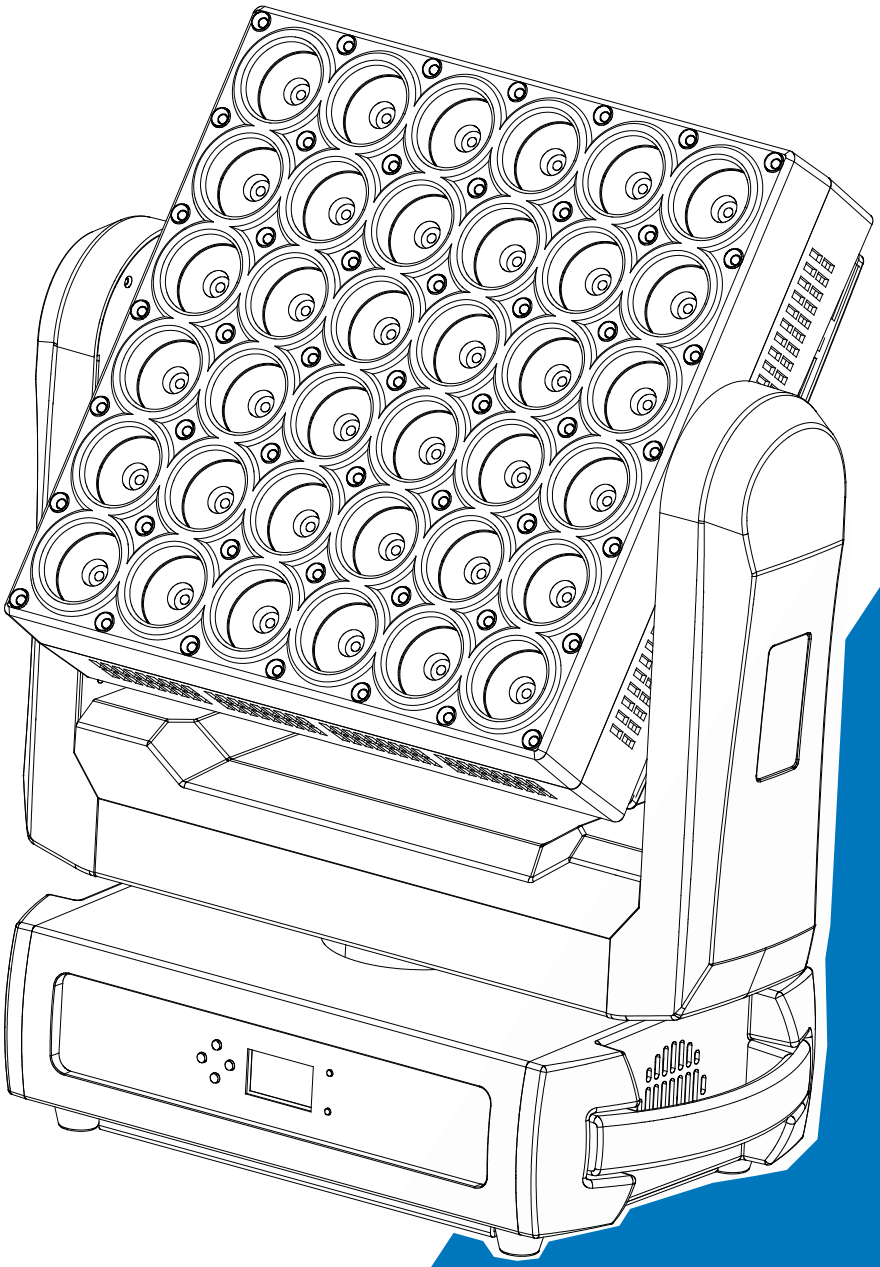
ACME®

Solaris



User Manual

Please read the instruction carefully before use

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1. Safety Instructions

Please read the instruction carefully which includes important information about the installation, usage and maintenance.

WARNING

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction manual.

Important:

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

- Unpack and check carefully that there is no transportation damage before using the unit.
- This product is for indoor use only. Use only in a dry location.
- DO install and operate by qualified operator.
- DO NOT allow children to operate the fixture.
- Use safety chain when fixing the unit. Handle the unit by carrying its base instead of head only.
- The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces.
- Be sure that no ventilation slots are blocked, otherwise the unit will be overheated.
- Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- Minimum ambient temperature TA: 0℃. Maximum ambient temperature TA: 40℃.
- DO NOT connect the device to any dimmer pack.
- Make sure there are no flammable materials close to the unit while operating to avoid fire hazard.
- Examine the power wires carefully; replace them immediately if there is any damage.
- Unit's surface temperature may reach up to 55℃. DO NOT touch the housing bare-handed during its operation.
- Avoid any inflammable liquids, water or metal objects entering the unit. Once it happens, cut off the mains power immediately.
- DO NOT operate in dirty or dusty environment, do clean fixtures regularly.

- DO NOT touch any wire during operation as there might be a hazard of electric shock.
- Avoid power wires together twist other cables.
- The minimum distance between light output and the illuminated surface must be more than 0.2 meters.
- Disconnect mains power before fuse replacement or servicing.
- Replace fuse only with the same type.
- In the event of serious operating problem, stop using the unit immediately.
- Never turn on and off the unit time after time.
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.
- DO NOT open the unit as there are no user serviceable parts inside.
- Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center if needed.
- Disconnect the mains power if the fixture is has not been used for a long time.
- DO use the original packing materials before transporting it again.
- DO NOT look directly at the light while the LED is on.
- DO NOT start on the unit without LED enclosure or when housing is damaged.

Installation:

The fixture should be mounted via its Omega Quick Release Clamp bracket. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating and make sure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times of the fixtures weight. Always use a safety cable that can hold 12 times of the weight of the fixture when installing.

The equipment must be installed by professionals. It must be installed in a place where is out of the reach of people and no one can pass by or under it.

2. Technical Specifications

Power Voltage:

AC 100~240V, 50/60Hz

Power Consumption:

580W

Light Source:

36x15W RGBW LED

49x0.06W CW LED

Beam Angle:

6°

Spot Angle:

10.8°

Movement:

Pan/Tilt movement: 360° Infinite

Pan/Tilt Resolution: 16bit

Dimmer/Shutter:

Smooth dimming from 0~100%, with 4 optional dimming curves; outstanding strobe effect with variable speed

Control:

DMX channel: 166/206/22+144/21 channels

Protocols: DMX512, RDM, Art-Net

Firmware Upgrade via DMX link

Construction:

Display: LCD display

Data In/Out: 3-pin&5-pin XLR, RJ-45

Power In/Out: Power Connector in/out

Protection Rating: IP20

Features:

Variable CTO

Integrated multi features: beam, wash, pixel effect, star background and moonflower beam

36 (6x6) x 15W RGBW pixel control LED + 49 (7x7) CW star-effect LED

Preset a variety of graphics matrix effect

Outstanding color mixing effect

Excellent thermal control

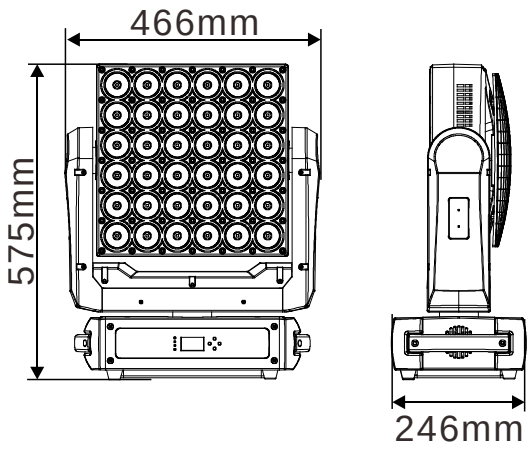
Low noise: fan speed can be adjusted automatically according to temperature

Optional reflector mirror module can create moonflower effect

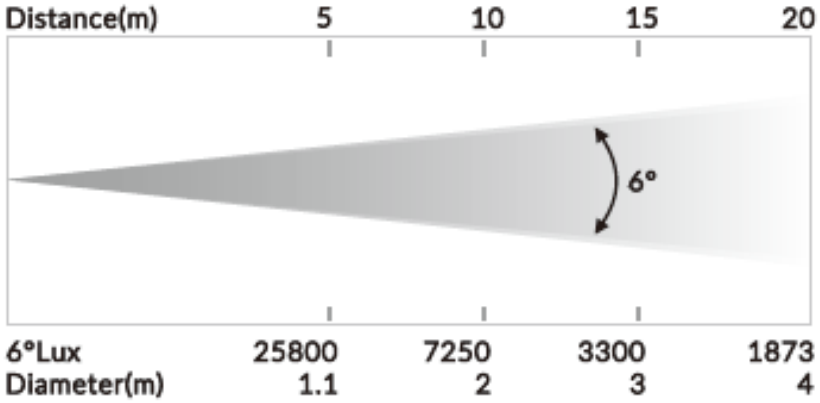
Dimensions/ Weight:

466x246x575mm, 20kgs

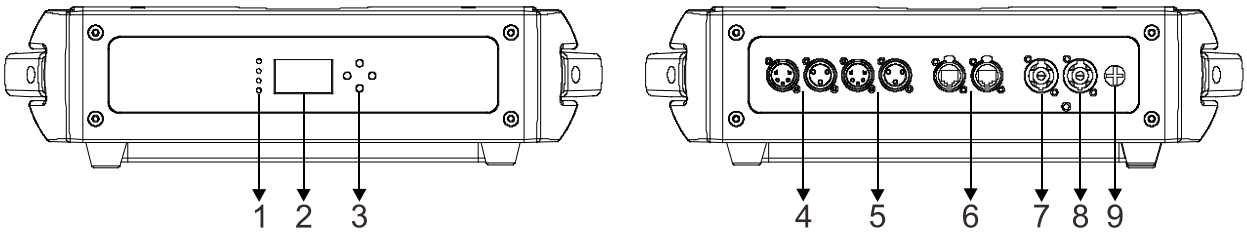
18.3”x9.7”x22.6”in, 44.1lbs



Photometrics Diagram



3. Control Panel



1. LED:

POWER	On	Power on
DMX	On	DMX input present

2. Display: To show the various menus and the selected function

3. Button:

MENU	To enter into move backward or leave the menu
UP	To go backward to move up in the menu
DOWN	To go forward to move down in the menu
ENTER	To perform the desired functions

4. DMX IN:

For DMX512 link, use 3/5-pin XLR cable to link the unit and DMX controller

5. DMX OUT:

For DMX512 link, use 3/5-pin XLR cable to link the next units

6. ETHERNET: Transfers fixture's information to a main controller

7. POWER IN: Connects to supply power

8. POWER OUT: Connects to the next fixture

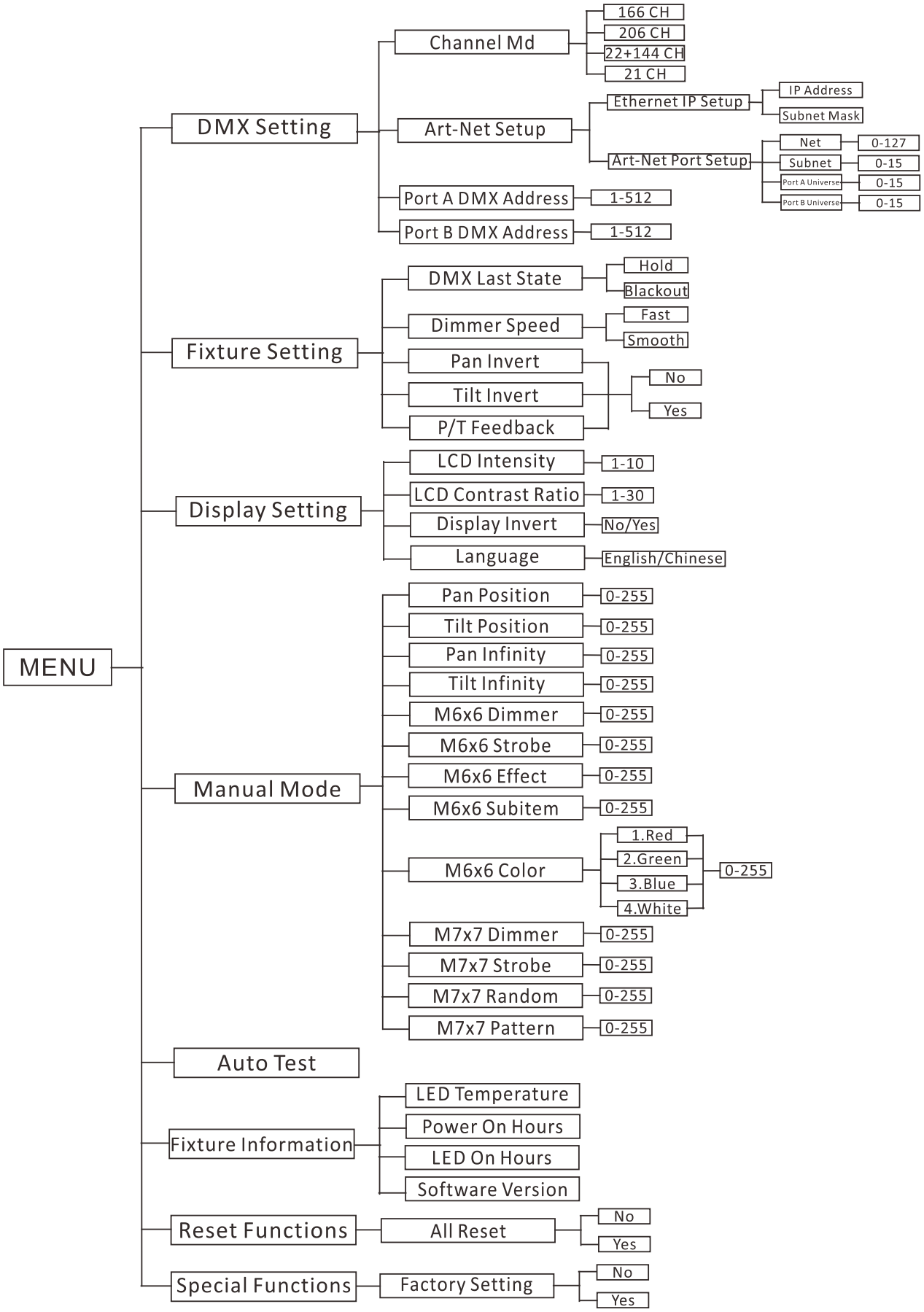
9. FUSE(T 15A): Protects the unit from damage of over current

4. How To Set The Unit

4.1 Main Function

Turn on the unit, press the **MENU** button into menu mode, and press the **UP**/**DOWN** button until the required function is shown on the monitor. Select the function by the **ENTER** button. Use the **UP**/**DOWN** button to choose the submenu, press the **ENTER** button to store and automatically return to the last menu. Press the **MENU** button or let the unit idle 30 seconds to exit menu mode.

The main functions are shown below:


MENU
DMX Setting
Channel Md
166 CH
206 CH
22+144 CH
21 CH
Art-Net Setup
Ethernet IP Setup
IP Address
Subnet Mask
Art-Net Port Setup
Net
0-127
Subnet
0-15
Port A Universe
0-15
Port B Universe
0-15
Port A DMX Address
1-512
Port B DMX Address
1-512
Fixture Setting
DMX Last State
Hold
Blackout
Dimmer Speed
Fast
Smooth
Pan Invert
Tilt Invert
P/T Feedback
No
Yes
Display Setting
LCD Intensity
1-10
LCD Contrast Ratio
1-30
Display Invert
No/Yes
Language
English/Chinese
Manual Mode
Pan Position
Tilt Position
Pan Infinity
Tilt Infinity
M6x6 Dimmer
M6x6 Strobe
M6x6 Effect
M6x6 Subitem
M6x6 Color
1.Red
2.Green
3.Blue
4.White
0-255
M7x7 Dimmer
M7x7 Strobe
M7x7 Random
M7x7 Pattern
0-255
Auto Test
Fixture Information
LED Temperature
Power On Hours
LED On Hours
Software Version
Reset Functions
All Reset
No
Yes
Special Functions
Factory Setting
No
Yes

DMX Setting

To select **DMX Settings,** press the **ENTER** button to confirm, use the **UP**/**DOWN** button to select **Channel Mode, Art-Net Setup, Port A DMX Address** or **Port B DMX Address.**

Channel Mode

To select **Channel Mode**, press the **ENTER** button to confirm. Use the **UP**/**DOWN** button to select **166 CH, 206 CH, 22+144CH** or **21 CH**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Are-Net Setup

To select **Are-Net Setup**, press the **ENTER** button to confirm. Use the **UP**/**DOWN** button to select **Ethernet IP Setup** or **Art-Net Port Setup**, press the **ENTER** button to store. When choose the **Ethernet IP Setup**, use the **UP**/**DOWN** button to select **IP Address** or **Subnet Mask.** When choose the **Art-Net Port Setup**, use the **UP**/**DOWN** button to select **Net, Subnet, Port A Universe** or **Port B Universe.** Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Port A DMX Address

To select **Port A DMX Address**, press the **ENTER** button to confirm. Use the **UP**/**DOWN** button to adjust the address from **001** to **512**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Port B DMX Address (This menu will only appear when the “Channel Mode” has selected the “22+144 CH”)

To select **Port B DMX Address**, press the **ENTER** button to confirm. Use the **UP**/**DOWN** button to adjust the address from **001** to **512**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Fixture Setting

To select **Fixture Setting**, press the **ENTER** button to confirm, use the **UP**/**DOWN** button to select **DMX Last State, Dimmer Speed, Pan Invert, Tilt Invert** or **P/T Feedback.**

DMX Last State

To select **DMX Last State**, press the **ENTER** button to confirm. Use the **UP**/**DOWN** button to select **Hold** (fixture continues to obey the last command it received Via DMX if DMX signal stops) or **Blackout** (fixture blacks out if DMX signal stops), press the **ENTER** button to store. Press the **MENU**

button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Dimmer Speed

To select **Dimmer Speed**, press the **ENTER** button to confirm. Use the **UP**/**DOWN** button to select **Fast** or **Smooth**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Pan Invert

To select **Pan Invert**, press the **ENTER** button to confirm. Use the **UP**/**DOWN** button to select **No** (normal) or **Yes** (pan invert), press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Tilt Invert

To select **Tilt Invert**, press the **ENTER** button to confirm. Use the **UP**/**DOWN** button to select **No** (normal) or **Yes** (tilt invert), press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

P/T Feedback

To select **P/T Feedback**, press the **ENTER** button to confirm. Use the **UP**/**DOWN** button to select **No** (Pan or tilt's position will not feedback while out of step) or **Yes** (Feedback while pan/tilt out of step), press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Display Setting

To select **Display Setting**, press the **ENTER** button to confirm, use the **UP**/**DOWN** button to select **LCD Intensity, LCD Contrast Ratio, Display Invert** or **Language.**

LCD Intensity

Select **LCD Intensity**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **1** (dark) to **10** (bright), press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

LCD Contrast Ratio

Select **LCD Contrast Ratio**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **1** to **30**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Display Invert

Select **Display Invert**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to select **No** (normal display) or **Yes** (invert display), press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Language

Select **Language**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to select **English** or **Chinese**. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Manual Mode

To select **Manual Mode,** press the **ENTER** button to confirm, use the **UP**/**DOWN** button to select **Pan Position, Tilt Position, Pan Infinity, Tilt Infinity, M6x6 Dimmer, M6x6 Strobe, M6x6 Effect, M6x6 Subitem, M6x6 Color, M7x7 Dimmer, M7x7 Strobe, M7x7 Random** or **M7x7 Pattern.**

Pan Position

Select **Pan Position,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Tilt Position

Select **Tilt Position,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Pan Infinity

Select **Pan Infinity,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Tilt Infinity

Select **Tilt Infinity,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

M6x6 Dimmer

Select **M6x6 Dimmer,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

M6x6 Strobe

Select **M6x6 Strobe,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

M6x6 Effect

Select **M6x6 Effect,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

M6x6 Subitem

Select **M6x6 Subitem,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

M6x6 Color

Select **M6x6 Color,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to select **1. Red, 2. Green, 3. Blue** or **4. White**, and adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

M7x7 Dimmer

Select **M7x7 Dimmer,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

M7x7 Strobe

Select **M7x7 Strobe,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

M7x7 Random

Select **M7x7 Random,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

M7x7 Pattern

Select **M7x7 Pattern,** press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to adjust the value from **0** to **255**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Auto Test

To select **Auto Test**, press the **ENTER** button to confirm, the unit will run built-in programs to automatically test pan, tilt, dimmer, pattern, and so on. Press the **MENU** button back to the last menu or exit menu mode after auto test.

Fixture Information

To select **Fixture Information**, press the **ENTER** button to confirm, use the **UP**/**DOWN** button to select **LED Temperatue, Power On Hours, LED On Hours** or **Sofatware Version.**

LED Temperature

Select **LED Temperature**, press the **ENTER** button to confirm, temperature of the unit will show on the display, press the **MENU** button to exit.

Power On Hours

Select **Power On Hours**, press the **ENTER** button to confirm, fixture use time will show on the display, press the **MENU** button to exit.

LED On Hours

Select **LED On Hours**, press the **ENTER** button to confirm, LED use time will show on the display, press the **MENU** button to exit.

Software Version

Select **Software Version**, press the **ENTER** button to confirm, firmware version will show on the display, press the **MENU** button back to exit.

Reset Functions

All Reset

Select **All Reset,** press the **ENTER** button to confirm, use the **UP**/**DOWN** button to select **No** or **Yes** (the unit will run built-in program to reset all motors to their home positions), press **ENTER** button to store. Press the **MENU** button to exit.

Special Functions

Factory Setting

Select **Factory Setting,** press the **ENTER** button to confirm, use the **UP**/**DOWN** button to select **No** (normal) or **Yes** (the fixture will reset to factory settings), press **ENTER** button to store. Press the **MENU** button to exit.

RDM FUNCTIONS

Select the MANUFACTURER menu to display the manufacturer of the fixture.

Select the SOFTWARE VERSION menu and the program version number of the fixture will be displayed.

Select the DMX START ADDRESS menu to change the DMX 512 address (001-512).

Select the DEVICE MODEL DESCRIPTION menu to display the model of the fixture.

Select the DEVICE LABEL menu to change the model of the fixture.

Select the DMX PERSONALITY menu to set the channel mode of the fixture (166⁄206⁄22+144⁄21 channel).

Select the DMX PERSONALITY DESCRIPTION menu to display the current channel mode of the fixture.

Select the DEVICE HOURS menu to display the running time of the fixture.

Select the PAN INVERT menu and the fixture will run the pan invert mode.

Select the TILT INVERT menu and the fixture will run the tilt invert mode.

Select the RESET DEVICE menu, the WARM RESET/COLD RESET option will be displayed. When WARM RESET is selected, the fixture will start a warm reset, and exit when COLD RESET is selected.

4.2 Home Position Adjustment

Press the **MENU** button into menu mode, then press the **ENTER** button for about 3 seconds into offset mode to adjust the home position. Select the function by the **ENTER** button. Use the **UP**/**DOWN** button to choose the submenu, press the **ENTER** button to store and automatically return to the last menu. Press MENU button to exit.

Pan

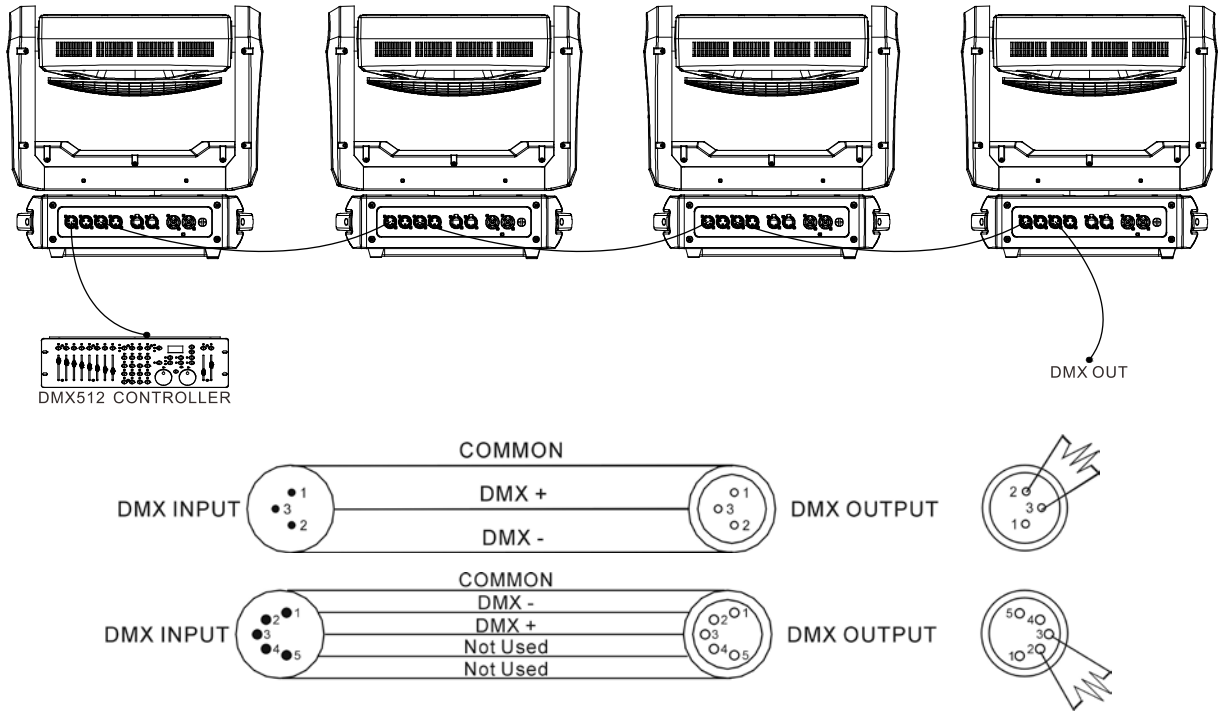
Enter offset mode, select **Pan**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP**/**DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

Tilt

Enter offset mode, select **Tilt**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP**/**DOWN** button to offset the value from -128 to 127, press the **ENTER** button to store. Press the **MENU** button to exit.

5. Control By Universal DMX Controller

5.1 DMX512 Connection



1. At last unit, the DMX cable has to be terminated with a terminator. Solder a 120-ohm 1⁄4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last unit.

2. Connect the unit together in a “daisy chain” by XLR plug cable from the output of the unit to the input of the next unit. The cable cannot be branched or split to a “Y” cable. DMX 512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system.

3. The DMX output and input connectors are pass-through to maintain the DMX circuit, when one of the units’ power is disconnected.

4. Each lighting unit needs to have a DMX address to receive the data by the controller. The address number is between 1-512.

5. The end of the DMX 512 system should be terminated to reduce signal errors.

6. 3 pin XLR connectors are more popular than 5 pins XLR.

   3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)

   5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+), Pin4, Pin5 not used.

5.2 Address Setting

If you use a universal DMX controller to control the units, you have to set DMX address from 1 to 512 so that the units can receive DMX signal.

Press the MENU button to enter menu mode, select DMX Setting, press the ENTER button to confirm, use the UP/DOWN button to select Port A DMX Address or Port A DMX Address, press the ENTER button to confirm, the present address will blinking the display, use the UP/DOWN button to adjust the address from 001 to 512, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle 30 seconds to exit menu mode.

Please refer to the following diagram to address your DMX512 channel for the first 4 units.

Channel mode	Unit 1 Address	Unit 2 Address	Unit 3 Address	Unit 4 Address
166 channels	1	167	333	499
206 channels	1	207	413	/
22+144 channels	1	167	333	499
21 channels	1	22	43	64

5.3 DMX512 Configuration

Please refer to below configurations to control the fixtures

Attentions:

1. The unit will maintain the last condition until reset if you cut-off the DMX signal.
2. For the channel Function, keep the value for about 3 seconds, then the corresponding function will take into effect.

166 Channels (Mode 1):

CHANNEL	VALUE	FUNCTION
1	000-255	**PAN** 0°→540°
2	000-255	**PAN FINE**
3	000-255	**TILT** 0°→450°
4	000-255	**TILT FINE**
5	000-254 255	**PAN/TILT SPEED** Fast to Slow Fast
6	000-127 128-189 190-193 194-255	**Pan Infinity** Pan Position CCW Infinity, Fast to Slow Stop CW Infinity, Slow to Fast
7	000-127 128-189 190-193 194-255	**Tilt Infinity** Tilt Position CW Infinity, Fast to Slow Stop CCW Infinity, Slow to Fast

8		**FUNCTION**
	000-069	No Function
	070-079	Reset All
	080-255	No Function
9		**DIMMER**
	000-255	0%→100%
10	000-255	**DIMMER FINE**
11		**STROBE**
	000-007	Close
	008-015	Open
	016-131	Strobe, Slow to Fast
	132-139	Open
	140-181	Fast Close Slow Open
	182-189	Open
	190-231	Fast Open Slow Close
	232-239	Open
	240-247	Random Strobe
	248-255	Open
12		**RED**
	000-255	0%→100%
13		**GREEN**
	000-255	0%→100%
14		**BLUE**
	000-255	0%→100%
15		**WHITE**
	000-255	0%→100%
16		**RGBW EFFECT SWITCH**
	000-063	No Function
	064-127	Control “RGBW EFFECT MODE”
	128-191	Control “36 RGBW PIXEL”
	192-255	Control “R, G, B, W”
17		**RGBW EFFECT MODE**
	000-014	Blackout
	015-047	Full On
	048-095	Macro Effect (see channel 18-1)
	096-135	Number 1 to 9 (see channel 18-2)
	136-175	Letter A to Z (see channel 18-3)
	176-215	Letter a to z (see channel 18-4)
	216-255	Blackout
18-1		**MARCO EFFECT**
	000-007	No Function
	008-015	Effect 01
	016-023	Effect 02
	024-031	Effect 03
	032-039	Effect 04

	040-047	Effect 05
	048-055	Effect 06
	056-063	Effect 07
	064-071	Effect 08
	072-079	Effect 09
	080-087	Effect 10
	088-095	Effect 11
	096-103	Effect 12
	104-111	Effect 13
	112-119	Effect 14
	120-127	Effect 15
	128-135	Effect 16
	136-143	Effect 17
	144-151	Effect 18
	152-159	Effect 19
	160-167	Effect 20
	168-175	Effect 21
	176-183	Effect 22
	184-191	Effect 23
	192-199	Effect 24
	200-207	Effect 25
	208-215	Effect 26
	216-223	Effect 27
	224-231	Effect 28
	232-239	Effect 29
	240-247	Effect 30
	248-255	Effect 31
18-2		**NUMBER 1 to 9**
	000-025	No Function
	026-048	Number-0
	049-071	Number-1
	072-094	Number-2
	095-117	Number-3
	118-140	Number-4
	141-163	Number-5
	164-186	Number-6
	187-209	Number-7
	210-232	Number-8
	233-255	Number-9
18-3		**LETTER A to Z**
	000-021	No Function
	022-030	Letter-A
	031-039	Letter-B
	040-048	Letter-C
	049-057	Letter-D
	058-066	Letter-E
	067-075	Letter-F

	076-084	Letter-G
	085-093	Letter-H
	094-102	Letter-I
	103-111	Letter-J
	112-120	Letter-K
	121-129	Letter-L
	130-138	Letter-M
	139-147	Letter-N
	148-156	Letter-O
	157-165	Letter-P
	166-174	Letter-Q
	175-183	Letter-R
	184-192	Letter-S
	193-201	Letter-T
	202-210	Letter-U
	211-219	Letter-V
	220-228	Letter-W
	229-237	Letter-X
	238-246	Letter-Y
	247-255	Letter-Z
18-4		**LETTER a to z**
	000-021	No Function
	022-030	Letter-a
	031-039	Letter-b
	040-048	Letter-c
	049-057	Letter-d
	058-066	Letter-e
	067-075	Letter-f
	076-084	Letter-g
	085-093	Letter-h
	094-102	Letter-i
	103-111	Letter-j
	112-120	Letter-k
	121-129	Letter-l
	130-138	Letter-m
	139-147	Letter-n
	148-156	Letter-o
	157-165	Letter-p
	166-174	Letter-q
	175-183	Letter-r
	184-192	Letter-s
	193-201	Letter-t
	202-210	Letter-u
	211-219	Letter-v
	220-228	Letter-w
	229-237	Letter-x
	238-246	Letter-y

	247-255	Letter-z
19		**RANDOM STAR**
	000-010	Open
	011-063	Effect 1
	064-073	Open
	074-127	Effect 2
	128-137	Open
	138-191	Effect 3
	192-201	Open
	202-255	Effect 4
20		**STAR PATTERN**
	000-011	Pattern 01
	012-023	Pattern 02
	024-035	Pattern 03
	036-047	Pattern 04
	048-059	Pattern 05
	060-071	Pattern 06
	072-083	Pattern 07
	084-095	Pattern 08
	096-107	Pattern 09
	108-119	Pattern 10
	120-131	Pattern 11
	132-143	Pattern 12
	144-155	Pattern 13
	156-167	Pattern 14
	168-179	Pattern 15
	180-191	Pattern 16
	192-203	Pattern 17
	204-215	Pattern 18
	216-227	Pattern 19
	228-239	Pattern 20
	240-255	No Function
21		**STAR DIMMER**
	000-255	0%→100%
22		**STAR STROBE**
	000-012	Open
	013-025	Close
	026-076	Strobe, Slow to Fast
	077-127	Slow Open Fast Close
	128-178	Fast Open Slow Close
	179-242	Random Strobe, Slow to Fast
	243-255	Open
23-166	000-255	**36 RGBW PIXEL**

206 Channels (Mode 2):

CHANNEL	VALUE	FUNCTION
1	000-255	**PAN** 0°→540°
2	000-255	**PAN FINE**
3	000-255	**TILT** 0°→450°
4	000-255	**TILT FINE**
5	000-254 255	**PAN/TILT SPEED** Fast to Slow Fast
6	000-127 128-189 190-193 194-255	**Pan Infinity** Pan Position CCW Infinity, Fast to Slow Stop CW Infinity, Slow to Fast
7	000-127 128-189 190-193 194-255	**Tilt Infinity** Tilt Position CW Infinity, Fast to Slow Stop CCW Infinity, Slow to Fast
8	000-069 070-079 080-255	**FUNCTION** No Function Reset All No Function
9	000-255	**DIMMER** 0%→100%
10	000-255	**DIMMER FINE**
11	000-007 008-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	**STROBE** Close Open Strobe, Slow to Fast Open Fast Close Slow Open Open Fast Open Slow Close Open Random Strobe Open
12-155	000-255	**36 RGBW PIXEL**
156	000-255	**STAR DIMMER** 0%→100%

157	000-012 013-025 026-076 077-127 128-178 179-242 243-255	**STAR STROBE** Open Close Strobe, Slow to Fast Slow Open Fast Close Fast Open Slow Close Random Strobe, Slow to Fast Open
158-206	000-255	**49 STAR PIXEL**

22+144 Channels (Mode 3):

CHANNEL	VALUE	FUNCTION
1(Port A)	000-255	**PAN** 0°→540°
2	000-255	**PAN FINE**
3	000-255	**TILT** 0°→450°
4	000-255	**TILT FINE**
5	000-254 255	**PAN/TILT SPEED** Fast to Slow Fast
6	000-127 128-189 190-193 194-255	**Pan Infinity** Pan Position CCW Infinity, Fast to Slow Stop CW Infinity, Slow to Fast
7	000-127 128-189 190-193 194-255	**Tilt Infinity** Tilt Position CW Infinity, Fast to Slow Stop CCW Infinity, Slow to Fast
8	000-069 070-079 080-255	**FUNCTION** No Function Reset All No Function
9	000-255	**DIMMER** 0%→100%
10	000-255	**DIMMER FINE**
11	000-007	**STROBE** Close

	008-015	Open
	016-131	Strobe, Slow to Fast
	132-139	Open
	140-181	Fast Close Slow Open
	182-189	Open
	190-231	Fast Open Slow Close
	232-239	Open
	240-247	Random Strobe
	248-255	Open
12		**RED**
	000-255	0%→100%
13		**GREEN**
	000-255	0%→100%
14		**BLUE**
	000-255	0%→100%
15		**WHITE**
	000-255	0%→100%
16		**RGBW EFFECT SWITCH**
	000-063	No Function
	064-127	Control “RGBW EFFECT MODE”
	128-191	Control “36 RGBW PIXEL”
	192-255	Control “R, G, B, W”
17		**RGBW EFFECT MODE**
	000-014	Blackout
	015-047	Full On
	048-095	Macro Effect (see channel 18-1)
	096-135	Number 1 to 9 (see channel 18-2)
	136-175	Letter A to Z (see channel 18-3)
	176-215	Letter a to z (see channel 18-4)
	216-255	Blackout
18-1		**MARCO EFFECT**
	000-007	No Function
	008-015	Effect 01
	016-023	Effect 02
	024-031	Effect 03
	032-039	Effect 04
	040-047	Effect 05
	048-055	Effect 06
	056-063	Effect 07
	064-071	Effect 08
	072-079	Effect 09
	080-087	Effect 10
	088-095	Effect 11
	096-103	Effect 12
	104-111	Effect 13
	112-119	Effect 14

	120-127	Effect 15
	128-135	Effect 16
	136-143	Effect 17
	144-151	Effect 18
	152-159	Effect 19
	160-167	Effect 20
	168-175	Effect 21
	176-183	Effect 22
	184-191	Effect 23
	192-199	Effect 24
	200-207	Effect 25
	208-215	Effect 26
	216-223	Effect 27
	224-231	Effect 28
	232-239	Effect 29
	240-247	Effect 30
	248-255	Effect 31
18-2		**NUMBER 1 to 9**
	000-025	No Function
	026-048	Number-0
	049-071	Number-1
	072-094	Number-2
	095-117	Number-3
	118-140	Number-4
	141-163	Number-5
	164-186	Number-6
	187-209	Number-7
	210-232	Number-8
	233-255	Number-9
18-3		**LETTER A to Z**
	000-021	No Function
	022-030	Letter-A
	031-039	Letter-B
	040-048	Letter-C
	049-057	Letter-D
	058-066	Letter-E
	067-075	Letter-F
	076-084	Letter-G
	085-093	Letter-H
	094-102	Letter-I
	103-111	Letter-J
	112-120	Letter-K
	121-129	Letter-L
	130-138	Letter-M
	139-147	Letter-N
	148-156	Letter-O
	157-165	Letter-P

	166-174	Letter-Q
	175-183	Letter-R
	184-192	Letter-S
	193-201	Letter-T
	202-210	Letter-U
	211-219	Letter-V
	220-228	Letter-W
	229-237	Letter-X
	238-246	Letter-Y
	247-255	Letter-Z
18-4		**LETTER a to z**
	000-021	No Function
	022-030	Letter-a
	031-039	Letter-b
	040-048	Letter-c
	049-057	Letter-d
	058-066	Letter-e
	067-075	Letter-f
	076-084	Letter-g
	085-093	Letter-h
	094-102	Letter-i
	103-111	Letter-j
	112-120	Letter-k
	121-129	Letter-l
	130-138	Letter-m
	139-147	Letter-n
	148-156	Letter-o
	157-165	Letter-p
	166-174	Letter-q
	175-183	Letter-r
	184-192	Letter-s
	193-201	Letter-t
	202-210	Letter-u
	211-219	Letter-v
	220-228	Letter-w
	229-237	Letter-x
	238-246	Letter-y
	247-255	Letter-z
19		**RANDOM STAR**
	000-010	Open
	011-063	Effect 1
	064-073	Open
	074-127	Effect 2
	128-137	Open
	138-191	Effect 3
	192-201	Open
	202-255	Effect 4

20		**STAR PATTERN**
	000-011	Pattern 01
	012-023	Pattern 02
	024-035	Pattern 03
	036-047	Pattern 04
	048-059	Pattern 05
	060-071	Pattern 06
	072-083	Pattern 07
	084-095	Pattern 08
	096-107	Pattern 09
	108-119	Pattern 10
	120-131	Pattern 11
	132-143	Pattern 12
	144-155	Pattern 13
	156-167	Pattern 14
	168-179	Pattern 15
	180-191	Pattern 16
	192-203	Pattern 17
	204-215	Pattern 18
	216-227	Pattern 19
	228-239	Pattern 20
	240-255	No Function
21		**STAR DIMMER**
	000-255	0%→100%
22		**STAR STROBE**
	000-012	Open
	013-025	Close
	026-076	Strobe, Slow to Fast
	077-127	Slow Open Fast Close
	128-178	Fast Open Slow Close
	179-242	Random Strobe, Slow to Fast
	243-255	Open
23-166(Port B)	000-255	**36 RGBW PIXEL**

21 Channels (Mode 4):

CHANNEL	VALUE	FUNCTION
1	000-255	**PAN** 0°→540°
2	000-255	**PAN FINE**
3	000-255	**TILT** 0°→450°
4	000-255	**TILT FINE**
5	000-254 255	**PAN/TILT SPEED** Fast to Slow Fast
6	000-127 128-189 190-193 194-255	**Pan Infinity** Pan Position CCW Infinity, Fast to Slow Stop CW Infinity, Slow to Fast
7	000-127 128-189 190-193 194-255	**Tilt Infinity** Tilt Position CW Infinity, Fast to Slow Stop CCW Infinity, Slow to Fast
8	000-069 070-079 080-255	**FUNCTION** No Function Reset All No Function
9	000-255	**DIMMER** 0%→100%
10	000-255	**DIMMER FINE**
11	000-007 008-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	**STROBE** Close Open Strobe, Slow to Fast Open Fast Close Slow Open Open Fast Open Slow Close Open Random Strobe Open
12	000-255	**RED** 0%→100%
13	000-255	**GREEN** 0%→100%

14	000-255	**BLUE** 0%→100%
15	000-255	**WHITE** 0%→100%
16		**RGBW EFFECT MODE**
	000-014	Blackout
	015-047	Full On
	048-095	Macro Effect (see channel 17-1)
	096-135	Number 1 to 9 (see channel 17-2)
	136-175	Letter A to Z (see channel 17-3)
	176-215	Letter a to z (see channel 17-4)
	216-255	Blackout
17-1		**MARCO EFFECT**
	000-007	No Function
	008-015	Effect 01
	016-023	Effect 02
	024-031	Effect 03
	032-039	Effect 04
	040-047	Effect 05
	048-055	Effect 06
	056-063	Effect 07
	064-071	Effect 08
	072-079	Effect 09
	080-087	Effect 10
	088-095	Effect 11
	096-103	Effect 12
	104-111	Effect 13
	112-119	Effect 14
	120-127	Effect 15
	128-135	Effect 16
	136-143	Effect 17
	144-151	Effect 18
	152-159	Effect 19
	160-167	Effect 20
	168-175	Effect 21
	176-183	Effect 22
	184-191	Effect 23
	192-199	Effect 24
	200-207	Effect 25
	208-215	Effect 26
	216-223	Effect 27
	224-231	Effect 28
	232-239	Effect 29
	240-247	Effect 30
	248-255	Effect 31
17-2		**NUMBER 1 to 9**

	000-025	No Function
	026-048	Number-0
	049-071	Number-1
	072-094	Number-2
	095-117	Number-3
	118-140	Number-4
	141-163	Number-5
	164-186	Number-6
	187-209	Number-7
	210-232	Number-8
	233-255	Number-9
17-3		**LETTER A to Z**
	000-021	No Function
	022-030	Letter-A
	031-039	Letter-B
	040-048	Letter-C
	049-057	Letter-D
	058-066	Letter-E
	067-075	Letter-F
	076-084	Letter-G
	085-093	Letter-H
	094-102	Letter-I
	103-111	Letter-J
	112-120	Letter-K
	121-129	Letter-L
	130-138	Letter-M
	139-147	Letter-N
	148-156	Letter-O
	157-165	Letter-P
	166-174	Letter-Q
	175-183	Letter-R
	184-192	Letter-S
	193-201	Letter-T
	202-210	Letter-U
	211-219	Letter-V
	220-228	Letter-W
	229-237	Letter-X
	238-246	Letter-Y
	247-255	Letter-Z
17-4		**LETTER a to z**
	000-021	No Function
	022-030	Letter-a
	031-039	Letter-b
	040-048	Letter-c
	049-057	Letter-d
	058-066	Letter-e
	067-075	Letter-f

	076-084	Letter-g
	085-093	Letter-h
	094-102	Letter-i
	103-111	Letter-j
	112-120	Letter-k
	121-129	Letter-l
	130-138	Letter-m
	139-147	Letter-n
	148-156	Letter-o
	157-165	Letter-p
	166-174	Letter-q
	175-183	Letter-r
	184-192	Letter-s
	193-201	Letter-t
	202-210	Letter-u
	211-219	Letter-v
	220-228	Letter-w
	229-237	Letter-x
	238-246	Letter-y
	247-255	Letter-z
18		**RANDOM STAR**
	000-010	Open
	011-063	Effect 1
	064-073	Open
	074-127	Effect 2
	128-137	Open
	138-191	Effect 3
	192-201	Open
	202-255	Effect 4
19		**STAR PATTERN**
	000-011	Pattern 01
	012-023	Pattern 02
	024-035	Pattern 03
	036-047	Pattern 04
	048-059	Pattern 05
	060-071	Pattern 06
	072-083	Pattern 07
	084-095	Pattern 08
	096-107	Pattern 09
	108-119	Pattern 10
	120-131	Pattern 11
	132-143	Pattern 12
	144-155	Pattern 13
	156-167	Pattern 14
	168-179	Pattern 15
	180-191	Pattern 16
	192-203	Pattern 17

	204-215 216-227 228-239 240-255	Pattern 18 Pattern 19 Pattern 20 No Function
20	000-255	**STAR DIMMER** 0%→100%
21	000-012 013-025 026-076 077-127 128-178 179-242 243-255	**STAR STROBE** Open Close Strobe, Slow to Fast Slow Open Fast Close Fast Open Slow Close Random Strobe, Slow to Fast Open

6. Troubleshooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

A. The unit does not work, no light and the fan does not work

1. Check the connect power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED to see if it can be light up or not.

B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if they are linked properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
4. Try to use another DMX controller.
5. Check to see if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

C. One of the channels is not working well

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition.

7. Fixture Cleaning

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

- Clean with soft cloth and use normal glass to clean liquid.
- Always dry the parts carefully.
- Clean the external optics at least every 20 days.

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