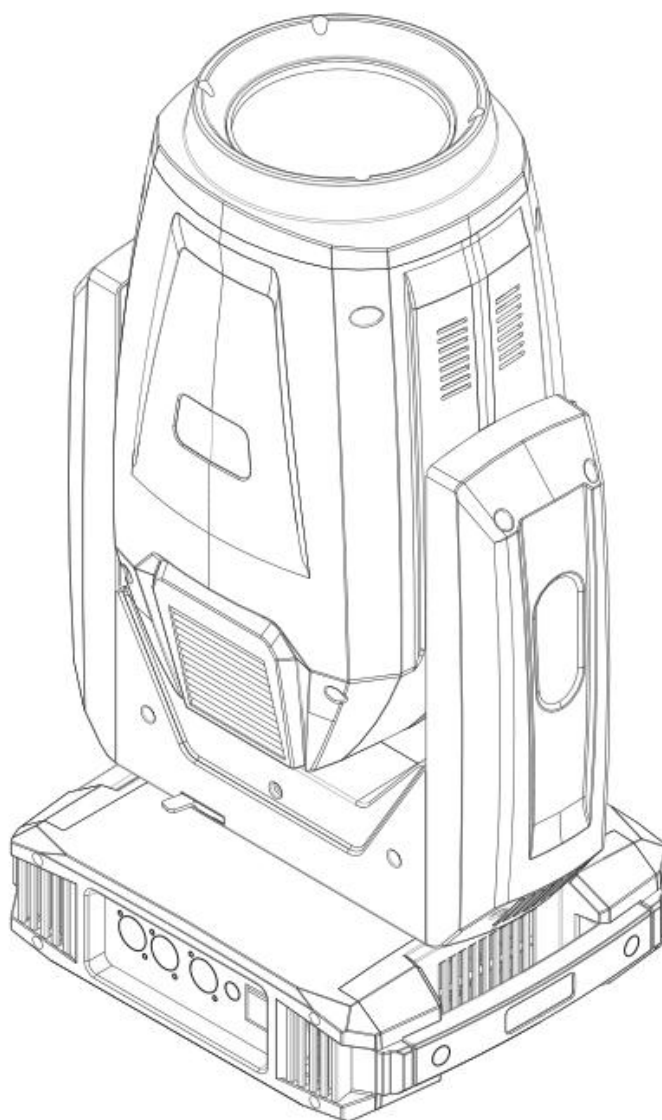


# 20R 440W 3IN1 Moving Head



## User Manual

**Please read the instruction carefully before use**

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# 1. Safety Instructions

## WARNING

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction manual.

Important:

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

Unpack and check carefully that there is no transportation damage before using the unit.

The unit is for indoor use only. Use only in a dry location.

DO install and operate by qualified operator.

DO NOT allow children to operate the fixture.

Use safety chain when fixing the unit. Handle the unit by carrying its base instead of head only.

The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces.

Be sure that no ventilation slots are blocked, otherwise the unit will be overheated.

Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.

It's important to ground the yellow/green conductor to earth in order to avoid electric shock.

Ambient temperature TA: 0°C-40°C.

DO NOT connect the device to any dimmer pack.

During initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective, and it will decrease gradually within 15 minutes.

Make sure there are no flammable materials close to the unit while operating to avoid fire hazard.

Examine the power wires carefully; replace them immediately if there is any damage.

Unit's surface temperature may reach up to 85°C. DO NOT touch the housing bare-handed during its operation, and allow about 15 minutes for cooling the unit down before replacing bulb or maintenance as it could be very hot.

Avoid any inflammable liquids, water or metal objects entering the unit. Once it happens, cut off Please read the instruction carefully which includes important information about

the installation, usage and maintenance.

the mains power immediately.

DO NOT operate in dirty or dusty environment, do clean fixtures regularly.

DO NOT touch any wire during operation as there might be a hazard of electric shock.

Avoid power wires together twist other cables.

The minimum distance between light output and the illuminated surface must be more than 18 meters.

Disconnect mains power before fuse/lamp replacement or servicing.

Replace fuse/lamp only with the same type.

In the event of serious operating problem, stop using the unit immediately.

Never turn on and off the unit time after time.

The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.

DO NOT open the unit as there are no user serviceable parts inside.

Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage

or malfunction. Please contact the nearest authorized technical assistance center if needed.

Disconnect the mains power if the fixture is has not been used for a long time.

DO use the original packing materials before transporting it again.

#### Cautions:

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

Hot lamp explosion hazard. DO NOT open the unit within 15 minutes after switching off.

DO replace the bulb once it is damaged, deformed or life-expired.

DO NOT look directly at the light while the bulb is on.

Never touch bulb with bare fingers, as it is very hot after using.

DO NOT start on the unit without bulb enclosure or when housing is damaged.

## 2. Technical Specifications

#### Power supply

- AC 100~240V 50/60Hz

#### Power Consumption

- 580W

Fuse

- T 10A

Light Source

- OSRAM SIRIUS HRI 440W/YODN MSD 440W

ColorTemperature :

- 7500K

Optical system

- High efficiency optical system, delivering extremely powerful output

- High quality dichroic lenses

Movement

- Pan: 540°

- Tilt: 270°

- Pan/Tilt moving speed adjustable.

- Automatic Pan/Tilt correction.

- Easy calibration and maintenance by magnetic home positioning.

- Pan/Tilt position lock for transporting protection.

Dimmer/Shutter

- Blackout, 0~100% smooth dimming, independent shutter and various strobe effect.

Color wheel

- Color wheel: 13 color plus white

CMY

-3 color wheels

- Rainbow effect in both directions.

Gobo wheel

- Gobo Wheel : 1 Fixed gobo wheel with 14 gobos plus open

1 Rotating gobo wheel with 7 gobos plus open

Prism

- Prism 1: 16 facet prism rotating in both directions

- Prism 2: 8prism rotating in both directions

Focus

- Electronic focus effect

Zoom

- Motorized linear zoom system, zoom range : 2°-50°

Protocols

- DMX 512, 24CH/28Ch

- Data input/output: 3/5 Pin XLR socket

Weight

- 23Kg

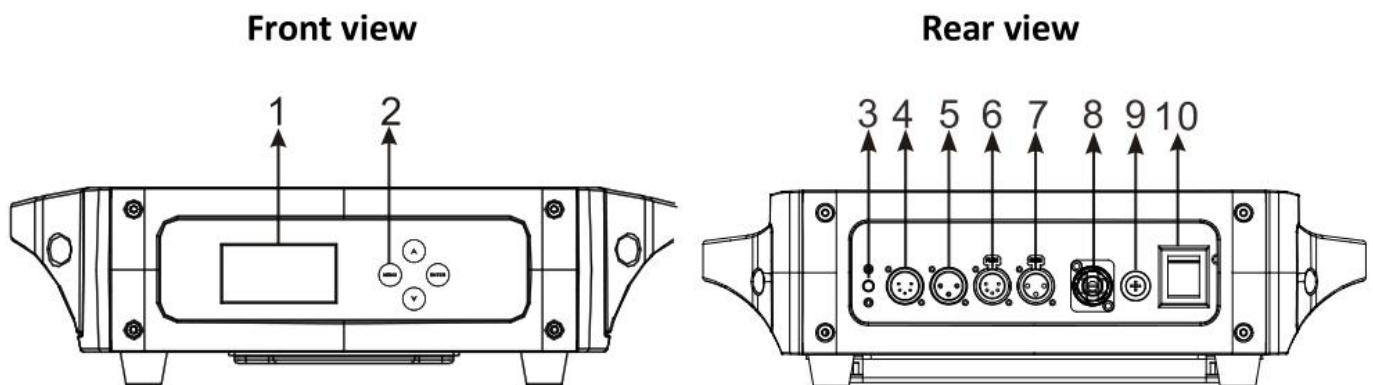
Dimension

- 667× 335×393mm

### 3. Description

#### 3.1 Control Panel

Front view Rear view



1. Function Display:

Shows the various menus and the selected functions.

2. Button:

The light panel diagram, Left area is TFT Displayer, support touch, and right area is encoder button, both of touch and coder button can operate light and setting.

Display & operation just like 'Android operation system, touch the item will set or modify setting.

Note: Prevent damage the touch or TFT displayer, Can not use sharp objects chick displayer.



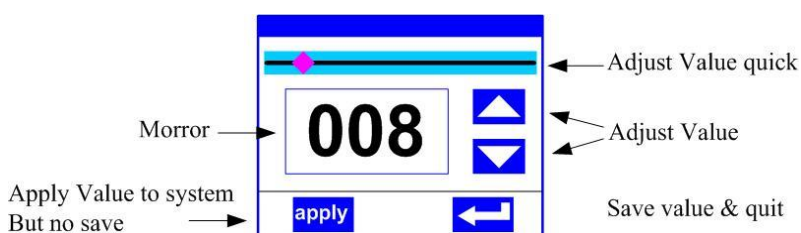
## Operation

### Operate light with touch or encoder button

- The left area is TFT Displayer and touch, click 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, As auxiliary input interface, if disable touch function,, the encoder can be choose to set or view the item, and then press the encoder button to confirm the selection, rotary encoder again set the parameter value, finally, Press encoder button one again to save value or setting.

### Parameter value setting

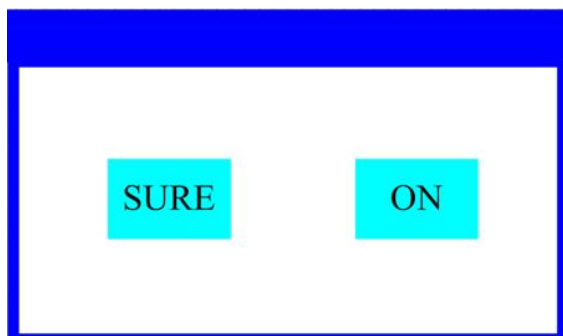
When the selected item is value need to be modified, the dialog shown in will popup.



- **Modify value:** Can quickly modify value via pull the slider to the desired position, or click the button of 'up' or 'down' with 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 be saved into internal memory.

### Boolean parameter setting

- when the selected parameters is a Boolean value (such as ON or OFF), can directly modify setting by click corresponding item, the setting will be saved right now.
- When the parameter is a key item, click corresponding item, a dialog shown in will be popup ask for the confirm. Click 'sure' to confirm.



### Sub Menu (Parameter)

Click item of main menu, enter corresponding sub menu, total 6 sub menu, includes class of parameter and status:

- ADDRESS: Set light DMX address.
- WORKMOD: Set light work mode, master or slave mode when in auto run mode.
- DISPLAY: Set display parameter, eg. select language.
- TEST: Used for test light, modify DMX channel data to test function, the corresponding function of reference channel function table.
- ADVANCE: Set light running parameter.
- STATUS: view light current status.

Address	
WorkMode	
Display	
Test	
Advance	
Status	
Escape	

001

Address	DMX Ctrl	✓
WorkMode	Auto Run	
Display	Sound Ctrl	
Test	M/S choose	OFF
Advance	Lamp On	OFF
Status	Channel Mode	sample
Escape		

Address	Language	中文
WorkMode	Screen saver	mode 1
Display	Screen rotation	OFF
Test	Touch Enable	ON
Advance	Touch adjust	
Status		
Escape		

Address	PAN	000
WorkMode	TILT	000
Display	FOCUS	000
Test	COLOR	000
Advance	GOBO	000
Status	PRISM	000
Escape	FROST	000
	STROBE	000

Address	PAN Insert	OFF
WorkMode	TILT Inset	OFF
Display	Rectify Enable	ON
Test	PAN Offset	008
Advance	TILT Offset	020
Status	Lamp on when	pwr on
Escape	Factory Setting	

Address	Work Mode	DMX ...
WrokMode	Address	001
Display	Version	B5R. 1.1 16n
Test	EIapse	000H 04M
Advance	Tatol	00000H 04M
Status		
Escape		

DMX Clr
SysRst

### Operation and parameter instruction

Via following operation, enter sub menu(parameter menu)

- In main menu, click 1/6 function button into corresponding parameter menu.



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

### Set DMX Address

Click and select the "ADDR", can enter the page of DMX address setting, range from 1 to 512, the address code shouldn't is not greater than (512- channels quantity), otherwise the light will not been controlled. Following is the operation:

Enter the page of DMX address, click the blank area in right side of display will pop-up diglog as in Fig. 4, modify value, then click 'ENTER' to confirm and save DMX address code.

### 6.2 Address Setting

If you use a universal DMX controller to control the units, you have to set DMX address from 1 to 512

so that the units can receive DMX signal.

Press the MENU button to enter menu mode, select DMX Functions, press the ENTER button to confirm, use the UP/DOWN button to select DMX Address, press the ENTER button to confirm, the present address will blinking the display, use the UP/DOWN button to adjust the address from 001 to 512, press the ENTER button to store. Press the MENU button back to the last menu or idling let the unit idle one minute to exit menu mode.

Please refer to the following diagram to address your DMX512 channel for the first 4 units.

Channel mode	Unit 1 Address	Unit 2 Address	Unit 3 Address	Unit 4 Address
26	1	27	53	79

### 6.3 DMX 512 Configuration

Please refer to below configurations to control the fixtures

Attentions:

1. The unit will maintain the last condition until reset if you cut-off the DMX signal.
2. For the channel Function, keep the value for about 5 seconds, then the corresponding function will take into effect.

### 24Channels/28Channels (Mode 1):

CH24	CH28	Function	VALUE	Instruction
[ CH1 ]	[ CH1 ]	Pan	0-255	0-540(degree)
[ CH2 ]	[ CH2 ]	Pan Fine	0-255	0-2(degree)
[ CH3 ]	[ CH3 ]	Tilt	0-255	0-270(degree)
[ CH4 ]	[ CH4 ]	Tilt Fine	0-255	0-1(degree)
[ CH5 ]	[ CH5 ]	Pan/Tilt Speed	0-255	Fast to slow
[ CH6 ]	[ CH6 ]	Reset		
			0-99	None
			100-105	Turn off lamp over 3 second
			106-199	None
			200-205	Turn on over 3 second
			206-239	None
			240-255	Reset fixture over 3 second
[ CH7 ]	[ CH7 ]	Cyan	0-255	
[ CH8 ]	[ CH8 ]	Magenta	0-255	
[ CH9 ]	[ CH9 ]	Yellow	0-255	
[ CH10 ]	[ CH10 ]	Colour		
			0-4	White
			5-9	White+colour1
			10-13	Colour1
			14-18	Colour1+Colour2
			19-22	Colour2
			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)
	[ CH11 ]	Colour Fine	0-255	
[ CH11 ]	[ CH12 ]	Gobo		
			0-3	White
			4-9	Gobo1
			10-15	Gobo2
			16-21	Gobo3
			22-27	Gobo4
			28-33	Gobo5
			34-39	Gobo6
			40-45	Gobo7
			46-51	Gobo8
			52-57	Gobo9
			58-63	Gobo10
			64-69	Gobo11
			70-75	Gobo12
			76-81	Gobo13
			82-87	Gobo14
			88-95	Shake slow to fast white
			96-103	Shake slow to fast Gobo1
			104-111	Shake slow to fast Gobo2
			112-119	Shake slow to fast Gobo3
			120-127	Shake slow to fast Gobo4

			128-135	Shake slow to fast Gobo5
			136-143	Shake slow to fast Gobo6
			144-151	Shake slow to fast Gobo7
			152-159	Shake slow to fast Gobo8
			160-167	Shake slow to fast Gobo9
			168-175	Shake slow to fast Gobo10
			176-183	Shake slow to fast Gobo11
			184-191	Shake slow to fast Gobo12
			192-199	Shake slow to fast Gobo13
			200-201	White
			202-227	Rotate reverse (fast to slow)
			228-229	Stop
			230-255	Rotate forward (slow to fast)
[ CH12 ]	[ CH13 ]	Effect Gobo	0-255	
[ CH13 ]	[ CH14 ]	Rotate Gobo		
			0-10	White
			11-20	Gobo1
			21-30	Gobo2
			31-40	Gobo3
			41-50	Gobo4
			51-60	Gobo5
			61-70	Gobo6
			71-80	Gobo7

			81-90	Shake slow to fast Gobo1
			91-100	Shake slow to fast Gobo2
			101-110	Shake slow to fast Gobo3
			111-120	Shake slow to fast Gobo4
			121-130	Shake slow to fast Gobo5
			131-140	Shake slow to fast Gobo6
			141-150	Shake slow to fast Gobo7
			151-199	Rotate forward (fast to slow)
			200-202	Stop
			203-255	Rotate reverse (slow to fast)
[ CH14 ]	[ CH15 ]	Gobo.Rotate		
			0-127	0-360(degree)
			128-190	Rotate reverse (fast to slow)
			191-192	Stop
			193-255	Rotate forward (slow to fast)
	[ CH16 ]	Gobo.Rotate Fine	0-255	
[ CH15 ]	[ CH17 ]	Prism1		
			0-63	None
			64-127	Inert prism1
			128-191	Insert prism2
			192-255	Prism1+prism2
[ CH16 ]	[ CH18 ]	Prism1.Rotate		
			0-127	0-360(degree)

			128-187	Rotate forward (fast to slow)
			188-195	Stop
			196-255	Rotate reverse (slow to fast)
[ CH17 ]	[ CH19 ]	Prism2.Rotate		
			0-127	0-360(degree)
			128-187	Rotate forward (fast to slow)
			188-195	Stop
			196-255	Rotate reverse (slow to fast)
[ CH18 ]	[ CH20 ]	Prism Zoom	0-255	
[ CH19 ]	[ CH21 ]	7Color		
			0-255	None
[ CH20 ]	[ CH22 ]	Frost		
			0-127	None
			128-255	Insert frost
[ CH21 ]	[ CH23 ]	Zoom	0-255	Large to small
[ CH22 ]	[ CH24 ]	Focus	0-255	Far to near
	[ CH25 ]	Focus Fine	0-255	
[ CH23 ]	[ CH26 ]	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
[ CH24 ]	[ CH27 ]	Dimmer	0-255	0-100% dimmer
	[ CH28 ]	Dimmer Speed	0-255	

## 7. Troubleshooting

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 connect power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED to see if it can be light up or not.

B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if they are linked properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
4. Try to use another DMX controller.
5. Check to see if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

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.

D. The lamp is cutting out intermittently

1. The lamp is not working well. Check the mains voltage either too high or too low.
2. Internal temperature may be too high. Check if replacement of fan is needed on the head.

E. If The pan belt is broken

1. Turn off the mains power.



2. Loosen the screws (A), open the cover(B).
3. Loosen the motor gear (C).
4. Loosen the screws (D)
5. Unplug all the connect wires over the belt.
6. Change a new belt (E), put the belt around the axis gear and motor gear.
7. Plug all the connect wires back upon the belt.
8. Tighten all the screws.

#### F. If The tilt belt is broken

1. Turn off the mains power.
2. Loosen all the screws (A) and open the right arm cover (B).
3. Loosen the screws (C) that fix the bridge.
4. Change a new belt (D). Please adjust the tension of the belt properly. Note: do not fix the belt too tight as it is can easily rupture.
5. Reverse the procedures from step 3 to 2.

#### 8. Maintenance and Cleaning

##### Maintenance:

- A. As the pictures shown above, please replace the cable or cable joints immediately once they've turned yellow.
- B. Do maintain the fixtures every two months and make sure that all the screws and terminals have been locked firmly to make sure the normal performance of the fixtures. Negligence of maintenance would cause malfunction of the fixture.

##### Cleaning:

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

Clean with soft cloth and use normal glass to clean liquid.

Always dry the parts carefully.

Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.