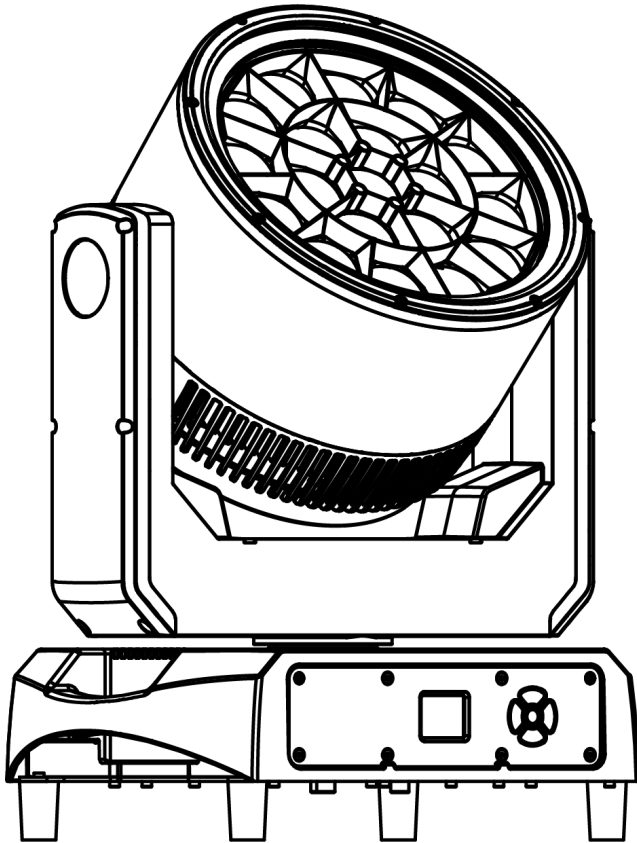


# 1960BW-4

IP65 19\*60W Bee Eye Moving Head



## User Manual

Please read manual carefully before use

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Thank you for choosing our LED lights. Each facility has been rigorously tested. Please check whether the facility has been damaged during transportation. If you find any parts are missing or broken, please contact the manufacturer immediately. Please do not return the product without any notice!

# 1.Safety Instructions



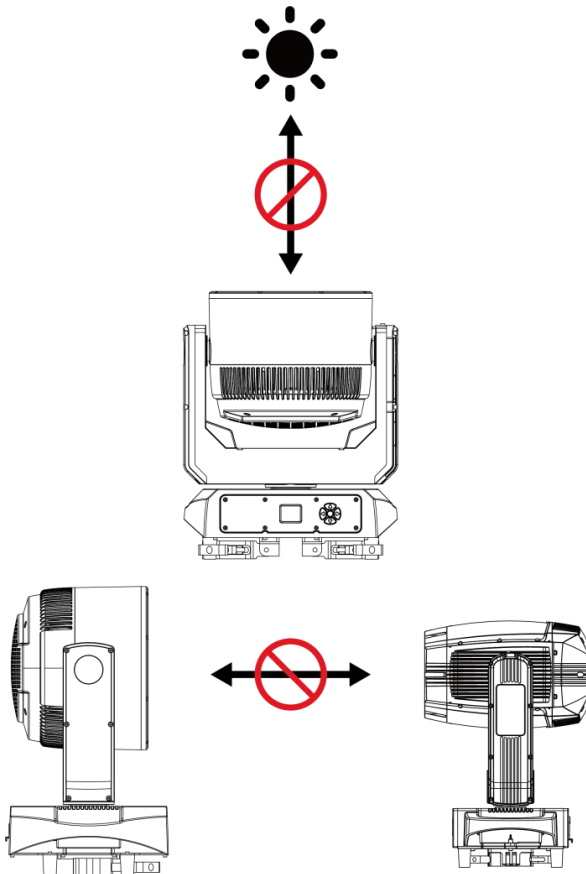
Please read this manual carefully, which includes important information on installation, use and maintenance.

## Attention

- Please keep this USER MANUAL for future consultation. If you sell the facility to another user, be sure that they also receive this USER MANUAL.
- Please open and check in details and make sure there is no transportation damage.
- Before operating, ensure that the voltage and frequency of power supply match the power requirements of the facility.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- The facility must be installed in a location with adequate ventilation, at least 50 cm from adjacent surfaces. Be sure that no ventilation slots are blocked.
- Make sure the power is disconnected before removing the facility.
- Make sure there are no flammable materials close to the unit while operating as it is fire hazard.
- Use safety cable when fixes this facility. Do not handle the facility by taking its head only, but always by taking its base.
- Maximum ambient temperature is 40 °C . Do not operate it where the temperature is higher than this.
- Please stop using the facility for serious operating problems. Stop using the facility immediately. Never try to repair the facility by yourself, but be a professional technician. Please contact the supplier's service department

for technical support.

- Do not touch any wire during operation as high voltage might be causing electric shock.
- When the housing or lens is damaged, it must be replaced.
- Direct sunlight or any other strong light source penetrating the lens of the light will cause serious internal damage to the facility. During unpacking, installation, use and long-term outdoor idleness, it is forbidden to expose the lens of the facility to direct sunlight or any other strong light source at any angle. It is forbidden to aim the beam of one light directly at another light.



## Caution

There are no accessories available, do not open the housing and try to repair the facilities yourself. Please contact our company for after service.

## Installation

The unit should be mounted via its screw holes on the bracket. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. And make sure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times of the unit's weight. Also always use a safety cable that can hold 12 times of the weight of the unit when installing the fixture.

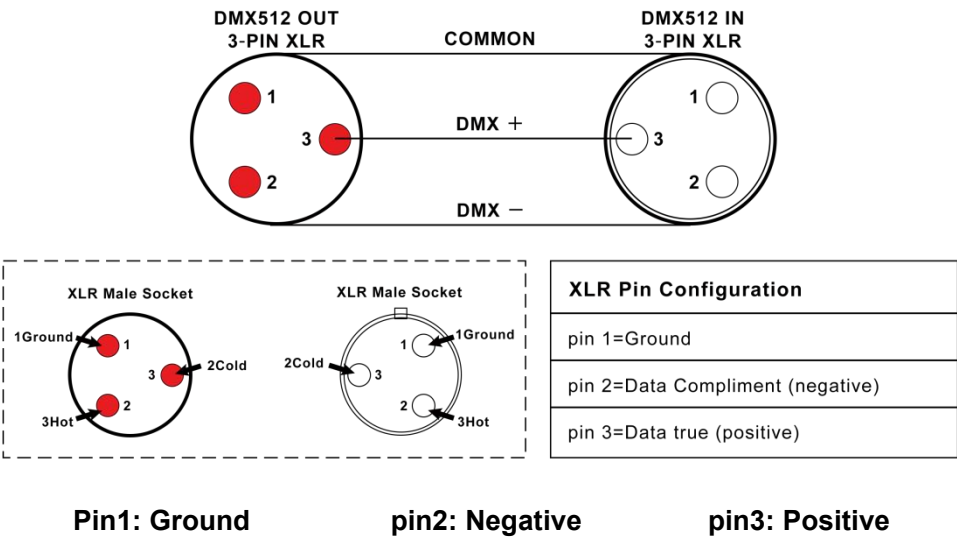
The facility must be installed by professionals, and keep it far away from fire, walking road, and easy touched place.

## 2. Technical Specification

|                    |                                                               |
|--------------------|---------------------------------------------------------------|
| Light Source       | 19*60W 4 in 1 RGBW LED                                        |
| LED Lifetime       | ≥ 50000H                                                      |
| Power Voltage      | AC90-240V , 50-60Hz                                           |
| Power Consumption  | 1050W±5%                                                      |
| Beam Angle         | 4.5° -43°                                                     |
| Control Modes      | DMX512/ Auto/ Sound/ Master/ Manual/ RDM/ ArtNet (optional)   |
| DMX Channel        | 21/ 23/ 35/ 78/ 92/ 97/ 99Channel<br>DMX+ArtNet Channel:11+76 |
| Protection Rating  | IP65                                                          |
| Display            | 1.8 inch TFT Display                                          |
| Data In/Out Socket | 3-pin XLR sockets                                             |
| Power Socket       | Power-Con in/ out                                             |
| Housing Material   | Aluminum                                                      |

|                     |                                                                                                                                                                                                      |                    |              |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------|
| Pan                 | 540°accuracy 2.11°/step, fine-tuning accuracy: 0.008°                                                                                                                                                |                    |              |
| Tilt                | 270°accuracy 0.86°/step, fine-tuning accuracy: 0.0034°                                                                                                                                               |                    |              |
| Pan/Tilt Resolution | Automatically correct pan/tilt position                                                                                                                                                              |                    |              |
| MAX. Connection     | 4 units (230V, 50Hz)                                                                                                                                                                                 | 2.5mm <sup>2</sup> | power cable  |
|                     | 2 units (120V, 60Hz)                                                                                                                                                                                 | 2.5mm <sup>2</sup> | power cable  |
| Dimension           | 418*319*522mm                                                                                                                                                                                        |                    |              |
| Net Weight          | 27 kg                                                                                                                                                                                                |                    |              |
| Carton Package      | 645*405*505mm                                                                                                                                                                                        | 1in1               | GW.: 30.6 kg |
| Flight Case         | 845*560*740mm                                                                                                                                                                                        | 2in1               | GW.: 89.6 kg |
| Features            | Full light range dimming, 65536-level dimming accuracy. fast strobe 1-25Hz. Single control of LED. three-in-one effects of wash, beam, and bee eye. preset multiple color macro and effect functions |                    |              |
| Configuration       | Signal cable                                                                                                                                                                                         | 1pc                |              |
|                     | Power cable                                                                                                                                                                                          | 1pc                |              |
|                     | Manual                                                                                                                                                                                               | 1pc                |              |

### 3. DMX Set Up



#### DMX Connection

To ensure optimal transmission of DMX data, please connect facilities in the shortest way. The connection order won't affect the DMX address code. For example, if the address code is set to 1, no matter where the facility is connected, its address code will not change. This is determined by the principle of the DMX controller.

#### Operation method

You can operate in the following three modes:

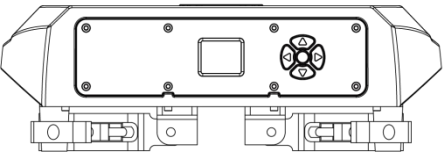
- Auto mode - the light can automatically complete all color changes
- DMX control mode - each light can be individually controlled by a standard DMX512 console
- Master mode - any light can work as a host in any of the above modes, and the other lights will work synchronously as slaves

## 4. Display

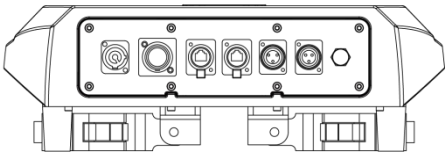
There are five buttons on the LED panel: ESC, UP, DOWN, ENTER and SAVE.

|                                                                                   |                                                                     |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Display                                                                           |                                                                     |
|  |                                                                     |
| <b>ESC      UP      DOWN      ENTER      SAVE</b>                                 |                                                                     |
| <b>ESC</b>                                                                        | to exit or back to the previous menu                                |
| <b>UP/ DOWN</b>                                                                   | to navigate through menu options or adjust values                   |
| <b>SAVE</b>                                                                       | to save the adjusted settings/ values and back to the previous menu |
| <b>ENTER</b>                                                                      | to enter next menu level.                                           |

**FRONT VIEW**



**REAR VIEW**



After powering on, the facility will automatically return to the last operation when it was powered off, then get into standby status. For more details, please refer to the information below↓



## 5. Menu

|      |              |                                                               |                                                                                                                                  |
|------|--------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Menu | 1.Pan Degree | 1.540      2.360                                              | Pan running angle selection                                                                                                      |
|      | 2.Mic Sense  | 001-100                                                       | Sound control sensitivity adjustment                                                                                             |
|      | 3.Language   | 1.English<br>2.Chinese                                        | Language selection                                                                                                               |
|      | 4.No Signal  | 1.Black Out<br>2.Hold                                         |                                                                                                                                  |
|      | 5.Fan Set    | 1.Auto    2.Low<br>3.High                                     |                                                                                                                                  |
|      | 6.ArtNet Set | 1.ArtNet Enable:<br>1.ON    2.OFF                             | This setting is available when there is network function                                                                         |
|      |              | 2.Universe:0-255                                              |                                                                                                                                  |
|      |              | 3.IP Mode:<br>A.2.X.X.X Auto<br>B.10.X.X.X Auto<br>C.Customer |                                                                                                                                  |
|      |              | 4.Custom<br>IP:192.168.000.0<br>01                            |                                                                                                                                  |
|      |              | 5.Sub Net Mask:<br>255.000.000.000                            |                                                                                                                                  |
|      | 7.Reset      | 1.Yes                                                         | Reset                                                                                                                            |
|      |              | 2.No                                                          |                                                                                                                                  |
|      | 8.Default    | 1.Yes                                                         | Restore factory settings                                                                                                         |
|      |              | 2.No                                                          |                                                                                                                                  |
|      | 9.Adjust     | Pass Word: ****                                               | Changing the values of Pan/Tilt/Focus/Rota can correct the angle;<br>changing the values of R/G/B/W can adjust the white balance |
|      |              | 1.Pan:0-255                                                   |                                                                                                                                  |
|      |              | 2.Tilt:0-255                                                  |                                                                                                                                  |

|             |                   |                  |      |                                      |
|-------------|-------------------|------------------|------|--------------------------------------|
|             |                   | 3.Focus:0-255    |      |                                      |
|             |                   | 4.Rotate: 0-255  |      |                                      |
|             |                   | 5.Red: 0-255     |      |                                      |
|             |                   | 6.Green: 0-255   |      |                                      |
|             |                   | 7.Blue: 0-255    |      |                                      |
|             |                   | 8.White: 0-255   |      |                                      |
| Address     | 001-512           |                  |      | Set the address code from 001 to 512 |
| Reverse     | 1.Pan Invert      | 1.YES            | 2.NO | Pan forward and reverse setting      |
|             | 2.Tilt Invert     | 1.YES            | 2.NO | Tilt forward and reverse setting     |
|             | 3.Display Invert  | 1.YES            | 2.NO | Forward and reverse setting          |
| Information | 1.CH Value        |                  |      | Display all channel information      |
|             | 2.Temperature℃    |                  |      | Display LED board temperature        |
|             | 3.Version:**      |                  |      | Program version number               |
|             | 4.IP:** ** ** *   |                  |      | When network function is available   |
|             | 5.Mask:** ** ** * |                  |      | When network function is available   |
| Mode        | 1.DMX 512         |                  |      | Setting the control mode             |
|             | 2.Auto            |                  |      |                                      |
|             | 3.Sound           |                  |      |                                      |
|             | 4.Manual          | Master/Alone     |      | Master/Alone                         |
|             |                   | 1.Pan:0-255      |      | Manual Control                       |
|             |                   | 2.Tilt:0-255     |      |                                      |
|             |                   | 3.Focus:0-255    |      |                                      |
|             |                   | 4.Rota: 0-255    |      |                                      |
|             |                   | 5.Red 1: 0-255   |      |                                      |
|             |                   | 6.Green 1: 0-255 |      |                                      |
|             |                   | 7.Blue 1: 0-255  |      |                                      |
|             |                   | 8.White 1: 0-255 |      |                                      |
|             | 9.Strobe 1: 0-255 |                  |      |                                      |
| Channel     | 1.21 Channels     | 21CH             |      | Select CH Mode                       |

|  |               |      |  |
|--|---------------|------|--|
|  | 2.23 Channels | 23CH |  |
|  | 3.35 Channels | 35CH |  |
|  | 4.78 Channels | 78CH |  |
|  | 5.92 Channels | 92CH |  |
|  | 6.97 Channels | 97CH |  |
|  | 7.99 Channels | 99CH |  |

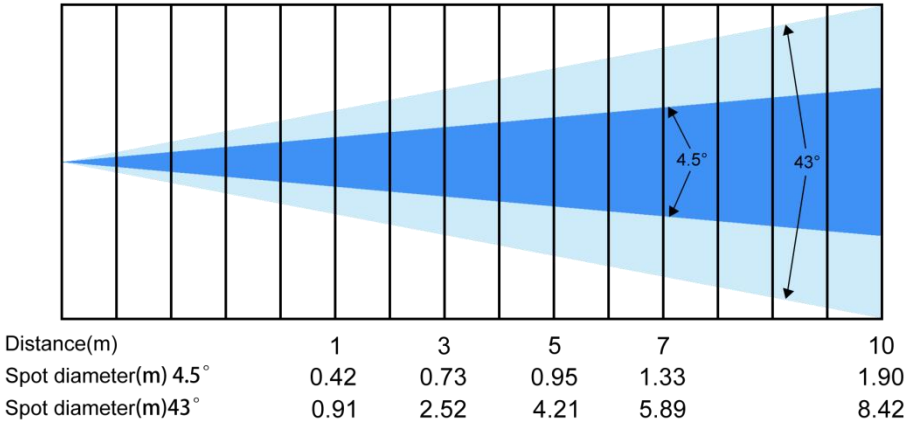
## 6. LUX Data

### BeamAngle=4.5°

|         |        |        |       |       |       |
|---------|--------|--------|-------|-------|-------|
| R lux   | 26100  | 17500  | 9100  | 4643  | 2275  |
| G lux   | 74300  | 42500  | 22100 | 11276 | 5525  |
| B lux   | 14300  | 7654   | 3980  | 2031  | 995   |
| W lux   | 91700  | 57692  | 30000 | 15306 | 7500  |
| ALL lux | 180000 | 113077 | 58800 | 30000 | 14700 |

### BeamAngle=43°

|         |       |       |      |      |     |
|---------|-------|-------|------|------|-----|
| R lux   | 9830  | 1389  | 500  | 255  | 125 |
| G lux   | 22900 | 3833  | 1380 | 704  | 345 |
| B lux   | 4430  | 708   | 255  | 130  | 64  |
| W lux   | 30900 | 5194  | 1870 | 954  | 468 |
| ALL lux | 60700 | 10278 | 3700 | 1888 | 925 |



## 7. DMX Channel List

### ► 21CH Mode

| CH | Function          | DMX Value | Description           |
|----|-------------------|-----------|-----------------------|
| 1  | Red               | 0 - 255   | Red dimming           |
| 2  | Red adjustment    | 0 - 255   | Red adjustment        |
| 3  | Green             | 0 - 255   | Green dimming         |
| 4  | Green adjustment  | 0 - 255   | Green adjustment      |
| 5  | Blue              | 0 - 255   | Blue dimming          |
| 6  | Blue adjustment   | 0 - 255   | Blue dimming          |
| 7  | White             | 0 - 255   | White dimming         |
| 8  | White adjustment  | 0 - 255   | White adjustment      |
| 9  | Color temperature | 0-15      | No function           |
|    |                   | 16-35     | R100%,G UP,B0%        |
|    |                   | 36-55     | R DOWN,G100%,B0%      |
|    |                   | 56-75     | R0%,G100%,B UP        |
|    |                   | 76-95     | R0%,G DOWN,B100%      |
|    |                   | 96-115    | R UP,G0%,B100%        |
|    |                   | 116-135   | R100%,G0%,B DOWN      |
|    |                   | 136-155   | R100%,G UP,B UP       |
|    |                   | 156-175   | R DOWN,G DOWN, B 100% |
|    |                   | 176-195   | R100%G100%B100%W100%  |
|    |                   | 196-200   | 2800K                 |
|    |                   | 201-205   | 3200K                 |
|    |                   | 206-210   | 3500K                 |
|    |                   | 211-215   | 4000K                 |
|    |                   | 216-220   | 4500K                 |
|    |                   | 221-225   | 5000K                 |
|    |                   | 226-230   | 5500K                 |
|    |                   | 231-235   | 6000K                 |

| CH | Function        | DMX Value | Description                                                                                          |
|----|-----------------|-----------|------------------------------------------------------------------------------------------------------|
|    |                 | 236-240   | 6500K                                                                                                |
|    |                 | 241-245   | 7000K                                                                                                |
|    |                 | 246-250   | 7500K                                                                                                |
|    |                 | 251-255   | 8000K                                                                                                |
| 10 | Macro color     | 0-9       | No function                                                                                          |
|    |                 | 10-19     | Macro color 1                                                                                        |
|    |                 | 20-29     | Macro color 2                                                                                        |
|    |                 | ....      | .... (10 numbers 1 macro color)                                                                      |
|    |                 | 240-249   | Macro color 24                                                                                       |
|    |                 | 250-255   | Macro color 25                                                                                       |
| 11 | Strobe          | 0-3       | Strobe dimming                                                                                       |
|    |                 | 4-203     | Synchronous strobe speed from slow to fast (1Hz-25Hz)                                                |
|    |                 | 204-255   | Random strobe                                                                                        |
| 12 | Dimmer          | 0 - 255   | Dark to bright linear dimming                                                                        |
| 13 | Dimmer adjust   | 0 - 255   | Dimmer adjustment control                                                                            |
| 14 | Pan             | 0 - 255   | Pan control                                                                                          |
| 15 | Pan adjustment  | 0 - 255   | Pan adjustment control                                                                               |
| 16 | Tilt            | 0 - 255   | Tilt control                                                                                         |
| 17 | Tilt adjustment | 0 - 255   | Tilt adjustment control                                                                              |
| 18 | Dimming Mode    | 0 - 49    | Mode -1                                                                                              |
|    |                 | 50 - 99   | Mode -2                                                                                              |
|    |                 | 100-149   | Mode -3                                                                                              |
|    |                 | 150-255   | Mode -4                                                                                              |
| 19 | Function        | 0-137     | No function                                                                                          |
|    |                 | 138-149   | PWM output frequency 1K-64K (Within 3 seconds) 1K, 2K, 4K, 6K, 8K, 10K, 16K, 20K, 24K, 32K, 48K, 64K |
|    |                 | 150-159   | Fast dimming                                                                                         |
|    |                 | 160-169   | Slow dimming (from fast to slow)                                                                     |

| CH | Function      | DMX Value | Description                 |
|----|---------------|-----------|-----------------------------|
|    |               | 170-250   | No function                 |
|    |               | 251-255   | Reset within 3s             |
| 20 | Zoom          | 0-255     | Zoom                        |
| 21 | Lens rotation | 0-155     | 0~60°                       |
|    |               | 156-205   | Clockwise infinite rotation |
|    |               | 206-255   | Counterclockwise rotation   |

## ► 23CH Mode

| CH | Function          | DMX Value | Description                                           |
|----|-------------------|-----------|-------------------------------------------------------|
| 1  | Pan               | 0 - 255   | 0-540°                                                |
| 2  | Pan adjustment    | 0 - 255   | 16bit adjustment                                      |
| 3  | Tilt              | 0 - 255   | 0-205°                                                |
| 4  | Tilt adjustment   | 0 - 255   | 16bit adjustment                                      |
| 5  | Pan/Tilt speed    | 0 - 255   | Speed from fast to slow                               |
| 6  | Zoom              | 0 - 255   | Angle from small to large                             |
| 7  | Lens rotation     | 0-155     | 0~60°                                                 |
|    |                   | 156-205   | Clockwise infinite rotation from fast to slow         |
|    |                   | 206-255   | Counterclockwise infinite rotation from slow to fast  |
| 8  | Dimmer            | 0 - 255   | Dark to bright linear dimming                         |
| 9  | Strobe            | 0-3       | Strobe dimming                                        |
|    |                   | 4-203     | Synchronous strobe speed from slow to fast (1Hz-25Hz) |
|    |                   | 204-255   | Random strobe                                         |
| 10 | R dimming         | 0-255     | Red dimming                                           |
| 11 | G dimming         | 0-255     | Green dimming                                         |
| 12 | B dimming         | 0-255     | Blue dimming                                          |
| 13 | W dimming         | 0-255     | White dimming                                         |
| 14 | Color temperature | 0 -15     | No function                                           |

| CH | Function       | DMX Value | Description                    |
|----|----------------|-----------|--------------------------------|
|    |                | 16-35     | R100%,G UP,B0%                 |
|    |                | 36-55     | R DOWN,G100%,B0%               |
|    |                | 56-75     | R0%,G100%,B UP                 |
|    |                | 76-95     | R0%,G DOWN,B100%               |
|    |                | 96-115    | R UP,G0%,B100%                 |
|    |                | 116-135   | R100%,G0%,B DOWN               |
|    |                | 136-155   | R100%,G UP,B UP                |
|    |                | 156-175   | R DOWN,G DOWN, B 100%          |
|    |                | 176-195   | R100%,G100%,B100%,W100%        |
|    |                | 196-200   | 2800K                          |
|    |                | 201-205   | 3200K                          |
|    |                | 206-210   | 3500K                          |
|    |                | 211-215   | 4000K                          |
|    |                | 216-220   | 4500K                          |
|    |                | 221-225   | 5000K                          |
|    |                | 226-230   | 5500K                          |
|    |                | 231-235   | 6000K                          |
|    |                | 236-240   | 6500K                          |
|    |                | 241-245   | 7000K                          |
|    |                | 246-250   | 7500K                          |
|    |                | 251-255   | 8000K                          |
| 15 | Macro color    | 0-9       | No function                    |
|    |                | 10-19     | Macro color 1                  |
|    |                | 20-29     | Macro color 2                  |
|    |                | ....      | ....(10 numbers 1 macro color) |
|    |                | 240-249   | Macro color 24                 |
|    |                | 250-255   | Macro color 25                 |
| 16 | Static pattern | 0-9       | No function                    |
|    |                | 10-12     | Monochrome function pattern 1  |

| CH | Function              | DMX Value | Description                            |
|----|-----------------------|-----------|----------------------------------------|
|    |                       | 13-15     | Monochrome function pattern 2          |
|    |                       | .....     | .....(3 numbers 1 pattern)             |
|    |                       | 208-210   | Monochrome function pattern 67         |
|    |                       | 211-213   | Mixed color pattern 1                  |
|    |                       | 214-216   | Mixed color pattern 2                  |
|    |                       | ....      | ....(3 numbers 1 pattern)              |
|    |                       | 250-252   | Mixed color pattern 14                 |
|    |                       | 253-255   | Mixed color pattern 15                 |
| 17 | Dynamic pattern       | 0-9       | No function                            |
|    |                       | 10-14     | Monochrome dynamic pattern 1           |
|    |                       | 15-19     | Monochrome dynamic pattern 2           |
|    |                       | .....     | .....(5 numbers 1 pattern)             |
|    |                       | 155-159   | Monochrome dynamic pattern 30          |
|    |                       | 160-164   | Mixed color dynamic pattern 1          |
|    |                       | 165-169   | Mixed color dynamic pattern 2          |
|    |                       | .....     | .....(5 numbers 1 pattern)             |
|    |                       | 220-224   | Mixed color dynamic pattern 13         |
|    |                       | 225-229   | Mixed color dynamic pattern 14         |
|    |                       | 230-234   | Monochrome dynamic pattern 31          |
|    |                       | 235-239   | Monochrome dynamic pattern 32          |
|    |                       | 240-244   | Monochrome dynamic pattern 33          |
|    |                       | 245-249   | Monochrome dynamic pattern 34          |
|    |                       | 250-255   | No function                            |
| 18 | Dynamic pattern speed | 0-127     | Forward, from fast to slow (with 17CH) |
|    |                       | 128-255   | Reverse, from slow to fast(with 17CH)  |
| 19 | Back color R          | 0-255     | Dark to bright linear dimming          |
| 20 | Back color G          | 0-255     | Dark to bright linear dimming          |
| 21 | Back color B          | 0-255     | Dark to bright linear dimming          |



| CH | Function     | DMX Value | Description                                                                                                   |
|----|--------------|-----------|---------------------------------------------------------------------------------------------------------------|
| 22 | Back color W | 0-255     | Dark to bright linear dimming                                                                                 |
| 23 | Function     | 0-137     | No function                                                                                                   |
|    |              | 138-149   | PWM output frequency 1K-64K<br>(Within 3 seconds) 1K, 2K, 4K, 6K,<br>8K, 10K, 16K, 20K, 24K, 32K, 48K,<br>64K |
|    |              | 150-159   | Fast dimming                                                                                                  |
|    |              | 160-169   | Slow dimming (from fast to slow)                                                                              |
|    |              | 170-250   | No function                                                                                                   |
|    |              | 251-255   | Reset within 3s                                                                                               |

## ► 35CH Mode

| CH | Function          | DMX Value | Description      |
|----|-------------------|-----------|------------------|
| 1  | Red               | 0 - 255   | Red dimming      |
| 2  | Red adjustment    | 0 - 255   | Red adjustment   |
| 3  | Green             | 0 - 255   | Green dimming    |
| 4  | Green adjustment  | 0 - 255   | Green adjustment |
| 5  | Blue              | 0 - 255   | Blue dimming     |
| 6  | Blue adjustment   | 0 - 255   | Blue dimming     |
| 7  | White             | 0 - 255   | White dimming    |
| 8  | White adjustment  | 0 - 255   | White adjustment |
| 9  | Color temperature | 0 -15     | No function      |
|    |                   | 16-35     | R100%,G UP,B0%   |
|    |                   | 36-55     | R DOWN,G100%,B0% |
|    |                   | 56-75     | R0%,G100%,B UP   |
|    |                   | 76-95     | R0%,G DOWN,B100% |
|    |                   | 96-115    | R UP,G0%,B100%   |

| CH | Function       | DMX Value | Description                                              |
|----|----------------|-----------|----------------------------------------------------------|
|    |                | 116-135   | R100%,G0%,B DOWN                                         |
|    |                | 136-155   | R100%,G UP,B UP                                          |
|    |                | 156-175   | R DOWN,G DOWN, B 100%                                    |
|    |                | 176-195   | R100%G100%B100%W100%                                     |
|    |                | 196-200   | 2800K                                                    |
|    |                | 201-205   | 3200K                                                    |
|    |                | 206-210   | 3500K                                                    |
|    |                | 211-215   | 4000K                                                    |
|    |                | 216-220   | 4500K                                                    |
|    |                | 221-225   | 5000K                                                    |
|    |                | 226-230   | 5500K                                                    |
|    |                | 231-235   | 6000K                                                    |
|    |                | 236-240   | 6500K                                                    |
|    |                | 241-245   | 7000K                                                    |
|    |                | 246-250   | 7500K                                                    |
|    |                | 251-255   | 8000K                                                    |
| 10 | Macro color    | 0-9       | No function                                              |
|    |                | 10-19     | Macro color 1                                            |
|    |                | 20-29     | Macro color 2                                            |
|    |                | ....      | ....(10 numbers 1 macro color)                           |
|    |                | 240-249   | Macro color 24                                           |
|    |                | 250-255   | Macro color 25                                           |
| 11 | Strobe         | 0-3       | Strobe dimming                                           |
|    |                | 4-203     | Synchronous strobe speed<br>From slow to fast (1Hz-25Hz) |
|    |                | 204-255   | Random strobe                                            |
| 12 | Dimmer         | 0 - 255   | Dark to bright linear dimming                            |
| 13 | Dimmer adjust  | 0 - 255   | Dimmer adjustment control                                |
| 14 | Pan            | 0 - 255   | Pan control                                              |
| 15 | Pan adjustment | 0 - 255   | Pan adjustment control                                   |

| CH | Function         | DMX Value | Description                                                                                                   |
|----|------------------|-----------|---------------------------------------------------------------------------------------------------------------|
| 16 | Tilt             | 0 - 255   | Tilt control                                                                                                  |
| 17 | Tilt adjustment  | 0 - 255   | Tilt adjustment control                                                                                       |
| 18 | Dimming Mode     | 0 -49     | Mode -1                                                                                                       |
|    |                  | 50 - 99   | Mode -2                                                                                                       |
|    |                  | 100-149   | Mode -3                                                                                                       |
|    |                  | 150-255   | Mode -4                                                                                                       |
| 19 | Function         | 0-137     | No function                                                                                                   |
|    |                  | 138-149   | PWM output frequency 1K-64K<br>(Within 3 seconds) 1K, 2K, 4K,<br>6K, 8K, 10K, 16K, 20K, 24K, 32K,<br>48K, 64K |
|    |                  | 150-159   | Fast dimming                                                                                                  |
|    |                  | 160-169   | Slow dimming (from fast to slow)                                                                              |
|    |                  | 170-250   | No function                                                                                                   |
|    |                  | 251-255   | Reset within 3s                                                                                               |
| 20 | Zoom             | 0 - 255   | Zoom                                                                                                          |
| 21 | Lens rotation    | 0 - 155   | 0~60°                                                                                                         |
|    |                  | 156-205   | Clockwise infinite rotation                                                                                   |
|    |                  | 206-255   | Counterclockwise rotation                                                                                     |
| 22 | Pattern rotation | 0-9       | No function                                                                                                   |
|    |                  | 10-14     | Monochrome dynamic pattern 1                                                                                  |
|    |                  | 15-19     | Monochrome dynamic pattern 2                                                                                  |
|    |                  | .....     | .....(5 numbers 1 pattern)                                                                                    |
|    |                  | 155-159   | Monochrome dynamic pattern 30                                                                                 |
|    |                  | 160-164   | Mixed color dynamic pattern 1                                                                                 |
|    |                  | 165-169   | Mixed color dynamic pattern 2                                                                                 |
|    |                  | .....     | .....(5 numbers 1 pattern)                                                                                    |
|    |                  | 220-224   | Mixed color dynamic pattern 13                                                                                |
|    |                  | 225-229   | Mixed color dynamic pattern 14                                                                                |
|    |                  | 230-234   | Monochrome dynamic pattern 31                                                                                 |
|    |                  | 235-239   | Monochrome dynamic pattern 32                                                                                 |

| CH | Function                     | DMX Value | Description                           |
|----|------------------------------|-----------|---------------------------------------|
|    |                              | 240-244   | Monochrome dynamic pattern 33         |
|    |                              | 245-249   | Monochrome dynamic pattern 34         |
|    |                              | 250-255   | No function                           |
| 23 | Pattern effect speed         | 0-9       | No function                           |
|    |                              | 10-132    | Forward, from fast to slow(with 22CH) |
|    |                              | 133-255   | Reverse, from slow to fast(with 22CH) |
| 24 | Pattern effect fade          | 0 - 255   | Pattern effect fade                   |
| 25 | Pattern Back R               | 0 - 255   | Pattern effect R                      |
| 26 | Pattern Back G               | 0 - 255   | Pattern effect G                      |
| 27 | Pattern Back B               | 0 - 255   | Pattern effect B                      |
| 28 | Pattern Back W               | 0 - 255   | Pattern effect W                      |
| 29 | Pattern dimming              | 0 - 255   | Pattern 0-100% dimming                |
| 30 | Background dimming           | 0 - 255   | Background 0-100% dimming             |
| 31 | Pattern change               | 0 - 255   | Pattern change control                |
| 32 | Pattern movement             | 0 - 255   | Pattern movement(with 22CH)           |
| 33 | Prospects strobe             | 0 - 255   | Prospects strobe                      |
| 34 | Background strobe            | 0 - 255   | Background strobe                     |
| 35 | Background pattern selection | 0 - 255   | Background selection                  |

## ► 78CH Mode

| CH | Function         | DMX Value | Description      |
|----|------------------|-----------|------------------|
| 1  | Red              | 0 - 255   | Red dimming      |
| 2  | Red adjustment   | 0 - 255   | Red adjustment   |
| 3  | Green            | 0 - 255   | Green dimming    |
| 4  | Green adjustment | 0 - 255   | Green adjustment |
| 5  | Blue             | 0 - 255   | Blue dimming     |

| CH | Function          | DMX Value | Description           |
|----|-------------------|-----------|-----------------------|
| 6  | Blue adjustment   | 0 - 255   | Blue dimming          |
| 7  | White             | 0 - 255   | White dimming         |
| 8  | White adjustment  | 0 - 255   | White adjustment      |
| 9  | Color temperature | 0 -15     | No function           |
|    |                   | 16-35     | R100%,G UP,B0%        |
|    |                   | 36-55     | R DOWN,G100%,B0%      |
|    |                   | 56-75     | R0%,G100%,B UP        |
|    |                   | 76-95     | R0%,G DOWN,B100%      |
|    |                   | 96-115    | R UP,G0%,B100%        |
|    |                   | 116-135   | R100%,G0%,B DOWN      |
|    |                   | 136-155   | R100%,G UP,B UP       |
|    |                   | 156-175   | R DOWN,G DOWN, B 100% |
|    |                   | 176-195   | R100%G100%B100%W100%  |
|    |                   | 196-200   | 2800K                 |
|    |                   | 201-205   | 3200K                 |
|    |                   | 206-210   | 3500K                 |
|    |                   | 211-215   | 4000K                 |
|    |                   | 216-220   | 4500K                 |
|    |                   | 221-225   | 5000K                 |
|    |                   | 226-230   | 5500K                 |
|    |                   | 231-235   | 6000K                 |
|    |                   | 236-240   | 6500K                 |
|    |                   | 241-245   | 7000K                 |
|    |                   | 246-250   | 7500K                 |
|    |                   | 251-255   | 8000K                 |
| 10 | Macro color       | 0-9       | No function           |
|    |                   | 10-19     | Macro color 1         |
|    |                   | 20-29     | Macro color 2         |
|    |                   | ....      | ....(10 in 1)         |

| CH | Function        | DMX Value | Description                                                                                          |
|----|-----------------|-----------|------------------------------------------------------------------------------------------------------|
|    |                 | 240-249   | Macro color 24                                                                                       |
|    |                 | 250-255   | Macro color 25                                                                                       |
| 11 | Strobe          | 0-3       | Strobe dimming                                                                                       |
|    |                 | 4-203     | Synchronous strobe speed from slow to fast (1Hz-25Hz)                                                |
|    |                 | 204-255   | Random strobe                                                                                        |
| 12 | Dimmer          | 0 - 255   | Dark to bright linear dimming                                                                        |
| 13 | Dimmer adjust   | 0 - 255   | Dimmer adjustment control                                                                            |
| 14 | Pan             | 0 - 255   | Pan control                                                                                          |
| 15 | Pan adjustment  | 0 - 255   | Pan adjustment control                                                                               |
| 16 | Tilt            | 0 - 255   | Tilt control                                                                                         |
| 17 | Tilt adjustment | 0 - 255   | Tilt adjustment control                                                                              |
| 18 | Dimming Mode    | 0 - 49    | Mode -1                                                                                              |
|    |                 | 50 - 99   | Mode -2                                                                                              |
|    |                 | 100-149   | Mode -3                                                                                              |
|    |                 | 150-255   | Mode -4                                                                                              |
| 19 | Function        | 0-137     | No function                                                                                          |
|    |                 | 138-149   | PWM output frequency 1K-64K (Within 3 seconds) 1K, 2K, 4K, 6K, 8K, 10K, 16K, 20K, 24K, 32K, 48K, 64K |
|    |                 | 150-159   | Fast dimming                                                                                         |
|    |                 | 160-169   | Slow dimming (from fast to slow)                                                                     |
|    |                 | 170-250   | No function                                                                                          |
|    |                 | 251-255   | Reset within 3s                                                                                      |
| 20 | Zoom            | 0-255     | Zoom                                                                                                 |
| 21 | Lens rotation   | 0-155     | 0~60°                                                                                                |
|    |                 | 156-205   | Clockwise infinite rotation                                                                          |
|    |                 | 206-255   | Counterclockwise rotation                                                                            |
| 22 | R1 LED dimming  | 0-255     | R1 LED dimming                                                                                       |

| CH         | Function        | DMX Value | Description     |
|------------|-----------------|-----------|-----------------|
| 23         | G1 LED dimming  | 0-255     | G1 LED dimming  |
| 24         | B1 LED dimming  | 0-255     | B1 LED dimming  |
| 25         | R2 LED dimming  | 0-255     | R2 LED dimming  |
| 26         | G2 LED dimming  | 0-255     | G2 LED dimming  |
| 27         | B2 LED dimming  | 0-255     | B2 LED dimming  |
| .....<br>. | .....           | .....     | .....           |
| 76         | R19 LED dimming | 0-255     | R19 LED dimming |
| 77         | G19LED dimming  | 0-255     | G19LED dimming  |
| 78         | B19LED dimming  | 0-255     | B19LED dimming  |

## ► 92CH Mode

| CH | Function          | DMX Value | Description      |
|----|-------------------|-----------|------------------|
| 1  | Red               | 0 - 255   | Red dimming      |
| 2  | Red adjustment    | 0 - 255   | Red adjustment   |
| 3  | Green             | 0 - 255   | Green dimming    |
| 4  | Green adjustment  | 0 - 255   | Green adjustment |
| 5  | Blue              | 0 - 255   | Blue dimming     |
| 6  | Blue adjustment   | 0 - 255   | Blue dimming     |
| 7  | White             | 0 - 255   | White dimming    |
| 8  | White adjustment  | 0 - 255   | White adjustment |
| 9  | Color temperature | 0 - 15    | No function      |
|    |                   | 16-35     | R100%,G UP,B0%   |
|    |                   | 36-55     | R DOWN,G100%,B0% |
|    |                   | 56-75     | R0%,G100%,B UP   |
|    |                   | 76-95     | R0%,G DOWN,B100% |
|    |                   | 96-115    | R UP,G0%,B100%   |
|    |                   | 116-135   | R100%,G0%,B DOWN |
|    |                   | 136-155   | R100%,G UP,B UP  |

| CH | Function        | DMX Value | Description                                           |
|----|-----------------|-----------|-------------------------------------------------------|
|    |                 | 156-175   | R DOWN,G DOWN, B 100%                                 |
|    |                 | 176-195   | R100%G100%B100%W100%                                  |
|    |                 | 196-200   | 2800K                                                 |
|    |                 | 201-205   | 3200K                                                 |
|    |                 | 206-210   | 3500K                                                 |
|    |                 | 211-215   | 4000K                                                 |
|    |                 | 216-220   | 4500K                                                 |
|    |                 | 221-225   | 5000K                                                 |
|    |                 | 226-230   | 5500K                                                 |
|    |                 | 231-235   | 6000K                                                 |
|    |                 | 236-240   | 6500K                                                 |
|    |                 | 241-245   | 7000K                                                 |
|    |                 | 246-250   | 7500K                                                 |
|    |                 | 251-255   | 8000K                                                 |
| 10 | Macro color     | 0-9       | No function                                           |
|    |                 | 10-19     | Macro color 1                                         |
|    |                 | 20-29     | Macro color 2                                         |
|    |                 | ....      | ....(10 numbers 1 macro color)                        |
|    |                 | 240-249   | Macro color 24                                        |
|    |                 | 250-255   | Macro color 25                                        |
| 11 | Strobe          | 0-3       | Strobe dimming                                        |
|    |                 |           | Synchronous strobe speed from slow to fast (1Hz-25Hz) |
|    |                 | 204-255   | Random strobe                                         |
| 12 | Dimmer          | 0 - 255   | Dark to bright linear dimming                         |
| 13 | Dimmer adjust   | 0 - 255   | Dimmer adjustment control                             |
| 14 | Pan             | 0 - 255   | Pan control                                           |
| 15 | Pan adjustment  | 0 - 255   | Pan adjustment control                                |
| 16 | Tilt            | 0 - 255   | Tilt control                                          |
| 17 | Tilt adjustment | 0 - 255   | Tilt adjustment control                               |



| CH | Function         | DMX Value | Description                                                                                                   |
|----|------------------|-----------|---------------------------------------------------------------------------------------------------------------|
| 18 | Dimming Mode     | 0 - 49    | Mode -1                                                                                                       |
|    |                  | 50 - 99   | Mode -2                                                                                                       |
|    |                  | 100-149   | Mode -3                                                                                                       |
|    |                  | 150-255   | Mode -4                                                                                                       |
| 19 | Function         | 0-137     | No function                                                                                                   |
|    |                  | 138-149   | PWM output frequency 1K-64K<br>(Within 3 seconds) 1K, 2K, 4K,<br>6K, 8K, 10K, 16K, 20K, 24K, 32K,<br>48K, 64K |
|    |                  | 150-159   | Fast dimming                                                                                                  |
|    |                  | 160-169   | Slow dimming (from fast to slow)                                                                              |
|    |                  | 170-250   | No function                                                                                                   |
|    |                  | 251-255   | Reset within 3s                                                                                               |
| 20 | Zoom             | 0-255     | Zoom                                                                                                          |
| 21 | Lens rotation    | 0-155     | 0~60°                                                                                                         |
|    |                  | 156-205   | Clockwise infinite rotation                                                                                   |
|    |                  | 206-255   | Counterclockwise rotation                                                                                     |
| 22 | Pattern rotation | 0-9       | No function                                                                                                   |
|    |                  | 10-14     | Monochrome dynamic pattern 1                                                                                  |
|    |                  | 15-19     | Monochrome dynamic pattern 2                                                                                  |
|    |                  | .....     | .....(5 numbers 1 pattern)                                                                                    |
|    |                  | 155-159   | Monochrome dynamic pattern 30                                                                                 |
|    |                  | 160-164   | Mixed color dynamic pattern 1                                                                                 |
|    |                  | 165-169   | Mixed color dynamic pattern 2                                                                                 |
|    |                  | .....     | .....(5 numbers 1 pattern)                                                                                    |
|    |                  | 220-224   | Mixed color dynamic pattern 13                                                                                |
|    |                  | 225-229   | Mixed color dynamic pattern 14                                                                                |
|    |                  | 230-234   | Monochrome dynamic pattern 31                                                                                 |
|    |                  | 235-239   | Monochrome dynamic pattern 32                                                                                 |
|    |                  | 240-244   | Monochrome dynamic pattern 33                                                                                 |
|    |                  | 245-249   | Monochrome dynamic pattern 34                                                                                 |

| CH    | Function                     | DMX Value | Description                            |
|-------|------------------------------|-----------|----------------------------------------|
|       |                              | 250-255   | No function                            |
| 23    | Pattern effect speed         | 0-9       | No function                            |
|       |                              | 10-132    | Forward, from fast to slow (with 22CH) |
|       |                              | 133-255   | Reverse, from slow to fast(with 22CH)  |
| 24    | Pattern effect fade          | 0-255     | Pattern effect fade                    |
| 25    | Pattern Back R               | 0-255     | Pattern effect R                       |
| 26    | Pattern Back G               | 0-255     | Pattern effect G                       |
| 27    | Pattern Back B               | 0-255     | Pattern effect B                       |
| 28    | Pattern Back W               | 0-255     | Pattern effect W                       |
| 29    | Pattern dimming              | 0-255     | Pattern 0-100% dimming                 |
| 30    | Back Dimming                 | 0-255     | Background 0-100% dimming              |
| 31    | Pattern change               | 0-255     | Pattern change control                 |
| 32    | Pattern movement             | 0-255     | Pattern movement(with 22CH)            |
| 33    | Prospects strobe             | 0-255     | Prospects strobe                       |
| 34    | Background strobe            | 0-255     | Background strobe                      |
| 35    | Background pattern selection | 0-255     | Background selection                   |
| 36    | LED1 R                       | 0-255     | LED1 R dimming                         |
| 37    | LED1 G                       | 0-255     | LED1 G dimming                         |
| 38    | LED1 B                       | 0-255     | LED1 B dimming                         |
| ..... | .....                        | .....     | .....                                  |
| 90    | LED19 R                      | 0-255     | LED 19 R dimming                       |
| 91    | LED19 G                      | 0-255     | LED19 G dimming                        |

## ► 97CH Mode

| CH | Function | DMX Value | Description |
|----|----------|-----------|-------------|
| 1  | Red      | 0 - 255   | Red dimming |

|    |                   |         |                       |
|----|-------------------|---------|-----------------------|
| 2  | Red adjustment    | 0 - 255 | Red adjustment        |
| 3  | Green             | 0 - 255 | Green dimming         |
| 4  | Green adjustment  | 0 - 255 | Green adjustment      |
| 5  | Blue              | 0 - 255 | Blue dimming          |
| 6  | Blue adjustment   | 0 - 255 | Blue dimming          |
| 7  | White             | 0 - 255 | White dimming         |
| 8  | White adjustment  | 0 - 255 | White adjustment      |
| 9  | Color temperature | 0 -15   | No function           |
|    |                   | 16-35   | R100%,G UP,B0%        |
|    |                   | 36-55   | R DOWN,G100%,B0%      |
|    |                   | 56-75   | R0%,G100%,B UP        |
|    |                   | 76-95   | R0%,G DOWN,B100%      |
|    |                   | 96-115  | R UP,G0%,B100%        |
|    |                   | 116-135 | R100%,G0%,B DOWN      |
|    |                   | 136-155 | R100%,G UP,B UP       |
|    |                   | 156-175 | R DOWN,G DOWN, B 100% |
|    |                   | 176-195 | R100%G100%B100%W100%  |
|    |                   | 196-200 | 2800K                 |
|    |                   | 201-205 | 3200K                 |
|    |                   | 206-210 | 3500K                 |
|    |                   | 211-215 | 4000K                 |
|    |                   | 216-220 | 4500K                 |
|    |                   | 221-225 | 5000K                 |
|    |                   | 226-230 | 5500K                 |
|    |                   | 231-235 | 6000K                 |
|    |                   | 236-240 | 6500K                 |
|    |                   | 241-245 | 7000K                 |
|    |                   | 246-250 | 7500K                 |
|    |                   | 251-255 | 8000K                 |
| 10 | Macro color       | 0-9     | No function           |

|    |                 |         |                                                                                                      |
|----|-----------------|---------|------------------------------------------------------------------------------------------------------|
|    |                 | 10-19   | Macro color 1                                                                                        |
|    |                 | 20-29   | Macro color 2                                                                                        |
|    |                 | ....    | ....(10 numbers 1 macro color)                                                                       |
|    |                 | 240-249 | Macro color 24                                                                                       |
|    |                 | 250-255 | Macro color 25                                                                                       |
| 11 | Strobe          | 0-3     | Strobe dimming                                                                                       |
|    |                 |         | Synchronous strobe speed from slow to fast (1Hz-25Hz)                                                |
|    |                 | 204-255 | Random strobe                                                                                        |
| 12 | Dimmer          | 0 - 255 | Dark to bright linear dimming                                                                        |
| 13 | Dimmer adjust   | 0 - 255 | Dimmer adjustment control                                                                            |
| 14 | Pan             | 0 - 255 | Pan control                                                                                          |
| 15 | Pan adjustment  | 0 - 255 | Pan adjustment control                                                                               |
| 16 | Tilt            | 0 - 255 | Tilt control                                                                                         |
| 17 | Tilt adjustment | 0 - 255 | Tilt adjustment control                                                                              |
| 18 | Dimming Mode    | 0 - 49  | Mode -1                                                                                              |
|    |                 | 50 - 99 | Mode -2                                                                                              |
|    |                 | 100-149 | Mode -3                                                                                              |
|    |                 | 150-255 | Mode -4                                                                                              |
| 19 | Function        | 0-137   | No function                                                                                          |
|    |                 | 138-149 | PWM output frequency 1K-64K (Within 3 seconds) 1K, 2K, 4K, 6K, 8K, 10K, 16K, 20K, 24K, 32K, 48K, 64K |
|    |                 | 150-159 | Fast dimming                                                                                         |
|    |                 | 160-169 | Slow dimming (from fast to slow)                                                                     |
|    |                 | 170-250 | No function                                                                                          |
|    |                 | 251-255 | Reset within 3s                                                                                      |
| 20 | Zoom            | 0-255   | Zoom                                                                                                 |
| 21 | Lens rotation   | 0-155   | 0~60°                                                                                                |
|    |                 | 156-205 | Clockwise infinite rotation                                                                          |
|    |                 | 206-255 | Counterclockwise rotation                                                                            |

|       |                 |       |                 |
|-------|-----------------|-------|-----------------|
| 22    | R1 LED dimming  | 0-255 | R1 LED dimming  |
| 23    | G1 LED dimming  | 0-255 | G1 LED dimming  |
| 24    | B1 LED dimming  | 0-255 | B1 LED dimming  |
| 25    | W1 LED dimming  | 0-255 | W1 LED dimming  |
| ..... | .....           | ..... | .....           |
| 94    | R19 LED dimming | 0-255 | R19 LED dimming |
| 95    | G19LED dimming  | 0-255 | G19 LED dimming |
| 96    | B19LED dimming  | 0-255 | B19 LED dimming |
| 97    | W19LED dimming  | 0-255 | W19 LED dimming |

## ► 99CH Mode

| CH | Function        | DMX Value | Description                                           |
|----|-----------------|-----------|-------------------------------------------------------|
| 1  | Pan             | 0 - 255   | 0-540°                                                |
| 2  | Pan adjustment  | 0 - 255   | 16bit adjustment                                      |
| 3  | Tilt            | 0 - 255   | 0-205°                                                |
| 4  | Tilt adjustment | 0 - 255   | 16bit adjustment                                      |
| 5  | Pan/Tilt speed  | 0 - 255   | Speed from fast to slow                               |
| 6  | Zoom            | 0 - 255   | Angle from small to large                             |
| 7  | Lens rotation   | 0-155     | 0~60°                                                 |
|    |                 | 156-205   | Clockwise infinite rotation from fast to slow         |
|    |                 | 206-255   | Counterclockwise rotation from slow to fast           |
| 8  | Dimmer          | 0 - 255   | Dark to bright linear dimming                         |
| 9  | Strobe          | 0-3       | Strobe dimming                                        |
|    |                 | 4-203     | Synchronous strobe speed from slow to fast (1Hz-25Hz) |
|    |                 | 204-255   | Random strobe                                         |
| 10 | R dimming       | 0-255     | Red dimming                                           |

| CH | Function          | DMX Value | Description             |
|----|-------------------|-----------|-------------------------|
| 11 | G dimming         | 0-255     | Green dimming           |
| 12 | B dimming         | 0-255     | Blue dimming            |
| 13 | W dimming         | 0-255     | White dimming           |
| 14 | Color temperature | 0 -15     | No function             |
|    |                   | 16-35     | R100%,G UP,B0%          |
|    |                   | 36-55     | R DOWN,G100%,B0%        |
|    |                   | 56-75     | R0%,G100%,B UP          |
|    |                   | 76-95     | R0%,G DOWN,B100%        |
|    |                   | 96-115    | R UP,G0%,B100%          |
|    |                   | 116-135   | R100%,G0%,B DOWN        |
|    |                   | 136-155   | R100%,G UP,B UP         |
|    |                   | 156-175   | R DOWN,G DOWN, B 100%   |
|    |                   | 176-195   | R100%,G100%,B100%,W100% |
|    |                   | 196-200   | 2800K                   |
|    |                   | 201-205   | 3200K                   |
|    |                   | 206-210   | 3500K                   |
|    |                   | 211-215   | 4000K                   |
|    |                   | 216-220   | 4500K                   |
|    |                   | 221-225   | 5000K                   |
|    |                   | 226-230   | 5500K                   |
|    |                   | 231-235   | 6000K                   |
|    |                   | 236-240   | 6500K                   |
|    |                   | 241-245   | 7000K                   |
|    |                   | 246-250   | 7500K                   |
|    |                   | 251-255   | 8000K                   |
| 15 | Macro color       | 0-9       | No function             |

| CH | Function        | DMX Value | Description                    |
|----|-----------------|-----------|--------------------------------|
|    |                 | 10-19     | Macro color 1                  |
|    |                 | 20-29     | Macro color 2                  |
|    |                 | ....      | ....(10 numbers 1 macro color) |
|    |                 | 240-249   | Macro color 24                 |
|    |                 | 250-255   | Macro color 25                 |
| 16 | Static pattern  | 0-9       | No function                    |
|    |                 | 10-12     | Monochrome function pattern 1  |
|    |                 | 13-15     | Monochrome function pattern 2  |
|    |                 | .....     | .....(3 numbers 1 pattern)     |
|    |                 | 208-210   | Monochrome function pattern 67 |
|    |                 | 211-213   | Mixed color pattern 1          |
|    |                 | 214-216   | Mixed color pattern 2          |
|    |                 | ....      | ....(3 numbers 1 pattern)      |
|    |                 | 250-252   | Mixed color pattern 14         |
|    |                 | 253-255   | Mixed color pattern 15         |
| 17 | Dynamic pattern | 0-9       | No function                    |
|    |                 | 10-14     | Monochrome dynamic pattern 1   |
|    |                 | 15-19     | Monochrome dynamic pattern 2   |
|    |                 | .....     | .....(5 numbers 1 pattern)     |
|    |                 | 155-159   | Monochrome dynamic pattern 30  |
|    |                 | 160-164   | Mixed color dynamic pattern 1  |
|    |                 | 165-169   | Mixed color dynamic pattern 2  |
|    |                 | .....     | .....(5 numbers 1 pattern)     |
|    |                 | 220-224   | Mixed color dynamic pattern 13 |
|    |                 | 225-229   | Mixed color dynamic pattern 14 |
|    |                 | 230-234   | Monochrome dynamic pattern 31  |
|    |                 | 235-239   | Monochrome dynamic pattern 32  |
|    |                 | 240-244   | Monochrome dynamic pattern 33  |
|    |                 | 245-249   | Monochrome dynamic pattern 34  |

| CH    | Function              | DMX Value | Description                                                                                          |
|-------|-----------------------|-----------|------------------------------------------------------------------------------------------------------|
|       |                       | 250-255   | No function                                                                                          |
| 18    | Dynamic pattern speed | 0-127     | Forward, from fast to slow (with 17CH)                                                               |
|       |                       | 128-255   | Reverse, from slow to fast(with 17CH)                                                                |
| 19    | Back color R          | 0-255     | Dark to bright linear dimming                                                                        |
| 20    | Back color G          | 0-255     | Dark to bright linear dimming                                                                        |
| 21    | Back color B          | 0-255     | Dark to bright linear dimming                                                                        |
| 22    | Back color W          | 0-255     | Dark to bright linear dimming                                                                        |
| 23    | Function              | 0-137     | No function                                                                                          |
|       |                       | 138-149   | PWM output frequency 1K-64K (Within 3 seconds) 1K, 2K, 4K, 6K, 8K, 10K, 16K, 20K, 24K, 32K, 48K, 64K |
|       |                       | 150-159   | Fast dimming                                                                                         |
|       |                       | 160-169   | Slow dimming (from fast to slow)                                                                     |
|       |                       | 170-250   | No function                                                                                          |
|       |                       | 251-255   | Reset within 3s                                                                                      |
| 24    | R1 LED dimmer         | 0-255     | R1 LED dimming                                                                                       |
| 25    | G1LED dimmer          | 0-255     | G1 LED dimming                                                                                       |
| 26    | B1 LED dimmer         | 0-255     | B1 LED dimming                                                                                       |
| 27    | W1LED dimmer          | 0-255     | W1 LED dimming                                                                                       |
| ..... | .....                 | .....     | .....                                                                                                |
| 96    | R19 LED dimmer        | 0-255     | R19 LED dimming                                                                                      |
| 97    | G19 LED dimmer        | 0-255     | G19 LED dimming                                                                                      |
| 98    | B19 LED dimmer        | 0-255     | B19 LED dimming                                                                                      |

## ► 76CH Mode(DMX512 + ArtNet Mode)

| CH                    | Function | DMX Value | Description |
|-----------------------|----------|-----------|-------------|
| <b>DMX512 control</b> |          |           |             |
| 1                     | Pan      | 0-255     | 0-540°      |



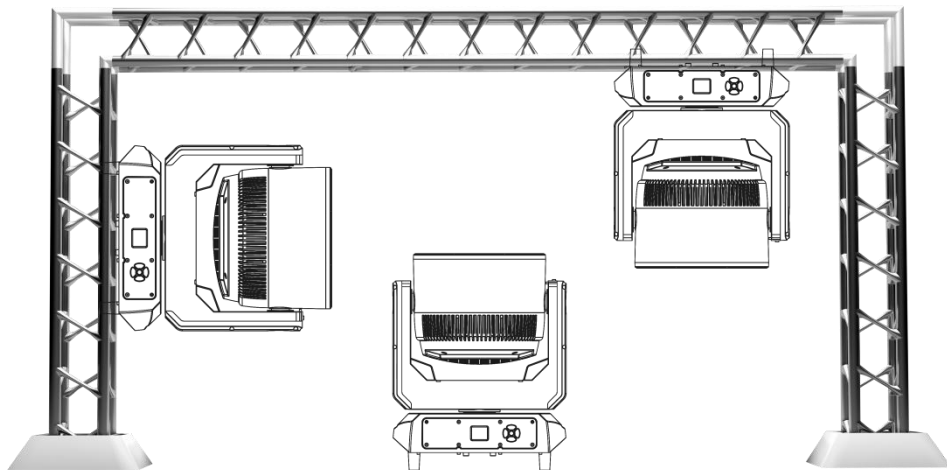
|                |                 |         |                                                                                                         |
|----------------|-----------------|---------|---------------------------------------------------------------------------------------------------------|
| 2              | Pan adjustment  | 0-255   | 16 bit adjustment                                                                                       |
| 3              | Tilt            | 0-255   | 0-205°                                                                                                  |
| 4              | Tilt adjustment | 0-255   | 16 bit adjustment                                                                                       |
| 5              | Pan/Tilt speed  | 0-255   | Speed from fast to slow                                                                                 |
| 6              | Zoom            | 0-255   | From narrow to wide                                                                                     |
| 7              | Lens rotation   | 0-155   | 0~60°                                                                                                   |
|                |                 | 156-205 | Clockwise infinite rotation from fast to slow                                                           |
|                |                 | 206-255 | Counterclockwise infinite rotation from slow to fast                                                    |
| 8              | Dimmer          | 0 - 255 | From dark to bright                                                                                     |
| 9              | Dimming Mode    | 0-49    | Linear dimming                                                                                          |
|                |                 | 50-99   | Square rate dimming                                                                                     |
|                |                 | 100-149 | Inverse square rate dimming                                                                             |
|                |                 | 150-255 | S-curve dimming                                                                                         |
| 10             | Reset           | 0-137   | No function                                                                                             |
|                |                 | 138-149 | PWM output frequency 1K-64K<br>(Within 3 seconds) 1K, 2K, 4K, 6K, 8K, 10K, 16K, 20K, 24K, 32K, 48K, 64K |
|                |                 | 150-159 | Fast dimming                                                                                            |
|                |                 | 160-169 | Slow dimming (from fast to slow)                                                                        |
|                |                 | 170-250 | No function                                                                                             |
|                |                 | 251-255 | Reset within 3s                                                                                         |
| 11             | Strobe          | 0-3     | Strobe dimming                                                                                          |
|                |                 | 4-203   | Synchronous strobe speed from slow to fast (1Hz-25Hz)                                                   |
|                |                 | 204-255 | Random strobe                                                                                           |
| ArtNet control |                 |         |                                                                                                         |
| 1              | R1 LED dimmer   | 0-255   | R1 LED dimming                                                                                          |
| 2              | G1LED dimmer    | 0-255   | G1 LED dimming                                                                                          |
| 3              | B1 LED dimmer   | 0-255   | B1 LED dimming                                                                                          |
| 4              | W1LED dimmer    | 0-255   | W1 LED dimming                                                                                          |

| ..... | .....             | ..... | .....           |
|-------|-------------------|-------|-----------------|
| 73    | R19 LED dimmer    | 0-255 | R19 LED dimming |
| 74    | G19 LED dimmer    | 0-255 | G19 LED dimming |
| 75    | B19 LED dimmer    | 0-255 | B19 LED dimming |
| 76    | W19 LED<br>dimmer | 0-255 | W19 LED dimming |

## 8. Mounting

When installing the unit, the trussing or area of installation must be able to hold 10 times the weight without any deformation. When installing the unit must be secured with a secondary safety attachment, e.g. an appropriate safety cable. Never stand directly under the facility while mounting, uninstalling or repairing facilities.

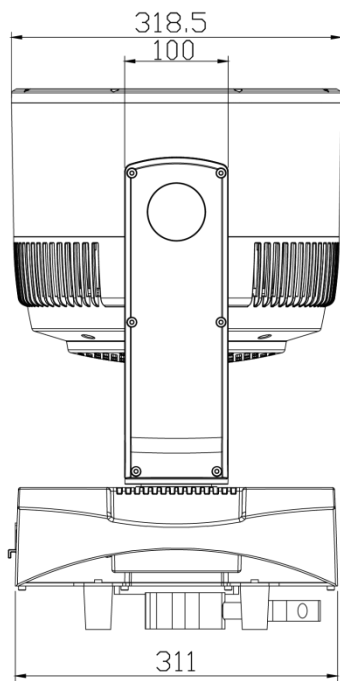
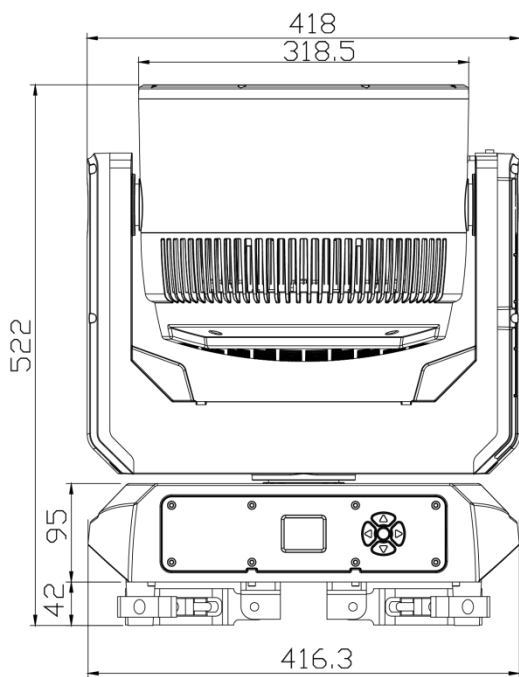
High-altitude mounting requires for extensive experience, including working load limits calculating , installation material, and periodic safety check of installation materials and facilities. If you're lack of mentioned qualifications, do not attempt the installation yourself. These installation should be checked by a skilled person annually.



1960BW-4 works properly in above different mounting, hanging upside-down from a ceiling, sideways on trussing, or set on smooth horizontal surface. Be sure this facility is at least 1m (3.5ft) away from flammable materials (decoration etc.). Always use and install the safety cable to prevent accidental damage or injury from the facility failure. Never use handles for secondary attachment.

**NOTICE:** The suitable environment temperature of the facility is from  $-10^{\circ}\text{C}$  to  $45^{\circ}\text{C}$ . Do not place this facility in an environment where the temperatures are under or above the temperatures stated. This will help the fixture run at its best and extend the lifetime.

## 9. Product Size



## 10. Attention

1. When the facility is powered on, please avoid looking directly at the facility.
2. When assembling/ replacing LED, be sure to cut off the main power of facilities before opening the cover upon the LED board.

## 11. Trouble Shooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

### **A. The unit does not work, no light and the fan does not work**

1. Check the status of power connection and fuse.
2. Check the voltage.
3. Check the power indicator.

### **B. No response to DMX controller**

1. If the display screen flashes, check the DMX signal connector and signal line whether the connection is correct.
2. If the display screen does not flash, but no response to channel control, check whether the address code or channel setting is correct.
3. If the DMX signal transmission is intermittent, check if the XLR and DMX cables are in good condition.
4. Try using another controller.
5. Check if the DMX cables is too close to the high-voltage wire, which may damage or interfere with the signal circuit.
6. The facility has not completed the self-check.

## C. One of the channels is not working well

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition.

## 12. Fixture Cleaning

The lens and diffuser should be clean frequently to get better light effect. Wipe frequency according to the environment. Humidity, excessive smoke, and dirty environment will make lens dusty.

- Use soft cloth and special glass cleaner.
- Wipe lens surface at least every 30 days.
- Use vacuum cleaners or air guns to clean the interior structure of the facility, at least twice a year.



Warning:

To avoid the danger of lighting strikes and fire, please do not place the facility in a humid environment. Do not disassemble it without permission, otherwise, the manufacturer will not provide warranty. If the facility fails, please contact the manufacturer first.

## Product Warranty Card

Product: IP65 19\*60W Bee Eye Moving Head

Model NO.: 1960BW-4

Manufacture Date:

User:

Purchase Date:

Manufacturer:

Sales Store:

Address:

ATTN.:

ATTN.:

Phone:

Phone:

Note: The above blank must be filled in and sealed by the end user or sales point, otherwise no warranty will be provided. (Below please check the warranty period and terms)

Warranty Period: This facility is warranted for 2 years from the date of purchase.

Warranty Terms:

1. Except for man-made damage and natural disasters
2. If the facility fails to function properly during the warranty period, please contact our after service department or our local distributor directly.
  - 1) Fail to present a valid warranty card.
  - 2) Omissions, alterations, and trade sales names on the warranty card.
  - 3) Failures and damage caused by force majeure.
  - 4) Failures and damage caused during transportation and handling.
  - 5) Failures and damage caused by failure to follow the instructions for use.
  - 6) Failures and damage caused by disassembly, repair, and modification of the product without the manufacturer's authorization or by non-professionals.
  - 7) Failures caused by the use of accessories not approved by the factory or not matched by the factory.

▲ Thank you for reading this manual. Please keep it for future reference.