



HAVOCH600F

600W LED Moving Head Hybrid with Framing

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 Warning

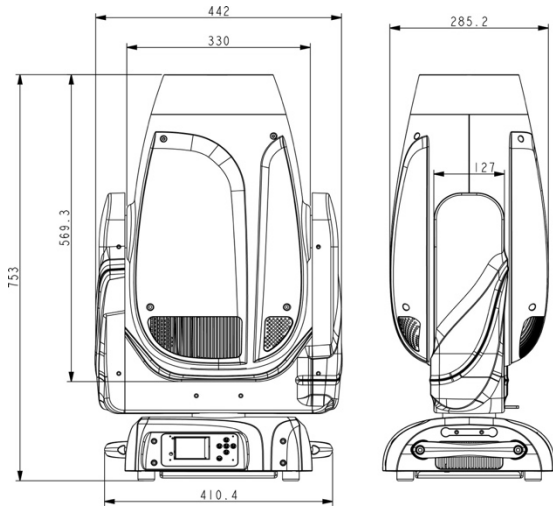
1. Do not open this device, there are no user serviceable parts inside. Risk of electric shock.
2. Before operate the device, please make sure the fixture is in good housing, ensure pan and tilt can rotate in its complete range.
3. Avoid contact with this unit during operation
4. Do not operate this device, or connect this device to power, within 200cm (6 ft) of any flammable material.
5. Install this fixture in a location with adequate ventilation, at least 100cm (3 ft) from adjacent surfaces.
6. Do not operate this device outdoors where excessive dust, heat, water, or humidity may affect it.
7. Do not look directly into the light while it is powered on for the risk of seizures, damage to the user's eyes and vision including blindness, and/or other serious harm to the user.
8. Do not operate this fixture if the housing, lenses, or cables appear damaged.
9. Do not connect this fixture to a dimmer or rheostat.
10. Do not operate this device at temperatures higher than 40°C (104°F).
11. Only connect this device to a grounded and protected circuit.
12. Use a safety chain when mounting this fixture overhead. Ensure the safety chain is rated to hold this fixtures weight.
13. Only use the hanging bracket to carry this fixture.
14. Stop using this device immediately if a serious operating problem becomes apparent.
15. The disposal of this device after lifecycle could damage the environment. Please ensure this disposed of at one of your region's official e-waste disposal or a company which specialises in electronic waste disposal.
16. Always carry the device by the handles, do not take the head or arm directly for transportation.
17. The products referred to in this manual conform to the European Community Directives and are therefore marked with CE logo.

Product Introduction

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

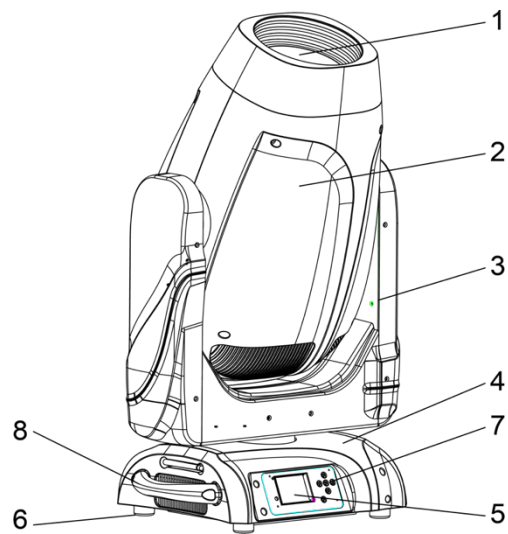
- The fixture
- The Quick Start Guide
- 5-Pin DMX Cable (3m / 6ft Length)
- 1.5m / 4ft Power Cable with True One Connection
- 2 x Omega Brackets for Hanging Installation

Product Dimensions

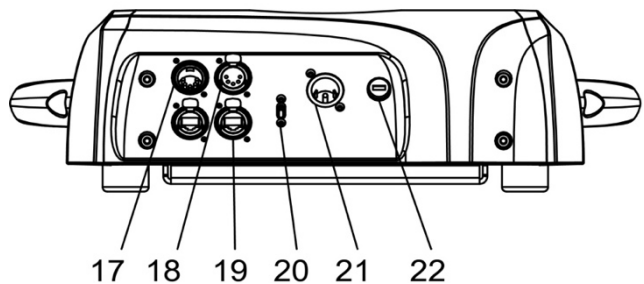
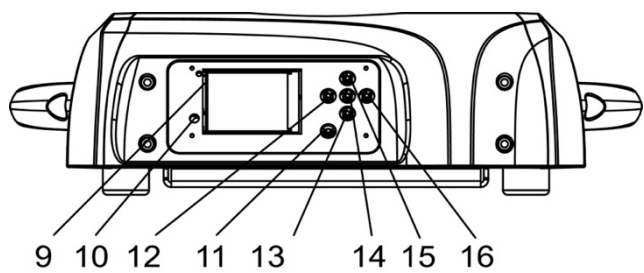


Description of Device

1. LED lens
2. Head
3. Arm
4. Base
5. Display
6. Foot stand
7. Operation button
8. Lifting Handle



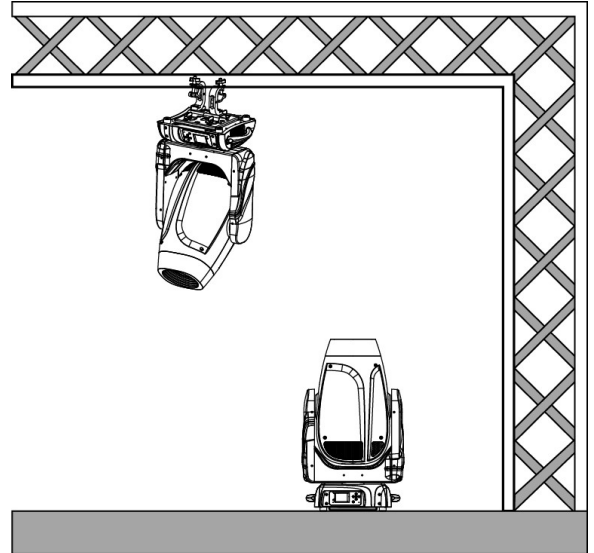
9. Wireless Indicator
10. Ethernet Indicator
11. Battery Indicator
12. Left Button
13. Down Button
14. Enter Button
15. Up Button
16. Right Button
17. 5-pin DMX Input
18. 5-pin DMX Output
19. ETHERNET In/Out
20. USB Input
21. Power Input
22. Fuse



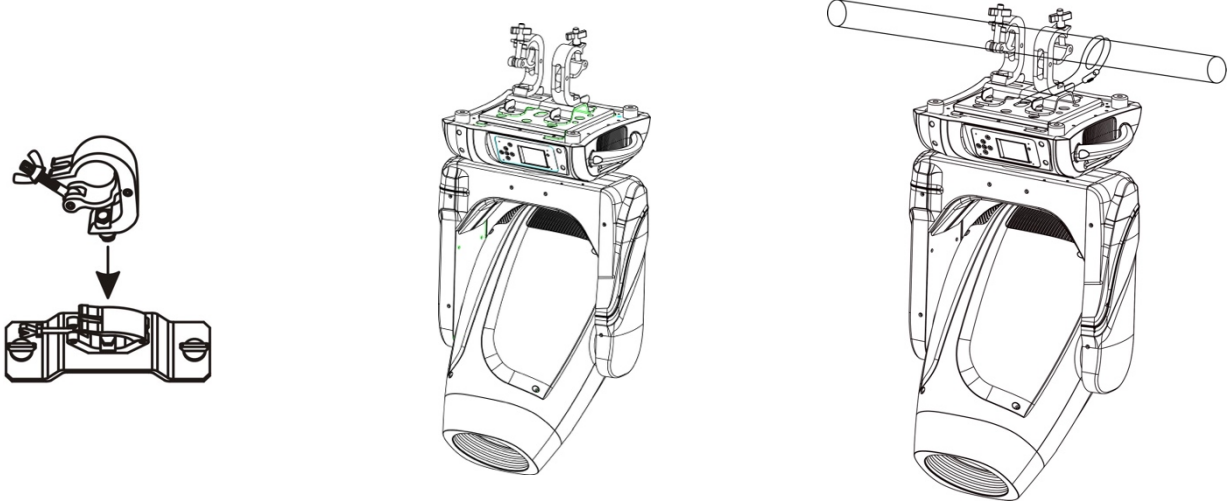
Product Installation

The device could be either put on a solid and even surface, or mounted upside down or sideways like the below 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 / 7.8".



How to do mounting installation

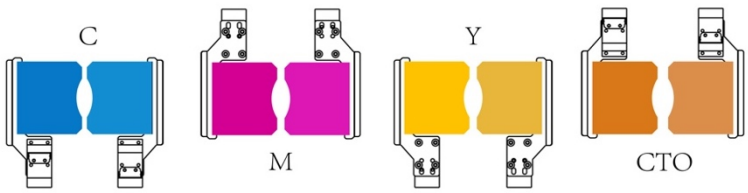










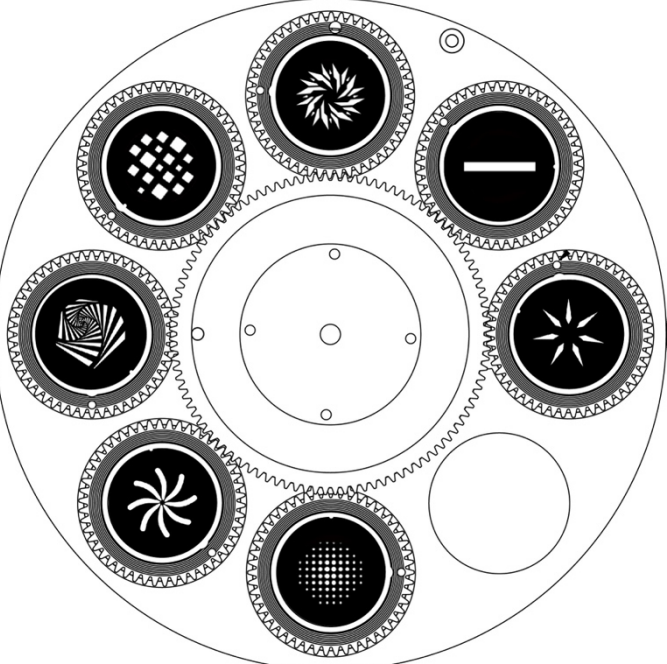










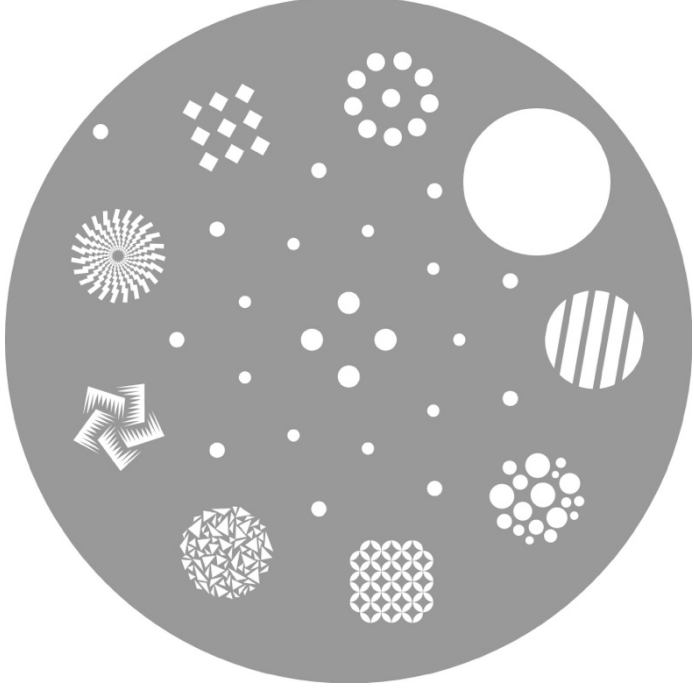









Step one: Installation the clamp onto the omega bracket;

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 / 7.8".

Colours and Gobos

CMY, CTO Flags		
		
Colour Wheel		
	Open	
	1 Colour Temperature Correction	
	2 Red	
	3 Green	
	4 Blue	
	5 Pale Yellow	
	6 Pink	
	7 Orange/Red	
	8 CRI-17	
Rotating Gobo Wheel		
	Open	
	1 7-Point Star	
	2 Single Line	
	3 Spiked Wheel	
	4 Square Polka	
	5 Endless Spiral	
	6 Thin Fan	
	7 Fading Dots	
Static Gobo Wheel		

	Open		
	1	Circles Circling Circle	
	2	3 of 3 of Diamonds	
	3	Lightning Round	
	4	Combed Star	
	5	Kaleidoscope	
	6	Starry Tiles	
	7	Bubbles	
	8	5 Bars	

Menu

Meaning of the icon in menu

CONNECT	LIGHT	INFOMATION	SET	PROGRAM
				

DMX Protocol and Connection

DMX Addressing

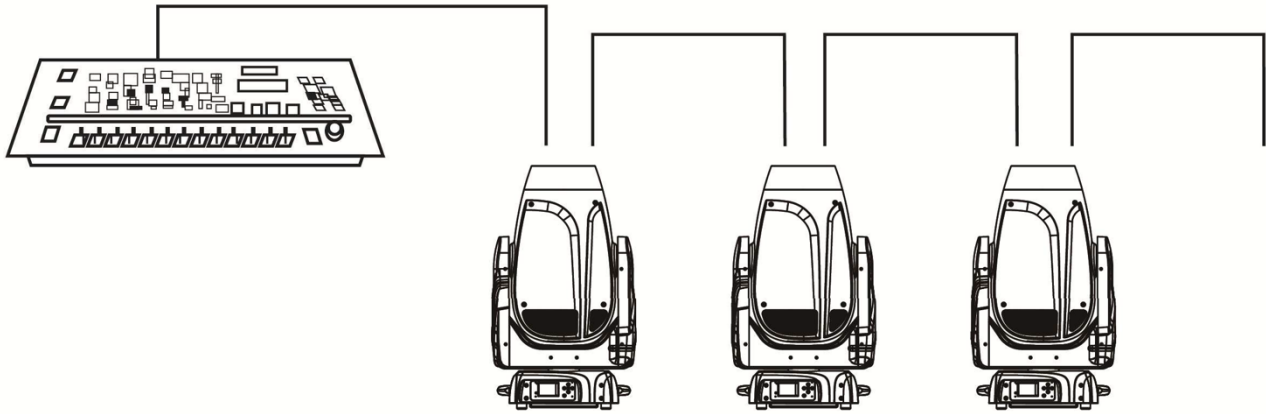
The device is controlled by universal DMX 512 protocol; DMX address is the start channel used to receive instructions from the external controller. For independent control, each fixture must be assigned its unique address control channels. For example, this device has four channel modes:39, if we set the mode at standard 39 channels mode, and there are several models need to be independently controlled, we just simply address first fixture at 1, and second fixture at 40, third one at 79, 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.

Connecting to Your Fixture

Use the included DMX cable with 5 pin XLR-plugs to connect the controller with the fixture or one fixture with another.



DMX Chart

CHANNEL	name	function	Min	Max
STANDARD			DMX	DMX
1	Pan	Lineary from 0% to 100%	0	255
2	Pan fine	Lineary from 0% to 100%	0	255
3	Tilt	Lineary from 0% to 100%	0	255
4	Tilt fine	Lineary from 0% to 100%	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	Lineary from close to open	0	255
8	Dimmer Fine	Lineary from 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	CTO	Lineary from 0% to 100%	0	255
13	Color Wheel	Indexed		
		Open	0	8
		Open + COLOR 1	9	15
		COLOR 1 	16	22
		COLOR 1 + COLOR 2	23	29
		COLOR 2 	30	36
		COLOR 2 + COLOR 3	37	43
		COLOR 3 	44	50
		COLOR 3 + COLOR 4	51	57
		COLOR 4 	58	64
		COLOR 4 + COLOR 5	65	71
		COLOR 5 	72	78
		COLOR 5 + COLOR 6	79	85
		COLOR 6 	86	92
		COLOR 6 + COLOR 7	93	99
		COLOR 7 	100	106
		COLOR 7 +COLOR 8	107	113
		COLOR 8 	114	120
		COLOR 8 + Open	121	127
		Forward Spin		

		From fast to slow	128	190
		Stop		
		Stop	191	192
		Reverse Spin		
		From slow to fast	193	255
14	Rot Gobo	Indexed		
		Open	0	7
		GOBO 1	8	15
		GOBO 2	16	23
		GOBO 3	24	31
		GOBO 4	32	39
		GOBO 5	40	47
		GOBO 6	48	55
		GOBO 7	56	63
		Forward Spin		
		From fast to slow	64	130
		Stop		
		Stop	131	132
		Reverse Spin		
		From slow to fast	133	199
		Shake		
		GOBO 1 from slow to fast	200	207
		GOBO 2 from slow to fast	208	215
		GOBO 3 from slow to fast	216	223
		GOBO 4 from slow to fast	224	231
		GOBO 5 from slow to fast	232	239
		GOBO 6 from slow to fast	240	247
		GOBO 7 from slow to fast	248	255
15	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
16	Gobo Rot Fine	Lineary from 0° to 360° (Indexed)	0	255
		Indexed		
		Open	0	5
		GOBO 1	6	11
		GOBO 2	12	17
		GOBO 3	18	23

17	Fixed Gobo	GOBO 4	24	29
		GOBO 5	30	35
		GOBO 6	36	41
		GOBO 7	42	47
		GOBO 8	48	53
		Forward Spin		
		From fast to slow	54	125
		Stop		
		Stop	126	127
		Reverse Spin		
		From slow to fast	128	199
		Shake		
		GOBO 1 from slow to fast	200	205
		GOBO 2 from slow to fast	206	211
		GOBO 3 from slow to fast	212	217
		GOBO 4 from slow to fast	218	223
		GOBO 5 from slow to fast	224	229
		GOBO 6 from slow to fast	230	235
		GOBO 7 from slow to fast	236	241
		GOBO 8 from slow to fast	242	255
18	4 Facet Prism	Open	0	127
		Prism insert	128	255
19	4 Facet Prism Rotation	Indexed		
		Lineary from 0° to 360°	0	127
		Forward Spin		
		From fast to slow	128	190
		Stop		
		Stop	191	192
		Reverse Spin		
20	Frost	Continuous		
		Lineary from 0% to 100%	0	255
21	Zoom	Lineary from in to out	0	255
22	Zoom Fine	Lineary from in to out	0	255
23	Focus	Lineary from in to out	0	255
24	Focus Fine	Lineary from in to out	0	255
25	Animation Insertion	Continuous		
		Lineary from 0% to 100%	0	255
26	Animation	Indexed		
		Lineary from 0° to 360°	0	127
		Forward Spin		
		From fast to slow	128	190
		Stop		

	Rotation	Stop	191	192
		Reverse Spin		
		From slow to fast	193	255
27	Iris	Open/No Function	0	31
		Indexed	32	63
		Pulse opening With Forward Backout	64	127
		Pulse opening With Reverse Backout	128	191
		Pulse closing With Forward Backout	192	223
		Pulse closing With Reverse Backout	224	255
28	Blade1 Position	Blade1 Position 0->100%	0	255
29	Blade1 Rot	Blade1 Rot	0	255
30	Blade2 Position	Blade2 Position 0->100%	0	255
31	Blade2 Rot	Blade2 Rot	0	255
32	Blade3 Position	Blade3 Position 0->100%	0	255
33	Blade3 Rot	Blade3 Rot	0	255
34	Blade4 Position	Blade4 Position 0->100%	0	255
35	Blade4 Rot	Blade4 Rot	0	255
36	Blade Rot	Blade All Rotation	0	255
37	Frame macros	No Function	0	3
		Macro 1	4	10
		Macro 2	11	17
		Macro 3	18	24
		Macro 4	25	31
		Macro 5	32	38
		Macro 6	39	45
		Macro 7	46	52
		Macro 8	53	59
		Macro 9	60	66
		Macro 10	67	73
		Macro 11	74	80
		Macro 12	81	87
		Macro 13	88	94
		Macro 14	95	101
		Macro 15	102	108
		Macro 16	109	115
		Macro 17	116	122
		Macro 18	123	129
		Macro 19	130	136
		Macro 20	137	143

		Macro 21	144	150
		Macro 22	151	157
		Macro 23	158	164
		Macro 24	165	171
		Macro 25	172	178
		Macro 26	179	185
		Macro 27	186	192
		Macro 28	193	199
		Macro 29	200	206
		Macro 30	207	213
		Macro 31	214	220
		Macro 32	221	227
		Macro 33	228	234
		Macro 34	235	241
		Macro 35	242	248
		Macro 36	249	255
38	Frame macros speed	Lineary from 0 to 100%	0	255
39	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
		HOME MODE STANDARD	16	17
		HOME MODE CUSTOM	18	19
		MOVEMENT IN BLACKOUT ON	20	21
		MOVEMENT IN BLACKOUT OFF	22	23
		COLOR WHEEL BLACKOUT ON (index)	24	25
		COLOR WHEEL BLACKOUT OFF (index)	26	27
		ROTATING GOBO WHEEL BLACKOUT ON (index)	28	29
		ROTATING GOBO WHEEL BLACKOUT OFF (index)	30	31
		FIX GOBO WHEEL BLACKOUT ON (index)	32	33
		FIX GOBO WHEEL BLACKOUT OFF (index)	34	35
		DISPLAY ON	36	37
		DISPLAY 10S	38	39
		DISPLAY 20S	40	41
		DISPLAY 30S	42	43
		FLIP DISPLAY ON	44	45
		FLIP DISPLAY OFF	46	47

		FLIP DISPLAY AUTO	48	49
		KEY LOCK ON	50	51
		KEY LOCK OFF	52	53
		FAN MODE AUTO	54	55
		FAN MODE SILENT	56	57
		FAN MODE HIGH	58	59
		NO SIGNAL HOLD	60	61
		NO SIGNAL BLACKOUT	62	63
		STATUS LED ON	64	65
		STATUS LED OFF	66	67
		DIMMER CURVE LINEAR	68	69
		DIMMER CURVE S-CURVE	70	71
		DIMMER CURVE SQUARE LAW	72	73
		DIMMER CURVE INVERSE SQUARE LAW	74	75
		DIMMER SPEED AUTO	76	77
		DIMMER SPEED FAST	78	79
		DIMMER SPEED MEDIUM	80	81
		DIMMER SPEED SLOW	82	83
		LED FREQUENCY 600HZ	84	85
		LED FREQUENCY 1200HZ	86	87
		LED FREQUENCY 2000HZ	88	89
		LED FREQUENCY 4000HZ	90	91
		LED FREQUENCY 6000HZ	92	93
		LED FREQUENCY 25KHZ	94	95
		LED FREQUENCY 50KHZ	96	97
		INVERT ZOOM OFF	98	99
		INVERT ZOOM ON	100	101
		RESET ALL	102	103
		RESET PAN	104	105
		RESET TILT	106	107
		RESET PAN & TILT	108	109
		RESET CYAN	110	111
		RESET MAGENTA	112	113
		RESET YELLOW	114	115
		RESET CTO	116	117
		RESET COLOR WHEEL	118	119
		RESET GOBO WHEEL	120	121
		RESET GOBO ROTATION	122	123
		RESET FIX GOBO WHEEL	124	125
		RESET ANIMATION	126	127
		RESET ANIMATION ROTATION	128	129
		RESET PRISM	130	131
		RESET PRISM ROTATION	132	133

		RESET FROST	134	135
		RESET IRIS	136	137
		RESET ZOOM	138	139
		RESET FOCUS	140	141
		RESET FRAME ROT	142	143
		RESET BLADE 1 POSITON	144	145
		RESET BLADE 1 ROT	146	147
		RESET BLADE 2 POSITON	148	149
		RESET BLADE 2 ROT	150	151
		RESET BLADE 3 POSITON	152	153
		RESET BLADE 3 ROT	154	155
		RESET BLADE 4 POSITON	156	157
		RESET BLADE 4 ROT	158	159
		Reserved	160~253	
		FACTORY DEFAULT OF CONTROL FUNCTIONS	254	255

Technical specification

Photometrics

- Light Source: 640w LED White
- Beam Angle: 4°-50°
- Output: 83,800 lux @ 5m / 16ft at 4°
- Colour Temperature: 7,700K
- LED lifespan: 20,000 hours

Colour

- 8 Colours + Open
- Linear CMY+CTO

Gobos

- Fixed: 8 + Open
- Rotating: 7+ Open

Effects

- Dimming: 0~100%
- Strobe: Yes
- Focus: Motorised
- Prism: Rotating 4 facets
- Animation wheel
- Iris: Yes
- Frost: Yes

- Zoom: Yes (4° to 50°)
- 4 Individual Shutter Blades Rotating +/- 45°

Movement

- 16 bit resolution
- Auto repositioning
- Pan: 630° (4.4 sec) or 540° (3.9 sec)
- Tilt: 233° (2.3 sec)

Power

- Max power consumption: 590W
- Input Voltage: 100~240V AC, 50/60 Hz
- Connection: TrueOne in/out

Control

- Control Protocol: DMX512, RDM
- Optional Wireless
- DMX Channels: 39
- Interface: 5-pin XLR in/out, RJ45 in / out
- RDM function to change DMX address
- Display: 2.4" colour LCD control panel
- Software Upgrade via DMX: Yes

Housing

- Materials: ABS & Steel, matte black finish
- Dimensions: 443 x 748 x 305mm / 17.4" x 29.4" x 12"
- Cooling: Multi sensor thermostat controlled variable speed fan
- IP rating: IP20
- Net Weight: 37.2kg / 80.01lbs
- Rigging: 2 x omega brackets with 1/4-turn quick locks

Warranty

Please refer to your local dealer or contact Event Lighting.

www.eventlighting.com.au