USER MANUAL

700W LED SPOT FRAMING MOVING HEAD LIGHT WITH CMY+CTO+RDM

Instruction for use

Read the instructions carefully before use

1.　Precautions and Installation Precautions and installation

1.1 The statement

Thank you for choosing our products! This product in the factory, performance in good condition, completely packed. For your safe and effective use of this product, before you use this product, please read this manual carefully and completely. Installation and use of this manual contains important information, please according to the requirements of the instructions for installation and operation, at the same time, please keep this manual, in order to use at any time. Our company does not assume all responsibility for damage to lamps or other properties caused by individuals who do not operate according to the instructions during installation, use or maintenance.

This manual if there is any technical changes without prior notice.

1.2 Maintenance
- Please disconnect the power supply before maintenance maintenance.
- The lamps and lanterns should keep dry, avoid in wet environment.
- The use of intermittent can effectively prolong the life of the lamps and lanterns.
- In order to obtain good ventilation and lighting effects, to pay attention to often clean fan and fan nets and lens.
- Please do not use alcohol and other organic solvents to wipe test lamps shell, lest cause damage.

1.3 Product matters needing attention
- The lamps and lanterns for professional use only.
- **Ensure that the power supply voltage is consistent with the required power supply voltage of the equipment before operation.**
- Do not place this product where easy to loose or easy to vibrate.
- During use, if the lamp is abnormal, stop using the lamp in time.
- In order to guarantee the service life of the product, this product is not put in damp or leaking, more can't work in more than 60 degrees temperature environment.
- Light bulb, power supply voltage change should not be more than plus or minus 10%, the voltage is too high, will shorten the life of the light bulb, the voltage is too low, then affect the light bulb.
- Need used after 20 minutes, when the power is used lamps and lanterns is cooled sufficiently to energized again.
- The rotating part of the lamp and the sticking accessories must be checked regularly, and the loosening and shaking should be strengthened in time to prevent accidents.
- In order to ensure the normal use of this product, please read the instructions carefully.

1.4 Product introduction

- Input Voltage:100-240V 50/60Hz
- Light Source:700W white LED, 8000K
- LED lifetime: 20000 hours
- CRI:≥90
- Movement：Pan 540°&Tilt 270°, With super quiet movement and automatic error reset function.
- Framing: 4 groups and eight directions of blade, multiple design
- Static gobo wheel: 10 gobos + open
- Rotating gobo wheel: 7 gobos + open, interchangable, indexable
- Animation wheel: 1 animation wheel with outstanding water and flame effect
- Color Wheel: one color wheel with 6 colors+ Open
- CTO: Independent CTO,color temperature can be linear adjusted
- CMY: Independent CMY, with linear color change,excellent color macro effect
- Prism：3 prism, with rotate in either direction
- Focus: Automatic focus
- Zoom: 5°- 55° Linear zoom
- Iris: 5%-100% motorized linear iris adjustment
- Dimming：0-100% linear dimming
- Strobe：0-20Hz ,With strobe effect, 1-25 times/second
- Frost: 35°-65° With frost effect, with 3 frost lever-heavy, medium and light
- Display: LCD display
- Control Mode: DMX 512,RDM，Auto-running , Master/salve, Sound active, Built-in program
- The unique folded hanging clamp system makes this product more practical and convenient
- DMX Channel: 36CH
- N.W.: 36kg
- G.W.: 38.5kg

1.5 Signal lines connected

Luminaires come with standard DMX input and output 3-core or 5-core XLR sockets. Please use for the DMX 512 shielded twisted-pair signal lines; The signal line is generally connected at a distance of 150 meters. When long-distance signal transmission, DMX512 signal amplifier must be added.

Use a shielded twisted-pair signal lines connected to the first from the DMX controller output device of the DMX input port, and the DMX output from the first device is connected to the second device DMX input port, and so on, until completion connect all the lamps and lanterns, Then install a terminal plug on the last connecting 3-core jack of the luminaire output in each connection. (Solder a 4/1W, 120Ω resistor between the 2 and 3 pins of the 3-core pin card noong plug).

Important: The wires should not be in contact with each other or with the metal housing.
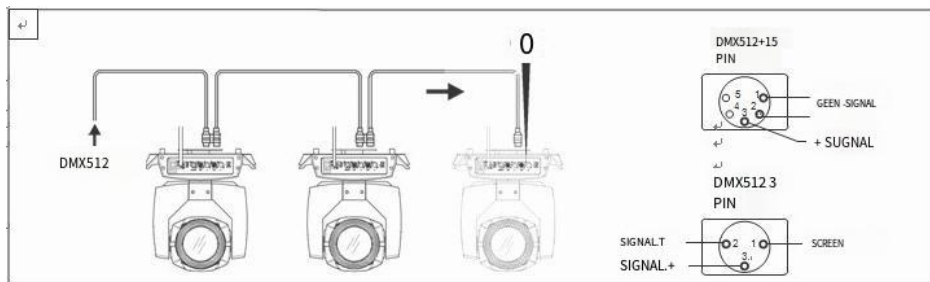
Figure 1 DMX signal connection diagram

➢　Lamps and lanterns is the starting address code calculation method:

The starting address code of the current lamp is equal to (the starting address code of the previous lamp)+(the number of channels of the lamp)

1: first the starting address code value A001 of lamps and lanterns.

2: basic channel number of the controller, lamps and lanterns should be greater than or equal to the total use the channel number.

3: Note: when using any controller, each lamp should have its own starting address code. If the starting address code of the first lamp is set to A001, the number of channels of the lamp is 16CH; Then the second stage lamps and lanterns is the starting address code is set to A017; The third stage the starting address code is set to A033 of lamps and lanterns; So on, the mode (this setting can be according to different control table to decide)

1.6 Luminaire installation

Lamps can be placed horizontally, slant, and upside down. Hang on and upside down when it is important to note that the installation method.

As shown in Figure 2, before positioning the lamps, the stability of the installation site should be ensured. During the reverse hanging installation, the lamps must not fall down on the support frame. Safety ropes should be used to carry out auxiliary hanging through the support frame and the handle of the lamps to ensure safety. Prevent the lamps from falling and sliding.

Below the lamps and lanterns in the installation and debugging, ban pedestrians pass, regularly check whether the safety rope wear, hook screw whether there is loose.
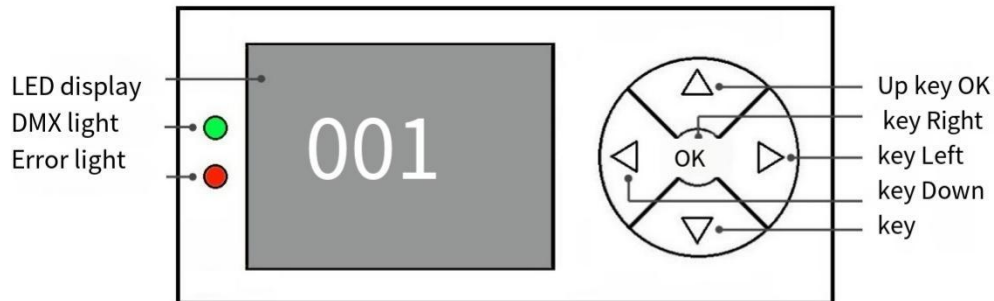
If the hanging installation is not stable, resulting in the fall of the lamps and all the consequences, our company does not assume any responsibility.

Figure 1. 2 Schematic diagram of e folded hanging clamp system
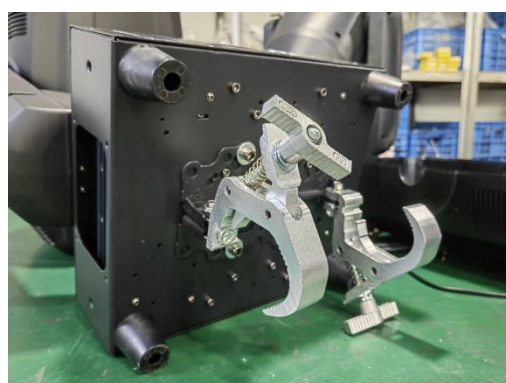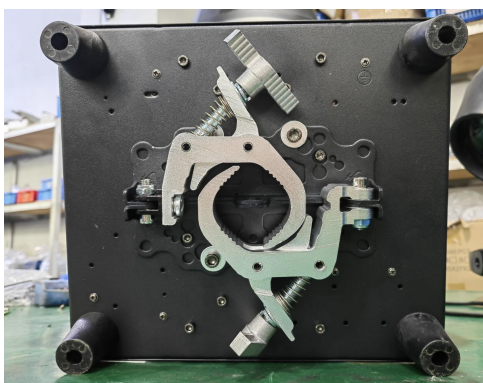
2.The control panel

2.1 Key Instructions

Figure 3 panel key schematic diagram

Take "Modify DMX address code" as an example to describe the use of keys:

1, if the current is not the main interface, press the "left" key (one or more) can be returned to the main interface

2. Under the main screen, press the "Up" or "Down" key to select the "DMX Settings" button

3, press the "ok" key, enter "DMX Settings" interface

4, press "up" or "down" key to revise the DMX address code

5, Press the "OK" key to exit the editing state

6. Press the right button in the main interface to enter the shortcut key of the calibration interface.

The lowest point 7, note: the main interface, Chinese/English, screen rotation and reset shortcuts can only manual touch, not buttons.

2.2 Menu Description

2.1.1 The main screen　　　(figure The main menu map)
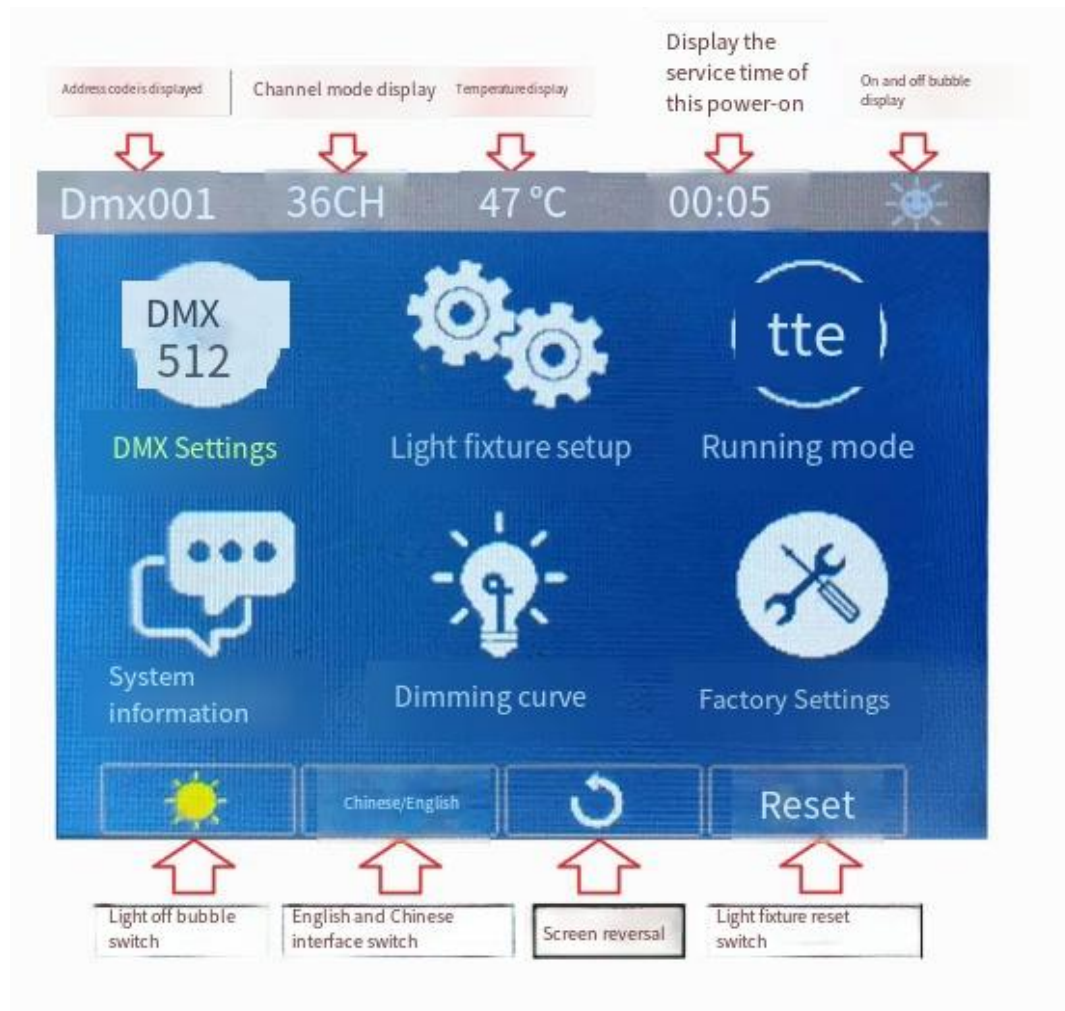
2.2.1 DMX Settings

Options	instructions	
Address code	001 ~ 512	▶ Press "Up" and "Down" keys to change the address code (only increment or decrement by one value); ▶ Press the "right" key to automatically switch to the address code of the next machine (for example, when the channel mode is 20CH, the address code is 021, press the "right" key, the address code becomes 041, and the right key is to switch to the last machine in the address code interface); ▶ Adjust to the required address code, press "OK" key again to save the address code and exit the address code editing interface.

2.2.2 Lamp Settings

options		instructions
DMX channel		Channel mode switch
RMD function	Off/on	Close/open the RDM function
language	Chinese	Set to Chinese interface
	English	Set to English interface
Screen rotation	Off	Positive display
	On	Back screen display
Screen automatically turning	Off	Screen automatically turning
	On	
Screen saver	Off	Screen always on
	On	Black screen after 30 seconds
DMX signal	keep	According to the original state continues to run
	reset	The motor returns to position and stops running
Screen saver	On/off	After turning on, do not operate the interface for 30 seconds before turning off the screen
X reverse	On/off	The X axis 0-255 reverse
Y reversal	On/off	Y a scale of 0-255 to reverse
XY swap	On/off	The exchange of XY channels (including fine-tuning)
XY encoder	On	Using encoder (light coupling) judging out-of-step and automatically correct position
	Off	Do not use the encoder (light coupling) correct position
Restore the default Settings		Click "ok" button after see confirmation dialog, press the "ok" key again to restore the default Settings

2.2.3 operation mode

Description: can choose DMX mode, since go mode, acoustic mode.

Options		Notes
Self-walk mode	DMX	Slave state: Receive DMX signals from console or host
	Since the go	Host state: Self-walk and send DMX signal to slave
	Voice control	
Manual control		Manual control into the interface
Light fixture reset		After confirmation, all motors begin to reset
XY reset		Confirmed, x, y motors start reset
MT reset		Once confirmed, the small motor begins to reset

Manual control

This interface is used to control the current lamp (does not receive DMX signal), corresponding to the channel. Refer to the channel table for details

Options		Instructions
1CH.	0 ~ 255	Press "OK" to enter edit. At this point, it is to select hundreds, and press "up" and "Down" to change the channel value. Press "OK" again to select the ten digit edit. Press "OK" again to select single-digit editing. According to the state of an exit the editor again
...	0 ~ 255	
15CH.	0 ~ 255	
...	0 ~ 255	

2.2.4 System information

Options		Instructions
System version		Display board and motor board software version
Temperature information		Temperature display lamp bead
Fan information		Display fan speed information
The system time	Total light bubble	Total light bubble time (accurate to minutes)
	The bright bubble	Time of this bright bubble (accurate to minutes)
	Total used	Cumulative usage time (accurate to minutes)
	The use	The use of this boot since time (down to minute)
	The access time	9999 means no encryption and can be used for a long time; Other numerical said the rest of the time, have the encryption;
Sensors to monitor	X hall Y Hall Color hall CMY Cyan Hall CMY magenta hall CMY yellow hall CTO Hall Fixed pattern hall Glass design hall Glass rotates hole pattern Adjustable JiaoHuoEr Enlarge hole,	Optocoupler Hall status viewing; When the magnetic is detected, it is 0, otherwise it is 1;

|	Prism rotating hall. X coding state Y coding state	
	X encodes the step value Y code the step value	XY encoding step value: were walking direction, step value should be increased, walking in the opposite direction, step value should be reduced. Every time they go to the same point value as is normal;
System error		See the error record; You can press the "Clear" button to clear the error record after checking
DMX monitoring		Corresponding channel, real-time view DMX values

Common error message	instructions
MT board connection failed	No response from the motor board. There is a problem with the serial communication line connecting the display board to the motor board, or there is a problem with the motor board.
The X-axis reset failed	There is a problem with the X-axis photoelectric switch, or the X-axis motor or motor plate
Y axis reset failed	There is a problem with the Y-axis photoelectric switch, or the Y-axis motor or motor plate
The X axis error Hall	The X axis hole, or there is something wrong with the motor plate
Y Hall error	Y-axis Hall, or there is a problem with the motor board
Failed color disk reset	Color plate hole, or color plate of motor has a problem
Pattern plate reset failed	Hall, or the pattern plate of motor has a problem
Pattern disc failed to reset	Pattern disc hall, or there is a problem with the pattern disc motor
...	...
Focusing reset failed	Focus hall, or there is a problem with the focus motor
The light bulb control failure	Bright or destroy dip failure, lighting apparatus, or the light bulb has a problem

2.2.5 Bulb control

options	instructions	
Dimming curve	SCurve (sinusoidal)	The default is linear dimming curve, reference the dimming curve
	InSquare (log)	
	Square (index)	
	Linear (straight line)	
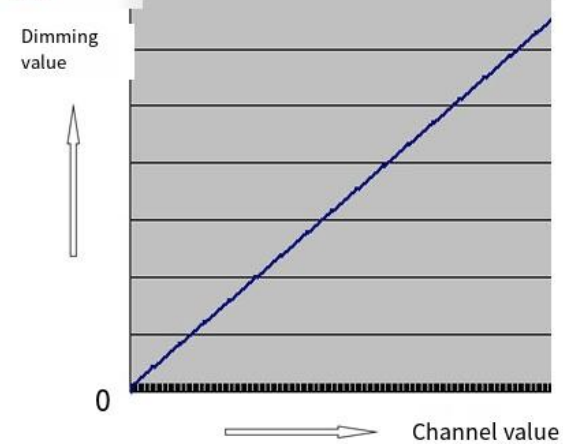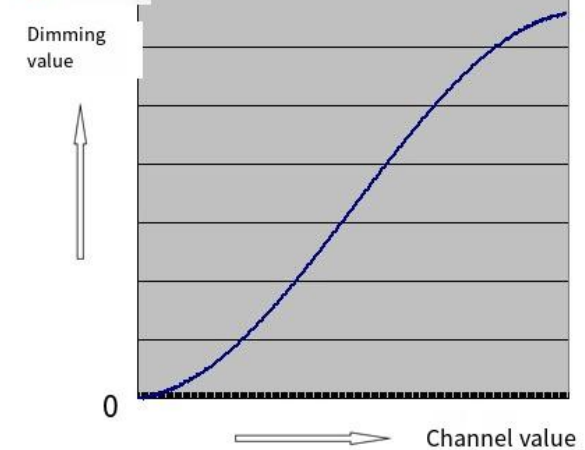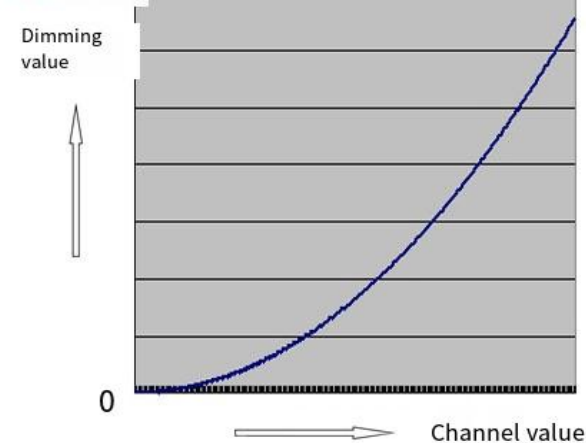
Dimming curve:
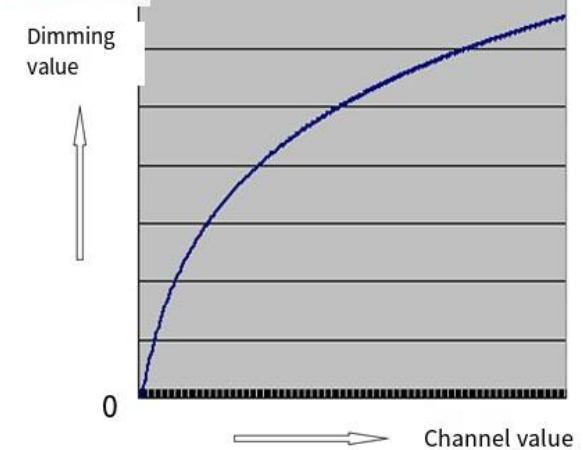
2.2.6 factory set

Motor calibration	The X axis	After the child into the interface, it can adjust the reset of X axis and Y axis motor position, in order to make up for the error of hardware
	The Y axis	
	Color	

	Gobo	installation, adjustment range - 128 ~ + 127, + 0 means no adjustment.
	Gobo 2	
	Gobo 2 Rotating	
	Gobo 3	
	Gobo 3 disc stroke	
	Display finger zero	
	Cyan	
	Magenta	
	yellow	
	Color temperature	
	Focusing	
	Zoom	
	Prism zero	
	Prism stroke	
	Prism rotating	
	Frost zeros	
	Frost trip	
	Cutting rotary disc	
	The aperture	
	Cut 1	
	...	
	Cut 8	
	power	0-255 power regulation

2.   Channel function

3.1   Channel Table

36 channels	Name	Number	Description
CH1	X	0-255	0-540 degrees
CH2	X Fine	0-255	0-2 degrees
CH3	Y	0-255	0-270 degrees
CH4	Y Fine	0-255	0-1 degrees
CH5	XY Speed	0-255	Fast to slow
CH6	Shutter	0-3	Guan Guang
		4-127	By arrive slow fast pulse strobes
		128-191	By arrive slow fast frequency flash

36 channels	Name	Number	Description
		192-251	Random stroboscopic from slow to fast
CH1	X	0-255	0-540 degrees
CH2	X Fine	0-255	0-2 degrees
CH3	Y	0-255	0-270 degrees
CH4	Y Fine	0-255	0-1 degrees
CH5	XY Speed	0-255	Fast to slow
CH6	Shutter	0-3	Guan Guang
		4-127	By arrive slow fast pulse strobes
		128-191	By arrive slow fast frequency flash
		192-251	Random stroboscopic from slow to fast
		252-255	medallion
CH7	Dimming	0-255	0-100% dimming
CH8	Cyan	0-255	
CH9	Magenta	0-255	
CH10	Yellow	0-255	
CH11	CTO	0-255	
CH12	Color	0-127	Linear color
		128-137	Color 1
		138-146	Color 2
		147-155	Color 3
		156-164	Color 4
		165-173	Color 5
		174-182	Color 6
		183-191	Color 7
		192-222	From fast to slow is running water
		223-224	Stop
		225-255	Reverse flow from slow to fast
CH13	Display slice	0-255	
CH14	Gobo	0-4	White light
		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
		55-59	low to Fast shake White light
		60-64	low to Fast shake Gobo 1
		65-74	low to Fast shake Gobo 2
		75-84	low to Fast shake Gobo 3
		85-94	low to Fast shake Gobo 4
		95-104	low to Fast shake Gobo 5
		105-114	low to Fast shake Gobo 6
		115-124	Low to Fast shake Gobo 7
		125-134	low to Fast shake Gobo 8
		135-144	low to Fast shake Gobo 9
		145-154	low to Fast shake Gobo 10
		155-203	Flow the water forward from fast to slow
		204-206	Stop
		207-255	Reverse the flow from slow to fast
CH15	**Gobo 2**	0-9	White light
		10-19	Gobo 1
		20-29	Gobo 2
		30-39	Gobo 3
		40-49	Gobo 4
		50-59	Gobo 5
		60-69	Gobo 6
		70-79	Gobo 7
		80-89	low to Fast shake Gobo 1
		90-99	low to Fast shake Gobo 2
		100-109	low to Fast shake Gobo 3
		110-119	low to Fast shake Gobo 4
		120-129	low to Fast shake Gobo 5
		130-139	low to Fast shake Gobo 6
		140-149	low to Fast shake Gobo 7
		150-190	From fast to slow is running water
		191-192	Stop
		193-255	By arrive slow fast reverse flow

CH16	Gobo 2 Rotating	0-127	By arrive slow fast reverse flow
		128-190	Move away
		191-192	The linear insertion
		193-255	Stop
CH17	Gobo 3	0-10	Flow the water forward from fast to slow
		11-255	By arrive slow fast reverse flow
CH18	Gobo 3 Rotating	0-2	Focus stroke
		3-128	Focus stroke
		129-255	From small to large
CH19	Focus	0-255	From small to large
CH20	Focus Fine	0-255	None
CH21	Zoom	0-255	Prism Cut in
CH22	Zoom Fine	0-255	Angle switch
CH23	Prism	0-127	Flow the water forward from fast to slow
		128-255	Stop
CH24	Prism Rotating	0-127	Reverse flow from slow to fast
		128-187	Flow the water forward from fast to slow
		188-195	STOP
		196-255	Reverse flow from slow to fast
		128-187	None
		188-195	Frost cut in
		196-255	Linear insert
CH25	Frost	0-127	Linear insert
		128-255	Linear insert
CH26	Bladel 1	0-255	Linear insert
CH27	Bladel 2	0-255	Linear insert
CH28	Bladel 3	0-255	Linear insert
CH29	Bladel 4	0-255	Linear insert
CH30	Bladel 5	0-255	Linear insert
CH31	Bladel 6	0-255	Bladel Angle
CH32	Bladel 7	0-255	From largest to smallest
CH33	Bladel 8	0-255	Contraction function
CH34	Bladel Wheel	0-255	Reset XY
CH35	Iris	0-127	Reset Effect
		128-255	Reset All
36	Reset	210-215	
		220-235	
		240-255	

3.　Common faults

For some common faults, the corresponding solutions are proposed. Any problems that cannot be solved should be dealt with by professionals. Disconnect the lights before maintaining them.

1.　The light bulb doesn't work

● Check that the voltage is installed to match the light fixture;

● Check whether the lamp power supply connection or control switch is in bad contact;

● Check whether the power supply is insufficient;

● Check that the DMX512 controller has sent instructions.

2.　The luminaire does not accept control from the console after normal reset

● Check whether the luminaire digital start address value and function options are correct;

● Check whether the connection of the communication control line is correct, the communication line is too long or has been interrupted;

● Check whether the control equipment is invalid, check whether the serial connection signal amplifier is invalid;

● Check whether the communication line is too long or other equipment interferes with each other;

● Optimize the wiring, shorten the length of the control signal line, and separate the high voltage and low voltage lines;

● Add signal amplifiers;

● The signal line adopts high-quality shielded twisted-pair wire;

● Connect the signal terminal resistor (120 ohm) at the end of the lamp.

3.　The luminaire will not start

● Check whether the power supply parameters are consistent with the lamps;

● Check the light in the process of long-distance transportation due to extrusion deformation, internal parts vibration, moisture and other reasons, resulting in poor contact

Or fall off.

● Please check whether the wire product connector inside the lamp falls off and becomes loose.

● Check whether the electronic components of the lamp (such as electronic transformer, PCB board, motor control board, etc.) are loose, short circuit and burned out.

4. When working, the action of the X axis or Y axis of the lamp is not normal

● Check one by one as in the previous step;

● Check whether the transmission belt corresponding to the X and Y axis direction in the lamp falls off and breaks;

● Check whether the data feedback receiver (optocoupler) corresponding to the X and Y direction in the lamp is damaged;

● Restart and reset once.