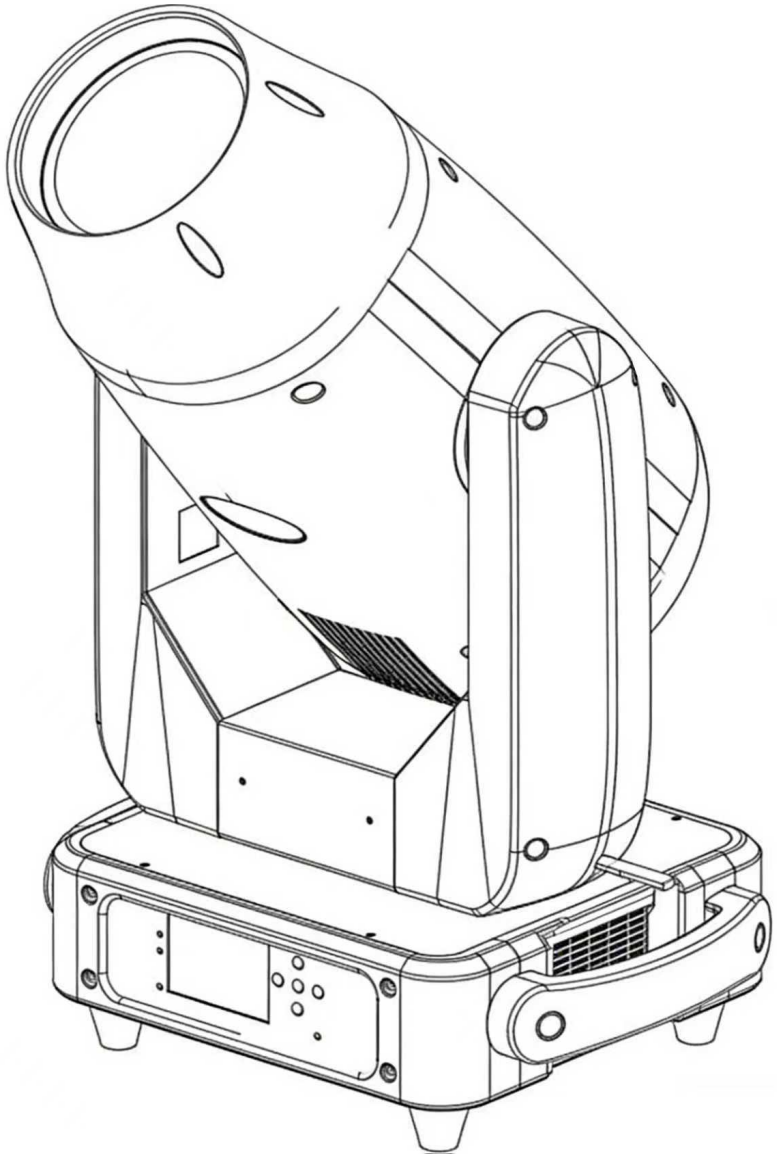
ALED BSW 400 CMY



USER MANUAL

KEEP THIS USER MANUAL FOR FUTURE NEEDS

Thank you for your patronage!
We are confident that our excellent products and service can satisfy you.
For your own safety, please read this user manual carefully before installing the device.
In order to install, operate, and maintain the lighting safety correctly.
We suggest that the installation and operation should be done by the verified technician and follow the instruction strictly.



CAUTION!
Keep this device away from rain and moisture!



CAUTION!
Unplug mains lead before device's installation,cleaning and maintenance!

Every person involved with the installation, operation and maintenance of this device has to:
-be qualified
-follow carefully the instructions of this manual

INTRODUCTION

Thank you for having chosen this professional moving head.
You will see you have acquired a powerful and versatile device.
Unpack the device. Inside the carton box you should find:

1. One power cord
2. One 3 Pin DMX cable(5 Pin optional)
3. Two mounted brackets
4. One safety rope
5. One English user manual

（Flight case, Clamps/Folding clamps are optional, please contact your dealer）
Please check carefully that there is no damage caused by transportation. Should there be any questions, please consult your dealer and don't install this device.

GENERAL GUIDELINES

This device is a lighting effect for a professional use on stages, TV, in discotheques, theaters, etc., The device was designed for indoor use only.

This fixture is only allowed to be operated with the max alternating current which stated in the technical specifications in 6th page of this manual.
Lighting effects are not designed for permanent operation. Consistent operation breaks may ensure that the device will serve you for a long time without defects.

Do not shake the device. Avoid brute force when installing or operating the device.
While choosing the installation-spot, please make sure that the device is not exposed to extreme heat, moisture or dust. Please don't project the beam onto combustible substances. The minimum distance between light-output from the projector and the illuminated surface must be more than 0,5 meter.
If you use the quick lock cam in hanging up the fixture, please make sure the quick lock

fasteners turned in the quick lock holes correctly.
Operate the device only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the device. Most damages are the result of unprofessional operation.

Please use the original packaging if the device is to be transported.
For safety reasons, please be aware that all modifications on the device are forbidden. If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to short-circuit, burns, electric shock, crash, etc.

SAFETY INSTRUCTIONS

CAUTION!



Be careful with your operations. With a dangerous voltage you can suffer a dangerous electric shock when touching wires!

This device has left the factory in 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 user manual.
1. In order to guarantee the product's life, please don't put it in the damp places or even the environment over 60degress.
2. Always mount this unit in safe and stable matter.
The qualified professionals are allowed to carry out the lamp installation, operation and maintenance, but they must guarantee to operate in strict accordance with the instructions referred to.

▲ **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.

If the device has been exposed to temperature changes due to environmental changes, do not switch it on immediately. The arising condensation could damage the device. Leave the device switched off until it has reached room temperatures.
This device falls under protection-class Ⅰ. Therefore it is essential that the device be earthed.
The electric connection must carry out by qualified person.

Make sure the power cord is never crimped or damaged by sharp edges. If this would be the case, replacement of the cable must be done by an authorized dealer.

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.
During initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective, it should decrease gradually.
Please don't project the beam onto combustible substances.
If the external flexible cable or cord of this luminaire is damaged, it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person in order to avoid a hazard.



CAUTION!

Never touch the device during operation!

The housing may heat up!



CAUTION!

Never look directly into the light source,

As sensitive persons may suffer an epileptic shock.

Please be aware that damages caused by manual modifications to be the device are not subject to warranty. Keep away from children and non-professionals.

CLEANING AND MAINTENANCE

1. To reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.
2. Do not spill water or other liquids into or on to your unit.
3. During long periods of non-use, disconnect the unit's main power.
4. It should be installed in a well-ventilated place, at a distance of 50 centimeters or more with the walls. At the same time, please check if the fan and ventilation holes are unobstructed.

The following points have to be considered during the inspection

1) All screws for installing the devices or parts of the device have to be tightly connected and must not be corroded.
2) There must not be any deformations on the housing. Fixations and installations spots(ceiling, suspension, trussing).
3) Mechanically moved parts must not show any traces of wearing and must not rotate with unbalances.
4) The electric power supply cables must not show any damage, material fatigue or sediments. Further instructions depending on the installation spot and usage have to be adhered by a skilled installer and any safety problems have to be removed.

CAUTION!



Disconnect from mains before starting maintenance operation!

In order to make the lights in good condition and extend the life time, we suggest a regular cleaning to the lights.

1) Clean the inside and outside lens each week to avoid the weakness of the lights due to accumulation of dust.
2) Clean the fan each week.
3) A detailed electric check by approved electrical engineer each three month, make sure that the circuit contacts are in good condition, prevent the poor contact of circuit from overheating.

We recommend a frequent cleaning of the device. Please use a moist, lint-free cloth. Never use alcohol or solvents.

TECHNICAL PARAMETERS

POWER SUPPLY

Input voltage: AC110V-240V/50-60HZ
Power consumption: 430W

LIGHT SOURCE

Light source specification: Imported new LED Module engine 350W
Light source life: 50000 hours
Lumen illuminance: 5 meters 100,000 lm
Color temperature: 8000K CRI>85

OPTICS

Dimming system: 0-100% linear adjustment
Focusing system: linear adjustment from 4 meters to 50 meters
Frost: 1 independent frost filter, soft and natural light spot
Spot zoom angle: 4-35 degrees
Wash angle:10-50 degrees
High-speed strobe: 0-30 times/sec. Adjustable speed strobe effect. Strobe macro function.

CONTROL AND PROGRAMMING

Channel mode: 22/26 channels
Display mode: LCD touch screen display with display flip
Control signal: International standard DMX512. With RDM function, online software upgrade is available, dial address code

EFFEC SECTION

Color: 8 colors + open. Color half-color function
Color mixing system: linear CMY+CTO color mixing system
Fixed gobos: 12 fixed patterns + ioen
Rotating gobos: 7 glass patterns, each glass pattern can be independently forward and reverse
Prism system: standard single 3-facet prism and 8 prism, each prism can be independently forward and reverse
Macro function: console reset function, self-propelled mode, master-slave mode

MOVING BODY

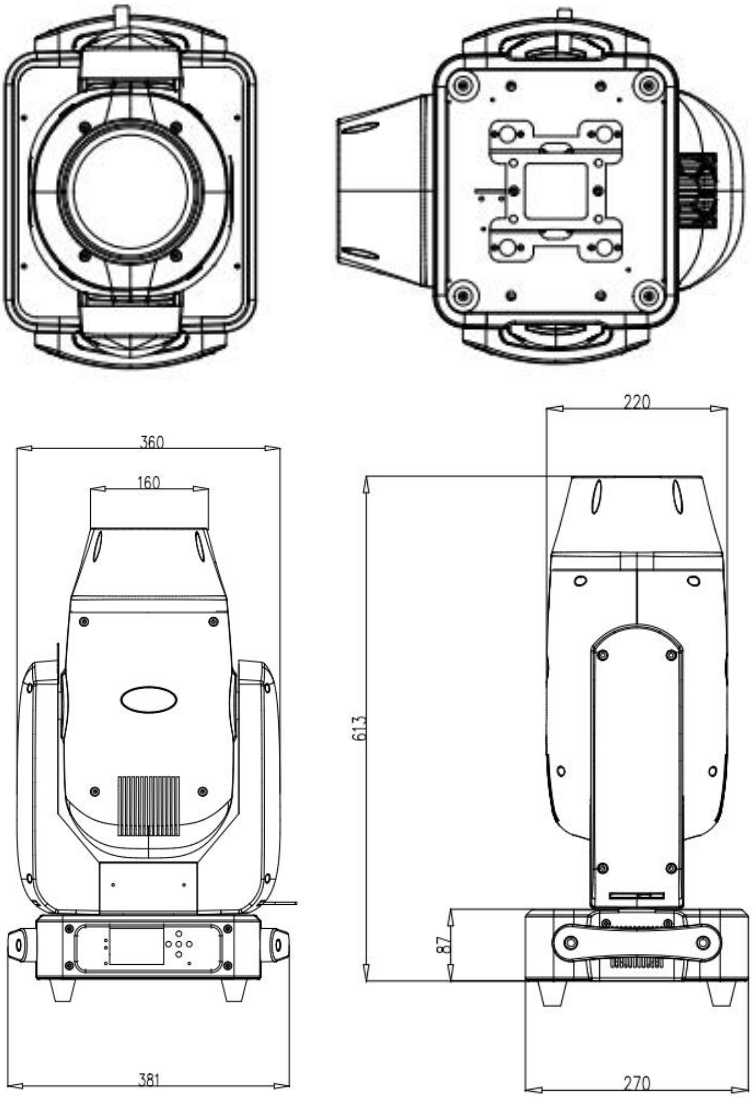
Horizontal scan: 540 degrees (16bit precision scan) electronic error correction
Vertical scanning: 270 degrees (16bit precision scanning) electronic error correction
Cooling method: Adopt axial fan to enhance cooling
Safety device: with electronic temperature control overheating protection,electronic temperature control automatic power-off protection when the overheating system fails
Appearance material: high temperature resistant plastic
Working environment: -20 degrees - 40 degrees
Protection level: IP20

WEIGHT&DIMENSION

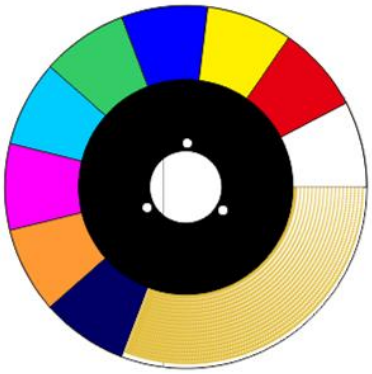
Product net weight: 22.5KG

Product size: 38*27*65CM (L*W*H)

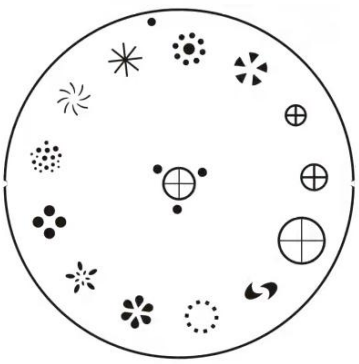
SIZE DRAWING



COLOR +CTO WHEEL



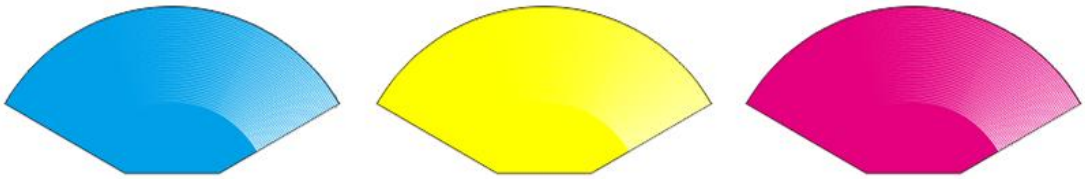
FIXED GOBO



ROTATING GOBOS(OutDia22.7MM*InDia14MM)



CMY FILTER



CHANNEL LIST

39CH	34CH	FUNCTION	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	CH5	P/T SPEED	0-255	From fast to slow
CH6	CH6	POWER/SPECIAL FUNCTIONS	0-255	
CH7	CH7	CYAN	0-255	
CH8	CH8	MAGENTA	0-255	
CH9	CH9	YELLOW	0-255	
CH10	CH10	COLOUR WHEEL	0-255	
CH11	*	COLOUR WHEEL-FINE POSITIONING	0-255	Fine positioning
CH12	CH11	VIRTUAL COLOUR WHEEL	0-255	
CH13	CH12	EFFECT SPEED	0-255	From fast to slow
CH14	CH13	CMY&COLOUR WHEEL TIME	0	Off
			1-255	Time of CMY and col.wheel movement
C15	CH14	ZOOM & FOCUS & FROST & PRISM TIME	0	Off
			1-255	Time of zoom/focus movement
			1-100	Time of frost movement
			1-50	Time of prism movemeant

CH16	CH15	EFFECT WHEEL POSITIONING	0-19	No function
			20-127	Proportional indexing
			128-170	Ramping from open to full position
			171-213	Ramping from open to half position
			214-255	Ramp. from half position to full position
CH17	CH16	EFFECT WHEEL ROTATION	0	No function
			1-127	Forwards rotation from fast to slow
			128	No rotation
			129-255	Backwards rotation from slow to fast
CH18	CH17	EFFECT WHEEL ANIMATIONS	0-127	0-400 degree
			128-187	Fast to slow positive rainbow
			188-195	Stop
			196-255	Slow to fast negative rainbow
CH19	CH18	STATIC GOBO WHEEL	0-255	
CH21	CH20	ROT.GOBO INDEXING AND ROTATION	0-255	
CH22	*	ROT.GOBO INDEXING/ROTATION-FINE	0-255	Fine indexing/rotation
CH23	CH21	PRISM WHEEL 1	0-255	Prism 1
CH24	CH22	PRISM WHEEL 1 INDEXING/ROTATION	0-255	
CH25	CH23	PRISM WHEEL 2	0-255	Prism 2
CH26	CH24	PRISM WHEEL 2 INDEXING/ROTATION	0-255	
CH27	CH25	PATTERN SELLECTION	0-255	
CH28	CH26	PATTERN ROTATION AND INDEXING	0-255	
CH29	CH27	BEAM SHAPER SELECTION	0-255	
CH30	CH28	BEAM SHAPER ROTATION AND INDEXING	0-255	
CH31	CH29		0-255	
CH32	CH30	ZOOM	0-255	
CH33	*	ZOOM FINE	0-255	
CH34	CH31	FOCUS	0-255	

CH35	*	FOCUS FINE	0-255	
CH36	CH32	HOT- SPOT CONTROL	0	Automatic Hot-Spot control
			1-255	Hot-Spot control
CH37	CH33	STROBE	0-255	From slow to fast
CH38	CH34	DIMMER INTENSITY	0-255	Dimmer intensity from 0% to 100%
CH39	*	DIMMER INTENSITY-FINE	0-255	Fine dimming

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.

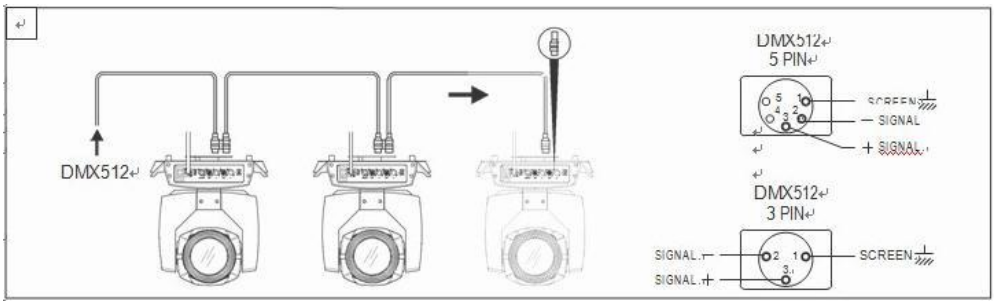


Figure 1　DMX Cable connection

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.

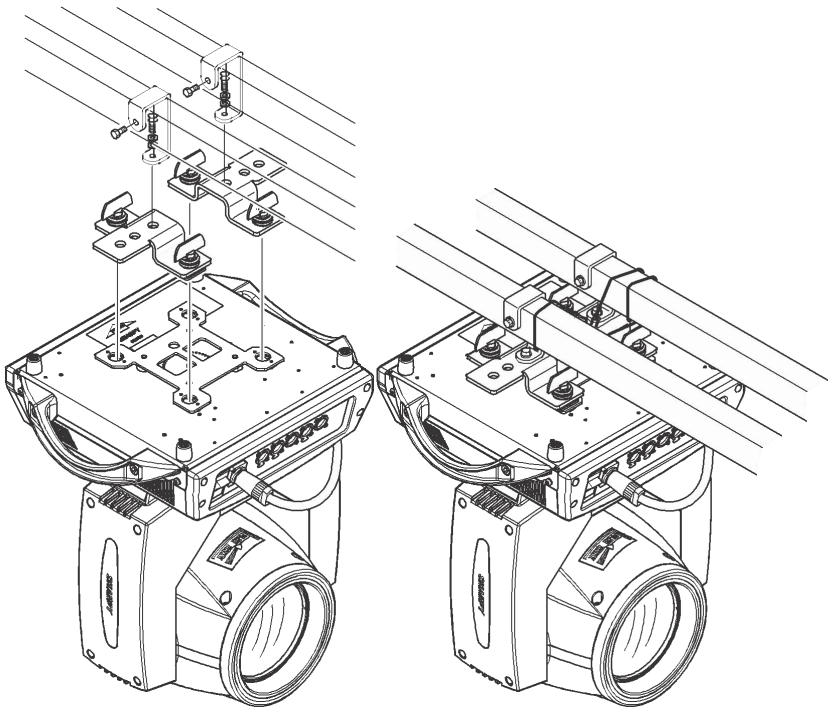


Figure 2 Installation

Brief

The light panel diagram show as Figure 3, Left area is TFT Displayer, support touch, and right area is KEY, both of touch and KEY can operate light and setting.
Display & operation just like 'Android operation system', touch the item will set or modify setting.

Note: Prevent damage the touch or TFT displayer, Can not use sharp objects chick displayer.



Figure 3 Panel diagram

2.2 Operation

2.2.1 Operate light with touch or KEY

- The left area is TFT Displayer and 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 4 KEY, As auxiliary input interface, if disable touch function,, the KEYr can been choose to set the parameter.

2.2.2 Parameter value setting

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

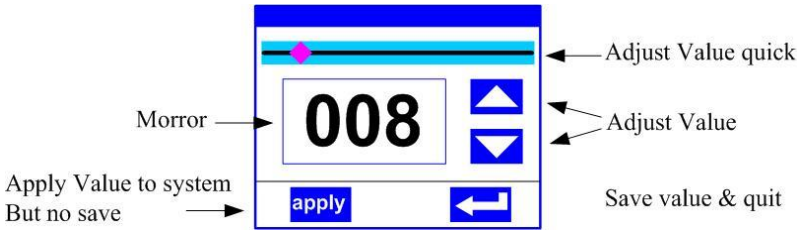


Figure 4 Dialog of value setting

- **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.

2.2.3 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.

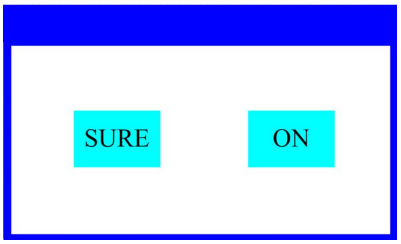


Figure 5　Dialog of confirm

2.2.4 Sub Menu（Parameter）

Chick item of main menu, enter corresponding sub menu, shown in Figure 6, total 6 sub menu, includes class of parameter and status:

- ADDRESS：Set light DMX address.
- WORKMOD：Set light work mode, master or slave mode when in auto run mode.
- DISPLAY：Set display parameter, eg. select language.
- TEST：Used for test light, modify DMX channel data to test function，the corresponding function of reference channel function table.
- ADVANCE：Set light running parameter.
- STATUS：view light current status.

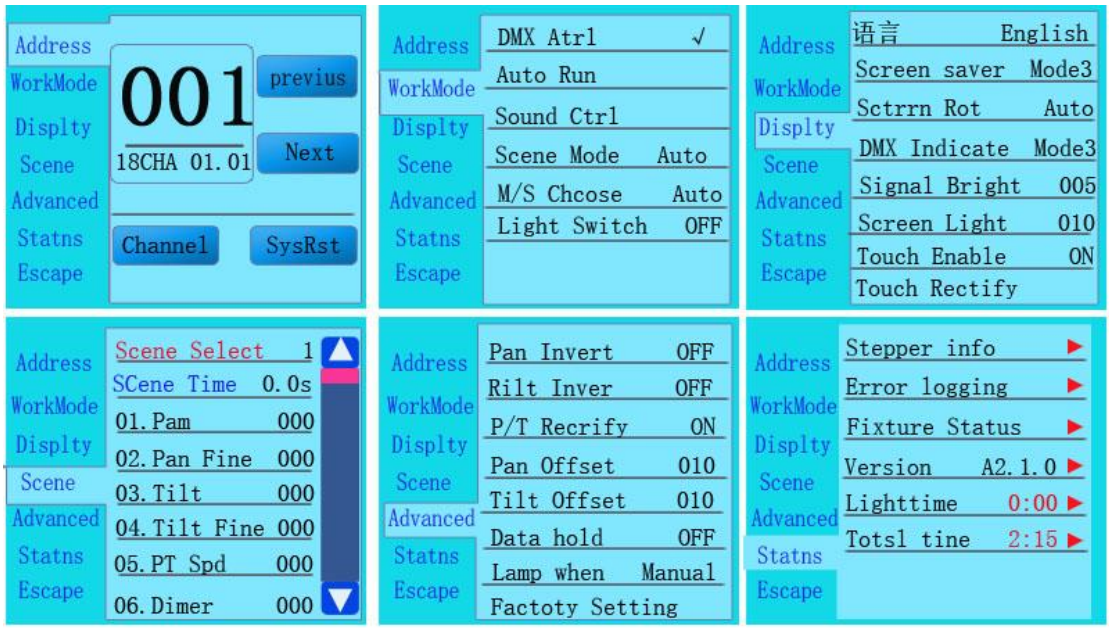


Figure 6　Parameter menu

Operation and parameter instruction

Via following operation, enter sub menu(parameter 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.

2.3.1 ADDR--> Address: Set DMX Address

Click and select the "ADDR", can enter the page of DMX address setting, range from 1 to 512, the address code shouldn't is not greater than (512- channels quantity), otherwise the light will not been controlled. Following is the operation:

Enter the page of DMX address, as shown in Figure 7, click the blank area in right side of display will pop-up diglog as in Fig. 4, modify value, then click 'ENTER' to confirm and save DMX address code.

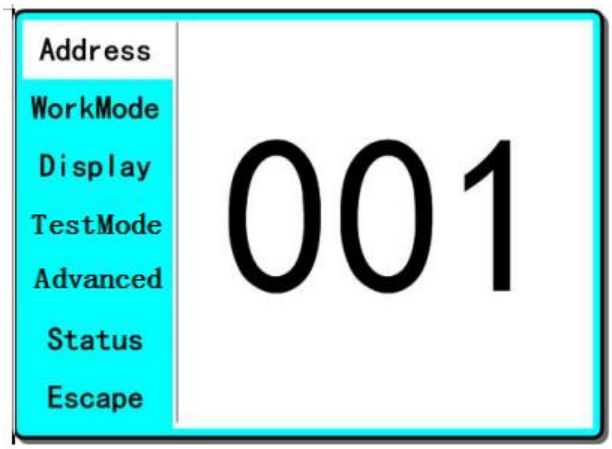


Figure 7 page of DMX Address

2.3.2 MODE--> WorkMode: Set Light work mode

Enter the page of 'WorkMode' as shown in Figure 8 and modify setting. Can set light work mode, control lamp and DMX channel mode.

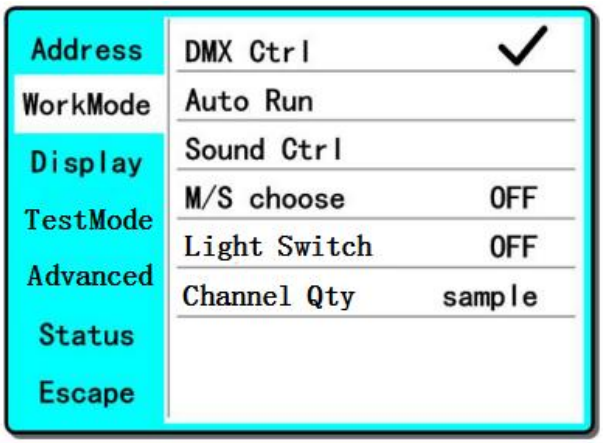


Figure 8 page of work mode

- ◆ **DMX Ctrl**: Choose to set DMX Mode,
- ◆ **Auto Run**: Choose to set Auto Mode,
- ◆ **Sound Ctrl**: Choose to set Sound Mode,
- ◆ **M/S Choose:**Available just in 'AUTO RUN' or 'SOUND Ctrl' mode.
  ON--> Master. (Data will be send to other slave lamp immediately.)
  OFF--> Slaver.(NOT send data to other lamp via DMX Cable).(**Default**)
- ◆ **Light Switch:**
  ON--> Turn on the light,
  OFF--> Turn off the light.
- ◆ **Channel Qty:** Light support 2 DMX Channel mode: sample or extend。
  Simple --> 16CH.(**Default**)
  Expand--> 20CH(or null).

DISP-->DISPLAY: Set display

Light support 2 language, rotation display， Enter page as shown in Figure9 to set parameter following:

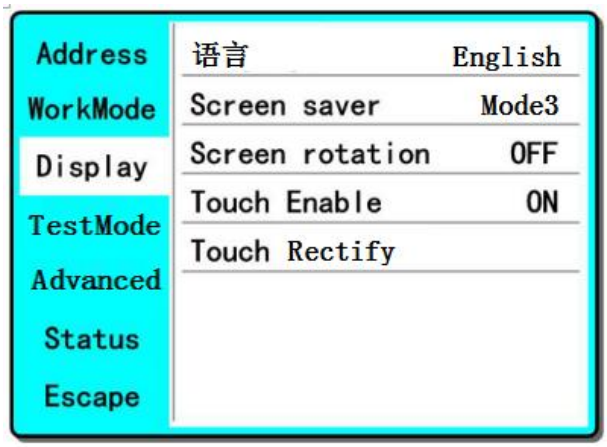


Figure9 page of display

◆ **Language**: English / 中文.

◆ **Screen Saver:** when panel is idle(these is no operation in 10 second), displayer will enter saver status.

OFF--> No screen saver.

Mode1--> Power-saving mode, turn off the display.

Mode2--> Displays the current address.

Mode3--> Displays the icon and the current working mode.(**Default**)

◆ **Screen Rotion: To turning display.**

ON--> Normal display.(**Default**)

OFF--> 180° turning display.

◆ **Touch enable**：Disable or enable touch function,.

ON--> Enable touch function.(**Default**)

OFF--> Dosable touch function.

◆ **Touch adjust**：**A**djust touch function. Normally, not enter this item.

2.3.4 TEST--> TestMode

Enter the page as shown in Figure 10, Light will into test mode, in this mode, the light does not receive the data for DMX controller.:

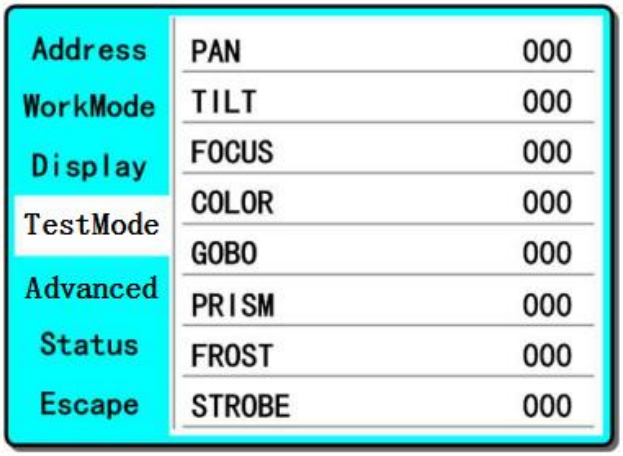


Figure 10 page of Test

◆ **PAN:** range for 0 to 255;

◆ **TILT:** range for 0 to 255;

◆ **FOCUS:** range for 0 to 255;

◆ **COLOR:** range for 0 to 255;

◆ **GOBO:** range for 0 to 255;

◆ **PRISM:** range for 0 to 255;
◆ **FROST:** range for 0 to 255;;
◆ **STROBE:** range for 0 to 255;

2.3.5 ADVA-->Advanced: Set light run parameter

Enter the page as shown in Figure 10, set the parameter of light:

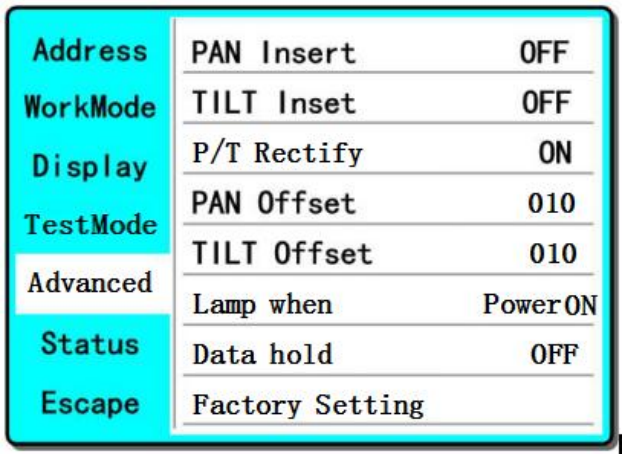


Figure 11 page of run parameter

◆ **Pan Invert**: **Reverse PAN move**
OFF--> Pan Normal move.(**Default**)
ON--> Reverse PAN move.
◆ **Tilt Invert: Reverse TILT move**
OFF--> Tilt Normal move.(**Default**)
ON--> Reverse Tilt move.
◆ **P/T Rectify: Disable or enable position rectify function.**
OFF--> Disable P/T rectify
ON--> Enable P/T rectify-(**Default**)
◆ **Pan Offset:** Set PAN original position. **Default: 10**
◆ **Tilt Offset:** Set TILT original position. **Default: 10**
◆ **Lamp when:**
PowerON--> Turn on the lamp when power on.(**Default**)
RstDone--> Turn on the lamp after reset.
Manual--> Manually turn on the lamp.
◆ **Data hold:**
OFF--> When no DMX signal,return to middle position.(**Default**)
ON--> When no DMX signal,stop in the final position.
◆ **Factory Setting:** Restore all parameter to factory setting.

2.3.6 STAT-->Status: View status

Enter the page as shown in Figure 12:

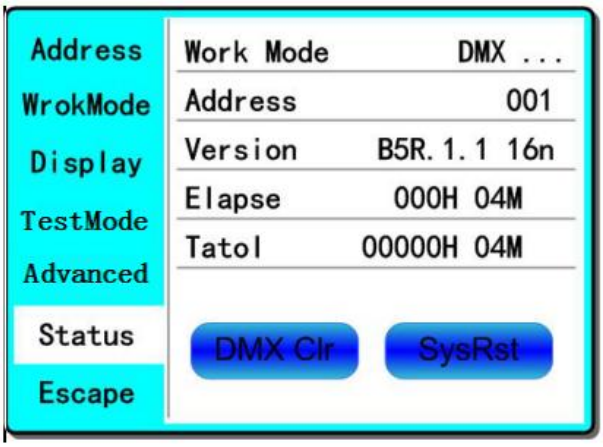


Figure 12 page of status

- ◆ **Work Mode:** Show the current working mode.
- ◆ **Address:** Show the current address.
- ◆ **Version:** Show the version of the lamp.
- ◆ **Elapse:** Working hours after turn on.
- ◆ **Tatol:** Cumulative hours of operation



When <Data hold> set <ON>,click to clear DMX data, and make the lamp return to themiddle position.



Click to reset.

d use attention

1. Common fault handling

The lamp contains professional components such as microcomputer circuit board and high-voltage power supply. For your safety and product life, non-professionals should not disassemble the lamp and related accessories without authorization.

1. The bulb does not light up (except LED light source)

Possible cause: The bulb is not completely cooled, or the bulb has reached the end of its life, the treatment is as follows:

- Due to abnormal operation, the bulb is not completely cooled down, so let the lamp body cool down for more than 10 minutes to make the inside completely return to normal state, and then turn on the power again.;
- Check whether the bulb has reached the end of its life, and replace it with a new one;
- Check whether the bulb and the lighter circuit are leaking, falling off, or having poor contact;
- Replace with a new lighter.

2. The light beam appears dim

Possible cause: The bulb has been used for a long time or the light path is not clean, the treatment is as follows:

- Check whether the bulb has reached the end of its life, and replace it with a new one;
- Check whether the optical components or bulbs are clean, and whether there is dust

on the bulbs and other optical components. Regular cleaning and maintenance of the bulbs and components in the lamps are required.

3. Fuzzy pattern projection

- Check whether the electronic focus channel value is suitable for the current projection distance.

4. The lamps work intermittently

Possible cause: The internal circuit enters the protection state, and the treatment is as follows:

- Check whether the fan is operating normally or whether it is dirty, causing the internal temperature of the lamp to rise;
- Check whether the internal temperature control switch is closed;
- Check whether the bulb has reached the end of its service life, and replace it with a new one.

5. After the lamp is reset normally, it does not accept the control of the console

Possible cause: signal line failure or abnormal lamp parameter setting, the treatment is as follows:

- Check the start address code and check the connection of the DMX signal line (whether the signal line cable is intact, and whether the connection of the head is loose);
- Add signal amplifier, add 120 ohm terminal resistance;

6. The lamp can't start

Possible cause: bad power line, the treatment is as follows:

- Check whether the fuse on the power input socket is fused, replace the fuse;
- Lamps have poor line contact due to vibration during long-distance transportation
- Check the input power, computer board and other plug-in devices.

2. Precautions for use

- Check whether the local power supply meets the requirements of the rated voltage of the product, and the leakage protector, overcurrent protector, etc. meet the requirements of the load;
- Do not use power cords with damaged insulation, and do not overlap power cords with other wires;
- The lamp adopts strong air cooling, which is easy to accumulate dust. It must be cleaned once a month, especially the heat dissipation vent, otherwise it will be blocked by the accumulation of dust, resulting in poor heat dissipation and abnormalities in the lamp.
- When installing the lamp, the fixing screws must be fastened, with safety cables, and regular inspections;
- When installing and positioning the luminaire, keep a minimum distance of 10 meters between any point on the surface of the luminaire and any flammable and explosive object, and the distance from the irradiated object is 2.5 meters. Please do not install the luminaire directly on the surface of combustible materials.;
- It is recommended that the continuous working time of the lamp should not exceed 10 hours, and the interval between continuous starting of the lamp should not be

less than 10 minutes, otherwise it will not be triggered normally due to the lamp overheating protection;

- The closing time using the on-off valve should not exceed 5 minutes. If you need to close the light for a long time, you should use the console (lighting control channel) to turn off the light.;
- In order to ensure that multiple luminaires better comply with the scene effect, the luminaire should not be in the unfinished current scene all the time, that is, start the next scene action, it is best not to exceed 3 minutes in this state to ensure that multiple luminaires can run simultaneously;
- During use, if there is an abnormality in the lamp, stop using the lamp in time to prevent other malfunctions.

3. Precautions for using RDM

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

- To use a console or host device that supports the RDM protocol host;
- To use a two-way signal amplifier, the traditional one-way signal amplifier is not suitable for the RDM protocol, because the RMD protocol requires feedback data, and the use of a one-way amplifier will block the returned data, resulting in the search for lamps and lanterns;
- All lamps must be set to DMX mode to ensure that there is only one host on the signal line;
- A 120ohm impedance matching resistor must be inserted between terminals 2 and 3 of the terminal plug. When the signal line is relatively long, the use of differential signals will be more stable when the signal line is relatively long, which is conducive to the quality of communication;

When it appears that the lamp accepts DMX control, but cannot search for the lamp by RDM, first check the signal amplifier, and then check whether there is a bad connection between the 2 and 3 lines of the signal line.

REMARK

The product has perfect performance and intergrity packing. All users should be strictly comply 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.

Errors and omissions for every information given in this manual excepted.

All information is subject to change without prior notice.