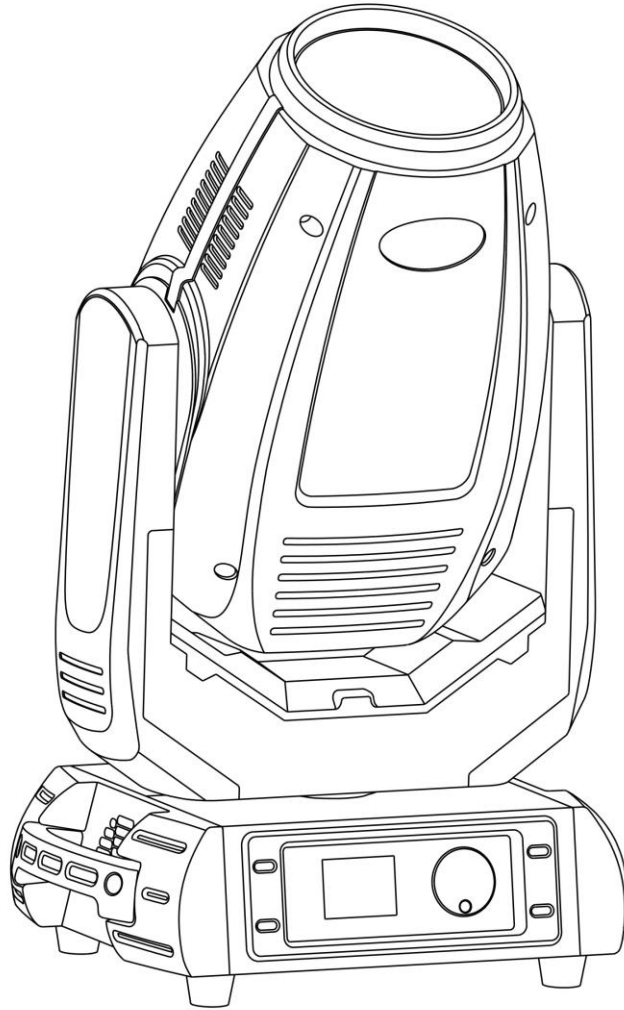


# BEAM WS 280

## MOVING HEAD BEAM



# ITEM

|                                      |           |
|--------------------------------------|-----------|
| <b>Item.....</b>                     | <b>02</b> |
| <b>1.Product introduce .....</b>     | <b>03</b> |
| <b>2.Fixture size.....</b>           | <b>03</b> |
| <b>3.Parts introduce.....</b>        | <b>04</b> |
| <b>4.Safety information.....</b>     | <b>05</b> |
| <b>5.Packing and shipping .....</b>  | <b>07</b> |
| <b>6.AC power.....</b>               | <b>08</b> |
| <b>7.Lamp model and replace.....</b> | <b>08</b> |
| <b>8.Control Panel.....</b>          | <b>11</b> |
| <b>9.Control panel operate.....</b>  | <b>11</b> |
| <b>10.DMX Channels.....</b>          | <b>14</b> |
| <b>11.PCB Driving board.....</b>     | <b>18</b> |

## STATEMENT

The product is good packing when ship out the factory. All users should strictly abide by the warnings and instructions stated in this manual, any damage and results due to misuse and the neglect of this operating manual will be excluded from the deal responsibility this manual will not informed in additionally if have technical changes.

## PRODUCTION INTRODUCE

Thank you for choose this BEAM WS 280 products, this model is the moving head light which is the latest development of the smart, efficient products, beautiful shape, smooth R & D, combined with the advanced technology of today's stage lighting products with international advanced electronic control technology and excellent user-friendly industrial design , fully comply with CE standard, accepted international standard DMX512 signal mode.

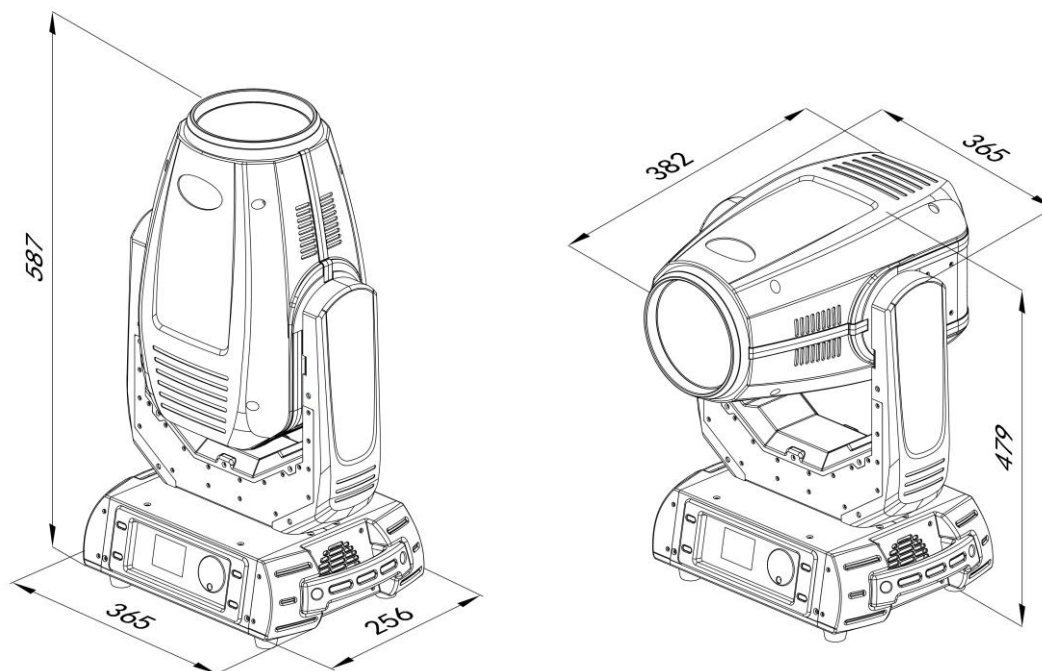
This moving head lights, use ceramic luminescent film reflector as a condenser system, coupled with the high-quality optical lens components, broadband voltage, a clear pattern, sharp and uniform output light efficiency. Intelligent LCD display module, the English language selection mode, intuitive operating menu, shortcut.

BEAM WS 280, have 16/24 international standard DMX512 channels optional Horizontal scan: 540 ° vertical scanning 270 ° (16bit precision scanning) electronic correction, dot-matrix display, four touch switch LCD + single-Key flying shuttle can spin. The can be inverted 180 °, the color wheel is combined with white and 14 colors. 2 Gobo wheels: 9 patterns + white effect round by 8 prism+ 6 prism and atomization function. 0-100% mechanical dimmer, support mechanical strobe and variable strobe effect, strobe macro function. The optical system of the lens group electric focusing, the beam angle of 0 to 4 ° with overheating protection function

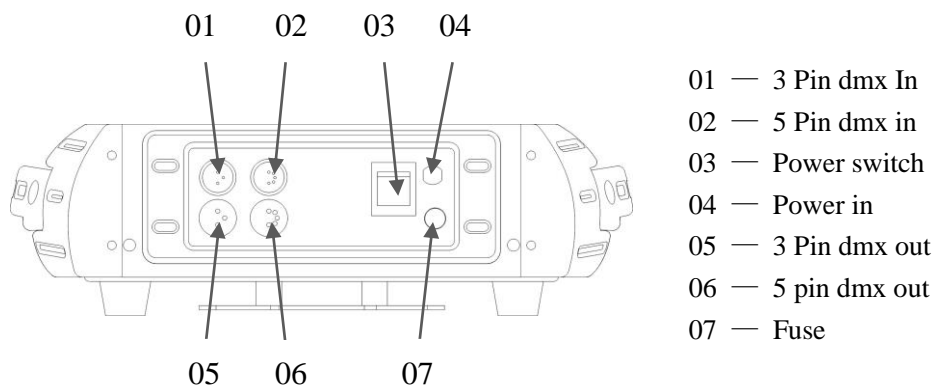
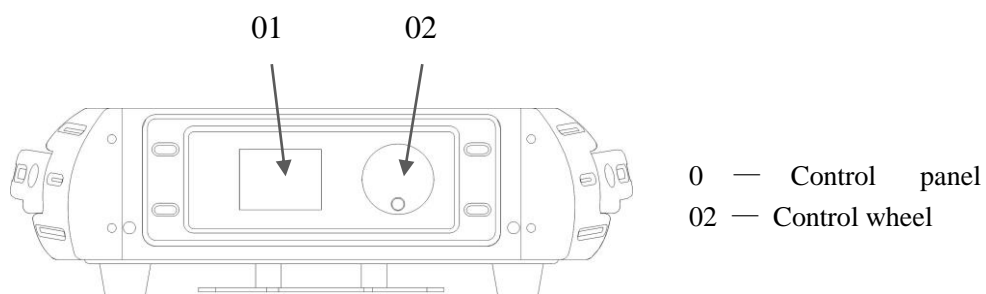
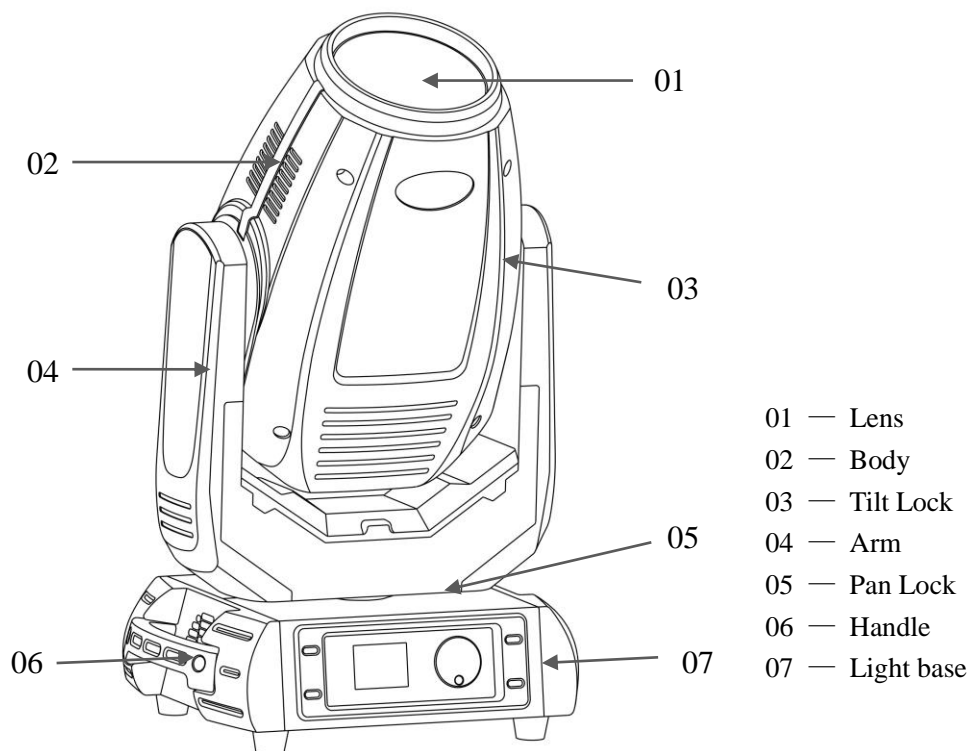
Moving head lights are widely used in television, disco, dance halls, nightclubs, large-scale performances and other professional venues

## 2 FIXTURE SIZE

Size: 385 (L) ×365 (W) ×589 (H) mm



### 3. PARTS INTRODUCE



## 4. SAFETY INFORMATION

Safety warning message

This product is only suitable for professional use, and does not apply to security for other purposes. After you got the lights, please check the package whether have any damage caused by transportation. If there is any damage, do not use this fixture, and please contact the dealer or manufacturer as soon as possible.

This product is only suitable for indoor, IP20 protection class. Lamps should be kept dry to avoid Moisture, overheating or dusty environment. Prevent lamps come into contact with water or any other liquid.

The use of this product should pay attention to: fire, heat, electric shock, ultraviolet radiation, the lamp to explode or

Shedding caused serious or fatal injury.

Need to read the instructions before use energized or installing.

Follow through the operation of security methods and pay attention to the warning signs on the specification and equipment. If you have any problem for how to safely operate the equipment.

Please contact your dealer.

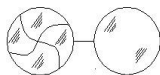
### 4.1 2.1 ANTI-HIGH TEMPERATURE



$t_a = 40^{\circ}\text{C}$

Please don't use the equipment if the temperature above  $40^{\circ}\text{C}$

### 4.2 BURST PREVENTION



The lens should be changed if had damaged or any problems. Don't change the non-original manufacturer lens.

Len size: 128\*32mm

### 4.3 TO PREVENT FALLING WOUNDING



Please don't move the package by one person only.

When Hang the fixture, please must verify that the facilities to be able to withstand the weight of the lamps at least 10 times more.

Please make sure the Mounting hardware is strong enough no any damage, and insurance for the safety rope as auxiliary security fixed in other facilities will need to verify before installation. Installing or removing the equipment, to make the pulley below the work location

### 4.4 UA PROTECTION AND THE BULB EXPLOSION

Prohibit straight viewpoint with exposed bulbs to avoid UV damage to the eyes;

Do not use the equipment without the lens screen and the lid;


The lens and the light head covers should be timely replaced if any damage to rupture  
The Fixture should be used with the protection screen together.

#### 4.5 PREVENTION OF ELECTRIC SHOCK



The electrical connection must only be carried out with corresponding qualifications;

Before installing, make sure you use the power voltage lamps must comply with the identified power, voltage and have an overload or leakage protection;

Each lamp must be properly grounded, installed in accordance with the relevant standards; 

Cut off the power when stall or replace the lamp and the fuse; 

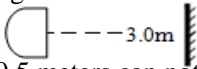
Prohibit the use of a lightning storm or wet environment.

#### 4.6 TO PREVENT BURNING OR FIRE



1. The fixture can be mounted directly on the surface of ordinary combustible

material. 


2. Do not short-circuit temperature protection switch or fuse, use the specified type of fuse.
3. The equipment must be installed away from inflammable and explosive materials.
4. The equipment should be projected range of 3 meters away objects and projectiles temperature less than 60 ° C; --- 3.0m. 
5. Fan or ventilation, at least in the range of 0.5 meters can not be an obstacle.
6. Do not place any object on the lens.
7. Handling at least allow the device to cool for 20 minutes.
8. Do not replace the non-original parts.



#### 4.7 TRANSPORT PROTECT LOCK

In order to protect the light, there is a protect lock; During the transport , the lock will closed keeping the item in safety state.

#### 4.8 ABOUT PACKING

1. Before packed, make sure power is off, and wait for at least 20mins for cooling down.
2. Before clean the fixture, make sure X, Y axis protect lock closed.
3. After packed by plastic bag, high-lift the fixture with two handles besides the product. put the product into the fly-case up-side-down.
4. After packed the product, put the accessory into the accessory case, then closed and lock the fly-case.
5. Fly-case only up stacked two layers. Prohibited upside down
6. When packed with carton box, equipment should be put into the foam first, then set into a carton, pay attention to the vertical position. 

。

## 4.9 UNPACKING

Note: Before unpacking check the damage is whether due to the transportation or not, if you find any such damage, please do not use this item, and contact with the dealer or manufacturer as soon as possible.

1. Open the fly-case, and discover the inside plastic bag.
2. High-lift the product by two handles beside the bottom base and move it out.
3. Before power on, make sure you have opened the X, Y axis lock!



Attention! One product only can accept one input one output.

Hot BEAM WS 280 cable include 3 contact pins:

Pin 1, FOR GROUND; Pin 2 connected to the negative polarity signal; The pin 3 connected to the positive polarity signal.

DMX512 cable must use the professional shielded twisted pair cable; standard loudspeaker cable is not reliable to control the long-range data. 24AWG cable is suitable for more than 300 meters long-distance signal transmission and must add DMX 512 signal amplifier.

Do not use two outputs to separate the connection, if separate a continuous connection to branch, DMX512 splitter is necessary.



Attention! Do not overload the connection. One continuous connection can only connect up to 32 devices.

If use the DMX512 splitter. At first connect DMX512 Splitter input terminal to controller .And then connected from the splitter output terminal to next device.

Do as above guide to connect other device, and finally coupled with terminal insertion

## 5.PACKAGE

BEAM WS 280 packed with fly-case of two in one ,or carton box.

Attach follow accessory.

### ACCESSORY

| CONTENT      | QUANTITY |
|--------------|----------|
| USER MANUL   | 1        |
| HANG FIXTURE | 1        |
| SIGNAL CABLE | 2        |

## 6. AC POWER

### VOLTAGE, POWER, FUSE SPECIFICATION

| Input Voltage | Total Power | Frequency |
|---------------|-------------|-----------|
| 110~240V      | 470W        | 50/60HZ   |

| Fuse voltage | Electronic current | Specification |
|--------------|--------------------|---------------|
| 250V         | 6A                 | 5×20          |

### 6.1 POWER PROTECT

The equipment must be operated by professionals; Make sure that the voltage of power supply must be comply with the voltage identified on the lamp, and must have an overload or leakage electrical protection.

#### ATTENTION!



Factory has equipped the standard 3 pin plug socket. Connect the power supply as below table.

If lamp cable is damaged, replacement should be operate by factory or qualified staff. Any question, please contact professionals or talk to a qualified electrician.

| Live wire(L) | Null(N) | Ground wire   |  |
|--------------|---------|---------------|--|
| RED          | BLUE    | Yellow +Green |  |

## 7. LAMP

### 7.1 LAMP DESCRIPTION

| LAMP MODEL       | POWER OF LAMP | LIFE/HOUR  | COLOR TEMPERATURE |
|------------------|---------------|------------|-------------------|
| OSRAM SIRIUS HRI | 280 W         | 2200 HOURS | 9300K             |



**WARNING! There is a safety hazard or damage if install similar bulb**  
To reduce the risk of damage to light ,do change the lamp before using time over 125% of lamp life .

### LAMP REPLACE

Attention! When replace the lamp is forbidden to touch lamp with bare hand, to avoid the greasy dirt stains filament. filament must be kept clean



1. Disconnect the power. Before replace lamp, fixture need 20 minutes for lamp cooling. Fasten the head with Y axis protect lock in 60 ° position.

1. Use cross screwdriver to open the light body cover(picture 1)



(1)

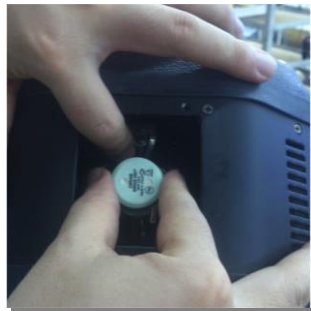


2. After open the cover,you can see the lamp inside,please wait the lamp be cool after used but not touch it in hot status.(picture 2)



(2)

3. One hand press the lamp holder,another hand hold the lamp,and pull out the wires(picture 3,4)



(3)



(4)

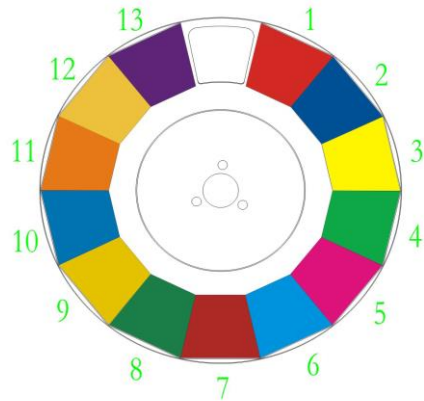
4.after take apart the lamp, please check the inside glasses, clear it will make the light better effect.(Picture 5)



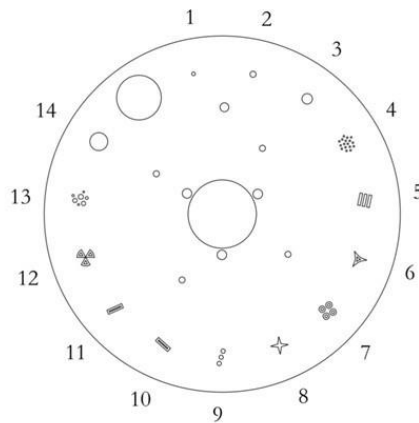
(5)

5.installed the lamp after replaced.

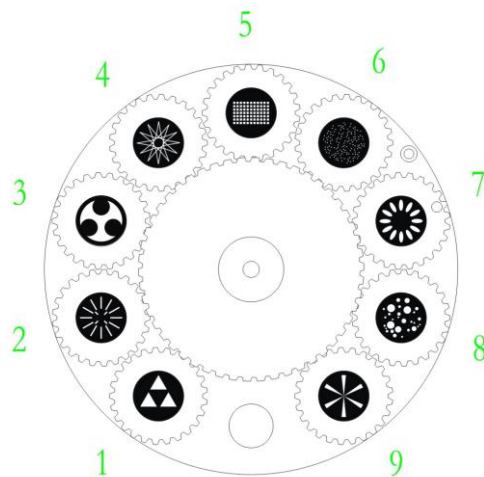
## 8.COLOR WHEEL, GOBO WHEEL



## STATIC GOBO



## ROTATE GOBO



**BEAM WS 280 Have 6 linear prism and 8 facet prism.**

## 8.CONTROL PANEL



Display: to display all information of fixture.

Control wheel: can turn right,left and enter.

## 9.CONTROL PANEL MENU OPERATE

| Main Menu   | Submenu 1  | Submenu 2 | Function SET                       | Function description                  |
|-------------|------------|-----------|------------------------------------|---------------------------------------|
| DMX Address |            |           | 001-512                            | DMX Address number set                |
| Display     | "ShowReve" |           | "Natu"                             | Normal                                |
|             |            |           | "Revl"                             | reverse 180°                          |
|             | "Language" |           | "Chin"                             | Chinese 中文                            |
|             |            |           | "English"                          | English                               |
|             | "BrigSett" |           | 000-255                            | Brightness set                        |
|             | "Backligh" |           | "60S "                             | Backlight close after delay 60S       |
|             |            |           | "Ligh"                             | Backlight light always                |
|             | MenuBack"  |           | 90S                                | Menu back to mainmenu after dalay 90S |
|             |            |           | "Off "                             | Menu back not automatic               |
|             | Backflah   |           | open                               | Backlight blinking when no dmx        |
|             |            | off       | Backlight not blinking when no dmx |                                       |
| "Return "   |            | ▲         | return                             |                                       |

|            |            |            |        |                     |
|------------|------------|------------|--------|---------------------|
| "Feature " | "XY Setup" | "Xreverse" | "Off " | PAN SCAN Normal     |
|            |            |            | "Open" | Pan Scan Reverse    |
|            |            | "Yreverse" | "Off " | Tilt Scan normal    |
|            |            |            | "Open" | Tilt Scan Reverse   |
|            |            | "XY Speed" | "Fast" | PAN/TILT FAST SPEED |

|                   |            |        |                      |  |  |
|-------------------|------------|--------|----------------------|--|--|
|                   |            |        | "NORM"               | PAN/TILT<br>NORMAL                     |  |
|                   |            |        | "Solw"               | PAN/TILT SLOW                          |  |
|                   |            |        | "X Angle"            | "360 ", "360 "                         | Pan Angel 360°                         |
|                   |            |        |                      | "540 ", "540 "                         | Pan Angel 540°                         |
|                   |            |        |                      | "630 ", "630 "                         | Pan Angel 630°                         |
|                   |            |        |                      | "Off "                                 | PAN/TILT optical<br>sensor testing off |
|                   |            | "Open" |                      | PAN/TILT optical<br>sensor testing on  |  |
|                   |            | Return | ▲                    | Return                                 |  |
|                   | "Shortcut" |        | "Off "               | Shortcut off for<br>colors and gobos   |  |
|                   |            |        | "Open"               | Shortcut open for<br>colors and gobos  |  |
|                   | "FullColr" |        | "Off "               | half color function                    |  |
|                   |            |        | "Open"               | full color function                    |  |
|                   | "ChanMode" |        | "Smal"               | Simplify mode                          |  |
|                   |            |        | "Stan"               | Standard mode                          |  |
|                   | "ReceMode" |        | "DMX "               | Accept DMX                             |  |
|                   |            |        | "Wire"               | Accept Wireless                        |  |
|                   |            |        | "Auto"               | AutoRun                                |  |
|                   | "RunMode " |        | "Slve"               | Accept other signal<br>control         |  |
|                   |            |        | "Musc"               | Sound active                           |  |
|                   |            |        | "Auto"               | Inside program Run<br>automatically    |  |
| "SigClear"        |            | "Off " | keep signal data     |  |  |
|                   |            | "Open" | clear signal data    |  |  |
| DMX Reset         |            | Off    | Dmx reset not accept |  |  |
|                   |            | Open   | Dmx reset accept     |  |  |
|                   | Return     | ▲      | Return               |  |  |
| <b>"LampSett"</b> | "Default " |        | "Wink"               | Lamp off                               |  |
|                   |            |        | "Ilum"               | Lamp on                                |  |
|                   | "Control " |        | "Wink"               | Lamp off by manual                     |  |
|                   |            |        | "Ilum"               | lamp on by manual                      |  |
|                   | "DmxLamp " |        | "Off "               | Close other signal<br>control the lamp |  |
|                   |            |        | "Open"               | Open other signal<br>control the lamp  |  |
|                   | "LampTime" |        | 0000-9999            | Lamp used time recorded                |  |

|            |                |                             |   |                            |
|------------|----------------|-----------------------------|---|----------------------------|
|            |                | ★                           | Password input Enter                    |                            |
|            | "ClearTim"     | "Illum"                     | Clear Lamp time                         |                            |
|            |                | "Wink"                      | Lamp off                                |                            |
|            | "LampStat"     | "Illum"                     | Lamp on                                 |                            |
|            | Return         | ▲                           | Return                                  |                            |
| "InfoSee " | "WorkHour<br>" | 0000-9999                   | working hours memo<br>for connect power |                            |
|            | "Times<br>"    | 0000-9999                   | Open times memo                         |                            |
|            | "Fan1Rota"     | 0000-9999                   | Fan rotation speed 1                    |                            |
|            | "Fan2Rota"     | 0000-9999                   | Fan rotation speed 2                    |                            |
|            | "Version "     | XMOA                        | Version                                 |                            |
|            | Spare time     | No limit                    | No limit time                           |                            |
|            | Spare cut      | No limit                    | No limit times                          |                            |
|            | Return         | ▲                           | Return                                  |                            |
| "Control " |                | Chan 00-Chan<br>40          | Control the Channels                    |                            |
| "AssiTool" | "Factory "     | ★                           | Password input Enter                    |                            |
|            |                | "Fold"                      | Recover Factory set                     |                            |
|            |                | "Save"                      | Save factory set                        |                            |
|            | "Defaults"     | ★                           | Password input Enter                    |                            |
|            |                | "Fold"                      | Recover to default                      |                            |
|            | Redress        | ★                           | Password input enter                    |                            |
|            |                | Reset01-10                  | Set the motors                          |                            |
|            | Chdefine       | Color wheel<br>Rotation 001 | Channels set by<br>define               |                            |
|            |                | 000.....040                 | Channels set by<br>define               |                            |
|            | "Brightne"     | ★                           | Password input Enter                    |                            |
|            |                | "TimeLimi"                  | 0000-9999                               | Open fixture time<br>limit |
|            |                | "TimsLimi"                  | 0000-9999                               | fixture times limit        |
|            |                | TimeCLEA                    | clear                                   | Clear the time of<br>used  |
|            |                | CutClea                     | clear                                   | Clear the times of<br>used |
|            |                | "Passwor1"                  | 000-255                                 | Revise password 1          |
|            |                | "Passwor2"                  | 000-255                                 | Revise password 2          |
|            |                | "Passwor3"                  | 000-255                                 | Revise password 3          |
|            |                | "Passwor4"                  | 000-255                                 | Revise password 4          |
|            |                | "X Drivin"                  | 000-255                                 | pan main drive gear        |
|            |                | "X Driven"                  | 000-255                                 | Pan slave drive gear       |
|            | "Y Drivin"     | 000-255                     | Tilt main drive gear                    |                            |

|                 |                |            |                       |                            |
|-----------------|----------------|------------|-----------------------|----------------------------|
|                 |                | "Y Driven" | 000-255               | Tilt slave drive gear      |
|                 |                |            |                       |                            |
|                 |                | "LampPowe" | "Off "                | Ballast earthed            |
|                 |                |            | "total 5V",<br>"Open" | Ballast 5V                 |
|                 |                | "YAngle "  | 000-255               | Tilt angel rotation<br>set |
|                 |                | "Return "  | 000-255               | return                     |
|                 | "Checksum<br>" | 01-10"     |                       | Check Cabrilate data       |
|                 | <b>Return</b>  |            | ▲                     | Return                     |
| <b>CHANLEVE</b> |                |            | Chan1..140            | Show the dmx address       |
| <b>MotorRst</b> |                |            | Color...focus         | Display the status         |
|                 | <b>Return</b>  |            | ▲                     |                            |
| All Reset"      |                |            | "Annu"                | Cancel                     |
|                 |                |            | "Exec"                | Reset                      |

|                 |                   |  |        |        |
|-----------------|-------------------|--|--------|--------|
| <b>XY Rst</b>   | PAN/tilt<br>RESET |  | "Annu" | Cancel |
|                 |                   |  | "Exec" | Reset  |
| <b>EffecRst</b> | Effect reset      |  | "Annu" | Cancel |
|                 |                   |  | "Exec" | Reset  |
| "ExitMenu"      |                   |  | ▲      | Exit   |

## 10.DMX Channels

| MODE 1 | MODE 2 | DMX Value | Description               |
|--------|--------|-----------|---------------------------|
| 1      | 1      | 0–255     | Pan                       |
| 2      | *      | 0–255     | Pan Fine                  |
| 3      | 2      | 0–255     | Tilt                      |
| 4      | *      | 0–255     | Tilt Fine                 |
| 5      | 3      | 0–255     | Pan/Tilt speed            |
| 6      | 4      |           | Micro                     |
|        |        | 0–19      | Empty                     |
|        |        | 20–24     | Energy-saving mode (230W) |
|        |        | 25–129    | Empty                     |
|        |        | 130–139   | Lamp on by dmx            |
|        |        | 140–149   | PAN/TILT reset            |
|        |        | 150–159   | Empty                     |

|   |   |         |                                 |
|---|---|---------|---------------------------------|
|   |   | 160–169 | Small motors reset              |
|   |   | 170–199 | empty                           |
|   |   | 200–209 | Whole unit reset                |
|   |   | 210–229 | empty                           |
|   |   | 230–239 | Lamp off by dmx                 |
|   |   | 240–255 | empty                           |
| 7 | 5 |         | Colors                          |
|   |   | 0–8     | White                           |
|   |   | 9–17    | Deep Red                        |
|   |   | 18–26   | Deep Blue                       |
|   |   | 27–35   | Yellow                          |
|   |   | 36–44   | green                           |
|   |   | 45–53   | Magenta                         |
|   |   | 54–62   | Light blue                      |
|   |   | 63–71   | red                             |
|   |   | 72–80   | Deep green                      |
|   |   | 81–89   | Amber                           |
|   |   | 90–98   | blue                            |
|   |   | 99–107  | orange                          |
|   |   | 108–116 | CTO                             |
|   |   | 117–127 | blue                            |
|   |   | 128–129 | white+blue                      |
|   |   | 130–134 | blue+CTO                        |
|   |   |         |                                 |
|   |   | 135–138 | CTO+orange                      |
|   |   | 139–143 | Orange+blue                     |
|   |   | 144–147 | blue+amber                      |
|   |   | 148–152 | Amber+deep green                |
|   |   | 153–157 | Deep green+red                  |
|   |   | 158–161 | Red+light blue                  |
|   |   | 162–166 | Light blue+magenta              |
|   |   | 167–171 | magenta+green                   |
|   |   | 172–176 | Green+yellow                    |
|   |   | 177–180 | Yellow+deep blue                |
|   |   | 181–185 | Deep blue+deep red              |
|   |   | 186–189 | Deep red+white                  |
|   |   | 190–220 | Run from fast to slow           |
|   |   | 221–250 | Run from slow to fast           |
|   |   | 251–255 | Color change when sound control |
| 8 | * |         | empty                           |
| 9 | 6 |         | empty                           |
|   | 7 |         | Static gobo                     |

|         |                                   |         |                                |         |              |
|---------|-----------------------------------|---------|--------------------------------|---------|--------------|
| 10      |                                   | 0–3     | empty                          |         |              |
|         |                                   | 4–9     | Gobo 1                         |         |              |
|         |                                   | 10–15   | Gobo 2                         |         |              |
|         |                                   | 16–21   | Gobo 3                         |         |              |
|         |                                   | 22–27   | Gobo 4                         |         |              |
|         |                                   | 28–33   | Gobo 5                         |         |              |
|         |                                   | 34–39   | Gobo 6                         |         |              |
|         |                                   | 40–45   | Gobo 7                         |         |              |
|         |                                   | 46–51   | Gobo 8                         |         |              |
|         |                                   | 52–57   | Gobo 9                         |         |              |
|         |                                   | 58–63   | Gobo 10                        |         |              |
|         |                                   | 64–69   | Small beam 1                   |         |              |
|         |                                   | 70–75   | Small beam 2                   |         |              |
|         |                                   | 76–87   | Small beam 3                   |         |              |
|         |                                   |         | Gobo shaking from slow to fast |         |              |
|         |                                   | 88–95   | Gobo 1                         |         |              |
|         |                                   | 96–103  | Gobo 2                         |         |              |
|         |                                   | 104–111 | Gobo 3                         |         |              |
|         |                                   | 112–119 | Gobo 4                         |         |              |
|         |                                   | 120–127 | Gobo 5                         |         |              |
|         |                                   | 128–135 | Gobo 6                         |         |              |
|         |                                   | 136–143 | Gobo 7                         |         |              |
|         |                                   | 144–151 | Gobo 8                         |         |              |
|         |                                   | 152–159 | Gobo 9                         |         |              |
|         |                                   | 160–167 | Gobo 10                        |         |              |
|         |                                   |         |                                | 168–175 | Small beam 1 |
|         |                                   |         |                                | 176–183 | Small beam 2 |
| 184–199 | Small beam 3                      |         |                                |         |              |
| 200–255 | Static gobo run from slow to fast |         |                                |         |              |
| 11      | 8                                 |         | Rotate gobo                    |         |              |
|         |                                   | 0–8     | empty                          |         |              |
|         |                                   | 9–17    | Gobo 1                         |         |              |
|         |                                   | 18–26   | Gobo 2                         |         |              |
|         |                                   | 27–35   | Gobo 3                         |         |              |
|         |                                   | 36–44   | Gobo 4                         |         |              |
|         |                                   | 45–53   | Gobo 5                         |         |              |
|         |                                   | 54–62   | Gobo 6                         |         |              |
|         |                                   | 63–71   | Gobo 7                         |         |              |
|         |                                   | 72–80   | Gobo 8                         |         |              |
|         |                                   | 81–89   | Gobo 9                         |         |              |
|         | Gobo shaking from slow to         |         |                                |         |              |



|    |    |         |   |
|----|----|---------|---|
|    |    |         | fast                                    |
|    |    | 90–97   | Gobo 1                                  |
|    |    | 98–106  | Gobo 2                                  |
|    |    | 107–115 | Gobo 3                                  |
|    |    | 116–124 | Gobo 4                                  |
|    |    | 125–133 | Gobo 5                                  |
|    |    | 134–142 | Gobo 6                                  |
|    |    | 143–151 | Gobo 7                                  |
|    |    | 152–160 | Gobo 8                                  |
|    |    | 161–169 | Gobo 9                                  |
|    |    | 171–179 | Gobo 9 not move                         |
|    |    | 180–217 | Run from fast to slow                   |
|    |    | 218–255 | Run from slow to fast                   |
|    |    |         | Gobo rotation                           |
|    |    | 0–127   | index                                   |
|    |    | 128–177 | Run from slow to fast in anti clockwise |
|    |    | 178–203 | stop                                    |
|    |    | 204–255 | Run from fast to slow in clockwise      |
| 12 | 9  |         |   |
| 13 | *  | 0–255   | empty                                   |
|    |    |         | prism                                   |
|    |    | 0–19    | empty                                   |
|    |    | 20–75   | 6 linear prism                          |
|    |    | 76–255  | 8 facet prism                           |
|    |    |         | Prism rotation                          |
|    |    | 0–127   | index                                   |
|    |    | 128–191 | Run from fast to slow in clockwise      |
|    |    | 192–193 | empty                                   |
|    |    | 194–255 | Run from slow to fast in anti clockwise |
| 15 | 11 |         |   |

|    |    |        |              |
|----|----|--------|--------------|
| 16 | 12 |        | Frost        |
|    |    | 0–64   | empty        |
|    |    | 65–255 | linear frost |
| 17 | 13 |        | zoom         |
|    |    | 0–255  | Linear zoom  |
| 18 | *  | 0–255  | Zoom fine    |
| 19 | 14 | 0–255  | focus        |
| 20 | *  | 0–255  | Zoom fine    |

|    |    |         |                                      |
|----|----|---------|--------------------------------------|
| 21 | *  | 0–255   | empty                                |
| 22 | 15 |         | strobe                               |
|    |    | 0–31    | Strobe close                         |
|    |    | 32–63   | Strobe open                          |
|    |    | 64–95   | Strobe from slow to fast             |
|    |    | 96–127  | Strobe open                          |
|    |    | 128–143 | Fast to slow,slow close fast<br>open |
|    |    | 144–159 | Slow to fast,fast open slow<br>close |
|    |    | 160–191 | Strobe open                          |
|    |    | 192–223 | Random strobe from slow to<br>fast   |
|    |    | 224–255 | Strobe open                          |
| 23 | 16 |         | dimmer                               |
|    |    | 0–255   | Linear dimmer                        |
| 24 | *  |         | empty                                |