

USER'S MANUAL



Model: BC-M260 260W Beam Moving Head Light

Package Includes:

- 1 x beam moving head light
- 1 x clamp
- 1 x handle
- 1 x safe cable
- 1 x power cable
- 1 x DMX cable

Please read this manual before use

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Chapter 1 Safety Guidance and Technical Parameters

Attention

The equipment is well packaged when it leaves the factory. Please follow the user's manual, and the machine failure is not covered by the warranty due to human reasons

1. Safety guidance

Please keep this instruction manual as a basis for a future consultation, and if you sell this product to other users, please make sure that they also get it.

- The lamp is only suitable for indoor drying places.
- The installation and operation of the lamps should be carried out by professionals.
- Don't let the child operate the machine.
- Use a safe rope when fixing the equipment, and hold up the bottom when moving the lamps.
- Equipment must be installed in a well-ventilated place, at least 50 cm from the adjacent level.
- Ensure that the vents are unobstructed to avoid overheating during lamp operation.
- Ensure that the supply voltage complies with the equipment supply voltage before operation.
- Please ground the electric conductor to prevent the electric shock.
- Do not operate lamps above 40° C.
- Do not connect the lamps directly to the dimming device.
- The new lamp may have little smoke or odor, and will disappear after 15 minutes of operation.
- Do not place combustible items next to the lamps when running to prevent fire risk.
- Before opening the lamp, please carefully check whether the power cord is damaged. If there is any damage, please replace it immediately.
- The surface temperature of the lamp can reach 90° C, do not touch with bare hands.
- Avoid flammable liquid, water, or metal and other electrical conductors from entering the lamp interior to avoid electric shock or fire. If any foreign body enters the lamp, please cut off the power supply immediately.
- Avoid operating in a dirty and dusty environment, and clean and maintain the lamps regularly.
- Do not touch the wire to prevent electric shock.
- Avoid winding the power cord with other wires.
- The distance between the lamp and the irradiation surface shall be greater than 12M.
- Disconnect the power supply before replacing the fuse or light bulb.
- Use the same model when replacing the fuse or light bulb.
- Severe operation failure occurs, please stop the use immediately.
- Do not turn on the lamp repeatedly.
- Please replace the lamp shell, lens or UV filter.
- There are no available parts inside the lamp, do not open the lamp shell without authorization

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- Do not operate the machine by yourself. Non-professional operation will cause damage to the equipment or functional failure. If maintenance is needed, please contact the nearest authorized service center.
- Cut off the power supply when the lamps are not used or repaired for a long time.
- To avoid fire or electric shock, do not expose the lamps to rain or wet areas.
- High temperature bulb explosion risk, do not open the lamp within 15 minutes of power failure.
- Please replace the bulb when damaged, heat-deformed or beyond its service life.
- Do not look directly at the lamps during their operation.
- The light bulb will be very hot when the lamp is running. Do not touch it with your bare hands.
- Do not operate the machine when the bulb is not without a protective cover or the housing is damaged.

2. Technical Specifications

- ♦ Light source: 280W
- Expected life of lamp bulbs: 2000 hours
- Color temperature: 7800K
- Voltage: AC100-240V,50/60HZ
- ◆ Total power: 400W
- Power port: Input/output port of Power Connector
- Signal interface: Three-core DMX/RDM signal input/output
- Advanced optical systems ensure clear image quality.
- ♦ Beam angel: 0-2 °
- Control panel: LCD color panel +5 buttons; Chinese and English display interface;
- Control mode: DMX512, RDM, self-propelled, master-slave, voice control functions
- Control channel: 16CH
- X-axis/Y-axis: 16-bit precision scanning; photoelectric reset system is used for horizontal and vertical direction of X-axis 540° and Y-axis 270°. Accidental collision error can be automatically retrieved and reset.
- Color disc: One fixed color disc; a total of 13 kinds of colors (including white); the two-way rainbow effect can achieve half-color, panchromatic, single and double color gradient and slow motions in positive and negative directions. It also has Hall, magnet positioning and automatic error correction function in any angle.
- Fixed pattern plate: One fixed pattern plate, 10 kinds of metal patterns +3 kinds of glass patterns. It also has Hall, magnet positioning and automatic error correction function in any angle.
- Dual Prism: It is equipped with a bi-directionally rotated and stacked 8 prism and a 16+8 Prism.
- Stroboscopic: Mechanical stroboscopic design is used; the stroboscopic frequency is as high as 1-14 times/second; the stroboscopic frequency speed can be adjusted arbitrarily and the smooth dimming is between 0% and 100%.
- Independent atomizing effect
- Independent seven-color sheets

- Dust-proof and oil-proof design
- Electronic ballast
- Bubble point system: The long-distance lamp bulb control system is designed to intelligently control the openness and closure of lamp bulbs control system in distance and effectively extend the service life of the lamp bulb.
- Speed regulation through intelligent fan: Intelligent fan speed control: The fan will automatically reduce its speed and reduce the noise of the fan when there is no point bubble or the lamp is under the strobos-closed light state so as to create good performance environments.
- Use DMX to connect and update the software.
- ♦ Work environment Maximum tolerable ambient temperature: 45 °C Maximum tolerable surface temperature: 65 °C The lowest acceptable operating temperature: -5 °C

Chapter 2 Panel Operation

1. An Overview

- ◆ The schematic diagram of lamp panel is shown in Figure 1. The upper title shows names of the lamps and the lower part in the status bar, which shows signals of the current lamps and states and faults of the lamp bulb ("ERR" will be displayed when there is no fault information; otherwise, "NOR" will be displayed) and so on.
- This lamp supports DMX/RDM protocol. When the lamp is searched by the RDM console, the three letters "RDM" will appear on the panel to indicate that the lamp is enumerated normally.
- In order to display and operate similar "Android operating system", you can use your fingertip or blunt object to click corresponding items.

Note: Do not use sharp objects to click the display so as not to damage it.



Figure 1 Schematic diagram of the display panel

2. Operation

2.1 Please use visual touch or assisted input to operate the lamp (Touch-enabled

product)

- The left zone is TFT display area and the touch area. Click the panel with your finger or hard objects with dull surface and you can set parameters or view the status and do other operations.
- The right area is used for auxiliary input. If you do not use the touch function of TFT, you can use the auxiliary input to select the items you want to set or view and complete the operation.

2.2 Input parameters

If values need to be input into the selected parameter items, the window as shown in Figure 2 will appear:



Fig 2. Number setting interface

- Set the value: You can directly pull the slider to quickly set the required value or click the "up" or "down" button on the right to set the required value accurately or use the auxiliary input to set related values.
- Apply the value: After data are well set by the "up" or "down" button, if you press the "Apply" button in the lower left corner, the value will be sent to the lamp button immediately, but it is not saved at that time.
- Save the value: Click the "OK" button in the lower right corner to save the current value to the internal memory. The saved values will be applied to the lamp next time you turn the lamp on.

2.3 Set the Boolean parameter

- When the parameter is set to a Boolean value (such as ON or OFF), you only need to click corresponding items directly to switch the parameters. The modified parameters will be saved to the internal memory. Press the parameter option on the right and the corresponding options will become gray. After you release your hand, corresponding parameters will be changed and saved. If the parameter option is not the parameter you want to change, you can move your finger to another part of the screen and corresponding parameters will not change.
- Important Boolean parameters can be set through the window, as shown in Figure 3 below:

SURE	ON	

Figure 3 Confirm the input window

2.4 Sub-parameter page (parameters)

Address setting		100		Address setting	DMX mode	1	Address setting	Language	Chine	ese
Run setting	007	Previ	ous	Run setting	Self-propelled mode		Run setting	Screen protection	0	off
Display setting	007			Display setting	Voice-activated mode		Display setting	Screen rotation	forwa	ard
Scene setting	17CH 01.07	Ne	xt	Scene setting	Scene mode Au	utomatic	Scene setting	Screen switch	o	on
dvanced setting				Advanced setting	Master-slave choice	Slave	Advanced setting	Screen correction		
atus information	Concession in the local division in the loca			Status information	On-off operation of the lam	p bulb Off	Status information	-		-
Esc	Common mode	Lamp	reset	Esc			Esc			
Figure	6-1 Address s	etting		Figur	e 6-2 Run setting	01	Fig	ure 6-3 Displa	y settin	g
Figure	6-1 Address s	etting		Figur	e 6-2 Run setting	01	Fig	ure 6-3 Displa	y settin	ıg
Figure Address setting	6-1 Address s [Sceneselection] [Scene time]	etting 1 25.3s		Figur Address setting	e 6-2 Run setting X-axis Reverse Y-axis Reverse	OFF	Fig Addresssetting	ure 6-3 Displa Mote information Fault record	y settin	ig Þ
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Figure Address setting Run setting Display setting Scene setting	6-1 Address s [sceneselection] [Scenetime] 01.X-axis 02.Y-axis 03.Wenged	1 25.3s 255 135 000		Figure Address setting Run setting Display setting Scene setting	e 6-2 Run setting X-axis Reverse Y-axis Reverse Optical coupling correction X-axis offset Y-axis offset	OFF OFF n ON 010	Fig Address setting Run setting Display setting Scene setting	Mote information Fault record Lamp status Version (Light source time	y settin 25. 0. 15 0н))))
Figure Address setting Run setting Display setting Scene setting dvanced setting	6-1 Address s [sceneselection] [Scene time] 01.X-axis 02.Y-axis 03.XY speed 04. Reset/function	1 25.3s 255 135 000 000		Figure Address setting Run setting Display setting Scene setting Advanced setting	e 6-2 Run setting X-axis Reverse Y-axis Reverse Optical coupling correction X-axis offset Y-axis offset Data hold	OFF OFF ON 010 010 OFF	Fig Address setting Run setting Display setting Scene setting Advanced setting	Mote information Fault record Lamp status Version (Light source time Run time	y settin 05. 0. 15 0H 9H))))
Figure Address setting Run setting Display setting Scene setting dvanced setting atus information	6-1 Address s [Sceneselection] [Scene time] 01.X-axis 02.Y-axis 03.XY speed 04. Reset/function 05. Colour disk	1 25.3s 255 135 000 000 000		Figure Address setting Run setting Display setting Scene setting Advanced setting Status information	e 6-2 Run setting X-axis Reverse Y-axis Reverse Optical coupling correction X-axis offset Y-axis offset Data hold Lamp-on mode M	OFF OFF n ON 010 010 0FF lanual open	Fig Address setting Run setting Display setting Scene setting Advanced setting Status information	Are 6-3 Displation Mote information Fault record Lamp status Version (Light source time Run time	y settin 05. 0. 15 0H 9H	ig b b b
Figure Address setting Run setting Display setting Scene setting dvanced setting atus information Esc	6-1 Addresss [Sceneselection] [Scenetime] 01.X-axis 02.Y-axis 03.XY speed 04.Reset/function 05.Colour disk 06.Pattern disk	1 25.3s 255 135 000 000 000 255		Figure Address setting Display setting Scene setting Advanced setting Status information Esc	e 6-2 Run setting X-axis Reverse Y-axis Reverse Optical coupling correction X-axis offset Y-axis offset Data hold Lamp-on mode M Factory settings	OFF OFF n ON 010 010 OFF lanual open	Fig Address setting Run setting Display setting Scane setting Advanced setting Status information Esc	Are 6-3 Displa Mote information Fault record Lamp status Version (Light source time Run time	y settin 25. 0. 15 0H 9H	b b b

3. Function operations and parameter setting

Enter the setting interface as shown in Figure 6-1:

- In the main interface, you can enter corresponding parameter setting interfaces by selecting the six buttons.
- In the parameter setting interface, you can press the blue option on the left to quickly switch to other setting interfaces.

3.1 Set the DMX address code

DMX address and channel mode can be set through the page shown in Figure 6-1.

The menu settings of lamps optimize the address setting. Operations for several kinds of address setting are shown as follows:

- Select "Previous" or "Next", the address code of the precious one or the next one will be automatically calculated according to the current address code and channel data. They can be set quickly;
- Click the address code value and you can enter the numeric editing window where you can set any valid address codes. The lamp will automatically obtain current channel numbers of the lamp and automatically filter unusable address codes (512- current channel number).
- ◆ The lamp supports RDM protocol. You can set the address code of the lamp through RDM

remotely.

- Two buttons are provided:
- Channel mode: Different channel modes can be selected circularly;
- Lamp reset: Reset all motors.

3.2 Set working mode of the lamp

• Operations modes of the lamp can be set to control the lamp bulb according to the page shown in Figure 6-2. The lamp supports four operation modes (DMX mode, self-propelled mode, voice-activated mode and scene mode). Please refer to the previous section for parameter value setting. Detailed parameters are described as follows:

DMX mode	Under the console mode, it can receive DMX signal and RDM						
	signal.						
	Under the c	onsole mode, it can receive DMX signal and RDM					
	signal.						
Self-propelled	The lamp will be operated automatically according to the built-in						
mode	program.						
Voice-activate	When the lamp detects strong sounds, the lamp will						
d mode	automatical	y run a scene according to the built-in program,					
	otherwise, th	he last scene will continue.					
Scene	The lamp of	perates according to the scenes set; it supports the					
mode 01	customized	editing of up to 10 scenes at most.					
	1~10	Output specified scenarios					
	Automatic	Automatically output scenes in the sequence of					
	operation	setting scene time (not 0). Scenes with time of 0					
		will be automatically ignored.					
Master-slave	It will become	me effective when it is not under DMX mode; please					
choice	select data	output mode and the lamp will automatically detect					
	DMX statu	s and automatically switch output to prevent data					
	conflicts.						
	Console	The lamp will be operated according to the built-in					
		program; if DMX has no signal, data will be output					
		(synchronization); otherwise, no data will be output.					
	Slave	The lamp will be operated according to the built-in					
		program and will not output data (it will not be					
		synchronized with other lamps).					
	Automatic	If DMX has no signal, lamp will be operated					
	operation	according to the built-in program; otherwise, the					
		lamp will be operated according to the DMX signal.					
On-off	(Light sourc	es of lamp bulbs) A confirmation dialog box will pop					
operation of	up; select "	sure" to confirm the current operation. Then, switch					
the lamp bulb	on or off the	e lamp bulb and the time interval shall be set to be 30					
	seconds.						

Operation mode

Close	Output of the current lamp bulb is turned off.
Open	The current light output is turned on.

- Scene mode is suitable for single lamp or small numbers of scenes. You only need to output fixed scenes or operate a simple program. The console may not be connected; you only need to edit it on the scene page.
- If the light source of the lamp is the lamp bulb, you need to wait for 10 minutes after you turn off the lamp bulb. You can turn on the lamp bulb then.

3.3 Panel display settings

• The lamp supports Chinese-English settings and upside-down display. You can set corresponding parameter according to operations shown in Figure 6-3. Specific menu contents are shown in the table below:

Language	Set languages displayed				
	English	English display			
	Chinese	Chinese display			
Screen	Set screen	n display content or mode if there is no operation on the			
protection	screen within 30 seconds.				
	Close Keep the last operation page; the screen is on.				
	Mode 1	The screen is off			
	Mode 2	Black screen; address code of current lamp will be			
		displayed on the bottom left corner.			
	Mode 3	Display the trademark information, address code and			
		operation mode.			
Screen	Set the dis	play direction of the screen			
rotation	Close	Non-reverse display			
	Open	Reverse display			
	Automati	Automatically detect lamp direction and switch the			
	с	display direction.			
DMX	Set the ind	ication mode of DMX signal indicator lamp			
indication	Mode 1	It lights up when there is a signal and goes off when			
		there is no signal.			
	Mode 2	It goes off when there is a signal and lights up when			
		there is no signal.			
	Mode 3	If flashes when there is a signal and goes off when there			
		is no signal.			
Signal	Set the bri	ghtness of the signal indicator			
indication	1~10	10 grades			
brightness					
Screen	Set the bri	ghtness of the screen backlight after there is no operation			
backlight	for 10 seco	onds. All lights will be on during operation.			
	1~10	10 grades			

Display settings

Touch switch	Select whether to disable the touch screen; when the screen touch
	is accidentally damaged, you may disable the touch function and
	use the auxiliary input to set the lamp.
Touch-screen	When the screen touch is not accurate, you can enter the correction
calibration	page to correct the screen.

The lamp supports touch operation. If the touch screen does not work, you can enter the calibration page to rectify the touch precision of the touch screen again. Under normal situations, you should not enter this page. If the touch screen is damaged, please select "Disable Touch Switch".

3.4 Scene mode

- Enter the page displayed on Figure 6-4 and the lamp will enter the scene editing mode. On this page, the lamp will not receive DMX console data. The edited data will be reflected to the lamp instantly.
- Contents of the page are based on the currently selected channel and the channel contents and orders displayed are the same as those of the lamp channel table. 10 scenes can be edited on this page and they are shown in the table below:

Scene	Select the scene to operate on at present			
selection	1~10	Setup formats for 10 scenes		
Scene time	Set the retention time of the cur	rent scene on automatic mode; unit:		
	0.1 second			
	0	The current scene does not		
		participate in the automatic scene		
		output		
	1-255	From 0 1 to 25.5 seconds		
1. X-axis	0-255	Set data for each channel so that		
•••••	0-255	the display contents and orders can		
•••••	0-255	match the channel table for the		
N. function	0-255	lamp		

Scene mode

- If effective reset data are edited by the reset channel in the scene, the lamps will be reset. However, after that, values of corresponding reset channels will be automatically reset to zero so as to prevent multiple consecutive resets.
- Check this page to obtain the current channel table order of the lamp. Refer to the detailed channel description for channel data.

3.5 Set work parameters of the lamp

• Enter the page shown in Figure 6-5 to adjust on-field parameters of the lamp and to facilitate field installation of the lamp:

Advanced settings

X-axis reverse	Set the X-ax	xis rotation direction				
	Close	Not reversed				
	Open	Reverse				
Y-axis reverse	Set the Y-axis rotation direction					
	Close No	eversed				
	Open Rev	verse				
Optocoupler	Set whether	the lamp can detect lost synchronization of X-axis and				
calibration	Y-axis and o	correct them.				
	Close	No position correction after lost synchronization				
	Open	Automatically correct the position after lost				
		synchronization and record failures for lost				
		synchronization				
X-axis offset	Set the posi	tion of the null point at X-axis of the lamp				
	4-150					
Y-axis offset	Set the position of the null point at Y-axis of the lamp					
	4-48	-48				
Data Retention	Set the outp	ut state of the lamp when the lamp has no DMX signal.				
	Close	No signal; the motor and light source return to the				
		position and state when it is well reset.				
	Open No signal; keep the last DMX data output					
Light-up	Set the way	that the lamp bulb is started after it is powered on				
pattern	Power-on	Start the lamp bulb first after it is powered on and then				
	bubble	reset the lamp 30seconds later.				
	Reset	Reset the lamp after it is powered on for three seconds;				
	completion	open the lamp bulb after it is well reset.				
	bubble					
	opened					
	Start bubble	e After it is well reset, manually turn on the lamp bulb				
	manually	bulbs through the menu or the console.				
Factory	After the co	onfirmation box pops out, you should select "SURE" and				
settings	lamp parameters will return to the factory settings.					

- ◆ When the power-on bubble mode is used, the lamp will wait for the lamp bulb for 30 seconds to fully start the lamp bulb. As long as the internal voltage is stable enough, the reset program shall be started again. If the site has stable electricity capacity, the power-on lamp bulb mode is recommended.
- If the lamp fails to correct the position, please check whether the "Optocoupler calibration" is turned off.
- After the signal is removed, if the position of the lamp is not output according to the set value, please check "Data Hold" setting first.
- After the offset values of XY axes are set, please control XY with the maximum stroke and then check whether X and Y will not hit the positioning rod or shell after it is well set.

3.6 Check current status of the lamp

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• You can check the information and real-time status of the lamp in the page shown in Figure 6-6 and to obtain the usage status of the lamp. If you need after-sales service, please provide the status information displayed on this page for judgment. The information is shown in the table below:

Motor	Display the information status of all motors and signals of the lamp			
information	Hall	If it is not displayed, it means that the motor is not		
		corrected through Hall correction. 0 means that the		
		motor has been away from the correction position point		
		while 1 means that the motor is at the correction		
		position point.		
	Status	Display reset completion state of the motor		
	X-axis	Display the real-time position fed back by the X-Axis		
	Optocoupler			
	Y-axis	Display the real-time position fed back by the Y-Axis		
		Optocoupler		
		Display the electrical level state of optocoupler on		
	Optocoupler	X-Axis and Y-Axis. The binary system is used.		
Failure/status	Display recen	at 8 fault records when the lamp is reset and operated;		
record	fault records	will not be saved after power is off. It is valid in the		
	current electri	c cycle.		
	Failure data	Total number of faults detected after power is on		
	12: :03	Power-on time when the fault appear; unit: minute.		
	Hall failure	No effective Hall signal is detected by the motor when		
		corresponding motor is reset		
	Hall short	The Hall signal of the motor is always valid when		
	circuit	corresponding motor is reset.		
	Optocouple	No effective Optocoupler signal is detected when the		
	failure	corresponding motor is reset.		
	Step failing	The corresponding motor steps out during operations of		
	out	the corresponding motor.		
	Hit the rod	Hit the positioning rod when corresponding motor is		
		reset.		
	Failure of	The lamp bulb accidentally goes off.		
	the lamp			
	bulb			
	Sensor fault	Temperature sensor has abnormal signals.		
	Fan fault	The main fan does not work normally.		
Lamp status	Display key s	tatus data for the current lamp for reference		
	Communica	0~100%; Communication quality of internal data links		
	tion	of the lamps		
	Error count	The total number of error frames detected after power is		

Status information

		on.		
	Light	Display the temperature of the current light source. ""		
	source	means no detection.		
	temperature			
	Display	Display the temperature of the current display board or		
	panel temperature of nearby places			
	temperature			
	Sensor 1	Display the current motherboard temperature or the		
	temperature	ambient temperature at the location where the main		
		board is installed		
Version	Display the i	nformation and version of the current lamp; serve as an		
information	important refe	erence for after-sales maintenance		
	Equipment	Name of the lamp; it is the same as the RDM device		
		information		
	Model	The model number of lamp; it is same as the model		
	number	number information of RDM		
	Display	The firmware version and serial number of the display		
	board	board		
	Main board	The firmware version and serial number of the		
	1	motherboard 1		
Light source	Record the to	tal cumulative time of lamp sources turned on; the unit is		
time	minute. It can	n be manually cleared by users and used as a reference		
	time for regular maintenance of light sources.			
Lamp time	Record total lamp opening time. Unit: minute. It can not be cleared.			

Chapter 3 Description of Channels

1 Channel table

- The lamp has 16 channel modes.
- Orders of channels can be checked in the scene mode. The channel mode can be set in the "Address Settings" page and detailed data are shown in the following table:

Channel	Name	Value	Description
CH1	X-axis	0-255	0-540 °
CH2	Y-axis	0-255	0-270 °
СНЗ	X-axis fine	0-255	
	tuning	0-233	
СН4	Y-axis fine	0.255	
CI14	tuning	0-233	
CH5	XY speed	0-255	From fast to slow
CH6	Pulverization	0-127	No

Channel table

		128-255	Insert the atomization
CH7		0-3	Close the light
		4-103	Pulse strobe from slow to fast
		104-107	Open the light
	Strobing	108-207	Gradual strobing from slow to fast
		208-212	Open the light
		213-251	Random strobing from slow to fast
		252-255	Open the light
CH8	Dimming	0-255	0-100% Dimming
	0	0-9	White light
		10-14	White light + Color 1 (Red)
		15-19	Color 1 (Red)
		20-24	Color 1 (Red) + Color 2 (Orange)
		25-29	Color 2 (Orange)
		30-34	Color 2 (Orange) + Color 3 (Blue)
		35-39	Color 3 (Blue)
		40-44	Color 3 (Blue)+ Color 4 (Green)
		45-49	Color 4 (Green)
		50-54	Color 4 (Green)+ Color 5 (Yellow)
		55-59	Color 5 (Yellow)
		60-64	Color 5 (Yellow) + Color 6 (Purple)
		65-69	Color 6 (Purple)
		70-74	Color 6 (Purple) + Color 7 (Dark
			Blue)
		75-79	Color 7 (Dark Blue)
			Color 7 (Dark Blue)+ Color 8 (Light
GUIO		80-84	yellow)
CH9	Color	85-89	Color 8 (Light yellow)
			Color 8 (Light yellow)+ Color 9
		90-94	(olivine)
		95-99	Color 9 (olivine)
		100-104	Color 9 (olivine) + Color 10 (Rose
			Red)
		105-109	Color 10 (Rose Red)
		110-114	Color 10 (Rose Red) + Color 11
			(Tangerine)
		115-119	Color 11 (Tangerine)
		120-124	Color 11 (Tangerine)+ Color 12 (CTO)
		125-129	Color 12 (CTO)
		130-134	Color 12 (CTO)+ Color 13 (CTB)
		135-139	Color 13 (CTB)
		145-149	Color 13 (CTB)+white light
		150-203	Forward flow from fast to slow
		204-255	Reserve flow from slow to fast

		0-4	White light
		5-9	Pattern 1
		10-14	Pattern 2
		15-19	Pattern 3
		20-24	Pattern 4
	Pattern	25-29	Pattern 5
		30-34	Pattern 6
		35-39	Pattern 7
		40-44	Pattern 8
		45-49	Pattern 9
		50-54	Pattern 10
		55-59	Pattern 11
		60-64	Pattern 12
		65-69	Pattern 13
		70-125	Forward flow from fast to slow
CH10		126-130	Stop
		131-190	Reverse flow from slow to fast
		191-195	Pattern 1 shakes
		196-200	Pattern 2 shakes
		201-205	Pattern 3 shakes
		206-210	Pattern 4 shakes
		211-215	Pattern 5 shakes
		216-220	Pattern 6 shakes
		221-225	Pattern 7 shakes
		226-230	Pattern 8 shakes
		231-235	Pattern 9 shakes
		236-240	Pattern 10 shakes
		241-245	Pattern 11 shakes
		246-250	Pattern 12 shakes
		251-255	Pattern 13 shakes
	Prism	0-63	Remove the prism
QU11		64-127	Insert prism 1
CHII		128-191	Insert prism 2
		192-255	Insert Prism 1 and Prism 2
	Autorotation of prism 1	0-64	0-400 °
CU12		65-127	Forward flow from fast to slow
CH12		128-191	Stop
		192-255	Reverse flow from slow to fast
	Autorotation of prism 2	0-64	0-400 degrees
CU12		65-127	Forward flow from fast to slow
CHI3		128-191	Stop
	or priorit =	1	1
h	or priorit 2	192-255	Reverse flow from slow to fast
		192-255	Reverse flow from slow to fast
CH14	Focusing	192-255 0-255	Reverse flow from slow to fast From far to near

		128-255	Insert seven colors
	Reset/lamp bulb	100-105	Turn off the lamp bulb after more than
			three seconds.
		200-205	Turn on the lamp bulb after more than
			three seconds.
CU16		210-215	Reset the XY after more than three
СПІО			seconds.
		220-235	Reset effects after more than three
			seconds
		240-255	Reset effects after more than three
			seconds

Chapter 4 Common Failures and Matters Needing Attention

1. Handling of common failures

The lamp contains the microcomputer circuit boards, high voltage power supply and other professional parts. In order to ensure your safety and the service life of the product, non-professionals should not dismount lamps and related accessories.

1.1 The lamp bulb is off (except LED light source)

Possible reasons: Lamp bulb is not completely cooled or the lamp bulb reaches its service life. Please handle them as follows:

- The lamp bulb is not fully cooled down because of abnormal operation. The lamp shall be cooled down for more than 10 minutes so that its inside parts can be operated normally. Then, start the power supply again.
- Check whether the lamp bulb has reached its service life and replace the new lamp bulb in time.
- Check whether the lamp bulb and lines of the lighting apparatus suffers from electric leakage, falling or poor contact;
- Change new lamp lighter.
 - 1. The light beam is dim

2. Possible reasons: The lamp bulb has been used for a long time or the light path is not clean. Please handle them by using the following methods:

- Check whether the lamp bulb has reached their service life. Please change new lamp bulb.
- Check whether optical parts or the lamp bulbs are clean and whether there is dust accumulated on the lamb bulb and optical devices. Clean and maintain the lamb bulbs and other parts regularly.

1. Blurry pattern projection

• Check whether the electronic focusing channel value is appropriate for the current projection distance.

1. The lamp works intermittently

Possible reasons: Internal circuits are under the protection state. Please handle this matter according to the following methods:

- Check whether the fan is running properly or has been dirty, which can lead to higher internal temperature;
- Check whether the internal temperature control switch is in a closed state;
- Check whether the lamp bulb has reached service life and replace it with a new lamp bulb.

1. The lamp is not controlled by the console after it is reset normally.

2.Possible reasons: The signal lines have faults or parameters of the lamp are not set normally. Please handle this matter according to the following methods:

- Check the starting address code and the connection situation of DMX signal line (whether the signal line cable is in good condition and the connection ports have been loosed or not).
- Install a signal amplifier and a 120-ohm terminal resistor;

1. The lamp can not be started

2.Possible reasons: Possible reasons: Poor line contact. Please handle this matter according to the following methods:

- Check whether the fuse wire on the power input socket has been fused. If so, please replace the fuse wire in time;
- Vibration of the lamp in long distance transportation leads to bad contact;
- Check the input power supply, computer board and other plug-in devices.

2. Matters needing attention

- Check whether the power supply at local areas can meet rated voltage requirements and whether the leakage protector and over-current protector can meet the load requirements;
- Do not use the power cord whose insulation layer has been damaged. Do not lap the power cord on other wires.
- Lamp refrigerates through strong wind, which may lead to the accumulation of dust. Therefore, the lamp, especially its heat vent, shall be cleaned every month, otherwise, the it will be blocked by dust accumulation, which may lead to poor heat dissipation and abnormal situation of the lamp.
- When the lamp is installed, the fixing screws must be tightened and safety cable must be equipped. They shall be checked regularly.
- When the lamp is installed and positioned, the site on the surface of the lamp shall be 10 meters away from any inflammable explosive material, be 2.5 meters away from the light objects. Please do not install the lamp directly on surfaces of inflammable materials.
- The continuous working time of the lamp should not exceed 10 hours and the interval between consecutive starting time should not be less than 10 minutes, otherwise, lamp bulbs may not be normally triggered because of overheating protection;
- The closing time of the on-off valve should not exceed 5 minutes. If the light needs to be turned

off for a long time, the light gun shall be turned off by the console (the light gun control channel).

- In order to ensure that many lamps can better comply with scene effects, the lamps should not be kept in the present uncompleted scene before it starts the next scene. This state should be less than three minutes and you should ensure that more than one lamps can be operated synchronously;
- When the lamps are used, if some lamps become abnormal, you should stop using them immediately so as to prevent the occurrence of other failures.

3.Matters needing attention when RDM is used

- Use a console or host device that supports RDM protocol console;
- Bi-directional amplifier shall be used because traditional unidirectional amplifiers are not suitable for RDM protocol, which requires feedback data. Unidirectional amplifier will block the returned data and lead to the failure in searching for the lamp.
- All lamps must be set to DMX mode and there shall only be one host on one signal line;
- ♦ A 120ohm impedance matching resistor must be inserted between terminal 2 and terminal 3 of the terminal plug. When there are long signal lines, the reduction of signal reflection will make differential signals more stable, which is beneficial to improving the communication quality.
- In the case where lamps can be controlled by DMX but can not be searched by RDM, you should check the signal amplifier first. Then, you need to check whether either signal line 2 or signal line 3 is not well contacted.

4.Installation of the lamp

Use RS-485 cable conforming to specifications (shielding function, 120ohm characteristic impedance, 22-24 AWG, low capacitance) shall be used. Do not use microphone cables or cables with different specified characteristics. Terminals must be connected through a 3-pin or 5-pin XLR male/female connector. (Minimum 1/4 W).

Important hint: The wires should not contact each other or be connected with metal



Fig. 4 Schematic diagram for DMX signal line connection

- The lamps can be placed horizontally, hung diagonally and hung upside down. Be sure to install them correctly when they are hung diagonally and upside down.
- ♦ As what is shown in Figure 5, before you position the lamps, you should confirm that the installation site is stable. If the lamps are hung reversedly, you must ensure that the lamps should not fall down from the support frame. Therefore, you need to pass a safety rope through

the support frame and the handle of the lamp so as to ensure the safety and prevent the lamps from falling down or sliding.

- When the lamps are installed and debugged, no pedestrian is allowed to pass underneath. You should check the safety ropes regularly to see whether they are worn and whether the hook screws are loose.
- Our company will not take any responsibility for consequences caused by falling lamps which are not stably installed.



Fig. 5 Schematic diagram for the lamp hung upside down

5.Declaration

- This product has intact performance and complete packaging when it is delivered out of the factory. All users should strictly follow warnings and operating instructions stated above. Any damage caused by our using this product improperly will not be guaranteed by our company. The dealer will not be responsible for any malfunction or problem caused by operations done not according to the operation manual.
- This manual is subject to technical changes without prior notice.

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