SKYSTAR

PROFESSIONAL SHOW LIGHTING

SG-420evo

BSW MOVING-HEAD

USER MANUAL

SKYSTAR

GUANGZHOU LIGHTSTAR LIGHT CO.,LTD

			112-119	Shake slow to fast Gobo7
			120-185	Rotate forward (fast to slow)
			186-189	Stop
			190-255	Rotate reverse (slow to fast)
[CH11]	[CH8]	Gobo.Rot		
			0-127	0-360(degree)
			128-190	Rotate reverse (fast to slow)
			191-192	Stop
			193-255	Rotate forward (slow to fast)
[CH12]		Gobo.R F	0-255	
[CH13]	[CH9]	Prism1		
			0-63	None
			64-127	Inert prism1
			128-191	Insert prism2
			192-255	Prism1+prism2
[CH14]	[CH10]	Prism1.R		
			0-127	0-360(degree)
			128-187	Rotate forward (fast to slow)
			188-195	Stop
			196-255	Rotate reverse (slow to fast)
[CH15]	[CH11]	Prism2.R		
			0-127	0-360(degree)
			128-187	Rotate forward (fast to slow)
			188-195	Stop
			196-255	Rotate reverse (slow to fast)
[CH16]	[CH12]	Frost		
			0-127	None
			128-255	Insert frost
[CH17]	[CH13]	Zoom	0-255	Large to small
[CH18]		Zoom F	0-255	
[CH19]	[CH14]	Focus	0-255	Far to near
[CH20]		Focus F	0-255	
[CH21]		Macro	0-255	
[CH22]	[CH15]	Strobe		
			0-3	Dark
			4-103	Pluse strobe slow to fast
			104-107	Open
			108-207	Fade strobe slow to fast
			208-212	Open
			213-251	Rand strobe slow to fast
			252-255	Open
[CH23]	[CH16]	Dimmer	0-255	0-100% dimmer
[CH24]		Dimmer Spd	0-255	

[CH8]		Colour F	0-255	
[CH9]	[CH6]	Gobo		
			0-4	Gobo1
			5-9	Gobo2
			10-14	Gobo3
			15-19	Gobo4
			20-24	Gobo5
			25-29	Gobo6
			30-34	Gobo7
			35-39	Gobo8
			40-44	Gobo9
			45-49	White
			50-54	Shake slow to fast Gobo1
			55-59	Shake slow to fast Gobo2
			60-64	Shake slow to fast Gobo3
			65-69	Shake slow to fast Gobo4
			70-74	Shake slow to fast Gobo5
			75-79	Shake slow to fast Gobo6
			80-84	Shake slow to fast Gobo7
			85-89	Shake slow to fast Gobo8
			90-94	Shake slow to fast Gobo9
			95-177	Rotate forward (fast to slow)
			178-180	Stop
			181-255	Rotate reverse (slow to fast)
[CH10]	[CH7]	Rot Gobo		
			0-7	White
			8-15	Gobo1
			16-23	Gobo2
			24-31	Gobo3
			32-39	Gobo4
			40-47	Gobo5
			48-55	Gobo6
			56-63	Gobo7
			64-71	Shake slow to fast Gobo1
			72-79	Shake slow to fast Gobo2
			80-87	Shake slow to fast Gobo3
			88-95	Shake slow to fast Gobo4
			96-103	Shake slow to fast Gobo5
			104-111	Shake slow to fast Gobo6

TECHNICAL PARAMETER:

VOLTAGE: AC90- 240V 50/60Hz

LIGHT SOURCE: 20R 420W

POWER CONSUMPTION: 550W

BEAM ANGLE: 2°--40°

1 COLOR WHEEL: 9 colors+open, half color effect,
        bi-directional rainbow effect at variable speed

1 ROTATING GOBO WHEEL:7 rotating gobos+open,
        bi-directionally rotating   at variable speed

1 FIX GOBO WHEEL:9 fix gobos+open, bi-directionally
        rotating at variable speed

2 PRISM WHEEL:5-facet prism,5-facet linear prism
        bi-directionally rotating, at variable speed

FOCUS: Linearly adjustable

WASH: 0~100% adjustable

DIMMER: 0~100% linearly adjustable

STROBE: 0.5~20 flash per second, speed adjustable

PAN AND TILT: Smooth, automatic Pan & Tilt
        position correction, speed adjustable

RANGE: Pan-540°, Tilt-270°(16-bit)

CHANNELS: 16/24CH

NET WEIGHT: 15. 5KG

GROSS WEIGHT: 18KG

FIXTURE DIMENSION: L325×W249×H598(mm)

PACKING DIMENSION:L390×W320×H650(mm)

Chapter 2   Panel operation

1.   Brief

The light panel diagram show as Figure 3, above area is Title for fixture description, the black font in the lower right corner shows the fault status of the fixture (when the fault information is not viewed, it displays "ERR", otherwise it displays "NOR"), and the status bar below shows the signal of the current fixture , lamp status, communication status, etc. (the panel in the figure is an example picture and does not represent the real appearance of the product panel，please select a panel of the same type as your product for reference.).

RDM protocol is embed in fixture, user set DMX address via cable using the controller support RDM function. when fixture was search by controller, displayer will echo 'RDM' indicate this RDM is work.

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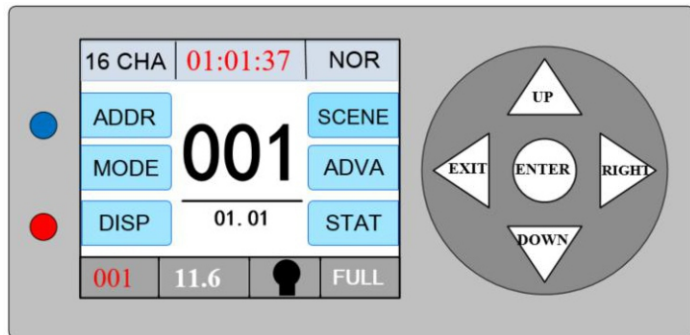

Figure 3-1   Five-buttons Panel diagram

2.   Operation

1. Operate fixture with touch knob or button

☐   The left area is the display area, the right area is the input area, you can use the key or knob to control the cursor to select the item that needs to be set or viewed, and press the OK key to complete the operation.

☐   For the knob shown in Figure 3-3, the cursor can be controlled up or down by rotating in different directions, and pressing the knob can confirm it. If you want to go back, turn the knob to move the cursor to the back button on the display, press the knob to confirm and

Chapter 3   Channel description

1.   Channel table

Note: the channel tables of different lamps are different. The following channel tables are for reference only

This luminance channel can be viewed in scene mode in order, channel mode is set in the "Address Settings" page, specific details of the data as follows:

CHANNEL TABLE

LIST-1	LIST-2	NAME	VALUE	BRIEF
[CH1]	[CH1]	Pan	0-255	0-540(degree)
[CH2]		Pan Fine	0-255	0-2(degree)
[CH3]	[CH2]	Tilt	0-255	0-270(degree)
[CH4]		Tilt Fine	0-255	0-1(degree)
[CH5]	[CH3]	PT Spd	0-255	Fast to slow
[CH6]	[CH4]	Reset		
			0-99	None
			100-105	Turn off lamp over 3 second
			106-199	None
			200-205	Turn on over 3 second
			206-209	None
			210-215	Reset XY motor over 3 second
			216-219	None
			220-235	Reset Effect motor over 3 second
			236-239	None
			240-255	Reset fxiture over 3 second
[CH7]	[CH5]	Colour		
			0-129	Linear colour
			130-134	Colour1
			135-138	Colour2
			139-143	Colour3
			144-147	Colour4
			148-152	Colour5
			153-157	Colour6
			158-161	Colour7
			162-166	Colour8
			167-171	Colour9
			172-210	Rotate forward (fast to slow)
			211-215	Stop
			216-255	Rotate reverse (slow to fast)

EN   I

	Hit	Striking the positioning rod when the motor is reset
	Lamp error	Lamp explosion accident
	NTC error	The temperature sensor signal is abnormal
	Fan error	The main fan is not working properly.
Fixture status	Displays the critical state data of the current fixture for reference.	
	Communication prec	0~100%, Communication quality of internal data link of lamps and lanterns
	Error Cnt	The number of erroneous frames was detected after power on, and the total number of erroneous frames was detected.
	Light Temperature	Show the temperature of the current light source, "---" means no detection.
	Panel Temperature	Displays the temperature of the current display panel or the ambient temperature.
	Sensor1 Temperature	Display the ambient temperature of the motherboard temperature or the motherboard installation position.
Version	Display the information and version of the current fixture, important reference for after sales maintenance.	
	Device	The name of the fixture is the same as the equipment information of RDM.
	Model	The type of fixture is the same as the model information of RDM.
	Panel	Firmware version and serial number of display panel
	Main Board	Firmware version and serial number of mother board 1
Light time	Record the total cumulative time of light source opening, unit minute, user manual cleaning, as a reference for regular maintenance of light source time.	
Total time	The total accumulated time for recording the opening of fixture is not allowed to be removed.	

return.

2. Parameter value setting

When the selected item is value need to been modified, the dialog shown in Figure 4 will popup.

Figure 4 Dialog of value setting

☐ **Modify value**：The desired value can be set by pressing the "Up" and "Down" buttons or by turning the knob.

☐ **Save Value**：After setting the data by pressing the button, press the "ENTE" button, the values are immediately saved to the internal memory, and the saved values are applied to the fixture the next time the machine is turned on.

3. Boolean parameter setting

☐ when the selected parameters is a Boolean value (such as ON or OFF), can directly modify setting by chick corresponding item, the setting will been saved right now.

☐ When the parameter is a key item, chick corresponding item, a dialog shown in Figure 5 will been popup ask for the confirm. Chick 'sure' to confirm.
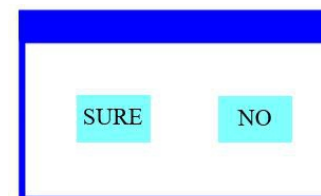

Figure 5 Dialog of confirm

4. Sub Menu（Parameter）
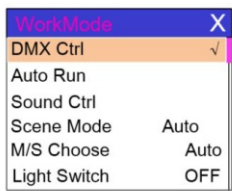

Figure 6-1 Address setting
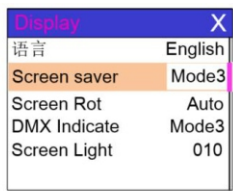

Figure 6-2 Run Settings
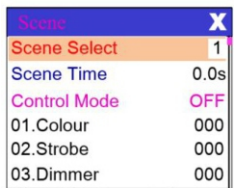

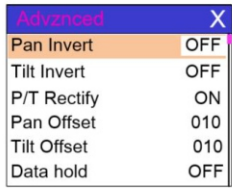Figure 6-3 Display Settings

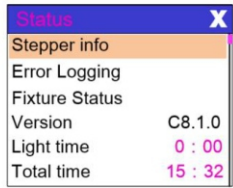Figure 6-4 Scene Settings

Figure 6-5 Advanced setting

Figure 6-6 Status Settings

Figure 6   Parameter menu

3. Operation and parameter instruction

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

1. DMX Address setting

Enter page show in Figure6-1, can set fixture DMX address, channel mode and so on.

Figure 6-1

The menu settings of fixture have optimized the setting of addresses. Several settings of the address are as follows:

☐ Select " Prev " or "Next", the fixture will be based on the current address and channel mode, automatically calculate the next or last address, make address setting can quickly;

☐ Click on the address value, you can enter the numeric editing window, where you can set any valid address, fixture system automatically get the current number of channels, automatically filter the unusable address (512 - the current number of channels).

	factory settings.

When choosing power-on mode, the lamp will wait for 30 seconds after power-on, let the lamp fully start, internal voltage is stable enough, then start the reset program, if the field capacity is stable, recommend power-on mode.

When the fixture can not calibrate the position, please check whether the "P/T Rectify" is turned off.

When the signal is unplugged, check the Data Hold setting first if the position of the fixture is not output as expected.

When setting the XY offset, after setting up, please control XY with the maximum stroke first to check that XY will not bump into the positioning rod or shell.
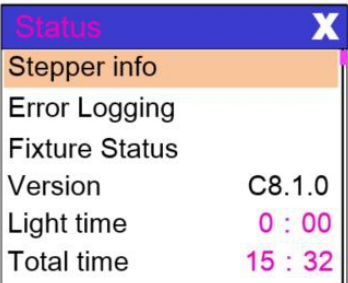
6. Status and information

Figure 6-6

Entering the page shown in Figure 6-6, you can view the information and real-time status of the fixture to get their usage status. If the fixture need customer service, please provide the status information displayed on the page as a basis for judgment, as shown in the following table:

STATUS INFORMATION

Stepper info	Display information status of all motors and signals in fixture.	
	Hall	No display, indicating that the motor has no Hall, 0 indicating that the motor leaves the correction position point, 1 indicating that the motor is in the correction position point
	Status	Display motor reset status
	PAN	Display real-time position value of PAN optocoupler feedback
	TILT	Display real-time position value of TILT optocoupler feedback
	PAN OP	Displays the PAN TILT optocoupler two signal level state, binary
Error Logging	Show the latest 8 error records when the fixture is reset and running. The error records are not saved after power failure. The current power cycle is valid.	
	Error Logging	Total number of failures detected after power on
	12：:03	The time of power failure when the fault occurs is in minutes.
	Hall error	The effective hall signal is not detected when the motor is reset
	Hall short	When the motor is reset, the hall signal of the motor is always effective
	Opti error	No effective optocoupler signal is detected when the motor is reset.
	Lose stop	The corresponding motor is out of step during its operation.

5. Set light run parameter

Figure 6-5

Enter the page shown in Figure 6-5, adjust the field parameters of fixture, facilitate the installation of fixture, etc.

ADVANCED SETTING

Pan Invert	Set the rotation direction of PAN	
	OFF	
	ON	
Tilt Invert	Set the rotation direction of TILT	
	OFF	
	ON	
P/T Rectify	Setting up fixture to detect XY lost step and correct	
	OFF	Uncorrected position after out of step
	ON	After losing step, the position is automatically corrected and the out of step fault is recorded.
Pan Offset	Setting the zero point of the PAN of the fixture	
	4-150	
Tilt Offset	Setting the zero point of the TILT of the fixture	
	4-48	
Data hold	When the fixture is not equipped with DMX signal, the output state of the fixture	
	OFF	No signal, so the motor and light source return to the position and state when reset is completed.
	NO	No signal, keep the last frame DMX data output.
Scene Time (multiple)	Work with the scene time to determine the scene retention time	
	1-255	Retention time = Scene time * multiple
Lamp mode	(lamp light source) Set the way to first open the lamp after power up	
	Power on	Turn on the lamp at power up and reset the lamp after 30 seconds.
	After reset	Reset the fixture after 3 seconds when power-on, and turn on the lamp after reset.
	Manual	After reset, manually turn on the lamp through the menu or console.
Reset	Pop up the confirmation box, select "SURE", and reset the fixture.	
Factory Setting	Pop up the confirmation box, select "SURE", and return the lamp parameters to the	

☐ Fixture support RDM protocol, remote address can be set through RDM.

Provide one buttons:

☐ Channel mode:: you can choose different channel modes by cycle.

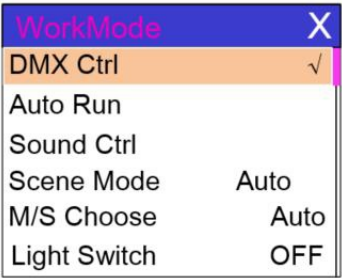## 2. Fixture operating mode setting

Figure 6-2

Through the page shown in Figure 6-2, the operating mode of the fixture can be set and the lamp can be controlled. The fixture supports four operating modes (DMX mode, auto mode, voice control mode and scene mode). Detailed parameter settings can be refer in the previous section. Specific parameter descriptions are as follows:

operating mode

DMX Ctrl	DMX mode, receive DMX signal, RDM signal	
Auto Run	Fixture run automatically according to built-in programs	
Sound Ctrl	When the fixture detects a strong sound, the fixture automatically runs a scene according to the built-in program, otherwise it will stay the last scene	
Scene Mode 01	runs in a set scene, which supports most of the custom editing of 10 scenes.	
	1~10	outputs the specified scene
	Auto	Automatically loops the output scene in the set scene time (non-zero) order, and the scene with time 0 automatically ignore
M/S Choose	Master and slave selection, non-DMX mode takes effect, select the mode of data output, fixture detect DMX cable state automatic switch output, prevent data conflicts	
	Master	fixture runs built-in program. If DMX has no signal, it outputs data (synchronization), otherwise it does not output data.
	Slave	fixture runs built-in program and do not output data
	Auto	If DMX has no signal, the fixture will runs built-in program. Otherwise, the fixture will run in DMX Mode(follow DMX).
Lamp switch	(Lamp light source) pop-up confirmation dialog box, select "SURE" to confirm the current operation, turn on or off the lamp, switch time interval limited to 30 seconds	
	Off	the current lamp output is off
	On	The current lamp output is turned on

Scene mode applies to a single or a small number of fixture, just output a fixed scene, or need to run a simple program, you no need connect to the console, in the scene page can be edited.
If the light source is lamp, wait for 10 minutes before turning off the lamp.
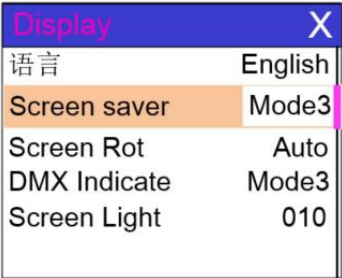
3. Set display

Figure 6-3

The fixture support Chinese and English, invert display and so on. Enter the corresponding parameter settings as shown in Figure 6-3.The specific menu contents are as follows:

DISPLAY SETTING

Language	display language settings	
	English	English display
	Chinese	Chinese display
Screen saver	Set screen 30 seconds without operation, the screen's display content or method.	
	OFF	Keep the last operation page
	Mode1	Black
	Mode2	Black screen, showing the address code of the current fixture in the lower left corner.
	Mode3	Display trademark information, address code and operation mode.
	Mode4	Display trademark information, address code and operation mode,which lasts for 30 seconds ,black screen.
Screen Rot	Set the display direction of the screen.	
	OFF	No reverse display
	ON	Reverse display
DMX Indicate	Set the indication mode of DMX signal indicator.	
	Mode1	When signal is bright, no signal is off.
	Mode2	When signal is off, no signal is bright.
	Mode3	When signal is flash, no signal is off.
Screen Light	Set the screen backlight for 10 seconds without operation	
	1~10	10

4. Scene

Enter the page shown in Figure 6-4(The channel shown in the picture is only an example of the function, please refer to the channel table description in the next section for the specific channel table of this product), and the fixture enters the scene editing mode. For example,under this page,when the [Control Mode] option is turned off ,the fixture does not receive DMX console data, and the edited data will effect on the fixture immediately.When it turned on, the console signal is received and the console data is read and reflected on the corresponding channel display.
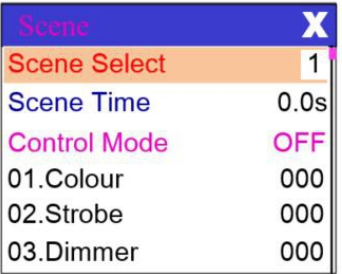

Figure 6-4

The content of the page depends on the currently selected channel mode, and the channel content and order displayed are consistent with the fixture channel table. Through this page, you can edit 10 scenes, as shown in the following table:

SCENE MODE

Scene Select	Select the current operation scenario.	
	1~10	The 10 scenes sets the format
Scene Time	Sets the retention time of the current scene when it is automatic,the final time is determined by the scene time multiplier, unit in 0.1 seconds.	
	0	The current scene is not output in automatic scene output.
	1-255	0..1s-25.5s
Control Mode	Choose whether to use the console to manipulate the settings data	
	OFF	It is not possible to control the console and set the data directly from the current interface
	ON	Using console control, the console data comes first when setting, and the setting is invalid in the current interface
1. PAN	0-255	Set up the data of each channel, and the contents and order of the display are one-to-one correspondence with the channel list of fixture.
••••••	0-255	
••••••	0-255	
N. Function	0-255	

If the reset channel in the scene edits the effective reset data, the fixture will reset, but after reset, the corresponding reset channel value will automatically set 0, preventing multiple consecutive resets.

Looking at this page, you can get the current channel table slot of the fixture. For specific channel data, please refer to the detailed channel description.

EN   I