

# Instruction Manual

PROFESSIONAL SHOW LIGHT

**LED SPOT Q20**



**Unpacking:** Thank you for purchasing LED Spot Q20. Every unit has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton appears to be damaged, carefully inspect your fixture for any damage and be sure all accessories necessary to operate the unit has arrived intact. In the case damage has been found or parts are missing, please contact the manufacturer or your dealer for further instructions. Do not return this unit to your dealer without first contacting.

**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE POWERING OR INSTALLING LED Spot Q20. SAVE IT FOR FUTURE REFERENCE.**

**Warning!** To prevent or reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.

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

**Caution!** There are no user serviceable parts inside this unit. Do not attempt any repairs yourself; doing so will void your manufactures warranty. In the unlikely event your unit may require service please contact the manufacturer or your dealer.

**PLEASE recycle the shipping carton when ever possible.**

**General Instructions:** To optimize the performance of this product, please read these operating instructions carefully to familiarize you with the basic operations of this unit. These instructions contain important safety information regarding the use and maintenance of this unit.

## Features

- Multi-Colors+goboes
- Color strobe
- Electronic Dimming 0-100%
- DMX-512 protocol
- Master/Slave synchronization
- LCD operation menu with function buttons
- Daisy Chain Units Together in DMX Mode

## Safety Precautions

- To reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.
- Do not spill water or other liquids into or on to your unit.
- Be sure that the local power outlet matches that of the required voltage for your unit.
- Do not attempt to operate this unit if the power cord has been frayed or broken. Do not attempt to remove or break off the ground prong from the electrical cord. This prong is used to reduce the risk of electrical shock and fire in case of an internal short.
- Disconnect from main power before making any type of connection.
- Do not remove the cover under any conditions. There are no user serviceable parts inside.
- Never operate this unit when it's cover is removed.
- Never plug this unit in to a dimmer pack.
- Always be sure to mount this unit in an area that will allow proper ventilation. Allow about 6" (15cm) between this device and a wall.
- Do not attempt to operate this unit, if it becomes damaged.
- This unit is intended for indoor use only; use of this product outdoors voids all warranties.
- During long periods of non-use, disconnect the unit's main power.

- Always mount this unit in safe and stable matter.
- Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to the point they exit from the unit.
- Cleaning -The fixture should be cleaned only as recommended by the manufacturer. See “Cleaning” for details.
- Heat -The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
- The fixture should be serviced by qualified service personnel when:
  - A. The power-supply cord or the plug has been damaged.
  - B. Objects have fallen, or liquid has been spilled into the appliance.
  - C. The appliance has been exposed to rain or water.
  - D. The appliance does not appear to operate normally or exhibits a marked change in performance.

## Technical Specifications

### Electrical

Power supply:.....electronic auto-ranging  
 Input voltage range:.....supply 90-250V, 50/60Hz  
 Fuse:..... 5 A@220V  
 Power consumption:.....300W@230V

### Optic

Light source: LumiEngin 1piece \*200W White LED  
 LED lifespan: 6,0000 hours  
 Dimmer: Smooth dimmer from 0-100%  
 Fixed gobo wheel: 7gobos+Open  
 Rotating gobo wheel: 7gobos+Open  
 Color wheel: 8colors+Open  
 6 linear+8-facet dual prisms  
 Focus+Frost +Iris

### Motorized

Pan/Tilt  
 Pan movement range: 540°  
 Tilt movement range: 270°  
 16 bit movement resolution  
 Automatic Pan/Tilt position correction  
 Pan movement 0°-540°at max.....Speed: 2.2 sec.  
 Tilt movement 0°-270°at max..... Speed: 1.2 sec.

### LCD operation

Built-in demo sequences  
 Silent fans cooling  
 Strong three-phase motors  
 Stand-alone operation  
 Supported protocols: DMX512

2 DMX modes (19/16 control channels)

**Connection**

DMX data in/out: Locking 3-pin and 5-pin XLR

AC power input: 1.5m power cord with plug

**Rigging**

Mounting points: 2 pairs of 1/4-turn locks

Mounting horizontally or vertically via 2 Omega brackets

**Temperatures**

Maximum ambient temperature: 45°C

Maximum housing temperature: 75°C

**Minimum distances**

Min. distance from flammable surfaces: 3.0m

Min. distance to lighted object: 2.0m

Total heat dissipation: 1200 BTU/h (calculated)

Net dimension: 428(L) x 260(W) x 678(H) mm

Weight (net): 22kg

Warranty: 1 Year .....

**Set Up:**

**Power Supply:** Before plugging your unit in, be sure the source voltage in your area matches the required voltage for your SPOT Q20, The model is Auto power supply, It is workable in 90-250V/50~60Hz. Please make sure your unit voltage matches the wall outlet voltage before attempting to operate you fixture.

**Connection to the mains**

For protection from electric shock, the fixture must be earthed!

Install a suitable plug on the power cord, note that the cores in the power cord are colored according to the following table. The earth has to be connected!

If you have any doubts about proper installation, consult a qualified electrician.

Core (EU)	Core (US)	Connection	Plug Terminal Marking
Brown	Black	Live	L
Light blue	White	Neutral	N
Yellow/Green	Green	Earth	

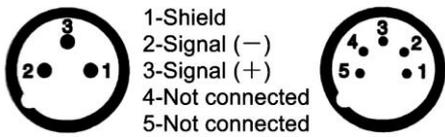
**DMX512 connection**

The fixture is equipped with 3-pin and 5-pin XLR sockets for DMX input and output. The sockets are wired in parallel.

Only use a shielded twisted-pair cable designed for RS-485 and 3-pin or 5-pin XLR-plugs and connectors in order to connect the controller with the fixture or one fixture with another.

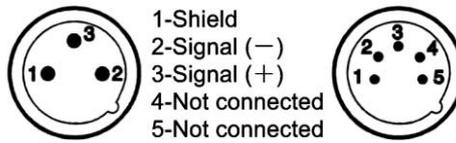
### DMX-output

XLR mounting-sockets (rear view):



### DMX-input

XLR mounting-plugs (rear view):



**DMX Linking:** To ensure proper DMX data transmission, when using several DMX fixtures try to use the shortest cable path possible. The order in which fixtures are connected in a DMX line does not influence the DMX addressing. For example; a fixture assigned a DMX address of 1 may be placed anywhere in a DMX line, at the beginning, at the end, or anywhere in the middle. When a fixture is assigned a DMX address of 1, the DMX controller knows to send DATA assigned to address 1 to that unit, no matter where it is located in the DMX chain.

**Operating Modes:** You can use the LED Spot Q20 in 3 ways:

- Auto Mode - The unit will automatically chase through the different colors and built-in programs.
- Slave Mode – The unit will run under slave mode.
- DMX control mode - This function will allow you to control each individual fixtures traits with a standard DMX 512 controller.

**DMX Mode:** Operating through a DMX controller give the user the freedom to create their own programs tailored to their own individual needs. This function also allows you to use your fixtures as spot lights.

1. This function will allow you to control each individual fixture’s traits with a standard DMX 512 controller.
2. The LED Spot Q20 uses 16/19 two DMX channels modes to operate. Please see “DMX Values and Functions” for the DMX traits.
3. To run your fixture in DMX mode, plug in the fixture via the XLR connections to any standard DMX controller. Set your desired DMX address following the setup specifications that come with your DMX controller.

**Touch Buttons:** There are four buttons under the LCD display below:

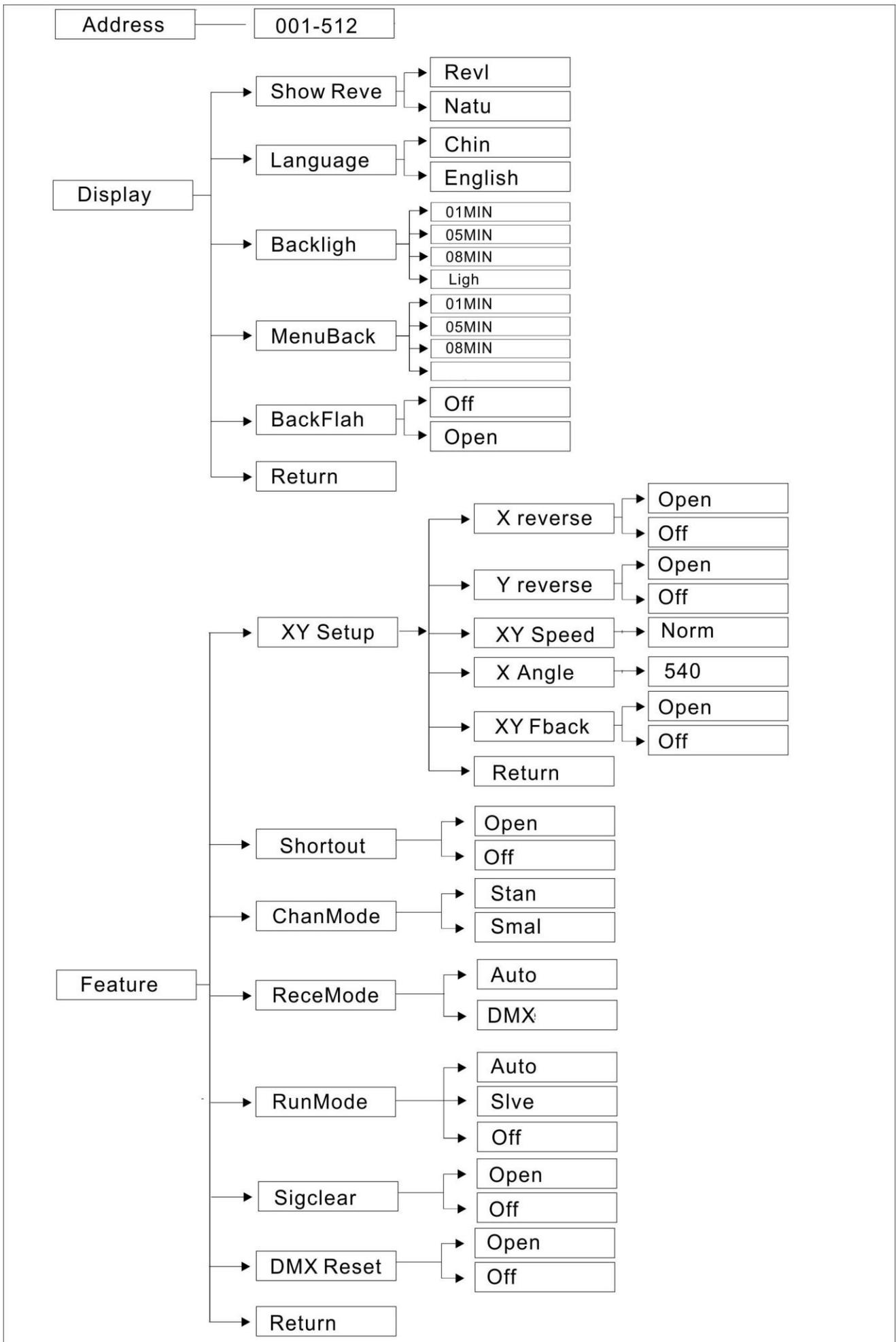
There are four touch buttons under the LED display: Menu, Down, Enter. Normally, the LED will display the current DMX address code of the fixture. At this time, presses up and down to choose the functions you want.

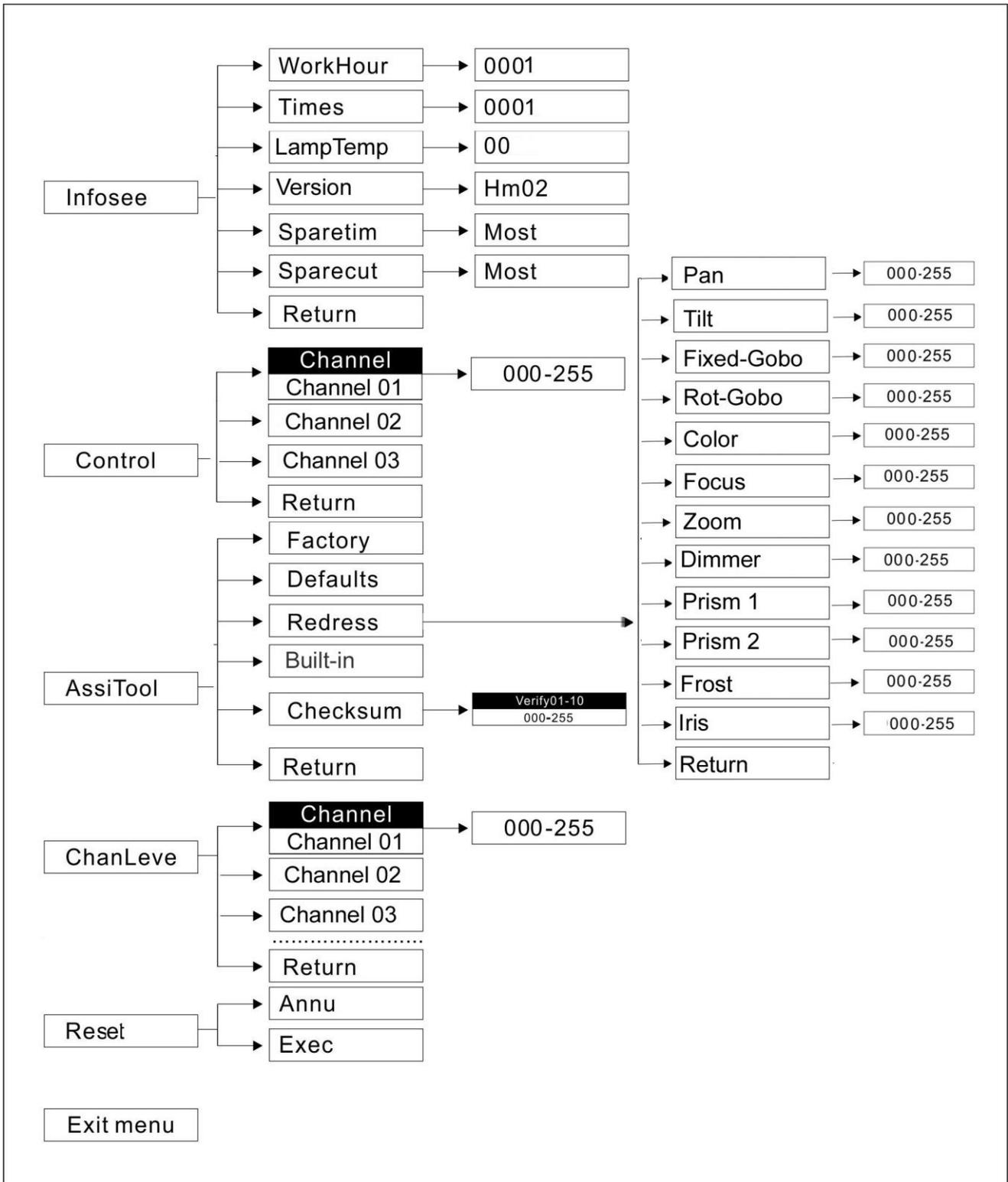


Up,

**LED Operation Menu:** LED screen with four touch buttons: **MENU, UP, DOWN and ENTER.**

**LCD display operation:**



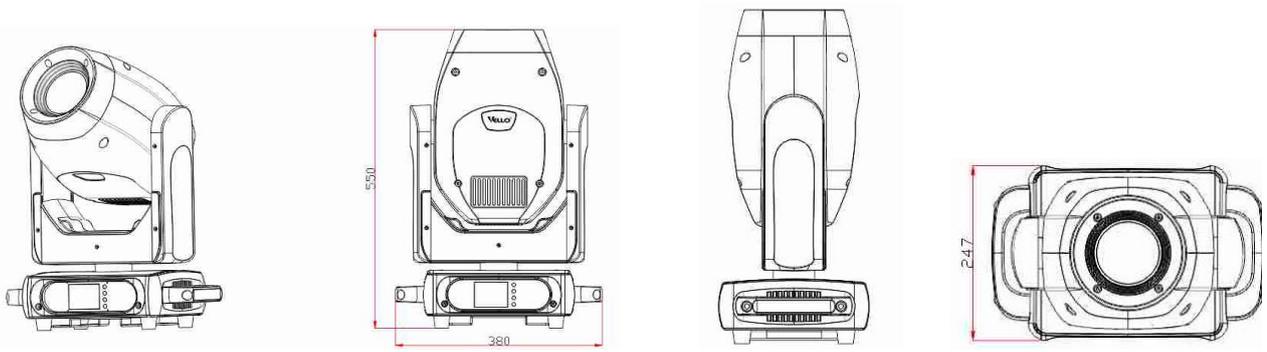


DMX Chart:

Standard Mode	Reduced Mode	DMX Value	Function
1	1	0~255	Pan 0~540
2	*	0~255	Pan Fine 16bit
3	2	0~255	Tilt 0~230
4	*	0~255	Tilt Fine 16bit
5	*	0~255	Pan/Tilt Speed Fast-Slow
6	3	0~255	Dimmer
7	4	<b>Strobe</b>	
		0-2	Open
		3~103	Strobe slow-fast
		104~107	Open
		108~207	Pulse Strobe 1 Slow to Fast
		208~212	Open
		213~238	Pulse Strobe 2 Slow to Fast
		239~251	Random Strobe 2 Slow to Fast
252~255	Open		
8	5	<b>Color Wheel</b>	
		0~128	Index
		129~131	Red
		132~135	Yellow
		136~138	Blue
		139~142	Magenta
		143~146	Cyan
		147~150	Pink
		151~154	Green
		155~158	Orange
		159~207	Forward Fast-Slow
208~255	Backward Slow-Fast		
9	6	<b>Static Gobo Wheel</b>	
		0~7	Open
		8~15	Gobo 1
		16~23	Gobo 2
		24~31	Gobo 3
		32~39	Gobo 4
		40~47	Gobo 5
		48~55	Gobo 6
		56~63	Gobo 7
		64~70	Gobo 7 shake Fast - slow
		71~77	Gobo 6 shake Fast - slow
		78~84	Gobo 5 shake Fast - slow
		85~91	Gobo 4 shake Fast - slow
		92~99	Gobo 3 shake Fast - slow
		100~107	Gobo 2 shake Fast - slow
		108~114	Gobo 1 shake Fast - slow
115~185	Forward Fast-Slow		

		186~255	Backward	Slow-Fast	
10	7	<b>Rotation Gobo Wheel</b>			
		0~7	Open		
		8~15	Gobo 1		
		16~23	Gobo 2		
		24~31	Gobo 3		
		32~39	Gobo 4		
		40~47	Gobo 5		
		48~55	Gobo 6		
		56~63	Gobo 7		
		64~70	Gobo 7 shake	Fast - slow	
		71~77	Gobo 6 shake	Fast - slow	
		78~84	Gobo 5 shake	Fast - slow	
		85~91	Gobo 4 shake	Fast - slow	
		92~99	Gobo 3 shake	Fast - slow	
		100~107	Gobo 2 shake	Fast - slow	
		108~114	Gobo 1 shake	Fast - slow	
		115~185	Forward	Fast-Slow	
		186~255	Backward	Slow-Fast	
11	8	<b>Gobo Rotation</b>			
		0~127	Gobo index		
		128~187	Gobo Forward Rotation(Fast-Slow)		
		188~194	Stop		
		195~255	Gobo Backward Rotation(Slow-Fast)		
12	9	0~128	Iris Index		
		129~255	Iris Pulse		
13	10	0~127	NO		
		128~255	Frost		
14	11	<b>Prism</b>			
		0~10	Open		
		11~128	Prism 1	8 faced	
		129~255	Prism 2	6 linear	
15	12	<b>Prism1 Rotation</b>			
		0~128	Prism 1 index		
		129~187	Prism 1 Backward Rotation	Fast-Slow	
		188~255	Prism 1 Forward Rotation	Slow-Fast	
16	13	<b>Prism2 Rotation</b>			
		0~128	Prism 2 index		
		129~187	Prism 2 Backward Rotation	Slow-Fast	
		188~255	Prism 2 Forward Rotation	Slow-Fast	
17	14	0~255	Zoom		
18	15	0~255	Focus		
19	16	0~127	NO		
		128~255	All-Reset		

Fixture dimension 438x260x678 (mm):



**Rigging the fixture**

**Caution:** Fixture may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do not install the moving head!

Before rigging make sure that the installation area can hold a minimum point load of 10 times the fixture's weight.

When installing the device, make sure there is no highly inflammable material (decoration articles, etc.) in a distance of min. 1.0 m.

**CAUTION!**

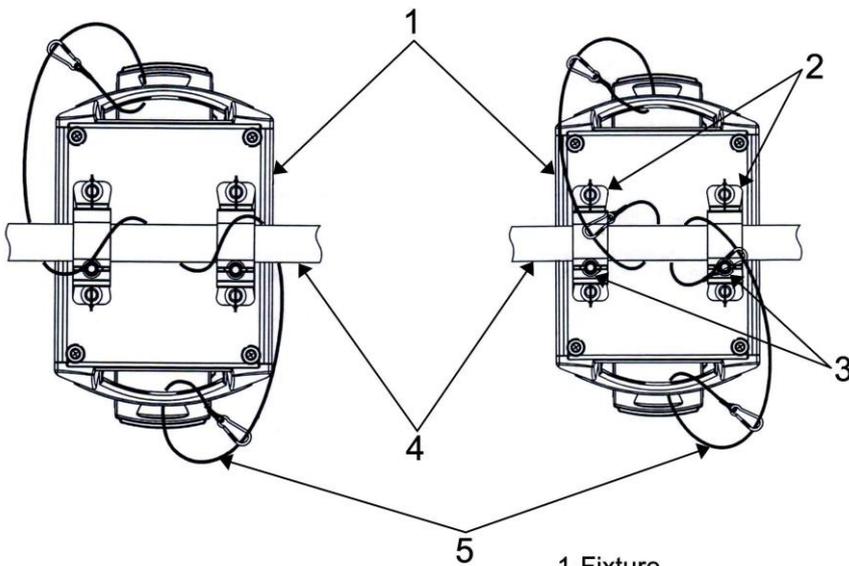
Use an appropriate clamp to ring the fixture on the truss.

Follow the instructions mentioned at the bottom of the base.

Make sure that the device is fixed properly! Ensure that the structure (truss) to which you are attaching the fixtures is secure.

Securing the fixture via one safety wire

Securing the fixture via two safety wires



- 1-Fixture
- 2-Omega holder
- 3-Clamp
- 4-Truss
- 5-Safety chain

## Cleaning

Due to fog residue, smoke, and dust cleaning the internal and external optical lenses must be carried out periodically to optimize light output.

1. Use normal glass cleaner and a soft cloth to wipe down the outside casing.
2. Clean the external optics with glass cleaner and a soft cloth every 20 days.
3. Always be sure to dry all parts completely before plugging the unit back in.

Cleaning frequency depends on the environment in which the fixture operates (i.e. smoke, fog residue, dust, dew).

**TROUBLE SHOOTING:** Listed below are a few common problems the user may encounter, with solutions.

### ***Unit not respond to DMX:***

1. Check that the DMX cables are connected properly and are wired correctly (pin 3 is “hot”; on some other DMX devices pin 5 may be ‘hot’). Also, check that all cables are connected to the right connectors; it does matter which way the inputs and outputs are connected.

***Note: All information is subject to change without prior notice.***