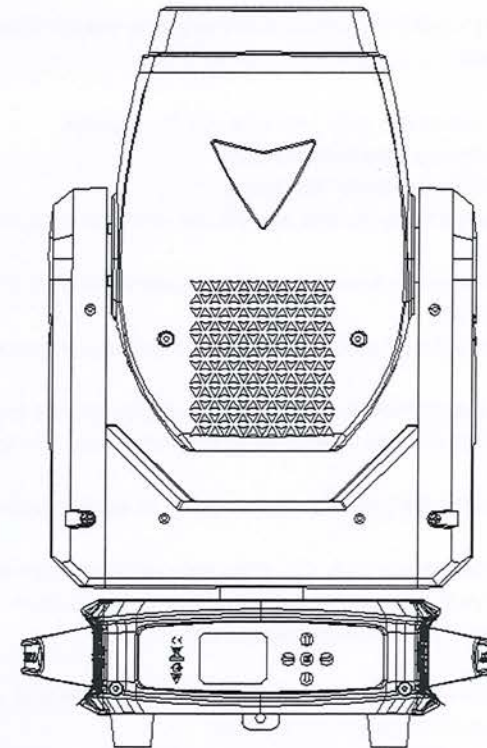




# SPECTRAL HYBRID



Manual

## 1. Safety Instructions

Please read the instruction carefully which includes important information about the installation, usage and maintenance.

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction manual.

### Important:

**Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.**

Unpack and check carefully to ensure that there is no transportation damage before using the unit.

This product is for indoor use only. Use only in a dry location.

DO install and operate by qualified operator.

DO NOT allow children to operate the fixture.

Use safety chain when fixing the unit. Handle the unit by carrying its base instead of head only.

The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces.

Be sure that no ventilation slots is blocked, otherwise the unit will be overheated.

Before operation, ensure that you are connecting this product to the proper voltage in accordance with the specifications in this manual or on the product's specification label.

It's important to ground the yellow/green conductor to earth in order to avoid electric shock.

Minimum ambient temperature TA: 0°C. Maximum ambient temperature TA: 40°C. Do not operate this product at a lower or higher temperature.

DO NOT connect the device to any dimmer pack.

Avoid any flammable liquids, water or metal from entering the unit. Once it happens, cut off the mains power immediately.

DO NOT operate in a dirty or dusty environment. DO clean the fixture regularly.

DO NOT touch any wire during operation as there might be a hazard of electric shock.

Avoid entanglement of the power cord with other wires.

The minimum distance to objects/surface must be more than 1 meters.

Disconnect mains power before fuse/lamp replacement or servicing.

Replace fuse/lamp only with the same type.

## 2. The lamps cannot be started

- Check that the lamps have poor contact or fall off due to extrusion deformation, vibration of internal parts, moisture and other reasons during long-distance transportation.
- Please check whether the wires and connectors inside the lamp are detached or loose.
- Check whether the electronic components of lamps (such as electronic transformers, PCB boards, motor control boards, etc.) are loose, short-circuited and burned out.

## 3. When working, the X-axis or Y-axis of the lamp does not move normally

- Check whether the transmission belt corresponding to the X and Y axis directions in the lamp is off and broken;
- Check whether the data feedback receiver (optical coupler) corresponding to the X and Y directions in the lamp is damaged;
- Reboot to reset once.

	0-127	Rotation gobo indexing
	128-190	Forward gobo Rotation: Fast to Slow
	191-192	stop
	193-255	Reverse gobo Rotation: Slow to Fast
13		<b>Prism</b>
	0-63	no prism
	64-255	Prism Insert
14		<b>Prism Rotation</b>
	0-127	Prism Positioning and Rotation
	128-190	The prism rotates in reverse, from fast to slow
	191-192	Prism stops spinning
	193-255	The prism rotates forward, from slow to fast
15		<b>frost</b>
	0-63	null
	64-255	frost
16	0-255	<b>ZOOM</b>
17	0-255	<b>Zoom fine</b>
18	0-255	<b>Focus</b>
19	0-255	<b>Focus fine</b>
20		<b>reset</b>
	0-199	null
	200-209	Pan/Tilt reset
	210-219	effect reset
	220-229	reset all

### 13.Common malfunctions

#### 1. After the lamp is reset normally, it will not accept the control of the console

- Check whether the digital start address value and function options of the lamps are correct;
- Check whether the connection of the communication control line is correct, the communication line is too long or has been interrupted;
- Check whether the control equipment is invalid, and check whether the signal amplifier connected in series is invalid;
- Check whether the communication line is too long or other devices interfere with each other;
- Optimize wiring, shorten the length of control signal lines, separate high-voltage and low-voltage lines;
- Add a signal amplifier;
- The signal line adopts high-quality shielded twisted pair;
- Connect a signal terminating resistor (120 ohms) at the end of the fixture.

In the event of serious operating problem, stop using the unit immediately. Never turn on and off the unit time after time.

The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.

DO NOT attempt to operate this unit if it becomes damaged. DO NOT attempt any repairs

yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center if needed.

Disconnect this product from its power source before servicing.

DO use the original packaging if the device is to be transported.

Avoid direct eye exposure to the light source while the product is on.

Never touch bulb with bare fingers, as it is very hot after using.

DO NOT operate this product if you see damage on the housing, shields, or cables. Have the damaged parts replaced by an authorized technician at once

#### Installation:

The fixture should be fixed on the clamp. Always ensure that the unit is firmly fixed to avoid vibration and slipping off during operation. Ensure that the trussing or area of installation must be able to hold 10 times the weight without any deformation. Always install a safety cable that can hold at least 12 times the weight of the fixture when installing. DO install and operate by qualified operator. It must be installed in a place where there is out of the reach of people.

### 2.INSTALLATIONS

installations Note: In order to increase protection, please install the lamp on the sidewalk, outside the seating area, or an area where unauthorized persons may touch the lamp

Before installing the fixture on any surface, make sure that the installation area can bear the minimum point load above 10 points of the weight of the equipment. The installation of the fixing device must always be fixed with auxiliary safety accessories (such as a suitable safety rope)

Do not stand directly under the equipment when installing, removing, or servicing fixtures

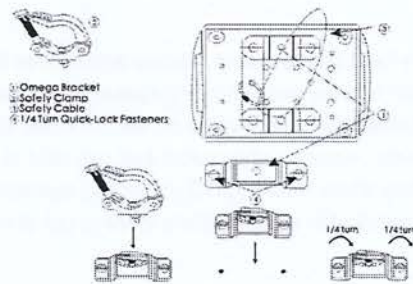
From the ceiling or set on a flat surface (see the picture below). Ensure that this fixture is kept at least 0.5m (1.5 feet) away from any flammable materials (decorations, etc.)

Be sure to use and install the supplied safety rope to ensure safety and prevent accidental damage and/or injury in case the fixture is damaged

Installation point: Overhead installation requires a wealth of experience, including calculation of working load limits, in-depth understanding of the installation materials used, and regular safety inspections of all installation materials and fixtures. If you do not have these qualifications, please do not try to install it yourself. Improper installation can cause personal injury

Before connecting the main power cord to an appropriate wall outlet, make sure to complete all assembly and installation procedures

LED installation: LED shaking head provides a unique mounting bracket assembly, which integrates the bottom of the base and the fixing point of the safety cable into one unit (see the figure below). When installing the fixture to the truss, make sure to use the appropriate tools to fix it on the attached bracket, and use the M10 screw that passes through the center hole of the "bracket" to fix it. As an additional safety measure, make sure to use at least one safety cable integrated in the base assembly to connect at least one appropriately rated safety cable to the fixture.



### 3. DMX-512 control connections

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 heads be connected together through serial linking. The cable needed should be two core, screened cable with XLR input and output connectors.

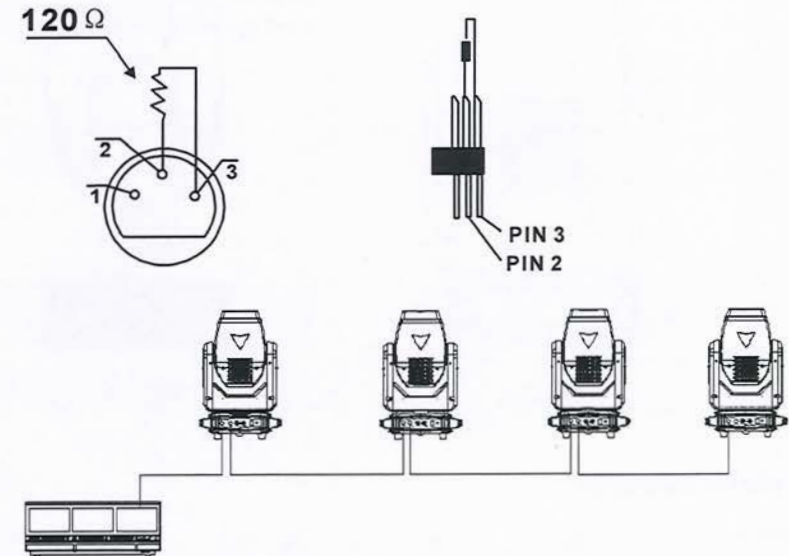
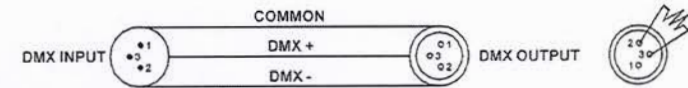
For installations where the DMX cable has to run a long distance or is in an electrically noisy environment, such as in a discotheque, it is recommended to use a DMX terminator. This helps in preventing corruption of the digital control signal by electrical noise. The DMX terminator is simply an XLR plug with a 120 Ω 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

		<b>GOBO</b>
<b>10</b>	0-4	Open (white light hole)
	5-12	GOBO 1
	13-20	GOBO 2
	21-28	GOBO 3
	29-36	GOBO 4
	37-44	GOBO 5
	45-52	GOBO 6
	53-60	GOBO 7
	61-76	GOBO 8
	77-89	GOBO 1 shaking from slow to fast
	90-102	GOBO 2 shaking from slow to fast
	103-115	GOBO 3 shaking from slow to fast
	116-128	GOBO 4 shaking from slow to fast
	129-141	GOBO 5 shaking from slow to fast
	142-154	GOBO 6 shaking from slow to fast
	155-167	GOBO 7 shaking from slow to fast
	168-180	GOBO 8 shaking from slow to fast
	181-201	Open
	202-227	The shaking is scrolling forward, from fast to slow
	228-229	stop scrolling
230-255	shaking scrolls in reverse, from slow to fast	
<b>11</b>		<b>Rotation GOBO</b>
	0-5	Open (white light hole)
	6-15	GOBO1
	16-25	GOBO2
	26-35	GOBO3
	36-45	GOBO4
	46-55	GOBO5
	56-65	GOBO6
	66-75	GOBO7
	76-92	GOBO 1 shaking from slow to fast
	93-109	GOBO 2 shaking from slow to fast
	110-126	GOBO 3 shaking from slow to fast
	127-143	GOBO 4 shaking from slow to fast
	144-160	GOBO 5 shaking from slow to fast
	161-177	GOBO 6 shaking from slow to fast
	178-199	GOBO 7 shaking from slow to fast
	200-201	null
202-227	Forward gobo flow effect: from fast to slow	
228-229	gobo stops spinning	
230-255	Reverse gobo Flow Effect: Slow to Fast	
<b>12</b>		<b>GOBO rotation</b>

## 11. DMX512

### 20CH

CH	DMX	describe
1	0-255	<b>Pan</b>
2	0-255	<b>Pan fine</b>
3	0-255	<b>Tilt</b>
4	0-255	<b>Tilt fine</b>
5		<b>Pan/Tilt speed</b>
	0	NO
	1-255	speed from fast to slow
6	0-255	<b>Dimming</b>
7	0-255	<b>Dimming fine</b>
8		<b>Strobe</b>
	0-3	closure
	4-103	Strobe from slow to fast
	104-107	Open
	108-207	Fast off and slow on, from fast to slow
	208-212	Open
	213-251	Random strobe, from slow to fast
252-255	Open	
9		<b>color wheel</b>
	0-7	Color 1 (white light)
	8-15	color 1+color 2
	16-23	color 2
	24-31	color 2+color 3
	32-39	color 3
	40-47	color 3+color 4
	48-55	color 4
	56-63	color 4+color 5
	64-71	color 5
	72-79	color 5+color 6
	80-87	color 6
	88-95	color 6+color 7
	96-103	color 7
	104-111	color 7+color 8
	112-119	color 8
	120-127	color 8+color 1
	128-190	Rainbow effect from fast to slow
	191-192	rainbow effect stopped
193-255	Rainbow effect from slow to fast	

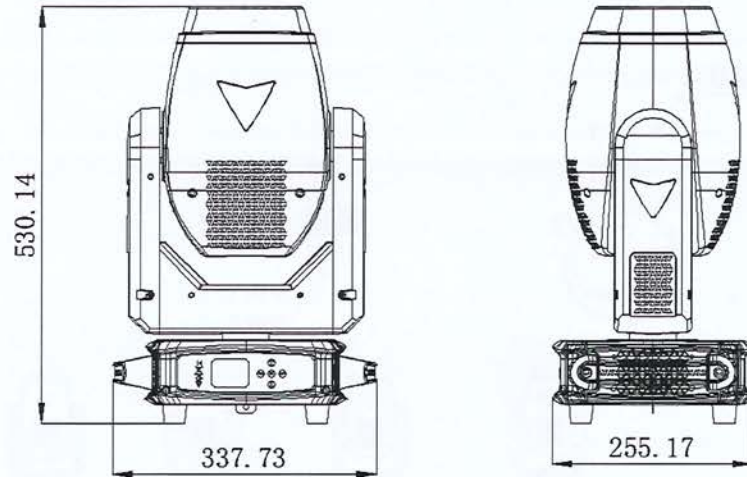


#### 4.Address code setting

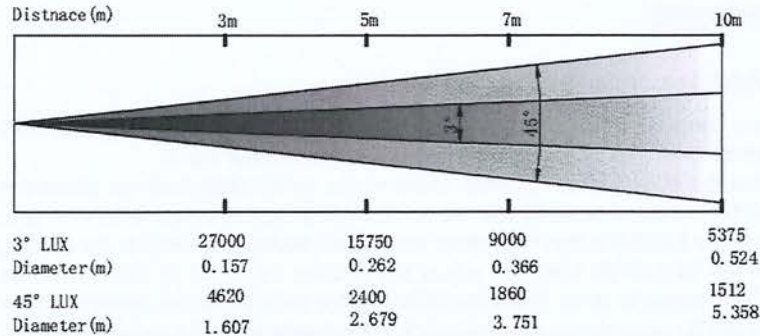
If you use a universal DMX controller to control the units, you have to set DMX address from 1 to 512 so that the units can receive DMX signal. Press the MENU button to enter menu mode, select DMX Settings, press the ENTER button to confirm, use the UP/DOWN button to select DMX Address, press the ENTER button to confirm, the present address will blink in the display, use the UP/DOWN button to adjust the address from 001 to 512, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle 30 seconds to exit menu mode. Please refer to the following diagram to address your DMX512 channel for the first 4 units.

Channel MODE	UNIT1 ADDRESS	UNIT2 ADDRESS	UNIT3 ADDRESS	UNIT4 ADDRESS
20CH	1	21	41	61

## 5. Fixture size



## 6. Illuminance chart:



**Factory setting:** Set the logo on and off.

**Trim Recovery:** After replacing the display board, use this menu to restore the trim data saved by the motor board to the display board.

### information:

**DMX value:** Display the current received DMX signal value

**Channel:** Select the channel to be observed

**Value:** Displays the DMX value of the selected channel

**Error:** Display error message (if any item in this menu is wrong, an exclamation mark will be displayed in the upper right corner of the menu cover)

**Storage:** Indicates whether the storage is functioning normally. If the memory is abnormal, the menu information cannot be recorded or read, and the lamp time record and self-programming data may also be lost.

**RAM Error:** Chip memory allocation failed, if this error occurs, please contact the manufacturer.

**Bus communication:** If there is an error, the motors of various functions will not operate normally. If this error occurs, please check whether the communication cables between the boards are in poor contact.

**X-axis reset:** X-axis reset failed, check whether the optocoupler or motor is normal.

**Y-axis reset:** Y-axis reset fails, check whether the optocoupler or motor is normal.

**Color reset:** Color wheel reset failed

**Gutu reset:** Gutu disk reset failed

**Focus error:** focus positioning failed

**Zoom in error:** Zoom in positioning failed

**Prism Error:** Prism positioning failed

**LED:** Displays the usage time of the bulb

**Usage time:** Displays the total time the lamp has been on since the lamp time was reset to zero

**Time Clear:** The total time the bulb is on is cleared to 0.

**Test mode:** For product testing only, temporary use

**Product Code:** The internal code of the product is only for reference in product production and maintenance.

DMX: controlled and run by DMX512 console.  
 Self-propelled (factory test): run the program set by the factory, this program is mainly used for factory test.  
 User program: run user self-programming program. The editing scene can be set in the [Run Settings] - [Self-Programming] menu.

**Manual:** Manually set the value of the channel

**Run Settings:** Run parameter settings.

**Master-slave mode:** set master-slave mode

**XY axis general settings:**

**X-axis reverse:** Select "Yes" to reverse the rotation direction of the Pan motor, select "No", and follow the rotation direction at the factory.

**Y-axis reverse:** select "Yes" to reverse the rotation direction of the Pan motor, select "No", and follow the rotation direction at the factory.

**X-axis settings:** start range: 0-254  
 End Range: 0-255

**Y axis setting:** start range: 0-254  
 End Range: 0-255

**Dimming curve:** select the dimming curve

**Self programming:**

**Step count:**

**When no signal:** select the operation mode if no DMX512 signal is detected

**When powering on:** Only when powering on, if no DMX signal is detected, the above operation mode will be executed, Otherwise, the last DMX action will be held

**Centered:** Except for Pan and Tilt, all other channels are cleared to zero.

Self-propelled (factory test/pattern/color): Run the program set by the factory.

**User program:** run user self-programming program.

**Runtime:** The action to be performed at any time as long as the DMX signal is lost.

**Hold:** Hold the DMX value of the last frame.

**Shut off:** close the shutter

**Display settings:** LCD screen settings

**advanced settings:**

**Fine-tuning:** Factory debugging function, which requires password authentication to enter.

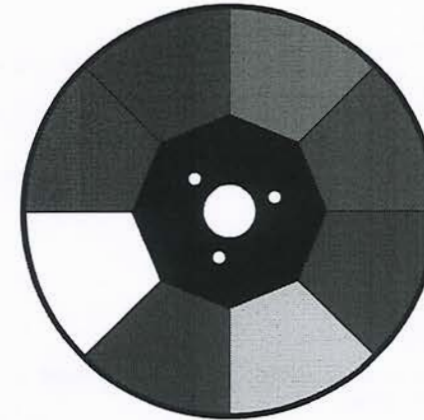
**Display:** Menu screen flip setting

**Language:** Set the system language

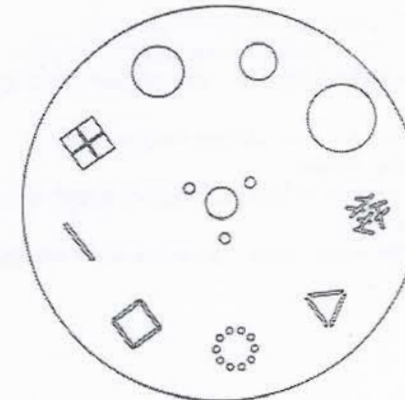
**Ignore errors:** Some error reports may not affect the final use effect, or for the general purpose of the product, you can choose to close some meaningless error reports

## 7. Effect Wheels

COLOR WHLLE



STATIC GOBO WHEEL



Rotation GOBO



## 8. LED technical parameters

Input Voltage: 100-240V, 50/60Hz  
 Output Voltage: V1:36V(Master board+LED driver), V2:12V(cooling fan+Display)  
 Power consumption: 220W  
 Power supply: 300W  
 Light source: 200W Osram LED Chip (21-24V,8A)  
 Color temperature: 8000K  
 Diameter of optic lens: 97mm  
 Beam angle: 3-45°  
 Color wheel: 1 color wheel, 7 fixed colors plus white  
 Static gobo: 8 gobos plus 1 white circle  
 Rotation Gobo: 7 Gobo plus 1 white circle  
 Prism: 3 prism, can be rotated in both directions  
 Frost filter: with smooth wash effect  
 DMX Channel: 20CH  
 Four dimming curves  
 Operate mode: DMX512, self-propelled, master/slave, RDM  
 Fixture size: 338\*530\*225mm

### Features:

1. 0-100% 16Bit smooth dimming, Four dimming curves
2. Overheating self-energy protection can extend lamp life
3. Three phase Motor with SY Brand (XY axis magnetic coding positioning is more accurate)
4. Two angle lens 3° and 45° can change the gobo size
5. High quality LCD touch screen
6. Power in & Out connector, 3 or 5pin XLR in/out & output can be optional
7. Folding clamp can be optional
8. Housing material: PA6 Nylon (Solid, high temperature resistance up to 200° flame retardance)

## 9. LCD Homepage Instructions

2		
1		3
		4
		5
6	11	7
8	9	10

- 1 — Displays the current DMX address in large font
- 2 — Logo display area
- 3 — DMX signal frame rate (FPS)
- 4 — Current channel mode, the displayed number indicates the current channel number
- 5 — Show current temperature
- 6 — Current Mode (Master, Slave)
- 7 — Current running mode (DMX512, Auto, User)
- 8 — Error message. If a red band "x" is displayed, the self-test found an error. (Press down to view specific error message)
- 9 - Display the address code of the next fixture
- 10 — SN term display

### 10. menu operation:

- **DMX address:** set the DMX address
- 
- **Channel Mode:** Set the channel mode, the number of the menu option indicates the number of channels.
- **Reset operation:** reset the motor
- 
- **Motor power off:** Select "On", all motors are powered off; select "Off", all motors are powered on and reset. Using this menu, it is possible to plug and unplug the motor and power-on reset without turning off the main switch.
- **XY Axis:** Reset Pan and Tilt Motors

### ● **Run: Set the run mode.**

The description of each menu option is as follows (Note: "Automatic" mode options may vary according to different product models):