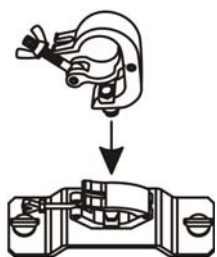


3.1 The device could be either put on a solid and even surface, or mounted upside down or sideways like left picture.

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 Meaning of the icon in menu

CONNECT	LIGHT	INFOMATION	SET	PROGRAM
				

## 4.2 DMX Chart

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

Channel	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	XY Speed	Fast to Slow	0	255
6	Shutter	Close	0	1
		Strobe from slow to fast	2	62
		Open	63	64
		Pulse in from slow to fast	65	125
		Open	126	127
		Pulse out from slow to fast	128	188
		Open	189	190
		Randon from slow to fast	191	251
Open	252	255		
7	Dimmer	Dimmer(Close to Open)	0	255
8	Dimmer Fine	Dimmer(Close to Open)	0	255
9	Cyan	Lineary from 0% to 100%	0	255
10	Magenta	Lineary from 0% to 100%	0	255
11	Yellow	Lineary from 0% to 100%	0	255
12	Color Wheel1	Indexed		
		Open	0	18
		Open + LAVANDER	19	37
		LAVANDER	38	56
		LAVANDER + CTO 3200K	57	75
		CTO 3200K	76	94
		CTO 3200K + BLUE WOOD	95	113
		BLUE WOOD	114	132
		BLUE WOOD + Cyan	133	151
		Cyan	152	170
		Forward Spin		
		From fast to slow	171	211
		Stop		
		Stop	212	214
		Reverse Spin		
		From slow to fast	215	255
		Indexed		
		Open	0	18
		Open + DARK GREEN	19	37
		DARK GREEN	38	56
		DARK GREEN + DARK BLUE	57	75
		DARK BLUE	76	94
		DARK BLUE + DARK RED	95	113

13	Color Wheel 2	DARK RED	114	132		
		DARK RED + MAGENTA	133	151		
		MAGENTA	152	170		
		Forward Spin				
		From fast to slow	171	211		
		Stop				
		Stop	212	214		
		Reverse Spin				
		From slow to fast	215	255		
14	Color Wheel 3	Indexed				
		Open	0	18		
		Open + LIGHT GREEN	19	37		
		LIGHT GREEN	38	56		
		LIGHT GREEN + PINK	57	75		
		PINK	76	94		
		PINK + LIGHT ORANGE	95	113		
		LIGHT ORANGE	114	132		
		LIGHT ORANGE + YELLOW	133	151		
		YELLOW	152	170		
		Forward Spin				
		From fast to slow	171	211		
		Stop				
		Stop	212	214		
		Reverse Spin				
		From slow to fast	215	255		
15	Rot Gobo	Indexed				
		Open	1	9		
		GOBO 1	10	19		
		GOBO 2	20	29		
		GOBO 3	30	39		
		GOBO 4	40	49		
		GOBO 5	50	59		
		GOBO 6	60	69		
		GOBO 7	70	79		
		GOBO 8	80	89		
				Shake		
				GOBO 1 from slow to fast	90	99
				GOBO 2 from slow to fast	100	109
				GOBO 3 from slow to fast	110	119
				GOBO 4 from slow to fast	120	129
				GOBO 5 from slow to fast	130	139
				GOBO 6 from slow to fast	140	149
				GOBO 7 from slow to fast	150	159
				GOBO 8 from slow to fast	160	169
				Forward Spin		
		From fast to slow	170	211		
		Stop				

		Stop	212	213
		Reverse Spin		
		From slow to fast	214	255
16	Gobo Rot	Indexed		
		Lineary from 0° to 360°	0	127
		Forward Spin		
		From fast to slow	128	190
		Stop		
		Stop	191	192
		Reverse Spin		
		From slow to fast	193	255
17	Gobo Rot Fine	Lineary from 0° to 360° (Indexed)	0	255
18	Fixed Gobo	Indexed		
		Open	0	5
		GOBO 1	6	11
		GOBO 2	12	17
		GOBO 3	18	23
		GOBO 4	24	29
		GOBO 5	30	35
		GOBO 6	36	41
		GOBO 7	42	47
		GOBO 8	48	53
		GOBO 9	54	59
		GOBO 10	60	65
		GOBO 11	66	71
		Shake		
		GOBO 1 from slow to fast	72	77
		GOBO 2 from slow to fast	78	83
		GOBO 3 from slow to fast	84	89
		GOBO 4 from slow to fast	90	95
		GOBO 5 from slow to fast	96	101
		GOBO 6 from slow to fast	102	107
		GOBO 7 from slow to fast	108	113
		GOBO 8 from slow to fast	114	119
		GOBO 9 from slow to fast	120	125
		GOBO 10 from slow to fast	126	131
		GOBO 11 from slow to fast	132	137
		Forward Spin		
		From fast to slow	138	195
		Stop		
		Stop	196	197
		Reverse Spin		
		From slow to fast	198	255
19	Prism 1	Open	0	127
		Prism insert	128	255
		Indexed		
		Lineary from 0° to 360°	0	127

20	Prism 1 Rotation	Forward Spin		
		From fast to slow	128	190
		Stop		
		Stop	191	192
		Reverse Spin		
		From slow to fast	193	255
21	Prism 2	Open	0	127
		Prism insert	128	255
22	Prism 2 Rotation	Indexed		
		Lineary from 0° to 360°	0	127
		Forward Spin		
		From fast to slow	128	190
		Stop		
		Stop	191	192
		Reverse Spin		
		From slow to fast	193	255
23	Frost	Continuous		
		Lineary from 0% to 100%	0	255
24	Zoom	Lineary from in to out	0	255
25	Zoom Fine	Lineary from in to out	0	255
26	Focus	Lineary from in to out	0	255
27	Focus Fine	Lineary from in to out	0	255
28	Animation Insertion	Continuous		
		Lineary from 0% to 100%	0	255
29	Animation Rotation	Indexed		
		Lineary from 0° to 360°	0	127
		Forward Spin		
		From fast to slow	128	190
		Stop		
		Stop	191	192
		Reverse Spin		
		From slow to fast	193	255
30		No Function/Safe	0	1
		PAN REVERSE ON	2	3
		PAN REVERSE OFF	4	5
		TILT REVERSE ON	6	7
		TILT REVERSE OFF	8	9
		PAN/TILT MODE FAST	10	11
		PAN/TILT MODE MEDIUM	12	13
		PAN/TILT MODE SLOW	14	15
		MOVEMENT IN BLACKOUT ON	16	17
		MOVEMENT IN BLACKOUT OFF	18	19
		COLOR WHEEL 1 BLACKOUT ON (index)	20	21
		COLOR WHEEL 1 BLACKOUT OFF (index)	22	23
		COLOR WHEEL 2 BLACKOUT ON (index)	24	25
		COLOR WHEEL 2 BLACKOUT OFF (index)	26	27
		COLOR WHEEL 3 BLACKOUT ON (index)	28	29
COLOR WHEEL 3 BLACKOUT OFF (index)	30	31		

Control	ROTATING GOBO WHEEL BLACKOUT ON (index)	32	33
	ROTATING GOBO WHEEL BLACKOUT OFF (index)	34	35
	FIXED GOBO WHEEL BLACKOUT ON (index)	36	37
	FIXED GOBO WHEEL BLACKOUT OFF (index)	38	39
	COLOR WHEEL 1 CONTINUOUS MOVEMENT (index)	40	41
	COLOR WHEEL 1 STEP MOVEMENT (index)	42	43
	COLOR WHEEL 2 CONTINUOUS MOVEMENT (index)	44	45
	COLOR WHEEL 2 STEP MOVEMENT (index)	46	47
	COLOR WHEEL 3 CONTINUOUS MOVEMENT (index)	48	49
	COLOR WHEEL 3 STEP MOVEMENT (index)	50	51
	ROTATING GOBO WHEEL CONTINUOUS MOVEMENT (index)	52	53
	ROTATING GOBO WHEEL STEP MOVEMENT (index)	54	55
		FIXED GOBO WHEEL CONTINUOUS MOVEMENT (index)	56
	FIXED GOBO WHEEL STEP MOVEMENT (index)	58	59
	HOME MODE STANDARD	60	61
	HOME MODE CUSTOM	62	63
	DISPLAY ON	64	65
	DISPLAY 10S	66	67
	DISPLAY 20S	68	69
	DISPLAY 30S	70	71
	FLIP DISPLAY ON	72	73
	FLIP DISPLAY OFF	74	75
	FLIP DISPLAY AUTO	76	77
	KEY LOCK ON	78	79
	KEY LOCK OFF	80	81
	FAN MODE AUTO	82	83
	FAN MODE SILENT	84	85
	FAN MODE HIGH	86	87
	NO SIGNAL HOLD	88	89
	NO SIGNAL BLACKOUT	90	91
	STATUS LED ON	92	93
	STATUS LED OFF	94	95
	DIMMER CURVE LINEAR	96	97
	DIMMER CURVE S-CURVE	98	99
	DIMMER CURVE SQUARE LAW	100	101
	DIMMER CURVE INVERSE SQUARE LAW	102	103
	DIMMER SPEED AUTO	104	105
	DIMMER SPEED FAST	106	107
	DIMMER SPEED MEDIUM	108	109
	DIMMER SPEED SLOW	110	111
	LED FREQUENCY 600HZ	112	113
	LED FREQUENCY 1200HZ	114	115
	LED FREQUENCY 2000HZ	116	117



		LED FREQUENCY 4000HZ	118	119
		LED FREQUENCY 6000HZ	120	121
		LED FREQUENCY 25KHZ	122	123
		LED FREQUENCY 50KHZ	124	125
		INVERT ZOOM OFF	126	127
		INVERT ZOOM ON	128	129
		RESET ALL	130	131
		RESET PAN/TILT	132	133
		RESET COLOR 1	134	135
		RESET COLOR 2	136	137
		RESET COLOR 3	138	139
		RESET CYAN	140	141
		RESET MAGENTA	142	143
		RESET YELLOW	144	145
		RESET ROTATING GOBO	146	147
		RESET GOBO ROTATION	148	149
		RESET FIXED GOBO	150	151
		RESET ZOOM	152	153
		RESET FOCUS	154	155
		RESET ANIMATION	156	157
		RESET 4F PRISM	158	159
		RESET 8F PRISM	160	161
		RESET FROST	162	163
		Reserved	164	253
		FACTORY DEFAULT OF CONTROL FUNCTIONS	254	255

## 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: 30, if we set the mode at standard 30 channels mode, and there are several models need to be independently controlled, we just simply address first fixture at 1, and second fixture at 31, third one at 61, etc.

5.1.2 This device is equipped with 5-pins DMX in and out sockets only.



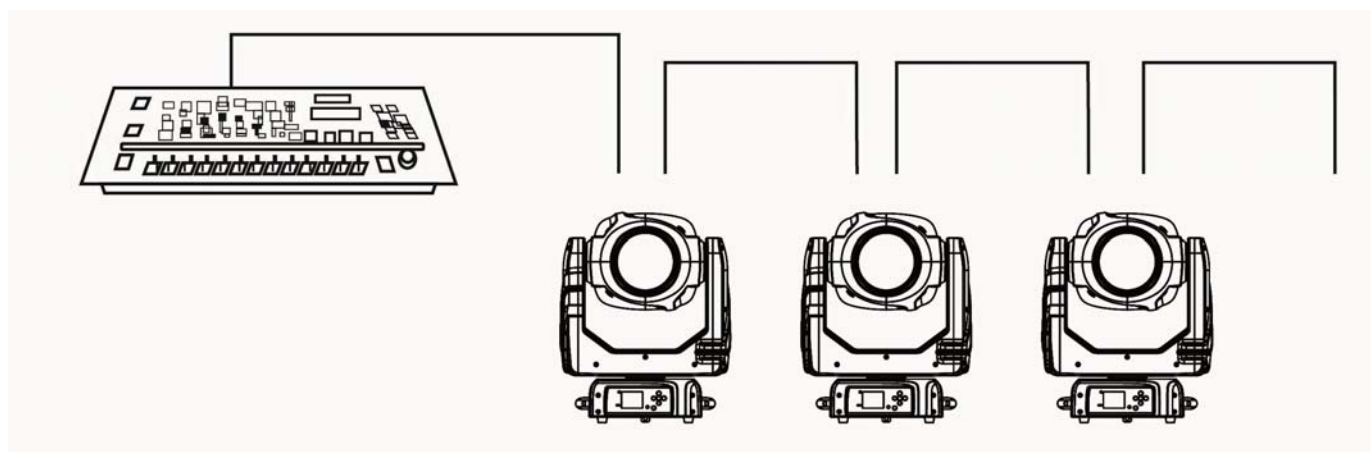
Pin1 =GND      Pin4=N.A.  
Pin2=SIG(-)    Pin5=N.A.  
Pin3=SIG(+)



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



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 Menu Tree

Connet	Address①	Value (1-512)		
	Control protocol	DMX/W-DMX		
	DMX Mode	Standard		
	WIRELESS	WDMX ON/OFF	ON/OFF	
		WDMX MODE	TRANSMITTER/RECEIVER	
		TX LINK	ON/OFF	
		TX UNLINK	ON/OFF	
		RX RESET	ON/OFF	
DMX TO WDMX (TX)		ON/OFF		
WDMX TO DMX (RX)	ON/OFF			
Setup	Fixture Settings	Dmx Fault①	Hold/Blackout(Hold)	
		Temprature Unit	Fahrenheit /Celsius(Celsius)	
		Hibernation	Off, 01M~99M	
		Fan Mode	AUTO/HIGH/SILENT(AUTO)	
		Dimmer Curve	LINEAR/S-CURVE/SQUARE LAW/ INVERSE SQUARE LAW	
		Dimmer Speed	AUTO/FAST/MEDIUM/SLOW	
		LED Frequency	600HZ/1200 HZ/2000 HZ/4000 HZ/6000HZ/25KHZ/50KHZ	
		Menu Language	En/Fr/Sp/简/繁 (En)	
		Transfer Configuration	No Dmx Address With Dmx Address	
	Movement	Pan Reverse①	Yes/No(No)	
		Tilt Reverse①	Yes/No(No)	
		Feedback①	Yes/No (Yes)	
		Pan/Tilt Mode①	Slow/Medium/Fast (Fast)	
		Totem Mode①	Off/Up/Down(Off)	
	Screen	Backlight①	02~60M (02M)	
		Flip Display①	On/Off(Off)	
		Key Lock①	On/Off (Off)	
	rim	Fixture Time	Fixture Hours	Total ( Only Read)

		Partial	(Read And Reset)	
	Current Hours	Total	( Only Read)	
		Partial	(Read And Reset)	
	Lamp Hours	Total	( Only Read)	
		Partial	(Read And Reset)	
	Power On Cycle	Total	( Only Read)	
		Partial	(Read And Reset)	
	Temperature	Near Source Temp,Driver PCB Temp,Led PCB Temp,...		
	Fans Speed	Near Source Fan,Base Fan ...		
	Channel Value	Pan.....		
	Error Message	Pan,Tilt.....		
	Fixture Model	xxxxxxxxxxxx		
	RDM UID	(Read And Reset)		
Software Version	1U01 V1.0.00.....			
Service	Reset	All		
		Pan&Tilt		
		:		
	Calibration	Password	=xxx	
		Pan	=xxx	
		:	:	
		Focus	=xxx	
		Gobo 1	Focus	
		:	:	
		Gobo 8	Focus	
		:		
	Encoder Reset	clean value in encoder pcb		
	Manual Control	Pan		
		:		
	Reload Default	Basic Reload(①)	On/Off (Off)	
Factory Reload		On/Off(Off)		
Program	Play①	DMX Receive		
		Slave Receive	Slave Receive 1,2,3	
		Sequence	Master / Alone	
		Music	Master / Alone	
	Select Chase②	Chase Part 1	Chase 1 ~ 8	Chase 1
		Chase Part 2	Chase 1 ~ 8	Chase 2
		Chase Part 3	Chase 1 ~ 8	Chase 3
	Edit Chase②	Chase 1	Chase Test	
		:	Step 01	=xxx
		Chase 8	Step 64	=xxx
Edit Scenes②	Edit Scene 001	Pan,Tilt,.....		
	~ Edit Scene 250	--Fade Time--	=xxx	

		--Secne Time--	=xxx
		DMX Input	
Scenes Record	ScXX=>ScXX		

## 6. Unique Features

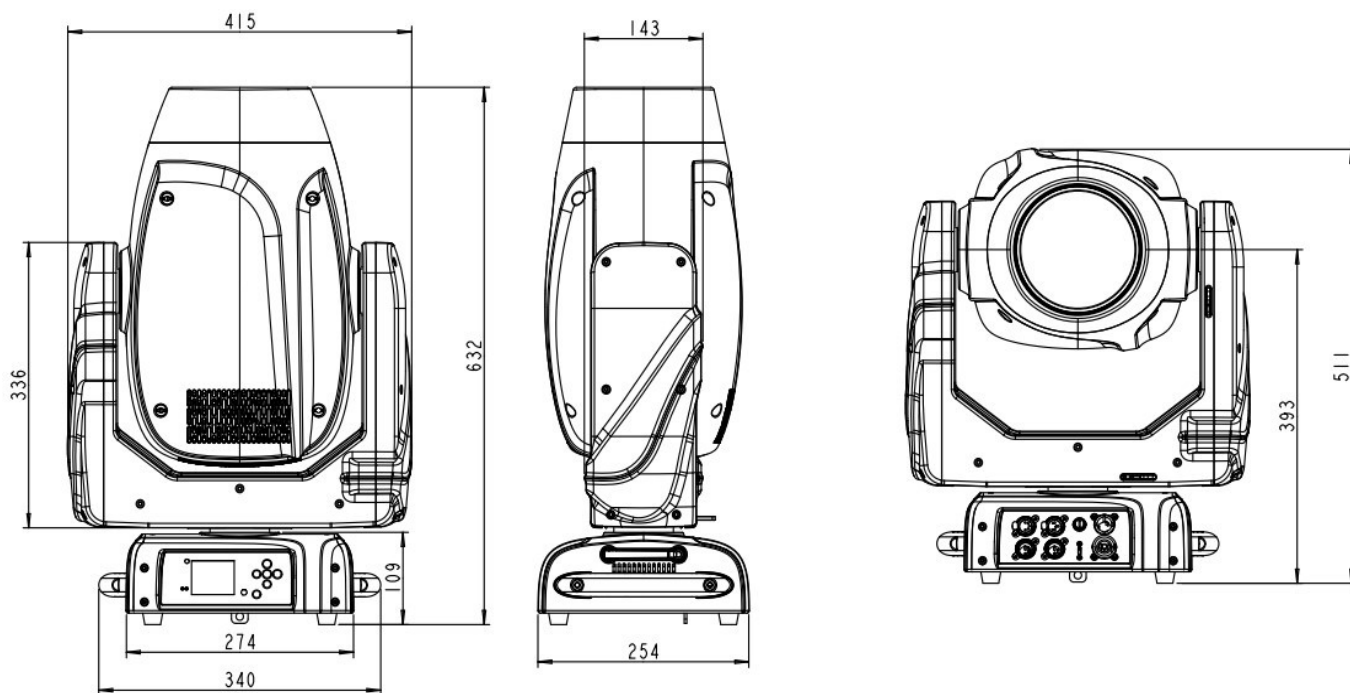
6.1 RDM, stand for "Remote Device Management", with this function, users can realize remote control of the device, such as remotely changing DMX address, reverse pan/tilt setting, check a lot of useful information such as temperature, power consumption, fan speed. Etc. Every single device has a unique 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 flip, by press up and down button for more than 3 seconds, 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	556W
Lamp	Advanced 380w white led
DMX channels	30 channels
Beam angle	4° to 48 °
Luminous flux	93000 lux@5m
Fuse	T8A , 250 V
Device dimensions	415*340*632mm
Net Weight	21KG
Gross Weight	22.5KG
IP	20

## Warranty

Please refer to your local dealer or contact Event Lighting.

[www.event-lighting.com.au](http://www.event-lighting.com.au)