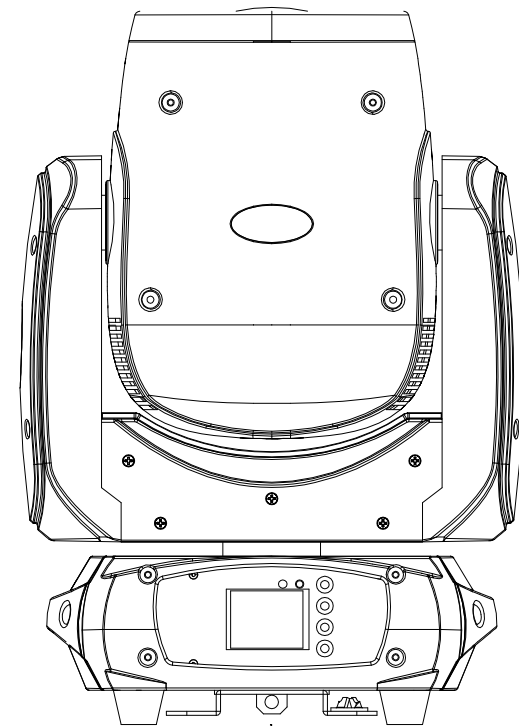# FOS Smart Beam

Version 1.0

- 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

t is absolutely essential that the fixture is kept clean and that dust, dirt and smoke-fluid residues must not build
p 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
fe.A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances
hould alcohol or solvents be used!

> *DANGER !*
> *Disconnect from the mains before starting any*
> *maintenance work*

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

he interior of the fixture should be cleaned at least annually using a vacuum-cleaner or an air-jet. Remove dust
nd dirt from the fans and cooling vents using a soft brush and vacuum-cleaner.

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

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

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

eplacing 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.

22	24	24		Pix_Macro_Speed
			0..255	Slow to Fast
		25		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
		26		Pix_Foreground dimmer
			0..255	Pix_ExpandPatterns Foreground dimmer 0–100%. (Foreground ColorShare with "Pix_Macro"Channel)
		27		Pix_Background dimmer
			0..255	Pix_ExpandPatterns Background dimmer 0–100%.
		28		Pix_Background Red
			0..255	Pix_ExpandPatterns Background Red 0–100%.
		29		Pix_Background Green
			0..255	Pix_ExpandPatterns Background Green 0–100%.
		30		Pix_Background Blue
			0..255	Pix_ExpandPatterns Background Blue 0–100%.

1.Safety instructions

THANK YOU FOR CHOOSING OUR FOS Smart Beam. 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!*

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.

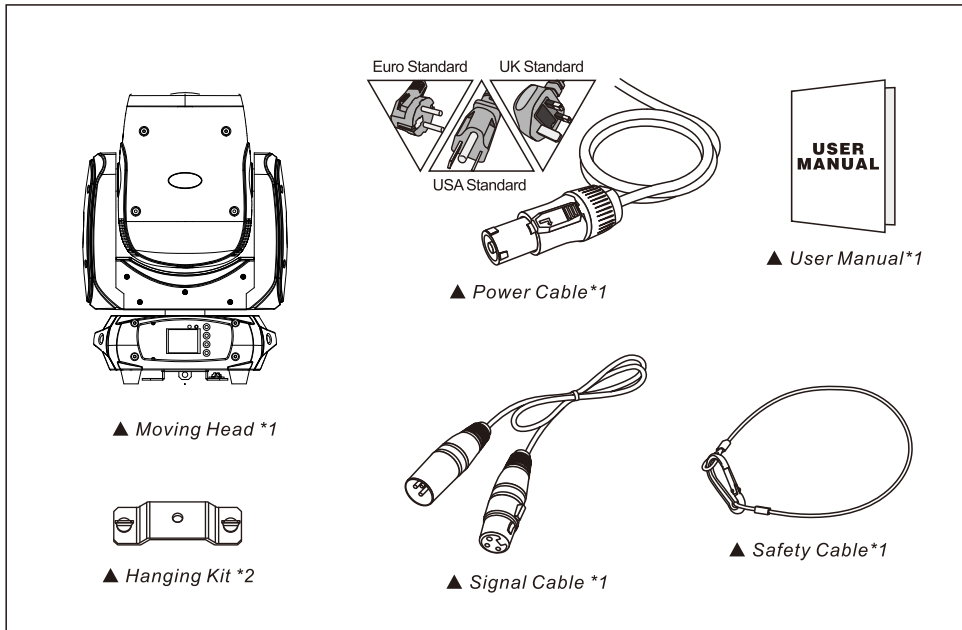Do not switch the fixture on and off in short intervals as this would reduce the lamp's life.

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

The FOS Smart Beam adopts a High Brightness SeawyTM Led 150 watt 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:

Euro Standard   UK Standard
USA Standard

▲ User Manual*1
▲ Power Cable*1
▲ Moving Head *1
▲ Hanging Kit *2
▲ Signal Cable *1
▲ Safety Cable*1

The FOS Smart Beam 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 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.

18	20	20	Pix_Green	
			0..255	0-100%Pix_Green dimmer from dark to bright
19	21	21	Pix_Blue	
			0..255	0-100%Pix_Blue dimmer from dark to bright
20	22	22	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
21	23	23	Pix_Macro	
			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

			Value	Function
11	11	11	128..189	Prism2 Forwards rotation from fast to slow
			190..193	Prism2 rotation stop
			194..255	Prism2 Backwards rotation from slow to fast
12	12	12		Frost
			0..199	Frost swing out
			200..255	Frost swing in
13	13	13		Speed pan/tile
			0..225	max to min speed
			226..235	blackout by movement
			236..245	blackout by all wheel changing
			246..255	no function
14	14	14		Special function
			0..19	No function
			20..29	No function
			30..39	No function
			40..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..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
Vector	Mode		Value	Function
	15	15		Color Time
			0..255	max to min speed
	16	16		Gobo Time
			0..255	max to min speed
15	17	17		Pix_Dimmer
			0..255	Pix_Dimmer 0%...100%
16	18	18		Pix_Strobe
			0..255	Pix_Strobe Speed 0%...100%
17	19	19		Pix_Red
			0..255	0-100% Pix_Red dimmer from dark to bright

3.TECHNICAL INFORMATION

SPECIFICATIONS:
- Led Source: High Brightness SeawyTM Led 150 watt
- Luminosity: 5000lm
- Color Temperature: 8000K
- Lifetime: 10,000 Hours
- Input Voltage:AC90-260V 50/60Hz.
- Power Consumption: 200W.
- Control Signal:DMX512, master-slave and sound activated or auto operation.
- Control Channel: 22/24/30 DMX channels USITT DMX-512.
- Dimensions:308(D)*224(W)*436(H)mm
- Packing Dimensions:385(D)*275(W)*500(H)mm.
- Net Weight:11.78kgs.
- Gross Weight: 14.02kgs.

FEATURES:
- Low power consumption.
- Specific high precision glass optic systen with 2 °
- projection angle.
- 2 meter to 3.0 eclectric focus.
- 16-facet and 24-facet prism 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 display .
- POWERCON connector IN/OUT.
- 3-Pin XLR connectors IN/OUT.
- IP20 protection rating.
  55dB at 3'dB rating.
  2*1/4 turn fastening Omega clamp.
- 1*Safety attachment point.

- MOVEMENT:

8/16 bit smooth and precise resolution for PAN/TILT movement.
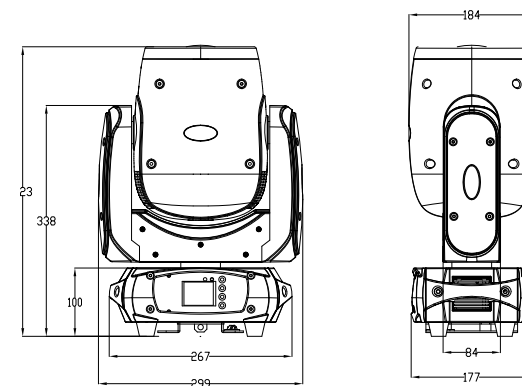360° /540° /630° PAN and 90°/180° /270° TILT movement.
-
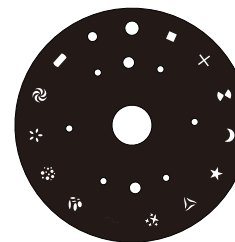
COLORS:
- 1 Color wheel with 11 colors plus open.
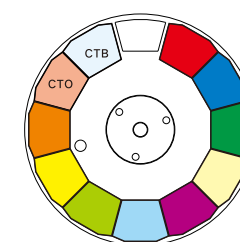
GOBOS:
- 1 Static gobo wheel with 14 gobos plus open
-

FUNCTION:
- PAN/TILT inversion available.
- Scan position memory,auto reposition after unexpected
- movement.
- Improved optics and flat beam field.
- Variable direction rainbow effect with speed adjustable. Fan cooling sytem.
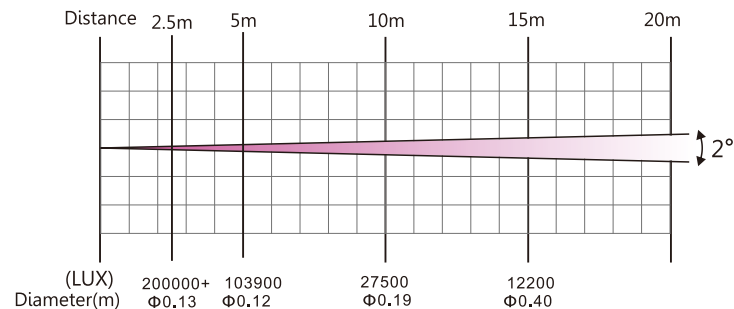 Constant temperature readout and management function

Static Gobo Wheel   Color Wheel

4.PHOTOMETRICS DIAGRAM

Distance	2.5m	5m	10m	15m	20m

2°

(LUX) Diameter(m)	200000+ Φ0.13	103900 Φ0.12	27500 Φ0.19	12200 Φ0.40

5.OPERATION INSTRUCTIONS

- The FOS Smart Beam 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.

			77..83	gobo 11
6	6	6	84..90	gobo 12
			91..97	gobo 13
			98..104	gobo 14
			105..111	Gobo 1 shake slow to fast
			112..118	Gobo 2 shake slow to fast
			119..125	Gobo 3 shake slow to fast
			126..132	Gobo 4 shake slow to fast
			133..139	Gobo 5 shake slow to fast
			140..146	Gobo 6 shake slow to fast
			147..153	Gobo 7 shake slow to fast
			154..160	Gobo 8 shake slow to fast
			161..167	Gobo 9 shake slow to fast
			168..174	Gobo 10 shake slow to fast
			175..181	Gobo 11 shake slow to fast
			182..188	Gobo 12 shake slow to fast
			189..195	Gobo 13 shake slow to fast
			196..202	Gobo 14 shake slow to fast
			203..255	Rot.gobo wheel cont.rotation slow to fast
				Shutter
			0..31	Shutter closed
			32..63	shutter open
7	7	7	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		**Dimmer**
			0..255	Dimmer 0%...100%
9	9	9		**Focus**
			0..255	In(near) to out(far)
				Rrotating prism1
			0..5	Prism 1 swing out(hole)
10	10	10	6..127	Prism 1 swing in
			128..189	Prism 1 Forwards rotation from fast to slow
			190..193	Prism 1 rotation stop
			194..255	Prism 1 Backwards rotation from slow to fast
				Rrotating prism2
11	11	11	0..5	Prism2 swing out(hole)
			6..127	Prism2 swing in

9.DMX PROTOCOL

Mode/Channel			Value	Function
22CH	24CH	30CH		
1	1	1		**Pan**
			0..255	PAN Movement
2	2	2		**Pan-fine**
			0..255	Fine control of Pan movement
3	3	3		**Tilt**
			0..255	TiltMovement
4	4	4		**Tile-fine**
			0..255	Fine control of Tilt movement
5	5	5		**Color wheel**
			0..9	Open/ white
			10..19	Color1
			20..29	Color2
			30..39	Color3
			40..49	Color4
			50..59	Color5
			60..69	Color6
			70..79	Color7
			80..89	Color8
			90..99	Color9
			100..109	Color10
			110..127	Color11
			128..189	Forwards rainbow effect from fast to slow
			190..193	Color rotation stop
			194..255	Backwards rainbow effect from slow to fast
6	6	6		**Gobo wheel 1**
			0..6	Open
			7..13	gobo1
			14..20	gobo2
			21..27	gobo3
			28..34	gobo4
			35..41	gobo5
			42..48	gobo6
			49..55	gobo7
			56..62	gobo8
			63..69	gobo9
			70..76	gobo10

6.INSTALLATIONS

Cautions:

For added protection mount the fixtures in areas outside walking paths, seating areas, or in areas were 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 f t) away from any flammable materials (decoration etc.).
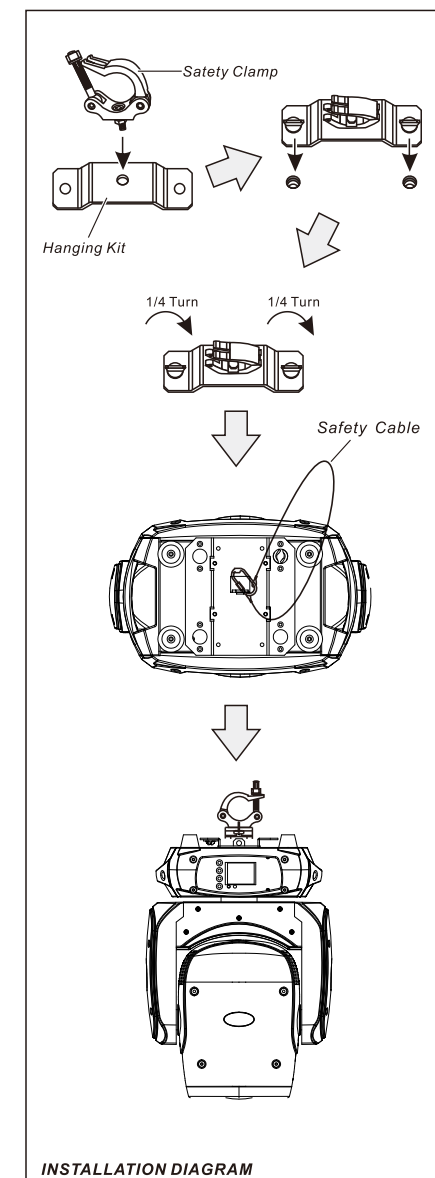**Always use and install the supplied safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.**

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.
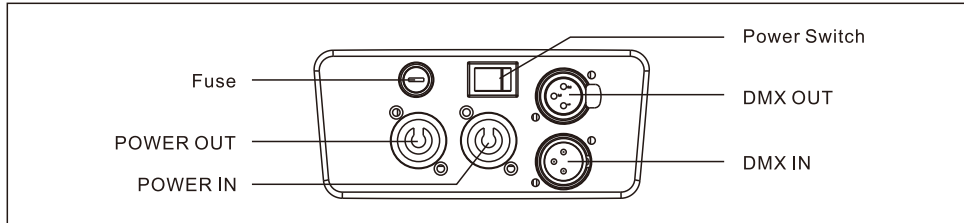
Clamp Mounting:

FOS Smart Beam 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 attached at least one properly rated safety cable to the fixture using on of the safety cable rigging point integrated in the base assembly .

Satety Clamp
Hanging Kit
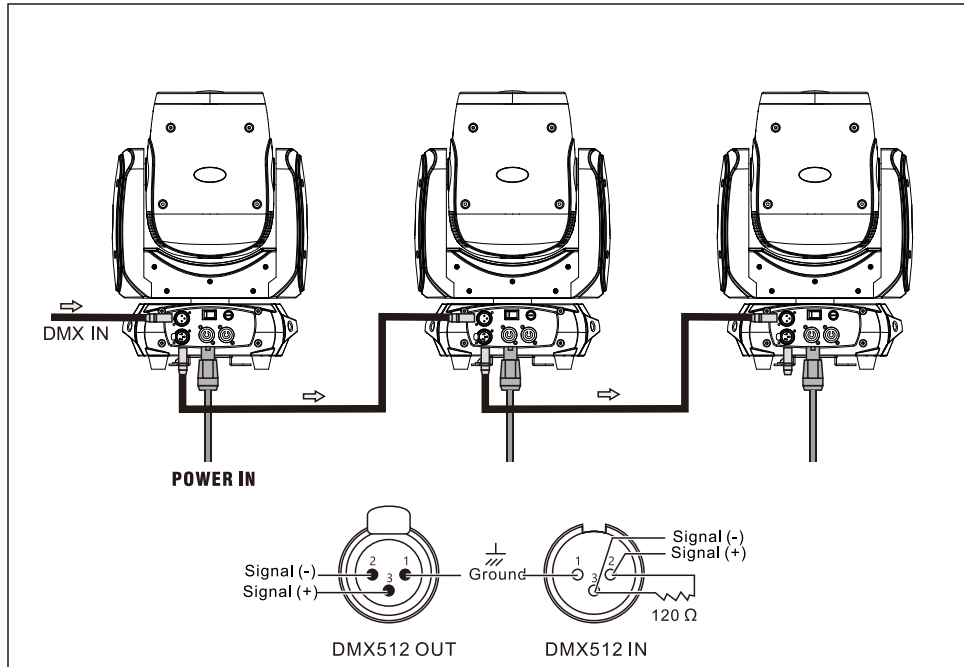*1/4 Turn*   *1/4 Turn*
Safety Cable

INSTALLATION DIAGRAM
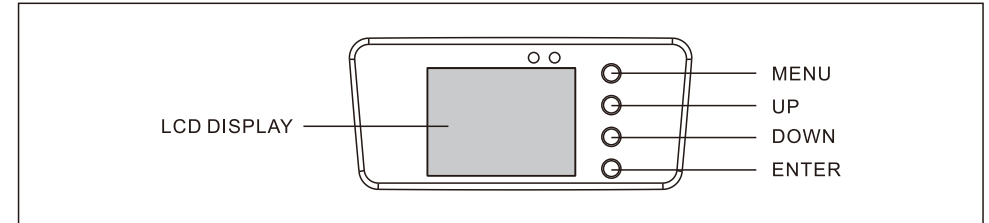
7.CONTROL CONNECTION

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.

8.MENU OPERATIONS

MENU			Description
DMX (FunctionMode)	DmxAddress	A001~AXXX	DMX addresssetting
	ChannelMode	22CH	22CH mode
		24CH	24CH mode
		30CH	30CH mode
	AutoRun	Program1~7	MasterAlone	Auto program
	MusicRun	Program1	MasterAlone	Autorun
SET (FixtureSet)	ResetDefault	Yes/No	Resetdefault
	SignalSet	Wire	Wire DMX
	ReversePan	(On/Off)	Reversepan
	ReverseTilt	(On/Off)	Reversetilt
	SelectPan	630°/540°/360°	Pan degree,defaultis 540°
	SelectTilt	270°/180°/90°	Tiltdegree,defaultis 270°
	Micsensitivity	0~99%	MIC sensitivitysetting
	OFF SignalMode	(On/Off)	Off at originalstatusand ON at reset statuswhenno DMX signal
	ScanQuickMode	(On/Off)	Fastscanmode
Manu (Manual)	Reset	TotalReset ScanReset ColorReset GoboReset OthersReset	TotalReset ScanReset ColorReset GoboReset OthersReset
	Channel	PAN=XXX…..	Channelcontrol
ADV (Advanced) (AccessCode088)	Calibration	PAN=XXX…..	Calibration
	UIDCode	XX XX XX XX XX XX	UID Codesetting