

WWW. BLACKHAWK-SPAIN.COM

Tels. : 0034 968850439 & 0034 617339732

## SA040 Moving Head Light BLACK HAWK



Thanks for you choose Our Pro moving head . For your safety , and use it easier .pls ready the user manual carefully .pls operate the equipment according to the user manual.

### **Safety direction**

For ensure your and the equipment safety .pls ready the manual carefully. Or, it will harm to person and equipment .

- 1.No professional personal , No disassembly the equipment and spare parts .
- 2.Standard voltage scope : 220V—240V
- 3.Do not put the beam of light on the tinder, Pls keep more than 1 Meter distance between the equipment and the inflammable substances .
- 4.The equipment using temperature of circumstance:  $-15^{\circ}\text{C}$ - $40^{\circ}\text{C}$ .the highest temperature of the equipment is surface :  $90^{\circ}\text{C}$  .
- 5.The equipment is far away the liquid and wet environment.
- 6.Pls ensure the lighting is connect the earth well before using it , do not install and disassembly the equipment and any parts with electricity .
- 7.When we install it , fixed screw ,add the safety cable, pls inspect it in timing.
- 8.Do not use the equipment will be exceed 6 hours per time . restart it after 15 minutes, Or the lamp will not be triggered well and will be burn out .
- 9.When we are using the equipment, pls close the equipment ASAP when it have happen abnormality.
- 10.When the lamp have used long time nearly standard using life, pls replace it in timing ,or the lamp will be burn out .

11. We must inspect the parts of rotating and sticking of equipment, pls reinforce it asap when it is loose, shack, or the accident will be happened..
12. The equipment have adopt to strong fan cooling, begrime easily. it must be cleaned once each week. especial the mouse of fan cooling .or begrime jam, to arose the abnormally.

## **Technical parameter ( BLACK HAWK)**

1. Power : AC200V~240V/50HZ
2. General power consumption : 800W
3. Ballast : 575W ( inductance)
4. Transformer :150W input :220V/50HZ .Output : 2X12V
5. Bulb: HMI575W
6. Color temperature : 6500K
7. Size : 500×390×660
8. Weight:42KG
9. Connect earth resistance :  $\leq 0.5 \Omega$

## **Brief Function**

1. International standard Control signal :DMX512
2. 20 PCS DMX CHANNEL.
3. LCD: [www.desmocal.com](http://www.desmocal.com) BLACK HAWK
4. HOT TEMPRATURE PROTECTION.
5. Pan rotate 450°, Tilt rotate 270° .
6. PAN,TILT ROTATE ,speed adjustable .Fine adjustable .
7. FOCUS adjustable function (3m~50m)
8. Pan,Tilt rotate direction can bidirectional set up.
9. Facula luminance adjustable , flash speed adjustable 1—10 Time per second.
10. Tri facet prism effect (rotation)
11. 6 color + open , full color , speed adjustable , rainbow effect.
12. Double gobo, stream effect and light adjustable, GOBO superposition.5 rotating gob , 6 fixed gobo , each gobo have shock effect .

## **LCD operate method**

All of lighting must be named one digital drive IP address code ., It can sure the control signal can response well . Digital drive IP address code is one channel code, Via the Code, so that the computer can received the signal direction from controller. 16 Channel ,pls dial the LCD address code as digital drive IP address value .

### **The equipment digital drive IP account method**

When the equipment digital start IP address value =(last lighting is digital start IP value)+( basic channel number of controller )

specification 1: the first light is digital Start IP address value is 1.

2:basic channel number of controller must big and equal the light have used digital control channels.

Caution: when you choose any controller. each light must have itself data Start IP address, if the first light is IP address set as A001 ,controller channel is 16;

The second light is start IP address set as A017 .The third light will be set as A033 , so analogy,(the set way will change according to different controller .)

Panel operation specification :

Press “MODE “ ,To display “DMX512” IP address code ,then press “UP” and “Down” to

adjust IP address code.

Press "FUNC" to enter function set up . then press "UP" and "Down" to revise parameter .

1、 run node:DMX512; DMX address:001。

1. open LCD

2 .Press FUNC will display : PAN reverse or TILT reverse。

3 .To choose any one , Then press UP and DOWN , corresponding is YES and NO.

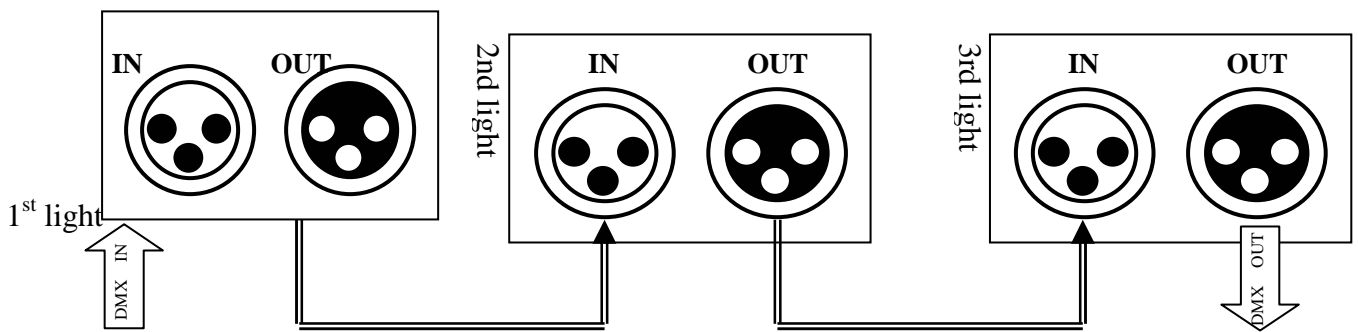
Yes means Positive direction rotation ,No means reverse rotation ,

PAN reverse: NO/YES。

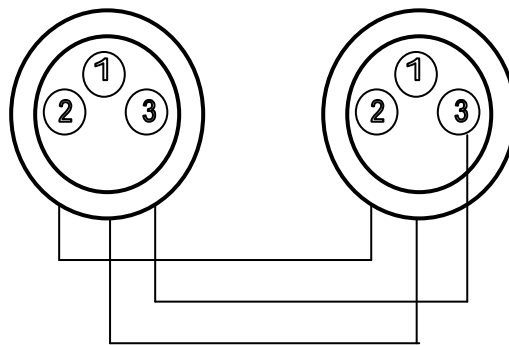
TILT reverse: NO/YES。

## The connection of the DMX512 Signal

This light use the DMX512 signal control mode, every light is be linked in a line, you'd better use the 2 pins shelter cable when connecting various signal cables, the DMX "INPUT" and "OUTPUT" socket of every light link ordinal , the male and female 3 pins XLR plug of the signal cable must be corresponded : ( see chart 2 )

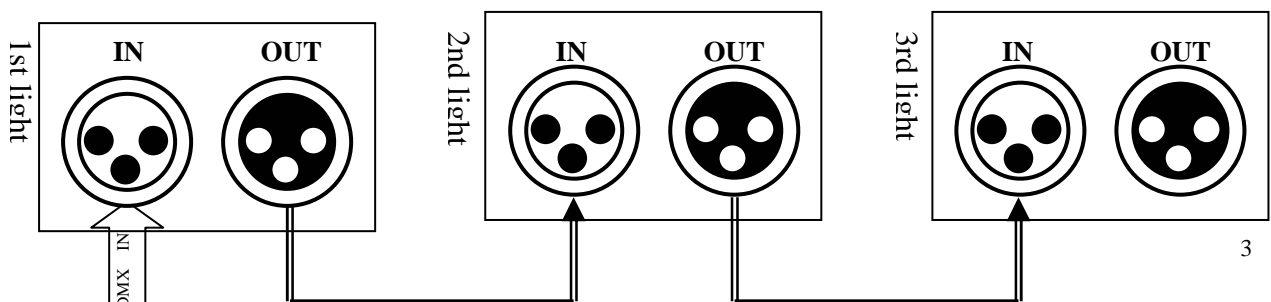


The connecting method of the light



The connecting method of the plug

We suggest you use the DMX signal terminator to avoid damage the digital control signal which may caused by the electrical noise when connecting the light signal, DMX terminator is XLR connector, connect one 120Ohm and 1 W resistor between the pin2 and pin3, and connect it to the OUTPUT socket of the last light. Sea chart:



## The installation of the light

Horizontal 、 gradient and up right down hanging the light is available, please note the install method when gradient and up right down hanging, see chart:



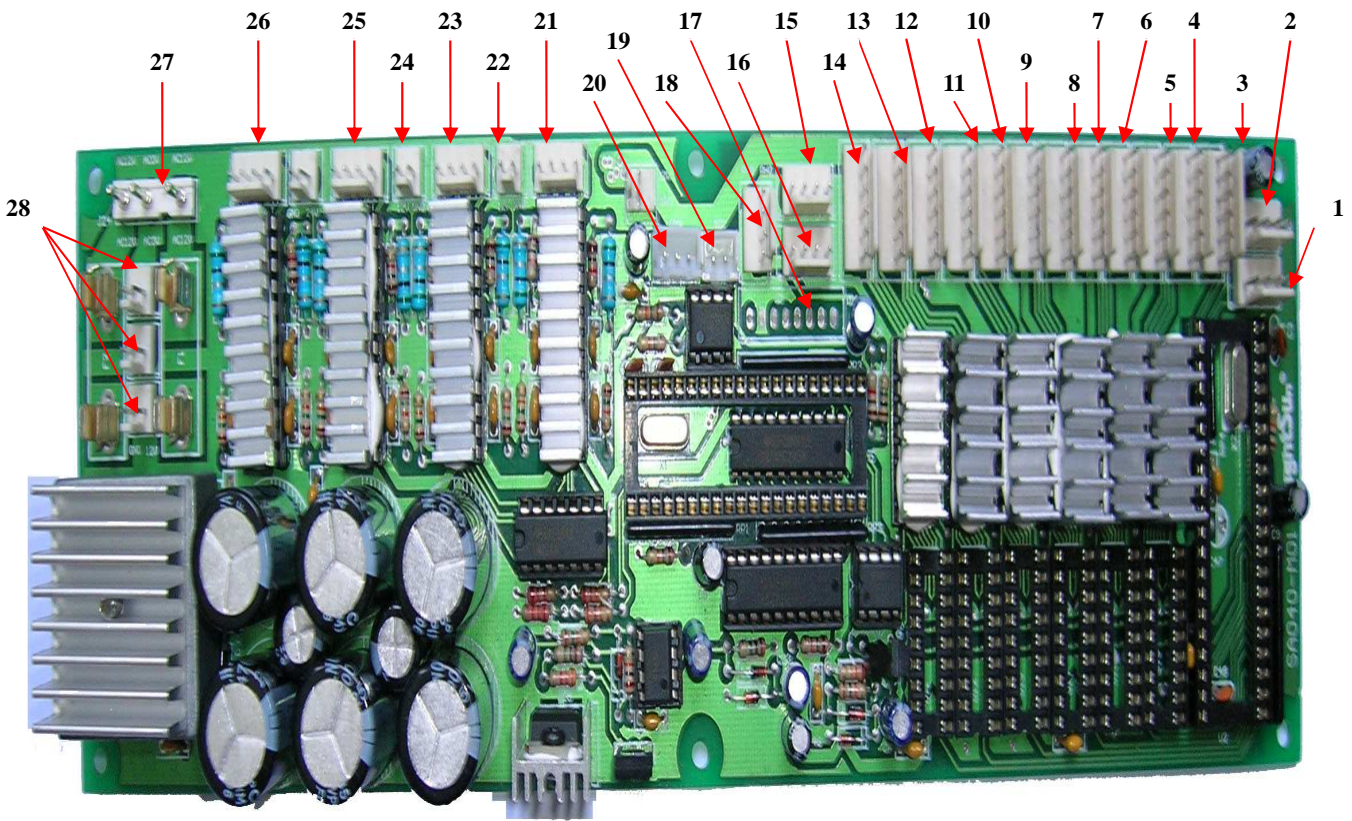
(4)



(5)

- ,1 You must check if the stand is stable before you installing the light
- ,2 It must use the exclusive hook and safety cable when gradient and up right down hanging. (see chart 5)。
- ,3 Use the M10\*20 screw to fix the hook, you must tighten the screw.
- ,4 The safety cable must across the truss and the light handle (see chart 5) Note: Please check the screw periodically, please tighten if it's loosened.

## PCB Instruction ( BLACK HAWK)



[www.desmocal.com](http://www.desmocal.com) BLACK HAWK---Tels.: 968850439 & 617339732

- 1、 Color Hall
- 2、 Rotate Gobo hall
- 3、 Prism rotation
- 4、 Rotate prism
- 5、 Flash、 Dimming
- 6、 Color
- 7、 Empty
- 8、 Fixed Gobo
- 9、 Rotate Gobo
- 10、 Gobo rotation
- 11、 Focus
- 12、 Iris
- 13、 Fixed Prism
- 14、 Zoom out
- 15、 Iris、 Zoom Switch
- 16、 Tilt rectify optoelectronic switch
- 17、 Connect the display board
- 18、 Pan rectify optoelectronic switch
- 19、 Mic
- 20、 DMX
- 21、 Y2
- 22、 Fan
- 23、 Y1
- 24、 Fan
- 25、 X2
- 26、 X1
- 27、 Connect the transformer
- 28、 Fan

## Installation of the lamp

Drive out the screws which on the position A、B、C、D when you install or replace the lamp (see chart 7), then install or replace it. (see chart 8) you must tighten the screws of the 2 ends when installing the lamp, or it will lead to high voltage short circuit discharge which because of the poor-connection, or the lamp loosed and fall off to influence the work life of the lamp. High voltage damage the electronic component of the PC Board, lead the light abnormally

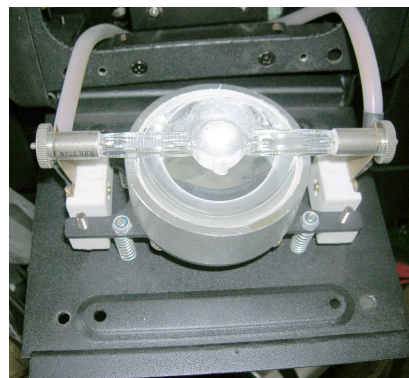
Note: ○,1 we suggest you use the high quality lamp;

○,2 Cut off the power when installing and dismantling the lamp;

○,3 Bare hand touch the glass part of the lamp is prohibited;

○,4Please tighten the screws after you replaced the lamp (A、B、C、D);

○,5 The lamp will up to an extreme high temperature, and the HMI lamp can't continuous supply the power. So, you must cooling it for 15 minutes every time after you cut off the power. Or, it will lead to high voltage discharge、short circuit, and even burned out the component of the PC Board.



⑥ You can adjust the screws which on E、F、G、H if you found the projected beam is not average after turned on the light. (see chart 7)

### The channel illustration of the light

DMX Channel	DMX Value	Specification
1、Flash	0~7	Off
	8~231	Flash from slow to fast
	232~255	On
2、Dimming	0~255	Dimming from darkness to brightness
3、Pan	0~255	Pan 0~450°
4、Tilt	0~255	Tilt 0~270°
5、Pan fine	0~255	Fine 1.8

6、Tilt fine	0~255	Fine 1.8
7、Pan, Tilt Speed adjustment	0~255	From fast to slow
8、Focus	0~255	From near to far
9、Color Wheel	0~17	Open
	18~35	Color 1
	36~53	Color 2
	54~71	Color 3
	72~89	Color 4
	90~107	Color 5
	108~127	Color 6
	128~191	Clockwise stream effect from slow to fast
192~255	Anti-clockwise stream effect from slow to fast	
10、Iris	0~255	Iris from big to small
11、Stationery Gobo Wheel	0~8	Open
	9~17	Gobo 1
	18~26	Gobo 2
	27~35	Gobo 3
	36~44	Gobo 4
	45~53	Gobo 5
	54~62	Gobo 6
	63~71	Open
	72~80	Gobo 1 Dithering
	81~89	Gobo 2 Dithering
	90~98	Gobo 3Dithering
	99~107	Gobo 4Dithering
	108~116	Gobo 5Dithering
	117~127	Gobo6Dithering
128~191	Clockwise stream effect from slow to fast	
192~255	Anti-clockwise stream effect from slow to fast	
12、Dynamic Gobo Wheel	0~10	Open
	11~21	Gobo 1
	22~32	Gobo 2
	33~43	Gobo 3
	44~54	Gobo 4
	55~63	Gobo 5
	64~74	Open
	75~85	Gobo 1Dithering
	86~96	Gobo 2Dithering
	97~107	Gobo 3Dithering
	108~118	Gobo 4Dithering
	119~127	Gobo 5Dithering
	128~191	Clockwise stream effect from slow to fast
	192~255	Anti-clockwise stream effect from slow to fast
13 、 Dynamic Gobo Wheel orientation	0~255	
14、Gobo Wheel Rotate	0~7	Gobo without auto-rotation

	8~119 120~231 232~239 240~247 248~255	Gobo clockwise rotate from slow to fast Gobo anti-clockwise rotate from slow to fast Gobo rotate 180° Gobo rotate 360° Gobo Rotate 720°
15、Zoom out 1	0~127 128~255	Without Zoom grade 1 zoom
16、Zoom out 2	0~127 128~255	Without zoom grade 2 zoom
17、Dynamic Prism	0~127 128~255	Without Prism With Prism
18、Prism Rotate	0~7 8~119 120~231 232~239 240~247 248~255	Prism without rotation Prism anti-clockwise rotate from slow to fast Prism anti-clockwise rotate from slow to fast Prism rotate 180° Prism rotate 360° Prism rotate 720°
19、5-facet Prism	0~127 128~255	Without Prism With 5-facet prism
20、Fog Prism	0~127 128~255	Without fog effect With fog effect
Remark: resetting when 1、2、7、8、9 five channels up to a value of 255.		

## Difficulty Disposal

the faulty solution of the light, the maintenance must operated by the professional person.

### 1、Lamp Blank out

- ◆ The lamp haven't be full cooled, you should cooling it at least 15 minutes, resume the lamp to the normal status, then, turn on it again.
- ◆ Check if the lamp out of its work life, replace a new lamp.
- ◆ Check if the lamp and triggering circuit are discharge、fall off or poor-connection.
- ◆ Replace the new ignitor.

### 2、The beam is darkness

- ◆ The light tube maybe up to the work life, you should replace the new light tube. Check if the optic component is clear.
- ◆ There is the dust on the light tube or some optic component, you should periodically clear and maintain the lamp and every component
- ◆ The shutter is full open

### 3、The projected image is flurry

- ◆ Check if the electronic focus channel is suit for the projection distance.

- ◆ Check if there is oil or dust on the lens.
- 4、 The light work intermittence.
- ◆ Check if the fan dirty or work in normally.
  - ◆ Check if the internal temperature sensing switch is in close status.
  - ◆ The light tube maybe up to its work life, replace the new lamp.
  - ◆ Check the circuit.
- 5、 The light shining but not controlled by the controller
- ◆ Check the IP code and the connection circumstance of the communication control circuit
  - ◆ Check if the corresponding channel of the controller is open.
  - ◆ You did the abnormal operation when lamp haven't be full cooled, the immediate over voltage of the ignitor with discharge, and lead to damage the IC or CPU of the PC Board.
- 6、 The light doesn't work
- ◆ Check if the fuse burned out.
  - ◆ Check if the light is poor-connection because of the long distance transportation.
  - ◆ Check the power input, PC Board and others component.
- 7、 After auto-inspection, some functions are not accept the control order.
- ◆ Check if the function is connected to power, or the IC is burned out by other high voltage.
- 8、 Arise the abnormal noise when the Pan and Tilt resetting .
- ◆ High triggering voltage discharge burned out the optoelectronic PC Board of the Pan and Tilt when normally starting. You need to repair the PC Board.
  - ◆ Turn on the light again as the normal process, or set all the channel value to be 0, long distance reset the light.
  - ◆ The auto-rectify malfunction or not work, replace or adjust the thermocouple.
- 9、 The running program disordered and uncontrolled after auto-inspected.
- ◆ Check if used the DMX512.
  - ◆ Check if the signal cable is short circuit or open circuit.

## **Maintenance**

Please keep clear to ensure the light running in stable. We suggest you clear the light body and fan once each 15 days. You should clear the lens and color filter periodically to make sure the best brightness. Please never use any liquid when cleaning the color filter, to avoid damage the light

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