IP66 380W BWS 3 in 1 Moving Head

USER MANUAL

(TFT DISPLAY)



Selling Points:

1. High protection level: IP66, not afraid of heavy rain impact, can completely prevent dust from entering.

2. Lightweight: only 24KG.

4. Magnetic coding positioning: fast and accurate without losing step.

3. Good heat dissipation: air cooling + full die-cast magnesium alloy + radiator heat dissipation, extending the life of the lamp.

4. With dynamic effect plate: suitable for different application places.

5. Strong corrosion resistance: passed 500 hours salt spray test, suitable for seaside, desert and other environments.

6. Good shock absorption: not afraid of collision and impact caused by mobile performance transportation.

Optics

Light source: 380W/420W long-life gas discharge bulb Color temperature: 7800K Diameter of light outlet: 138mm Illumination: 146000Lux@15m (2°) Light source life: 3000 hours Zoom range: 2-40 degrees

Effects Horizontal scan: 540° Vertical scan: 270° Color system: one color wheel, 11 colors plus white light CTO color temperature adjustment: 3200-7500K Fixed gobo: one fixed gobo plate, 11 gobos Rotating gobo: one rotatable gobo plate with 8 gobos, which can be customized, gobo plate outer diameter 14.4MM, inner diameter 9.5MM Effect plate: one dynamic effect plate Focus: electric focus Strobe: 0~20Hz Dimming: 0~100% Prism: one 8-prism, one 6-row prism, can be superimposed and rotated independently.

Control Control mode: DMX512/RDM DMX channel: 18/22CH Display: Touch control interface, can remotely control the bulb switch function, display fan speed, bulb usage time

Power supply Input voltage and frequency: 90-240V, 50/60 Hz Power connection: Waterproof power connector input/output Signal connection: 3 pin or 5 pin waterproof XLR socket Total power: 600W Power factor: 0.95 Working environment: $-20^{\circ}C \sim 45^{\circ}C$

Physical characteristics Size: 41.5*24*76.6CM Net weight: 24kg Cooling system: air cooling + die-cast magnesium alloy + radiator Casing: die-cast magnesium, semi-gloss fine black sand outdoor paint Protection level: IP66 Standard configuration: folding integrated hook, power cable 1PC, DMX cable 1pc, safety rope 1PC

CONTENTS

Chapter 1 Installation and attention	1
1. Maintenance	1
2. Statement	1
3. Safety Precaution	1
4. Cable connection (DMX)	1
5. Rigging (Optional)	2
6. RDM Note	3
Chapter 2 Panel operation	4
1. Brief	4
2. Operation	4
1. Operate fixture with touch or encoder/button	4
2. Parameter value setting	4
3. Boolean parameter setting	5
4. Sub Menu (Parameter)	5
5. Anti wrong touch operation of key	6
3. Operation and parameter instruction	6
1. DMX Address setting	6
2. Fixture operating mode setting	7
3. Set display	8
4. Scene	9
5. Set light run parameter	9
6. Status and information	. 10
Chapter 3 Channel description	.12
1. Channel table	12

Chapter 1 Installation and attention

1. Maintenance

• To reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.

- Intermittently using will extend this item's service life.
- Please clear the fan, fan net, and optical lens in order to keep good work state.
- Do not use the alcohol or any other organic solvent to wipe the shell.

Statement

The product has perfect performance and integrity packing. All users should be strictly complying with the warning and operating instructions as stated. Or we aren't in charge of any result by misusing. Any damage resulting by misuse is not within the Company's warranty. Any fault or problem caused by neglecting the manual is also not in the charge of dealers.

Note: All information is subject to change without prior notice.

2. Safety Precaution

• In order to guarantee the product's life, please don't put it in the damp places or even the environment over 60degress.

- Always mount this unit in safe and stable matter.
- Install or dismantle should operate by professional engineer.

• Using lamp, the change rate of power voltage should be within $\pm 10\%$, If the voltage is too high, it will shorten the light's life; If it's not enough, will influence the effect.

• Please restart it 20 minutes later after turning off light, until full-cooling. Frequent switching will reduce the life span of lamps and bulbs; intermittent using will improve the life of bulbs and lamps.

• In order to make sure the product is used well, please read the Manual carefully.

3. Cable connection (DMX)

Use a cable conforming to specifications EIA RS-485: 2-pole twisted, shielded, 1200hm characteristic impedance, 22-24 AWG, low capacity. Do not use microphone cable or other cable with characteristics differing from those specified. The end connections must be made using XLR type 3 or 5-pin male/female connectors. A terminating plug must be inserted into the last projector with a resistance of 1200hm (minimum 1/4 W) between terminals 2 and 3.

IMPORTANT: The wires must not make contact with each other or with the metal casing of the connectors. The casing itself must be connected to the shield braid and to pin 1 of the connectors.

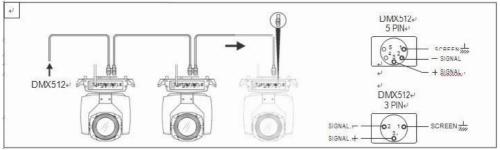


Figure 1 DMX Cable connection

4. Rigging (Optional)

This equipment can be positioned and fixed by clamp in every direction of the stage. Locking system makes it easy to fasten to the bracket.

Attention! Two clamps is needed to fix the equipment. Every clamp is locked by fastener of 1/4 kind. Fastener can only be locked clockwise.

Attention! Fasten a safety string to the additional hole of side aluminum piece. The secondary accessory can not hang on the delivery handle. Nip the equipment on bracket.

• Check if rigging clamp (not including the one inside) damaged or not? If stand ten times weight as the equipment. Make sure the architecture can stand ten times weight as all the equipments, clamps, wirings and other additional fixtures.

• Screws for clamping must be fixed firmly. Take one M12 screw (Grade 8.8 or higher) to clamp bracket, and then screw the nuts.

• Level the two hanging points at the bottom of clamp. Insert fastener to the bottom, lock the two levers by 1/4 rotating clockwise; then install another clamp.

• Install on safety string which stands at least ten times weight as equipment. Terminal of the accessory is designed for clamps.

• Make sure pan/tilt lock unlocked or not. Keep the distance more than 1M from equipment to flammable material or lighting source.

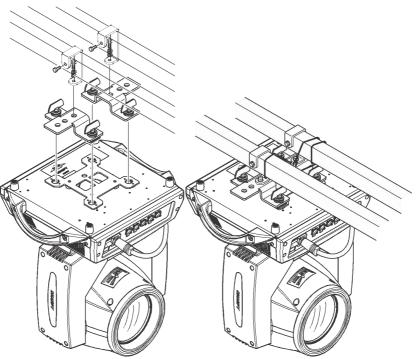


Figure 2 Installation

5. RDM Note

RDM is an extended version of DMX512-A protocol. It is a remote device management protocol. Traditional DMX512 protocol communication is one-way communication. The protocol is based on RS-485 bus. RS-485 is a time-sharing multi-point, half-duplex protocol. Only one port is allowed to output at the same time. So, when using RDM, we should pay attention to it. The following points:

• To use console or host device that supports RDM host protocol.

• Use bidirectional signal amplifier, traditional one-way signal amplifier is not suitable for RDM protocol, because the RMD protocol needs feedback data, the use of one-way amplifier will block the return of data, resulting in no search fixture;

• All fixture must be set to DMX mode to ensure only one host on the cable.

• A 120 ohm impedance matching resistor must be inserted between terminals 2 and 3 of the terminal plug. When the signal line is longer, reducing the signal reflection will make the differential signal more stable and beneficial to the quality of communication.

• When the fixture appears to accept DMX control, but can not been search by RDM host, first check the signal amplifier, and then check whether the signal line 2, 3 lines have bad contact.

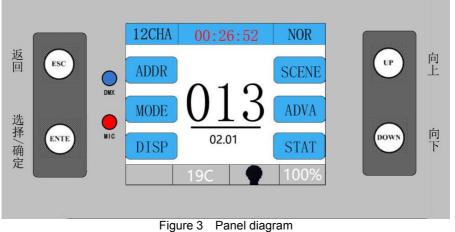
Chapter 2 Panel operation

1. Brief

The light panel diagram show as Figure 3, above area is fixture description, below area show fixture real-time status, such as DMX cable status, lamp status, error or information(ps. when there are message hav't been checked, echo 'ERR' in status bar, otherwise echo 'NOR').

Display & operation just like 'Android operation system', when select or set item value, system save the settting immediately.

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



2. Operation

1. Operate fixture with touch or encoder/button

• The left area is TFT Displayer and touch(product which support touch), chick 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 or key, As auxiliary input interface, if fixture disable touch function, the encoder/key can been choose to set or view the item, and then press the encoder button/key to confirm the selection, rotary encoder or push key again set the parameter value, finally, Press encoder button/key 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 4 will popup.



Figure 4 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' whit finger on the right side to set the exact desired value, another way is roll encoder on the right hand side of panel.

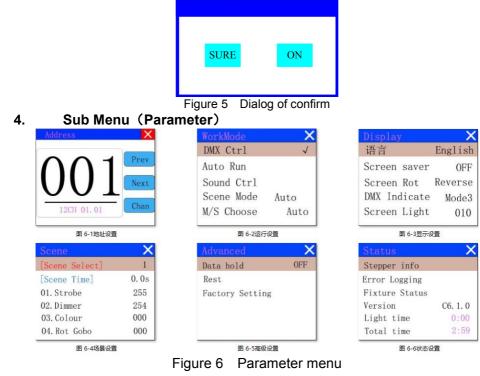
• **Apply value:** When Value had been modified, Then press the bottom of 'apply' in the left corner to apply to the light, but hav't saved;

• **Save Value:** Any time, click on the lower right corner of the "OK" button, the setting will been saved into internal memory.

3. Boolean parameter setting

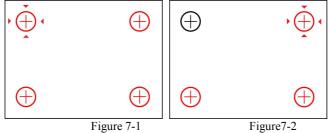
• when the selected parameters is a Boolean value (such as ON or OFF), can directly modify setting by chick corresponding item, the setting will been saved right now.

• 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.



5. Anti wrong touch operation of key

• After a period of time, the display screen will enter the key anti-false touch lock interface, and press the corresponding four buttons in turn to exit the interface, as shown in Figure 7-1 below.



• As shown in Figure 7-2, when the corresponding button is pressed, the red icon of the corresponding button will turn black, then the red logo points to the next button position, and the four corresponding buttons can be pressed in turn to exit the anti-false touch interface. When the button is pressed, the corresponding position button icon is still red, which means that the button in the wrong position is pressed.

• After power-on, when editing the lamp parameters, it will trigger to enter the anti-false touch interface, but browsing the parameters will not trigger the entry into the anti-false touch interface; When the "lock screen" function is turned on, after not operating the luminaire display panel every period of time, editing the luminaire parameters will enter the anti-false touch interface; When the "lock screen" function is turned off, only after the power is re-energized, editing the lamp parameters will enter the anti-false touch interface, the anti-false touch interface will no longer enter the anti-false touch interface during the current power-on cycle.

• "Lock screen" function switch. In order to prevent the "lock screen" function from being turned off due to accidental touch, when the "lock screen" function is turned on, pressing the confirmation button for the "lock screen" option will enter the anti-false touch interface, which will prompt that the "lock screen function" will be turned off; When the Lock Screen feature is turned off, you can turn it on directly.

3. Operation and parameter instruction

Chick item of main menu, enter corresponding sub menu shown in Figure 6, 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. DMX Address setting

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

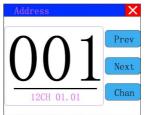


Figure 6-1 Parameter menu

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).

• Fixture support RDM protocol, remote address can be set through RDM. Provide one buttons:

• Channel mode' chan': you can choose different channel modes by cycle.

2. Fixture operating mode setting

WorkMode	×
DMX Ctrl	\checkmark
Auto Run	
Sound Ctrl	
Scene Mode	Auto
M/S Choose	Auto

Figure 6-2 Parameter menu

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			
Sound Ctri	accordir	ng to the built-in program, otherwise it will stay the last scene		
	runs in a set scebe, which supports most of the custom editing of 10 scenes.			
Scene	Mode 01 Automatically loops the output scene in the set scene time (non-zer			
Mode 01				
Auto Auto and the scene with time 0 automatically ignore				
M/S	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		
Choose	Choose 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).		
		mp light source) pop-up confirmation dialog box, select "SURE" to confirm the		
Lamp	current of	current operation, turn on or off the lamp, switch time interval limited to 30 seconds		
switch	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

Display	X
语言	English
Screen saver	OFF
Screen Rot	Reverse
DMX Indicate	Mode3
Screen Light	010

Figure 6-3 Parameter menu

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

	display language settings			
Language	English	English display		
Chinese		Chinese display		
	Set screen 30	seconds without operation, the screen's display content or method.		
	OFF	Keep the last operation page		
Screen saver	Mode1	Black		
Screen saver	Mode2	Black screen, showing the address code of the current fixture in the		
	WIOde2	lower left corner.		
Mode3		Display trademark information, address code and operation mode.		
	Set the display direction of the screen.			
Screen Rot	OFF	No reverse display		
ON		Reverse display		
	Set the indica	indication mode of DMX signal indicator.		
DMX	Mode1	When signal is bright, no signal is off.		
Indicate	icate Mode2 When signal is off, no signal is bright.			
Mode3 When signal is flash, no signal is off.		When signal is flash, no signal is off.		
Screen	Set the screet	en backlight for 10 seconds without operation		
Lihgt	1~10	10		

4. Scene

Enter the page shown in Figure 6-4, and the fixture enters the scene editing mode. Under this page, the fixture does not receive DMX console data, and the edited data will effect on the fixture immediately.

Scene	×
[Scene Select]	1
[Scene Time]	0.0s
01. Strobe	255
02. Dimmer	254
03.Colour	000
04.Rot Gobo	000

Figure 6-4 Parameter menu

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.					
Scene Select	1~10	The 10 scenes sets the format				
	Sets the rete	Sets the retention time of the current scene when it is automatic, unit in 0.1				
S	seconds.					
Scene Time	0	The current scene is not output in automatic scene output.				
	1-255	01s-25.5s				
1. PAN	0-255	Set up the data of each channel, and the contents and order of th display are one-to-one correspondence with the channel list o 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.

5. Set light run parameter

Advanced	×
Data hold	OFF
Rest	
Factory Setting	



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

ADVANCED SETTING

		ADVANCED SETTING	
	Set the ro	tation direction of PAN	
Pan Invert	OFF		
	ON		
	Set the ro	tation direction of TILT	
Tilt Invert	OFF		
	ON		
	Setting up	o fixture to detect XY lost step and correct	
D/T Deatify	OFF	Uncorrected position after out of step	
P/T Rectify	ON	After losing step, the position is automatically corrected and the out of	
	ON	step fault is recorded.	
Pan Offset	Setting th	e zero point of the PAN of the fixture	
Pan Oliset	4-150		
Tilt Offset	Setting th	e zero point of the TILT of the fixture	
The Offset	4-48		
	When the fixture is not equipped with DMX signal, the output state of the fixture		
Data hold	OFF	No signal, so the motor and light source return to the position and state when reset is completed.	
	ON	No signal, keep the last frame DMX data output.	
	(lamp lig	nt source) Set the way to first open the lamp after power up	
Tama and	Power on	Turn on the lamp at power up and reset the lamp after 30 seconds.	
Lamp mode	After	Reset the fixture after 3 seconds when power-on, and turn on the lamp	
	reset	after reset.	
	Manual	After reset, manually turn on the lamp through the menu or console.	
Reset	Reset fixture		
Factory	Pop up the confirmation box, select "SURE", and return the lamp parameters to		
Setting	the 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 Parameter menu

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:

Stepper Display information status of all motors and signals in fixture. No display, indicating that the motor has no Hall, 0 indicating the motor leaves the correction position point, 1 indicating that motor is in the correction position point Stepper Display motor reset status PAN Display real-time position value of PAN optocoupler feedback TILT Display real-time position value of TILT optocoupler feedback				
Stepper info Hall the motor leaves the correction position point, 1 indicating that 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				
Stepper 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	t the			
info 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				
PANDisplay real-time position value of PAN optocoupler feedbackTILTDisplay real-time position value of TILT optocoupler feedback				
TILT Display real-time position value of TILT optocoupler feedback				
PAN OP Displays the PAN TILT optocoupler two signal level state, bin				
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 rese				
Hall short When the motor is reset, the hall signal of the motor is all	ways			
Error effective				
Logging Opti error No effective optocoupler signal is detected when the motion	or is			
reset.				
Lose stop The corresponding motor is out of step during its operation.				
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.				
Displays the critical state data of the current fixture for reference.				
Communication 0~100%, Communication quality of internal data link of la	imps			
prec and lanterns				
Error cnt The number of erroneous frames was detected after power on	, and			
the total number of erroneous frames was detected.				
status Light Show the temperature of the current light source, "" mean	s no			
Temperature detection.				
Panel Displays the temperature of the current display panel or	the			
Temperatrue ambient temperature.				
Sensor1 Display the ambient temperature of the motherboard temperature	ature			
Temperatrue or the motherboard installation position.				
Display the information and version of the current fixtrue, important reference	e for			
after sales maintenance.				
Version Device The name of the fixture is the same as the equipment information of RDM.	ation			
Model The type of fixture is the same as the model information of RI	DM.			
Panel Firmware version and serial number of display panel				
Main Board Firmware version and serial number of mother board 1				
Record the total cumulative time of light source opening unit minute user ma	nual			
Light time cleaning, as a reference for regular maintenance of light source time				
······································	o ho			
Total time The total accumulated time for recording the opening of fixture is not allowed the removed.	0.06			

STATUS INFORMATION

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 luminaire 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)
[CH2]	[CH3]	Tilt	0-255	0-270(degree)
	[CH4]	Tilt Fine	0-255	0-1(degree)
[CH3]	[CH5]	PT Spd	0-255	Fast to slow
[CH4]	[CH6]	Colour		
			0-4	White
			5-8	White+colour1
			9-12	Colour1
			13-17	Colour1+Colour2
			18-21	Colour2
			22-25	Colour2+Colour3
			26-29	Colour3
			30-34	Colour3+Colour4
			35-38	Colour4
			39-42	Colour4+Colour5
			43-48	Colour5
			49-51	Colour5+Colour6
			52-55	Colour6
			56-59	Colour6+Colour7
			60-63	Colour7
			64-68	Colour7+Colour8
			69-72	Colour8
			73-76	Colour8+Colour9
			77-81	Colour9
			82-85	Colour9+Colour10
			86-89	Colour10
			90-93	Colour10+Colour11
			94-98	Colour11
			99-102	Colour11+Colour12
			103-192	Rotate forward (fast to slow)
			193-255	Rotate reverse (slow to fast)
[CH5]	[CH7]	СТО	0-255	
[CH6]	[CH8]	Gobo		
			0-4	White
			5-9	Gobo1
			10-14	Gobo2
			15-19	Gobo3
			20-24	Gobo4

			25-29	Gobo5
			30-34	Gobo6
			35-39	Gobo7
			40-44	Gobo8
			45-49	Gobo9
			50-69	Gobol1
			70-74	Shake slow to fast Gobo1
			75-79	Shake slow to fast Gobol Shake slow to fast Gobol
			80-84	Shake slow to fast Gobo2 Shake slow to fast Gobo3
			85-89	Shake slow to fast Gobo3
			90-94	Shake slow to fast Gobo5
			90-94	Shake slow to fast Gobo5
			100-104	Shake slow to fast Goboo
			105-104	Shake slow to fast Gobo7
			<u>110-114</u> 115-129	Shake slow to fast Gobo9
				Shake slow to fast white
			130-191	Rotate reverse (fast to slow)
			192-193	Stop Rotate forward (slow to fast)
		F1	194-255	Kotate forward (slow to fast)
[CH7]	[CH9]	Flame	0-255	
[CH8]	[CH10]	Rot Gobo	0.0	XX71 °,
			0-9	White
			10-19	Gobo1
			20-29	Gobo2
			30-39	Gobo3
			40-49	Gobo4
			50-59	Gobo5
			60-69	Gobo6
			70-79	Gobo7
			80-89	Gobo8
			90-94	Shake slow to fast Gobo1
			95-99	Shake slow to fast Gobo2
			100-104	Shake slow to fast Gobo3
			105-109	Shake slow to fast Gobo4
			110-114	Shake slow to fast Gobo5
			115-119	Shake slow to fast Gobo6
			120-124	Shake slow to fast Gobo7
			125-129	Shake slow to fast Gobo8
			130-199	Rotate forward (fast to slow)
		~ 1 -	200-255	Rotate reverse (slow to fast)
[CH9]	[CH11]	Gobo.Rot		
			0-127	0-360(degree)
			128-190	Rotate reverse (fast to slow)
			191-192	Stop
			193-255	Rotate forward (slow to fast)
[CH10]	[CH12]	Zoom	0-255	Large to small
	[CH13]	Zoom F	0-255	
[CH11]	[CH14]	Focus	0-255	Far to near
	[CH15]	Focus F	0-255	

[CH12]	[CH16]	Prism1		
			0-63	None
			64-127	Inert prism1
			128-191	Insert prism2
			192-255	Prism1+prism2
[CH13]	[CH17]	Prism1.R		
			0-127	0-360(degree)
			128-187	Rotate forward (fast to slow)
			188-195	Stop
			196-255	Rotate reverse (slow to fast)
[CH14]	[CH18]	Prism2.R		
			0-127	0-360(degree)
			128-187	Rotate forward (fast to slow)
			188-195	Stop
			196-255	Rotate reverse (slow to fast)
[CH15]	[CH19]	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
[CH16]	[CH20]	Dimmer	0-255	0-100% dimmer
[CH17]	[CH21]	Frost		
			0-127	None
			128-255	Insert frost
[CH18]	[CH22]	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