LED BEAM SPOT MOVING HEAD LIGHT
MJ-1220
(3IN1)

User manual

====PROFESSIONAL LED LIGHTING =======

Thank you for choosing our LED moving head light. For the sake of your safety, Please read and follow these instructions carefully and keep this manual in a safe place for future reference.

Catalogue

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☆Important notice:

• In this instruction for use contains about the installment and the use aspect important information of the LED moving head. When installing and using, you need to look this usage instruction strictly.

• Before open the LED moving head and if you want to do the repair work, please make sure the power source is at the separation condition.

• Every unit is tested completely and packed properly by the manufacturer. Please make sure the packing and the unit are in good condition before installation and use. Should there be any damage caused by transportation, consult your dealer and do not use the unit. Any damage caused by improper use will not be assumed by the manufacturer or dealer.

Attention: Unceasingly carries on the product improvement about our company the policy, in this instruction booklet carries the data will have the possibility to be able to change in the future, when no longer separate notice change matters concerned. Our company retains when the product improvement changes the related specification the authority. This instruction booklet publisher cannot be responsible regarding this instruction booklet in information accuracy, also cannot the related consequence which causes regarding these information be responsible.

SAFE USAGE OF THE PRODUCT

When unpacking and before disposing of the carton, check there is no transportation damage before using the product. Should there be any damage caused by transportation, consult your dealer and do not use the apparatus.

The product is for indoor use only, IP20. Use only in dry locations. Keep this device away from rain and moisture, excessive heat, humidity and dust. Do not allow contact with water or any other liquids.

The product is not designed or intended to be mounted directly on to inflammable surfaces

The product is only intended for installation, operation and maintenance by professional person.

The product must be installed in a location with adequate ventilation, at least 50cm from adjacent wall surfaces. Be sure that no ventilation slots are blocked.

Do not product the beam onto inflammable surfaces, minimum distance is m. ⊲ 5m ⋿

Avoid direct exposure to the light from the lamp. The light is harmful to the eye.

Do not attempt to dismantle or modify the projector in any way.

Electrical connection must only be carried out by qualified personnel.

Before installation, ensure that the voltage and frequency of power supply match the power requirements of the projector.

It is essential that each projector is correctly earthed and that electrical installation conforms to all relevant standards.

Do not connect this device to any other types of dimmer apparatus.

Make sure that the power-cord is never crimped or damaged by sharp edges. Never let the power-cord come into contact with other cables. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.

Keep the optical system clean. Do not touch the lens with bare hands.

The product should always be installed with a secondary safety fixing. On the projector base brink, there is a hole for the safety cord provided. It should be attached as shown in "installing the projector" section.

The lens shall be changed if they have become visibly damaged to such an extent that their

effectiveness is impaired, for example by cracks or deep scratches.

Exterior surface temperatures of the luminaire after 5 minutes operation is 40°C，when steady state is achieved 50°C.

There is no user serviceable parts inside the projector, do not open the housing and never operate the product with the covers removed.

If you have any questions, don't hesitate to consult your dealer or manufacturer.

★**Always disconnect from the mains, when the device is not in use or before cleaning it or before attempting any maintenance work !**

Install The Equipment:
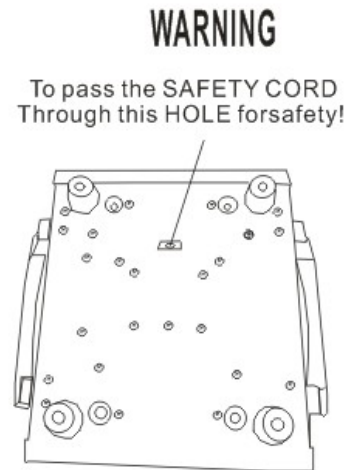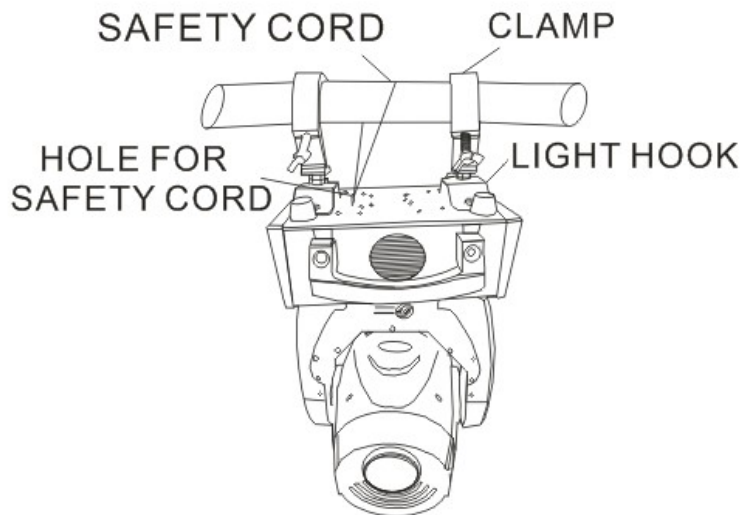
Use 2pcs clamp and 1safety cord(need to purchase).Use clamp fix with light hook which in the packing box with light, then use screw install to the bottom of lamp. Hang the fixture on the structure and fasten the screws attached to each clamp. Make sure the light is installed reliable, and confirm the light which you fixed is strong enough for hanging the light. Base on safety reason, please according to the above picture using safety wire cross the light to make it strong enough again.

Warning!
1．Light Hook and clamp only use for hanging the light. Do not use clamp as a tool to move fixtures.
2．Base on safety reason, please use the safety cord which can afford the weight ten times of lamp through Insurance hole for auxiliary hanging.
3．Don't use the handle of the moving head light to fixed or lift!

Power Code Connection:

Connect the power cord as follows:

  L (live) =brown
  E (earth) =yellow/green
  N (neutral) =blue

Use the plug provided to connect the mains power to the projector paying attention to the voltage and frequency marked on the panel of the projector. It is recommended that each projector be supplied separately so that they may be individually switched on and off.

★**It is essential that each projector is correctly earthed and the electrical installation conforms to all relevant standards.**

DMX Connection:

	DMX 512	
PIN		FUNCTION
1		GND
2		DATA-
3		DATA+

	DMX 512	
PIN		FUNCTION
1		GND
2		DATA-
3		DATA+
4		N/C
5		N/C
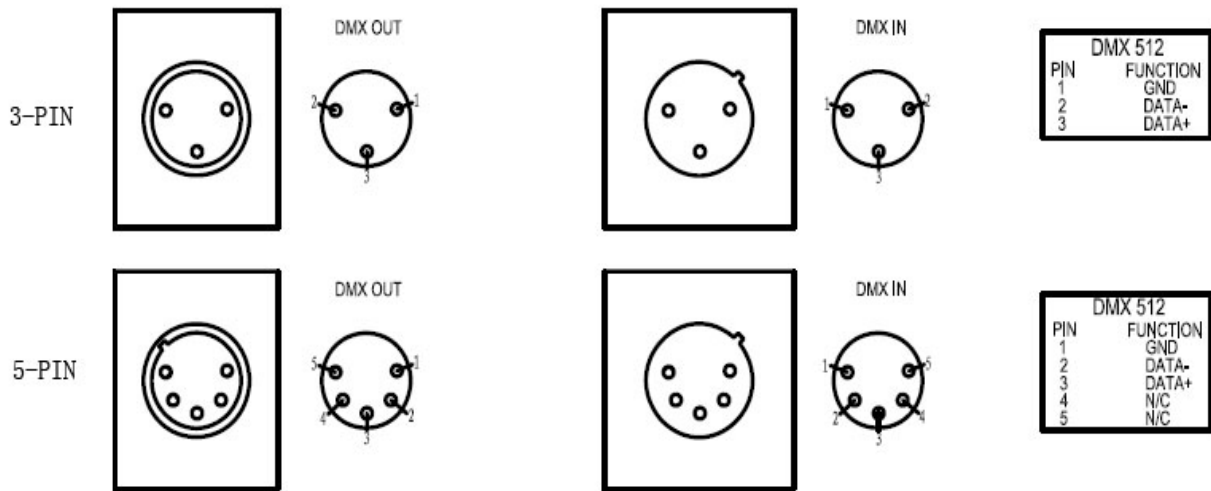
Connection between the controller and a projector and between one projector and another must be made with a 2 core-screened cable, with each core having at least a 0.5mm diameter. Connection to and from the projector is via cannon 3 pin (which are included with the projector) XLR plugs and sockets. The XLR's are connected as shown in the figure above.

Note: Care should be taken to ensure that none of the pins touch the metallic body of the plug or each other. The body of the plug is not connected in any way. The XLED 590 accepts digital control signals in protocol DMX512 (1990).

Connect the controller's output to the first fixture's input, and connect the first fixture's output to the second fixture's input and connect the rest fixtures in the same way. Eventually connect the last fixture's output to a DMX terminator as shown in the figure below.

DMX CONTROLLER   DMX TERMINATOR
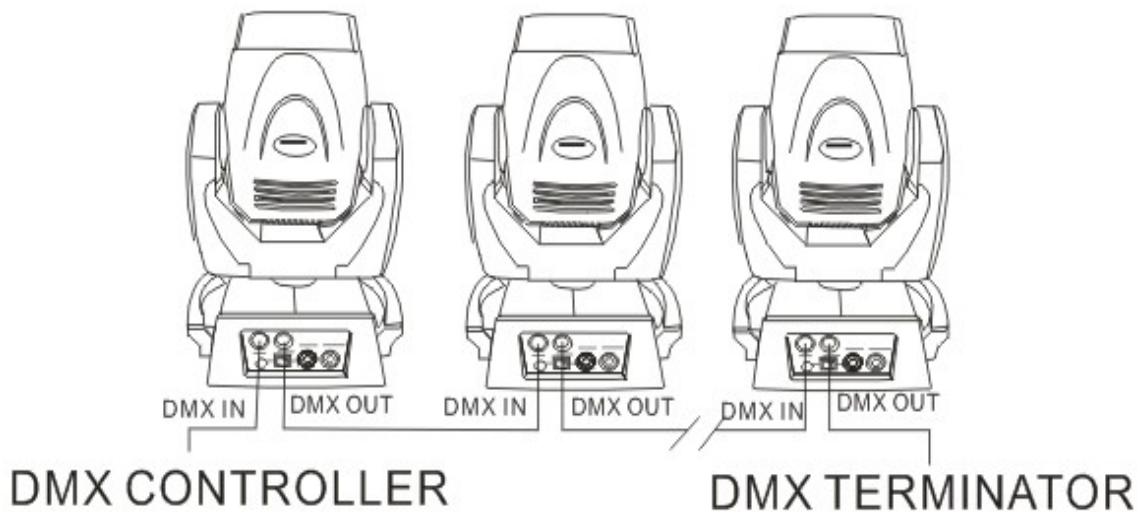
DMX Terminator:

In the Controller mode, at the last fixture in the chain, the DMX output has to be connected with a DMX terminator. This prevents electrical noise from disturbing and corrupting the DMX control signals.

The DMX terminator is simply an XLR connector with a 120Ω (ohm) resistor connected across pins 2 and 3, which is then plugged into the output socket on the last projector in the chain. The connections are illustrated below.
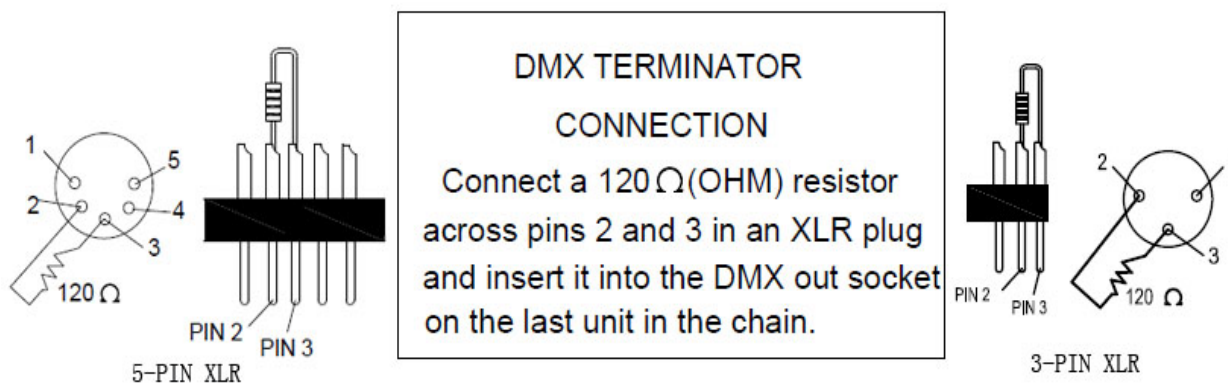
Function Set:

1. Display Window Operation(Press the Button into the main menu as below)
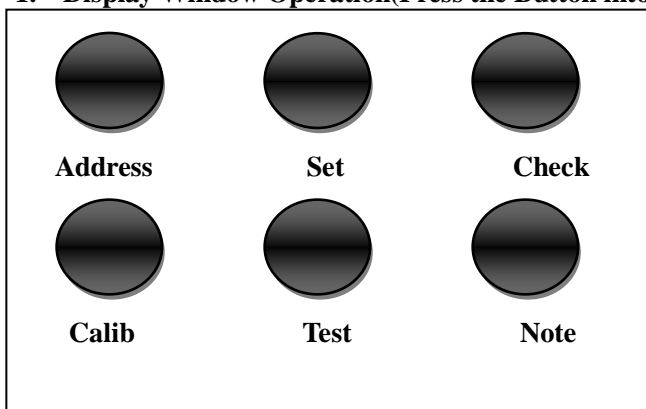
2. Button Operation
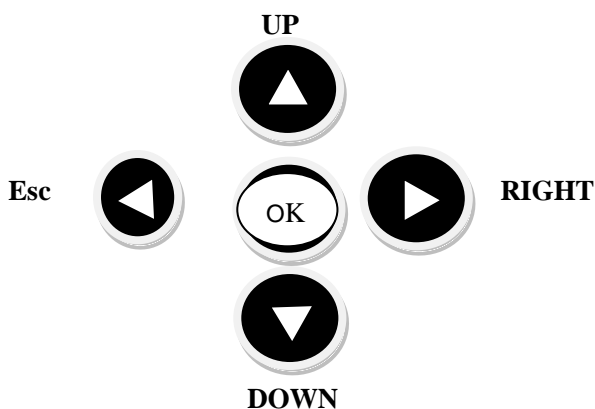
Use button switch can set the address code and function code easily.

Check or modify lighting function settings, Press the any button. LCD display panel will display main menus. Function operation menu all have corresponding submenu . Each menu all represent the specific functions of lamps, specific see below "operation menu" section.

Set or browse function setting of lamp, Press **UP** ,**DOWN** or **RIGHT** key.
Press **OK** key to save your changes or to enter submenu, Press **UP** or **DOWN** can change value(Plus or reduce number).

Operation Menu:

➢ Menu Structure chart

Main Menu		Sub Menu
Address	⟹	DMX Address Set(001-512)

System Set	⟹	Run Mode	⟹	DMX
				Auto 1
				Auto 2
				Sound
		Fixture ID	⟹	0-255
		Channel Mode	⟹	18CH
		Invert Pan	⟹	OFF/ON
		Invert Tilt	⟹	OFF/ON
		Pan-Tilt Swap	⟹	OFF/ON
		Motor Encoder	⟹	OFF/ON
		No Signal	⟹	Keep/Clean
		Screen saver	⟹	OFF/ON
		Language	⟹	Chinese/ English
		Load default	⟹	OK/Cancel

Manual Drive	⟹	CH1	⟹	0-255
		CH2	⟹	0-255
		CH3	⟹	0-255
		••••••		••••••
		CH18	⟹	0-255

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┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│  Motor Calibration  │ ══►  │      Password       │ ══►  │        Motor        │
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘
                                                          ┌─────────────────────┐
                                                          │         MIC         │
                                                          └─────────────────────┘
                                                          ┌─────────────────────┐
                                                          │      Password       │
                                                          └─────────────────────┘

┌─────────────────────┐      ┌─────────────────────┐
│     System Test     │ ══►  │      Auto test      │
└─────────────────────┘      └─────────────────────┘
┌─────────────────────┐      ┌─────────────────────┐
│     System Info     │ ══►  │    LED 200W BSM     │
└─────────────────────┘      └─────────────────────┘
                             ┌─────────────────────┐      ┌─────────────────────┐
                             │   Moto Soft Ver.    │ ══►  │       V01.01        │
                             └─────────────────────┘      └─────────────────────┘
                             ┌─────────────────────┐      ┌─────────────────────┐
                             │  Display Soft Ver.  │ ══►  │       V01.01        │
                             └─────────────────────┘      └─────────────────────┘
                             ┌─────────────────────┐
                             │     System OK!      │
                             └─────────────────────┘
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➢ **Sub Menu description**

Sub menu include address, System Set, Manual Drive, Motor Calibration, System Test, System Info.

Press the main menu picture to do each setting.

1) **Address setting**, after you finished the setting, then you need to touch " OK" button to keep the address code and return to main menu.

2) **System Set,**
   ➢ Run Mode:(Run mode have include DMX mode, Auto mode, Sound mode)

   1. DMX mode: When the light in the DMX mode, then also can be slave mode. If the light connect to the DMX control signal, then it is DMX mode. If you connect the light is Master signal, then it is running slave mode.

   2. Auto mode: auto mode also can be master mode.

   3. Sound mode: When the light in sound mode, it can't be work with voice.
   ➢ Fixture ID: This is display DMX value
   ➢ Channel Mode: The light channel
   ➢ Invert Pan: Pan reverse set
   ➢ Invert Tilt: Tilt reverse set
   ➢ Pan-Tilt Swap: Pan and Tilt reverse set
   ➢ Motor Encoder: Motor position correction function
   ➢ No Signal: When turn on signal link, cut off control signal will be blackout.
   ➢ Screen saver: Screen saver on or off
   ➢ Language: menu language can choose Chinese or English
   ➢ Load default: reset

3) **Manual Drive** : It is control by hand
   ➢ CH1-CH18: adjust CH1 to CH18 function by hand

4) **Motor Calibration**: This is for factory set, need password

5) **System Test**: test mode is a special mode, only can be used when it is in test mode interface.

6) **System Info**
   ➢ Moto Soft Ver: V01.01
   ➢ Display Soft Ver.: V01.01

Control panel of LED display information:

Blue	On	DMX signal ok
	Off	No DMX signal
Red	On	Error

Maintenance:

To prolong the life of the projector, some maintenance work has to be done to ensure the LED optical system in good condition. If the projector does not function, check the fuses on the power socket of the projector, they should only be replaced by fuses of the same specification. Should these be damaged, call a qualified technician before replacement. The projector has thermal protection device that will switch off the projector in case of overheating. Should either of these operate, check that the fans are not blocked, and if they are dirty, clean them before switching on the projector again. Check that the fans are operational, if not, call a qualified technician.

☆**Any maintenance work should only be carried out by qualified technicians.**

Keeping The Product Clean:

To ensure the reliability of the projector, it should be kept clean. It is recommended that the fans should be cleaned every 15 days. LED lens should also be regularly cleaned to maintain an optimum light output.

Cleaning frequency depends on the environment in which the fixture operates: damp, smoke or particularly dirty surroundings can cause greater accumulation of dirt on the unit's optics. A soft cloth and typical glass cleaning products should be used for cleaning. It is recommended to clean the external optics at least once every 15 days.

☆**Do not use any organic solvent, e.g. alcohol, to clean housing of the apparatus.**

Trouble Shooting:

Problem	Answer
The LED moving head light doesn't switch on.	Check the fuse the power socket
Although shines, but the LED moving head lamp doesn't accept the instruction of the controller.	Check the digital start address and also check the connection situation of the communication control line
LED moving head lamp only can work intermittently.	Inspect the power supply and voltage is whether normal.
Do not receive the DMX512 signal.	Whether the signal lines do contact well or broken.
The light beam appears gloomily.	Check that the heat dissipation system is running normally or Inspect the optics part is whether clean.

☆**Other maintain work should by the specialist which has the experience to carry on.**

Equipment and Appendix:

The packing list of this light as follows:
- ☆ Led moving head light 1pcs
- ☆ Power Cable 1pcs
- ☆ XLR connector 1unit
- ☆ Light Hook 2pcs
- ☆ The Product of Instruction 1pcs

Channel List:(18CH)

Channel	Function	Value	Function Description
CH1	Pan	0~255	Pan movement (0-540)
CH2	Pan Fine	0~255	Pan Fine 16bit
CH3	Tilt	0~255	Tilt movement (0-270)
CH4	Tilt Fine	0~255	Tilt Fine 16 bit
CH5	Speed	0~255	P/T speed from fast to slowly
CH6	Dimmer	0-255	Dimmer 0-100%
CH7	Strobe	0~3	Open
		4~100	Frequency stroboscopic
		101~150	Divide stroboscopic
		151~200	sharp- stroboscopic
		201~250	Random stroboscopic
		251~255	Open
CH8	Color	0~199	Color choose
		200~226	Rotate clockwise from fast to slow
		227~228	Stop rotation
		229~255	Rotate counterclockwise from slow to fast
CH9	Fix Gobo	0~4	Open
		5~9	Gobo 1
		10~14	Gobo 2
		15~19	Gobo 3
		20~24	Gobo 4
		25~29	Gobo 5
		30~34	Gobo 6
		35~39	Gobo 7
		40~44	Gobo 8
		45~49	Gobo 9
		50~54	Gobo 10
		55~64	Gobo 1 shake from fast to slowly
		65~74	Gobo 2 shake from fast to slowly

		75～84	Gobo 3 shake from fast to slowly
		85～94	Gobo 4 shake from fast to slowly
		95～104	Gobo 5 shake from fast to slowly
		105～114	Gobo 6 shake from fast to slowly
		115～124	Gobo 7 shake from fast to slowly
		125～134	Gobo 8 shake from fast to slowly
		135～144	Gobo 9 shake from fast to slowly
		145～154	Gobo 10 shake from fast to slowly
		155～204	Gobo rotate clockwise from fast to slow
		205	Stop
		206～255	Gobo rotate counterclockwise from fast to slow
CH10	Rotate Gobo	0～9	Open
		10～19	Rote Gobo 1
		20～29	Rote Gobo 2
		30～39	Rote Gobo 3
		40～49	Rote Gobo 4
		50～59	Rote Gobo 5
		60～69	Rote Gobo 6
		70～79	Rote Gobo 7
		80～89	Open Gobo shake from fast to slowly
		90～99	Rote Gobo 1 shake from fast to slowly
		100～109	Rote Gobo 2 shake from fast to slowly
		110～119	Rote Gobo 3 shake from fast to slowly
		120～129	Rote Gobo 4 shake from fast to slowly
		130～139	Rote Gobo 5 shake from fast to slowly
		140～149	Rote Gobo 6 shake from fast to slowly
		150～159	Rote Gobo 7 shake from fast to slowly
		160～206	Gobo rotate clockwise from fast to slow
		207～208	Stop
		209～255	Gobo rotate counterclockwise from fast to slow
CH11	Gobo Rotate	0～127	Gobo 360 degrees rotation
		128～190	Gobo rotate clockwise from fast to slow
		191～192	Stop
		193～255	Gobo rotate counterclockwise from slow to fast
CH12	Prism	0～127	Prism OFF
		128～255	Prism ON
CH13	Prism Rotate	0～127	Prism rotation 90 degrees
		128～190	Prism rotate clockwise from fast to slow
		191～192	Stop
		193～255	Prism rotate counterclockwise from slow to

			fast
CH14	Frost	0～127	Frost OFF
		128～255	Frost ON
CH15	Focus	0～255	0-100% Linear focus
CH16	Zoom	0～255	0-100% Linear zoom
CH17	Macro	0～50	No function
		51～100	Function auto test
		101～150	Auto1
		151～200	Auto 2
		201～255	Sound control
CH18	Reset	0～250	No function
		251-255	Reset（Hold for 5 seconds）

Technical Parameters:

Voltage: AC100V-240V; 50/60Hz
Power Consumption: 260W (220V)
LED Bulbs: 200W*1pcs White LUMEN LED
Color temperature : 7500K
LED Current: 7.5A
LED Lifetime: 50000Hours
Color: 9 color + open color wheel
Gobo: 10 Fixed Gobo + open Gobo wheel
    7 Rotation Gobo + open Gobo wheel
Prism : 1pcs rotation 4-face prism, Bilateral rotation.
Frost : 1Pcs frost mirror
Dimmer : 0-100% linear adjustment
Strobe: 1-25/second high speed strobe, but single color Mixes the color strobe
Focus : Electric focus from near to far
ZOOM: Linear ZOOM function
Zoom angle : 6°-10° beam model; 10°–40° spot model
Head Movement: Pan 540°, Tilt 270°, with auto position correction and electronic replacement function.
Control mode: DMX 512, Stand –alone mode, Self-test mode, Sound, Master/slave
DMX Channel: 18CH
Control Panel: LCD display panel with 5 buttons, the menu can be set English and Chinese menu
IP Grade: IP20
Work Environment Temperature: -20°C~40°C
Net weight:16KG
Gross Weight: 18kg
Package Size: 49 x 37x 63cm