USER MANUAL

700W LED SPOT FRAMING MOVING HEAD

WITH CMY+CTO+RDM

PLEASE READ OVER THIS MANUAL BEFORE OPERATING THE LIGHT FIXTURE

1. SAFETY INSTRUCTION

The fixture is designed and manufactured to meet the requirements of People's Republic of China and international safety regulations. Modifications to the product could affect safety and render the product non-compliant to relevant safety standards.
Instructions pertaining to continued protection against fire, electric shock, and injury to persons are found throughout this manual. Please read all instructions prior to assembling, mounting, and operating this equipment.

IMPORTANT

ALWAYS READ THE USER MANUAL BEFORE OPERATION. PLEASE CONFIRM THAT THE POWER SUPPLY STATED ON THE PRODUCT IS THE SAME AS THE MAINS POWER SUPPLY IN YOUR AREA.

● This product must be installed by a qualified professional.
● Always operate the equipment as described in the user manual.
● A minimum distance of 1m must be maintained between the equipment and combustible surface.
● The product must always be placed in a well ventilated area.
● Always make sure that the equipment is installed securely.
● DO NOT stand close to the equipment and stare directly into the LED light source.
● Always disconnect the power supply before attempting and maintenance.
● Always make sure that the supporting structure is solid and can support the combined weight of the products.

ATTENTION

⚠ ATTENTION ⚠

This product left the place of manufacturer in perfect condition. In order to maintain this condition and for safe operation, the user must always follow the instructions and safety warnings described in this user manual.
● Avoid shaking or strong impacts to any part of the equipment.
● Make sure that all parts of the equipment are kept clean and free of dust.
● Always make sure that the power connections are connected correct and secure.
● If there is any malfunction of the equipment, contact us immediately.
● When transferring the product, it is advisable to use the original packaging in which the product left the factory.
● Shields, lenses or ultraviolet screens shall be changed if they have become damaged to such an extent that their effectiveness is not conformable.

2. SPECIFICATION

Input Voltage:100-240V 50/60 Hz
Light Source:700W white LED, 8000K
LED lifetime: 10000 hours
CRI: 73-90
Movement：Pan 540°；Tilt 270°； auto X/Y repositioning, fast, quiet and smooth
Framing:4 groups and eight directions of blade, multiple design
Gobos： one static gobo wheel: 8 gobos + open
        one rotating gobo wheel: 6 gobos + open, interchangeable, indexable
        one animation wheel: dynamic effect like flame or water, etc.
Color: one color wheel, 7 colors+ Open;
CTO： Independent CTO, color temperature can be linear adjusted
CMY: Independent CMY, with linear color change, limitless color mixing
Prism： 3 facet linear prism，6 facet linear prism
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, Artnet (Optional), Auto-running, Master/salve, Sound active,
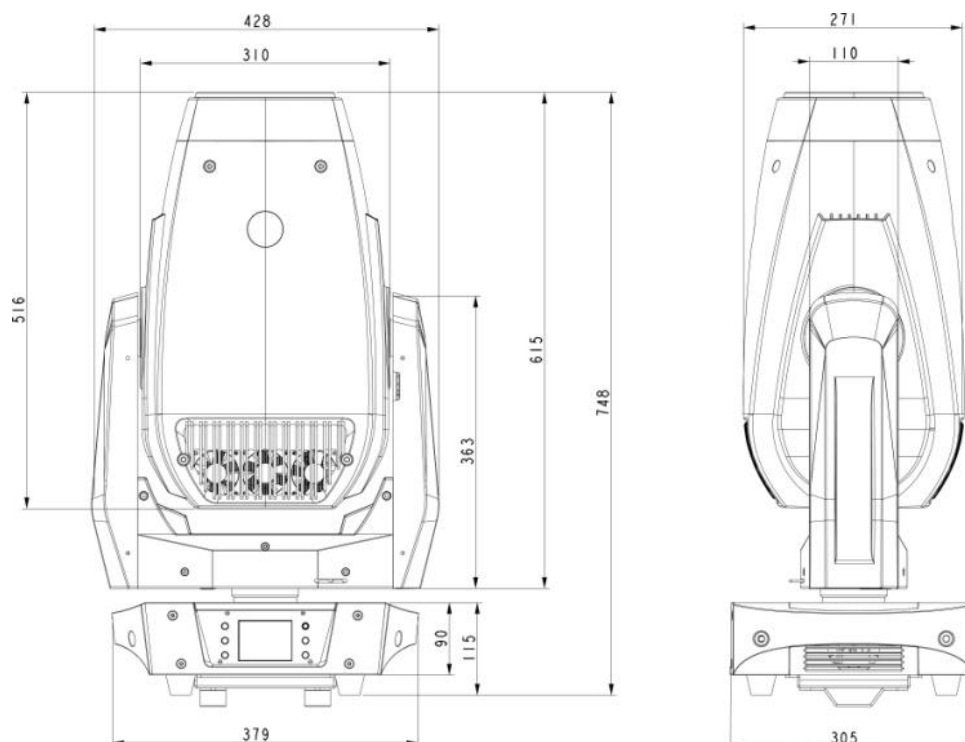Built-in program
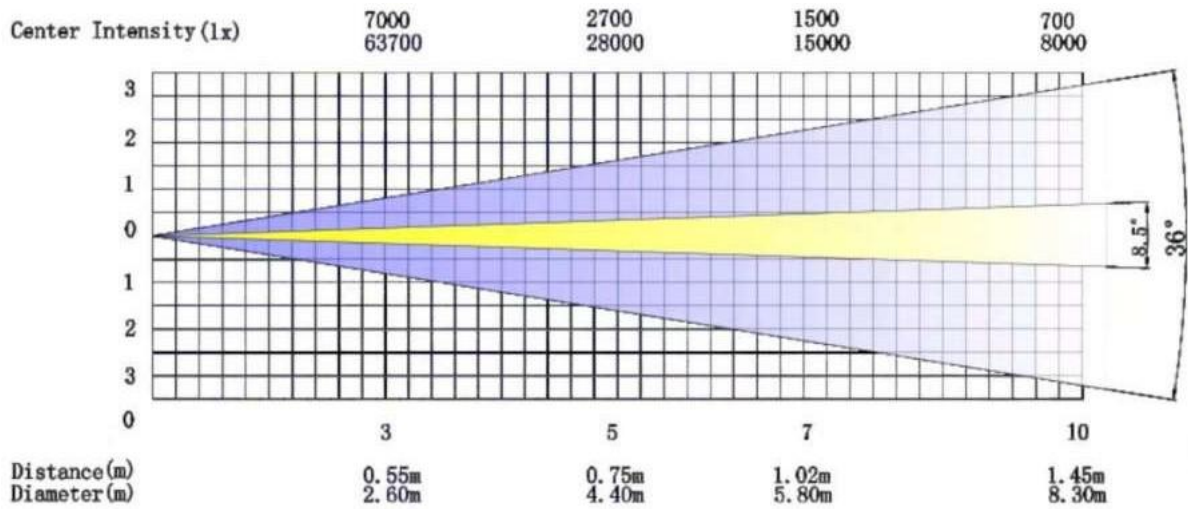Channel: 36CH
Gross weight: 42KG
Net Weight：38KG
Packing size：90.5x56x45.5CM

3. DIMENSION (MM)

4. PHOTOMETRIC DATA

Center Intensity (1x)	7000 63700	2700 28000	1500 15000	700 8000

Distance (m)	3	5	7	10
Diameter (m)	0.55m 2.60m	0.75m 4.40m	1.02m 5.80m	1.45m 8.30m

5. MOUNTING AND INSTALLATION

● The fixture can be mounted in any position.

● Always ensure that mounting surface can withstand 10 times the weight of the fixture.

● Always use a safety cable when mounting the fixture in any elevated position.

① Omega Bracket
② Quick Lock
③ Safety Clamp
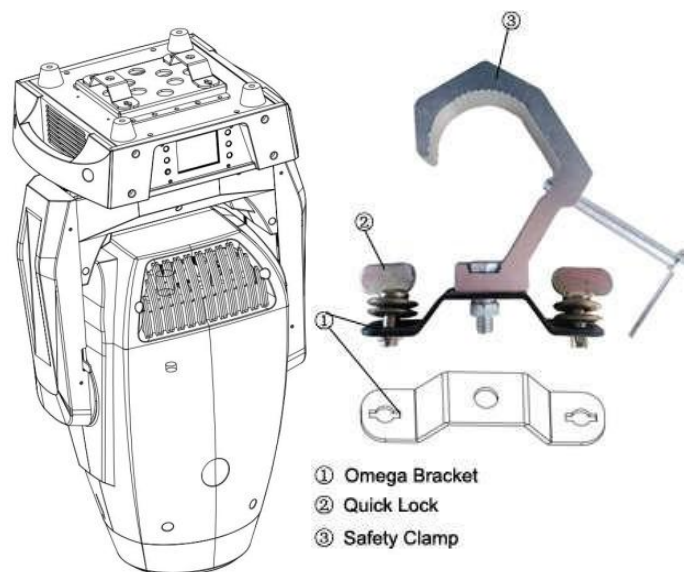
IMPORTANT SAFETY NOTE!!

Always use a safety cable when installing this unit!

Be sure that the safety cable is connected to a solid load-bearing structure!

6 Menu operation

1) **Summary**

The schematic diagram of the lamp panel is shown in Figure 3. The title above shows the name of the lamp, and the status bar below shows the signal of the current lamp, the status of the lamp, and the fault (when there is no fault information, "ERR" is displayed, otherwise "NOR").

This lamp supports DMX / RDM protocol. When the lamp is searched by the RDM host, three letters "RDM" will appear on the panel, indicating that the lamp is enumerated normally.

The display and operation are similar to the "Android operating system", and you can operate it by clicking the corresponding item with your fingertips or blunt hard objects.

Note: Do not use sharp or sharp objects to click on the display to prevent

damage

Figure 3 Schematic diagram of the display panel

Operating

Use intuitive touch or auxiliary input to operate lamps (products that support touch function)

    The left area is the TFT display area and touch area. Click the content of the panel with your finger or blunt hardware to complete the operation of parameter setting or viewing status.

    The area on the right is the auxiliary input. If you do not use the touch function of the TFT, you can use the auxiliary input to select the items to be set or viewed to complete the operation.

Parameter value input

When the selected parameter item needs to enter a value, the window shown in Figure 4 will open:
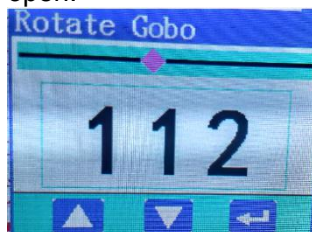
- Figure 4 Value setting page
- Set value: You can directly pull the slider to quickly set the required value, or you can click the "Up" or "Down" button on the right to set the required value precisely or use the auxiliary input to set.
- Application value: When the data is set by pressing the "Up" or "Down" buttons.
- Save the value: At any time, click the "OK" button in the lower right corner to save the current value to the internal memory, and apply the saved value to the light fixture the next time you turn it on.
- Set boolean parameters

- When the set parameter is a Boolean value (such as ON or OFF), you can directly click the corresponding item to switch the parameter value, and this type of parameter will be saved to the internal memory after modification. Press the parameter option on the right, the corresponding option will be grayed out. When you release your hand, the corresponding parameters will be changed and saved. If pressing the parameter option is not the parameter you want to change, you can move your finger to other places on the screen, and the corresponding parameter will not change.
- The determination of important Boolean parameters will be set through the determination window, as shown in Figure 5 below:
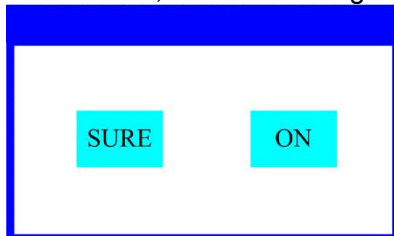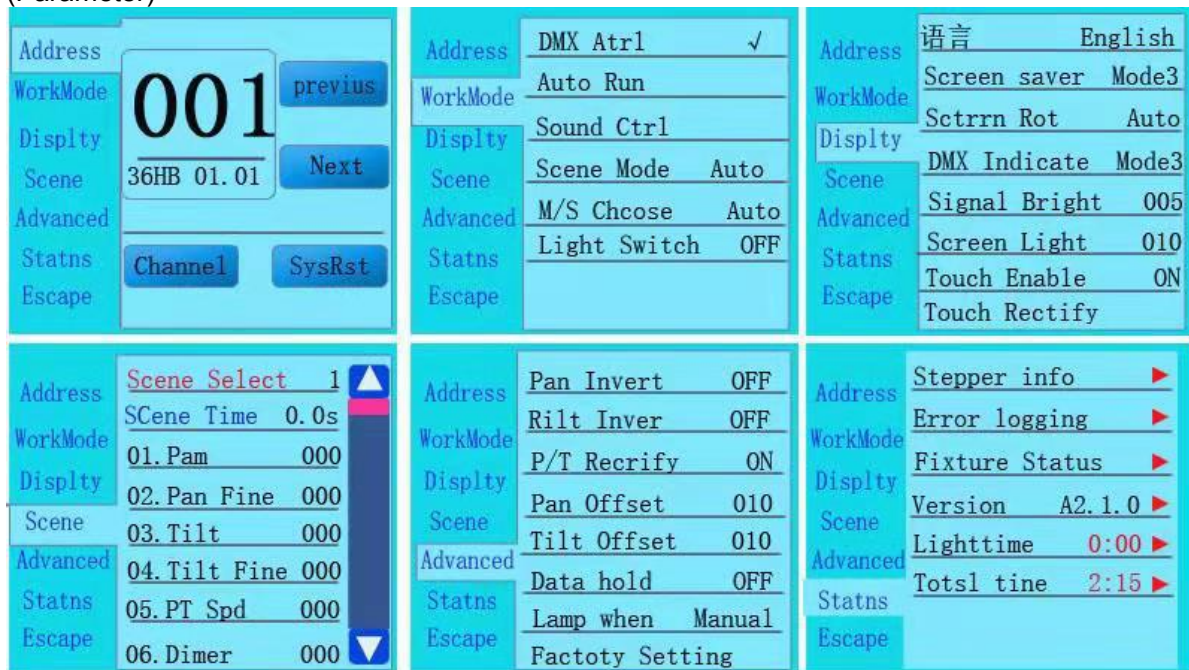

Figure 5 Confirm input window

Subpage

(Parameter)

Function operation and parameter setting

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

In the main interface, you can enter the corresponding parameter setting interface by selecting six buttons.

In the parameter setting interface, you can press the blue option on the left to quickly switch to other setting interfaces.

2) Set DMX address code

Through the page shown in Figure 6-1, the DMX address and channel mode of the fixture can be set.

The menu setting of the lamps and lanterns optimizes the setting of the address. Several operations for setting the address code are as follows:

Select "Previous" or "Next", the fixture will automatically calculate the address code of the next or previous one according to the current address code and channel data, which can be set quickly

Click the value of the address code to enter the value editing window, where you can set any valid address code, the fixture automatically obtains the current channel number of the fixture, and automatically filters the unusable address code (512-current channel number).

The lamp supports RDM protocol, and the address code of the lamp can be set remotely through

RDM.

Two buttons are provided:

    Channel mode: different channel modes can be selected cyclically;

    Lamp reset: reset all motors.

3) Set the lamp working mode

Through the page shown in Figure 6-2, you can set the operation mode of the lamp and control the lamp. The lamp supports four operating modes (DMX mode, self-propelled mode, voice control mode and scene mode). For detailed parameter value settings, please refer to the previous section. The specific parameter descriptions are shown in the following table:

Operating mode

DMX Mode	Console mode, receive DMX signal, RDM signal	
Autorun Mode	Automatically run according to the built-in program	
Voice control mode	When the lamp detects a strong sound, the lamp automatically runs a scene according to the built-in program, otherwise the last scene is maintained	
Scene Mode 01	Run in the set scene mode, support up to 10 scenes of custom editing	
	1~10	Output the specified scene
	Automatic	Automatically output scenes in sequence with the set scene time (non-zero), and scenes with time 0 are automatically skipped and ignored
Master-slave choice	Effective in non-DMX mode, select the data output mode, the lamp automatically detects the DMX state and automatically switches the output to prevent data conflicts	
	Host	The lamps and lanterns operate as built-in, if DMX has no signal, output data (synchronization), otherwise do not output
	Slave	Fixtures run as built-in and do not output data (do not synchronize other fixtures)
	Automatic	If the DMX has no signal, the lamp operates as built-in, otherwise, the lamp operates according to the DMX signal

The scene mode is suitable for a single or a small number of lamps, only need to output a fixed scene, or need to run a simple program, you can edit the scene page without connecting to the console.

Panel display settings

The lamps support Chinese and English bilingual, upside down display, etc., enter the corresponding parameter settings as shown in Figure 6-3, the specific menu content is shown in the following table:

Display setting

Language	Set the display language	
	English	English display
	Chinese	Chinese display
screen protector	Set the screen display content or method after no operation within 30 seconds	
	shut down	Keep the last operation page, screen on
	Mode 1	Screen off
	Mode 2	Screen off, Show the address code of the current fixture in the lower left corner
	Mode 3	Display trademark information, address code and operating mode
Screen rotation	Set the display orientation of the screen	
	shut down	Non-inverted display
	Open	Reverse display
	Automatic	Automatically detect the hanging direction of lamps and automatically switch the display direction
DMX instructions	Set the indication method of DMX signal indicator	
	Mode 1	Lights when there is a signal, and turns off when there is no signal
	Mode 2	Off when there is a signal, on when there is no signal

	Mode 3	Flashes when there is a signal, and turns off when there is no signal
Signal indicating brightness	Set the brightness of the signal indicator	
	1~10	10 levels
Screen backlight	Set the brightness of the screen backlight after 10 seconds of no operation, all bright during operation	
	1~10	10 levels
Touch screen switch	Choose whether to disable the touch screen, when the screen touch is accidentally damaged, you can disable the touch function and use the auxiliary input to set the lamp	
Touch correction	When the screen touch is not accurate, you can enter the correction page to correct the screen	

For lamps that support touch operation, if there is bad touch, you can enter the calibration page to recalibrate the touch accuracy of the touch screen. Under normal circumstances, please do not enter this page. If the touch is damaged, choose to disable the touch switch.

Scene mode

Enter the page shown in Figure 6-4, the fixture enters the scene editing mode, under this page, the fixture does not receive DMX console data, and the edited data is immediately reflected on the fixture. The content of the page depends on the currently selected channel, and the displayed channel content and sequence are consistent with the lamp channel table. Through this page, 10 scenes can be edited, as shown in the following table:

Scene mode

Scene selection	Select the current operation scene		
	1~10		10 scene setting formats
	Set the retention time of the current scene in automatic mode, the unit is 0.1 second		
	0		The current scene does not participate in automatic scene output
	1-255		0.1 second to 25.5 seconds
1. Pan	0-255		Set the data of each channel, the display content and sequence correspond to the channel table of the fixture
……	0-255		
……	0-255		
N. Function	0-255		

If the effective reset data is edited in the reset channel in the scene, the lamp will be reset, but after reset, the corresponding reset channel value will be automatically cleared to prevent multiple consecutive resets.

View this page, you can get the current channel table order of the fixtures. For specific channel data, please refer to the detailed channel description.

Set lamp working parameters

Enter the page shown in Figure 6-5, adjust the on-site parameters of the lamps and lanterns to facilitate the on-site installation of lamps and lanterns, etc .:

advanced settings

Pan reverse	Set Pan rotation direction	
	shut down	Not reverse
	Open	reverse
Tilt reverse	Set Tilt rotation direction	
	shut down	Not reverse
	Open	reverse
Hall Correction	Set whether the fixture detects XY out-of-step and corrects	
	shut down	Does not correct position after step out
	Open	Automatically correct position after out-of-step and record out-of-step fault
Pan	Set the Pan zero position of the fixture	

Offset	4-150	
Tilt Offset	Set the Tilt zero position of the fixture	
	4-48	
Data retention	When the fixture has no DMX signal, the output status of the fixture	
	shut down	No signal, so the motor and the light source return to the position and state when the reset is completed
	Open	No signal, keep the last frame of DMX data output

When the power on mode is selected, the lamp will wait for 30 seconds after the power is turned on to allow the light bulb to fully start. After the internal voltage is stable enough, the reset procedure will be started. If the on-site power capacity is stable, it is recommended to turn on the light bulb mode .
When the luminaire cannot calibrate the position, please first check whether the "optocoupler calibration" is turned off.
When the signal is unplugged, if the position of the lamp is not output as expected, please check the "Data Hold" setting first.
When setting the XY offset, after completing the setting, please control the XY with the maximum stroke to check the setting, X Y will not hit the positioning rod or the housing.
View the current status of the fixture
Enter the page shown in Figure 6-6, you can view the information and real-time status of the lamp to know the status of the lamp. If the lamp needs to be sold, please provide the status information displayed on this page as a basis for judgment, as shown in the following table:
status information

Motor information	Show the information of all motors and signal in unit	
	Hall	No information，Indicates that the motor has no Hall correction, 0 indicates that the motor leaves the correction position, and 1 indicates that the motor is at the correction position
	status	Display the motor reset completion status
	Pan	Display real-time position value of Pan optocoupler feedback
	Tilt	Display real-time position value of Tilt optocoupler feedback
	Hall	Display the level status of the two signals of the Pan and Tilt optocouplers, binary
Fault / status recording	Display the last 8 fault records during lamp reset and operation. The fault records are not saved after power off, and the current power-on cycle is valid	
	Fault data	The total number of faults detected after power on
	12：:03	The power-on time when the fault occurs, in minutes
	Hall fault	When the corresponding motor is reset, the motor does not detect a valid Hall signal
	Hall short circuit	Corresponding to the motor reset, the detected Hall signal of the motor is always valid
	Optocoupler failure	No valid optocoupler signal detected when the corresponding motor is reset
	Out of step	Corresponding motor out of step during operation
	Bumper	Corresponding to hitting the positioning rod when the motor is reset
	Lamp failure	Bulb unexpectedly extinguished
	Sensor failure	The temperature sensor signal is abnormal,
	Fan failure	The main fan is not working properly
Lamp status	Display the key status data of the current fixture for reference	
	Communicati	0 ~ 100%, the communication quality of the internal

	on	data link of the lamp
	Error count	The total number of error frames detected after power on, accumulated
	Light source temperature	Display the current light source temperature, "---" means no detection
	Display panel temperature	Display the current temperature of the display panel or the surrounding temperature
	Sensor 1 temperature	Display the current motherboard temperature or the ambient temperature of the motherboard installation location
Version Information	Display the current lamp information and version, an important reference for after-sales maintenance	
	device	The name of the lamp, the same as the RDM equipment information
	model	The model number of the lamp is the same as the model information of RDM
	display board	Display board firmware version and serial number
	board 1	board 1 firmware version and serial number
Light source time	Records the total accumulated time for turning on the light source, in minutes, the user manually clears it as a time reference for regular maintenance of the light source	
Lamp time	Record the total accumulated time for turning on the lamp, in minutes, which cannot be cleared	

7.DMX CHANNEL ASSIGNMENTS

This product has 36 DMX channels as below:

Channel	Function	Value	Description
CH1	**X**	0-255	0-540 degree
CH2	**X fine**	0-255	0-2 degree
CH3	**Y**	0-255	0-270 degree
CH4	**Y fine**	0-255	0-1 degree
CH5	**XY speed**	0-255	From fast to slow
CH6	**Strobe**	0-3	OFF
		4-127	Pulse strobe from slow to fast
		128-191	Gradual strobe from slow to fast
		192-251	Random strobe from slow to fast
		252-255	ON
CH7	**Dimmer**	0-255	0-100% linear dimmer

CH8	C	0-255	
CH9	M	0-255	
CH10	Y	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	Clockwise flowing water effect from fast to slow
		223-224	Stop
		225-255	Anti-clockwise flowing water effect from slow to fast
CH13	CRI	0-127	Mover away
		128-255	Insert
CH14	Fixed gobo	0-9	White
		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	Shaking gobo 1 from slow to fast
		80-89	Shaking gobo 2 from slow to fast

		90-99	Shaking gobo 3 from slow to fast
		100-109	Shaking gobo 4 from slow to fast
		110-119	Shaking gobo 5 from slow to fast
		120-129	Shaking gobo 6 from slow to fast
		130-190	Clockwise flowing water effect from fast to slow
		191-192	Stop
		193-255	Anti-clockwise flowing water effect from slow to fast
CH15	**Rotation gobo**	0-9	White
		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	Shaking gobo 1 from slow to fast
		80-89	Shaking gobo 2 from slow to fast
		90-99	Shaking gobo 3 from slow to fast
		100-109	Shaking gobo 4 from slow to fast
		110-119	Shaking gobo 5 from slow to fast
		120-129	Shaking gobo 6 from slow to fast
		130-190	Clockwise flowing water effect from fast to slow
		191-192	Stop

		193-255	Anti-clockwise flowing water effect from slow to fast
CH16	**Gobo rotation**	0-127	0-400 degree
		128-190	Clockwise flowing water effect from fast to slow
		191-192	Stop
		193-255	Anti-clockwise flowing water effect from slow to fast
CH17	**Effect insert**	0-10	Mover away
		11-255	Linear insert
CH18	**Gobo wheel**	0-2	Stop
		3-128	Clockwise flowing water effect from fast to slow
		129-255	Anti-clockwise flowing water effect from slow to fast
CH19	**Focus**	0-255	From far to near
CH20	**Focus fine**		
CH21	**Zoom**	0-255	From small to big
CH22	**Prism 1**	0-63	Move prism away
		64-127	Prism 1
		128-191	Prism 2
		192-255	Prism 1+prism 2
CH23	**Prism 1 rotation**	0-127	0-400 degree
		128-187	Clockwise flowing water effect from fast to slow
		188-195	Stop
		196-255	Anti-clockwise flowing water effect from slow to fast
CH24	**Prism 2 rotation**	0-127	0-400 degree
		128-187	Clockwise flowing water

			effect from fast to slow
		188-195	Stop
		196-255	Anti-clockwise flowing water effect from slow to fast
CH25	**Frost**	0-127	No
		128-255	Frost
CH26	**Blade 1**	0-255	Linear insert
CH27	**Blade 2**	0-255	Linear insert
CH28	**Blade 3**	0-255	Linear insert
CH29	**Blade 4**	0-255	Linear insert
CH30	**Blade 5**	0-255	Linear insert
CH31	**Blade 6**	0-255	Linear insert
CH32	**Blade 7**	0-255	Linear insert
CH33	**Blade 8**	0-255	Linear insert
CH34	**Blade wheel**	0-255	Blade degree 0-90
CH35	**Iris**	0-255	From big to small
CH36	**Function**	210-215	Reset XY after 3 seconds
		220-235	Reset effect motor after 4 seconds
		240-255	Reset whole unit after 5 seconds

8. **CLEANING**

In order to make the fixture in good condition and extend the life time, we suggest a regular cleaning to the fixture.

● Clean the inside and outside lens each week to avoid the weaknesses of the fixture due to accumulation of the dust.

● Clean the fan each week.

● A detailed electric check by approved electrical engineer each three month, make sure that the circuit contacts are in good condition, prevent the poor contact of circuit from overheating.

We recommend a frequent cleaning of the device. Please use a moist, lint-free cloth. Never use alcohol or solvents. There are no serviceable parts inside the device. Should you need any spare parts, please order genuine parts from us.