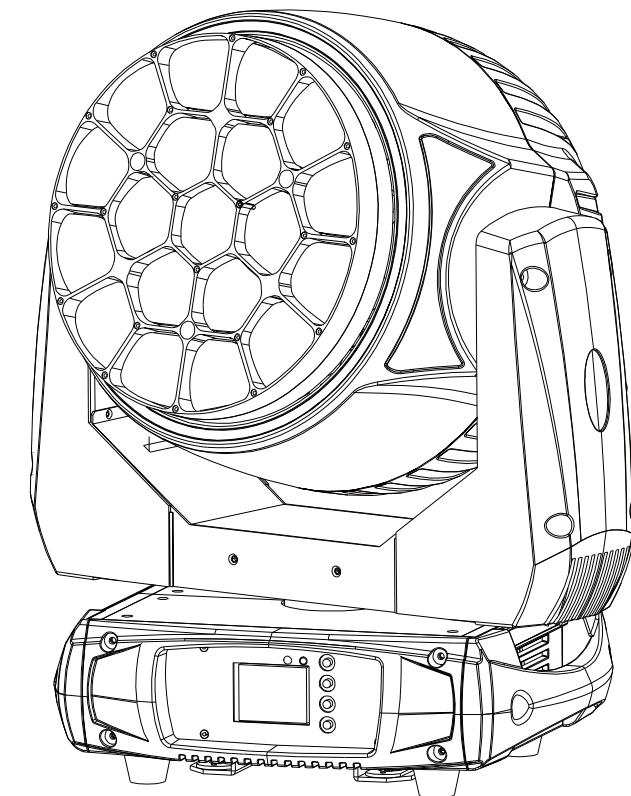




FOS Helix Ultra



Version 1.0

USER MANUAL

- Be sure to read the USER MANUAL carefully before using this product.
- Be sure to keep the USER MANUAL properly for future needs.
- Use this product correctly when you can fully understand the User Manual

10. Maintenance and cleaning

It is absolutely essential that the fixture is kept clean and that dust, dirt and smoke-fluid residues must not build up on or within the fixture. Otherwise, the fixture's light-output will be significantly reduced. Regular cleaning will not only ensure the maximum light-output, but will also allow the fixture to function reliably throughout its life. A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances should alcohol or solvents be used!

DANGER !
Disconnect from the mains before starting any maintenance work

The front objective lens will require weekly cleaning as smoke-fluid tends to building up residues, reducing the light-output very quickly. The cooling-fans should be cleaned monthly.

The interior of the fixture should be cleaned at least annually using a vacuum-cleaner or an air-jet. Dichroic colour filters, CMY lamellas, gobo and graphic wheels and the internal lenses should be cleaned monthly. Remove dust and dirt from the fans and cooling vents using a soft brush and vacuum-cleaner.

Important! Check the air filters periodically and clean before they become clogged!

Clean two air filters placed in the fixture's covers and two in the fixture base. Use a vacuum cleaner, compressed air or you can wash them and put back dry.

After replacing the air filters, reset the elapsed time counter in the menu "Information" (Information--->Air Filters--->Elapsed Time).

Replacing the fuse. Before replacing the fuse, unplug mains lead.

- 1) Remove the fuse holder on the rear panel of the base with a fitting screwdriver from the housing (anti-clockwise).
- 2) Remove the old fuse from the fuse holder.
- 3) Install the new fuse in the fuse holder (only the same type and rating).

90	78				Red in Pixel 14
91	79			0..255	Red in pixel 14 saturation control(0-100%)
				0..255	Green in pixel 14 saturation control(0-100%)
92	80			0..255	Blue in pixel 14 saturation control(0-100%)
93	81			0..255	White in pixel 14 saturation control(0-100%)
94	82			0..255	Red in Pixel 15
95	83			0..255	White in pixel 15 saturation control(0-100%)
				0..255	Green in pixel 15 saturation control(0-100%)
96	84			0..255	Blue in pixel 15 saturation control(0-100%)
97	85			0..255	White in pixel 15 saturation control(0-100%)
98	86			0..255	Red in Pixel 16
99	87			0..255	White in pixel 16 saturation control(0-100%)
				0..255	Green in pixel 16 saturation control(0-100%)
100	88			0..255	Blue in pixel 16 saturation control(0-100%)
101	89			0..255	White in pixel 16 saturation control(0-100%)
102	90			0..255	Red in Pixel 17
103	91			0..255	White in pixel 17 saturation control(0-100%)
				0..255	Green in pixel 17 saturation control(0-100%)
104	92			0..255	Blue in pixel 17 saturation control(0-100%)
105	93			0..255	White in pixel 17 saturation control(0-100%)
106	94			0..255	Red in Pixel 18
107	95			0..255	White in pixel 18 saturation control(0-100%)
				0..255	Green in Pixel 18 saturation control(0-100%)
108	96			0..255	Blue in Pixel 18
109	97			0..255	White in pixel 18 saturation control(0-100%)
110	98			0..255	Red in pixel 19
111	99			0..255	White in pixel 19 saturation control(0-100%)
112	100			0..255	Green in pixel 19 saturation control(0-100%)
113	101			0..255	Blue in pixel 19 saturation control(0-100%)
				0..255	White in pixel 19 saturation control(0-100%)
				0..255	Special function
				0..19	No function
				20..29	No function
				30..39	No function
				40..79	No function
				80..89	All Motor reset
				90..94	SCAN Motor Reset
				95..99	Focus Motor Reset
				100..119	Internal program 1
				120..139	Internal program 2
				140..159	Internal program 3
				160..179	Internal program 4
				180..199	Internal program 5
				200..219	Internal program 6
				220..239	Internal program 7
				240..255	Internal Sound program 1

1.Safety instructions

Thank you for choosing our FOS Helix Ultra. **FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOU INITIAL START - UP!**

CAUTION!

Be careful with your operations.

With a high voltage you can suffer a dangerous electric shock when touching the wires!

The device has been provided in absolute power to maintain the function and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

CAUTION!

Keep this device away from rain and moisture!

Unplug mains lead before opening the housing!

Important:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

During the operation the housing becomes hot). Allow the fixture to cool approximately 20 minutes prior to manipulate with it.

Make sure that the available voltage is not higher than stated on the rear panel.

WARNING! This unit does not contain an ON/OFF switch. Always disconnect power input cable to completely remove power from unit when not in use or before cleaning or servicing the fixture.

Make sure that the power-cord is never crimped or damaged by sharp edges. Check the device and the power-cord from time to time.

Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power-cord by the plug. Never pull out the plug by tugging the power cord.

This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.

The electric connection, repairs and servicing must be carried out by a qualified employee.

Do not connect this device to a dimmer pack.

Do not switch the fixture on and off in short intervals as this would reduce the lamp's life.

During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.

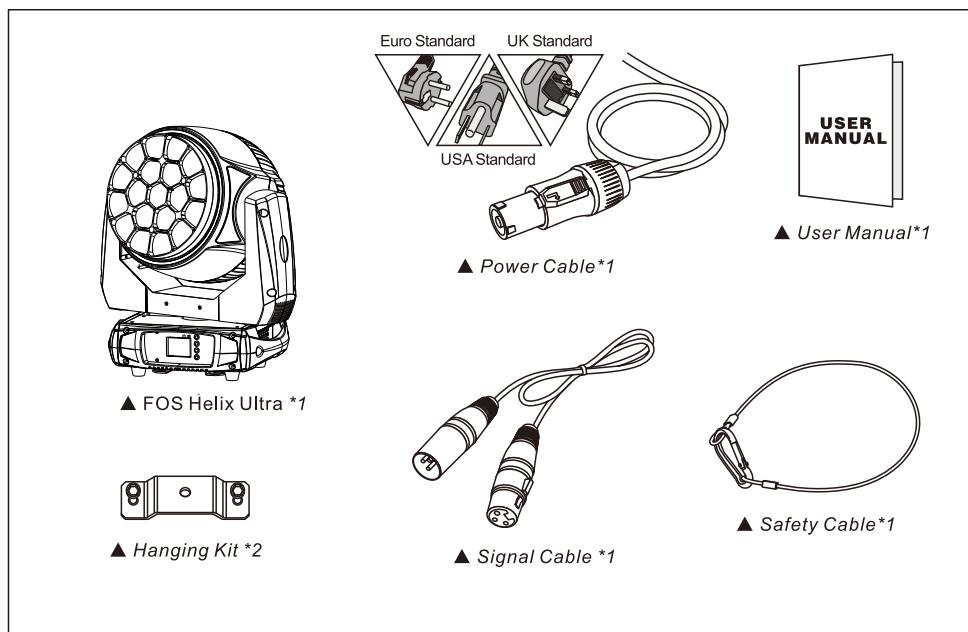
Do not touch the device's housing bare hands during its operation (housing becomes hot)!

For replacement use lamps and fuses of same type and rating only.

CAUTION ! EYE DAMAGES !
Avoid looking directly into the light source
(meant especially for epileptics) !

2.UNPACKING

FOS Helix Ultra adopts 40W RGBW LED lamp which features high brightness and stability. Please carefully unpack it when you receive the fixture and check whether it is damaged during the transportation. And please check whether the following items are included inside the box:



FOS Helix Ultra is made of a new type of high temperature strength of engineering plastics and cast aluminum casing with nice outlook. The fixture is designed and manufactured strictly following CE standards, complying with international standard DMX512 protocol. It's available independently controlled and linkable with each other for operation. And it is applicable for large-scale live performances, theater, studio, nightclubs and discos.

This manual covers the important information on installation and applications. Meanwhile, please keep this manual well for future needs.

61	49				White in pixel 6
62	50			0..255	White in pixel 6 saturation control(0-100%)
				0..255	Red in Pixel 7
63	51			0..255	White in pixel 7 saturation control (0-100%)
				0..255	Green in pixel 7
64	52			0..255	Blue in pixel 7 saturation control(0-100%)
				0..255	White in pixel 7
65	53			0..255	White in pixel 7 saturation control(0-100%)
				0..255	Red in Pixel 8
66	54			0..255	Red in pixel 8 saturation control (0-100%)
				0..255	Green in Pixel 8
67	55			0..255	Green in pixel 8 saturation control (0-100%)
				0..255	Blue in Pixel 8
68	56			0..255	Blue in pixel 8 saturation control(0-100%)
				0..255	White in pixel 8
69	57			0..255	White in pixel 8 saturation control(0-100%)
				0..255	Red in pixel 9
70	58			0..255	Red in pixel 9 saturation control(0-100%)
				0..255	Green in pixel 9
71	59			0..255	Green in pixel 9 saturation control(0-100%)
				0..255	Blue in pixel 9
72	60			0..255	Blue in pixel 9 saturation control(0-100%)
				0..255	White in pixel 9
73	61			0..255	White in pixel 9 saturation control(0-100%)
				0..255	Red in Pixel 10
74	62			0..255	Red in pixel 10 saturation control (0-100%)
				0..255	Green in pixel 10
75	63			0..255	Green in pixel 10 saturation control(0-100%)
				0..255	Blue in pixel 10
76	64			0..255	Blue in pixel 10 saturation control(0-100%)
				0..255	White in pixel 10
77	65			0..255	White in pixel 10 saturation control(0-100%)
				0..255	Red in Pixel 11
78	66			0..255	Red in pixel 11 saturation control (0-100%)
				0..255	Green in Pixel 11
79	67			0..255	Green in pixel 11 saturation control (0-100%)
				0..255	Blue in Pixel 11
80	68			0..255	Blue in pixel 11 saturation control(0-100%)
				0..255	White in pixel 11
81	69			0..255	White in pixel 11 saturation control(0-100%)
				0..255	Red in pixel 12
82	70			0..255	Red in pixel 12 saturation control(0-100%)
				0..255	Green in pixel 12
83	71			0..255	Green in pixel 12 saturation control(0-100%)
				0..255	Blue in pixel 12
84	72			0..255	Blue in pixel 12 saturation control(0-100%)
				0..255	White in pixel 12
85	73			0..255	White in pixel 12 saturation control(0-100%)
				0..255	Red in Pixel 13
86	74			0..255	Red in pixel 13 saturation control (0-100%)
				0..255	Green in pixel 13
87	75			0..255	Green in pixel 13 saturation control(0-100%)
				0..255	Blue in pixel 13
88	76			0..255	Blue in pixel 13 saturation control(0-100%)
				0..255	White in pixel 13
89	77			0..255	White in pixel 13 saturation control(0-100%)

38	26				Red in Pixel 1
				0..255	Red in pixel 1 saturation control (0-100%)
39	27				Green in Pixel 1
				0..255	Green in pixel 1 saturation control (0-100%)
40	28				Blue in Pixel 1
				0..255	Blue in pixel 1 saturation control(0-100%)
41	29				White in pixel 1
				0..255	White in pixel 1 saturation control(0-100%)
42	30				Red in pixel 2
				0..255	Red in pixel 2 saturation control(0-100%)
43	31				Green in pixel 2
				0..255	Green in pixel 2 saturation control(0-100%)
44	32				Blue in pixel 2
				0..255	Blue in pixel 2 saturation control(0-100%)
45	33				White in pixel 2
				0..255	White in pixel 2 saturation control(0-100%)
46	34				Red in Pixel 3
				0..255	Red in pixel 3 saturation control (0-100%)
47	35				Green in pixel 3
				0..255	Green in pixel 3 saturation control(0-100%)
48	36				Blue in pixel 3
				0..255	Blue in pixel 3 saturation control(0-100%)
49	37				White in pixel 3
				0..255	White in pixel 3 saturation control(0-100%)
50	38				Red in Pixel 4
				0..255	Red in pixel 4 saturation control (0-100%)
51	39				Green in pixel 4
				0..255	Green in pixel 4 saturation control(0-100%)
52	40				Blue in pixel 4
				0..255	Blue in pixel 4 saturation control(0-100%)
53	41				White in pixel 4
				0..255	White in pixel 4 saturation control(0-100%)
54	42				Red in Pixel 5
				0..255	White in pixel 5 saturation control (0-100%)
55	43				Green in pixel 5
				0..255	Green in pixel 5 saturation control(0-100%)
56	44				Blue in pixel 5
				0..255	Blue in pixel 5 saturation control(0-100%)
57	45				White in pixel 5
				0..255	White in pixel 5 saturation control(0-100%)
58	46				Red in Pixel 6
				0..255	White in pixel 6 saturation control (0-100%)
59	47				Green in pixel 6
				0..255	Green in pixel 6 saturation control(0-100%)
60	48				Blue in pixel 6
				0..255	Blue in pixel 6 saturation control(0-100%)

3.TECHNICAL INFORMATION

SPECIFICATIONS:

LED Quantities:19*40W 4-IN-1 RGBW LEDs ,
50,000 hours life span.

Input Voltage:AC90-260V 50/60Hz

Control Signal:DMX512, master-slave and sound activated or
auto operation

Control Channel: 26/38/102/114 DMX channels USITT

DMX-512

Power Consumption: 450W

Dimension:414(D)*286(W)*412(H)mm

Packing Dimension:525(D)*380(W)*530(H)mm

Net Weight: 16kg

Gross Weight: 18kg

FEATURES:

Low power consumption

Each color and each LED controllable individually, aura ring effect.
8/16 bit smooth and precise resolution for PAN/TILT movement

Scan position memory, auto reposition after unexpected movement

Specific high precision optic lens

Variable direction rotating front lens

4°-60°Smooth electronic linear zoom

Brilliant hard beam effects at 4°

Pure and even wash coverage effects at 60°

Petal-like micro beam effects

Pixel patterning macro effects

Built-in running programs

Built-in color and graphic effect macros

0-100% linear LED dimmer

1-25T/sec high speed LED shutter/strobe effect with variable speed

Preset variable/random strobe and dimming pulse effect

CTB and CTO,linear colour temperature 2800K-8000K changable

23/17/95/99 DMX channels USITT DMX-512

DMX512, master-slave, and sound activated controllable or auto operation

DMX recorder and edit function integrated

High resolution graphic LCD display

POWERCON connector IN/OUT

3-pin XLR connectors IN/OUT

Aluminium structure with die-cast plastic cover

Two side handles for transportation

PAN lock for transport and maintenance

High efficiency low noise cooling system

Constant temperature readout and management function

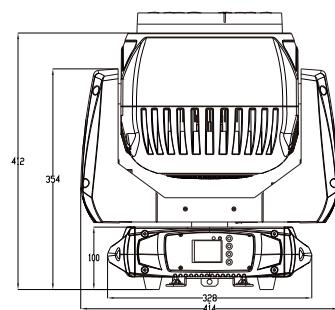
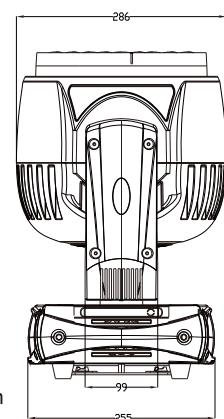
45°C max ambient temperature

IP20 protection rating

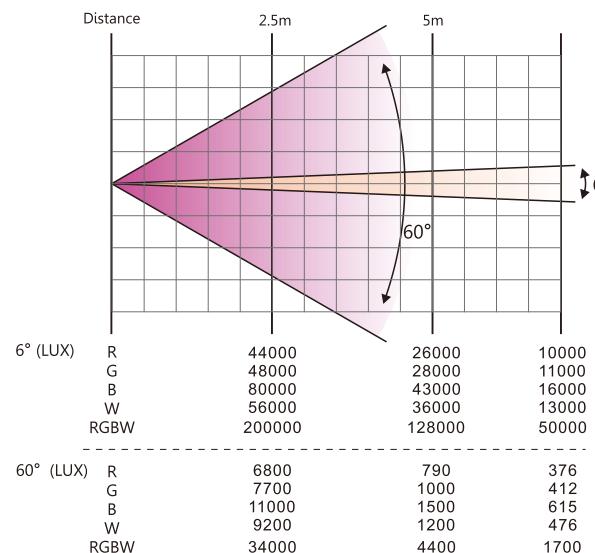
55dB at 3'dB rating

2*1/4 turn fastening Omega clamp

1*Safety attachment point



4.PHOTOMETRICS DIAGRAM



5.OPERATION INSTRUCTIONS

- FOS Helix Ultra is for beam effect for on-site decoration purpose.
- Don't turn on the fixture if it's been through severe temperature difference like after transportation because it might damage the light due to the environment changes. So make sure to operate the fixture until it is in normal temperature.
- This light should be keep away from strong shaking during any transportation or movement.
- Don't pull up the light by only the head, or it might cause damages to the mechanical parts.
- Don't expose the fixture in overheat, moisture or environment with too much dust when installing it. And don't lay any power cables on the floor. Or it might cause electronic shock to the people.
- Make sure the installation place is in good safety condition before installing the fixture.
- Make sure to put the safety chain and check whether the screws are screwed properly when installing the fixture.
- Make sure the lens are in good condition. It's recommended to replace the units if there are any damages or severe scratch.
- Make sure the fixture is operated by qualified personnel who knows the fixture before using.
- Keep the original packages if any second shipment is needed.
- Don't try to change the fixtures without any instruction by the manufacturer or the appointed repairing agencies.
- It is not in warranty range if there are any malfunctions from not following the user manual to operate or any illegal operation, like shock short circuit, electronic shock , lamp broke, etc.

30	24	30	24	72..85	Pix Dynamic Scene5
				86..99	Pix Dynamic Scene6
				100..113	Pix Dynamic Scene7
				114..127	Pix Dynamic Scene8
				128..143	Pix Dynamic Scene9
				142..155	Pix Dynamic Scene10
				156..169	Pix Dynamic Scene11
				170..183	Pix Dynamic Scene12
				184..197	Pix Dynamic Scene13
				198..211	Pix Dynamic Scene14
				212..225	Pix Dynamic Scene15
				226..239	Pix Dynamic Scene16
				240..255	Pix Dynamic Scene17
31	25	31	25	Pix_Macro_Speed	
				0..255	Slow to Fast
				Expand Patterns	
				0..15	No Function
				16..29	Pix Dynamic Scene1
				30..43	Pix Dynamic Scene2
				44..57	Pix Dynamic Scene3
				58..71	Pix Dynamic Scene4
				72..85	Pix Dynamic Scene5
				86..99	Pix Dynamic Scene6
				100..113	Pix Dynamic Scene7
				114..127	Pix Dynamic Scene8
				128..143	Pix Dynamic Scene9
				142..155	Pix Dynamic Scene10
				156..169	Pix Dynamic Scene11
				170..183	Pix Dynamic Scene12
				184..197	Pix Dynamic Scene13
				198..211	Pix Dynamic Scene14
				212..225	Pix Dynamic Scene15
				226..239	Pix Dynamic Scene16
				240..255	Pix Dynamic Scene17
32	32			Pix_Foreground dimmer	
				Pix_Expand Patterns Foreground dimmer 0 – 100%.	
				(Foreground Color Share with "Pix Macro" Channel)	
33	33			Pix_Background dimmer	
				Pix_Expand Patterns Background dimmer 0 – 100%.	
34	34			Pix_Background Red	
				Pix_Expand Patterns Background Red 0 – 100%.	
35	35			Pix_Background Green	
				Pix_Expand Patterns Background Green 0 – 100%.	
36	36			Pix_Background Blue	
				Pix_Expand Patterns Background Blue 0 – 100%.	
37	37				

					126..131	static scene22
					132..137	static scene23
					138..143	static scene24
					144..149	static scene25
					150..155	static scene26
					156..161	static scene27
					162..167	static scene28
					168..173	static scene29
					174..179	static scene30
					180..185	static scene31
					186..191	static scene32
				23	192..197	Multicolor static scene1
					198..203	Multicolor static scene2
					204..209	Multicolor static scene3
					210..215	Multicolor static scene4
					216..221	Multicolor static scene5
					222..227	Multicolor static scene6
					228..233	Multicolor static scene7
					234..239	Multicolor static scene8
					240..245	Multicolor static scene9
					246..251	Multicolor static scene10
					252..255	Multicolor static scene11
					Dynamic Patterns (If Patterns channel is in the interval 032 – 255)	
					000..023	No function
					024..137	Forward speed from zero speed to fast speed
					138..141	Stop movement
					142..255	Reverse speed from zero speed to fast speed
24	18	24	18		Pix_Dimmer	
					0..255	Pix_Dimmer 0%...100%
25	19	25	19		Pix_Strobe	
					0..255	Pix_Strobe Speed 0%...100%
26	20	26	20		Pix_Red	
					0..255	0-100% Pix_Red dimmer from dark to bright
27	21	27	21		Pix_Green	
					0..255	0-100% Pix_Green dimmer from dark to bright
28	22	28	22		Pix_Blue	
					0..255	0-100% Pix_Blue dimmer from dark to bright
					Pix_color	
					0..0	No Function
					1..15	Red
					16..31	Green
					32..47	Blue
					48..63	Red+Blue
					64..79	Red+Green
					80..95	Green+Blue
					96..111	Red+Blue+Green
					112..127	2700K
					128..143	3200K
					144..159	3500K
					160..175	5000K
					176..191	5500K
					192..207	6000K
					208..223	6500K
					224..239	7000K
					240..255	8000K
					Pix_Macro	
					0..15	No Function
30	24	30	24		16..29	Pix Dynamic Scene1
					30..43	Pix Dynamic Scene2
					44..57	Pix Dynamic Scene3
					58..71	Pix Dynamic Scene4

6.INSTALLATIONS

Cautions:

For added protection mount the fixtures in areas outside walking paths, seating areas, or in areas where the fixture might be reached by unauthorized personnel.

Before mounting the fixture to any surface, make sure that the installation area can hold a minimum point load of 10 times the device's weight.

Fixture installation must always be secured with a secondary safety attachment, such as an appropriate safety cable.

Never stand directly below the device when mounting, removing, or servicing the fixture, from a ceiling, or set on a flat level surface (see illustration below). Be sure this fixture is kept at least 0.5m (1.5 ft) away from any flammable materials (decoration etc.).

Always use and install the supplied safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.

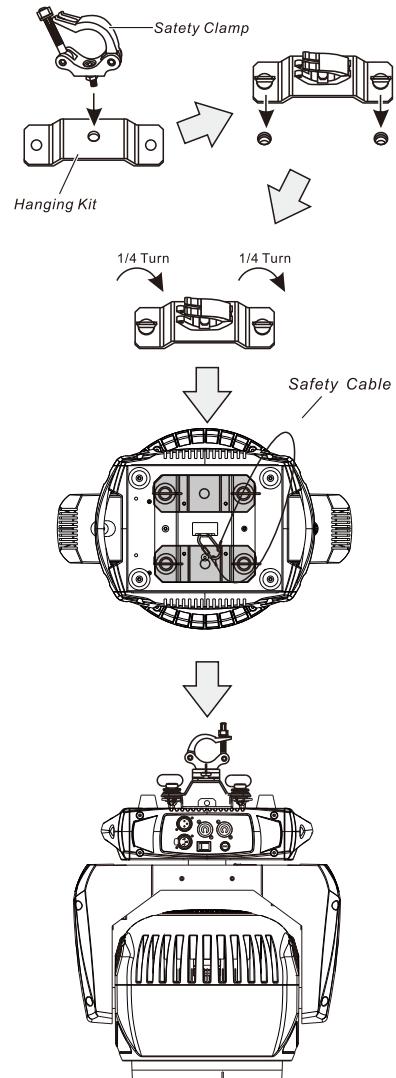
Mounting points:

Overhead mounting requires extensive experience, including amongst others calculating working load limits, a fine knowledge of the installation material being used, and periodic safety inspection of all installation material and the fixture. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury.

Be sure to complete all rigging and installation procedures before connecting the main power cord to the appropriate wall outlet.

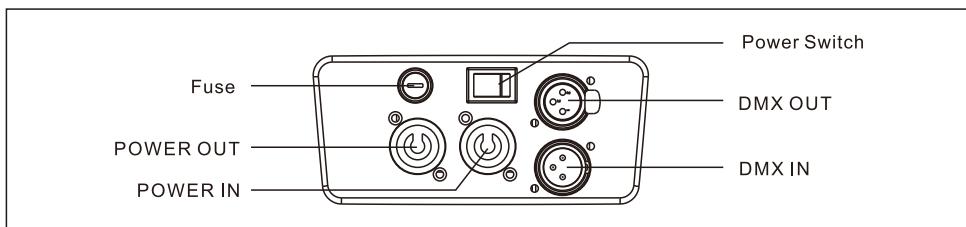
Clamp Mounting:

FOS Helix Ultra provides a unique mounting bracket assembly that integrates the bottom of the base, and the safety cable rigging point in one unit (see the illustration below). When mounting this fixture to truss be sure to secure an appropriately rated clamp to the included omega bracket using a M10 screw fitted through the center hole of the "Hanging Kit". As an added safety measure be sure to attach at least one properly rated safety cable to the fixture using one of the safety cable rigging point integrated in the base assembly .



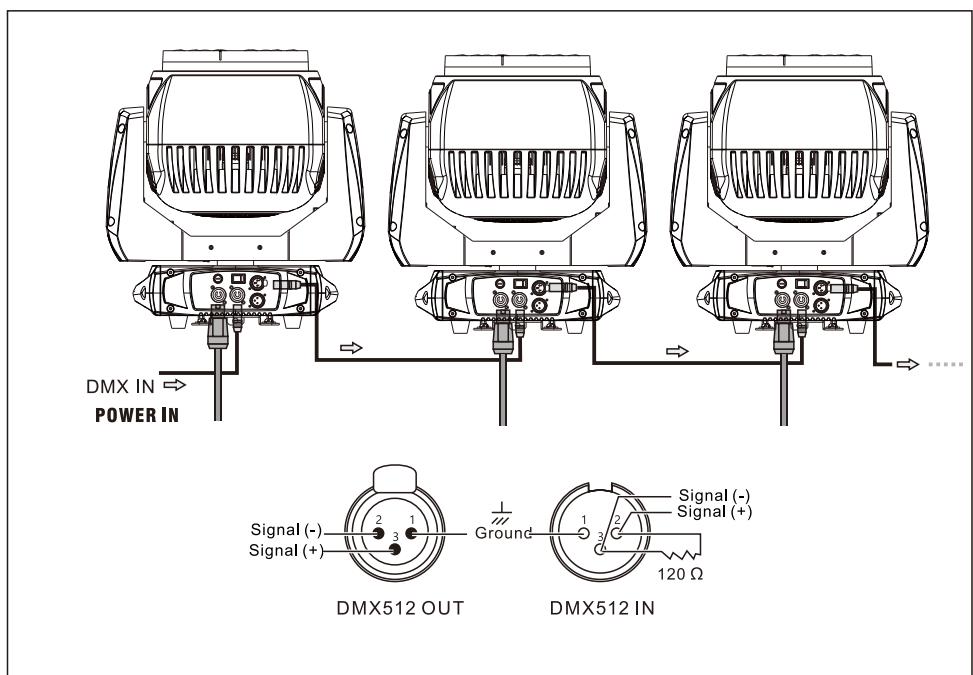
INSTALLATION DIAGRAM

7. CONTROL CONNECTION



Connect the provided XLR cable to the female 3-pin XLR output of your controller and the other side to the male 3-pin XLR input of the moving head. You can chain multiple Moving head together through serial linking. The cable needed should be two core, screened cable with XLR input and output connectors. Please refer to the diagram below. DMX-512 connection with DMX terminator.

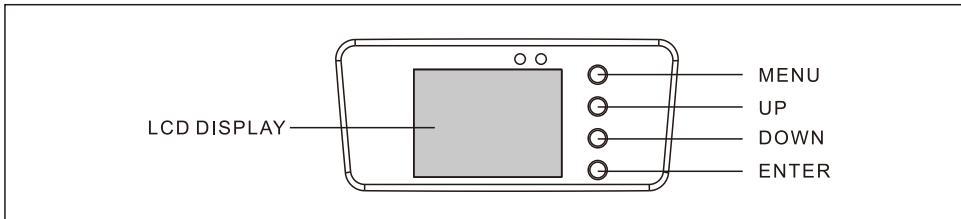
For installations where the DMX cable has to run a long distance or is in an electrically noisy environment, such as in a discotheque, it is recommended to use a DMX terminator. This helps in preventing corruption of the digital control signal by electrical noise. The DMX terminator is simply an XLR plug with a 3 resistor connected between pins 2 and 3, which is then plugged into the output XLR socket of the last fixture in the chain. Please see illustrations below.



22	22		097..101	Dynamic Scene14
			102..106	Dynamic Scene15
			107..111	Dynamic Scene16
			112..116	Dynamic Scene17
			117..121	Dynamic Scene18
			122..126	Dynamic Scene19
			127..131	Dynamic Scene20
			132..136	Dynamic Scene21
			137..141	Dynamic Scene22
			142..146	Dynamic Scene23
			147..151	Dynamic Scene24
			152..156	Dynamic Scene25
			157..161	Dynamic Scene26
			162..166	Dynamic Scene27
			167..171	Dynamic Scene28
			172..176	Dynamic Scene29
			177..181	Dynamic Scene30
			182..186	Dynamic Scene31
			187..191	Dynamic Scene32
			192..196	Multicolor Dynamic Scene1
			197..201	Multicolor Dynamic Scene2
			202..206	Multicolor Dynamic Scene3
			207..211	Multicolor Dynamic Scene4
			212..216	Multicolor Dynamic Scene5
			217..221	Multicolor Dynamic Scene6
			222..226	Multicolor Dynamic Scene7
			227..231	Multicolor Dynamic Scene8
			232..236	Multicolor Dynamic Scene9
			237..241	Multicolor Dynamic Scene10
			242..246	Multicolor Dynamic Scene11
			247..251	Multicolor Dynamic Scene12
			252..255	Multicolor Dynamic Scene13
			Static patterns or patterns speed	
			Static Patterns	
			(If Patterns channel is in the interval 016 – 031)	
23	23		000..005	static scene1
			006..011	static scene2
			012..017	static scene3
			018..023	static scene4
			024..029	static scene5
			030..035	static scene6
			036..041	static scene7
			042..047	static scene8
			048..053	static scene9
			054..059	static scene10
			060..065	static scene11
			066..071	static scene12
			072..075	static scene13
			078..083	static scene14
			084..089	static scene15
			090..095	static scene16
			096..101	static scene17
			102..107	static scene18
			108..113	static scene19
			114..119	static scene20
			120..125	static scene21

19		19			Foreground dimmer
				000..255	Foreground dimmer 0 – 100%.
20		20			Background color for patterns
					Choose Background color for Dynamic/Static Scene,no function for Multicolor Scene
				0..0	No Function
				1..13	Red
				14..27	Green
				28..41	Blue
				42..55	White
				56..69	Red+White
				70..83	Green+White
				84..97	Blue+White
				98..111	Green+Blue
				112..125	Red+Blue
				126..139	Red+Green
				140..153	Green+Blue+White
				154..167	Red+Blue+White
				168..181	Red+Green+White
				182..195	Red+Blue+Green+White
				196..202	2700K
				203..209	3200K
				210..216	3500K
				217..223	5000K
				224..230	5500K
				231..237	6000K
				238..244	6500K
				245..251	7000K
				252..255	8000K
21		21			Background dimmer
				000..255	Background dimmer 0 – 100%.
22		22			Patterns
				000..015	No function
				016..031	Static patterns
				032..036	Dynamic Scene1
				037..041	Dynamic Scene2
				042..046	Dynamic Scene3
				047..051	Dynamic Scene4
				052..056	Dynamic Scene5
				057..061	Dynamic Scene6
				062..066	Dynamic Scene7
				067..071	Dynamic Scene8
				072..076	Dynamic Scene9
				077..081	Dynamic Scene10
				082..086	Dynamic Scene11
				087..091	Dynamic Scene12
				092..096	Dynamic Scene13

8.MENU OPERATIONS



	MENU	Description
DMX (Function Mode)	Dmx Address	A001~AXXX
		26CH
		38CH
		102CH
		114CH
SET (FixtureSet)	Auto Run	Program1~8 MasterAlone
	Music Run	Program1~8 MasterAlone
	Reset Default	Yes/No
	Signal Set	Wire
	Reverse Pan	(On/Off)
	Reverse Tilt	(On/Off)
	Select Pan	630° /540° /360°
	Select Tilt	270° /180° /90°
	Mic sensitivity	0~99%
	OFF Signal Mode	(On/Off)
Manu (Manual)	Scan Quick Mode	(On/Off)
	Theater mode	(On/Off)
	Reset	Total Reset Scan Reset ZOOM Reset
ADV (Advanced) (AccessCode 088)	Channel	PAN=XXX....
	Calibration UIDCode	PAN=XXX.... XXXX XXXX XXXX

Special button instruction: press "UP" and "DOWN" for 3 seconds, display menu turns upside down

9.DMX PROTOCOL

Mode/Channel				Value	Function
114	102	38	26		
1	1	1	1		Pan
				0..255	PAN Movement
2	2	2	2		Pan-fine
				0..255	Fine control of Pan movement
3	3	3	3		Tilt
				0..255	Tilt Movement
4	4	4	4		Tile-fine
				0..255	Fine control of Tilt movement
5	5	5	5		Speed pan/tile
				0..225	max to min speed
				226..235	blackout by movement
6	6	6	6		no function
					Dimmer
7	7	7	7	0..255	Dimmer 0%...100%
					Shutter
				0..31	Shutter closed
				32..63	shutter open
				64..95	Strobe effect slow to fast
				96..127	shutter open
				128..159	Pulse-effect in sequences slow to fast
				160..191	shutter open
				192..223	Random strobe effect slow to fast
				224..255	shutter open
8	8	8	8		Red
				0..255	0-100% Red dimmer from dark to bright
9	9	9	9		Green
				0..255	0-100% Green dimmer from dark to bright
10	10	10	10		Blue
				0..255	0-100% Blue dimmer from dark to bright
11	11	11	11		White
				0..255	0-100% White dimmer from dark to bright
12	12	12	12		Zoom
				0..255	In(near) to out(far)
13	13	13	13		Zoom Rotation
				0..15	Zoom rotation stop
				16..63	shake slow to fast(width by Zoom Angle)
				64..156	Forwards rotation from fast to slow
				157..162	Zoom rotation stop
				163..255	Backwards rotation from slow to fast
14	14	14	14		Zoom Angle
				0..255	Zoom Angle(0°~60°)
15	15	15	15		Virtual color
				0..0	No Function
				1..13	Red
				14..27	Green
				28..41	Blue
				42..55	White
				56..69	Red+White

15	15	15	15	70..83	Green+White
				84..97	Blue+White
				98..111	Green+Blue
				112..125	Red+Blue
				126..139	Red+Green
				140..153	Green+Blue+White
				154..167	Red+Blue+White
				168..181	Red+Green+White
				182..195	Red+Blue+Green+White
				196..202	2700K
				203..209	3200K
				210..216	3500K
				217..223	5000K
				224..230	5500K
				231..237	6000K
				238..244	6500K
				245..251	7000K
				252..255	8000K
16	16	16	16		Color Temp
				0..15	No Function
				16..45	Below 3200K
				46..75	3200K - 3500K
				76..105	3500K - 5000K
				106..135	5000K - 5500K
				136..165	5500K - 6000K
				166..195	6000K - 6500K
				196..225	6500K - 7000K
				226..255	7000K - 8000K
17	17	17	17		Visual Tungsten Lamp
				0..15	No Function
				16..255	Tungsten lamp effect is gradually enhanced
18	18	18	18		Foreground color for patterns
					Choose Foreground color for Dynamic/Static Scene,no function for Multicolor Scene
				0..0	No Function
				1..13	Red
				14..27	Green
				28..41	Blue
				42..55	White
				56..69	Red+White
				70..83	Green+White
				84..97	Blue+White
				98..111	Green+Blue
				112..125	Red+Blue
				126..139	Red+Green
				140..153	Green+Blue+White
				154..167	Red+Blue+White
				168..181	Red+Green+White
				182..195	Red+Blue+Green+White
				196..202	2700K
				203..209	3200K
				210..216	3500K
				217..223	5000K
				224..230	5500K
				231..237	6000K
				238..244	6500K
				245..251	7000K
				252..255	8000K