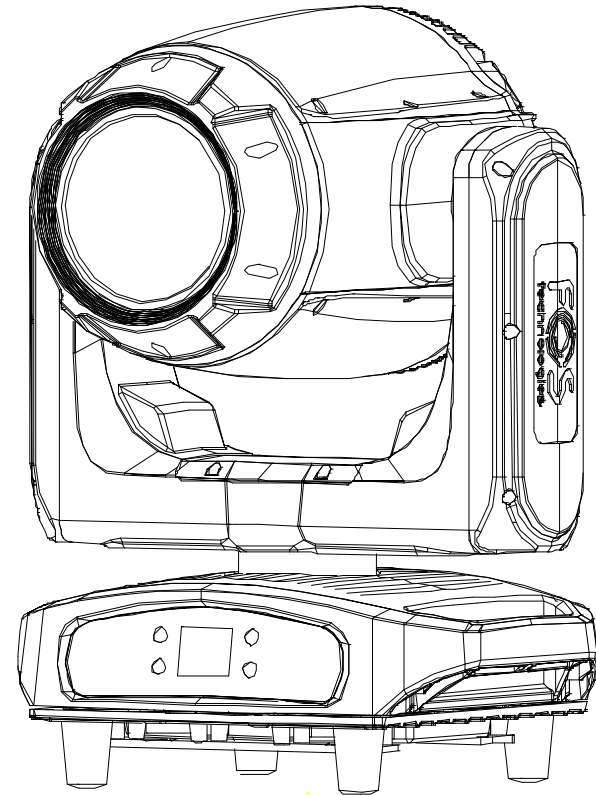


FOS Hydor BSW 400W



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

1.Safety instructions

THANK YOU FOR CHOOSING OUR FOS Hydor BSW 400W. 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!

This device has left our premises in absolutely perfect condition. In order to maintain this condition 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) !

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. 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.

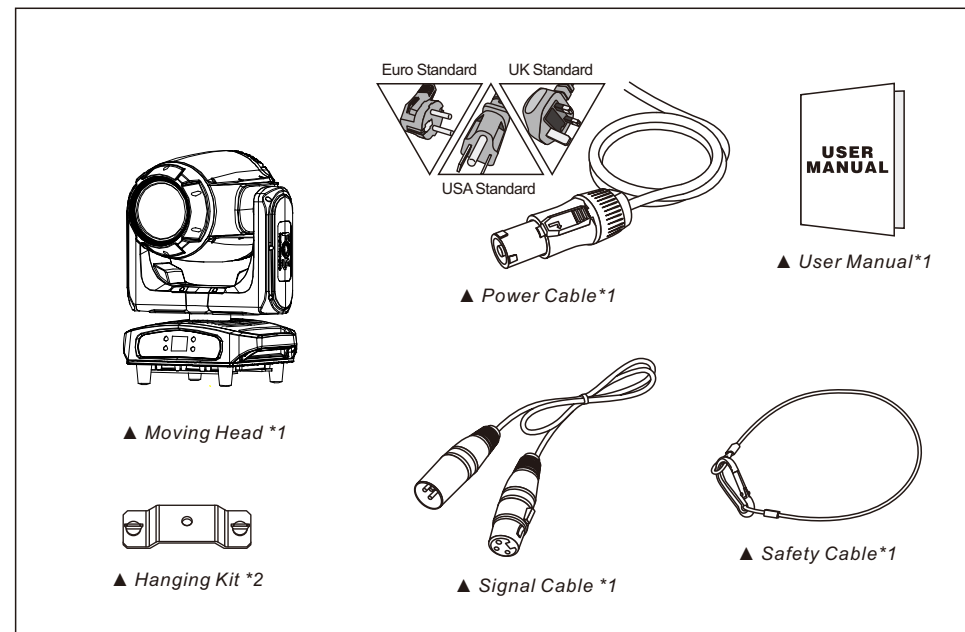
After replacing the air filters, reset the elapsed time counter in the menu "Information" (Information---> Air Filters---> Elapsed Time).

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).
- 4) Replace the fuseholder in the housing and fix it.

2. UNPACKING

The FOS Hydor BSW 400W adopts a 400W white LED 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:



The FOS Hydor BSW 400W is made of a new type of high temperature strength of engineering 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 per formances, theater, studio, nightclubs and discos.

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

3. TECHNICAL INFORMATION

SPECIFICATIONS:

- 1*400W white led, 50000 hours life span.
- Input Voltage:AC90-260V 50/60Hz
- Power Consumption:430 W
- Control Signal:DMX512,WDMX512 , RDM, master-slave auto operation
- Control Channel:19 /28 DMX channels USITT DMX-512
- Dimensions:366(D)*276(H)*575(H)mm
- Packing Dimensions:460(D)*450(H)*590(H)mm
- Net Weight: 22.35Kgs
- Gross Weight:25.7Kgs

FEATURES:

- Low power consumption
- Beam angle 4~38°
- 2.5m-50m electric focus
- Linear CMY+CTO
- filter with variable speed and direction
- 0-100% Linear LED dimmer
- 25T/sec high speed LED shutter/strobe effect with variable speed
- Preset variable/random strobe and dimming pulse effect
- 1.8" TFT LCD touch display with 4 control buttons
- Powercon IN/OUT
- 3-Pin XLR connectors IN/OUT
- IP65 Protection rating
- 48dB at 3'dB rating
- 2*1/4 turn fastening Omega clamps
- 1* Safety attachment point

MOVEMENT:

- 8/16 bit smooth and precise resolution for PAN/TILT movement
- 540°/630°/360°/ PAN and TILT movement

COLORS:

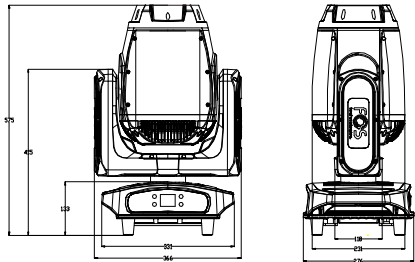
- 1 Color wheel with 10 plus open

GOBOS:

- 1 Static gobo wheel with 11 gobos plus open
- 1 Rotatable gobo wheel with 7 rotatable and interchangeable glass gobos plus open with speed adjustable, stream effect, dithering effect and rotatable clockwise or anticlockwise
- Rotatable gobo wheel can be Gobo indexing
- Gobo size 23.5mm (external dimensions)/16mm (inner dimensions)
- Gobo overlay (gobo morphing)

FUNCTION:

- Improved optics and flat beam field
- Variable direction rainbow effect with speed adjustable
- Fan cooling system
- Constant temperature readout and management function
- 35°C ~ 45°C max ambient temperature



Static Gobo Wheel & Color Wheel



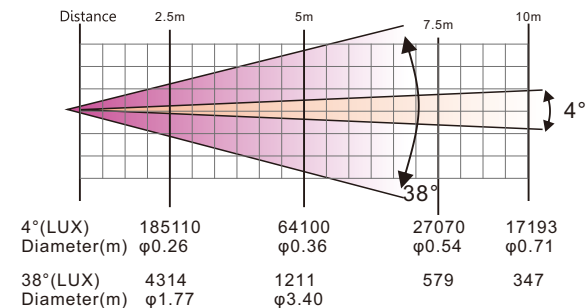
CMY+CTO Wheel

0%	Cyan	100%
0%	Magenta	100%
0%	Yellow	100%
0%	CTO	100%

28	19		Internal program Delay(Refresh Run after Change Internal program)
		0..2	No Delay
		3..5	Delay of "Slave Delay Set"(From Display Panel)
		5..7	0.1s Delay
		8..15	0.2s Delay
		16..23	0.3s Delay
		24..31	0.4s Delay
		32..39	0.5s Delay
		40..47	0.6s Delay
		48..55	0.7s Delay
		56..63	0.8s Delay
		64..71	0.9s Delay
		72..79	1s Delay
		80..87	1.1s Delay
		88..95	1.2s Delay
		96..103	1.3s Delay
		104..111	1.4s Delay
		112..119	1.5s Delay
		120..127	1.6s Delay
		128..135	1.7s Delay
		136..143	1.8s Delay
		144..151	1.9s Delay
		152..159	2s Delay
		160..167	2.1s Delay
		168..175	2.2s Delay
		176..183	2.3s Delay
		184..191	2.4s Delay
		192..199	2.5s Delay
200..207	2.6s Delay		
208..215	2.7s Delay		
216..220	2.8s Delay		
224..231	2.9s Delay		
232..239	3s Delay		
240..247	3.1s Delay		
248..255	3.2s Delay		

27	18		Special function
		0..19	No function
		20..24	FAN Auto Mode
		25..29	FAN High Speed
		30..34	FAN Mid Speed
		35..39	FAN Low Speed
		40..44	Linear Dimmer Curve
		45..49	S-Curve Dimmer Curve
		50..54	Square Dimmer Curve
		55..59	InvSquare Dimmer Curve
		60	900HZ LED refresh rate
		61	1000HZ LED refresh rate
		62	1100HZ LED refresh rate
		63	1200HZ LED refresh rate
		64	1300HZ LED refresh rate
		65	1400HZ LED refresh rate
		66	1500HZ LED refresh rate
		67	2500HZ LED refresh rate
		68	4000HZ LED refresh rate
		69	5000HZ LED refresh rate
		70	10K HZ LED refresh rate
		71	15K HZ LED refresh rate
		72	20K HZ LED refresh rate
		73	25K HZ LED refresh rate
		74..79	No function
		80..84	All Motor reset
		85..87	Scan motor reset
88..90	Colors motor reset		
91..93	Gobo motor reset		
94..96	No function		
97..99	Other motor reset		
100..117	Internal program 1		
118..135	Internal program 2		
136..153	Internal program 3		
154..171	Internal program 4		
172..189	Internal program 5		
190..207	Internal program 6		
208..225	Internal program 7		
226..243	Internal program 8		
244..255	Internal program 9		

4.PHOTOMETRICS DIAGRAM



5.OPERATION INSTRUCTIONS

- The FOS Hydor BSW 400W 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.

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.

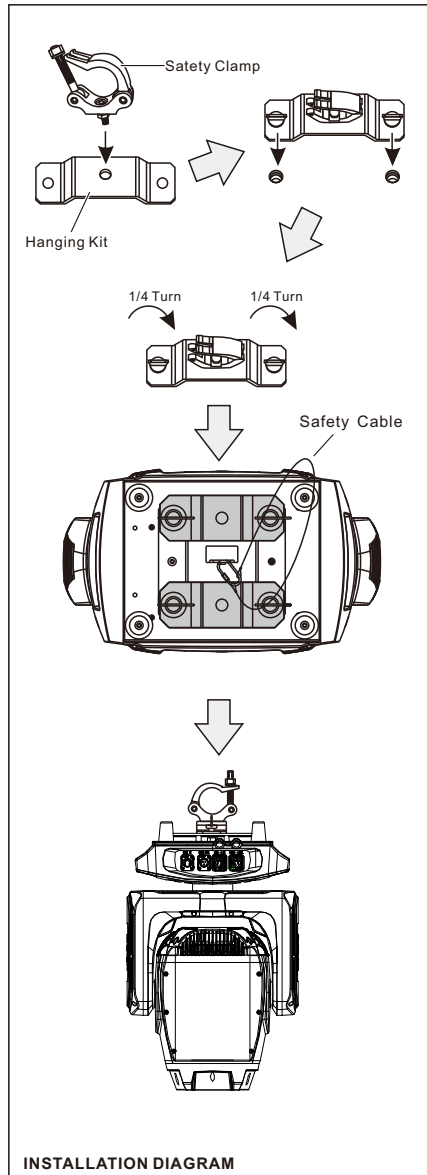
Mounting points:

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:

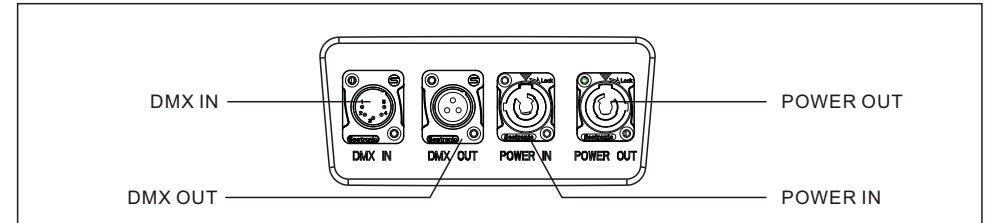
that integrates the bottom of the base, and the safety cable rigging point in one unit (see the illustration below). When mounting this fixture to truss be sure to secure an appropriately rated clamp to the included omega bracket using a M10 screw fitted through the center hole of the "Hanging Kit".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



9	7		Shutter		
		0..31	Shutter closed		
		32..63	shutter open		
		64..95	Strobe effect slow to fast		
		96..127	shutter open		
		128..143	Opening Pulse-effect in sequences slow to fast		
		144..159	Closing Pulse-effect in sequences fast to slow		
10	8		Dimmer		
		0..255	Dimmer 0% ...100%		
			Dimmer Fine		
		0..255	Dimmer Fine 0% ...100%		
			Cyan		
		0..255	Cyan 0% ...100%		
			Cyan_Fine		
0..255	Cyan Fine 0% ...100%				
11	9		Magenta		
		0..255	Magenta 0% ...100%		
			Magenta_Fine		
		0..255	Magenta_Fine 0% ...100%		
			Yellow		
		0..255	Yellow 0% ...100%		
			Yellow_Fine		
0..255	Yellow_Fine 0% ...100%				
12	10		CTO		
		0..255	Configure To Order 0% ...100%		
			CTO_Fine		
		0..255	Configure To Order 0% ...100%		
			Focus		
		0..255	In(near) to out(far)		
			Fcus Fine		
0..255	In(near) to out(far)				
13	11		Zoom		
		0..255	In(near) to out(far)		
			Zoom Fine		
		0..255	Zoom Fine		
			Rotating prism, Prism		
		0..5	OFF		
		6..127	ON		
14	12	128..189	Forwards rotation from fast to slow		
		190..193	Prism rotation stop		
		194..255	Forwards rotation from fast to slow		
			Frost		
		0..199	Frost OFF		
		200..255	Frost ON		
			Speed pan/tilt		
15	13	0..225	max to min speed		
		226..235	blackout by movement		
		236..245	blackout by all wheel changing		
		246..255	no function		
		16	14		Speed pan/tilt
				0..225	max to min speed
				226..235	blackout by movement
236..245	blackout by all wheel changing				
246..255	no function				
17	15				Speed pan/tilt
				0..225	max to min speed
		226..235	blackout by movement		
		236..245	blackout by all wheel changing		
		246..255	no function		
		18	16		Speed pan/tilt
				0..225	max to min speed
226..235	blackout by movement				
236..245	blackout by all wheel changing				
246..255	no function				
19	17				Speed pan/tilt
				0..225	max to min speed
		226..235	blackout by movement		
		236..245	blackout by all wheel changing		
		246..255	no function		

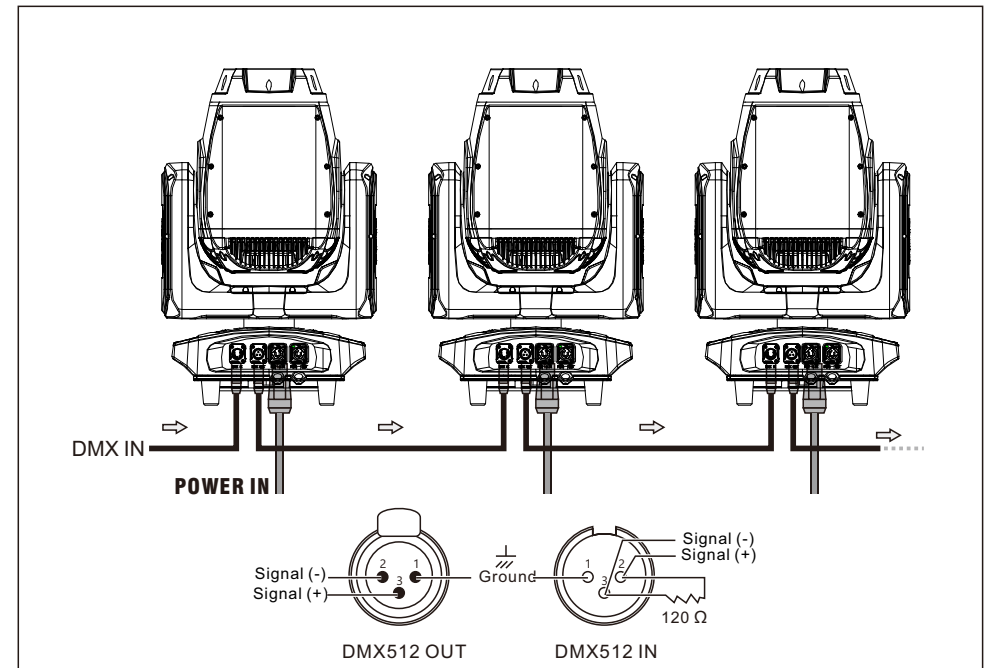
6	4		Gobo wheel 1		
		0..9	Open		
		10..19	gobo 1		
		20..29	gobo 2		
		30..39	gobo 3		
		40..49	gobo 4		
		50..59	gobo 5		
		60..69	gobo 6		
		70..79	gobo 7		
		80..99	Gobo 1 shake slow to fast		
		100..119	Gobo 2 shake slow to fast		
		120..139	Gobo 3 shake slow to fast		
		140..159	Gobo 4 shake slow to fast		
		160..179	Gobo 5 shake slow to fast		
		180..199	Gobo 6 shake slow to fast		
		200..219	Gobo 7 shake slow to fast		
		220..255	Rot. gobo wheel cont. rotation slow to fast		
		7	5		Gobo 1 rotation
				0..127	No function
128..189	Forwards gobo rotation from fast to slow				
190..193	Gobo rotation stop				
194..255	Backwards gobo rotation from slow to fast				
8	6		Gobo wheel 2		
		0..9	Hole with spot		
		10..19	gobo 1		
		20..29	gobo 2		
		30..39	gobo 3		
		40..49	gobo 4		
		50..59	gobo 5		
		60..69	gobo 6		
		70..79	gobo 7		
		80..89	gobo 8		
		90..99	gobo 9		
		100..109	gobo 10		
		110..119	gobo 11		
		120..129	Gobo 1 shake slow to fast		
		130..139	Gobo 2 shake slow to fast		
		140..149	Gobo 3 shake slow to fast		
		150..159	Gobo 4 shake slow to fast		
		160..169	Gobo 5 shake slow to fast		
		170..179	Gobo 6 shake slow to fast		
		180..189	Gobo 7 shake slow to fast		
		190..199	Gobo 8 shake slow to fast		
200..209	Gobo 9 shake slow to fast				
210..219	Gobo 10 shake slow to fast				
220..229	Gobo 11 shake slow to fast				
230..255	Rot. gobo wheel cont. rotation slow to fast				

7. CONTROL CONNECTION

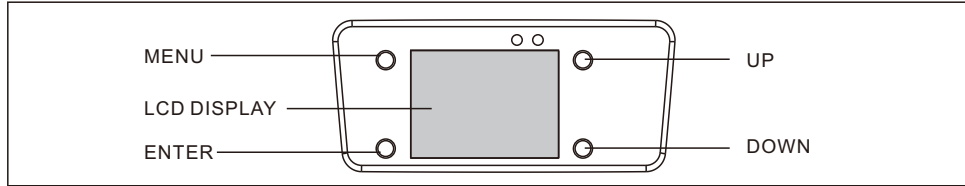


Connect the provided XLR cable to the female 3-pin XLR output of your controller and the other side to the male 3-pin XLR input of the moving head. You can chain multiple Moving head together through serial linking. The cable needed should be two core, screened cable with XLR input and output connectors.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



8.MENU OPERATIONS



MENU		Description	
DMX (FunctionMode)	Dmx Address	A001~AXXX	DMX address setting
	Channel Mode	28CH	28CH mode
		19CH	19CH mode
	Auto Run	Program1~9	Auto program1-9
		State: Master/ Alone	Auto program master/slave
Auto Run: (On/Off)		Auto program on/off	
SlaveDelay: Off(0.1-3.2s)		Auto program slave delay time	
Wireless Pair	Clear/No	Wireless Pair Clear	
SET (FixtureSet)	Reset Default	Yes/No	Reset Default
	SignalSet	Wire	Wire
		Wireless WDMX&Out	Wireless WDMX&Out
	ReversePan	(On/Off)	ReversePan
	ReverseTilt	(On/Off)	ReverseTilt
	SelectPan	630° /540° /360°	SelectPan
	Scan Feedback	(On/Off)	Scan Feedback
	Key Lock	(Off/1min/3min/5min)	Key Lock(OFF/1min/3min/5min)
	OFF SignalMode	(On/Off)	(OFF)keeporiginalstatus(ON)keep reset status,when no DMX
	DisplayInvert	(On/Off)	DisplayInvert
	Fan Mode	Auto/High/Mid/Low	Fan Auto/High/Mid/Low speed
	DimmerCurve	Linear	Lineardimmer
		S-Curve Square InvSquare	S-Curve dimmer Squaredimmer InvSquare dimmer
LED Freq	900Hz/1000Hz/1100Hz/1200Hz/ 1300Hz/1400Hz/1500Hz/2500Hz/4KHz/5KHz/ 10KHz/15KHz/20KHz/25KHz	LED frequency(default: 1000Hz)	
Half ColorWheel	(On/Off)	Half Color	
Manu (Manual)	Reset	Total Reset	Total Reset
		Scan Reset	Scan Reset
		Color Reset	Color Reset
		Gobo Reset	Gobo Reset
		OthersReset	OthersReset
	Channel	PAN=XXX.....	Manual channel control
ADV (Advanced) (AccessCode 088)	Calibration	PAN=XXX.....	Calibration
	UID Code	XX XX XX XX XX	UID Code

Accidental touch the "Key Lock" option, the unlock password is UP, DOWN, UP, DOWN
 Special button instruction: press "UP" and "DOWN" for 3 seconds, display menu turns upside down

9.DMX PROTOCOL

Mode/Channel		Value	Function
28CH	19CH		
1	1		Pan
		0..255	PAN Movement
2	1		Pan-fine
		0..255	Fine control of Pan movement
3	2		Tilt
		0..255	Tilt Movement
4	2		Tilt-fine
		0..255	Fine control of Tilt movement
5	3		Color wheel
		0..9	Open / white
		10..19	Color 1
		20..29	Color 2
		30..39	Color 3
		40..49	Color 4
		50..59	Color 5
		60..69	Color 6
		70..79	Color 7
		80..89	Color 8
		90..99	Color 9
		100..127	Color 10
		128..189	Forwards rainbow effect from fast to slow
		190-193	Color rotation stop
		194..255	Backwards rainbow effect from slow to fast
		5	3
0..4	Open / white		
5..9	White + Color 1		
10..14	Color 1		
15..19	Color 1 + Color 2		
20..24	Color 2		
25..29	Color 2 + Color 3		
30..34	Color 3		
35..39	Color 3 + Color 4		
40..44	Color 4		
45..49	Color 4 + Color 5		
50..54	Color 5		
55..59	Color 5 + Color 6		
60..64	Color 6		
65..69	Color 6 + Color 7		
70..74	Color 7		
75..79	Color 7 + Color 8		
80..84	Color 8		
85..89	Color 8 + Color 9		
90..94	Color 9		
95..99	Color 9 + Color 10		
100..104	Color 10		
105..127	Color 10 + White		
128..189	Forwards rainbow effect from fast to slow		
190-193	Color rotation stop		
194..255	Backwards rainbow effect from slow to fast		