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Own Idea Of Lighting

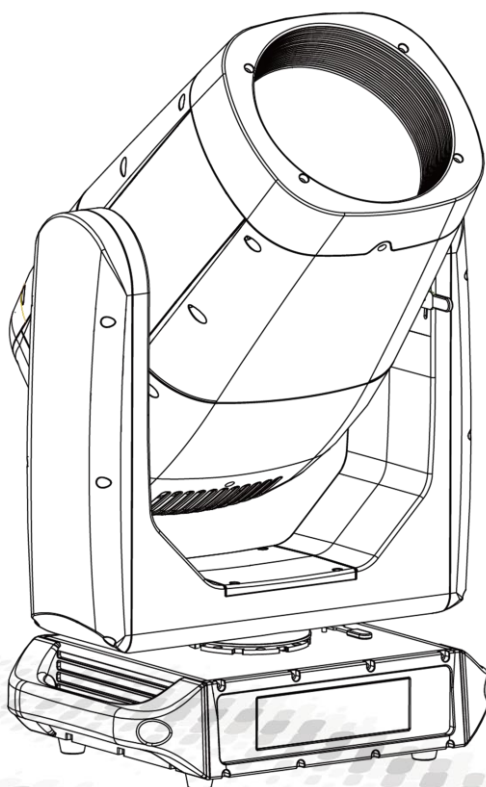
BX

USER MANUAL



BX

SS9451



MODEL: SS9451SCM



广州市雅江光电设备有限公司
Guangzhou Yajiang Photoelectric Equipment Co., Ltd.
电话/Tel: 020-86947788 邮箱/E-mail: sales@yajiang.cn
传真/Fax: 020-86943773 网址/Website: www.yajiang.cn

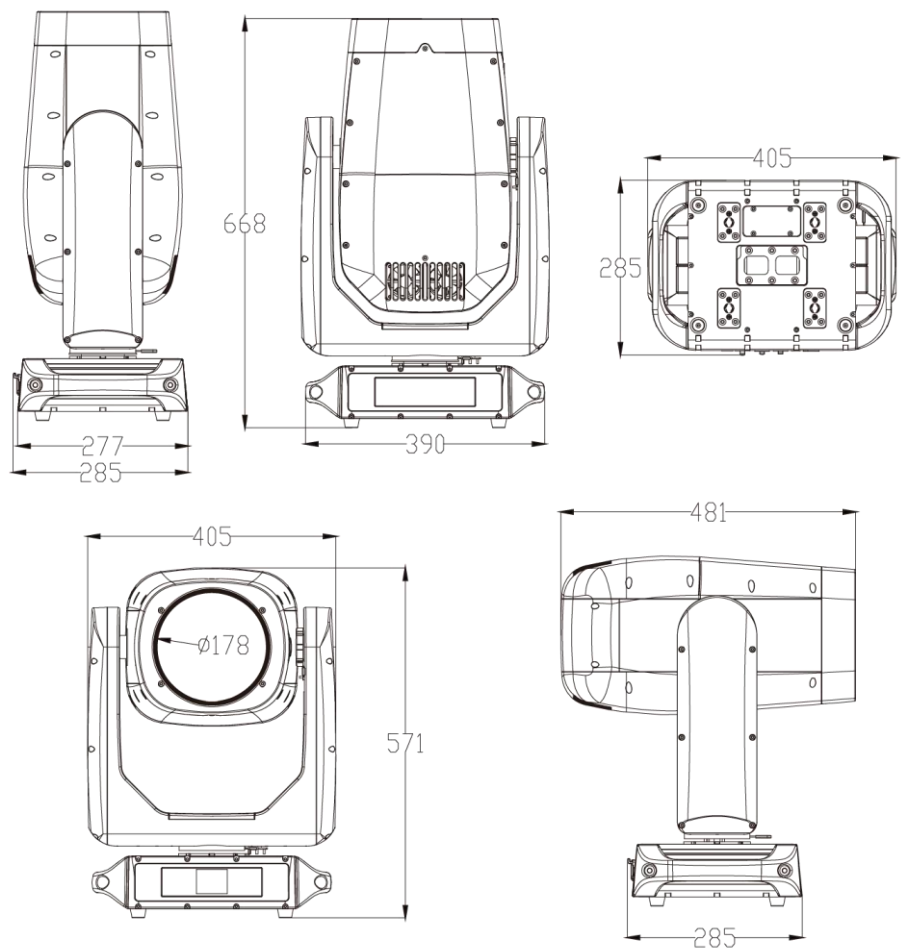
— Since 1985 —

1 PRODUCT

1.1 TECHNICAL SPECIFICATIONS

Type	SS9451SCM
LED colors	100W Laser source
Angle	0.7° - 5°
Power	270W
Control Protocol	DMX512/RDM/ARTNET/sACN/NFC/CRMX(Optional)
Voltage Range	100-240V~
Frequency Range	50/60Hz
Input Current	110V/2.5A,220V/1.3A
Protection	IP66
Operation Temperature	-15℃~45℃
Dimensions	405x258x668mm
Weight	26.7kg

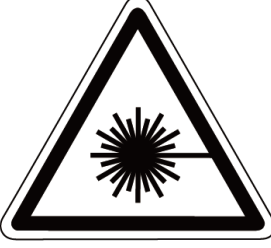
DIMENSIONS



1.2 Safety Notes

IMPORTANT

- This product must be installed by a qualified professional.
- In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes
- The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

 CAUTION	
	Emitted wavelength:455nm. Pulse pattern:continuous radiation. Maximum power or energy output:≤1.0mW. Complies with IEC 60825-1:2014 Class 1 IEC 62471 Risk Group3.

 CAUTION	
	CAUTION! Risk group 3, RG-3Avoid looking directly into the light source.

CAUTION!

- Make sure that the available voltage is not higher than stated on the rear panel.
- Do not touch the power cables if your hands are wet.
- The earth wire must always be connected to the ground. Therefore it is essential to connect the yellow/green conductor to earth.
- Make sure that the power-cord is never crimped or damaged by sharp edges. Check the device and the power-cord from time to time. The electric connection, repairs and servicing must be carried out by a qualified employee.
- Always disconnect power input cable to completely remove power from unit when not in use or before cleaning or servicing the fixture.
- Do not switch the fixture on and off in short intervals as this would reduce the lamp's life.
- Do not touch the device's housing bare hands during its operation (housing becomes hot)! The surface of the product's casing can reach up to 70° C (158° F) during operation. Avoid contact by persons and materials. Do not install the product in a location where there is a risk of accidental contact. Allow the product to cool for at least 10 minutes before handling.
- For replacement use lamps and fuses of same type and rating only.
- Please protect the fixture and avoid destroy during transport and installation. If there is any damage to the coating, the shell may be corroded.
- When hanging lamps and lanterns, it is necessary to verify that facilities and hooks can bear at least 10 times the weight of lamps and lanterns.

- Fix the safety rope at the correct holes only. Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.
- The maximum ambient temperature 45°C must never be exceeded. Do not operate the product if the ambient temperature (Ta) exceeds 45° C (115° F).
- During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.

Electrical Warning

- The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person
- For replacement use lamps and fuses of same type and rating only.
- The lens has to be replaced when it is obviously damaged, so that its function is impaired, e. g. due to cracks or deep scratches!

Keep the product well away from flammable materials

- Keep all combustible materials (e.g. fabric, wood, paper) at least 20m (65.6 feet) away from the product.
- Ensure that there is free and unobstructed airflow around the product. Provide a minimum clearance of 500 mm (20 in.) around fans and air vents.
- Do not illuminate surfaces within 20 m (65.6 feet) of the product.
- Do not install a fuse that has a higher rating than the one originally installed in the product. Do not bypass fuses.
- Do not stick filters, masks or other materials onto optical components.
- If the fixture seems to be abnormally hot, shows signs of melting or emits smoke, disconnect the fixture from power immediately and allow it to cool. Do not touch the fixture without heatproof safety gloves. Keep the fixture well away from combustible and flammable materials.

**NEVER LOOK DIRECTLY INTO THE LIGHT SOURCE!
RETINA INJURY RISK - MAY INDUCE BLINDNESS!**

Do not point the front of the fixture towards the sun or other strong light sources. The front lens focuses and concentrates light just like a magnifying glass. Strong light can cause internal damage to the fixture, melting components or starting an internal fire within seconds.

To avoid problems from strong light sources:

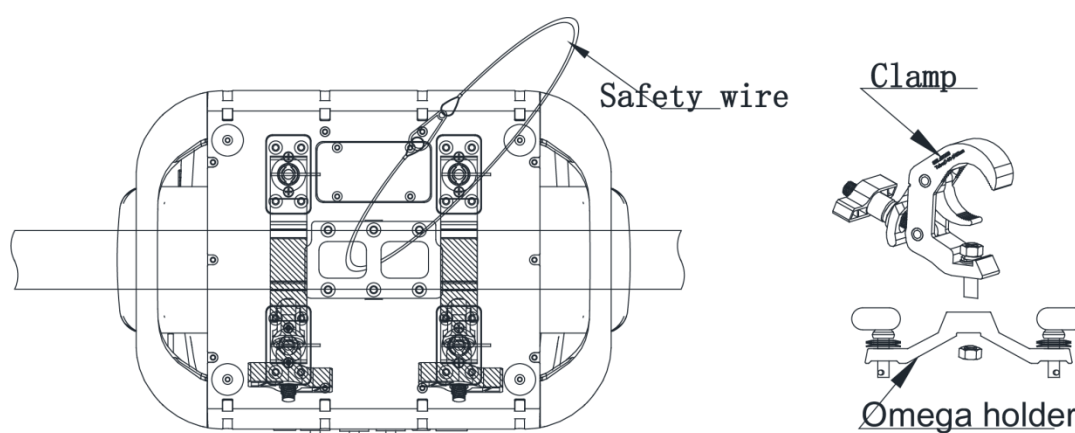
- Do not expose the front of a fixture to sunlight or any other strong light source. Avoid pointing other high-powered beam lights directly at the fixture.
- Do not focus a light beam from one lighting fixture directly towards another.
- For outdoor applications during daylight, make sure that the front face of any fixture is shielded or points away from the sun, even when not in use.
- Do not expose the product to heat (from other lighting fixtures for example).

2 INSTALLATION

2.1 MOUNTING

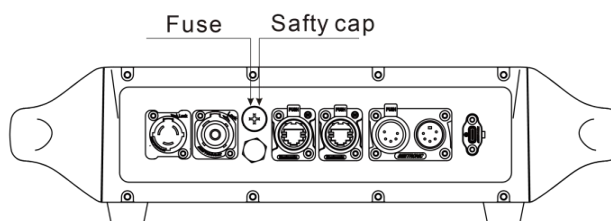
Truss installation

- ◆ Keep all combustible materials (e.g. fabric, wood, paper) at least 500 mm (20 in.) away from the product.
- ◆ For overhead use, always install a safety cable that can hold at least 10 times the weight of the fixture.
- ◆ For overhead installation, the fixture must be always secured with a safety wire that can bear at least 10 times the weight of the fixture;
- ◆ Secure the fixture with a safety cable through the rear safety eye and truss as shown..
- ◆ Ensure that the structure (truss) to which you are attaching the fixture is secure



2.2 Fuse replacement

- ◆ Remove the safety cap by a screwdriver.
- ◆ Fetch the old fuse from safety cap.
- ◆ Install a new fuse.
- ◆ Install the safety cap.



2.3 POWER CONNECTIONS

- ◆ This product has an auto-ranging power supply that can work with an input voltage range of 100–240 VAC, 50/60 Hz.

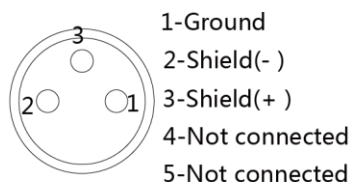
AC Plug

Connection	Wire (U.S.)	Wire(Europe)	Screw Color
AC Live	Black	Brown	Yellow/Brass
AC Neutral	White	Blue	Silver
AC Ground	Green/Yellow	Green/Yellow	Green

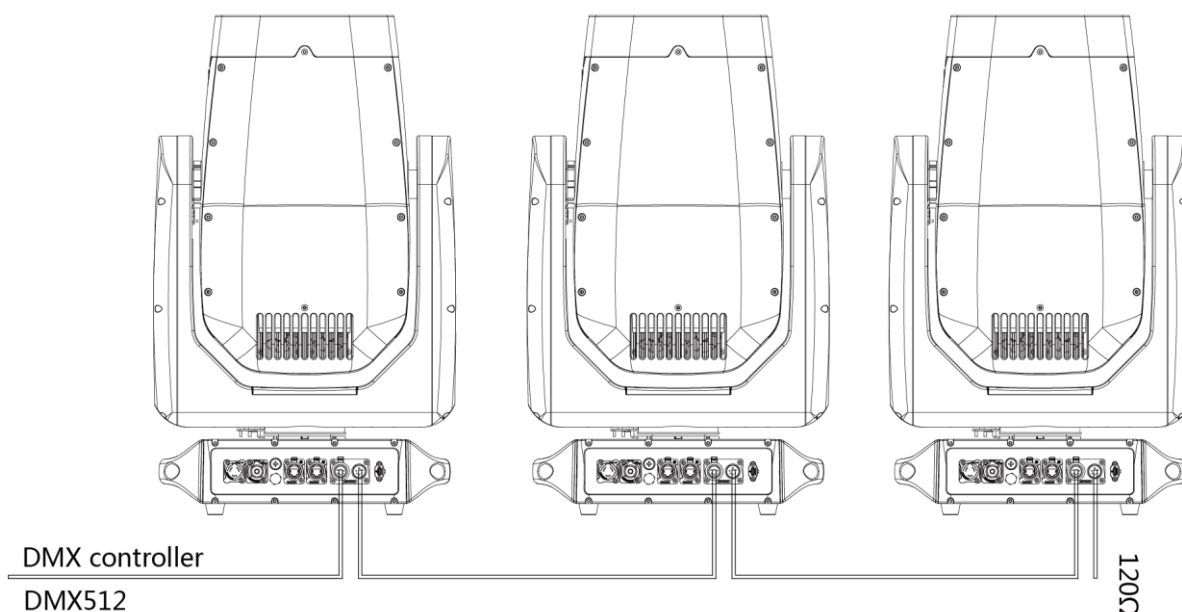
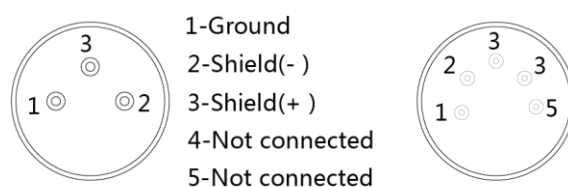
2.4 Data network requirements

- ◆ Connect the DMX512 controller to the units in series. A DMX 512 data link is required in order to control the fixture via DMX. The fixture has 3/5-pin XLR connectors for DMX data input and output.
- ◆ Each unit has N DMX channels so the DMX Addresses should increase by increments of 1, (Nx1)+1, (Nx2)+1, (Nx3)+1...
- ◆ Any DMX address in the range from 001 to 512 may be used.
- ◆ Connect the DMX-output of the first fixture in the DMX chain with the DMX-input of the next fixture. Always connect one output with the input of the next fixture until all fixtures are connected.
- ◆ Caution: At the last fixture, the DMX-cable has to be terminated with a terminator. Solder a 120 Ω resistor between Signal (–) and Signal (+) into a 3/5-pin XLR-plug and plug it in the DMX-output of the last fixture.

DMX-output
XLR mounting-sockets



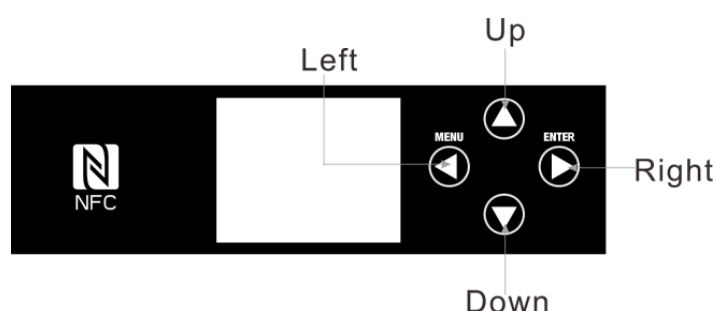
DMX-input
XLR mounting-plugs



3 FUNCTIONS AND SETTINGS

3.1 DISPLAY OPERATION

- ◆ LEFT: Used to access the menu or to return a previous menu option;
- ◆ RIGHT: Used to select and store the current menu or confirm the current function value or option within a menu;
- ◆ UP: Navigates downwards through the menu list and increases the numeric value when in a function;
- ◆ DOWN: Navigates upwards through the menu list and decreases the numeric value when in a function;
- ◆
- ◆ When the display locked, please unlock the display as below:
 1. Keep pressing BACK around 5sec, until the display shows inset password.
 2. Press “up down up down, enter” to unlock.



3.2 Menu Map

ADDRESS	001 – 512(Default 001)		DMX address setting
PERSON	BASIC		Use the menu to select desired channel mode
	STANDARD (Default)		
	EXTEND		
RUNMODE	DMX512 (Default)		Select Signal
	ARTNET		Default: DMX512
	ARTNET TO DMX		ARTNET: Ethernet control
	sACN		CUSTOM1-2 Set up get into EDIT
	AUTO		MENU edit
	CUSTOM1		
	CUSTOM2		
、 OPTION	PAN INVERT	NORMAL (Default)	PAN moving direction selection
		INVERT	
	TILT INVERT	NORMAL (Default)	TILT moving direction selection
		INVERT	
	PERFORM	STUDIO	Fan mode low speed
		POWER	Fast rotation of fan, all power
		LIVE (Default)	Automatic rotation of fan
	BLACKOUT	OFF (Default)	Select OFF blackout without delay

		ON	Select ON Blackout delay 3s
DIMMER SPEED	DIMMER	Halogen (Default)	Dimming speed LED (fast) to Halogen (slow);
	SPEED	LED	
DIMMER CURVE	LINEAR		Sets the Dimmer curve
	SQUARE LAW		
	INV. SQUARE LAW		
	S-CURVE		
LED PWM	1200Hz (Default)		Sets the PWM frequency
	2400Hz		
	4000Hz		
	6000Hz		
	25000Hz		
DMX ERROR	SAVE (Default)		Hold after loss of DMX signal
	BLACK		Blackout after loss of DMX signal
DISPLAY TIME	On		Display backlight always on
	30s		Turns off display backlight after
	1min (Default)		30s/1min
	2min		/2min of inactivity
DISPLAY LOCK	OFF		Locks display (passcode is <UP>, <DOWN>,<UP>, <DOWN>, <ENTER>)
	ON (Default)		
LOAD PARA	OFF		Not upload data
	ON (Default)		Upload data
SETTING	RECOVERY	****	Restore default factory settings.
	CLEAN EDIT1	****	Clean customer self-editing scene 1
	CLEAN EDIT2	****	Clean customer self-editing scene 2
	WDMX HIDE	NO	Hide wireless mode WDMX reset and signal hide and the default is wired mode only
		YES	
NETWORK	NET SWITCH	2.xxx.xxx.xxx	Net switch off IP mode
		10.xxx.xxx.xxx	Net switch on IP mode
	UNIVERS	0-255	Packet group Settings
	IP MODE	DEFAUL IP	Default IP
		CUSTOM IP	Customer's IP
	CUSTOM IP	XX.XX.XX.XX	Customer's IP setting
PT ENCODER	OFF		XY Encoder switch.
	ON		OFF is close; ON is open.
LANGUAGE	****	Chinese	LANGUAGE
		ENGLISH	
WDMX RESET	NO		Do not clear the receiver's message.

		YES			Clear the receiver's message
	SIGNAL	ONLY XLRDMX			ONLY XLR is wire only
		XLRDMX FIRST			XLR FIRST is wire first
		ONLY WDMX			ONLY WDMX is wireless only
		WDMX FIRST			WDMX FIRS is wireless first
		WDMX TO XLRDMX			WDMX TO DMX is wireless to wired
EDIT	EDIT 1-2	STEP 1-30	PAN	0-255	Edit the custom programs1-30
			TILT	0-255	Select play 【EDIT 1】 in RUNMOEDE
			PT SPEED	0-255	CUSTOM 1; Select play 【EDIT 2】 in
			CMY_C	0-255	RUNMOEDE CUSTOM 2
			CMY_M	0-255	
			CMY_Y	0-255	
			COLOR	0-255	
			ROTA.GOBO	0-255	
			GOBO.ROTA	0-255	
			FIXED GOBO	0-255	
			PRISM 1	0-255	
			PRISM 2	0-255	
			FROST	0-255	
			FOCUS	0-255	
			DIMMER	0-255	
			STROBE	0-25	
			TIME	0-255	
			USE	YES/NO	Select YES to run the steps user need.
		MANUAL	AUTO TEST		
CHANNEL	PAN		0-255		Manual control channel
	TILT		0-255		
	PT SPEED		0-255		
	CMY_C		0-255		
	CMY_M		0-255		
	CMY_Y		0-255		
	COLOR		0-255		
	ROTA.GOBO		0-255		
	GOBO.ROTA		0-255		
	FIXED GOBO		0-255		
	PRISM 1		0-255		
	PRISM 2		0-255		
	FROST		0-255		
	FOCUS		0-255		
	DIMMER		0-255		
	STROBE		0-25		

	DEBUG HIDE	YES		Factory testing mode. All stepper motors are not controlled by signal, It only works again after the reset.	
		NO			
	RESET	ALL RESET		Select Yes/No to carry out all reset	
		PT RESET		Select Yes/No to carry out P/T reset	
		COLOR SYSTEM		COLOR/CTO reset	
		OTHER		Focus GOBO reset	
	INFO	FIXTURE HOURS			Hours of fixture use
		LED USE HOURS			LED use time
TEMPERATURE			LED temperature		
VERSION			Software versions		
NETWORK			Check network parameter		
RDM		UID	0x388Axxxxxxx	Check fixture's ID	
		LABEL		Check fixture's LABEL	
SYSTEM ERROR		MEMORY IC		Memory IC	
		ANGLESENSOR		Angle Sensor	
		PAN SENSOR		Pan Sensor	
		PAN ENCODER		Pan Encoder	
		PAN DRIVEIC		Pan Drive IC	
		TILT SENSOR		Tilt Sensor	
		TILT ENCODER		Tilt Encoder	
		TILT DRIVEIC		Tilt Drive IC	
		TEMPERATURE		Temperature	
		CMY_C RESET		CMY_C Reset	
		CMY_M RESET		CMY_M Reset	
		CMY_Y RESET		CMY_Y Reset	
		COLOR RESET		COLOR Reset	
		GOBO RESET		GOBO Reset	
		RGOBO RESET		RGOBO Reset	
		FIXED GOBO		FIXED GOBO reset	
		PRISM 1 RESET		PRISM 1 Reset	
		PRISM 2 RESET		PRISM 2 Reset	
FOCUS RESET		FOCUS Reset			
SERVICE	****	PAN	±127	Pan position fine adjustment	
		TILT	±127	Tilt position fine adjustment	
		CMY-C	±127	CMY-C position fine adjustment	
		CMY-M	±127	CMY-M position fine adjustment	
		CMY-Y	±127	CMY-Y position fine adjustment	
		COLOR	±127	Color position fine adjustment	
		ROTA.GOBO	±127	ROTA.GOBO position fine adjustment	
		GOBO.ROTA	±127	GOBO.ROTA position fine adjustment	
		FIXED GOBO	±127	Gobo position fine adjustment	

		PRISM 1	±127	Prism1 position fine adjustment
		PRISM 2	±127	Prism2 position fine adjustment
		FOCUS	±127	Focus position fine adjustment
		OTHER	±127	
UPDATE SOFTWARE				UPDATE SOFTWARE
All passwords of this product are <UP>, <DOWN>,<UP>, <DOWN>, <ENTER>				

4 USING A DMX512 CONTROLLER

4.1 DMX CONTROL

BASIC (19CH)	STANDARD (23CH)	Extend (27CH)	Value	Function
1	1	1	000-255	PAN 0-540°
-	2	2	000-255	PAN FINE
2	3	3	000-255	TILT 0-270°
-	4	4	000-255	TILT FINE
3	5	5	000-255	PT Speed
4	6	6	000-255	CYAN
5	7	7	000-255	MAGENTA
6	8	8	000-255	YELLOW
7	9	9	COLOUR MACRO	
			000-010	No Function
			11-20	L106
			21-30	L194
			31-40	L019
			41-50	R08
			51-60	L213
			61-70	R80
			71-80	L202
			81-90	L328
			91-100	R3314
			101-110	L101
			111-120	L768
			121-128	No Function
			129-147	CYAN 100% / MAGENTA UP/ YELLOW 0%
			148-166	CYAN DOWN / MAGENTA 100% / YELLOW 0%
			167-185	CYAN 0% / MAGENTA 100% / YELLOW UP
			186-204	CYAN 0% / MAGENTA DOWN / YELLOW 100%
			205-223	CYAN UP / MAGENTA 0% / YELLOW 100%
			224-242	CYAN 100% /MAGENTA 0%/YELLOW DOWN
			243-255	CYAN 100%/MAGENTA UP/YELLOW 0%
8	10	10	000-255	CMY SPEED(SPEED 100%->1)
9	11	11	COLOR WHEEL 19+1	
			0-7	WHITE
			8-10	COLOR 1
			11-13	COLOR 2
			14-16	COLOR 3
			17-19	COLOR 4
			20-22	COLOR 5
			23-25	COLOR 6
			26-28	COLOR 7
			29-31	COLOR 8

			32-34	COLOR 9
			35-37	COLOR 10
			38-40	COLOR 11
			41-43	COLOR 12
			44-46	COLOR 13
			47-49	COLOR 14
			50-52	COLOR 15
			53-55	COLOR 16
			56-58	COLOR 17
			59-61	COLOR 18
			62-64	COLOR 19
			65-191	COLOR WHELL1 0-360°
			192-222	COLOR WHELL1 RAINBOW EFFECT(SPEED 100%→1)
			223-224	STOP
			225-255	COLOR WHELL1 RAINBOW EFFECT(SPEED 1→100%)
-	-	12	000-255	COLOR WHEEL FINE
10	12	13	ROTATING GOBO 6+1	
			000-010	ROTATING WHITE
			011-019	ROTATING GOBO 1
			020-028	ROTATING GOBO 2
			029-037	ROTATING GOBO 3
			038-046	ROTATING GOBO 4
			047-055	ROTATING GOBO 5
			056-064	ROTATING GOBO 6
			065-073	ROTATING GOBO 1 SHAKE (SPEED 1 → 100%)
			074-082	ROTATING GOBO 2 SHAKE (SPEED 1 → 100%)
			083-091	ROTATING GOBO 3 SHAKE (SPEED 1 → 100%)
			092-100	ROTATING GOBO 4 SHAKE (SPEED 1 → 100%)
			101-109	ROTATING GOBO 5 SHAKE (SPEED 1 → 100%)
			110-118	ROTATING GOBO 6 SHAKE (SPEED 1 → 100%)
			119-127	WHITE
			128-190	ROTATING GOBO FLOWING WATER EFFECT (SPEED 100 → 1%)
			191-192	STOP WATER EFFECT
			193-255	ROTATING GOBO FLOWING WATER EFFECT (SPEED 1 → 100%)
-	-	14	000-255	ROTATING GOBO FINE
11	13	15	GOBO ROTATING	
			0-120	ROTATING GOBO ANGLE ADJUSTMENT (0 → 360°)
			121-125	STOP
			126-165	ROTATING GOBO SHAKE (SPEED 1 → 100%)
			166-170	STOP
			171-210	ROTATING GOBO POSITIVE ROTATION (SPEED 100% → 1)
			211-215	STOP
			216-255	ROTATING GOBO REVERSE ROTATION (SPEED 1 → 100%)

-	-	16	000-255	GOBO ROTATING FINE
12	14	17	FIXED GOBO WHEEL 19+1	
			0-10	WHITE
			11-13	FIXED GOBO 1
			14-16	FIXED GOBO 2
			17-19	FIXED GOBO 3
			20-22	FIXED GOBO 4
			23-25	FIXED GOBO 5
			26-28	FIXED GOBO 6
			29-31	FIXED GOBO 7
			32-34	FIXED GOBO 8
			35-37	FIXED GOBO 9
			38-40	FIXED GOBO 10
			41-43	FIXED GOBO 11
			44-46	FIXED GOBO 12
			47-49	FIXED GOBO 13
			50-52	FIXED GOBO 14
			53-55	FIXED GOBO 15
			56-58	FIXED GOBO 16
			59-61	FIXED GOBO 17
			62-64	FIXED GOBO 18
			65-67	FIXED GOBO 19
			68-70	FIXED GOBO 1 SHAKE (SPEED 1 → 100%)
			71-73	FIXED GOBO 2 SHAKE (SPEED 1 → 100%)
			74-76	FIXED GOBO 3 SHAKE (SPEED 1 → 100%)
			77-79	FIXED GOBO 4 SHAKE (SPEED 1 → 100%)
			80-82	FIXED GOBO 5 SHAKE (SPEED 1 → 100%)
			83-85	FIXED GOBO 6 SHAKE (SPEED 1 → 100%)
			86-88	FIXED GOBO 7 SHAKE (SPEED 1 → 100%)
			89-91	FIXED GOBO 8 SHAKE (SPEED 1 → 100%)
			92-94	FIXED GOBO 9 SHAKE (SPEED 1 → 100%)
			95-97	FIXED GOBO 10 SHAKE (SPEED 1 → 100%)
			98-100	FIXED GOBO 11 SHAKE (SPEED 1 → 100%)
			101-103	FIXED GOBO 12 SHAKE (SPEED 1 → 100%)
			104-106	FIXED GOBO 13 SHAKE (SPEED 1 → 100%)
			107-109	FIXED GOBO 14 SHAKE (SPEED 1 → 100%)
			110-112	FIXED GOBO 15 SHAKE (SPEED 1 → 100%)
			113-115	FIXED GOBO 16 SHAKE (SPEED 1 → 100%)
			116-118	FIXED GOBO 17 SHAKE (SPEED 1 → 100%)
			119-121	FIXED GOBO 18 SHAKE (SPEED 1 → 100%)
			122-124	FIXED GOBO 19 SHAKE (SPEED 1 → 100%)
			125-127	WHITE
			128-190	STATIC GOBO JUMPING WATER EFFECT (SPEED 100 → 1%)
			191-192	STOP WATER EFFECT
			193-255	STATIC GOBO FLOWING WATER EFFECT (SPEED 1 → 100%)

-	-	18	000-255	FIXED GOBO WHEEL FINE
13	15	19	PRISM 1	
			0-10	WHITE
			11-145	PRISM INSERT AND ADJUST THE ANGLE (0 → 360°)
			146-150	STOP
			151-200	PRISM INSERT AND POSITIVE ROTATION (SPEED 100% → 1)
			201-205	STOP ROTATION
			206-255	PRISM INSERT AND REVERSE ROTATION (SPEED 1 → 100%)
14	16	20	PRISM 2	
			0-10	WHITE
			11-145	PRISM INSERT AND ADJUST THE ANGLE (0 → 360°)
			146-150	STOP
			151-200	PRISM INSERT AND POSITIVE ROTATION (SPEED 100% → 1)
			201-205	STOP ROTATION
			206-255	PRISM INSERT AND REVERSE ROTATION (SPEED 1 → 100%)
15	17	21	FROST	
			0-10	WHITE
			11-145	FROST INSERT AND ADJUST THE ANGLE (0 → 360°)
			146-150	STOP
			151-200	FROST INSERT AND POSITIVE ROTATION (SPEED 100% → 1)
			201-205	STOP ROTATION
			206-255	FROST INSERT AND REVERSE ROTATION (SPEED 1 → 100%)
16	18	22	000-255	FOCUS
-	19	23	000-255	FOCUS FINE
17	20	24	000-255	DIMMER
-	21	25	000-255	DIMMER FINE
18	22	26	STROBE	
			0-9	NO FUNCTION
			10-99	STROBE (FROM SLOW TO FAST)
			100-109	NO FUNCTION
			110-179	LIGHTNING STROBE
			180-189	NO FUNCTION
			190-255	RANDOM STROBE
19	23	27	CONTROL (EXECUTE AFTER 3 SECONDS)	
			0-10	NO FUNCTION
			11-20	PAN/TILT BLACK ACTIVATED
			21-30	PAN/TILT BLACK DEACTIVATED
			31-40	PAN INVERT
			41-50	TILT INVERT
			51-60	PAN/TILT INVERT OFF
			61-70	STUDIO

			71-80	POWER
			81-90	LIVE
			91-100	DIMMER SPEED Halogen
			101-110	DIMMER SPEED LED
			111-120	DIMMER CURVE LINEAR
			121-130	DIMMER CURVE SQUARE LAW
			131-140	DIMMER CURVE INV. SQUARE LAW
			141-150	DIMMER CURVE S-CURVE
			151-160	1200Hz
			161-170	2400Hz
			171-180	4000Hz
			181-190	6000Hz
			191-200	25000Hz
			201-210	ALL RESET
			211-220	XY RESET
			221-230	COLOR SYSTEM RESET
			231-240	GOBO SYSTEM RESET
			241-255	OTHER RESET