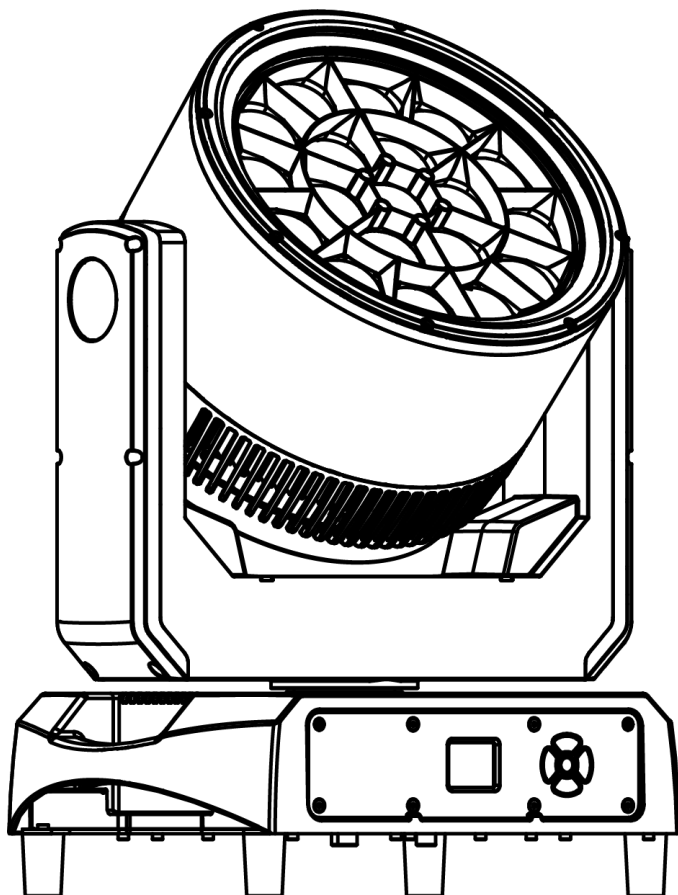


# 1960BW-4

## 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



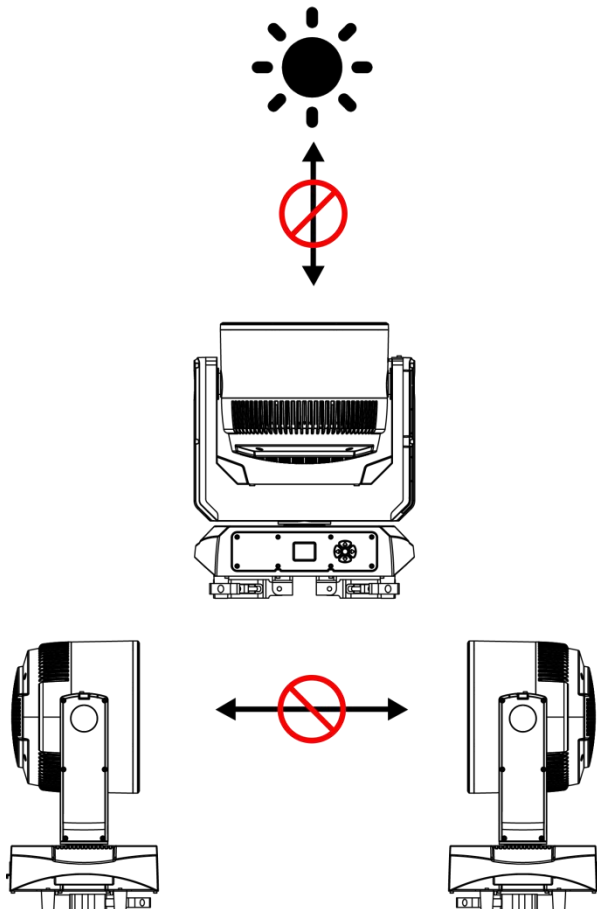
Please read this manual carefully, which includes important information on installation, use and maintenance.

## 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.

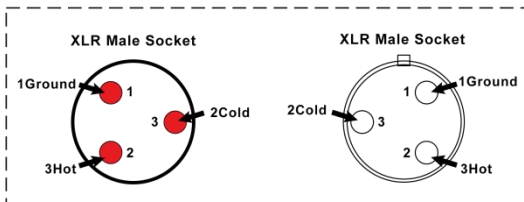
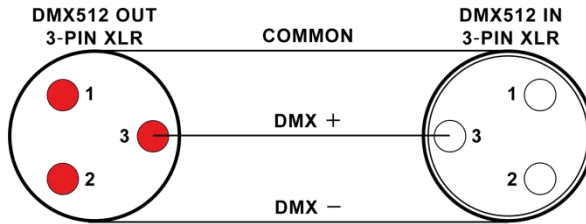
The facility must be installed by professionals, and keep it far away from fire, walking road, and easy touched place.

## 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 DMX+ArtNet Channel:11+76
Protection Rating	IP65
Display	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 (110V, 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



XLR Pin Configuration
pin 1=Ground
pin 2=Data Compliment (negative)
pin 3=Data true (positive)

**Pin1: Ground**

**pin2: Negative**

**pin3: Positive**

## 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.

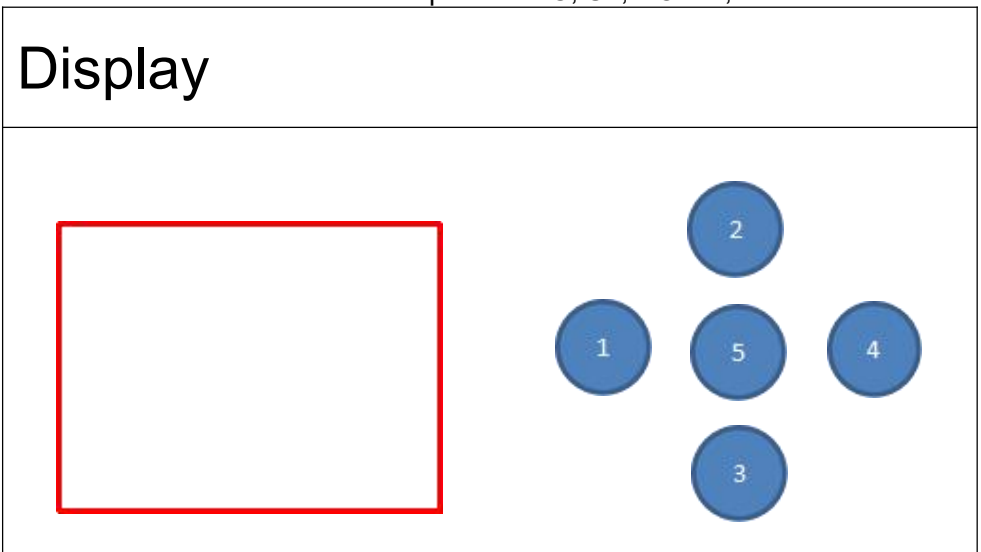
## Operation method

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

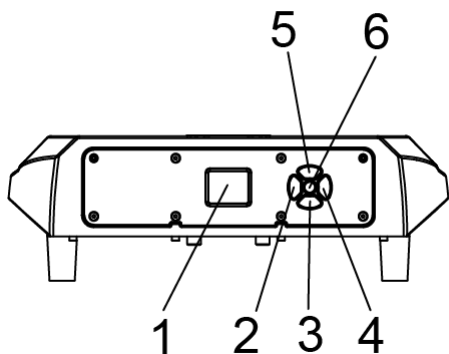
## 4. Display

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

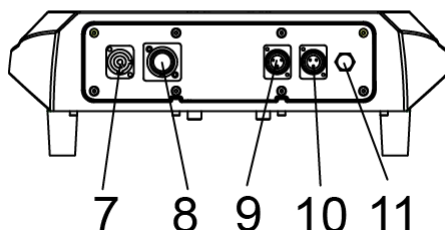


Please press the "ESC" to exit or return to the previous menu, press "UP" or "DOWN" to select the upper and lower menus or adjust the values, and press "ENTER" to confirm.

## 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

1 previous-MENU		2 UP	3 DOWN	4 Lower-MENU	5 ENTER
First level menu	Secondary menu	Third level menu		Note	
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 2.Chinese		Language selection	
	4.No Signal	1.Black Out 2.Hold			

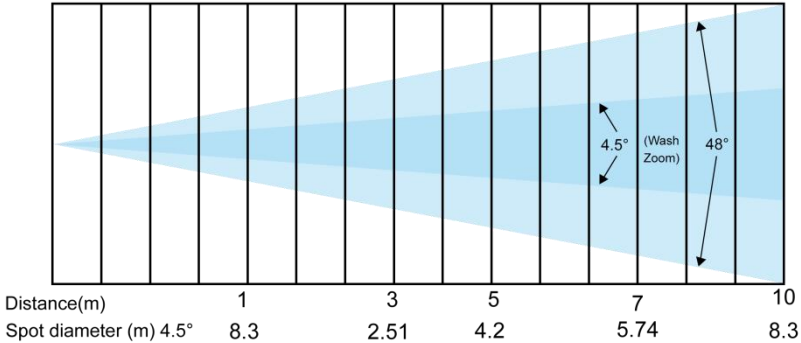
	5.Fan Set	1.Auto 2.Low 3.High	
	6.ArtNet Set	1.ArtNet Enable: 1.ON 2.OFF	This setting is available when there is network function
		2.Universe:0-255	
		3.IP Mode: A.2.X.X.X Auto B.10.X.X.X Auto C.Customer	
		4.Custom IP:192.168.000.0 01	
		5.Sub Net Mask: 255.000.000.000	
	7.Reset	1.Yes	Reset
		2.No	
	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; 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 °C		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

### Beam Angle = 4.5°

R lux	270000	30000	10800	5510	2700
G lux	510000	56666	20400	10408	5100
B lux	94000	10444	3760	1918	940
W lux	737500	81944	29500	15051	7375
4in1 lux	1392500	154722	55700	28418	13925



## 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

CH	Function	DMX Value	Description
		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
		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

CH	Function	DMX Value	Description
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

## ► 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

CH	Function	DMX Value	Description
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
		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		

CH	Function	DMX Value	Description
		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
		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

CH	Function	DMX Value	Description
		.....	.....(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
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

## ►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

<b>CH</b>	<b>Function</b>	<b>DMX Value</b>	<b>Description</b>
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		

CH	Function	DMX Value	Description
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)
		170-250	No function
		251-255	Reset within 3s
20	Zoom	0 - 255	Zoom
21	Lens rotation	0 - 155	0~60°

CH	Function	DMX Value	Description
		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
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

CH	Function	DMX Value	Description
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
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		

<b>CH</b>	<b>Function</b>	<b>DMX Value</b>	<b>Description</b>
		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)
		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

CH	Function	DMX Value	Description
		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	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
..... .	..... .	..... .	..... .
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

<b>CH</b>	<b>Function</b>	<b>DMX Value</b>	<b>Description</b>
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

CH	Function	DMX Value	Description
		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

CH	Function	DMX Value	Description
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
		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

CH	Function	DMX Value	Description
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

<b>CH</b>	<b>Function</b>	<b>DMX Value</b>	<b>Description</b>
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
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%

CH	Function	DMX Value	Description
		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
		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

CH	Function	DMX Value	Description
		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
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

CH	Function	DMX Value	Description
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)

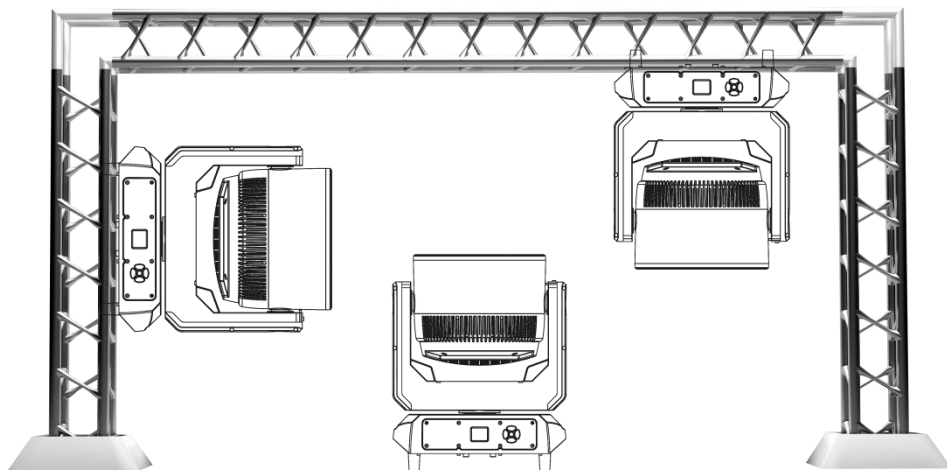
CH	Function	DMX Value	Description
<b>DMX512 signal control</b>			
1	Pan	0-255	0-540°
2	Pan adjustment	0-255	16 bit adjustment
3	Tilt	0-255	0-205°
4	Tilt adjustment	0-255	16 bit adjustment
5	Pan/Tilt speed	0-255	Speed from fast to slow
6	Zoom	0-255	From narrow to wide
7	Lens rotation	0-155	0~60°
		156-205	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 (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
<b>ArtNet signal control</b>			
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 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.

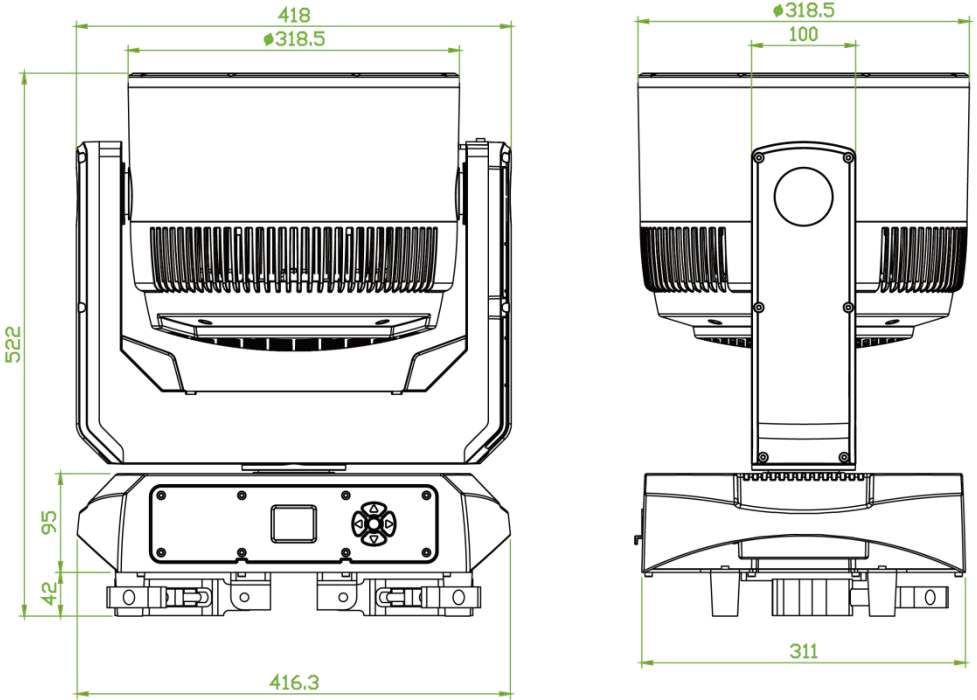
High-altitude mounting requires for extensive experience, including working load limits calculating , installation material, and periodic safety check of installation materials and facilities. If you're lack of mentioned qualifications, do not attempt the installation yourself. These installation should 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 12m (40ft) 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 -20° C to 55° 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.
  1. If the display screen does not flash, but no response to channel control, check whether the address code or channel setting is correct.
    1. If the DMX signal transmission is intermittent, check if the XLR and DMX cables are in good condition.
    2. Try using another controller.
    3. 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 lightning 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.**