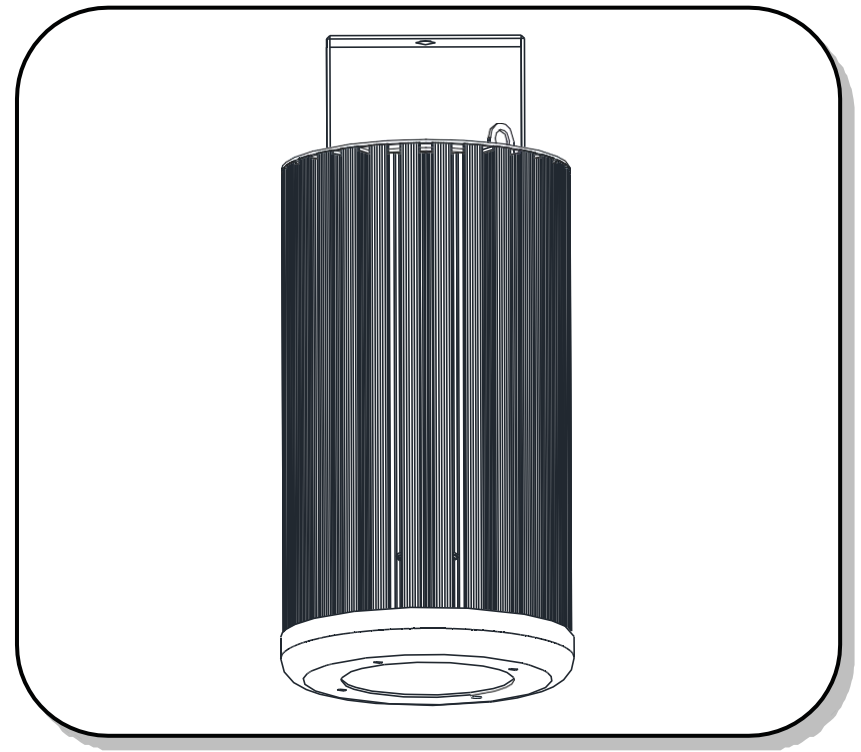


EV LIGHT[®]

HL RGBW



USER MANUAL

Please read it carefully

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ACCESSORIES

These items are packed together with the lighting , please check:

Name	Quantity	Unit	Remark
This manual	1	Pc	
The power cord	1	Pc	

8、DMX PROTOCOL

4CH	5CH	7CH	10CH	Value	Function
-	CH1	CH1	CH1	0—255	Dim all
CH1	CH2	CH2	CH2	0—255	Red
CH2	CH3	CH3	CH3	0—255	Green
CH3	CH4	CH4	CH4	0—255	Blue
CH4	CH5	CH5	CH5	0—255	White
-	-	CH6	CH6	0—10	No strobe
-	-	CH6	CH6	11—90	Strobe, slow->fast
-	-	CH6	CH6	91—170	Random Strobe, slow->fast
-	-	CH6	CH6	171—255	Electronic Squarewave, slow->fast
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	0—10	No effect
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	11—20	WHITE 1:3200K
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	21—30	WHITE 2:3400K
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	31—40	WHITE 3:4200K
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	41—50	WHITE 4:4900K
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	51—60	WHITE 5:5600K
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	61—70	WHITE 6:5900K
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	71—80	WHITE 7:6500K
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	81—90	WHITE 8:7200K
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	91—100	WHITE 9:8000K
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	101—110	WHITE 10:8500K
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	111—120	AT01:R,G,B,W,A,UV, RG, RB, RW, RA, RUV, GB, GW, GA, GUV, BW, BA, BUW, WA, UV, AUV, RGB, RGW, RGA, RGUV, GBW, GBA, GBUV, BWA, BWUV, WUV, RGBW, RGBA, RGBUV, GBWA, GBWUV, RGBWA, GBWAUV, RGBWALV
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	121—130	AT02:R↑,R↓,G↑,G↓,B↑,B↓,W↑,W↓,A↑,A↓
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	131—140	AT03:R↑G↑,R↓G↓,R↑B↑,R↓B↓,R↑W↑,R↓W↓,R↑A↑,R↓A↓,G↑B↑,G↓B↓,G↑W↑,G↓W↓,G↑A↑,G↓A↓,B↑W↑,B↓W↓,B↑A↑,B↓A↓,W↑A↑,W↓A↓
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	141—150	AT04:R↑G↑B↑W↑A↑,R↓G↓B↓W↓A↓
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	151—160	AT05:(Rainbow effect)B,BG↑,BG, B↓G,G,GR↑,GR,G↓R,R, RB↑,RB,R↓B
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	161—170	CHASE1
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	171—180	CHASE2
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	181—190	CHASE3
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	191—200	CHASE4
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	201—210	CHASE5
-	-	CH7 (CH7 Prior to CH9)	CH7 (CH7 Prior to CH9)	211—255	Reserved
-	-	CH8	CH8	0—255 (S)	Auto speed (fast->slow, when AUTO 1 - AUTO 5 effective)
-	-	CH8	CH8		Virtual colour wheel
-	-	CH8	CH8	0—10	No effect
-	-	CH8	CH8	11	Blue (Blue=full, Red+Green+White+Amber=0) (step)
-	-	CH8	CH8	12—50	Blue =full, Green->up (Red+White+Amber=0) (proportional)
-	-	CH8	CH8	51	Light Blue (Blue =full,White=full, Red+Green+Amber =0) (step)
-	-	CH8	CH8	52—90	White=full, Blue->down, Red+Green+Amber =0 (proportional)
-	-	CH8	CH8	91	Light Amber (White=full,Amber=full, Red+Green+Blue =0) (step)
-	-	CH8	CH8	92—130	White->down, Amber=full (Red+Green+Blue=0) (proportional)
-	-	CH8	CH8	131	Amaranth-pink (Amber=full,Green+Blue+White =0) (step)
-	-	CH8	CH8	132—170	Amber->down (Red+Green+Blue+White=0) (proportional)
-	-	CH8	CH8	171	Amaranth (Red=full, Green+Blue+White+Amber=0) (step)
-	-	CH8	CH8	172—210	Red=full, Green+Blue+White+Amber=0 (proportional)
-	-	CH8	CH8	211	Bright mauve (Red=full,Amber=full, Green+White+Amber=0) (step)
-	-	CH8	CH8	212—250	Red->down, Amber=full, (proportional)
-	-	CH8	CH8	251—255	Half White (Red=half, Green=half, Blue=half, White=half, Amber=half) (step)
-	-	CH7	CH10	0—10	Use menu setting dimmer mode
-	-	CH7	CH10	11—20	Dimmer off
-	-	CH7	CH10	21—30	Dimmer 1
-	-	CH7	CH10	31—40	Dimmer 2
-	-	CH7	CH10	41—50	Dimmer 3
-	-	CH7	CH10	51—60	Dimmer 4
-	-	CH7	CH10	61—254	Use menu setting dimmer mode
-	-	CH7	CH10	255	Reset (at least 5S)

Illustrations:

- 1) Must disconnect the connection of projector and console before sending the parameter.
- 2) The information of 【ADDR】、【CAL】 can't be sent, can't be downloaded each other.
- 3) There will be an automatic reset of the other projectors after receiving parameter correctly.

6、 MAINTENANCE

To prolong the life of lighting, it is very important to do the maintenance work. The environment is harsh outdoors, or if the lighting is idle for a long time, damp, dust can cause greater accumulation of dirt on its cover or housing. So it should be cleaned to maintain an optimum light output and at the same time to prevent it from corrupted by dust and acid gas. Cleaning frequency depends on the lighting operation frequency and the environment in which the fixture operates. Soft cloth and typical glass cleaning products should be used for cleaning. It is recommended to clean projector at least once every 20 days. Do not use any organic solvent, e.g. alcohol, to clean housing of the apparatus.

7、 TROUBLESHOOTING

PROBLEM	REASON AND ACTION
The lighting can't be started normally	<ul style="list-style-type: none"> ● Check the power connection is correct or not. ● Please detect the voltage. ● Power supply is damaged or incorrect connected. Call a qualified personnel to fix it. ● Connection of control board is not correct. Call a qualified personnel to fix it.
Out of console's control	<ul style="list-style-type: none"> ● Please check the DMX connector and the power connection is connected correctly or not. It means having signal if it shows twinkling of the decimal point which in the lower right corner of the screen when exiting the screen saver. ● Please check the DMX address setting of lighting is correct or not. ● Check 【CHMD】 setting is correct or not. ● Please check whether the DMX line is near to the high voltage wire or not. In that case, it will damage or interfere the DMX electric circuit.
The beam appears dim ,the brightness declines obviously	<ul style="list-style-type: none"> ● Check whether the 【CAL】 is started or not and the set value is too small. ● Check whether the 【POW】 is in over temperature protection situation or not, if yes, please take measures for ventilation.

1、 SAFETY GUIDELINE

- Please keep this manual in a safe place for further reference. Please make sure they also have this user manual if you sell this lighting to other users. Every unit is packed properly by the manufacturer. Please operate this lighting according to the user manual. Any damage caused by improper use will not be assumed by the manufacturer.
- When receiving the lighting , please dispose the carton, check and inspect there is any damage or not. Should there be any damage caused by transportation, do not use the lighting and consult your dealer or the manufacturer.
- This lighting can be used indoors and outdoors, IP65.
- The lighting is only intended for installation and operation by qualified personnel.
- Do not mount the lighting directly onto inflammable surface.
- Ensure power supply voltage correspond to device requirements before running.
- It is essential that each lighting is correctly earthed and that electrical installation conforms to all relevant standards.
- When the lighting is hanged to a high place, please use a safety cord provided to pass through the lighting handles as a secondary safety fixing for safety seasons. For details, refer to "LIGHTING INSTALLATION" section.
- Avoid direct exposure to the light from the lamp (specially for people with epilepsy) . The light is harmful to eyes.
- Do not project the beam onto inflammable surfaces. The minimum distance between the lighting and irradiated object should be 2 m.
- Exterior surface temperature of the lighting will be 65℃ when working, please do not touch it with bare hands .
- To prevent electric shocking, please do not touch the power cord when the lighting is running.
- Never let the power cord mix with other cables.
- The LED lens should be changed if deeply scratched or cracked.
- There is no user serviceable parts inside the lighting. Before using the device, please check whether the covers or housing are well installed or not, and whether the screws are installed firmly or not. Do not open the housing and never operate the lighting with the covers removed.
- Always disconnect a lighting from the power supply when the device is not in use or before cleaning it or before attempting any maintenance work!
- Electrical connection must only be carried out by qualified personnel.
- Please use the original packing material for second transportation.
- If you have any questions or suggestions, please do not hesitate to consult your dealer or our factory.

2、 TECHNICAL PARAMETER

Input Voltage: AC100V-AC240V, 50/60HZ;

Power Consumption: 110W ;

Lamp Specifications: CREE XB-D 3W LED R:6 PCS G:6 PCS B:6 PCS W:18PCS ; Rated life 50000 hours;

Lens Angle: 60°

Cooling system: convection;

Color: RGBW linear color mixing ;

Color Temperature: color cast calibration setting、 color temperature output inside device;

Dimmer: 0-100% linearly dimming, 5 types dimmer modes, smooth dimming, flicker-free;

Shutter: independent electronic strobe;

Control Mode:

Standard DMX512, 3 pin interfaces;

4 channel modes: 4,5,7,10 CH;

Master/slave mode, no need to set up the master and slave manually, will receive the main engine data automatically;

5 auto-running modes, rainbow channel and rainbow effect;

Other Functions:

Self-programming function, 5 chases, each chase has 20 scenes, fade function;

Lighting setting data、 self-programming data can be downloaded each other;

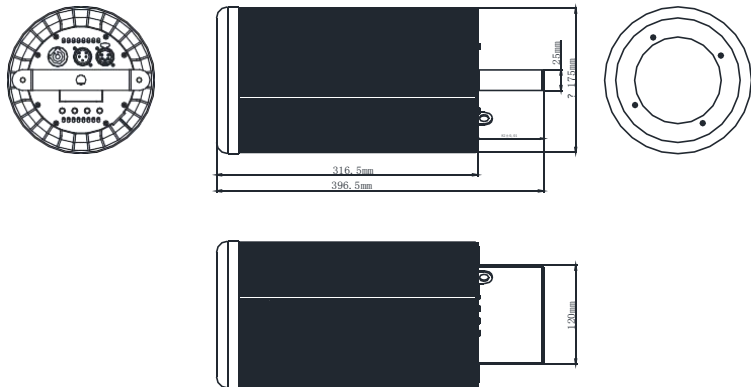
Temperature Control Protection: both of lamp holder and base have temperature control protection;

Waterproof Grade: IP20;

Work Environment Temperature: -20° C~40° C;

Net Weight: 4.5Kg;

DIMENSION



2) Press the **【UP/DOWN】** button to select **【AT01】** ... **【AT05】**, **【SPEED】**, **【CHASE01】** ... **【CHASE05】**

3) Press the **【ENTER】** button to start running.

5.9 EDIT AUTO-PROGRAMMING PROGRAM

1) Press the **【ENTER】** button in **【PROGRAM】** menu, then enter to the editing auto-programming program.

2) Press the **【UP/DOWN】** button to select **【CHASE01】** ... **【CHASE05】**

3) Press the **【ENTER】** button for confirmation and enter to the next menu.

4) Press the **【UP/DOWN】** button to select **【SCENE01】** ... **【SCENE20】**

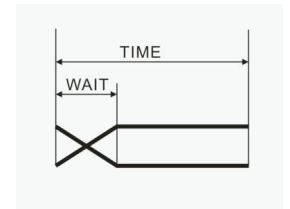
5) Press the **【ENTER】** button for confirmation and enter to the next menu.

6) Then press the **【UP/DOWN】** button to select **【RED】**, **【GREEN】**, **【BLUE】**, **【WHITE】**, **【AMBER】**, **【SHUT】**, **【TIME】**, **【WAIT】**, **【USE】** .

7) Press the **【UP/DOWN】** button to set up the parameter which are needed.

8) Press the **【ENTER】** button to escape and save.

Illustrations: When **【USE】** is set to be **【NO】**, or the parameter of **【TIME】** is 0, it will not run this scene. When **【WAIT】** is set to be FADE time, the running process is as the right chart showing.



5.10 CHECK THE LIGHTING INFORMATION

1) Press the **【ENTER】** button in **【INFO】** menu, then enter to the checking the lighting information.

2) **【SOFT】** button is for software version information.

3) **【LEDs】** button is for the LED quantity information.

4) **【POW】** button is for the current information of power reduction. It is 100% output in normal conditions, but 80% or 50% output in over temperature protection situation.

5.11 LIGHTING SETTING PARAMETER RESET

1) Press the **【ENTER】** button in **【ST L】** menu, then enter to the lighting setting parameter reset.

2) Press the **【UP/DOWN】** button to select **【YES】** .

3) Press the **【ENTER】** button to escape and save.

5.12 【PROG】 AUTO-PROGRAMMING PARAMETER RESET

1) Press the **【ENTER】** button in **【PR L】** menu, then enter to the **【PROG】** auto-programming parameter reset.

2) Press the **【UP/DOWN】** button to select **【YES】** .

3) Press the **【ENTER】** button to escape and save.

5.13 LIGHTING RESET

1) Press the **【ENTER】** button in **【REST】** menu, then enter to the lighting reset.

2) Press the **【UP/DOWN】** button to select **【YES】** .

3) Press the **【ENTER】** button for confirmation of lighting reset.

5.14 LIGHTING PARAMETER DOWNLOADING EACH OTHER

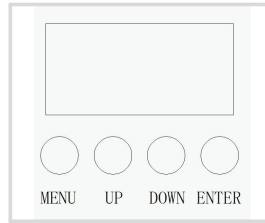
1) Press the **【ENTER】** button in **【SEND】** menu, then enter to sending parameter to other lightings.

2) Press the **【UP/DOWN】** button to select **【YES】** .

3) Press the **【ENTER】** button to confirm sending.

5.1 BUTTON OPERATION

- 1) MENU: To return to the previous menu.
- 2) ENTER: Enter to the next menu or save.
- 3) UP: Menu selection or increasing the parameter.
- 4) DOWN: Menu selection or decreasing the parameter.



5.2 DMX ADDRESS CODE SETTING

- 1) Press the **【ENTER】** button in **【ADDR】** menu, then enter to the DMX address code setting.
- 2) Press the **【UP/DOWN】** button to select **【1-512】** numerical value.
- 3) Press the **【ENTER】** button to escape and save.

5.3 STATIC SETTING

- 1) Press the **【ENTER】** button in **【STAT】** menu, then enter to the static setting.
- 2) Press the **【UP/DOWN】** button to select **【R】**, **【G】**, **【B】**, **【W】**, and **【SHUT】**
- 3) Press the **【UP/DOWN】** button to set up the **【0-255】** numerical value.
- 4) Press the **【ENTER】** button to escape and save.

5.4 COLOR CAST CALIBRATION SETTING

- 1) Press the **【ENTER】** button in **【CAL】** menu, then enter to the color cast calibration setting.
- 2) Press the **【UP/DOWN】** button to select **【R】**, **【G】**, **【B】**, **【W】**
- 3) Press the **【UP/DOWN】** button to set up the **【0-255】** numerical value.
- 4) On the **【USE】** interface, pressing **【ON】** button means valid, otherwise **【OFF】** button invalid.
- 5) Press the **【ENTER】** button to escape and save.

Illustrations: When pressing the **【ON】** button which means valid on the **【USE】** interface, the actual output value of RED, GREEN, BLUE, WHITE is output in accordance with the percentage which the color cast calibration value divides 255.

5.5 CHANNEL MODE SETTING

- 1) Press the **【ENTER】** button in **【CHMD】** menu, then enter to the channel mode setting.
- 2) Press the **【UP/DOWN】** button to select **【10CH】**, **【7CH】**, **【5CH】**, **【4CH】**
- 3) Press the **【ENTER】** button to escape and save.

5.6 DIMMING MODE SETTING

Illustrations: When setting **【OFF】** in **【DIM】** menu, there will be no delay dimming effect. The dimming speed of DIM1-DIM4 is from fast to slow. It will be set **【OFF】** automatically in **【DIM】** menu when showing the shutter effect.

- 1) Press the **【ENTER】** button in **【DIM】** menu, then enter to the dimming mode setting.
- 2) Press the **【UP/DOWN】** button to select **【OFF】**, **【DIM1】**, **【DIM2】**, **【DIM3】** and **【DIM4】**
- 3) Press the **【ENTER】** button to escape and save.

5.7 DISPLAY SETTING

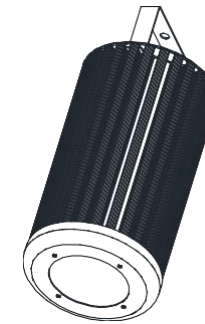
- 1) Press the **【ENTER】** button in **【DISY】** menu, then enter to the display setting.
- 2) Press the **【UP/DOWN】** button to select **【ON】**, **【2 MINUTES OFF】**
- 3) Press the **【ENTER】** button to escape and save.

5.8 RUN THE AUTO-RUN, AUTO-PROGRAMMING PROGRAM

- 1) Press the **【ENTER】** button in **【AUTO】** menu, then enter to the running the auto-run, auto-programming program.

3、 LIGHTING INSTALLATION

MOUNTING HOLE FOR LAMP HOOK



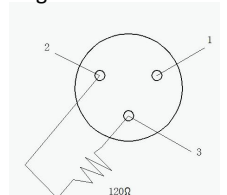
- The lighting can be hung at the high place with using the lamp hooks (as showed in picture one). Use the safety cord provided to pass through the handles and hang it as a second safety fixing.
- The lighting also can be used on the ground, as showed in picture 2.

Note:

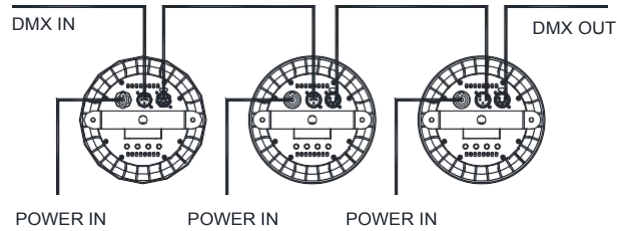
- Ensure support loading ability at least 10 times more than product weight, and also make sure the lighting is installed steadily.
- The lighting must be installed by the qualified personnel. Please install it at the place where no one goes through.

4、 POWER SUPPLY-CONTROL SIGNAL CONNECTIONS

- Make the XLR signal line connect with the lighting, one port connects with the output port of lighting, another one connects with the input port of another lighting.
- Due to the output and input of the lighting keep connecting all the time, so the DMX circuit still can be keep connecting when the power of certain unit occurs turn-off.
- XLR signal line only can be used in series connection pattern (the amount of the lighting can not be more than 32 PCS), not available in parallel connection pattern. Must add a signal amplifier if the length of signal line exceeds 60M between controller and lighting or between two lightings.
- In the controller mode, at the last fixture in the chain, the DMX output has to be connected with a DMX terminator. The DMX terminator is simply a connector with a resistor about 120Ω (OHM) connected across pins 2 and 3 of the Canon plug (please see the picture in the right). It can prevent the noise and reflection caused by DMX 512 signal during transmission.



- The transmission speed of DMX 512 signal is very quick. It will affect the signal transmission if any damage of the signal line, the weld is not firm or bad connection etc
- The connector with 3 pins XLR is more universal than the one with 5 pins XLR.
3 pins XLR: PIN 1: GND, PIN 2: - signal, PIN 3: +signal.
5 pins XLR: PIN 1: GND, PIN 2: - signal, PIN 3: + signal, PIN4/PIN5: UNUSED.
- There can't be more than 12 PCS of lightings for series connection pattern when using 220V AC; it can't exceed 6 PCS lightings for series connection pattern when using 110V AC.



5、 OPERATION MENU

Tab	Level 1	Level 2	Level 3	Level 4
ADDR (Address)	001-512			
STAT (Static control)	R (RED)	0-255 *		
	G (GREEN)	0-255 *		
	B (BLUE)	0-255 *		
	W (WHITE)	0-255 *		
	SHUT	0-255 *		
SET (Set)	CAL (Calibration)	R (RED)	<u>0-255</u>	
		G (GREEN)	<u>0-255</u>	
		B (BLUE)	<u>0-255</u>	
		W (WHITE)	<u>0-255</u>	
		USE	YES/NO	
	CHMD (Channel mode)	<u>10CH</u>		
		7CH		
		5CH		
		4CH		
	DIM (Dimming mode)	OFF		
		<u>DIM1</u>		
		DIM2		
		DIM3		
DIM4				
DISY (Display set)	ON (Permanent on)			
	<u>2MIN</u> (2 minutes off)			
CTST (Color set)	CT01	R (RED)	0-255	
		G (GREEN)	0-255	
		B (BLUE)	0-255	
		W (WHITE)	0-255	
			
	CT10			

AUTO (Auto)	AT01	RUN. . *		
			
	AT05	RUN. . *		
	ATSP (Auto speed)	0-255 (S)		
	CHS1	RUN. . *		
.....				
PROG (Program)	CHS1 (Chase 1)	SC01 (Scene 1)	R (RED)	0-255
			G (GREEN)	0-255
			B (BLUE)	0-255
			W (WHITE)	0-255
			SHUT	0-255
			TIME	0-255 (S)
			WAIT	0-25.5 (S)
	USE	YES/NO		
			
	SC20 (Scene 20)			
			
	CHS5 (Chase 5)			
	INFO (Information)	SOFT (Software version)	Vx.x	
LEDs		xxR		
		xxG		
		xxB		
		xxW		
POW (Power reduction)	100%/80%/50%			
LOAD (Load)	ST L (Setting load)	YES/NO		
	PR L (Program load)	YES/NO		
REST	YES/NO			
SEND	YES/NO			

Illustrations:

When the menu is set as the information of * position, the projector will be set automatically to be the main engine and then send data to external. Other projectors can receive these data and run synchronously with the main engine. It still be run according to these setting parameter even if power reconnection after power off .

When setting YES in **【ST L】** menu, The parameter will bereset to be the factory default value as which with underline of above chart.