



HAVOCH200

200W LED Moving Head Hybrid

USER MANUAL



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

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Version 1.0 (06.11.2024)

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 200w white led
- Led life: 20.000 hours
- Luminous Flux: 7138 lm,61600lx @5m@4.3°
- Control: Remote on/off via DMX
- Ballast: switching mode power supply

Optical System

- Beam angle: 4.3°-36.2°

X/Y

- Pan: 540°(2.62sec) Tilt: 265°(1.3sec)
- 16-bit resolution
- Auto repositioning

Colors

- 11+open, indexable and bidirectional rainbow effect
- Color bounce

Gobos

- Outside \varnothing 13.9mm, inside \varnothing 11mm
- 8+open custom interchangeable position for rotating gobo wheel
- 17+open fixed gobos
- Real indexable and gobo shaking
- Distinctive gobo animation effect

Features

- DMX channels: 21/17
- Color wheel:11 colors
- Fixed gobo wheel:17+1 gobos
- Rotating gobo wheel:8+1 gobos
- Motorized auto focus
- Full range 0-100% dimmer
- Various strobe
- Rotating 8 facets prism
- Frost
- Beam from 4.3° to 36.2 °
- 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

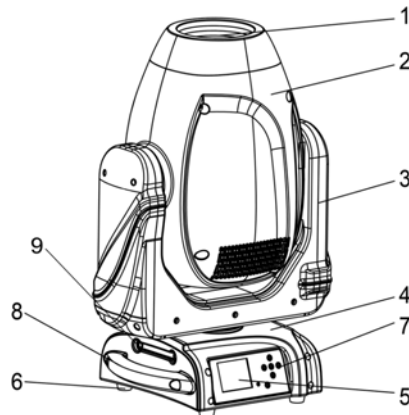
- 2.4inch super nice LCD display with friendly English/ Chinese/French/Spanish menu
- Auto lock and flip
- Signal: DMX/WDMX.Artnet.sACN(optional)
- Back-up communicating IC

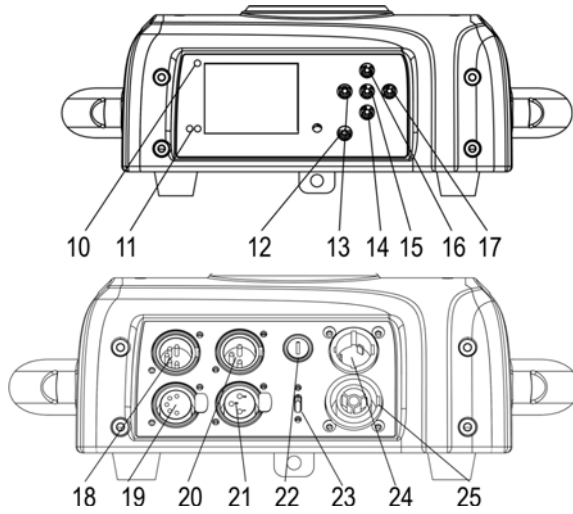
Power

- Max power consumption: 305W
- Power supply:Electronic auto-ranging
- Powercon in and out,3+5 pins
- Input voltage range: 100–240V, 50-60Hz

1.3 Description of the Device

1. Frontal lens
2. Head
3. Arm
4. Base
5. Display
6. Foot stand
7. Operation button
8. Handle
9. Antenna







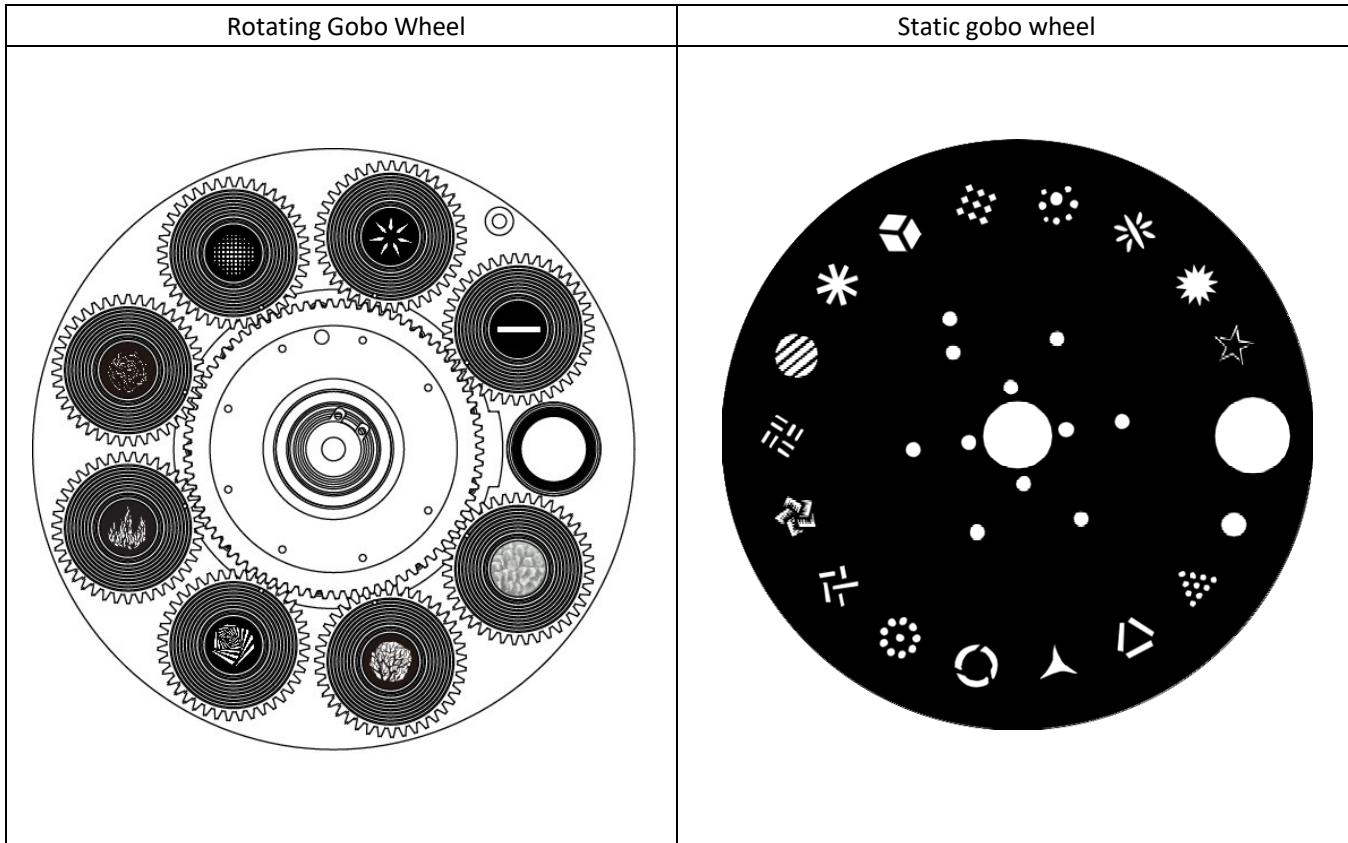


- 10. Wireless indicator
- 11. Ethernet
- 12. Battery Button
- 13. Left button
- 14. Down button
- 15. Enter button
- 16. Up button
- 17. Right button
- 18. 5-pin DMX in
- 19. 5-pin DMX out
- 20. 3-pin DMX in
- 21. 3-pin DMX out
- 22. Fuse
- 23. USB
- 24. Power in
- 25. Power out

1.4 Colors and Gobos






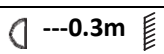










	Open	
1	Dark Red	
2	Cyan	
3	Yellow	
4	Magenta	
5	Acquamarine	
6	Deep Orange	
7	Forest Green	
8	CTO-3200K	
9	6000K	
10	Lavander	
11	Deep Blue	



2. Safety and maintenance Information

2.1 Safety Info

	<p>Before operate this unit, please carefully read this users guide and keep if needed in future. It's necessary to respect following rules.</p>
	<p>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.</p>
	<p>The products referred to in this manual conform to the European Community Directives and are therefore marked with CE logo.</p>
	<p>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.</p>
	<p>Before operate the device, pls make sure the fixture is in good housing, ensure pan and tilt can rotate in its complete range.</p>
	<p>Pls make sure minimal 0.3m distance need to kept between the fixture to any flammable material.</p>
	<p>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.</p>
	<p>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.</p>

	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°C	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
Led 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

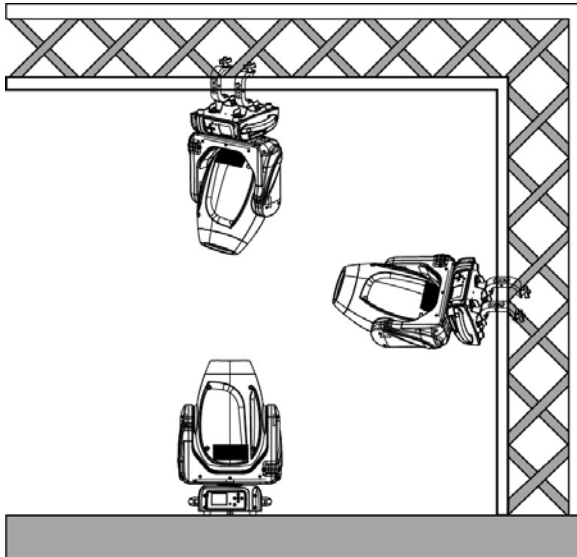
Need to replace with same type and rating, which originally installed in the device.

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.

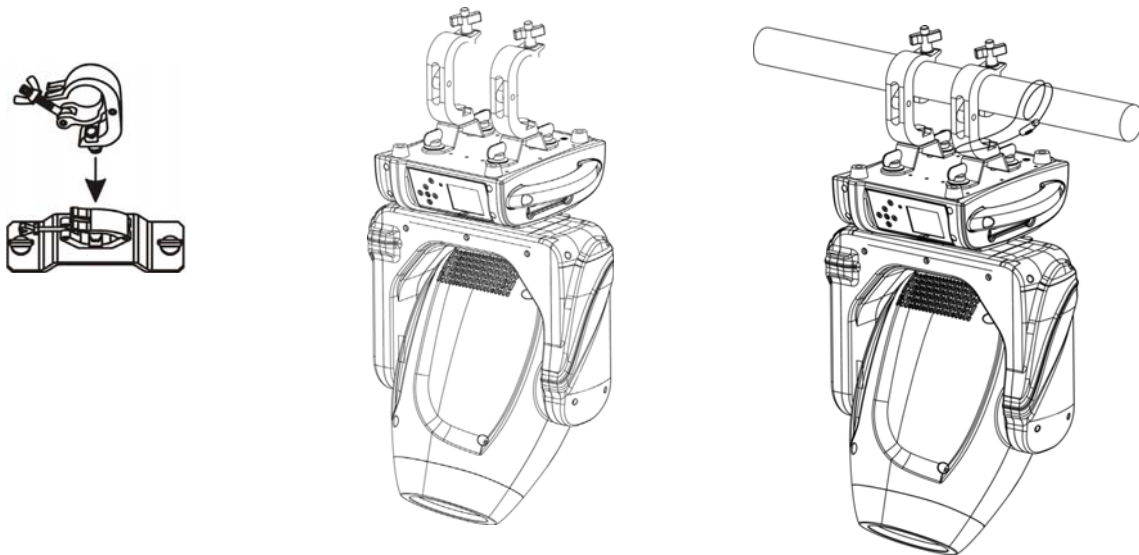


3. Installation

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
Standard	Basic				
1	1	Pan	Pan Coarse	0	255
2	2	Pan fine	Pan Fine	0	255
3	3	Tilt	Tilt Coarse	0	255
4	4	Tilt fine	Tilt Fine	0	255
5	5	XY Speed	Fast to Slow	0	255
6	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	7	Dimmer	Dimmer(Close to Open)	0	255
8		Dimmer Fine	Dimmer(Close to Open)	0	255
9	8	Color Wheel	Indexed		
			Open	0	8
			Open + DARK RED	9	17
			DARK RED	18	26
			DARK RED + CYAN	27	35
			CYAN	36	44
			CYAN + YELLOW	45	53
			YELLOW	54	62
			YELLOW + MAGENTA	63	71
			MAGENTA	72	80
			MAGENTA + ACQUAMARINE	81	89
			ACQUAMARINE	90	98
			ACQUAMARINE + DEEP ORANGE	99	107
DEEP ORANGE	108	116			

			DEEP ORANGE + FOREST GREEN	117	125
			FOREST GREEN	126	134
			FOREST GREEN + CTO 3200K	135	143
			CTO 3200K	144	152
			CTO 3200K + 6000K	153	161
			6000K	162	170
			6000K + LAVANDER	171	179
			LAVANDER	180	188
			LAVANDER + DEEP BLUE	189	197
			DEEP BLUE	198	206
			DEEP BLUE + Open	207	215
			Forward Spin		
			From fast to slow	216	234
			Stop		
			Stop	235	236
			Reverse Spin		
			From slow to fast	237	255
			Indexed		
			Open	0	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
10	9	Rot Gobo	Indexed		
			Lineary from 0° to 360°	0	127
			Forward Spin		
			From fast to slow	128	190
11	10	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
12		Gobo Rot Fine	Lineary from 0° to 360° (Indexed)	0	255
			Indexed		
			Open	0	3
			GOBO 1	4	7
			GOBO 2	8	11
			GOBO 3	12	15
			GOBO 4	16	19
			GOBO 5	20	23
			GOBO 6	24	27
			GOBO 7	28	31
			GOBO 8	32	35
			GOBO 9	36	39
			GOBO 10	40	43
			GOBO 11	44	47
			GOBO 12	48	51
			GOBO 13	52	55
			GOBO 14	56	59
			GOBO 15	60	63
			GOBO 16	64	67
			GOBO 17	68	71
			Shake		
13	11	Fixed Gobo	GOBO 1 from slow to fast	72	75
			GOBO 2 from slow to fast	76	79
			GOBO 3 from slow to fast	80	83
			GOBO 4 from slow to fast	84	87
			GOBO 5 from slow to fast	88	91
			GOBO 6 from slow to fast	92	95
			GOBO 7 from slow to fast	96	99
			GOBO 8 from slow to fast	100	103
			GOBO 9 from slow to fast	104	107
			GOBO 10 from slow to fast	108	111
			GOBO 11 from slow to fast	112	115
			GOBO 12 from slow to fast	116	119
			GOBO 13 from slow to fast	120	123
			GOBO 14 from slow to fast	124	127
			GOBO 15 from slow to fast	128	131
			GOBO 16 from slow to fast	132	135
			GOBO 17 from slow to fast	136	139
			Forward Spin		
			From fast to slow	140	196
			Stop		
			Stop	197	198

			Reverse Spin		
			From slow to fast	199	255
14	12	Prism 1	Open	0	127
			Prism insert	128	255
15	13	Prism 1 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
16	14	Frost	Continuous		
			Lineary from 0% to 100%	0	255
17	15	Zoom	Lineary from in to out	0	255
18		Zoom Fine	Lineary from in to out	0	255
19	16	Focus	Lineary from in to out	0	255
20		Focus Fine	Lineary from in to out	0	255
21	17	Control	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
			ROTATING GOBO WHEEL BLACKOUT ON (index)	24	25
			ROTATING GOBO WHEEL BLACKOUT OFF (index)	26	27
			FIXED GOBO WHEEL BLACKOUT ON (index)	28	29
			FIXED GOBO WHEEL BLACKOUT OFF (index)	30	31
			COLOR WHEEL 1 CONTINUOUS MOVEMENT (index)	32	33
			COLOR WHEEL 1 STEP MOVEMENT (index)	34	35
			ROTATING GOBO WHEEL CONTINUOUS MOVEMENT (index)	36	37
			ROTATING GOBO WHEEL STEP MOVEMENT (index)	38	39
			FIXED GOBO WHEEL CONTINUOUS MOVEMENT (index)	40	41
			FIXED GOBO WHEEL STEP MOVEMENT (index)	42	43
			Reserved	44	45
			Reserved	46	47
			DISPLAY ON	48	49
			DISPLAY 10S	50	51
			DISPLAY 20S	52	53

DISPLAY 30S	54	55
FLIP DISPLAY ON	56	57
FLIP DISPLAY OFF	58	59
FLIP DISPLAY AUTO	60	61
KEY LOCK ON	62	63
KEY LOCK OFF	64	65
FAN MODE AUTO	66	67
FAN MODE SILENT	68	69
FAN MODE HIGH	70	71
NO SIGNAL HOLD	72	73
NO SIGNAL BLACKOUT	74	75
STATUS LED ON	76	77
STATUS LED OFF	78	79
DIMMER CURVE LINEAR	80	81
DIMMER CURVE S-CURVE	82	83
DIMMER CURVE SQUARE LAW	84	85
DIMMER CURVE INVERSE SQUARE LAW	86	87
DIMMER SPEED AUTO	88	89
DIMMER SPEED FAST	90	91
DIMMER SPEED MEDIUM	92	93
DIMMER SPEED SLOW	94	95
LED FREQUENCY 600HZ	96	97
LED FREQUENCY 1200HZ	98	99
LED FREQUENCY 2000HZ	100	101
LED FREQUENCY 4000HZ	102	103
LED FREQUENCY 6000HZ	104	105
LED FREQUENCY 25KHZ	106	107
LED FREQUENCY 50KHZ	108	109
INVERT ZOOM OFF	110	111
INVERT ZOOM ON	112	113
RESET ALL	114	115
RESET PAN/TILT	116	117
RESET COLOR 1	118	119
RESET ROTATING GOBO	120	121
RESET GOBO ROTATION	122	123
RESET FIXED GOBO	124	125
RESET ZOOM	126	127
RESET FOCUS	128	129
RESET PRISM	130	131
RESET FROST	132	133
Reserved	134	253
FACTORY DEFAULT OF CONTROL FUNCTIONS	254	255

5. DMX connection and DMX protocol

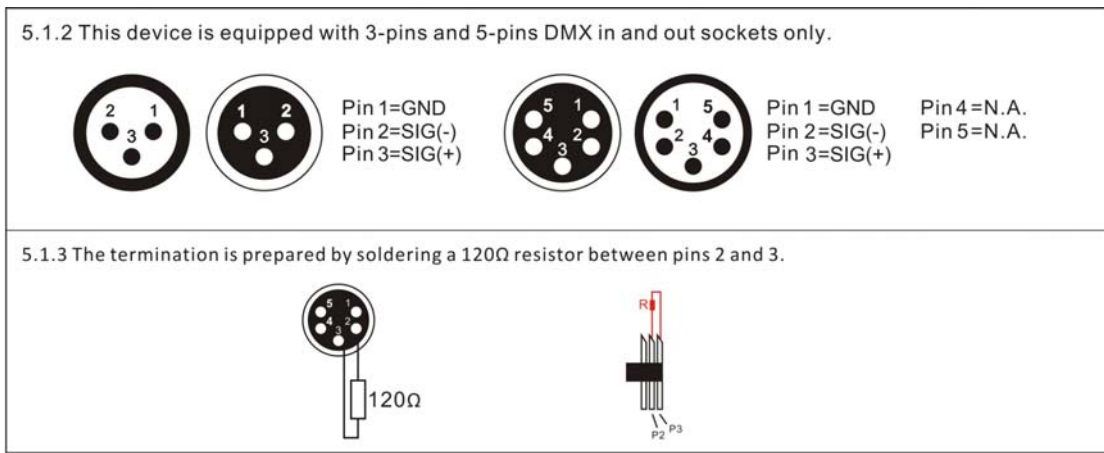
5.1 DMX addressing:

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: 20/17, if we set the mode at standard 20 channels mode, and there are several models need to be independently controlled, we just simply address first fixture at 1, and second fixture at 21, third one at 42, etc.

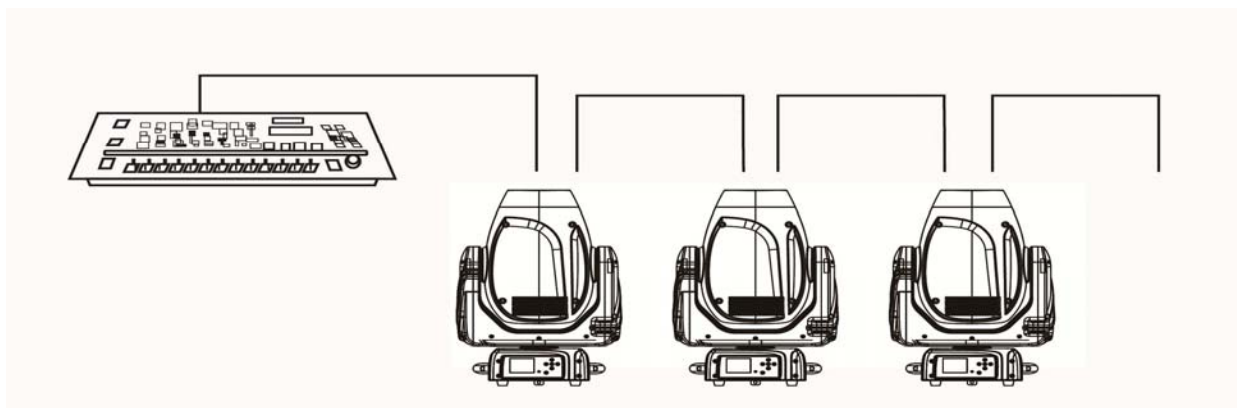
If the devices have the same address, they will behave synchronically.

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.



5.1.4 Connection: use DMX cable with 3+5 pin XLR-plugs to connect the controller with the fixture or one fixture with another.



5.2 Menu tree

Connect	Address①	Value (1-512)		
	Control protocol	DMX/W-DMX		
		sACN		
		ARTNET		
Setup	DMX Mode	Standard		
		Basic		
	WIRELESS	WDMX ON/OFF	ON/OFF	
		WDMX MODE	TRANSMITTER/RE CEIVER	
		TX LINK	ON/OFF	
		TX UNLINK	ON/OFF	
		RX RESET	ON/OFF	
		DMX TO WDMX (TX)	ON/OFF	
		WDMX TO DMX (RX)	ON/OFF	
	Ethernet Settings	Artnet Settings	IP Address	
			Net	
			Subnet	
		sACN Settings	Universe	
			IP Address	
			Universe	
	Ethernet to DMX		OFF/HTP/LTP	
	Fixture Settings	Dmx Fault①	Hold/Blackout(Hold)	
Temperature Unit		Fahrenheit /Celsius(Celsius)		
Hibernation		Off, 01M~99M		
Fan Mode		AUTO/HIGH/SILENT/SUPER 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		
Pan Reverse①		OFF/ON(OFF)		
Tilt Reverse①	OFF/ON(OFF)			

	Movement	Feedback①	OFF/ON(ON)	
		Pan/Tilt Mode①	Slow/Medium/Fast (Fast)	
		Totem Mode①	Off/Up/Down(Off)	
	Screen	Backlight①	10~30S/On (10S)	
		Flip Display①	On/Auto(Auto)	
		Status Led	ON/OFF(ON)	
		Key Lock①	ON/OFF(OFF)	
Information	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,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			
	Pan			

		:			
	Reload Default	Basic Reload(①)	ON/OFF(OFF)		
		Program Reload	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,.....	=xxx	
		~ Edit Scene 250	--Fade Time--	=xxx	
			--Secne Time--	=xxx	
			DMX Input		
Scenes Record	ScXX=>ScXX				
Factory	Rdm Pid Code				
	Locking	Password			
		xxxHours			
		unlocking code			
	Calibration	Password	=xxx		
		Pan	=xxx		
		:	:		
		Focus	=xxx		
		Gobo 1	FOCUS		
		:	:		
		Gobo 8	FOCUS		
		:			
	Max Temperature	80~139°C/176~282°C			
Reset All Data	Yes/No(No)				

6. Unique Features

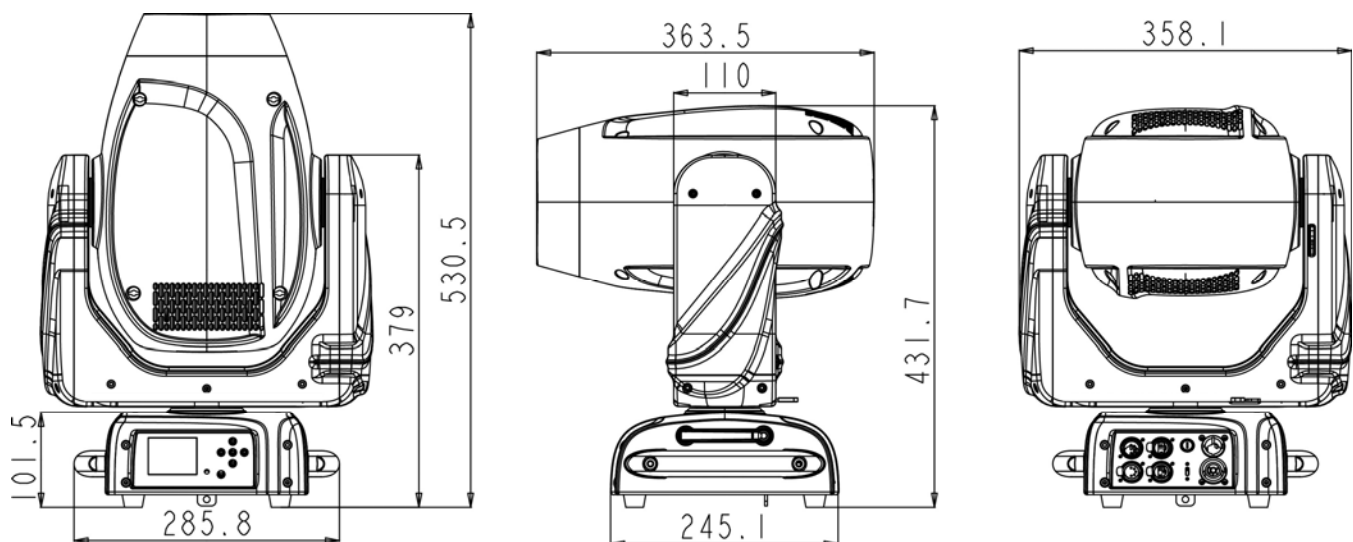
6.1 RDM, stand for “Remote Device Management”, with this function, users can realize remote control of the device, such as remotely changing DMX address, reverse pan/tilt setting, check a lot of useful information such as temperature, power consumption, fan speed. Etc. Every single device has a unique 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	305W
Lamp	Advanced 200w white led
DMX channels	21/17 channels
Beam angle	4.3° to 36.2 °
Luminous flux	7138.7 , ,61600lx @5m@4.3°
Fuse	T5A , 250 V
Device dimensions	530*358*245mm
Net Weight	14.74KG
Gross Weight	18KG
IP	20

Warranty

Please refer to your local dealer or contact Event Lighting.

www.event-lighting.com.au