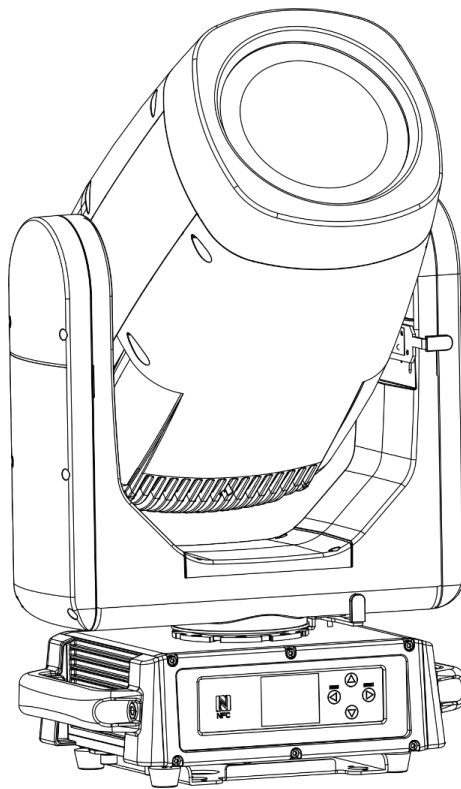


RAZER450i

PROFILE

USER MANUAL



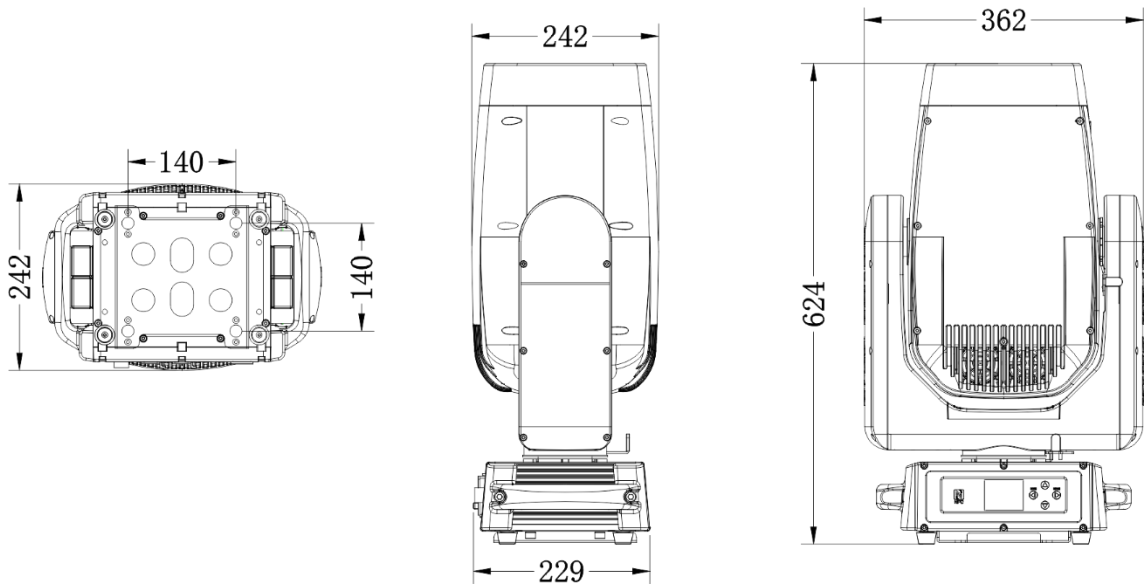

LEDING

1 PRODUCT

1.1 TECHNICAL SPECIFICATIONS

LED colors	1 LED(CW) 400W
Angle	3° - 52°
Power	550W
Control Protocol	DMX512, RDM, NFC, W-DMX(Optional)
Voltage Range	100-240V~,50/60Hz
Input Current	110V/5A,220V/2.5A
Protection	IP66
Operation Temperature	-20℃~45℃
Dimensions	362*242*624mm
Weight	26kg

Dimension



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:

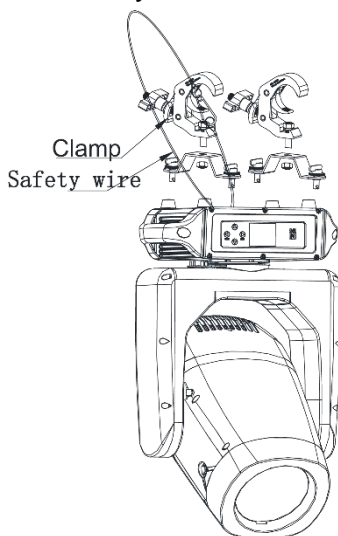
- Do not expose the front of a fixture to sunlight or any other strong light source. Avoid pointing other high-powered beam lights directly at the fixture.
- Do not focus a light beam from one lighting fixture directly towards another.
- For outdoor applications during daylight, make sure that the front 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

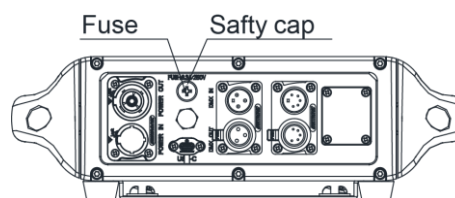
Truss installation

- ◆ 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

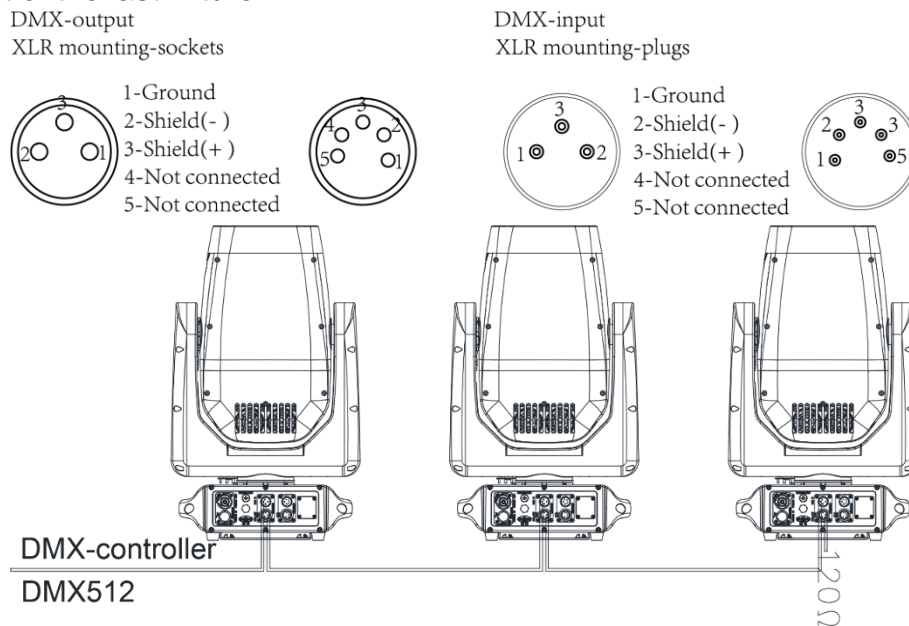
- ◆ POWER Linking: 3 units@110V; 6 units@220V.
- ◆ This product has an auto-ranging power supply that can work with an input voltage range of 100–240 VAC, 50/60 Hz.

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

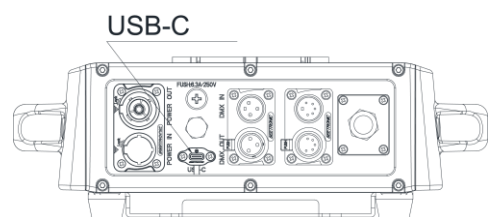
2.4 Data network requirements

- ◆ 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.



2.5 Update software

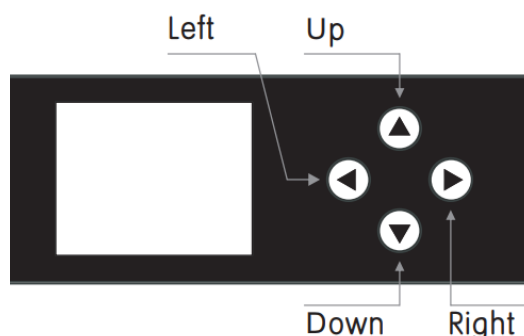
- ◆ Steps of updating software with USB-C interface:
 1. Insert USB-C U dish into USB-C interface
 2. After finding "Upgrade Software" in the menu, Find the corresponding software and click OK



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;
- ◆ Lock screen password: Long press 5s Left, Input after the screen is bright - UP/DOWN/UP/DOWN



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
	AUTO		Default: DMX512
	CUSTOM1		CUSTOM1-2 Set up get into EDIT MENU
	CUSTOM2		edit
OPTION	PAN INVERT	OFF (Default)	PAN moving direction selection
		ON	
	TILT INVERT	OFF (Default)	TILT moving direction selection
		ON	
	PAN DEGREE	630	PAN moving degree selection
		540	
	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
	SUN PROTECTION	ON (Default)	Turn the fixtures Head to earth
		OFF	
	DIMMER SPEED	Halogen (Default)	Dimming speed LED (fast) to Halogen (slow);
		LED	

EDIT	DIMMER CURVE	LINEAR			Sets the Dimmer curve
		SQUARE LAW (Default)			
		INV. SQUARE LAW			
		S-CURVE			
	LED PWM	1200Hz (Default)			Sets the PWM frequency
		2400Hz			
		4000Hz			
		6000Hz			
		25000Hz			
	NO DMX MODE	FREEZE (Default)			Hold after loss of DMX signal
		BLACKOUT			Blackout after loss of DMX signal
	DISPLAY TIME	On			Display backlight always on
		30s			Turns off display backlight after 30s/1min /2min of inactivity
		1min (Default)			
		2min			
	DISPLAY LOCK	OFF			Locks display (passcode is <UP>, <DOWN>,<UP>, <DOWN>, <ENTER>)
		ON (Default)			
	LOAD PARA	OFF			Upload data
		NO			Not 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	YES		Hide wireless mode WDMX reset and signal hide and the default is wired mode only
			NO		
	PT ENCODER	OFF			XY Encoder switch.
		ON			OFF is close; ON is open.
	LANGUAGE	****	Chinese		Language
			ENGLISH		
	WDMX RESET	YES			Clear the receiver's message
		NO			Do not 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 1-2	STEP 1-30	PAN	0-255	Edit the custom programs1-30	
		TILT	0-255	Select play 【EDIT 1】 in RUNMOEDE CUSTOM 1; Select play 【EDIT 2】 in RUNMOEDE CUSTOM 2	
		PT SPEED	0-255		
		CMY C	0-255		
		CMY M	0-255		
		CMY Y	0-255		
		CTO	0-255		
		COLOR	0-255		
		ROTA.GOBO	0-255		
		GOBO.ROTA	0-255		

			ANIMATION.D	0-255					
			ANIMATION.R	0-255					
			PRISM 1	0-255					
			PRISM 2	0-255					
			FROST1	0-255					
			FROST2	0-255					
			IRIS	0-255					
			ZOOM	0-255					
			FOCUS	0-255					
			FRAMING1.L	0-255					
			FRAMING1.R	0-255					
			FRAMING2.L	0-255					
			FRAMING2.R	0-255					
			FRAMING3.L	0-255					
			FRAMING3.R	0-255					
			FRAMING4.L	0-255					
			FRAMING4.R	0-255					
			FRAMING ROT	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		Auto Test channel			
				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								
CTO	0-255								
COLOR	0-255								
ROTA.GOBO	0-255								
GOBO.ROTA	0-255								
ANIMATION.D	0-255								
ANIMATION.R	0-255								
PRISM 1	0-255								
PRISM 2	0-255								
FROST1	0-255								
FROST2	0-255								
IRIS	0-255								
ZOOM	0-255								
FOCUS	0-255								
FRAMING1.L	0-255								
FRAMING1.R	0-255								
FRAMING2.L	0-255								
FRAMING2.R	0-255								

		FRAMING3.L	0-255	
		FRAMING3.R	0-255	
		FRAMING4.L	0-255	
		FRAMING4.R	0-255	
		FRAMING ROT	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
		XY RESET		Select Yes/No to carry out P/T reset
		COLOR\ GOBO SYS		Color/GOBO reset
		FOCUS\ZOOM RESET		Focus/Zoom reset
FRAMING RESET		Framing reset		
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
		CMY_C RESET		CMY C Reset
		CMY_M RESET		CMY M Reset
		CMY_Y RESET		CMY Y Reset
		CTO RESET		CTO Reset
		COLOR RESET		Color Reset
		GOBO RESET		Gobo Reset
		RGOBO RESET		Rotate Gobo Reset
		ANIMATION RESET		Animation reset
		PRISM 1 RESET		PRISM 1 Reset
		PRISM 2 RESET		PRISM 2 Reset
		IRIS RESET		Iris Reset
		ZOOM RESET		Zoom Reset
		FOCUS RESET		Focus Reset
	FRAMING RESET		Framing 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
		CTO	±127	CTO position fine adjustment
		COLOR	±127	Color position fine adjustment
		ROTA. GOBO	±127	Rotate Gobo position fine adjustment
		GOBO.ROTA	±127	Self-rotation position fine adjustment
		ANIMATION	±127	Animation position fine adjustment
		PRISM 1	±127	Prism 1 position fine adjustment
		PRISM 2	±127	Prism 2 position fine adjustment
		IRIS	±127	Iris position fine adjustment
		ZOOM	±127	Zoom position fine adjustment
		FOCUS	±127	Focus position fine adjustment
		FRAMING1.L	±127	Framing position fine adjustment
		FRAMING1.R	±127	Framing position fine adjustment
		FRAMING2.L	±127	Framing position fine adjustment
		FRAMING2.R	±127	Framing position fine adjustment
		FRAMING3.L	±127	Framing position fine adjustment
		FRAMING3.R	±127	Framing position fine adjustment
		FRAMING4.L	±127	Framing position fine adjustment
		FRAMING4.R	±127	Framing position fine adjustment
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 (34CH)	STANDARD (41CH)	EXTEND (56CH)	VALUE	Functions
1	1	1	000-255	PAN
-	2	2	000-255	PAN FINE
2	3	3	000-255	TILT
-	4	4	000-255	TILT FINE
3	5	5	000-255	PT Speed
4	6	6	PAN Motor continuous rotation	
			0-63	stop rotation by spinout
			64-127	stop rotation by shortcut
			128-189	Forwards Pan rotation from fast to slow
			190-193	No rotation
			194-255	Backwards Pan rotation from slow to fast
5	7	7	000-255	CYAN
		8	000-255	CYAN FINE
6	8	9	000-255	MAGENTA
		10	000-255	MAGENTA FINE
7	9	11	000-255	YELLOW
		12	000-255	YELLOW FINE
8	10	13	000-255	CTO
		14	000-255	CTO FINE
9	11	15	COLOUR MACRO	
			000-019	No Function
			020-021	3000K
			022-023	3200K
			024-025	3500K
			026-027	4000K
			028-029	4500K
			030-031	5000K
			032-033	5400K
			034-035	5600K
			036-037	6000K
			038-039	6500K
			040-041	7000K
			042-043	L106
			044-045	L194
			046-047	L019
			048-049	R08
			050-051	L213
			052-053	R80

			054-055	L202
			056-057	L328
			058-059	R3314
			060-061	L101
			062-063	L768
			064-255	MACRO EFFECT R->G->B->R
10	12	16	000-255	CMY SPEED(SPEED 100%->1)
11	13	17	COLOR WHEEL6+1	
			000-007	WHITE
			008-015	COLOR 1
			016-023	COLOR 2
			024-031	COLOR 3
			032-039	COLOR 4
			040-047	COLOR 5
			048-055	COLOR 6
			056-191	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%)
-	-	18	000-255	COLOR WHEEL FINE
12	14	19	ROTATING GOBO 7+1	
			000-010	ROTATING WHITE
			011-018	ROTATING GOBO 1
			019-026	ROTATING GOBO 2
			027-034	ROTATING GOBO 3
			035-042	ROTATING GOBO 4
			043-050	ROTATING GOBO 5
			051-058	ROTATING GOBO 6
			059-066	ROTATING GOBO 7
			067-074	ROTATING GOBO 1 SHAKE (SPEED 1 —> 100%)
			075-082	ROTATING GOBO 2 SHAKE (SPEED 1 —> 100%)
			083-090	ROTATING GOBO 3 SHAKE (SPEED 1 —> 100%)
			091-098	ROTATING GOBO 4 SHAKE (SPEED 1 —> 100%)
			099-106	ROTATING GOBO 5 SHAKE (SPEED 1 —> 100%)
			107-114	ROTATING GOBO 6 SHAKE (SPEED 1 —> 100%)
			115-122	ROTATING GOBO 7 SHAKE (SPEED 1 —> 100%)
			123-127	WHITE
			128-190	STATIC GOBO POSITIVE WATER EFFECT (SPEED 100 —> 1%)

			191-192	STOP WATER EFFECT
			193-255	STATIC GOBO REVERSE WATER EFFECT (SPEED 1 → 100%)
			191-192	STOP WATER EFFECT
			193-255	ROTATING GOBO FLOWING WATER EFFECT (SPEED 1 → 100%)
13	15	20	GOBO ROTATING	
			000-120	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	21	000-255	GOBO ROTATING FINE
14	17	22	000-255	Insert effect wheel
15	18	23	ANIMATION DISC ROTATION	
			0-10	Rotation STOP
			11-127	Animation Insertion CW Rotate Slow to Fast
			128-138	Rotation STOP
			139-255	Animation Insertion CCW Rotate Fast to Slow
16	19	24	PRISM LINEAR 6	
			000-010	WHITE
			011-145	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%)
17	20	25	PRISM ROUND 8	
			000-010	WHITE
			011-145	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%)
18	21	26	FROST	
			000-127	FROST (0-100%)
			128-255	FROST (100%-0)
19	22	27	IRIS	
			0-127	IRIS OPEN → CLOSE (FROM LARGE TO SMALL)
			128-130	IRIS CLOSE
			131-171	IRIS FADE IN FADE OUT
			172-211	IRIS FAST IN FADE OUT RANDOMLY
			212-251	IRIS FADE IN FAST OUT RANDOMLY
			252-255	IRIS CLOSE
		28	000-255	IRIS FINE
20	23	29	000-255	ZOOM
	24	30	000-255	ZOOM FINE
21	25	31	000-255	FOCUS
	26	32	000-255	FOCUS FINE
22	27	33	AUTO FOCUS	
			000-012	NO FUNCTION
			013-039	3 METER
			040-066	5 METER
			067-093	7 METER
			094-120	9 METER
			121-147	11 METER
			148-174	13 METER
			175-201	15 METER
			202-228	17 METER
			229-255	19 METER
	28	34	000-255	AUTO FOCUS FINE
23	29	35	000-255	FRAMING1.Left
		36	000-255	FRAMING1.Left
24	30	37	000-255	FRAMING1.Right
		38	000-255	FRAMING1.Right
25	31	39	000-255	FRAMING2.Left
		40	000-255	FRAMING2.Left
26	32	41	000-255	FRAMING2.Right
		42	000-255	FRAMING2.Right
27	33	43	000-255	FRAMING3.Left
		44	000-255	FRAMING3.Left
28	34	45	000-255	FRAMING3.Right

		46	000-255	FRAMING3.Right
29	35	47	000-255	FRAMING4.Left
		48	000-255	FRAMING4.Left
30	36	49	000-255	FRAMING4.Right
		50	000-255	FRAMING4.Right
31	37	51	ALL FRAMING ROTATION	
			000-255	FRAMING ROT
		52	000-255	FRAMING ROTATION FINE
32	38	53	000-255	DIMMER
-	39	54	000-255	DIMMER FINE
33	40	55	STROBE	
			000-009	NO FUNCTION
			010-099	STROBE (FROM SLOW TO FAST)
			100-109	NO FUNCTION
			110-179	LIGHTNING STROBE
			180-189	NO FUNCTION
			190-255	RANDOM STROBE
34	41	56	CONTROL CHANNEL	
			0-10	NO FUNCTION
			11-15	PAN/TILT BLACK ACTIVATED
			16-20	PAN/TILT BLACK DEACTIVATED
			21-25	PAN INVERT
			26-30	TILT INVERT
			31-35	PAN/TILT INVERT OFF
			36-40	PAN DEGREE 630
			41-45	PAN DEGREE 540
			46-50	Sun Protection On
			51-55	Sun Protection Off
			56-100	RESERVED
			101-105	STUDIO
			106-110	POWER
			111-115	LIVE
			116-130	RESERVED
			131-135	DIMMER SPEED Halogen
			136-140	DIMMER SPEED LED
			141-145	DIMMER CURVE LINEAR
			146-150	DIMMER CURVE SQUARE LAW
			151-155	DIMMER CURVE INV. SQUARE LAW
			156-160	DIMMER CURVE S-CURVE
			161-165	1200Hz
			166-170	2400Hz

			171-175	4000Hz
			176-180	6000Hz
			181-185	25000Hz
			186-200	RESERVED
			201-205	ALL RESET
			206-210	XY RESET
			211-215	COLOR\GOBO SYSTEM
			216-220	FOCUS\ZOOM RESET
			221-225	FRAMING RESET
			226-255	NO FUNCTION