# IP66 Beam 380W Moving Head

# **USER MANUAL**

## (TFT DISPLAY)



## **Selling Points:**

1. High protection level: IP66, not afraid of heavy rain impact, can completely prevent dust from entering.

2. Lightweight: only 21KG.

4. Magnetic coding positioning: fast and accurate without losing step.

**3.** Good heat dissipation: air cooling + full die-cast magnesium alloy + radiator heat dissipation, extending the life of the lamp.

4. Strong corrosion resistance: passed 500 hours of salt spray test, suitable for seaside, desert and other environments.

5. High shock absorption: not afraid of collision and impact caused by mobile performance transportation.

Optics:

Light source: 380W/420 long-life gas discharge bulb Color temperature: 7800K Diameter of light outlet: 160mm Illumination: 230000Lux@15m Light source life: 3000 hours Beam angle: 1.6°

Effect: Horizontal scan: 540° Vertical scan: 270° Color system: One color wheel, 13 colors plus white light Gobo system: One fixed gobo plate, 17 gobos Focus: Electric focus Atomization: Atomized glass Strobe: 0~20Hz Dimming: 0~100% strobe dimming Prism: One 8-prism, one honeycomb prism, can be superimposed Control: Control mode: DMX512 /RDM DMX channel: 18CH Display: Touch control interface, can remotely control the bulb switch function, display fan speed, bulb usage time

Power supply: Input voltage and frequency: 90~240V, 50/60Hz Power connection: Waterproof power connector input/output Signal connection: 3 pin or 5 pin waterproof plug socket Total power: 550W Power factor: 0.95 Working environment: -20°C~45°C

Physical characteristics: Size: 41.5\*24\*70.6CM Weight: 21kg Cooling system: air cooling + die-cast magnesium alloy + radiator Casing: magnesium alloy casing, black outdoor paint Protection level: IP66 Standard configuration: folding integrated hook, power cable 1PC, DMX cable 1PC, safety rope 1PC IP rating: IP66

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## **Chapter 1 Installation and attention**

## 1. Maintenance

• To reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.

- Intermittently using will extend this item's service life.
- Please clear the fan, fan net, and optical lens in order to keep good work state.
- Do not use the alcohol or any other organic solvent to wipe the shell.

## 2. Statement

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

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

## 3. Safety Precaution

• In order to guarantee the product's life, please don't put it in the damp places or even the environment over 60 degress.

- Always mount this unit in safe and stable matter.
- Install or dismantle should operate by professional engineer.

• Using lamp, the change rate of power voltage should be within  $\pm 10\%$ , If the voltage is too high, it will shorten the light's life; If it's not enough, will influence the effect.

• Please restart it 20 minutes later after turning off light, until full-cooling. Frequent switching will reduce the life span of lamps and bulbs; intermittent using will improve the life of bulbs and lamps.

• In order to make sure the product is used well, please read the Manual carefully.

## 4. Cable connection (DMX)

Use a cable conforming to specifications EIA RS-485: 2-pole twisted, shielded, 1200hm characteristic impedance, 22-24 AWG, low capacity. Do not use microphone cable or other cable with characteristics differing from those specified. The end connections must be made using XLR type 3 or 5-pin male/female connectors. A terminating plug must be inserted into the last projector with a resistance of 1200hm (minimum 1/4 W) between terminals 2 and 3.

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



Figure 1 DMX Cable connection

## 5. Rigging (Optional)

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

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

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

• Check if rigging clamp (not including the one inside) damaged or not? If stand ten times weight as the equipment. Make sure the architecture can stand ten times weight as all the equipments, clamps, wirings and other additional fixtures.

• Screws for clamping must be fixed firmly. Take one M12 screw (Grade 8.8 or higher) to clamp bracket, and then screw the nuts.

• Level the two hanging points at the bottom of clamp. Insert fastener to the bottom, lock the two levers by 1/4 rotating clockwise; then install another clamp.

• Install on safety string which stands at least ten times weight as equipment. Terminal of the accessory is designed for clamps.

• Make sure pan/tilt lock unlocked or not. Keep the distance more than 1M from equipment to flammable material or lighting source.



Figure 2 Installation

## 6. **RDM Note**

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

• To use console or host device that supports RDM host protocol.

• Use bidirectional signal amplifier, traditional one-way signal amplifier is not suitable for RDM protocol, because the RMD protocol needs feedback data, the use of one-way amplifier will block the return of data, resulting in no search fixture;

• All fixture must be set to DMX mode to ensure only one host on the cable.

• A 120 ohm impedance matching resistor must be inserted between terminals 2 and 3 of the terminal plug. When the signal line is longer, reducing the signal reflection will make the differential signal more stable and beneficial to the quality of communication.

• When the fixture appears to accept DMX control, but can not been search by RDM host, first check the signal amplifier, and then check whether the signal line 2, 3 lines have bad contact.

## Chapter 2 Panel operation

## 1. Brief

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

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

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



Figure 3 Panel diagram

## 2. Operation

## 1. **Operate fixture with touch or encoder/button**

• The left area is TFT Displayer and touch(product which support touch), chick item or value with finger will to complete operation of set light setting(parameters) or view light state.

• The area on the right hand side is rotary encoder with button or key, As auxiliary input interface, if fixture disable touch function, the encoder/key can been choose to set or view the item, and then press the encoder button/key to confirm the selection, rotary encoder or push key again set the parameter value, finally, Press encoder button/key one again to save value or setting.

### 2. Parameter value setting

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



Modify value : Can quickly modify value via pull the slider to the desired position, or click the button of 'up' or 'down' whit finger on the right side to set the exact desired value, another way is roll encoder on the right hand side of panel.

**Apply value:** When Value had been modified, Then press the bottom of 'apply' in the left corner to apply to the light, but hav't saved;

Save Value: Any time, click on the lower right corner of the "OK" button, the setting will been saved into internal memory.

#### 3. **Boolean parameter setting**

when the selected parameters is a Boolean value (such as ON or OFF), can • directly modify setting by chick corresponding item, the setting will been saved right now.

• When the parameter is a key item, chick corresponding item, a dialog shown in Figure 5 will been popup ask for the confirm. Chick 'sure' to confirm.



OFF

010

0:00

Figure 6 Parameter menu

## 5. Anti wrong touch operation of key

• After a period of time, the display screen will enter the key anti-false touch lock interface, and press the corresponding four buttons in turn to exit the interface, as shown in Figure 7-1 below.



• As shown in Figure 7-2, when the corresponding button is pressed, the red icon of the corresponding button will turn black, then the red logo points to the next button position, and the four corresponding buttons can be pressed in turn to exit the anti-false touch interface. When the button is pressed, the corresponding position button icon is still red, which means that the button in the wrong position is pressed.

• After power-on, when editing the lamp parameters, it will trigger to enter the anti-false touch interface, but browsing the parameters will not trigger the entry into the anti-false touch interface; When the "lock screen" function is turned on, after not operating the luminaire display panel every period of time, editing the luminaire parameters will enter the anti-false touch interface; When the "lock screen" function is turned off, only after the power is re-energized, editing the lamp parameters will enter the anti-false touch interface, the anti-false touch interface will no longer enter the anti-false touch interface during the current power-on cycle.

• "Lock screen" function switch. In order to prevent the "lock screen" function from being turned off due to accidental touch, when the "lock screen" function is turned on, pressing the confirmation button for the "lock screen" option will enter the anti-false touch interface, which will prompt that the "lock screen function" will be turned off; When the Lock Screen feature is turned off, you can turn it on directly.

## 3. Operation and parameter instruction

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

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

## 1. DMX Address setting

Enter page show in Figure6-1, can set fixture DMX address, channel mode and so on.



Figure 6-1 Parameter menu

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

• Select " Prev " or "Next", the fixture will be based on the current address and channel mode, automatically calculate the next or last address, make address setting can quickly;

• Click on the address value, you can enter the numeric editing window, where you can set any valid address, fixture system automatically get the current number of channels, automatically filter the unusable address (512 - the current number of channels).

• Fixture support RDM protocol, remote address can be set through RDM. Provide one buttons:

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

•

### 2. Fixture operating mode setting



Figure 6-2 Parameter menu

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

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

Scene mode applies to a single or a small number of fixture, just output a fixed scene, or need to run a simple program, you no need connect to the console, in the scene page can be edited.

If the light source is lamp, wait for 10 minutes before turning off the lamp.

### 3. Set display

	×
语言	English
Screen saver	OFF
Screen Rot	Reverse
DMX Indicate	Mode3
Screen Light	010

### Figure 6-3 Parameter menu

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

	display langua	age settings		
Language	English	English display		
	Chinese	Chinese display		
	Set screen 30 seconds without operation, the screen's display content or method.			
	OFF	Keep the last operation page		
Screen	Mode1	Black		
saver	Madal	Black screen, showing the address code of the current fixture in the		
	Widde2	lower left corner.		
	Mode3	Display trademark information, address code and operation mode.		
	Set the display direction of the screen.			
Screen Rot	OFF	No reverse display		
	ON	Reverse display		
	Set the indica	tion mode of DMX signal indicator.		
DMX	Mode1	When signal is bright, no signal is off.		
Indicate	Mode2	When signal is off, no signal is bright.		
	Mode3	When signal is flash, no signal is off.		
Screen	Set the screen backlight for 10 seconds without operation			
Lihgt	1~10	10		

### DISPLAY SETTING

### 4. Scene

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

Scene	×
[Scene Select]	1
[Scene Time]	0.0s
01. Strobe	255
02.Dimmer	254
03.Colour	000
04.Rot Gobo	000

Figure 6-4 Parameter menu

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

SCENE MODE

Scene	Select the current operation scenario.			
Select	1~10	The 10 scenes sets the format		
Saama	Sets the retention time of the current scene when it is automatic, unit in 0.1 seconds.			
Time	0	The current scene is not output in automatic scene output.		
Time	1-255	01s-25.5s		
1. PAN	0-255			
	0-255	Set up the data of each channel, and the contents and order of the		
	0-255	display are one-to-one correspondence with the channel list		
N.	0-255	fixture.		
Function	0 200			

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

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

### 5. Set light run parameter



Figure 6-5 Parameter menu

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

### ADVANCED SETTING

	Set the rotation direction of DAN		
	Set the rota	lion direction of PAN	
Pan Invert	OFF		
	ON		
	Set the rotat	tion direction of TILT	
Tilt Invert	OFF		
	ON		
	Setting up f	ixture to detect XY lost step and correct	
D/T Deatify	OFF	Uncorrected position after out of step	
P/1 Rectify	ON	After losing step, the position is automatically corrected and the out of	
	ON	step fault is recorded.	
Dam Officiat	Setting the	zero point of the PAN of the fixture	
Pan Oliset	4-150		
Tilt Offaat	Setting the zero point of the TILT of the fixture		
The Offset	4-48		
	When the fi	xture is not equipped with DMX signal, the output state of the fixture	
Data hald	OFF	No signal, so the motor and light source return to the position and	
Data noiu		state when reset is completed.	
	ON	No signal, keep the last frame DMX data output.	
	(lamp light	source) Set the way to first open the lamp after power up	
	Power on	Turn on the lamp at power up and reset the lamp after 30 seconds.	
Lamp mode	After	Reset the fixture after 3 seconds when power-on, and turn on the lamp	
	reset	after reset.	
	Manual	After reset, manually turn on the lamp through the menu or console.	
Reset	Reset fixture		
Factory	Pop up the confirmation box, select "SURE", and return the lamp parameters to the		
Setting	factory settings.		

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

When the fixture can not calibrate the position, please check whether the "P/T Rectify" is turned off.

When the signal is unplugged, check the Data Hold setting first if the position of the fixture is not output as expected.

When setting the XY offset, after setting up, please control XY with the maximum stroke first to check that XY will not bump into the positioning rod or shell.

Status	×
Stepper info	
Error Logging	
Fixture Status	
Version	C6. 1. 0
Light time	0:00
Total time	2:59

Figure 6-6 Parameter menu

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

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

STATUS INFORMATION

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

## Chapter 3 Channel description

## 1. Channel table

# Note: the channel tables of different lamps are different. The following channel tables are for reference only

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

CHANNEL TABLE

LIST-1	NAME	VALUE	BRIEF
[CH1]	Colour	VILOE	
	Colour	0-4	White
		5-9	White+colour1
		10-13	Colour1
		14-18	Colour1+Colour2
		19-22	Colour?
		23-27	Colour2+Colour3
		28-31	Colour3
		32-36	Colour3+Colour4
		37-40	Colour4
		41-45	Colour4+Colour5
		46-49	Colour5
		50-54	Colour5+Colour6
		55-58	Colour6
		59-63	Colour6+Colour7
		64-67	Colour7
		68-72	Colour7+Colour8
		73-76	Colour8
		77-81	Colour8+Colour9
		82-85	Colour9
		86-90	Colour9+Colour10
		91-94	Colour10
		95-99	Colour10+Colour11
		100-103	Colour11
		104-108	Colour11+Colour12
		109-112	Colour12
		113-117	Colour12+Colour13
		118-121	Colour13
		122-127	Colour13+Colour14
		128-191	Rotate forward (fast to slow)
		192-255	Rotate reverse (slow to fast)
[ CH2 ]	Strobe		
		0-3	Dark
		4-103	Pluse strobe slow to fast
		104-107	Open
		108-207	Fade strobe slow to fast
		208-212	Open
		213-251	Rand strobe slow to fast
		252-255	Open

[ CH3 ]	Dimmer	0-255	0-100% dimmer
[ CH4 ]	Gobo		
		0-4	White
		5-9	Gobo1
		10-14	Gobo2
		15-19	Gobo3
		20-24	Gobo4
		25-29	Gobo5
		30-34	Gobo6
		35-39	Gobo7
		40-44	Gobo8
		45-49	Gobo9
		50-54	Gobo10
		55-59	Gobo11
		60-64	Gobo12
		65-69	Gobo13
		70-74	Gobo14
		75-79	Gobo15
		80-84	Gobo16
		85-128	Rotate reverse (fast to slow)
		129-131	Stop
		132-175	Rotate forward (slow to fast)
		176-180	Shake slow to fast Gobo1
		181-185	Shake slow to fast Gobo2
		186-190	Shake slow to fast Gobo3
		191-195	Shake slow to fast Gobo4
		196-200	Shake slow to fast Gobo5
		201-205	Shake slow to fast Gobo6
		206-210	Shake slow to fast Gobo/
		211-215	Shake slow to fast Gobo8
		216-220	Shake slow to fast Gobo9
		221-225	Shake slow to fast Gobolu
		226-230	Shake slow to fast Gobol 1
		231-235	Shake slow to fast Gobol2
		236-240	Shake slow to fast Gobol 3
		241-245	Shake slow to fast Gobol4
		240-250	Shake slow to fast Gobol5
[ CH5 ]	Drigm1	231-233	
	FIISIIII	0.127	None
		128 255	Inert prism1
[ CH6 ]	Drism1 D	120-233	
	1 1151111.1	0-127	0-360(degree)
<u> </u>		128-187	Rotate forward (fast to slow)
<u> </u>		128-195	Ston
<u> </u>		196-255	Rotate reverse (slow to fast)
[ CH7 ]	Prism?	170 200	
	11101112	0-127	None
		128-255	Insert prism2

[ CH8 ]	Prism2.R		
		0-127	0-360(degree)
		128-187	Rotate forward (fast to slow)
		188-195	Stop
		196-255	Rotate reverse (slow to fast)
[ CH9 ]	Focus	0-255	Far to near
[CH10]	Pan	0-255	0-540(degree)
[CH11]	Pan Fine	0-255	0-2(degree)
[CH12]	Tilt	0-255	0-270(degree)
[CH13]	Tilt Fine	0-255	0-1(degree)
[CH14]	PT Spd	0-255	Fast to slow
[CH15]	Frost		
		0-127	None
		128-255	Insert frost
[CH16]	7Color		
		0-127	None
		128-255	Insert colorful
[CH17]	Lamp		
		0-99	None
		100-105	Turn off lamp over 3 second
		106-199	None
		200-205	Turn on over 3 second
		206-255	None
[CH18]	Reset		
		0-209	None
		210-215	Reset XY motor over 3 second
		216-219	None
		220-235	Reset Effect motor over 3 second
		236-239	None
		240-255	Reset fxiture over 3 second