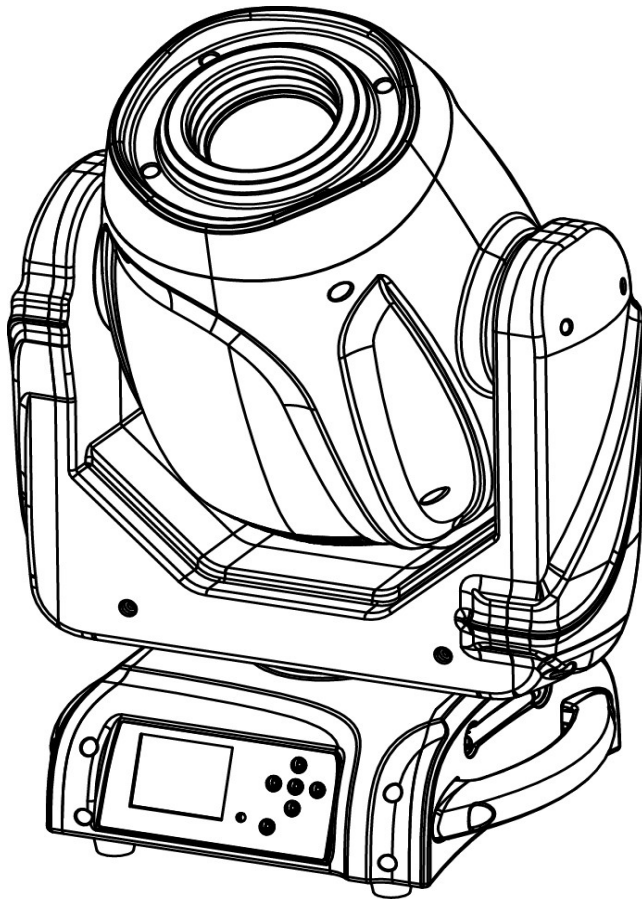




HAVOCS150

150W LED Moving Head Spot

USER MANUAL



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

Event Lighting reserves the right to revise the manual at any time. Information and specifications within this manual are subject to change without notice. Event Lighting assumes no liability or responsibility for any errors or omissions. Please consult Event Lighting for any clarification or information regarding this item.

Safety Instructions

Warning

- Do not open this device, there is no user-serviceable parts inside. Risk of electric shock.
- Do not look at the light source when the device is on.

Caution: This unit's housing may be hot during and after operation.

- Install this device in a location with adequate ventilation, at least 50 cm from adjacent surfaces.
- Do not leave any flammable material within 50 cm of this unit while operating or connected to power.
- Use a safety chain when mounting this device overhead.
- Do not operate this device in any location where excessive dust, heat, water or humidity may affect it.
- Do not operate this device if the housing, lenses, or cables appear damaged.
- Do not connect this device to a dimmer or rheostat.
- ONLY connect this device to a grounded and protected circuit.
- ONLY use the hanging bracket to carry this device.
- In case of a serious operating problem, stop using immediately.
- The maximum ambient temperature is 40° C. Do not operate this device at higher temperatures.

Power Input and Power Linking

This device has an auto-switching power supply that works with input voltage range of 100~240 VAC, 50/60 Hz. Link up to a maximum of 8A. Do NOT exceed this.

Fuse Replacement

If the fine-wire fuse of the device fuses, only replace the fuse by a fuse of same type and rating. Before replacing the fuse, unplug mains lead.

Procedure:

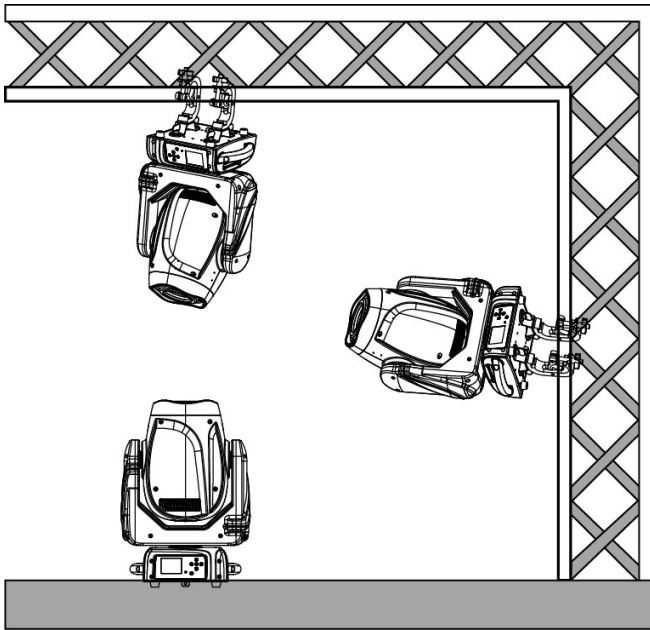
Step 1: Unscrew the fuse holder on the rear panel with a fitting screwdriver from the housing (anticlockwise). Step 2: Remove the old fuse from the fuse holder.

Step 3: Install the new fuse in the fuse holder.

Step 4: Replace the fuse holder in the housing and fix it.

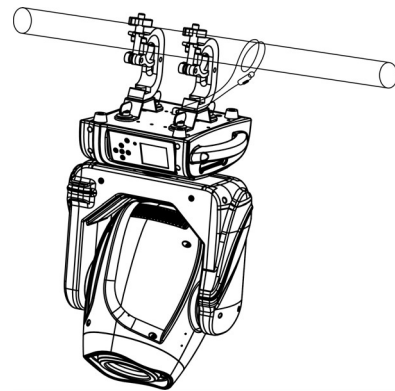
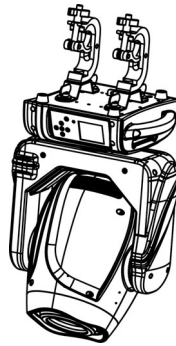
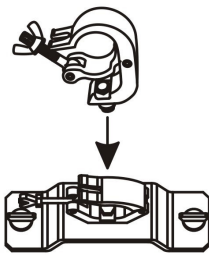
Product Installation

- This fixture can be mounted in many orientations provided each individual fixture is secured by the use of correct mounting bracket.
- Use a safety chain when mounting this device overhead.



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

How to Mount Fixture



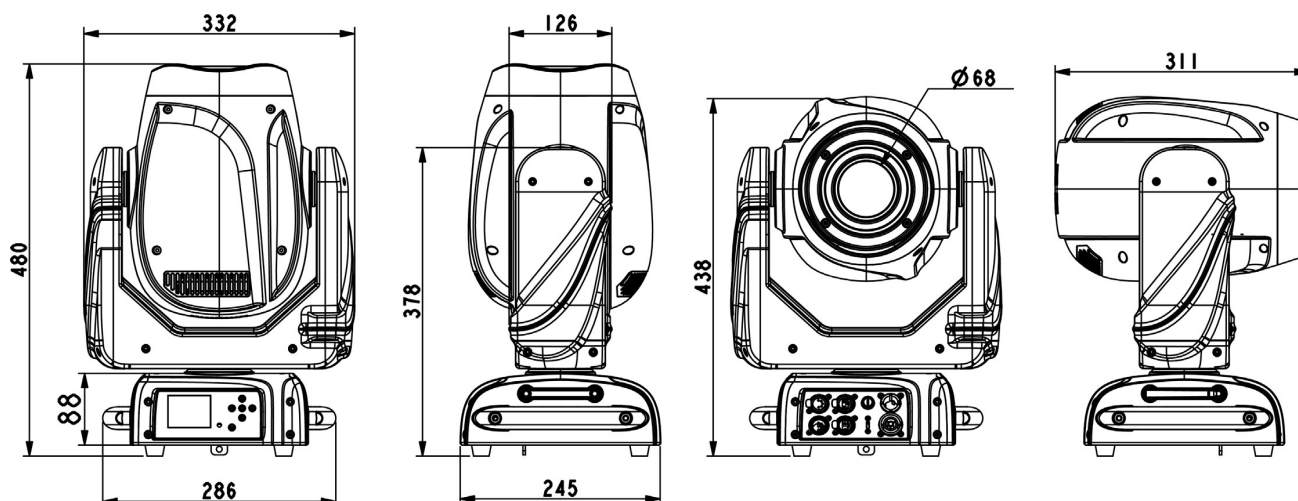
- Step one: Installation the clamp onto the omega bracket;
- Step two: Install the clamp and bracket on the bottom of panel, fasten the quick-locks;
- Step three: Install the whole device onto appropriate truss and fasten the clamps, tight the safety rope with the truss or other fixing point at a suitable position that drop down distance not exceed 20 cm.

Product Introduction

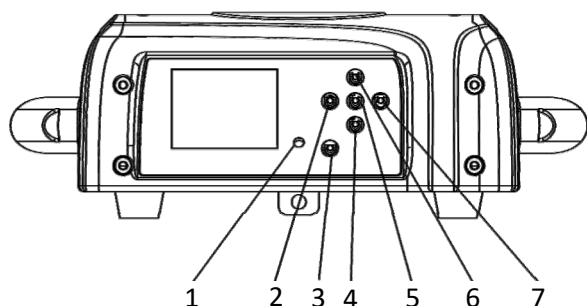
Before unpack the fixture, please make sure that the packing is in good condition, following items will be found in the box:

- The fixture
- 3m DMX cable
- 1.5m power cable with powercon
- Omega bracket for hanging installation
- Safety chain

Dimensions



Menu Operation



1. Microphone
2. Left Button
3. Battery
4. Down Button
5. Enter
6. Up Button
7. Right Button

Menu

Menu Icons

CONNECT	LIGHT	INFOMATION	SETTINGS	PROGRAM

Menu Tree

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

Connect	Address①	Value (1-512)	
	Control protocol	DMX/W-DMX	
	DMX Mode	Standard	

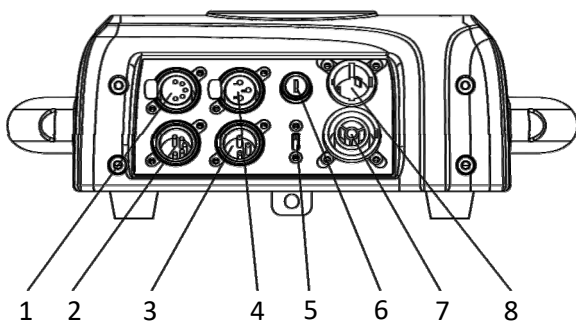
Setup		Basic		
	WIRELESS	WDMX ON/OFF	ON/OFF	
		WDMX MODE	TRANSMITTER/RECEIVER	
		TX LINK	ON/OFF	
		TX UNLINK	ON/OFF	
		RX RESET	ON/OFF	
		DMX TO WDMX (TX)	ON/OFF	
		WDMX TO DMX (RX)	ON/OFF	
	Fixture Settings	Dmx Fault①	Hold/Blackout(Hold)	
		Temprature Unit	Fahrenheit /Celsius(Celsius)	
		Hibernation	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	OFF/ON(OFF)	
		Tilt Reverse①	OFF/ON(OFF)	
		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)	
	Fixture Time	Fixture Hours	Total	(Only Read)

Information			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	xxxxxxxxxxxxx		
	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)	
		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	Chase Part 1	Chase 1 ~ 8 Chase 1	
	Chase②	Chase Part 2	Chase 1 ~ 8 Chase 2	
		Chase Part 3	Chase 1 ~ 8 Chase 3	
	Edit Chase ②	Chase 1	Chase Test	
		:	Step 01	=xxx
		Chase 8	Step 64	=xxx
	Edit Scenes ②	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)	

DMX connection and DMX protocol



1. 5-Pin DMX Out
2. 5-Pin DMX In
3. 3-Pin DMX In
4. 3-Pin DMX Out
5. USB
6. Fuse
7. Powercon Out
8. Powercon In

DMX addressing:

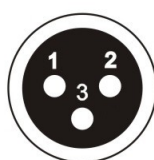
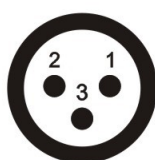
The device is controlled by universal DMX 512 protocol, DMX address is the start channel used to receive instructions from the external controller. For independent control, each fixture must be assigned its unique address control channels. For example, this device has four channel modes: 13/14, if we set the mode at standard 13 channels mode, and there are several models need to be

independently controlled, we just simply address first fixture at 1, and second fixture at 14, third one at 28, etc.

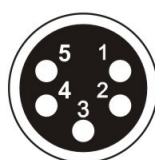
If the devices have the same address, they will behave synchronically.

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.

! This device is equipped with 3-pins and 5-pins DMX in and out sockets only.



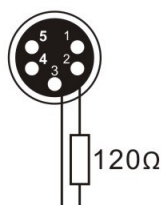
Pin 1=GND
Pin 2=SIG(-)
Pin 3=SIG(+)



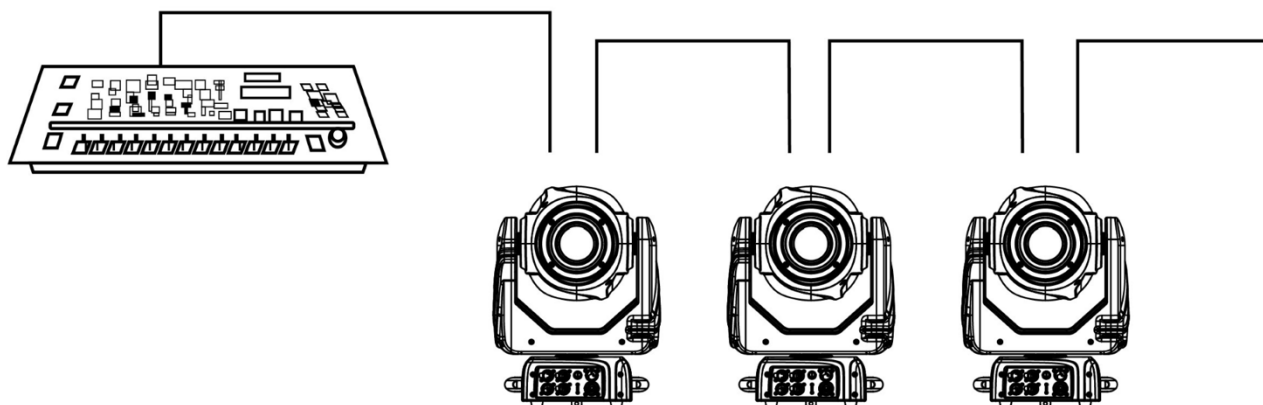
Pin 1=GND
Pin 2=SIG(-)
Pin 3=SIG(+)

Pin 4=N.A.
Pin 5=N.A.

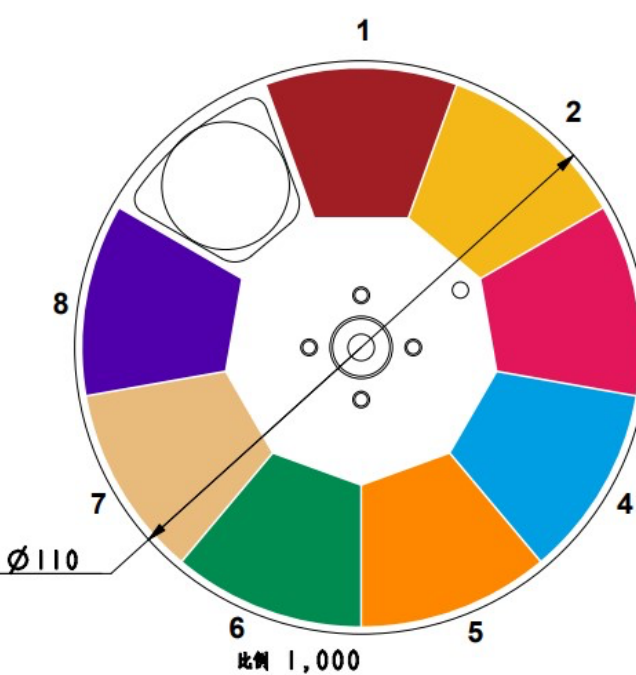
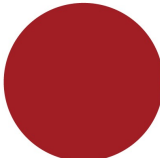
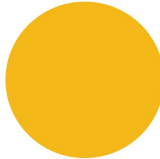

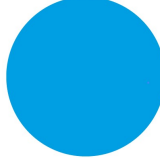
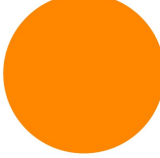
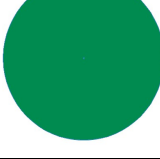
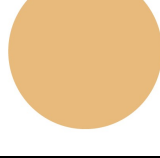
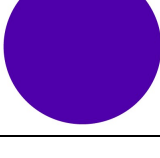
The termination is prepared by soldering a 120Ω resistor between pins 2 and 3.

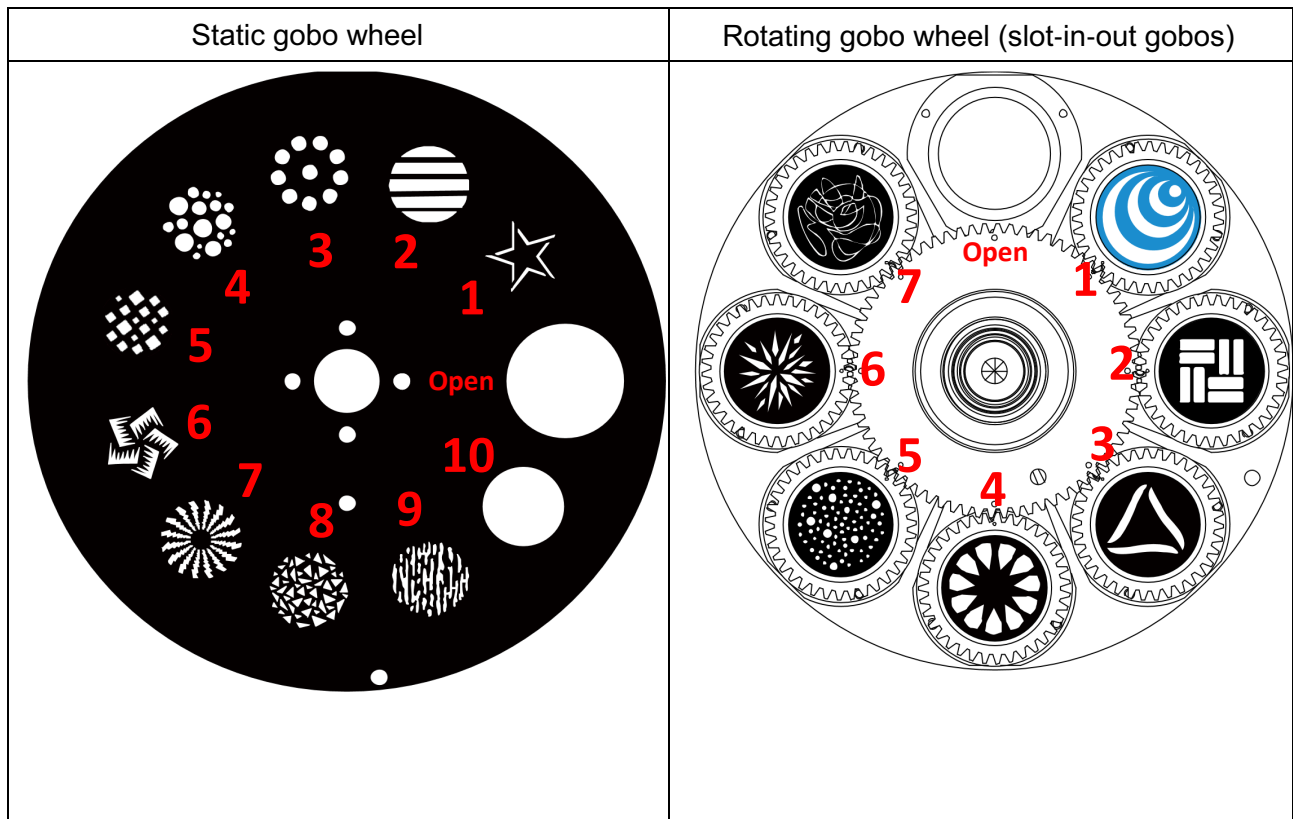


Connection: use DMX cable with 3+5 pin XLR-plugs to connect the controller with the fixture or one fixture with another.
















Colours & Gobo Wheels






		Open	
	1		Red
	2		Yellow
	3		Magenta
	4		Cyan
	5		Orange
	6		Green
	7		CTO-3200K
	8		Blue










DMX Chart

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	11
			Open + RED	12	23
			RED 	24	35
			RED + YELLOW	36	47
			YELLOW 	48	59
			YELLOW + MAGENTA	60	71
			MAGENTA 	72	83
			MAGENTA + CYAN	84	95
			CYAN 	96	107
			CYAN + ORANGE	108	119
			ORANGE 	120	131
			ORANGE + GREEN	132	143
			GREEN 	144	155
			GREEN + CTO 3200K	156	167
			CTO 3200K 	168	179
			CTO 3200K + BLUE	180	191
			BLUE 	192	203
			BLUE + Open	204	215
			Forward Spin		
			From fast to slow	216	234
			Stop		
			Stop	235	236
			Reverse Spin		
			From slow to fast	237	255
10	9	Rot Gobo	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
			Shake		
			GOBO 1 from slow to fast	80	89
			GOBO 2 from slow to fast	90	99
			GOBO 3 from slow to fast	100	109
			GOBO 4 from slow to fast	110	119
			GOBO 5 from slow to fast	120	129
			GOBO 6 from slow to fast	130	139
			GOBO 7 from slow to fast	140	149
			Forward Spin		
			From fast to slow	150	201
			Stop		
			Stop	202	203
			Reverse Spin		
			From slow to fast	204	255
11	10	Gobo Rot	Indexed		
			Lineary from 0° to 360°	0	127
			Forward Spin		
			From fast to slow	186	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
13	11	Fixed Gobo	Indexed		
			Open	0	6
			GOBO 1 	7	13
			GOBO 2 	14	20
			GOBO 3 	21	27

			GOBO 4 	28	34
			GOBO 5 	35	41
			GOBO 6 	42	48
			GOBO 7 	49	55
			GOBO 8 	56	62
			GOBO 9 	63	69
			GOBO 10 	70	76
			Shake		
			GOBO 1 from slow to fast	77	82
			GOBO 2 from slow to fast	83	88
			GOBO 3 from slow to fast	89	94
			GOBO 4 from slow to fast	95	100
			GOBO 5 from slow to fast	101	106
			GOBO 6 from slow to fast	107	112
			GOBO 7 from slow to fast	113	118
			GOBO 8 from slow to fast	119	124
			GOBO 9 from slow to fast	125	130
			GOBO 10 from slow to fast	131	136
			Forward Spin		
			From fast to slow	137	194
			Stop		
			Stop	195	197
			Reverse Spin		
			From slow to fast	198	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
			Reserved	20	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 FIXED GOBO	122	123
			RESET ZOOM	124	125
			RESET FOCUS	126	127
			RESET PRISM	128	129
			RESET FROST	130	131
			Reserved	132	253

			FACTORY FUNCTIONS	DEFAULT OF	CONTROL	254	255
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Unique Features

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.

Software upgrade function via DMX cable&usb, 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.

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.

Display battery, this function is prepaid in the display PCB, users just need to install a normal 10440 600mAh 3.7V rechargeable lithium battery, then users could power on the display and do setting without connect to main power.

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.

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.

Technical Specification

Source

- Light source: Advanced 150W White led
- Led life: 60.000 hours
- Luminous Flux: 4882 lumen, 25410 lux @ 3m
- Control: Remote on/off via DMX

Optical System

- Field angle 10%: 10°-45°

X/Y

- Pan: 540° (2.4 sec), Tilt: 263° (1.3 sec)
- 16-bit resolution
- Auto repositioning

Colours

- 8+open, indexable and bidirectional rainbow effect + colour bounce effect

Gobos

- Outside \varnothing 19.5mm, inside \varnothing 17mm
- 7+open custom interchangeable position for rotating gobo wheel
- Real indexable and gobo shaking
- 10+ open fixed gobos
- Distinctive gobo animation effect

Features

- DMX channels: 21/17
- Colour wheel: 8+1 colours
- Rotating gobo wheel: 7+1 gobos
- Fixed gobo wheel: 10+1 gobos
- Motorized focus
- Full range 0-100% dimmer
- Various strobe
- Rotating Effect wheel with 3 facets prism
- RDM function to change DMX address, display flip, X/Y Reverse
- 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: 200W
- Fuse: T 3.15 A, 250 V
- Powercon in and out
- Power supply: Electronic auto-ranging
- Input voltage range: 100–240V, 50-60Hz

Other

- Device Dimensions: 480 x 332 x 245mm
- Weight: 12.36kg