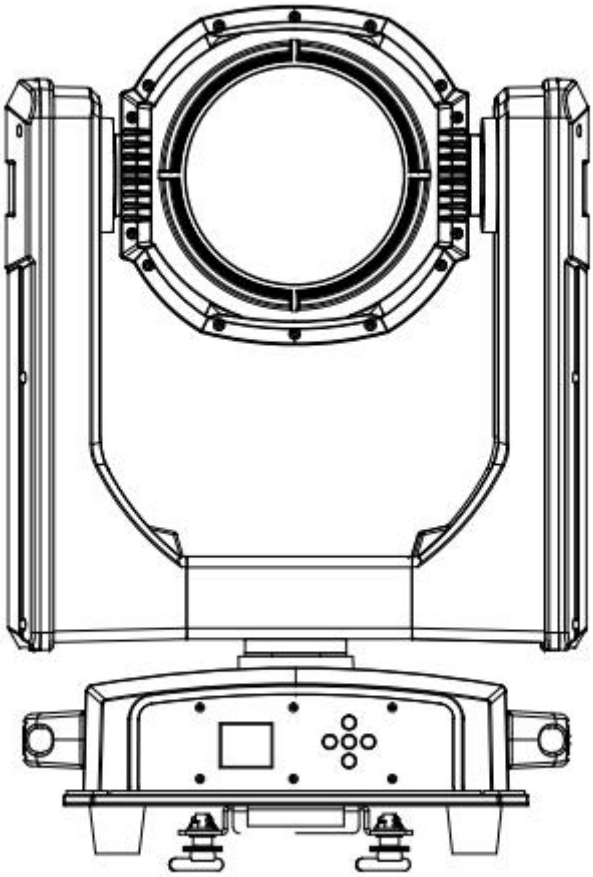
LED BSW 500 CMY IP



USER MANUAL

INSTALLATION AND ATTENTION

1. Maintenance

- To reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.
- Intermittently using will extend this item's service life.
- Please clear the fan, fan net, and optical lens in order to keep good work state.
- Do not use the alcohol or any other organic solvent to wipe the shell.

2. Statement

The product has perfect performance and integrity packing. All users should be strictly complying with the warning and operating instructions as stated. Or we aren't in charge of any result by misusing. Any damage resulting by misuse is not within the Company's warranty. Any fault or problem caused by neglecting the manual is also not in the charge of dealers.

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

3. Safety Precaution

- In order to guarantee the product's life, please don't put it in the damp places or even the environment over 60degress.
- Always mount this unit in safe and stable matter.
- Install or dismantle should operate by professional engineer.
- Using lamp， the change rate of power voltage should be within±10%， If the voltage is too high， it will shorten the light's life; If it's not enough, will influence the effect.
- Please restart it 20 minutes later after turning off light , until full-cooling. Frequent switching will reduce the life span of lamps and bulbs; intermittent using will improve the life of bulbs and lamps.
- In order to make sure the product is used well, please read the Manual carefully.

4. Cable connection（DMX）

Use a cable conforming to specifications EIA RS-485: 2-pole twisted, shielded, 120Ohm characteristic impedance, 22-24 AWG, low capacity. Do not use microphone cable or other cable with characteristics differing from those specified. The end connections must be made using XLR type 3 or 5-pin male/female connectors. A terminating plug must be inserted into the last projector with a resistance of 120Ohm (minimum 1/4 W) between terminals 2 and 3.

IMPORTANT: The wires must not make contact with each other or with the metal casing of the connectors. The casing itself must be connected to the shield braid and to pin 1 of the connectors.

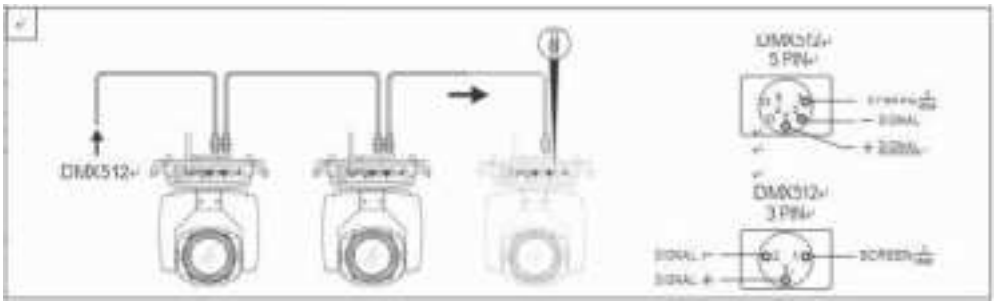


Figure 1 DMX Cable connection

5. Rigging (Optional)

This equipment can be positioned and fixed by clamp in every direction of the stage. Locking system makes it easy to fasten to the bracket.

Attention! Two clamps is needed to fix the equipment. Every clamp is locked by fastener of 1/4 kind. Fastener can only be locked clockwise.

Attention! Fasten a safety string to the additional hole of side aluminum piece. The secondary accessory can not hang on the delivery handle. Nip the equipment on bracket.

- Check if rigging clamp (not including the one inside) damaged or not? If stand ten times weight as the equipment. Make sure the architecture can stand ten times weight as all the equipments, clamps, wirings and other additional fixtures.
- Screws for clamping must be fixed firmly. Take one M12 screw (Grade 8.8 or higher) to clamp bracket, and then screw the nuts.
- Level the two hanging points at the bottom of clamp. Insert fastener to the bottom, lock the two levers by 1/4 rotating clockwise; then install another clamp.
- Install on safety string which stands at least ten times weight as equipment. Terminal of the accessory is designed for clamps.
- Make sure pan/tilt lock unlocked or not. Keep the distance more than 1M from equipment to flammable material or lighting source.

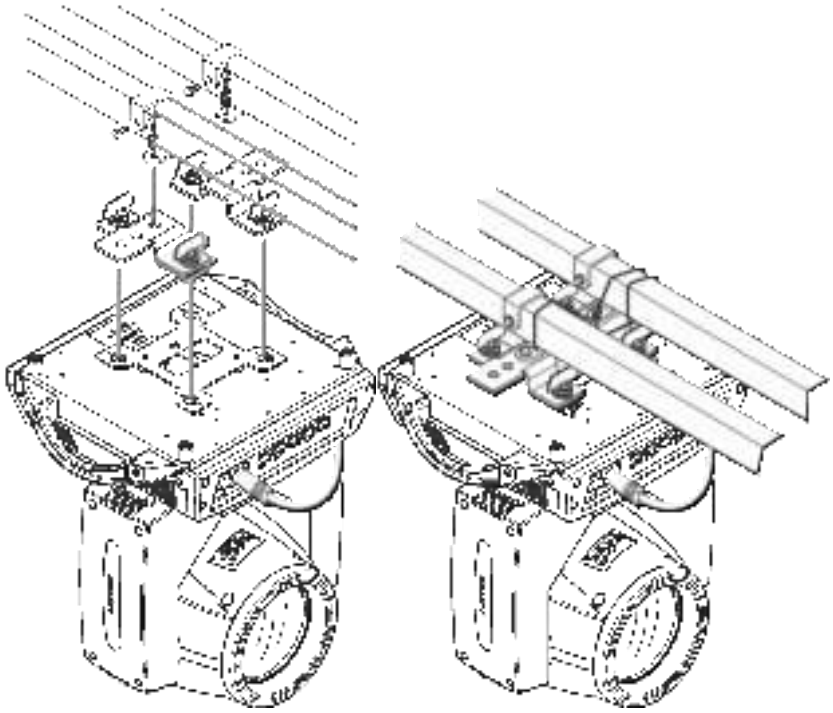


Figure 2 Installation

6. RDM Note

RDM is an extended version of DMX512-A protocol. It is a remote device management protocol. Traditional DMX512 protocol communication is one-way communication. The protocol is based on RS-485 bus. RS-485 is a time-sharing multi-point, half-duplex protocol. Only one port is allowed to output at the same time. So, when using RDM, we should pay attention to it. The following points:

- To use console or host device that supports RDM host protocol.
- Use bidirectional signal amplifier, traditional one-way signal amplifier is not suitable for RDM protocol, because the RMD protocol needs feedback data, the use of one-way amplifier will block the return of data, resulting in no search fixture;
- All fixture must be set to DMX mode to ensure only one host on the cable.
- A 120 ohm impedance matching resistor must be inserted between terminals 2 and 3 of the terminal plug. When the signal line is longer, reducing the signal reflection will make the differential signal more stable and beneficial to the quality of communication.
- When the fixture appears to accept DMX control, but can not been search by RDM host, first check the signal amplifier, and then check whether the signal line 2, 3 lines have bad contact.

PANEL OPERATION

1. Brief

The light panel diagram show as Figure 3, above area is fixture description, below area show fixture real-time status, such as DMX cable status, lamp status, error or information(ps. when there are message hav't been checked, echo 'ERR' in status bar, otherwise echo 'NOR').

Display & operation just like 'Android operation system', when select or set item value, system save the settting immediately.

RDM protocol is embed in fixture, user set DMX address via cable using the controller surpport RDM function. when fixture was search by controller, displayer will echo 'RDM' indicate this RDM is work.

Figure 3 Panel diagram

2. Operation

1. Operate fixture with touch or encoder/button

- The left area is TFT Display and touch(product which support touch), chick item or value with finger will to complete operation of set light setting(parameters) or view light state.
- The area on the right hand side is rotary encoder with button or key, As auxiliary input interface, if fixture disable touch function, the encoder/key can been choose to set or view the item, and then press the encoder button/key to confirm the selection, rotary encoder or push key again set the parameter value, finally, Press encoder button/key one again to save value or setting.

2. Parameter value setting

When the selected item is value need to been modified, the dialog shown in Figure 4 will popup.

Figure 4 Dialog of value setting

- **Modify value：** Can quickly modify value via pull the slider to the desired position, or click

the button of ‘up’ or ‘down’ whit finger on the right side to set the exact desired value, another way is roll encoder on the right hand side of panel.

- **Apply value：** When Value had been modified, Then press the bottom of ‘apply’ in the left corner to apply to the light, but hav’t saved；
- **Save Value：** Any time, click on the lower right corner of the "OK" button, the setting will been saved into internal memory.

3. Boolean parameter setting

- when the selected parameters is a Boolean value (such as ON or OFF), can directly modify setting by chick corresponding item, the setting will been saved right now.
- When the parameter is a key item, chick corresponding item, a dialog shown in Figure 5 will been popup ask for the confirm. Chick ‘sure’ to confirm.

Figure 5 Dialog of confirm

4. Sub Menu（Parameter）

Figure 6 Parameter menu

3. Operation and parameter instruction

Chick item of main menu, enter corresponding sub menu shown in Figure 6, In main menu, chick 1/6 function button into corresponding parameter menu.

In sub menu(page), chick main item on the left side of displayer, can shift to corresponding sub menu(page) quickly.

1. DMX Address setting

Enter page show in Figure 6-1, can set fixture DMX address, channel mode and so on.

The menu settings of fixture have optimized the setting of addresses. Several settings of the address are as follows:

- Select " Prev " or "Next", the fixture will be based on the current address and channel mode, automatically calculate the next or last address, make address setting can quickly;
- Click on the address value, you can enter the numeric editing window, where you can set any valid address, fixture system automatically get the current number of channels, automatically filter the unusable address (512 - the current number of channels).
- Fixture support RDM protocol, remote address can be set through RDM.

Provide one buttons:

- Channel mode' chan': you can choose different channel modes by cycle.

2. Fixture operating mode setting

Through the page shown in Figure 6-2, the operating mode of the fixture can be set and the lamp can be controlled. The fixture supports four operating modes (DMX mode, auto mode, voice control mode and scene mode). Detailed parameter settings can be refer in the previous section. Specific parameter descriptions are as follows:

operating mode

DMX Ctrl	DMX mode, receive DMX signal, RDM signal	
Auto Run	Fixture run automatically according to built-in programs	
Sound Ctrl	When the fixture detects a strong sound, the fixture automatically runs a scene according to the built-in program, otherwise it will stay the last scene	
Scene Mode 01	runs in a set scene, which supports most of the custom editing of 10 scenes.	
	1~10	outputs the specified scene
	Auto	Automatically loops the output scene in the set scene time (non-zero) order, and the scene with time 0 automatically ignore
M/S Choose	Master and slave selection, non-DMX mode takes effect, select the mode of data output, fixture detect DMX cable state automatic switch output, prevent data conflicts	
	Master	fixture runs built-in program. If DMX has no signal, it outputs data (synchronization), otherwise it does not output data.
	Slave	ixture runs built-in program and do not output data
	Auto	If DMX has no signal, the fxiture will runs built-in program. Otherwise, the fixture will run in DMX Mode(follow DMX).
Lamp switch	(Lamp light source) pop-up confirmation dialog box, select "SURE" to confirm the current operation, turn on or off the lamp, switch time interval limited to 30 seconds	
	Off	the current lamp output is off
	On	The current lamp output is turned on

Scene mode applies to a single or a small number of fixture, just output a fixed scene, or need to run a simple program, you no need connect to the console, in the scene page can be edited.
If the light source is lamp, wait for 10 minutes before turning off the lamp.

3. Set display

The fixture support Chinese and English, invert display and so on. Enter the corresponding parameter settings as shown in Figure 6-3. The specific menu contents are as follows:

DISPLAY SETTING

Language	display language settings	
	English	English display
	Chinese	Chinese display
Screen saver	Set screen 30 seconds without operation, the screen's display content or method.	
	OFF	Keep the last operation page
	Mode1	Black
	Mode2	Black screen, showing the address code of the current fixture in the lower left corner.
	Mode3	Display trademark information, address code and operation mode.
Screen Rot	Set the display direction of the screen.	
	OFF	No reverse display
	ON	Reverse display
DMX Indicate	Set the indication mode of DMX signal indicator.	
	Mode1	When signal is bright, no signal is off.
	Mode2	When signal is off, no signal is bright.
	Mode3	When signal is flash, no signal is off.
Screen Lihgt	Set the screen backlight for 10 seconds without operation	
	1~10	10
Touch screen switch	Select whether to disable the touch screen. When the screen touch is accidentally damaged, disable the touch function and set the lamp with auxiliary input	
Touch correction	When the screen touch is not accurate, you can enter the correction page correction screen	

Lamps that support touch operation. If the bad touch phenomenon occurs, you can enter the correction page to reset the touch accuracy of the touch screen. Under normal circumstances, please do not enter this page. If the touch is damaged, select to disable the touch switch.

4. Scene

Enter the page shown in Figure 6-4, and the fixture enters the scene editing mode. Under this page, the fixture does not receive DMX console data, and the edited data will effect on the fixture immediately.

The content of the page depends on the currently selected channel mode, and the channel content and order displayed are consistent with the fixture channel table. Through this page, you can edit 10 scenes, as shown in the following table:

SCENE MODE

Scene Select	Select the current operation scenario.	
	1~10	The 10 scenes sets the format
Scene Time	Sets the retention time of the current scene when it is automatic, unit in 0.1 seconds.	
	0	The current scene is not output in automatic scene output.

	1-255	0..1s-25.5s
1. PAN	0-255	Set up the data of each channel, and the contents and order of the display are one-to-one correspondence with the channel list of fixture.
……	0-255	
……	0-255	
N. Function	0-255	

If the reset channel in the scene edits the effective reset data, the fixture will reset, but after reset, the corresponding reset channel value will automatically set 0, preventing multiple consecutive resets.

Looking at this page, you can get the current channel table slot of the fixture. For specific channel data, please refer to the detailed channel description.

5. Set light run parameter

Enter the page shown in Figure 6-5, adjust the field parameters of fixture, facilitate the installation of fixture, etc.

ADVANCED SETTING

Pan Invert	Set the rotation direction of PAN	
	OFF	
	ON	
Tilt Invert	Set the rotation direction of TILT	
	OFF	
	ON	
P/T Rectify	Setting up fixture to detect XY lost step and correct	
	OFF	Uncorrected position after out of step
	ON	After losing step, the position is automatically corrected and the out of step fault is recorded.
Pan Offset	Setting the zero point of the PAN of the fixture	
	4-150	
Tilt Offset	Setting the zero point of the TILT of the fixture	
	4-48	
Data hold	When the fixture is not equipped with DMX signal, the output state of the fixture	
	OFF	No signal, so the motor and light source return to the position and state when reset is completed.
	ON	No signal, keep the last frame DMX data output.
Lamp mode	(lamp light source) Set the way to first open the lamp after power up	
	Power on	Turn on the lamp at power up and reset the lamp after 30 seconds.
	After reset	Reset the fixture after 3 seconds when power-on, and turn on the lamp after reset.
	Manual	After reset, manually turn on the lamp through the menu or console.
Reset	Reset fixture	
Factory Setting	Pop up the confirmation box, select "SURE", and return the lamp parameters to the factory settings.	

When choosing power-on mode, the lamp will wait for 30 seconds after power-on, let the lamp fully start, internal voltage is stable enough, then start the reset program, if the field capacity is

stable, recommend power-on mode.
When the fixture can not calibrate the position, please check whether the "P/T Rectify" is turned off.
When the signal is unplugged, check the Data Hold setting first if the position of the fixture is not output as expected.
When setting the XY offset, after setting up, please control XY with the maximum stroke first to check that XY will not bump into the positioning rod or shell.

6. Status and information

Entering the page shown in Figure 6-6, you can view the information and real-time status of the fixture to get their usage status. If the fixture need customer service, please provide the status information displayed on the page as a basis for judgment, as shown in the following table:

STATUS INFORMATION

Stepper info	Display information status of all motors and signals in fixture.	
	Hall	No display, indicating that the motor has no Hall, 0 indicating that the motor leaves the correction position point, 1 indicating that the motor is in the correction position point
	Status	Display motor reset status
	PAN	Display real-time position value of PAN optocoupler feedback
	TILT	Display real-time position value of TILT optocoupler feedback
	PAN OP	Displays the PAN TILT optocoupler two signal level state, binary
Error Logging	Show the latest 8 error records when the fixture is reset and running. The error records are not saved after power failure. The current power cycle is valid.	
	Error Logging	Total number of failures detected after power on
	12：:03	The time of power failure when the fault occurs is in minutes.
	Hall error	The effective hall signal is not detected when the motor is reset
	Hall short	When the motor is reset, the hall signal of the motor is always effective
	Opti error	No effective optocoupler signal is detected when the motor is reset.
	Lose stop	The corresponding motor is out of step during its operation.
	Hit	Striking the positioning rod when the motor is reset
	Lamp error	Lamp explosion accident
	NTC error	The temperature sensor signal is abnormal
	Fan error	The main fan is not working properly.
Fixture status	Displays the critical state data of the current fixture for reference.	
	Communication prec	0~100%, Communication quality of internal data link of lamps and lanterns
	Error cnt	The number of erroneous frames was detected after power on, and the total number of erroneous frames was detected.
	Light Temperature	Show the temperature of the current light source, "---" means no detection.
	Panel	Displays the temperature of the current display panel or the

	Temperatrue	ambient temperature.
	Sensor1 Temperatrue	Display the ambient temperature of the motherboard temperature or the motherboard installation position.
Version	Display the information and version of the current fixtrue, important reference for after sales maintenance.	
	Device	The name of the fixture is the same as the equipment information of RDM.
	Model	The type of fixture is the same as the model information of RDM.
	Panel	Firmware version and serial number of display panel
	Main Board	Firmware version and serial number of mother board 1
Light time	Record the total cumulative time of light source opening, unit minute, user manual cleaning, as a reference for regular maintenance of light source time	
Total time	The total accumulated time for recording the opening of fixture is not allowed to be removed.	

CHANNEL DESCRIPTION

1. Channel table

This luminaire channel can be viewed in scene mode in order, channel mode is set in the "Address Settings" page, specific details of the data as follows:

CHANNEL TABLE

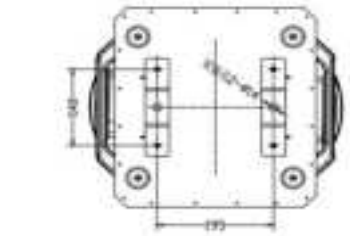
CH1	CH2	NAME	VALUE	DESCRIPTION
CH1	CH1	PAN	0-255	0-540 degree
CH2	CH2	PAN FINE	0-255	0-2 degree
CH3	CH3	TILT	0-255	0-270 degree
CH4	CH4	TILT FINE	0-255	0-1 degree
CH5		P/T Speed	0-255	Fast to slow
CH6	CH5	Dimming	0-255	0-100% dimming
CH7	CH6	Strobe	0-3	OFF
			4-103	Pulse strobe slow to fast
			104-107	ON
			108-155	Gradual strobe slow to fast
			156-207	Gradual off strobe slow to fast
			208-212	ON
			213-251	Random strobe slow to fast
			252-255	OFF
CH8	CH7	Color wheel	0-9	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	White + Color 1

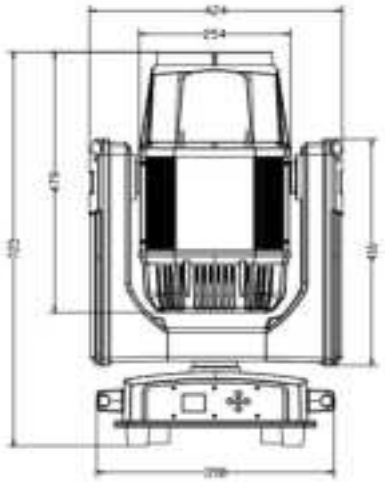
			100-109	Color 1+ Color 2
			110-119	Color 2 + Color 3
			120-129	Color 3 + Color 4
			130-139	Color 4+ Color 5
			140-149	Color 5 + Color 6
			150-159	Color 6 + Color 7
			160-169	Color 7 + Color 8
			170-179	Color 8 + Color 9
			180-215	Forward flow fast to slow
			216-220	Stop
			221-255	Backward flow slow to fast
CH 9	CH8	Cyan	0-255	/
CH 10	CH9	Pinkish red	0-255	/
CH11	CH10	Yellow	0-255	/
CH12	CH11	CTO	0-255	/
CH13	CH12	GOBO wheel	0-4	Gobo 1
			5-9	Gobo 2
			10-14	Gobo 3
			15-19	Gobo 4
			20-24	Gobo 5
			25-29	Gobo 6
			30-34	Gobo 7
			35-39	Gobo 8
			40-44	Gobo 9
			45-49	Gobo 10
			50-54	Gobo 11
			55-59	Gobo 12
			60-64	White
			65-69	Shaking gobo 2 slow to fast
			70-74	Shaking gobo 3 slow to fast
			75-79	Shaking gobo 4 slow to fast

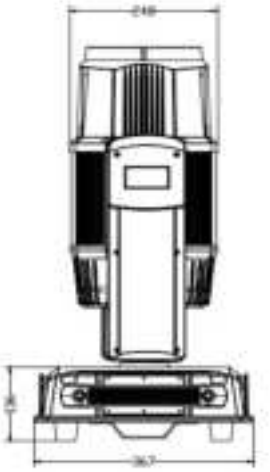
			80-84	Shaking gobo 5 slow to fast
			85-89	Shaking gobo 6 slow to fast
			90-94	Shaking gobo7 slow to fast
			95-99	Shaking gobo 8 slow to fast
			100-104	Shaking gobo 9 slow to fast
			105-109	Shaking gobo 10 slow to fast
			110-114	Shaking gobo 11 slow to fast
			115-119	Shaking gobo 12 slow to fast
			120-127	White
			128-190	Backward flow fast to slow
			191-192	Stop
			193-255	Forward flow slow to fast
CH 14	CH 13	Rotating GOBO	0-9	White
			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	Shaking gobo 1 slow to fast
			90-99	Shaking gobo 2 slow to fast
			100-109	Shaking gobo 3 slow to fast
			110-119	Shaking gobo 4 slow to fast
			120-129	Shaking gobo 5 slow to fast
			130-139	Shaking gobo 6 slow to fast
			140-149	Shaking gobo7 slow to fast
			150-200	Forward flow fast to slow
			201-205	Stop
			206-255	Backward flow slow to fast
CH15	CH14	Color wheel	0-127	0-360 degree

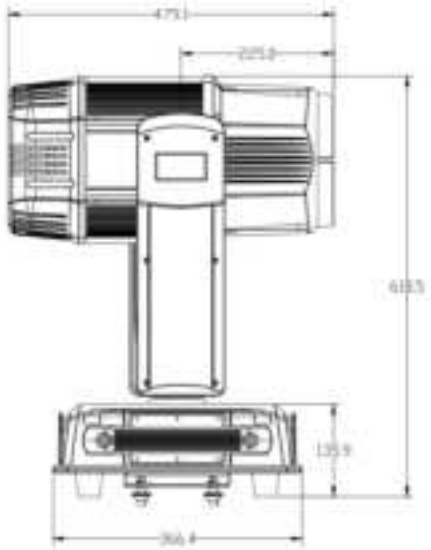
		rotation	128-190	Backward flow fast to slow
			191-192	Stop
			193-255	Forward flow slow to fast
CH 16		Color wheel fine	0-255	
CH17	CH15	Prism 1	0-127	/
			128-255	Insert prism 1
CH18	CH16	Prism rotation	0-127	0-360 degree
			128-187	Forward flow fast to slow
			188-195	Stop
			196-255	Backward flow slow to fast
CH19	CH17	Prism 2	0-127	/
			128-255	Insert prism 2
CH20	CH18	Prism 2 rotation	0-127	0-360 degree
			128-187	Forward flow fast to slow
			188-195	Stop
			196-255	Backward flow slow to fast
CH21	CH19	Frost	0-127	/
			128-255	Frost
CH22		Effect	0-255	
CH23	CH20	zoom	0-255	
CH24	CH21	Focus	0-255	
CH25		Focus fine	0-255	
CH26	CH22	Reset/function	0-209	/
			210-215	XY motor reset after 3 seconds
			216-219	/
			220-235	Effect motor reset after 3 seconds
			236-239	/
			240-255	Whole fixture reset after 3 seconds

FIXTURE SIZE









EFFECT

CTO

FIXED GOBO

ROTATING GOBO

CMY

TECHNICAL PARAMETERS

Input voltage: AC110V-240V/50-60HZ
Light source specification: 400W white light LED module
Color temperature: 8000k
CRI: 75
Light source life: 50000 hours
Illumination: 80,000 LUX at 4 meters Rated power: 500W
Channel mode: 22/ 26 channels
Dimming system: 0-100% linear adjustment
Focusing system: linear adjustment from 4 meters to 50 meters
Atomization system: 1 independent atomization effect, the light spot is soft and natural
Zoom angle: 4-35 degrees
High-speed strobe: 0-30 times per second, adjustable speed strobe effect - strobe macro function
Color: 12 colors + white light, color half-color function
Color system: independent CMY+CTO color mixing system.
Fixed pixels: 12 fixed patterns + white light
Rotation pattern: 7 glass patterns, each glass pattern can be reversed independently
Prism system: standard single 8 rows of school mirrors and 8 prisms, each prism can be turned forward and reverse independently, and can be superimposed
Macro function: console reset function, self-propelled mode, master-slave mode
Display mode:LCD display, button + touch dual operation mode
Control signal: international standard DMX512. With RDM function, online software upgrade, pull out address code
Cooling method: using axial fan to enhance cooling
Safety device: with electronic temperature control overheating protection, electronic temperature control automatic power-off protection when the overheating system fails
Horizontal/Vertical: The lamps and lanterns of the waterproof light can do 540° horizontal or 270° vertical scanning, the speed is fast and stable,
The lamps are equipped with an intelligent photoelectric reset correction system, which can automatically recover even if there is an accidental misoperation original position.
In addition, it has horizontal and vertical locking buttons, which is more convenient for maintenance and transportation.
cooling system: Use CFD software to analyze and calculate the heat flow of lamps, and design a low-noise heat dissipation system
The fan drive has excellent performance and extremely low noise.
Waterproof grade: IP65
Net weight: 27Kg Dimensions: 424*367*725mm
Gross weight: 33.28KG Package size: 601*530*735mm
Flight case 2in1: 92*47*90cm Weight: 93kg
Appearance: The lamp is made of high-strength engineering nylon plastic, anti-UV treatment, high temperature resistance, anti-aging + high temperature resistance die-casting aluminum shell, light in size, adopts wind direction drainage and intelligent temperature monitoring technology, fast heat dissipation!