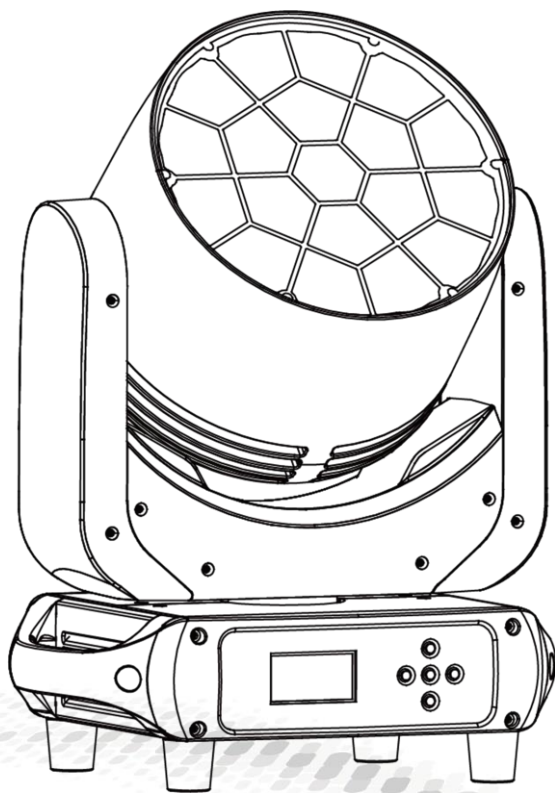| 图纸编码	RD-SS9391-SM-01(SS-I)					版本号	D
SS9391XLE-ME 英文说明书						编辑日期	2022/12/7
制作	刘丽萍	审核	白丹	批准	余泽松		
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备注	以 A4 样本打印						H

PLUTO 8000 WBX

USER MANUAL

® **PLUTO 8000 WBX**
SS9391

MODEL: SS9391XLE-ME

广州市雅江光电设备有限公司
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Since 1985

1 PRODUCT

1.1 TECHNICAL SPECIFICATIONS

Type	SS9391XLE-ME
LED colors	19x40W RGBL LED+RGB Ring
Angle	Beam Angle：3.5°~38°，Field Angle: 6°~60°
Power	720W
Control Protocol	DMX512，RDM，Bluetooth，NFC，W-DMX（Optional）
Voltage Range	AC100~240V,50/60Hz
Input Current	110V/6.5A,220V/3.3A
Protection	IP20
Operation Temperature	0℃~45℃
Dimensions	352x259x424mm
Weight	14KG

DIMENSIONS
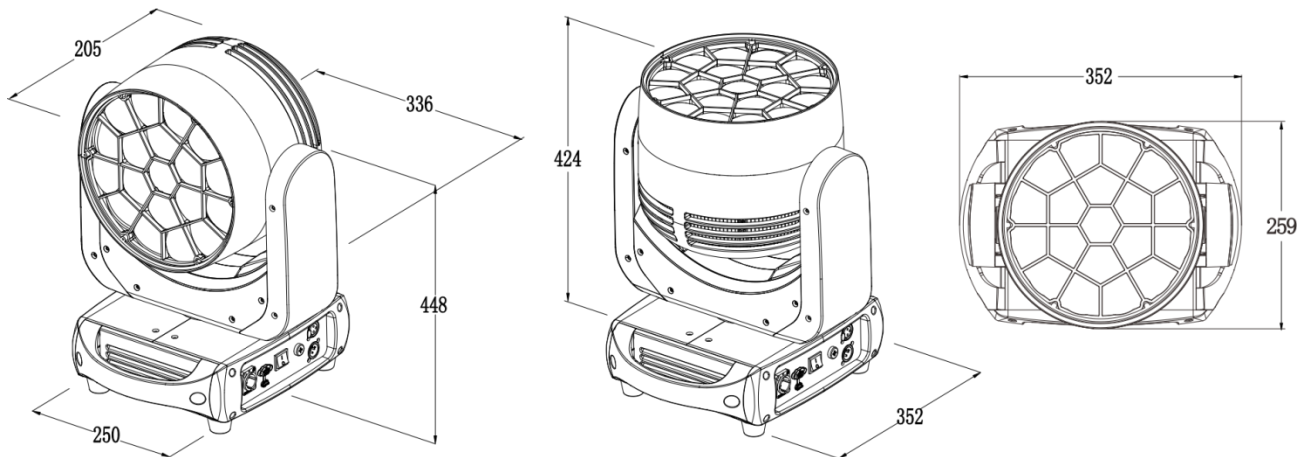
1.2 Safety Notes

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!

- 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 500 mm (20 in.) away from the product.
- Ensure that there is free and unobstructed airflow around the product. Provide a minimum clearance of 150 mm (6 in.) around fans and air vents.
- Do not illuminate surfaces within 3 m (10 ft.) 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
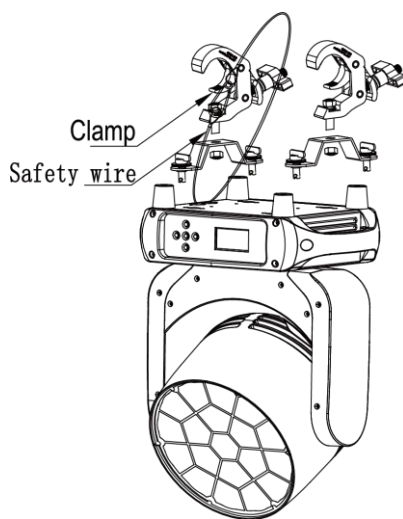
2.2 Fuse replacement

◆ Remove the safety cap by a screwdriver.
◆ Fetch the old fuse from safety cap.
◆ Install a new fuse.
◆ Install the safety cap.
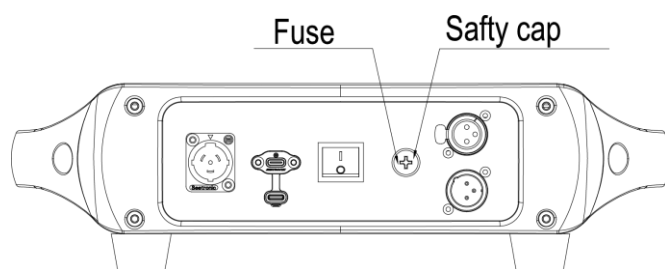
2.3 POWER CONNECTIONS

◆ 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

1-Ground
2-Shield(-)
3-Shield(+)
4-Not connected
5-Not connected

1-Ground
2-Shield(-)
3-Shield(+)
4-Not connected
5-Not connected

DMX-controller
DMX512

120Ω
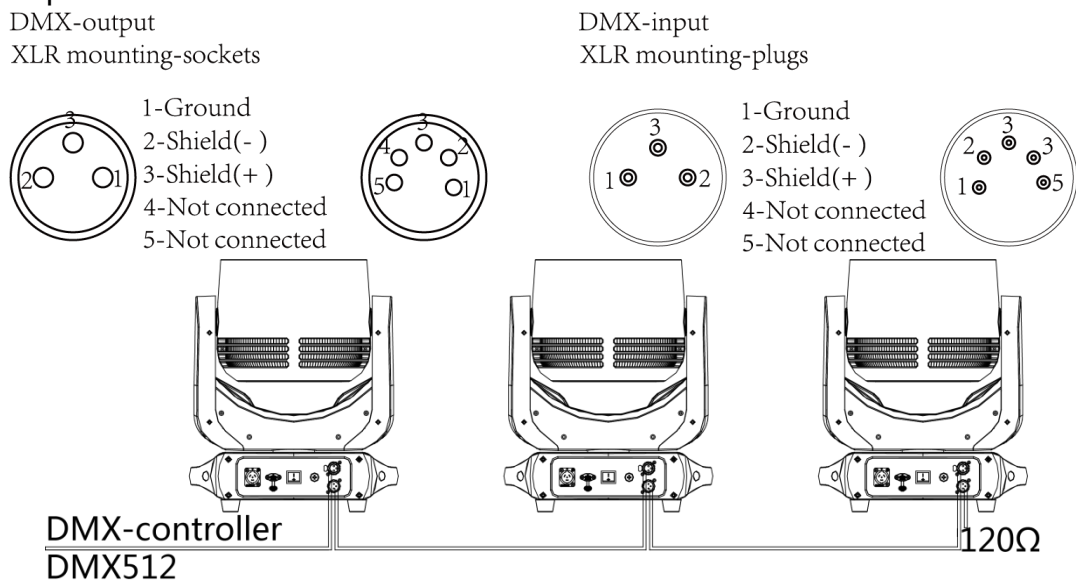
2.5 Update software

◆ Steps of updating software with USB-C interface:
   1. Insert USB-C U dish into USB-C interface
   2. After finding "Upgrade Software" in the menu,
   Find the corresponding software and click OK

USB-C
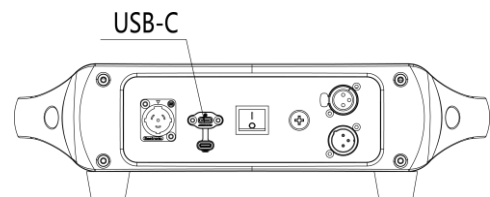
3 FUNCTIONS AND SETTINGS

3.1 DISPLAY OPERATION

◆ MENU：Used to access the menu or to return a previous menu option;
◆ ENTER：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；
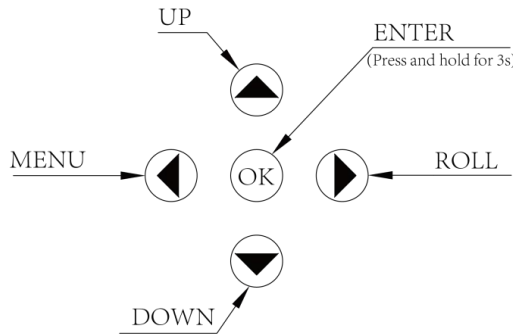
3.2 Menu Map

ADDRESS	001 – 512(Default 001)		DMX address setting
OPTION	PERSON	HSIC	Use the menu to select desired channel mode
		SSP	
		TOUR (default)	
		TR16	
		CMY	
		PIXEL	
	PAN INVERT	OFF (default)	PAN moving direction selection
		ON	
	TILT INVERT	OFF (default)	TILT moving direction selection
		ON	
	RESET	ALL RESET	Select Yes/No to carry out all reset
		XY RESET	Select Yes/No to carry out P/T reset
		ZOOM RESET	Zoom/ Focus/ Prism reset
SETTING	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
	PT ENCODER	OFF	XY Encoder switch. OFF is close; ON is open.
		ON (default)	
	DIMMER	DIM4 (Default)	Dimming curves **OFF** (fast) to **DIM4** (slow)；
		OFF	
	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(Default)				Turns off display backlight after 30s/1min/2min of inactivity
		1min				
		2min				
	DISPLAY LOCK	OFF				Locks display (passcode is <UP>, <DOWN>,<UP>,<DOWN>
		ON (Default)				
	RUNMODE	DMX512 (default)				Select Signal CUSTOM1-2 Set up get into EDIT MENU edit
		CUSTOM1				
		CUSTOM2				
	EDIT	EDIT 1-2	STEP 1-30	PAN	0-255	Edit the custom programs1-30 Select play 【EDIT 1】 in RUNMOEDE CUSTOM 1; Select play 【EDIT 2】 in RUNMOEDE CUSTOM 2
				TITL	0-255	
				ZOOM	0-255	
				RED	0-255	
				GREEN	0-255	
				BLUE	0-255	
				LIME	0-255	
				STROBE	0-255	
				PRESET COLOR	0-255	
				CCT	0-255	
				EFFECT	0-255	
				RING RED	0-255	
				RING GREEN	0-255	
				RING BLUE	0-255	
				TIME	0-255	
				USE	YES/NO	
	SETTING	RECOVERY	****			Restore default factory settings.
		CLEAN EDIT1	****			Clean customer self-editing scene 1
		CLEAN EDIT2	****			Clean customer self-editing scene 2
		WDMX HIDE	YES			Hide wireless mode WDMX reset and signal hide and the default is wired mode only
			NO			
	MANUAL	Auto Test				Auto Test channel
		CHANNEL	PAN	0-255		Manual control channel
			TITL	0-255		
			ZOOM	0-255		
			RED	0-255		
			GREEN	0-255		
			BLUE	0-255		
			LIME	0-255		
			STROBE	0-255		

			PRESET COLOR	0-255	
			CCT	0-255	
			EFFECT	0-255	
			RING RED	0-255	
			RING GREEN	0-255	
			RING BLUE	0-255	
		CCT	1800K		
			2200K		
			2700K		
			3000K		
			3200K		
			4000K		
			4500K		
			5000K		
			5600K		
			6000K		
			6500K		
			7000K		
			8000K		
			10000K		
		PRESET COLOR	COLOR 1		
			COLOR 2		
			...		
			COLOR 24		
		CMY	CYAN		
			MAGENTA		
			YELLOW		
	Color Cali	OFF			Full power mode
		User Calibration	RED	0-255	Manual calibration mode
			GREEN	0-255	
			BLUE	0-255	
			LIME	0-255	
		Factory Calibration			Factory calibration mode
	SERVICE	****	PAN	±127	
			TILT	±127	
			ZOOM	±127	
	INFO	FIXTURE HOURS			Hours of fixture use
		LED USE HOURS			LED use time
		TEMPERATURE			LED temperature
		VERSION			Software versions
		RDM	UID		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
LANGUAGE	****	中文		Language select
		ENGLISH		
DEBUG HIDE	NO			Factory testing mode. All stepper motors are not controlled by signal, It only works again after the reset.
	YSE			
WIRELESS	WIFI	WIFIMODE	STATION	WiFi settings
			AP	
			SMART	
		SSID	YJSS9391	
		PASSWORD	yj000001	
		LOCAL IP	xxx:xxx:xxx:xxx	
		REMOTE IP	xxx:xxx:xxx:xxx	
		MAC	xx:xx:xx:xx:xx	
		WIFI RESTART	NO	
			YES	
		WIFI DEFAULT	NO	
			YES	
	BLUET OOYH	MAC	xx:xx:xx:xx:xx	Bluetooth Settings
		NAME	YJSS9391	
WDMX RESET	YES			Do not clear the receiver's message.
	NO			Clear the receiver's message
SIGNAL	ONLY XLRDMX			ONLY XLR is wire only
	ONLY WDMX			ONLY WDMX is wireless only
	WDMX TO XLRDMX			WDMX TO DMX is wireless to wired
UPDATE SOFTWARE				USB-C Update software
All passwords of this product are: <UP>, <DOWN>,<UP>, <DOWN>, <ENTER>				

4 USING A DMX512 CONTROLLER

4.1 DMX CONTROL

HSIC(20CH)	Value	Function
CH.1	0-255	PAN
CH.2	0-255	PAN FINE
CH.3	0-255	PAN FINE
CH.4	0-255	TITL FINE
CH.5	0-255	PT SPEED
CH.6	0-255	INTENSIYT
CH.7	0-255	HUE
CH.8	0-255	HUE FINE
CH.9	0-255	SATURATION
	CCT	
	0-9	NO FUNCTION
	10	1800K
	25	2200K
	40	2700K
	55	3000K
	70	3200K
	85	4000K
CH.10	100	4500K
	115	5000K
	130	5600K
	145	6000K
	160	6500K
	175	7000K
	190	8000K
	205	10000K
	255	10000K
	STROBE	
	0-9	NO FUNCTION
	10-99	STROBE FROM （SLOD TO FAST，0-25Hz）
CH.11	100-109	NO FUNCTION
	110-179	LIGHTNING STROBE
	180-189	NO FUNCTION
	190-255	RANDOM STROBE
CH.12	0-255	ZOOM
CH.13	0-255	RED RING
CH.14	0-255	GREEN RING
CH.15	0-255	BULE RING
	Ring Color Presets	
	000-009	Open
CH.16	010-014	RED
	015-019	GREEN
	020-024	BLUE

		025-029	Yellow
		030-034	Magenta
		035-039	Cyan
		040-044	WHITE
		045-049	Violet blue
		050-054	Light blue
		055-059	Wine red
		060-064	May green
		065-069	Reseda green
		070-074	Blue lilac
		075-079	Moss green
		080-084	Signal violet
		085-089	Red lilac
		090-094	Purple red
		095-099	Green brown
		100-104	Pale green
		105-109	Ruby red
		110-114	Flame red
		115-119	Red orange
		120-124	Rose
		125-129	Honey yellow
		130-134	Light Pin
		135-139	Deep orange
		140-144	Lemmon
		145-149	Golden yellow
		150-154	Pastel orange
		155-159	Cream
		160-164	Melon yellow
		165-169	Luminous orange
		170-174	Luminous yellow
		175-179	Open
		180-248	Stop Color FX
		249-255	Open
CH.17	**Color FX**		
		0-9	Open
		10-23	FX1
		24-37	FX2
		38-51	FX3
		52-65	FX4
		66-79	FX5
		80-93	FX6
		94-107	FX7
		108-121	FX8
		122-135	FX9
		136-149	FX10
		150-163	FX11

	164-177	FX12
	178-191	FX13
	192-205	FX14
	206-219	FX15
	220-233	FX16
	234-247	FX17
	248-255	Open
CH.18	0-255	Ring Speed (SPEED 1 —> 100%)
CH.19	0-255	Ring Dimmer
CH.20	**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	TITL INVERT
	51-60	PAN/TITL INVERT OFF
	61-70	LIVE
	71-80	STUDIO
	81-90	POWER
	91-100	RESERVED
	101-110	DIMMER OFF
	111-120	DIMMER DIM4
	121-150	RESERVED
	151-160	1200Hz
	161-170	2400Hz
	171-180	4000Hz
	181-190	6000Hz
	191-200	25000Hz
	201-210	ALL RESET
	211-220	PAN/TITL RESET
	221-230	ZOOM RESET
	231-255	RESERVED

SSP (18CH)	TOUR (22CH)	TR16 (29CH)	Value	Function
CH.1	CH.1	CH.1	0-255	PAN
		CH.2	0-255	PAN FINE
CH.2	CH.2	CH.3	0-255	TITL
		CH.4	0-255	TITL FINE
CH.3	CH.3	CH.5	0-255	PT SPEED
CH.4	CH.4	CH.6	0-255	RED
		CH.7	0-255	RED FINE
CH.5	CH.5	CH.8	0-255	GREEN
		CH.9	0-255	GREEN FINE
CH.6	CH.6	CH.10	0-255	BLUE
		CH.11	0-255	BLUE FINE
CH.7	CH.7	CH.12	0-255	LIME

		CH.13	0-255	LIME FINE
CH.8	CH.8	CH.14	0-255	DIMMER
		CH.15	0-255	DIMMER FINE
CH.9	CH.9	CH.16	**STROBE**	
			0-9	NO FUNCTION
			10-99	STROBE FROM（SLOD TO FAST,0-25Hz）
			100-109	NO FUNCTION
			110-179	LIGHTNING STROBE
			180-189	NO FUNCTION
			190-255	RANDOM STROBE
	CH.10	CH.17	**PRESET COLOR**	
			0-10	NO FUNCTION
			11-255	PRESET COLOR
	CH.11	CH.18	**CCT**	
			0-9	NO FUNCTION
			10	1800K
			25	2200K
			40	2700K
			55	3000K
			70	3200K
			85	4000K
			100	4500K
			115	5000K
			130	5600K
			145	6000K
			160	6500K
			175	7000K
			190	8000K
			205	10000K
			255	10000K
	CH.12	CH.19	**EFFECT**	
			0-10	NO FUNCTION
			11-15	1
			16-20	2-7
			21-25	8-19
			26-30	1,2-7
			31-35	1,8-19
			36-40	2-7,8-19
			41-45	1→2-7→8-19 cycle
			46-50	8-19→2-7→1 cycle
			51-55	1→2-7→8-19→2-7→1 cycle
			56-60	1&8-19 cycle
			61-65	1(30%)→2-7(60%)→ 8-19(100%)（associated with CH4-CH10）
				2-7(30%)→8-19 (60%)→1(100%)（associated with CH4-CH10）
				8-19(30%)→1(60%) →2-7 (100%)（associated with

					CH4-CH10）
				66-70	8-19(30%)→2-7(60%)→1(100%)（associated with CH4-CH10）
					2-7 (30%)→1(60%)→8-19 (100%)（associated with CH4-CH10）
					1 (30%)→8-19 (60%)→2-7(100%)（associated with CH4-CH10）
				71-75	1→2-7→8-19 2700K cycle run (CH4-CH11 background)
				76-80	8-19→2-7→1 2700K cycle run (CH4-CH11 background)
				81-85	1→2-7→8-19→2-7→1 2700K cycle run (CH4-CH11 background)
				86-90	1&8-19 2700K cycle run (CH4-CH11 background)
				91-95	1→2-7→8-19 6000K cycle run (CH4-CH11 background)
					2-7→8-19→1 6000K cycle run (CH4-CH11 background)
					8-19→1→2-7 6000K cycle run (CH4-CH11 background)
				96-100	8-19→2-7→1 7200K cycle run (CH4-CH11 background)
					2-7→1→8-19 7200K cycle run (CH4-CH11 background)
					1→8-19→2-7 7200K cycle run (CH4-CH11 background)
				101-105	Red background, 2700K cycle 1→2-7→8-19
				106-110	Red background, 2700K cycle 8-19→2-7→1
				111-115	Red background, 2700K cycle 1→2-7→8-19→2-7→1
				116-120	Red background, 2700K cycle 1→2-7 and 8-19→2-7
				121-125	Red background, 2700K cycle 1→2-7 and 8-19→2-7
					Red background, 2700K cycle 2-7→8-19→1
					Red background, 2700K cycle 8-19→1→2-7
				126-130	Red background, 2700K cycle 8-19→2-7→1
					Red background, 2700K cycle 2-7→1→8-19
					Red background, 2700K cycle 1→8-19→2-7
				131-135	Green background, 3000K cycle 1→2-7→8-19
				136-140	Green background,3000K cycle 8-19→2-7→1
				141-145	Green background,3000K cycle 1→2-7→8-19→2-7→1
				146-150	Green background,3000K cycle 1→2-7 and 8-19→2-7
				151-155	Green background,3000K cycle 1→2-7 and 8-19→2-7
					Green background,3000K cycle 2-7→8-19→1
					Green background,3000K cycle 8-19→1→2-7
				156-160	Green background,3000K cycle 8-19→2-7→1
					Green background,3000K cycle 2-7→1→8-19
					Green background,3000K cycle 1→8-19→2-7
				161-165	Blue background,3200K cycle 1→2-7→8-19
				166-170	Blue background,3200K cycle 8-19→2-7→1
				171-175	Blue background,3200K cycle 1→2-7→8-19→2-7→1
				176-180	Blue background,3200K cycle 1→2-7 and 8-19→2-7
				181-185	Blue background,3200K cycle 1→2-7 and 8-19→2-7
					Blue background,3200K cycle 2-7→8-19→1
					Blue background,3200K cycle 8-19→1→2-7
				186-190	Blue background,3200K cycle 8-19→2-7→1

				Blue background,3200K cycle 2-7→1→8-19
				Blue background,3200K cycle 1→8-19→2-7
			191-195	Blue background,3500K cycle 1→2-7→8-19
			196-200	White background,3500K cycle 8-19→2-7→1
			201-205	White background,3500K cycle 1→2-7→8-19→2-7→1
			206-210	White background,3500K cycle 1→2-7 and 8-19→2-7
			211-215	White background,3500K cycle 1→2-7 and 8-19→2-7
				White background,3500K cycle 2-7→8-19→1
				White background,3500K cycle 8-19→1→2-7
			216-220	White background,3500K cycle 8-19→2-7→1
				White background,3500K cycle 2-7→1→8-19
				White background,3500K cycle 1→8-19→2-7
			221-225	Pink background,4000K cycle 1→2-7→8-19
			226-230	Pink background,4000K cycle 8-19→2-7→1
			231-235	Pink background,4000K cycle 1→2-7→8-19→2-7→1
			236-240	Pink background,4000K cycle 1→2-7 and 8-19→2-7
			241-245	Pink background,4000K cycle 1→2-7 and 8-19→2-7
				Pink background,4000K cycle 2-7→8-19→1
				Pink background,4000K cycle 8-19→1→2-7
			246-250	Pink background,4000K cycle 8-19→2-7→1
				Pink background,4000K cycle 2-7→1→8-19
				Pink background,4000K cycle 1→8-19→2-7
			251-255	NO FUNCTION
	CH.13	CH.20	**0-255**	AUTO SPEED ADJUSTMENT(SLOW TO FAST)
CH.10	CH.14	CH.21	**0-255**	ZOOM
CH.11	CH.15	CH.22	0-255	RED RING
CH.12	CH.16	CH.23	0-255	GREEN RING
CH.13	CH.17	CH.24	0-255	BULE RING
CH.14	CH.18	CH.25	**Ring Color Presets**	
			000-009	Open
			010-014	RED
			015-019	GREEN
			020-024	BLUE
			025-029	Yellow
			030-034	Magenta
			035-039	Cyan
			040-044	WHITE
			045-049	Violet blue
			050-054	Light blue
			055-059	Wine red
			060-064	May green
			065-069	Reseda green
			070-074	Blue lilac
			075-079	Moss green
			080-084	Signal violet
			085-089	Red lilac

			090-094	Purple red
			095-099	Green brown
			100-104	Pale green
			105-109	Ruby red
			110-114	Flame red
			115-119	Red orange
			120-124	Rose
			125-129	Honey yellow
			130-134	Light Pin
			135-139	Deep orange
			140-144	Lemmon
			145-149	Golden yellow
			150-154	Pastel orange
			155-159	Cream
			160-164	Melon yellow
			165-169	Luminous orange
			170-174	Luminouse yellow
			175-179	Open
			180-248	Stop Color FX
			249-255	Open
CH.15	CH.19	CH.26	**Color FX**	
			0-9	Open
			10-23	FX1
			24-37	FX2
			38-51	FX3
			52-65	FX4
			66-79	FX5
			80-93	FX6
			94-107	FX7
			108-121	FX8
			122-135	FX9
			136-149	FX10
			150-163	FX11
			164-177	FX12
			178-191	FX13
			192-205	FX14
			206-219	FX15
			220-233	FX16
			234-247	FX17
			248-255	Open
CH.16	CH.20	CH.27	0-255	Ring Speed(SPEED 1 —> 100%)
CH.17	CH.21	CH.28	0-255	Ring Dimmer
CH.18	CH.22	CH.29	**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	TITL INVERT
		51-60	PAN/TITL INVERT OFF
		61-70	LIVE
		71-80	STUDIO
		81-90	POWER
		91-100	RESERVED
		101-110	DIMMER OFF
		111-120	DIMMER DIM4
		121-150	RESERVED
		151-160	1200Hz
		161-170	2400Hz
		171-180	4000Hz
		181-190	6000Hz
		191-200	25000Hz
		201-210	ALL RESET
		211-220	PAN/TITL RESET
		221-230	ZOOM RESET
		231-255	RESERVED

CMY(23CH)	Value	Function	
CH.1	0-255	PAN	
CH.2	0-255	PAN FINE	
CH.3	0-255	TITL	
CH.4	0-255	TITL FINE	
CH.5	0-255	PT SPEED	
CH.6	0-255	CYAN	
CH.7	0-255	MAGENT	
CH.8	0-255	YELLOW	
CH.9	0-255	DIMMER	
CH.10	STROBE		
	0-9	NO FUNCTION	
	10-99	STROBE FROM （SLOD TO FAST ， 0-25Hz）	
	100-109	NO FUNCTION	
	110-179	LIGHTNING STROBE	
	180-189	NO FUNCTION	
	190-255	RANDOM STROBE	
CH.11	PRESET COLOR		
	0-10	NO FUNCTION	
	11-255	PRESET COLOR	
CH.12	CCT		
	0-9	NO FUNCTION	
	10	1800K	
	25	2200K	
	40	2700K	
	55	3000K	

	70	3200K
	85	4000K
	100	4500K
	115	5000K
	130	5600K
	145	6000K
	160	6500K
	175	7000K
	190	8000K
	205	10000K
	255	10000K
CH.13	**EFFECT**	
	0-10	NO FUNCTION
	11-15	1
	16-20	2-7
	21-25	8-19
	26-30	1,2-7
	31-35	1,8-19
	36-40	2-7,8-19
	41-45	1→2-7→8-19 cycle
	46-50	8-19→2-7→1 cycle
	51-55	1→2-7→8-19→2-7→1 cycle
	56-60	1&8-19 cycle
	61-65	1 (30%)→2-7(60%)→ 8-19(100%)（associated with CH4-CH10）
		2 -7(30%)→8-19 (60%)→1(100%)（associated with CH4-CH10）
		8-19(30%)→1(60%) →2-7 (100%)（associated with CH4-CH10）
	66-70	8-19(30%)→ 2-7 (60%)→1(100%)（associated with CH4-CH10）
		2-7 (30%)→1(60%)→8-19 (100%)（associated with CH4-CH10）
		1 (30%)→8-19 (60%)→2-7(100%)（associated with CH4-CH10）
	71-75	1→2-7→8-19 2700K cycle run (CH4-CH11 background)
	76-80	8-19→2-7→1 2700K cycle run (CH4-CH11 background)
	81-85	1→2-7→8-19→2-7→1 2700K cycle run (CH4-CH11 background)
	86-90	1&8-19 2700K cycle run (CH4-CH11 background)
	91-95	1→2-7→8-19 6000K cycle run (CH4-CH11 background)
		2-7→8-19→1 6000K cycle run (CH4-CH11 background)
		8-19→1→2-7 6000K cycle run (CH4-CH11 background)
	96-100	8-19→2-7→1 7200K cycle run (CH4-CH11 background)
		2-7→1→8-19 7200K cycle run (CH4-CH11 background)
		1→8-19→2-7 7200K cycle run (CH4-CH11 background)
	101-105	Red background, 2700K cycle 1→2-7→8-19
	106-110	Red background, 2700K cycle 8-19→2-7→1
	111-115	Red background, 2700K cycle 1→2-7→8-19→2-7→1
	116-120	Red background, 2700K cycle 1→2-7 and 8-19→2-7
	121-125	Red background, 2700K cycle 1→2-7 and 8-19→2-7
		Red background, 2700K cycle 2-7→8-19→1
		Red background, 2700K cycle 8-19→1→2-7

	126-130	Red background, 2700K cycle 8-19→2-7→1
		Red background, 2700K cycle 2-7→1→8-19
		Red background, 2700K cycle 1→8-19→2-7
	131-135	Green background, 3000K cycle 1→2-7→8-19
	136-140	Green background,3000K cycle 8-19→2-7→1
	141-145	Green background,3000K cycle 1→2-7→8-19→2-7→1
	146-150	Green background,3000K cycle 1→2-7 and 8-19→2-7
	151-155	Green background,3000K cycle 1→2-7 and 8-19→2-7
		Green background,3000K cycle 2-7→8-19→1
		Green background,3000K cycle 8-19→1→2-7
	156-160	Green background,3000K cycle 8-19→2-7→1
		Green background,3000K cycle 2-7→1→8-19
		Green background,3000K cycle 1→8-19→2-7
	161-165	Blue background,3200K cycle 1→2-7→8-19
	166-170	Blue background,3200K cycle 8-19→2-7→1
	171-175	Blue background,3200K cycle 1→2-7→8-19→2-7→1
	176-180	Blue background,3200K cycle 1→2-7 and 8-19→2-7
	181-185	Blue background,3200K cycle 1→2-7 and 8-19→2-7
		Blue background,3200K cycle 2-7→8-19→1
		Blue background,3200K cycle 8-19→1→2-7
	186-190	Blue background,3200K cycle 8-19→2-7→1
		Blue background,3200K cycle 2-7→1→8-19
		Blue background,3200K cycle 1→8-19→2-7
	191-195	Blue background,3500K cycle 1→2-7→8-19
	196-200	White background,3500K cycle 8-19→2-7→1
	201-205	White background,3500K cycle 1→2-7→8-19→2-7→1
	206-210	White background,3500K cycle 1→2-7 and 8-19→2-7
	211-215	White background,3500K cycle 1→2-7 and 8-19→2-7
		White background,3500K cycle 2-7→8-19→1
		White background,3500K cycle 8-19→1→2-7
	216-220	White background,3500K cycle 8-19→2-7→1
		White background,3500K cycle 2-7→1→8-19
		White background,3500K cycle 1→8-19→2-7
	221-225	Pink background,4000K cycle 1→2-7→8-19
	226-230	Pink background,4000K cycle 8-19→2-7→1
	231-235	Pink background,4000K cycle 1→2-7→8-19→2-7→1
	236-240	Pink background,4000K cycle 1→2-7 and 8-19→2-7
	241-245	Pink background,4000K cycle 1→2-7 and 8-19→2-7
		Pink background,4000K cycle 2-7→8-19→1
		Pink background,4000K cycle 8-19→1→2-7
	246-250	Pink background,4000K cycle 8-19→2-7→1
		Pink background,4000K cycle 2-7→1→8-19
		Pink background,4000K cycle 1→8-19→2-7
	251-255	NO FUNCTION
CH.14	0-255	AUTO SPEED ADJUSTMENT(SLOW TO FAST)
CH.15	0-255	ZOOM

CH.16	0-255	RED RING
CH.17	0-255	GREEN RING
CH.18	0-255	BULE RING
CH.19	**Ring Color Presets**	
	000-009	Open
	010-014	RED
	015-019	GREEN
	020-024	BLUE
	025-029	Yellow
	030-034	Magenta
	035-039	Cyan
	040-044	WHITE
	045-049	Violet blue
	050-054	Light blue
	055-059	Wine red
	060-064	May green
	065-069	Reseda green
	070-074	Blue lilac
	075-079	Moss green
	080-084	Signal violet
	085-089	Red lilac
	090-094	Purple red
	095-099	Green brown
	100-104	Pale green
	105-109	Ruby red
	110-114	Flame red
	115-119	Red orange
	120-124	Rose
	125-129	Honey yellow
	130-134	Light Pin
	135-139	Deep orange
	140-144	Lemmon
	145-149	Golden yellow
	150-154	Pastel orange
	155-159	Cream
	160-164	Melon yellow
	165-169	Luminous orange
	170-174	Luminous yellow
	175-179	Open
	180-248	Stop Color FX
	249-255	Open
CH.20	**Color FX**	
	0-9	Open
	10-23	FX1
	24-37	FX2
	38-51	FX3

	52-65	FX4
	66-79	FX5
	80-93	FX6
	94-107	FX7
	108-121	FX8
	122-135	FX9
	136-149	FX10
	150-163	FX11
	164-177	FX12
	178-191	FX13
	192-205	FX14
	206-219	FX15
	220-233	FX16
	234-247	FX17
	248-255	Open
CH.21	0-255	Ring Speed(SPEED 1 —> 100%)
CH.22	0-255	Ring Dimmer
	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	TITL INVERT
	51-60	PAN/TITL INVERT OFF
	61-70	LIVE
	71-80	STUDIO
	81-90	POWER
	91-100	RESERVED
CH.23	101-110	DIMMER OFF
	111-120	DIMMER DIM4
	121-150	RESERVED
	151-160	1200Hz
	161-170	2400Hz
	171-180	4000Hz
	181-190	6000Hz
	191-200	25000Hz
	201-210	ALL RESET
	211-220	PAN/TITL RESET
	221-230	ZOOM RESET
	231-255	RESERVED

PIXEL(28CH)	Value	Function
CH.1	0-255	PAN
CH.2	0-255	PAN FINE
CH.3	0-255	TILT
CH.4	0-255	TILT FINE

CH.5	0-255	PT SPEED
CH.6	0-255	ZOOM
CH.7	0-255	RED RING
CH.8	0-255	GREEN RING
CH.9	0-255	BULE RING
	ring color effect	
	000-009	Open
	010-014	RED
	015-019	GREEN
	020-024	BLUE
	025-029	Yellow
	030-034	Magenta
	035-039	Cyan
	040-044	WHITE
	045-049	Violet blue
	050-054	Light blue
	055-059	Wine red
	060-064	May green
	065-069	Reseda green
	070-074	Blue lilac
	075-079	Moss green
	080-084	Signal violet
CH.10	085-089	Red lilac
	090-094	Purple red
	095-099	Green brown
	100-104	Pale green
	105-109	Ruby red
	110-114	Flame red
	115-119	Red orange
	120-124	Rose
	125-129	Honey yellow
	130-134	Light Pin
	135-139	Deep orange
	140-144	Lemmon
	145-149	Golden yellow
	150-154	Pastel orange
	155-159	Cream
	160-164	Melon yellow
	165-169	Luminous orange
	170-174	Luminouse yellow

	175-179	Open
	180-248	Stop
	249-255	Open
CH.11	**Color FX**	
	0-9	Open
	10-23	FX1
	24-37	FX2
	38-51	FX3
	52-65	FX4
	66-79	FX5
	80-93	FX6
	94-107	FX7
	108-121	FX8
	122-135	FX9
	136-149	FX10
	150-163	FX11
	164-177	FX12
	178-191	FX13
	192-205	FX14
	206-219	FX15
	220-233	FX16
	234-247	FX17
	248-255	Open
CH.12	0-255	Ring Speed (SPEED 1 —> 100%)
CH.13	0-255	Ring Dimmer
CH.14	**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	TITL INVERT
	51-60	PAN/TITL INVERT OFF
	61-70	LIVE
	71-80	STUDIO
	81-90	POWER
	91-100	RESERVED
	101-110	DIMMER OFF
	111-120	DIMMER DIM4
	121-150	RESERVED
	151-160	1200Hz

	161-170	2400Hz
	171-180	4000Hz
	181-190	6000Hz
	191-200	25000Hz
	201-210	ALL RESET
	211-220	PAN/TITL RESET
	221-230	ZOOM RESET
	231-255	RESERVED
CH.15	0-255	DIMMER
CH.16	**STROBE**	
	0-9	NO FUNCTION
	10-99	STROBE FROM（SLOD TO FAST，0-25Hz）
	100-109	NO FUNCTION
	110-179	LIGHTNING STROBE
	180-189	NO FUNCTION
	190-255	RANDOM STROBE
CH.17	0-255	RED 1
CH.18	0-255	GREEN1
CH.19	0-255	BLUE1
CH.20	0-255	LIME1
CH.21	0-255	RED2
CH.22	0-255	GREEN2
CH.23	0-255	BLUE2
CH.24	0-255	LIME 2
CH.25	0-255	RED3
CH.26	0-255	GREEN3
CH.27	0-255	BLUE3
CH.28	0-255	LIME 3

Annex 1

PRESET COLOR	Value	Color Names		x	y
	0-10	NO FUNCTION			
	11-15	RESERVE	Loving Amber	0.407	0.321
COLOR 1	16-20	R40	Light Salmon	0.499	0.321
COLOR 2	21-25	L24	Scarlet	0.561	0.296
COLOR 3	26-30	L164	Flame Red	0.659	0.302
	31-35	RESERVE	Easy White	0.389	0.344
	36-40	RESERVE	Warm Peach	0.448	0.353
COLOR 4	41-45	L08	Dark Salmon	0.498	0.347
COLOR 5	46-50	L25	Sunset Red	0.566	0.359
	51-55	RESERVE	Medium Bastard Amber	0.37	0.335
COLOR 6	56-60	L237	CID(To Tungsten)	0.43	0.365
COLOR 7	61-65	R321	Soft Golden Amber	0.477	0.406
COLOR 8	66-70	L652	Urban Sodium	0.535	0.399
	71-75	RESERVE	LCT Yellow(Y1)	0.34	0.363
COLOR 9	76-80	L765	LEE Yellow	0.389	0.412
COLOR 10	81-85	L513	Ice And A Slice	0.38	0.447
	86-90	RESERVE	Spring Yellow	0.41	0.502
	91-95	RESERVE	LEE Plus Green	0.324	0.388
	96-100	RESERVE	CalColor 30 Green	0.318	0.44
	101-105	RESERVE	Fern Green	0.234	0.543
COLOR 11	106-110	L90	Dark Yellow Green	0.184	0.641
	111-115	RESERVE	LEE Fluorescent3600K	0.286	0.37
COLOR 12	116-120	R92	Tuiquoise	0.235	0.36
	121-125	RESERVE	Kelly Green	0.185	0.459
	126-130	RESERVE	Forest Green	0.162	0.496
	131-135	RESERVE	Cosmetic Aqua Blue	0.3	0.318
COLOR 13	136-140	L728	Steel Green	0.256	0.302
COLOR 14	141-145	L117	Steel Blue	0.223	0.278
COLOR 15	146-150	L354	Special Steel Blue	0.173	0.265
	151-155	RESERVE	Paler Lavender	0.284	0.284
COLOR 16	156-160	L501	New Colour Blue	0.246	0.249
COLOR 17	161-165	L174	Dark Steel Blue	0.204	0.205
	166-170	RESERVE	Daylight Blue	0.159	0.158
	171-175	RESERVE	Pale Lavender	0.288	0.254
	176-180	RESERVE	Surprise Pink	0.24	0.183
COLOR 18	181-185	L142	Pale Violet	0.209	0.148
	186-190	RESERVE	Perfect Lavender	0.177	0.07
	191-195	RESERVE	Light Pink	0.335	0.289
COLOR 19	196-200	L794	Pretty'n Pink	0.335	0.251
COLOR 20	201-205	L328	Follies Pink	0.335	0.18
	206-210	RESERVE	Magical Magenta	0.327	0.138
	211-215	RESERVE	Pale Rose	0.35	0.318
COLOR 21	216-220	L127	Smokey Pink	0.397	0.265
COLOR 22	221-225	L192	Flesh Pink	0.41	0.237
	226-230	RESERVE	Special Rose Pink	0.465	0.193
	231-235	RESERVE	Moroccan Pink	0.378	0.324
COLOR 23	236-240	L157	Pink	0.457	0.272
COLOR 24	241-245	R332	Cherry Rose	0.489	0.295
	246-250	RESERVE	Cool LED Bright Pink	0.57	0.263
	251-255	NO FUNCTION			