

# TECHNICAL SPECIFICATION

**Light Sources:** 280W(10R)

Live Fuse: T5 A/250

Neutral Fuse: T5 A/250

Power Voltage: AC 100-240V, 50/60Hz

Max Power Consumption: 470W at 230V(I=2.05A, Power factor 0.96)

Typical Power Consumption : 230W at 230V(I=1.8A, Power factor 0.95)

Allow for a deviation of +/-10%

## **Lamp:**

Lamp : Osram 280W

Base E27

Lamp life : 2000hrs (Stand mode)

3000hrs (Eco mode)

## **Optical System:**

High luminous-efficiency glass reflector

Beam angle : 5° - 20° (spot application)

2.5° - 10° (beam application)

## **Color Wheel:**

one color wheel, 14 kinds of color chips in one color wheel

## **Static Gob Wheel:**

10 metal gobos & 4 beam reducers

## **Rotation Gob Wheel:**

9 Glass gobos can be indexed and rotated in both directions at different speeds

Gobo wheels continuous rotation

Glass gobos: outside diameter=15.9mm, image diameter=12.5mm,  
thickness=1.1mm

**Prisms:**

Rotation 6-facet linear prism with continuous rotation in both directions

Rotation 16-facet circular prism with continuous rotation in both directions

**Frost filter :**

Separate, variable frost filter

**Zoom:**

Linear motorized zoom

**Strobe:**

Strobe effect with variable speed (max.15 flashes/sec)

**Control**

Graphic touch screen for fixture setting and addressing

Gravitation sensor for auto screen positioning

Battery backup of the touch screen

Readout fixture and lamp usage, receiving DMX values, temperatures. Etc

Built-in analyzer for easy fault finding, error messages

Remotely switching on/off the lamp

Built-in demo sequences

Black-out while head moving, color or gobo changing.

Self-resettable thermos-fuse

DMX Channel: 16/24 Channel

Control Modes: DMX

**Pan/Tilt**

Pan/Tilt: 540°/ 270°

Pan/Tilt Resolution: 16 bit, Electric correction

Movement control: tracking and vector

Pan/Tilt-lock mechanism

**Temperatures:**

Maximum ambient temperature : 45°

Maximum surface temperature : 90°

**Minimum Distances:**

Min distance from flammable surface :1m

Min distance to lit objects (Stand Mode-280W):10m

Min distance to lit objects (Eco Mode-230W):7.5m

**Total Heat Dissipation:**

1600 BTU/h (calculated)

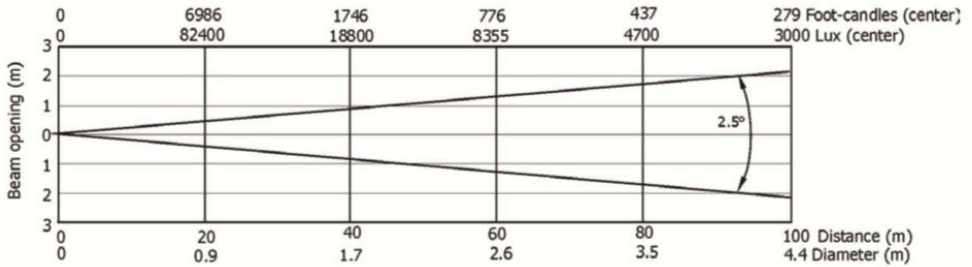
469 Wh (calculated)

**Please Note: Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.**

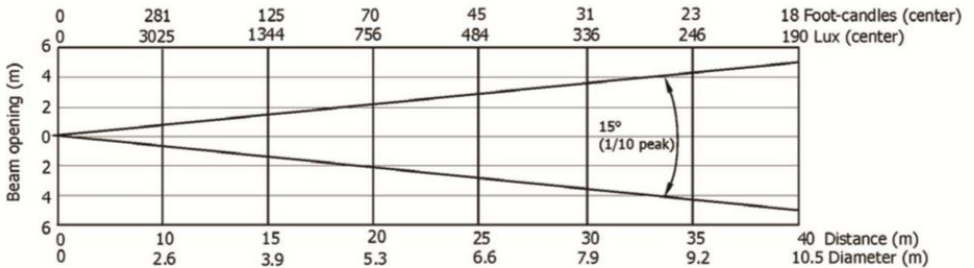
# PHOTOMETRIC DIAGRAMS

All diagrams are for full power of the lamp (Standard Mode)

### Min. Zoom (Beam application)

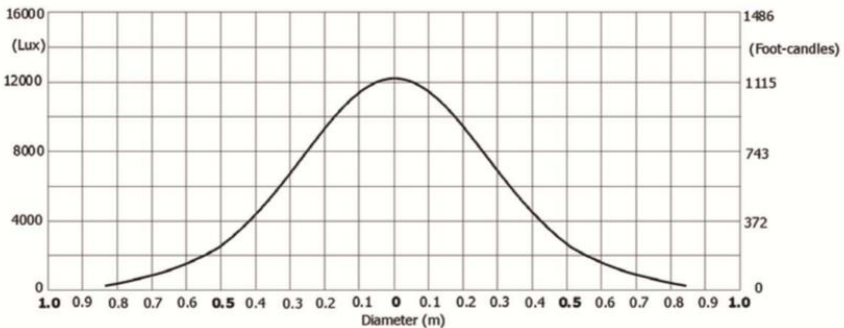


### Min. Zoom with frost

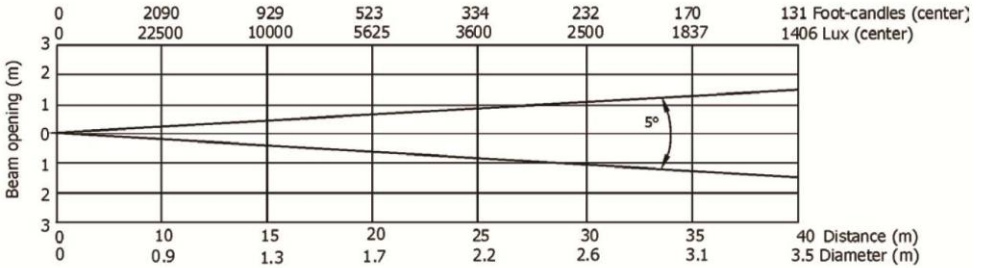


### Illuminance distribution

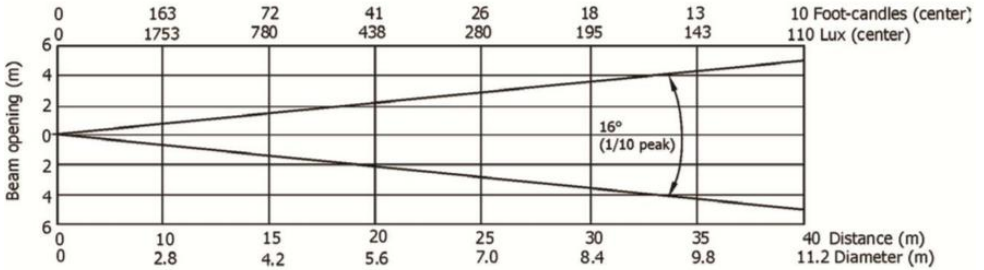
Distance=5m



### Min. Zoom (Spot application)

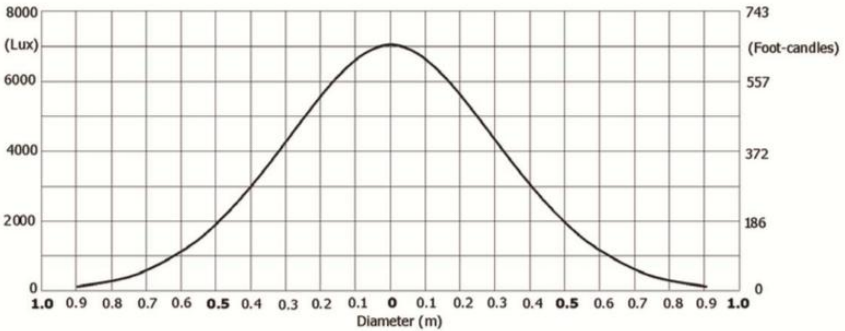


### Min. Zoom with frost

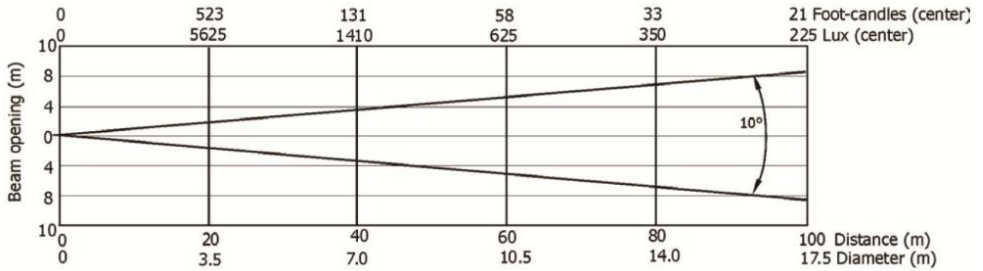


### Illuminance distribution

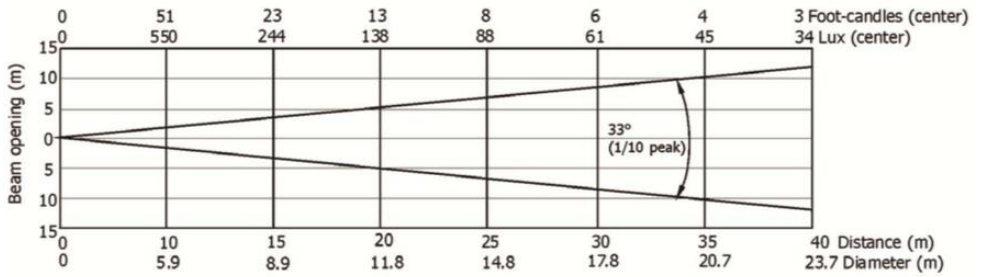
Distance=5m



### Max. Zoom (Beam application)

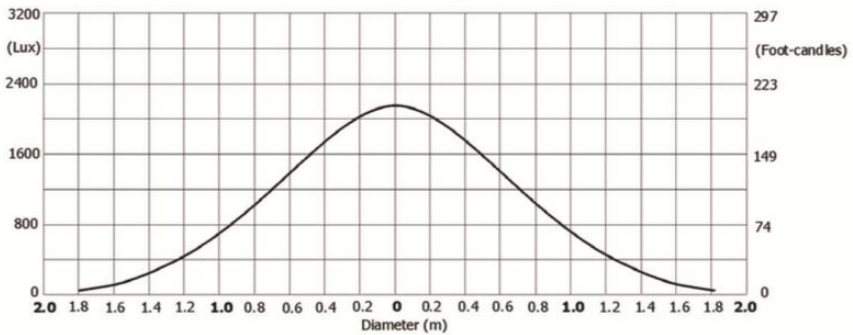


### Max. Zoom with frost

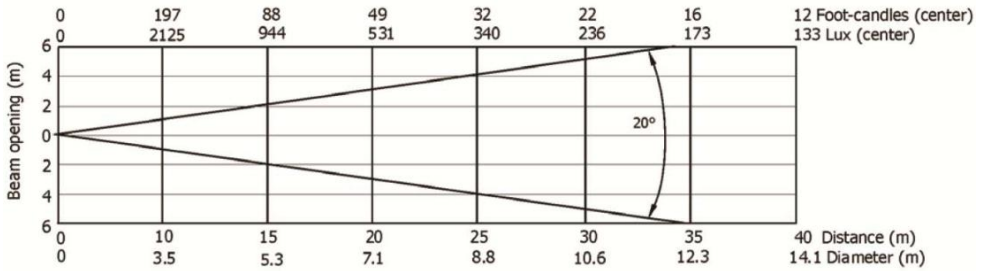


### Illuminance distribution

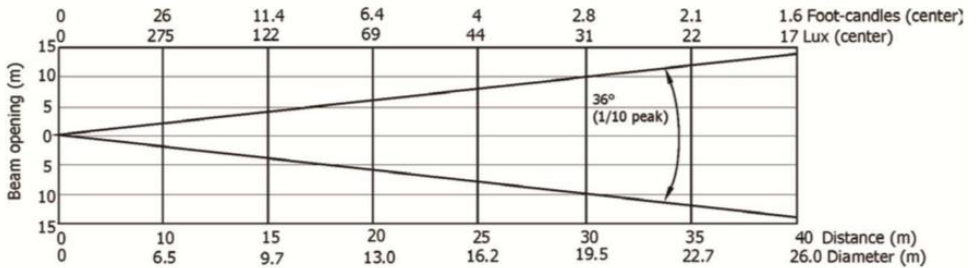
Distance=5m



### Max. Zoom (Spot application)

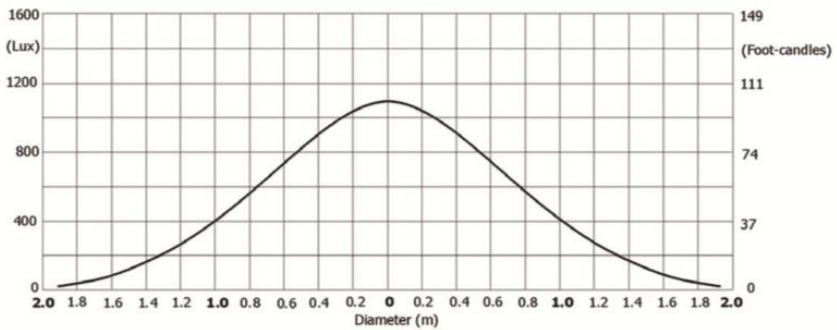


### Max. Zoom with frost



### Illuminance distribution

Distance=5m



# CONTROL SYSTEM

The DMX512 is widely used in intelligent lighting control, with a DMX 512 controller. Connect several lights together dmx in and dmx out, 3 pin XLR connectors: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)

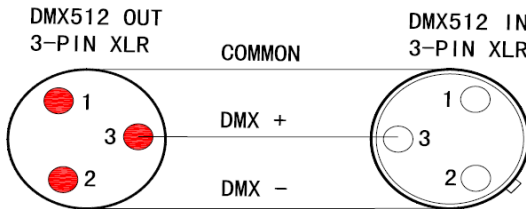
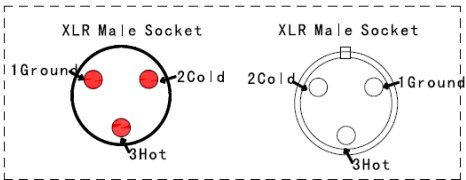


Figure2



<b>XLR Pin Configuration</b>
pin1=Ground
pin2=Data Compliment (negative)
pin3=Data true (positive)

## Panel operation

### 1. Brief

The light panel diagram show as Figure 1, Left area is TFT Displayer, support touch, and right area is encoder button, both of touch and coder button can operate light and setting.

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



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

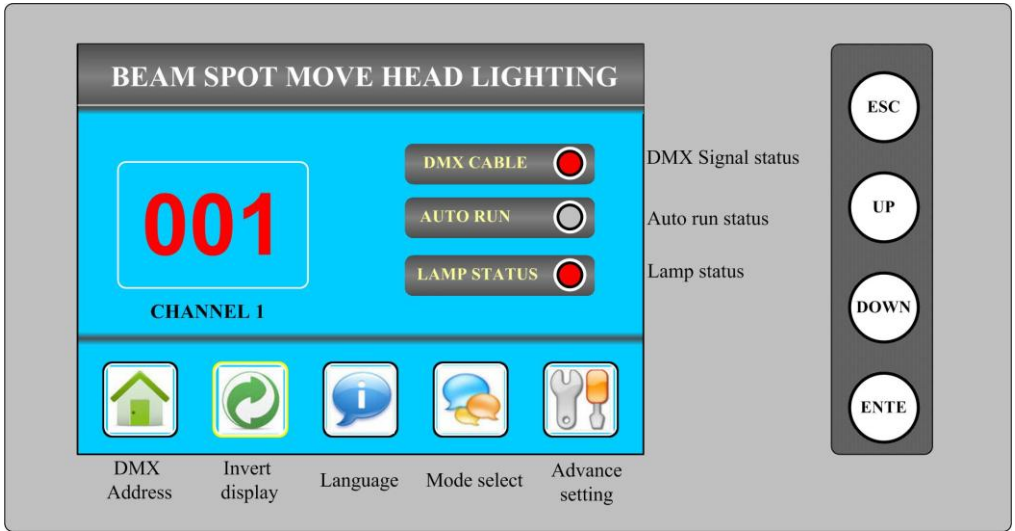


Figure 1 Panel diagram

## 2. Operation

### 1. Operate light with touch or encoder button

- The left area is TFT Displayer and touch, chik item or value with finger will to complete operation of set light setting(parameters) or view light state.
- The area on the right hand side is rotary encoder with button, As auxiliary input interface, if disable touch function,, the encoder can be choose to set or view the item, and then press the encoder button to confirm the selection, rotary encoder again set the parameter value, finally, Press encoder button one again to save value or setting.

### 2. Parameter value setting

When the selected item is value need to been modified, the dialog shown in

Figure 2 will popup.

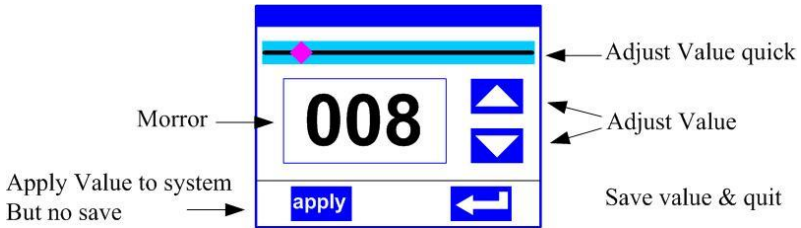


Figure 2 Dialog of value setting

- **Modify value:** Can quickly modify value via pull the slider to the desired position, or click the button of 'up' or 'down' with finger on the right side to set the exact desired value, another way is roll encoder on the right hand side of panel.
- **Apply value:** When Value had been modified, Then press the bottom of 'apply' in the left corner to apply to the light, but hav't saved;
- **Save Value:** Any time, click on the lower right corner of the "OK" button, the setting will be saved into internal memory.

### 3. Boolean parameter setting

- when the selected parameters is a Boolean value (such as ON or OFF), can directly modify setting by click corresponding item, the setting will be saved right now.
- When the parameter is a key item, click corresponding item, a dialog shown in Figure 3 will be popup ask for the confirm. Click 'sure' to confirm.

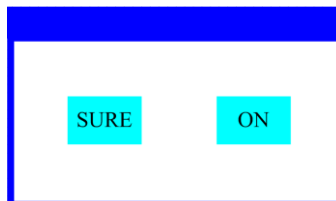


Figure 3 Dialog of confirm

#### 4. Sub Menu (Parameter)

Chick item of main menu, enter corresponding sub menu, shown in Figure 4, total 6 sub menu, includes class of parameter and status:

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

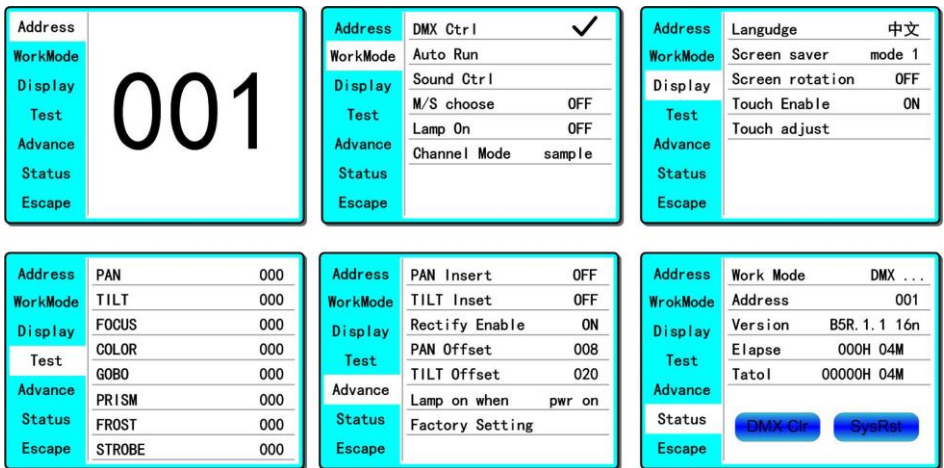


Figure 4 Parameter menu

### 3. Operation and parameter instruction

Via following operation, enter sub menu(parameter menu) shown in Figure 4

- In main menu, chick 1/6 function button into corresponding parameter menu.
- In sub menu(page), chick main item on the left side of displayer, can shift

to corresponding sub menu(page) quickly.

## 1. Set DMX Address

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

Enter the page of DMX address, as shown in Figure 5, click the blank area in right side of display will pop-up diglog as in Fig. 4, modify value, then click 'ENTER' to confirm and save DMX address code.

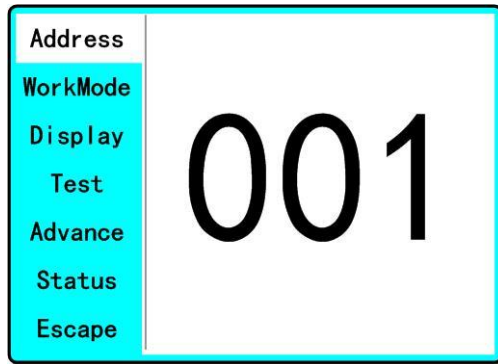


Figure 5 page of DMX Address

## 2. Set Light work mode

Enter the page of 'WORK MOD' as shown in Figure 6 and modify setting. Can set light work mode, control lamp and DMX channel mode..

Light includes 3 work mode: DMX MODE, AUTO RUN and SOUND MODE, Parameter definition as following:

- **DMX Mode:** Under this mode, the light receive data from the DMX controller and move.
- **AUTO RUN:** Under this mode, light will run with inside code(data), ignore data from DMX controller.

- **SOUND Ctrl:** Under this mode, light ignore data from DMX controller., When there is a strong sound in stage, the light will run a scene, otherwise it will keep the last scene.
- **M/S Choose:** 'M/S Choose' is available when light just in 'AUTO RUN' or 'SOUND Ctrl' mode. If this item is set as 'OFF', the light don't send data to other light via DMX Cable. When 'ON', the data will send to other slave light immediately.
- **Lamp control:** Turn on lamp when this item is set 'ON', otherwise, turn off lamp. The gap between operation is limited to 30 second.
- **Channel mode:** Light support 2 DMX Channel mode: sample or extend.

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

Figure 6 page of work mode

### 3. Set display

Light support 2 language, rotation display, Enter page as shown in Figure7 to set parameter following:

- **Language:** Select display as simplified Chinese or English.
- **Screen Saver:** when panel is idle(these is no operation in 10 second), displayer will enter saver status. When set as 'mode 1', saver status is close display, as 'mode 2' saver status will display DMX address code(DMX MODE) or display LOGO(AUTO RUN or SOUND CTRL). As 'OFF', keep light up displayer and show main menu.
- **Screen Rotation:** rotate displayer.

- **Touch enable:** Disable or enable touch function, when disable, use encoder to operate light and set parameter.
- **Touch adjust:** adjust touch function, normally, not enter this item.

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

Figure7 page of display

#### 4. Test light

Enter the page as shown in Figure 8, Light will into test mode, in this mode, the light does not receive the data for DMX controller.:

- PAN: range for 0 to 255;
- TILT: range for 0 to 255;
- FOCUS: range for 0 to 255;
- COLOR: range for 0 to 255;
- GOBO: range for 0 to 255;
- PRISM: range for 0 to 255;
- FROST: range for 0 to 255;;
- STROBE: range for 0 to 255;。

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

Figure 8 page of Test

## 5. Set light run parameter

Enter the page as shown in Figure 8, set the parameter of light:

- Pan Invert: Reverse PAN move.
- Tilt Invert: Reverse TILT mover.
- Rectify enable: set as 'OFF', PAN or TILT will disable position rectify function. As 'ON', when PAN or TILT lose steps, light will rectify auto.
- Pan Offset: Set PAN original position.
- Tilt Offset: Set TILT original position.
- Lamp up when: Select lamp on mode, includes 3 mode: power on, after reset done and manual;
- Factory setting: restore all parameter to factory setting.

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

Figure 9 page of run parameter

## 6. View status

Enter the page as shown in Figure 10:

- View light current status, version;
- DMXClr: Click to clear all DMX data to '0'.
- SysRst: Click to reset light.

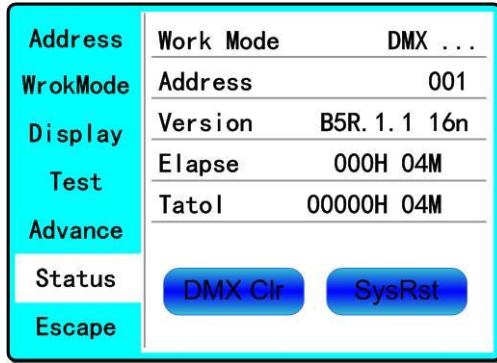


Figure 10 page of status

# Channel description:

Light support 2 DMX mode: 24ch (Standard) and 16ch (sample), as shown in Table 1:

Table 1 Channel brief

MODE/CHS		FUNCTION	VALUE	DESCRIPTION
STAND	BASIC			
1	1	<b>Pan</b>	0~255	Pan movement by 540
2		<b>Pan Fine</b>	0~255	Fine control of pan movement
3	2	<b>Tilt</b>	0~255	Tilt movement by 270
4		<b>Tilt Fine</b>	0~255	Fine control of tilt movement
5	3	<b>P/T Speed</b>	0~255	Fast to slow



6	4	<b>Function Reset Lamp</b>	0~89	none
			90~99	Blackout when color wheel moving
			100~109	Blackout when gobos wheel moving
			110~119	Blackout when prisms moving
			120~129	Blackout when color, gobos, prisms moving
			130~139	Lamp on (Over 3 seconds)
			140~149	Reset Pan/Tilt (Over 3 seconds)
			150~189	Reset Effect motor (Over 3 seconds)
			200~209	Reset All (Over 3 seconds)
			210~229	none
			230~239	Lamp Off (Over 3 seconds)
			240~255	none
			7	5
0~1	White (100%~10%)			
2~9	Color 1 (100%~10%)			
10~19	Color 2 (100%~10%)			
20~28	Color 3 (100%~10%)			
29~37	Color 4 (100%~10%)			
38~47	Color 5 (100%~10%)			
48~55	Color 6 (100%~10%)			
56~65	Color 7 (100%~10%)			
66~74	Color 8 (100%~10%)			
75~83	Color 9 (100%~10%)			

			84~92	Color 10 (100%~10%)
			93~101	Color 11 (100%~10%)
			101~110	Color 12 (100%~10%)
			110~119	Color 13 (110%~10%)
			119~129	White
			130~134	Color 1
			135~138	Color 2
			139~143	Color 3
			144~147	Color 4
			148~152	Color 5
			153~157	Color 6
			158~161	Color 7
			162~166	Color 8
			167~171	Color 9
			172~176	Color 10
			177~180	Color 11
			181~185	Color 12
			186~189	Color 13
			190~215	Forwards rainbow effect from fast to slow
			216~217	Stop, white
			218~243	Backwards rainbow effect from slow to fast
			244~255	Auto color selection from fast to slow
8		<b>Color Fine</b>	0~255	Fine positioning
9	6	<b>Effect Speed</b>	0~255	Speed of Rotating gobo, fast to slow
10	7	<b>Static</b>	0~3	Beam(Hole)

		<b>Gobo Wheel</b>	4~9	Gobo 1
			10~15	Gobo 2
			16~21	Gobo 3
			22~27	Gobo 4
			28~33	Gobo 5
			34~39	Gobo 6
			40~45	Gobo 7
			46~51	Gobo 8
			52~57	Gobo 9
			58~63	Gobo 10
			64~69	Gobo 11
			70~75	Gobo 12
			76~81	Gobo 13
			82~87	Gobo 14
			88~95	Gobo 1 Shake (Slow to fast)
			96~103	Gobo 2 Shake (Slow to fast)
			104~111	Gobo 3 Shake (Slow to fast)
			112~119	Gobo 4 Shake (Slow to fast)
			120~127	Gobo 5 Shake (Slow to fast)
			128~135	Gobo 6 Shake (Slow to fast)
			136~143	Gobo 7 Shake (Slow to fast)
			144~151	Gobo 8 Shake (Slow to fast)
			152~159	Gobo 9 Shake (Slow to fast)
			160~167	Gobo 10 Shake (Slow to fast)
			168~175	Gobo 11 Shake (Slow to fast)
			176~183	Gobo 12 Shake (Slow to fast)
			184~191	Gobo 13 Shake (Slow to fast)
192~199	Gobo 14 Shake (Slow to fast)			
200~201	Beam/hole			

			202~221	Forwards gobo rainbow from slow to fast
			222~223	stop
			224~243	Backwards gobo rainbow from fast to slow
			244~255	Auto gobo selection from fast to slow
11	8	<b>Rotating Gobo Wheel</b>	Rot.gobo Index	
			0~4	White
			5~7	Gobo 1
			8~10	Gobo 2
			11~13	Gobo 3
			14~16	Gobo 4
			17~19	Gobo 5
			20~22	Gobo 6
			23~25	Gobo 7
			26~28	Gobo 8
			29~31	Gobo 9
			Rot. Gobo rotation	
			32~34	Gobo 1
			35~37	Gobo 2
			38~40	Gobo 3
			41~43	Gobo 4
			44~46	Gobo 5
			47~49	Gobo 6
			50~52	Gobo 7
			53~55	Gobo 8
56~59	Gobo 9			
Rot.gobo Index				

			60~67	Gobo 1 Shake (slow to fast)
			68~75	Gobo 2 Shake (slow to fast)
			76~83	Gobo 3 Shake (slow to fast)
			84~91	Gobo 4 Shake (slow to fast)
			92~99	Gobo 5 Shake (slow to fast)
			100~107	Gobo 6 Shake (slow to fast)
			108~115	Gobo 7 Shake (slow to fast)
			116~123	Gobo 8 Shake (slow to fast)
			124~129	Gobo 9 Shake (slow to fast)
			Rot. Gobo rotation	
			130~137	Gobo 1 Shake (slow to fast)
			138~145	Gobo 2 Shake (slow to fast)
			146~153	Gobo 3 Shake (slow to fast)
			154~161	Gobo 4 Shake (slow to fast)
			162~169	Gobo 5 Shake (slow to fast)
			170~177	Gobo 6 Shake (slow to fast)
			178~185	Gobo 7 Shake (slow to fast)
			186~193	Gobo 8 Shake (slow to fast)
			194~199	Gobo 9 Shake (slow to fast)
			200~201	White
			202~221	Forwards gobo rainbow from slow to fast
			222~223	stop
			224~243	Backwards gobo rainbow from fast to slow
			244~255	Auto goo selection from fast to slow
12	9	<b>Rot. Gobo</b>	Gobo index	
			0~255	0~200

			Gobo rotation	
			0	No rotation
			1~127	Forwards gobo rotation from fast to slow
			128~129	No rotation
			130~255	Backwards gobo rotation from slow to fast
13		----		Rot.gobo indexing and rotation-fine
			0~255	Fine indexing (rotation)
14	10	Prism	0~19	Open position (hole)
			20~49	6-facet linear rotating prism-indexing
			50~75	6-facet linear rotating prism-rotation
			76~105	8-facet circular rotating prism-Indexing
			106~127	8-facet circular rotating prism-rotation
			Prism/Gobo macro	
			128~135	Macro 1
			136~143	Macro 2
			144~151	Macro 3
			152~159	Macro 4
			160~167	Macro 5
			168~175	Macro 6
			176~183	Macro 7
			184~191	Macro 8
192~199	Macro 9			
200~207	Macro 10			

			208~215	Macro 11
			216~223	Macro 12
			224~231	Macro 13
			232~239	Macro 14
			240~247	Macro 15
			248~255	Macro 16
15	11	<b>Rot.Prism</b>	Rot.Prism Index	
			0~255	0~200 degree
			Rot.Prism rotation	
			0	No rotation
			1~127	Forwards prism rotation from fast to slow
			128~129	No rotation
			130~255	Backwards prism rotation from slow to fast
16	12	<b>Frost</b>	0	Open
			1~179	Frost from 0% to 100%
			189~189	100% frost
			190~211	Pulse closing from slow to fast
			212~233	Pulse opening from slow to fast
			234~255	Rambing from fast to slow
17	13	<b>Zoom</b>	0~255	Zoom from max. to min.beam angle
18		<b>Zoom Fine</b>	0~255	Fine Zoom
19	14	<b>Focus</b>	0~255	Continuous adjustment from far to near
20		<b>Focus Fine</b>	0~255	Fine Focus
21		---	0~255	Resered
22	15	<b>Strobe</b>	0~31	Shutter closed (Lamp power

				reduced to 230W)
			32~63	Shutter open, Full lamp power
			64~95	Strobe-effect from slow to fast
			96~127	Shutter open
			128~159	Opening pulse in sequences from slow to fast
			160~191	Shutter open
			192~223	Random strobe-effect from slow to fast
			224~255	Shutter open, full lamp power
23	16	<b>Dimmer</b>	0~255	Dimmer intensity from 0% to 100%
24		--		Reserved