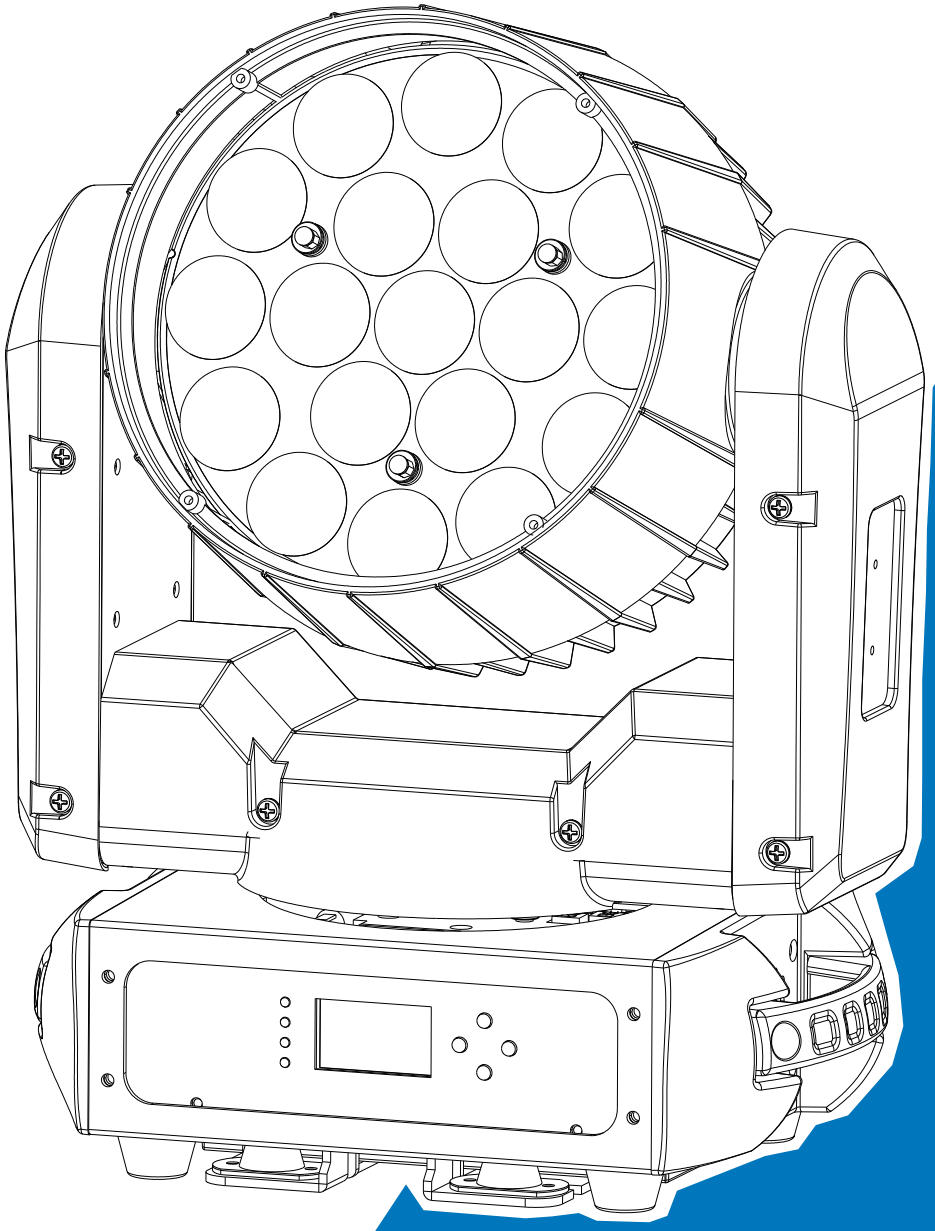
ICARUS 320



User Manual

Please read the instruction carefully before use

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01/ Safety Information

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

WARNING

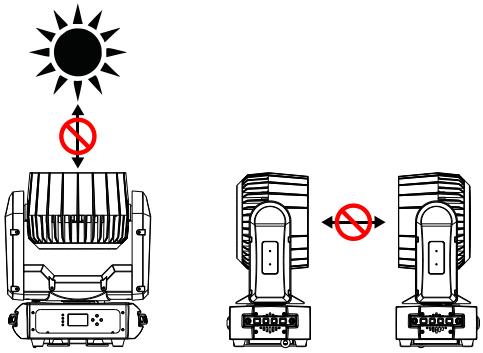
Please keep this User Manual for future consultation. If you sell the unit to another user, be sure that they also receive this instruction manual.

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.

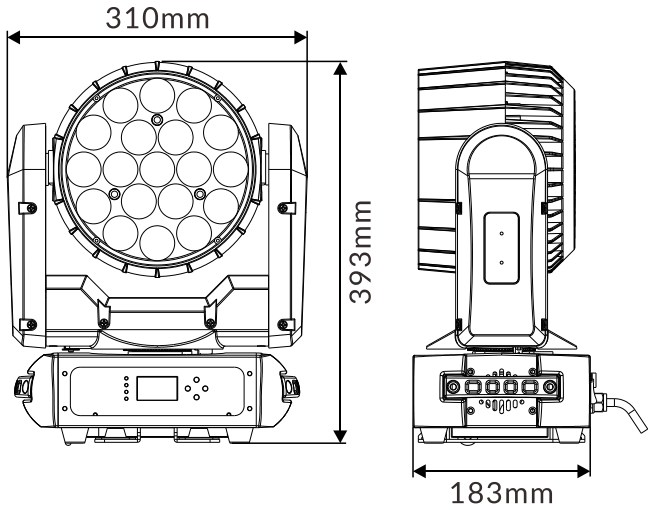
- Unpack and check carefully to ensure that there is no transportation damage before using the unit.
- This product is for indoor use only. Use only in a dry location.
- DO install and operate by qualified operator.
- DO NOT allow children to operate the fixture.
- Use safety chain when fixing the unit. 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 is blocked, otherwise the unit will be overheated.
- Before operation, ensure that you are connecting this product to the proper voltage in accordance with the specifications in this manual or on the product's specification label.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- Minimum ambient temperature TA: 0˚C. Maximum ambient temperature TA: 40˚C. Do not operate this product at a lower or higher temperature.
- DO NOT connect the device to any dimmer pack.
- Keep flammable materials away from the fixture while operating to avoid fire hazard.
- Make sure the power cord is not crimped or damaged; replace it immediately if damaged.
- Unit's surface temperature may reach up to 75˚C. DO NOT touch the housing bare-handed during its operation.

- Avoid any flammable liquids, water or metal from entering the unit. Once it happens, cut off the mains power immediately.
- DO NOT operate in a dirty or dusty environment. DO clean the fixture regularly.
- DO NOT touch any wire during operation as there might be a hazard of electric shock.
- Avoid entanglement of the power cord with other wires.
- The minimum distance to objects/surface must be more than 0.5 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 housing as there are no user serviceable parts inside.
- DO NOT attempt to operate this unit if it becomes damaged. DO NOT attempt any repairs yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center if needed.
- Disconnect this product from its power source before servicing.
- DO use the original packaging if the device is to be transported.
- Avoid direct eye exposure to the light source while the product is on.
- DO NOT operate this product if you see damage on the housing, shields, or cables. Have the damaged parts replaced by an authorized technician at once.
- External sources of light beams from direct sunlight or any other strong light source, which penetrate the front lens of lighting fixtures, can cause severe internal damage. DO NOT expose the fixture front lens to light beams from direct sunlight or any other strong light source from any angle while unpacking, installation, use, and extended idle times outdoors. DO NOT focus a light beam from one lighting fixture directly towards another.

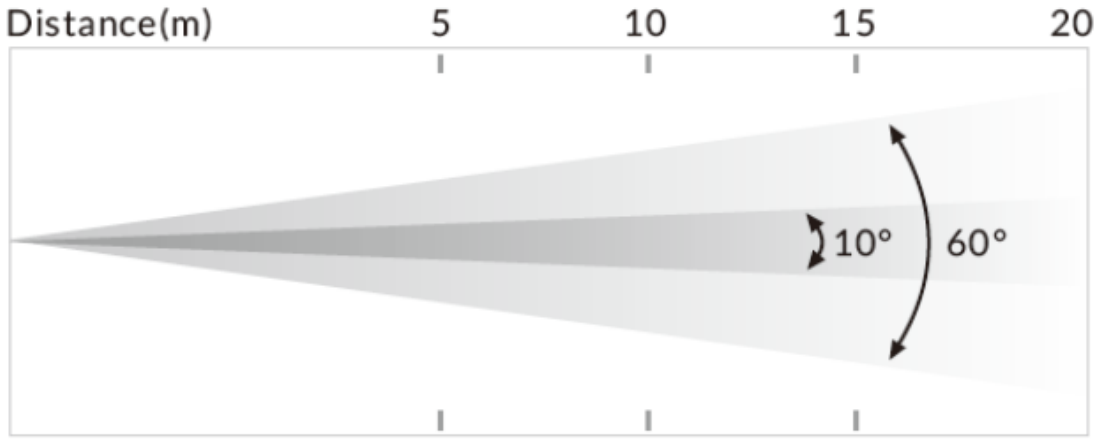


02/ Technical Specifications

AC Power	100-240Vac; 50/60Hz	
Max. Power Consumption	255W	
Light Source	19x20W RGBW LED	
Zoom Range	10°-60°	
Movement	Pan	540°
	Tilt	240°
	16 bit movement resolution	
	Automatic pan/tilt repositioning	
Control and Programming	DMX Channels	14/26/30/14+
	Protocols	DMX512
		RDM
	Firmware Update	via DMX
Construction	Display	LCD display
	DMX and RDM Data In/Out	3-pin/5-pin XLR
	Power In/Out	Power Cord in
		Power Connector in/out
	Protection Rating	IP20
Dynamic Effects	Ring control	
	0-100% continuous dimming and strobe effects	
	Choice of four dimming curves	
	Outstanding color mixing	
	Variable color temperature control	
	Motorized zoom	
Dimensions	310x183x393mm	12.2"x7.2"x15.5"
Weight	9 kg	19.8 lbs



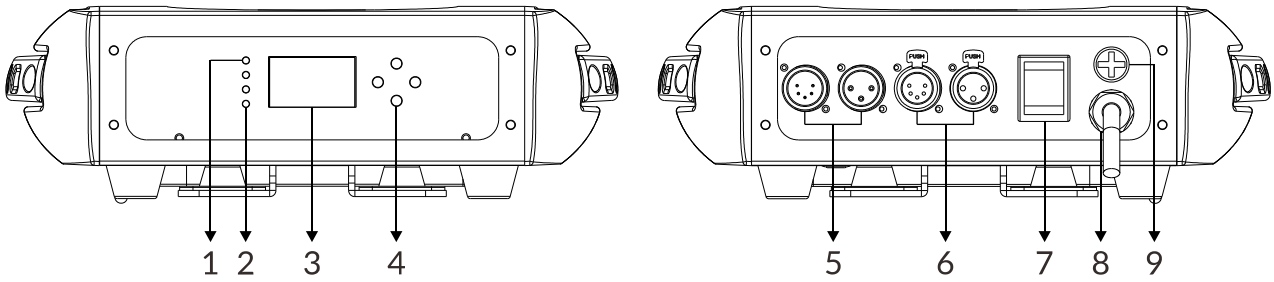
Photometric Diagram:



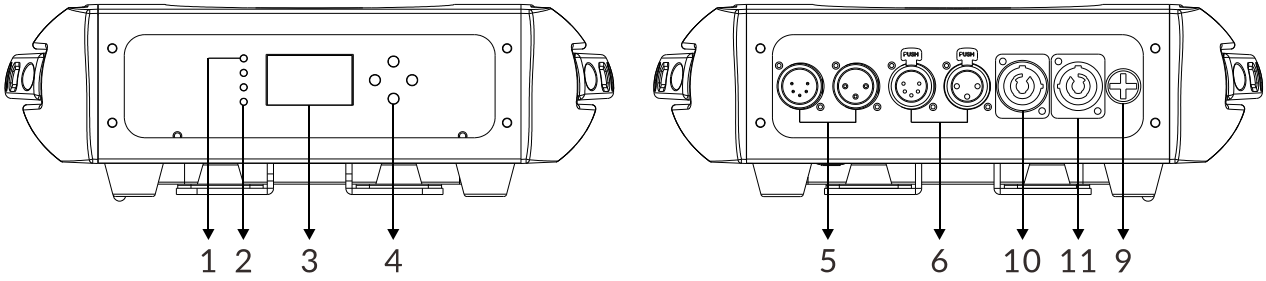
10° Lux	8,850	2,413	1,023	660
Diameter(m)	0.9	1.8	2.7	3.6
60° Lux	710	225	120	79
Diameter(m)	3.2	6.4	9.6	12.8

03/ Overview

Power Cord Version:



Power Connector Version:



1. POWER	On	Power input present
2. DMX	On	DMX input present
3. Display	To show the various menus and the selected function	
4. Buttons	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
5. DMX IN	For DMX512 link, use 3/5-pin XLR cable to link the unit and DMX controller to input DMX signal	
6. DMX OUT	For DMX512 link, use 3/5-pin XLR cable to link the next units to output DMX signal	
7. POWER SWITCH	Turns on/off the power	
8. POWER IN	To connect to supply power	
9. FUSE (T 6.3A)	Protects the unit from damage of over-voltage or short circuit	
10. MAINS IN	To connect to supply power	
11. MAINS OUT	To connect to the next fixture	

04/ Connecting Power and Data

4.1 Connecting Power

This fixture can operate on any 100-240Vac; 50/60Hz AC mains power supply.

The maximum power consumption is 255W.

The fixture must be grounded/earthed and able to be isolated from AC power. The AC power supply must incorporate a fuse or circuit breaker for fault protection.

Wiring and connection work must be carried out by a qualified electrician.

The power cable color coding is given in the figure below:

Wire	Color (US)	Wire	Color (EU)	Symbol	Conductor
	black		brown	L	live
	white		blue	N	neutral
	green		yellow/green	⏚ or ⏚	ground (earth)

CAUTION!

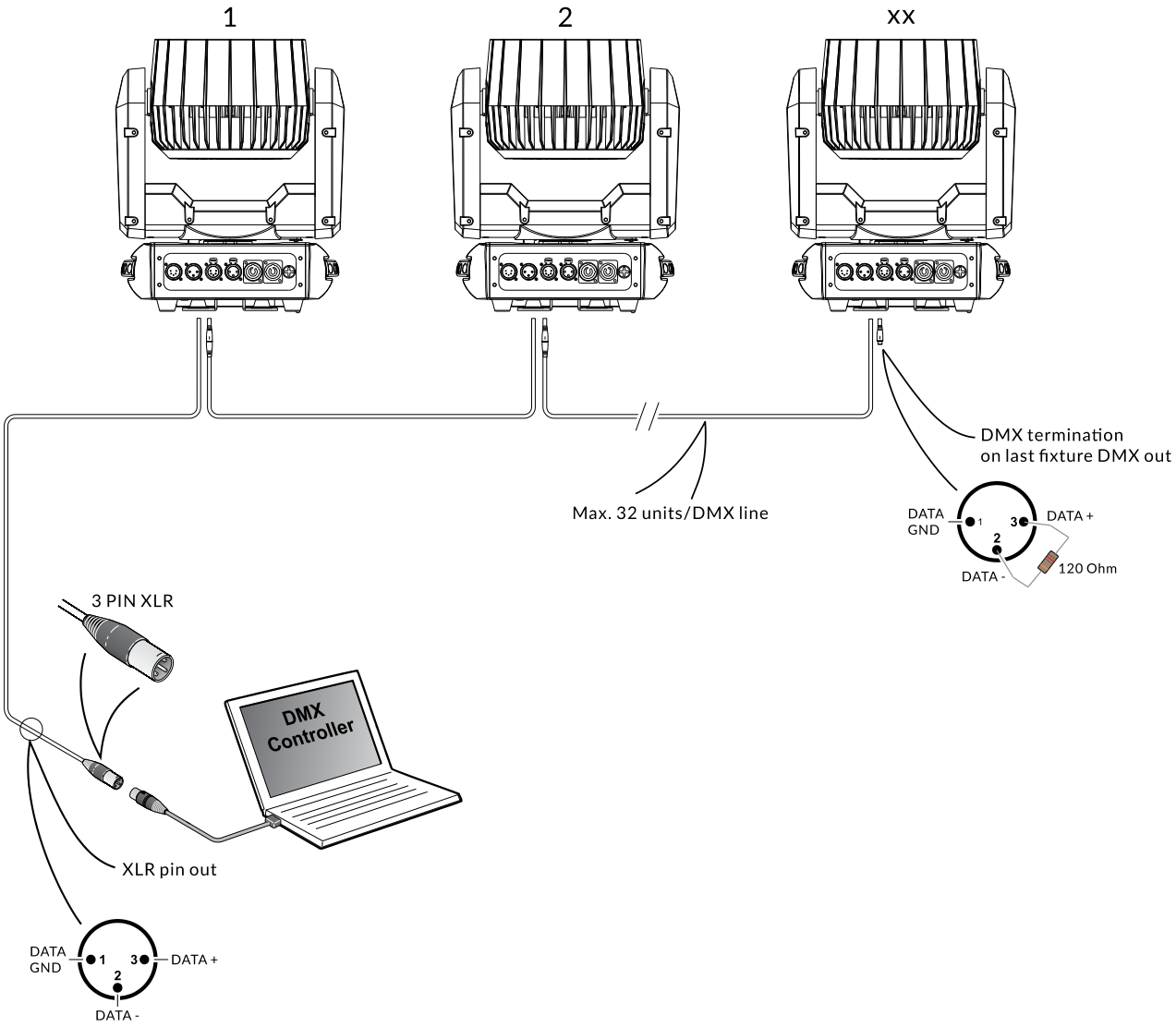
DO NOT CONNECT THE FIXTURE TO AN ELECTRICAL DIMMER SYSTEM AS DOING SO MAY CAUSE DAMAGE.

4.2 Connecting Data

The fixture is equipped with 3-pin (and 5-pin) XLR sockets for DMX input and output. Use a high-quality DMX cable designed for RS-485 and 3-pin (and 5-pin) XLR-plugs and connectors in order to connect the controller with the fixture or one fixture with another.

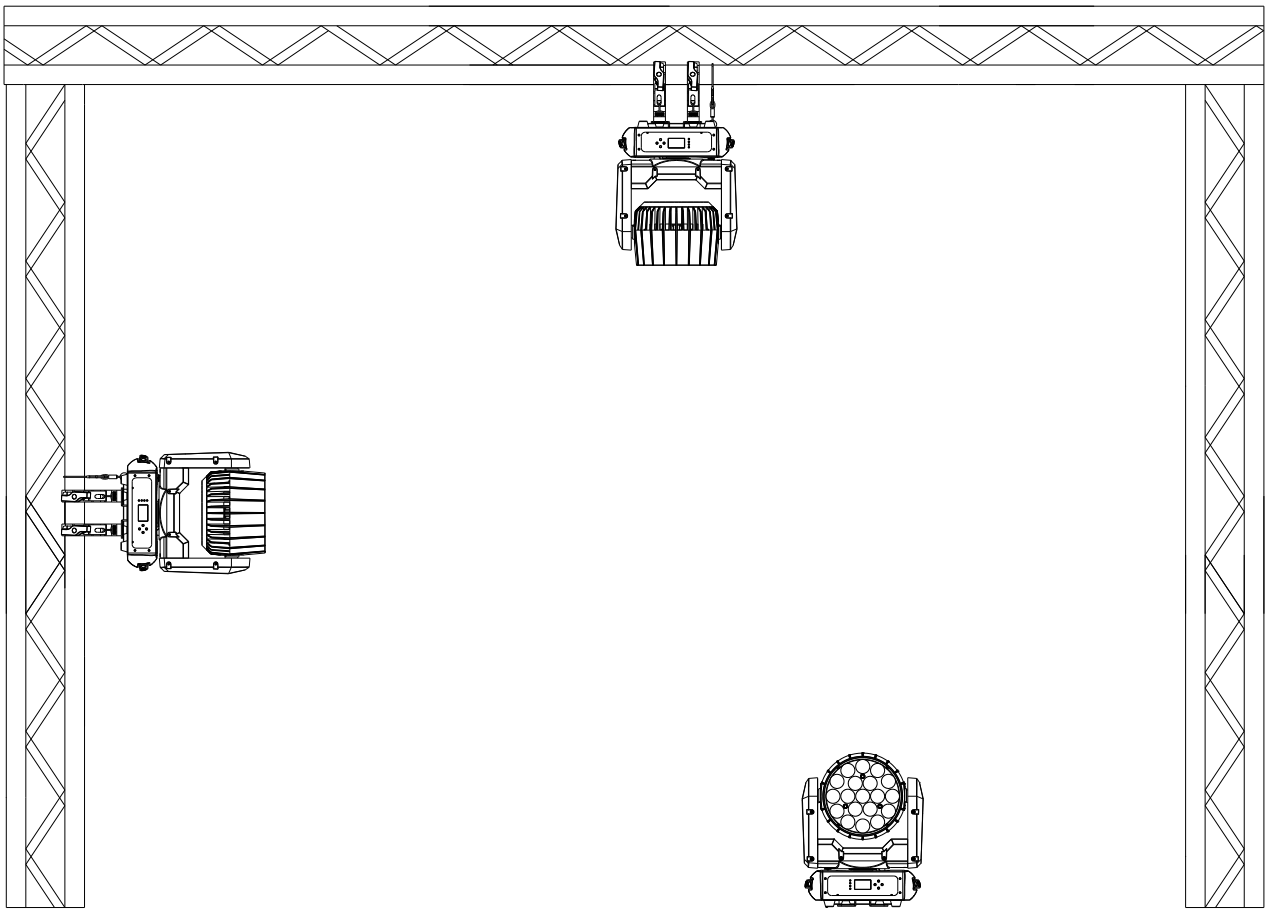
Building a serial DMX chain:

Connect the DMX data output from the controller to the fixture's data input socket. 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. Up to 32 fixtures can be connected to the same DMX link. Terminate the DMX out cable of the last fixture in the data link with a 120 ohm DMX terminator.

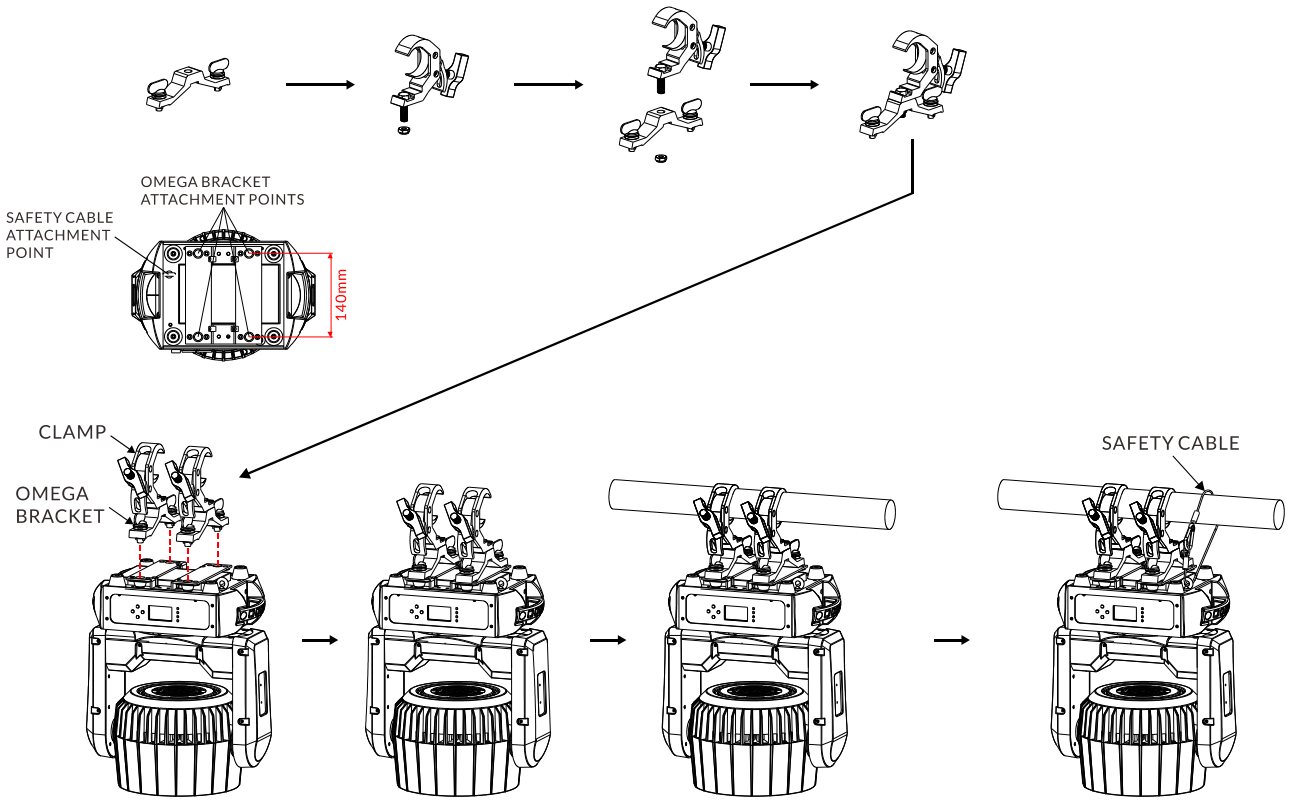


05/ Fixture Installation

- DO install and operate by qualified operator. Fixture(s) should be installed in areas outside walking paths, seating areas, or away from areas were unauthorized personnel might reach the fixture by hand. NEVER stand directly below the fixture(s) when rigging, removing or servicing.
- Always ensure that the unit is firmly fixed to avoid vibration and slipping off during operation. Ensure that the trussing or area of installation must be able to hold 10 times the weight without any deformation. Always attach a safety cable that can hold at least 12 times the weight of the fixture whenever installing this fixture in a suspended environment to ensure that the fixture will not fall if the clamp fails.
- This fixture is fully operational in three different mounting positions: hanging upside-down, mounted sideways on trussing, or standing on the floor. Always use and install a safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.



Steps for installing omega brackets to the fixture:



06/ Operation

6.1 Control Menu

- To access the control menus, press the [MENU] button.
- Navigate the menu structure, using the [ENTER], [▲ UP] and [▼ DOWN] buttons.
- To select a menu option or to confirm a selection, press the [ENTER] button.
- To return to a higher level in the menu structure without making a change, press the [MENU] button, or wait 30 seconds.

The main functions are shown below:

MAIN MENU	SUBMENU	CHOICES/VALUES	
DMX Setting	DMX Address	1-499 (14 CH)	(Default=1)
		1-487 (26 CH)	
		1-483 (30 CH)	
		1-499 (14+ CH)	
	DMX Channel Mode	Mode 1 (14)	
		Mode 2 (26)	
		Mode 3 (30)	
		Mode 4 (14+)	
	View DMX Value		
Fixture Setting	Pan Invert	No	
		Yes	
	Tilt Invert	No	
		Yes	
	P/T Feedback	No	
		Yes	
	Bl. O. P/T Moving	No	
		Yes	
	White Balance	Red	125-255
		Green	125-255
		Blue	125-255
	Cooling Mode	Auto	
		Low	
	Dimmer Curve	Linear	
		Square Law	
		Inv SQ Law	
		S Curve	
	Dimmer Speed	Fast	
		Smooth	

MAIN MENU	SUBMENU	CHOICES/VALUES		
Display Setting	Display Invert	No		
		Yes		
	Backlight Auto Off	No		
		Yes		
	Backlight Intensity	1-10	(Default=10)	
	Temperature Unit	℃		
		℉		
	Display Warning	No		
		Yes		
	Language	English		
		Chinese		
Fixture Test	Auto Test			
	Manual Mode	Pan	0-255	
		Pan Fine	0-255	
		Tilt	0-255	
		Tilt Fine	0-255	
		P/T Speed	0-255	
		Special Function	0-255	
		Dimmer	0-255	
		Shutter	0-255	
		Red	0-255	
		Green	0-255	
		Blue	0-255	
		White	0-255	
		Color	0-255	
		Zoom	0-255	
Fixture Information	Fixture Use Hour			
	Error Logs	Fixture Errors		
		Reset Error Log	No	
			Yes	Password=050
	Firmware Version			
Reset Functions	Pan/Tilt	No		
		Yes		
	Zoom	No		
		Yes		
	All	No		
		Yes		

MAIN MENU	SUBMENU	CHOICES/VALUES	
Special Functions	Fixture Maintenance	Interval	10h-300h
		Remain Time	Exit
			Reset Time
	Factory Setting	No	
		Yes	

DMX Setting

Enter the control menu and select **DMX Setting**, press ENTER. Use the UP/DOWN button to select **DMX Address, DMX Channel Mode** or **View DMX Value.**

DMX Address

Select **DMX Address,** press ENTER.

Use UP/DOWN button to select an address, confirm your selection with ENTER.

CHANNEL MODE	DMX ADDRESS
Mode 1 (14)	1-499
Mode 2 (26)	1-487
Mode 3 (30)	1-483
Mode 4 (14+)	1-499

To exit the menu, press MENU, or wait 30 seconds.

DMX Channel Mode

Select **DMX Channel Mode,** press ENTER.

Use UP/DOWN button to select between **Mode 1 (14), Mode 2 (26), Mode 3 (30)** and **Mode 4 (14+)**, confirm your selection with ENTER.

To exit the menu, press MENU, or wait 30 seconds.

View DMX Value

Select **View DMX Value,** press ENTER.

Use UP/DOWN button to select the desired DMX channel, for which the value is to be displayed.

To exit the menu, press MENU, or wait 30 seconds.

Fixture Setting

Enter the control menu and select **Fixture Setting**, press ENTER. Use the UP/DOWN button to select **Pan Invert, Tilt Invert, P/T Feedback, Bl. O. P/T Moving, White Balance, Cooling Mode, Dimmer Curve** or **Dimmer Speed.**

Pan Invert

Select **Pan Invert,** press ENTER.
Use UP/DOWN button to select **No** (pan invert deactivated) or **Yes** (pan invert activated), confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Tilt Invert

Select **Tilt Invert,** press ENTER.
Use UP/DOWN button to select **No** (tilt invert deactivated) or **Yes** (tilt invert activated), confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

P/T Feedback

Select **P/T Feedback,** press ENTER.
Use UP/DOWN button to select **No** (pan/tilt feedback deactivated) or **Yes** (pan/tilt feedback activated), confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Bl. O. P/T Moving

Select **Bl. O. P/T Moving,** press ENTER.
Use UP/DOWN button to select **No** (blackout when pan/tilt moves deactivated) or **Yes** (blackout when pan/tilt moves activated), confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

White Balance

Select **White Balance,** press ENTER.

Use UP/DOWN button to select **Red, Green** or **Blue**, confirm your selection with ENTER.

Use UP/DOWN button to select a value between **125** and **255**, confirm your selection with ENTER.

To exit the menu, press MENU, or wait 30 seconds.

Cooling Mode

Select **Cooling Mode,** press ENTER.

Use UP/DOWN button to select **Auto** or **Low**, confirm your selection with ENTER.

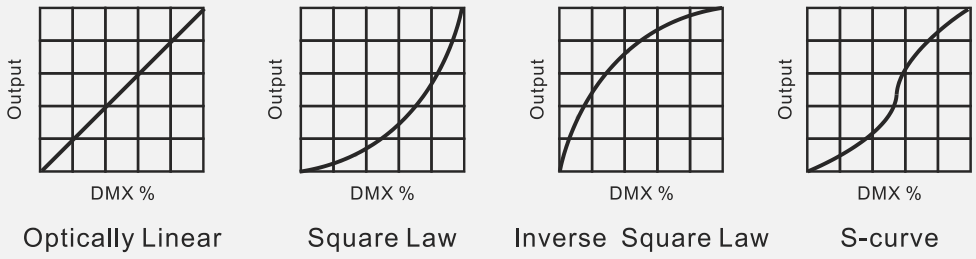
To exit the menu, press MENU, or wait 30 seconds.

Dimmer Curve

Select **Dimmer Curve,** press ENTER.

Use UP/DOWN button to select **Linear, Square Law, Inv SQ Law** or **S Curve**, confirm your selection with ENTER.

Dimmer Modes



To exit the menu, press MENU, or wait 30 seconds.

Dimmer Speed

Select **Dimmer Speed,** press ENTER.

Use UP/DOWN button to select **Fast** or **Smooth**, confirm your selection with ENTER.

To exit the menu, press MENU, or wait 30 seconds.

Display Setting

Enter the control menu and select **Display Setting**, press ENTER. Use the UP/DOWN button to select **Display Invert, Backlight Auto Off, Backlight Intensity, Temperature Unit, Display Warning** or **Language.**

Display Invert

Select **Display Invert,** press ENTER.
Use UP/DOWN button to select **No** (display normal) or **Yes** (display inverted), confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Backlight Auto Off

Select **Backlight Auto Off,** press ENTER.
Use UP/DOWN button to select **No** or **Yes**, confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Backlight Intensity

Select **Backlight Intensity,** press ENTER.
Use UP/DOWN button to select a value between **1** (dark) and **10** (bright), confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Temperature Unit

Select **Temperature Unit,** press ENTER.
Use UP/DOWN button to select **°C** or **°F**, confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Display Warning

Select **Display Warning,** press ENTER.
Use UP/DOWN button to select **No** or **Yes**, confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Language

Select **Language,** press ENTER.
Use UP/DOWN button to select **English** or **Chinese**, confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Fixture Test

Enter the control menu and select **Fixture Test**, press ENTER. Use the UP/DOWN button to select **Auto Test** or **Manual Mode.**

Auto Test

Select **Auto Test,** press ENTER.
The device immediately performs an automatic self-test.
To end the automatic self-test and exit the menu, press MENU.

Manual Mode

Select **Manual Mode,** press ENTER.
Use UP/DOWN button to select the channel for which the manual test is to be performed, confirm your selection with ENTER.
Use UP/DOWN button to select a value, confirm your selection with ENTER.
To exit the menu, press MENU.
(All channels value will become 0 after exiting Manual Mode menu)

Fixture Information

Enter the control menu and select **Fixture Information**, press ENTER. Use the UP/DOWN button to select **Fixture Use Hour, Error Logs** or **Firmware Version.**

Fixture Use Hour

Select **Fixture Use Hour,** press ENTER.
The operating hours is displayed.
To exit the menu, press MENU, or wait 30 seconds.

Error Logs

Select **Error Logs,** press ENTER.
Use UP/DOWN button to select **Fixture Errors**, confirm your selection with ENTER.
The error list is displayed.
Use UP/DOWN button to select **Reset Error Log**, confirm your selection with ENTER.
If you wish to reset the relevant error logs, select **Yes**. If you do not wish to reset anything, select **No**. Confirm your selection with ENTER.
If you select **Yes**, use UP/DOWN button to set the password 050, confirm your selection with ENTER. The relevant error logs are reset.
To exit the menu, press MENU, or wait 30 seconds.

Firmware Version

Select **Firmware Version,** press ENTER.
The firmware version is displayed.
To exit the menu, press MENU, or wait 30 seconds.

Reset Functions

Enter the control menu and select **Reset Functions**, press ENTER. Use the UP/DOWN button to select **Pan/Tilt, Zoom** or **All.**

Pan/Tilt

Select **Pan/Tilt,** press ENTER.
Use UP/DOWN button to select **No** or **Yes** (the device will run built-in program to reset pan/tilt to their home positions), confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Zoom

Select **Zoom,** press ENTER.
Use UP/DOWN button to select **No** or **Yes** (the device will run built-in program to reset zoom to its home positions), confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

All

Select **All,** press ENTER.
Use UP/DOWN button to select **No** or **Yes** (the device will run built-in program to reset all to their home positions), confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Special Functions

Enter the control menu and select **Special Functions**, press ENTER. Use the UP/DOWN button to select **Fixture Maintenance** or **Factory Setting.**

Fixture Maintenance

Select **Fixture Maintenance,** press ENTER.
Use UP/DOWN button to select **Interval** or **Remain Time**, confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Factory Settings

Select **Factory Settings,** press ENTER.
If you wish to reset the device to the factory settings, select **Yes**. If you do not wish to reset anything, select **No**. Confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

RDM functions: Certain menus of the device and functions can be called up via the RDM protocol.

The parameter IDs are implemented as follows for different commands:

Parameter ID	Command 'Discovery'	Command 'Set'	Command 'Get'
DISC_UNIQUE_BRANCH	√		
DISC_MUTE	√		
DISC_UN_MUTE	√		
DEVICE_INFO			√
SUPPORTED_PARAMETERS			√
SOFTWARE_VERSION_LABEL			√
DMX_START_ADDRESS		√	√
IDENTIFY_DEVICE		√	√
DEVICE_MODEL_DESCRIPTION			√
PARAMETER_DESCRIPTION			√
MANUFACTURER_LABEL			√
DEVICE_LABEL		√	√
FACTORY_DEFAULTS		√	√
BOOT_SOFTWARE_VERSION_ID			√
BOOT_SOFTWARE_VERSION_LABEL			√
DMX_PERSONALITY		√	√
DMX_PERSONALITY_DESCRIPTION			√
SLOT_INFO			√
SLOT_DESCRIPTION			√
SENSOR_DEFINITION			√
SENSOR_VALUE			√
DEVICE_HOURS			√
LAMP_HOURS			√
PAN_INVERT		√	√
TILT_INVERT		√	√
PAN_TILT_FEEDBACK		√	√
RESET_DEVICE		√	
CURVE		√	√
DMX_STATE		√	√
DIMMER_SPEED		√	√

√ -Command implemented for the respective parameter ID

6.2 Home Position Adjustment

- To access the control menus, press the [MENU] button.
- To access the offset menus, long-press the [ENTER] button.
- Navigate the offset menus, using the [ENTER], [⮝ UP] and [⮟ DOWN] buttons.
- To select a menu option or to confirm a selection, press the [ENTER] button.
- To return to a higher level in the menu structure without making a change, press the [MENU] button, or wait 30 seconds.

OFFSET MENU	VALUES
Pan	-128~127
Tilt	-128~127
Zoom	0~255

Pan

Select **Pan,** press ENTER.
Use UP/DOWN button to select a value between -128 and 127, confirm your selection with ENTER.
To exit the offset menu, press MENU, or wait 30 seconds.

Tilt

Select **Tilt,** press ENTER.
Use UP/DOWN button to select a value between -128 and 127, confirm your selection with ENTER.
To exit the offset menu, press MENU, or wait 30 seconds.

Zoom

Select **Zoom,** press ENTER.
Use UP/DOWN button to select a value between 0 and 255, confirm your selection with ENTER.
To exit the offset menu, press MENU, or wait 30 seconds.

07/ Configuring the Device for DMX Control

7.1 Address Setting

All fixtures should be given a DMX starting address when operating with a DMX controller, in order to ensure that the correct fixture responds to the correct control signal. Incorrect settings will result in unpredictable responses from the lighting controller.

You can set the same starting address for all fixtures or a group of fixtures, or set different addresses for each individual fixture.

Setting all fixtures to the same DMX address will cause all fixtures to react in the same way. In this case, please note that changing the settings of one channel will affect all the fixtures simultaneously.

If you set each fixture to a different DMX address, each unit will “listen” starting at the channel number you have set, based on the quantity of DMX channels of each fixture. That means changing the settings of one channel will only affect the selected fixture.

For example, if the first fixture is set to 14 ch DMX mode with a start DMX address of 1, the following fixture in the DMX chain should then be set to a DMX address of 15. As the first fixture uses all the first 14 DMX channels, the next available channel is 15 (14+1=15 >> 15).

See the chart below for more details:

Channel Mode	Unit 1 Address	Unit 2 Address	Unit 3 Address	Unit 4 Address	Unit xxx Address
14 channels	1	15	29	43	.....
26 channels	1	27	53	79	.....
30 channels	1	31	61	91	.....
14+ channels	1	15	29	43	.....

7.2 DMX Protocol

CHANNEL				VALUE	FUNCTION
14ch	26ch	30ch	14+ch		
1	1	1	4	000-255	**PAN** 0°→540°
2	2	2	5	000-255	**PAN FINE**
3	3	3	6	000-255	**TILT** 0°→240°
4	4	4	7	000-255	**TILT FINE**
5	5	5		000-255	**PAN/TILT SPEED** Fast to Slow
6	7	7	8	000-009 010-014 015-255	**SPECIAL FUNCTION** Null Reset All Null
7	8	8	2	000-255	**DIMMER** 0%→100%
8	9	9	1	000-019 020-024 025-064 065-069 070-084 085-089 090-104 105-109 110-124 125-129 130-144 145-149 150-164 165-169 170-184 185-189 190-204 205-209 210-224 225-229 230-244 245-255	**STROBE** Close Open Strobe 1: fast → slow Open Strobe 2: slow open fast close, fast → slow Open Strobe 3: fast open slow close, fast → slow Open Strobe 4: random strobe, fast → slow Open Strobe 5: random slow open fast close, fast → slow Open Strobe 6: random fast open slow close, fast → slow Open Strobe 7: burst pulse, fast → slow Open Strobe 8: random burst pulse, fast → slow Open Strobe 9: sine wave, fast → slow Open Strobe 10: burst, fast → slow Open
9			10	000-255	**RED** 0%→100%
10			11	000-255	**GREEN** 0%→100%
11			12	000-255	**BLUE** 0%→100%
12			13		**WHITE**

				000-255	0%→100%
					CTO
				000-019	Null
				020-022	10000K
				023-025	9900K
				026-028	9800K
				029-031	9700K
				032-034	9600K
				035-037	9500K
				038-040	9400K
				041-043	9300K
				044-046	9200K
				047-049	9100K
				050-052	9000K
				053-055	8900K
				056-058	8800K
				059-061	8700K
				062-064	8600K
				065-067	8500K
				068-070	8400K
				071-073	8300K
				074-076	8200K
				077-079	8100K
				080-082	8000K
				083-085	7900K
				086-088	7800K
				089-091	7700K
			14	092-094	7600K
				095-097	7500K
				098-100	7400K
				101-103	7300K
				104-106	7200K
				107-109	7100K
				110-112	7000K
				113-115	6900K
				116-118	6800K
				119-121	6700K
				122-126	6600K
				127-129	6500K
				130-132	6400K
				133-135	6300K
				136-138	6200K
				139-141	6100K
				142-144	6000K
				145-147	5900K
				148-150	5800K
				151-153	5700K
				154-156	5600K
				157-159	5500K
				160-162	5400K
				163-165	5300K
				166-168	5200K
				169-171	5100K
				172-175	5000K

				176-178	4900K
				179-181	4800K
				182-184	4700K
				185-187	4600K
				188-190	4500K
				191-193	4400K
				194-196	4300K
				197-199	4200K
				200-202	4100K
				203-205	4000K
				206-208	3900K
				209-211	3800K
				212-214	3700K
				215-217	3600K
				218-220	3500K
				221-223	3400K
				224-226	3300K
				227-229	3200K
				230-232	3100K
				233-235	3000K
				236-238	2900K
				239-241	2800K
				242-244	2700K
				245-247	2600K
				248-255	2500K
					COLOR MACRO
				000-009	Null
				010-014	Color 1
				015-019	Color 2
				020-024	Color 3
				025-029	Color 4
				030-034	Color 5
				035-039	Color 6
				040-044	Color 7
				045-049	Color 8
				050-054	Color 9
				055-059	Color 10
				060-064	Color 11
				065-069	Color 12
13			**9**	070-074	Color 13
				075-079	Color 14
				080-084	Color 15
				085-089	Color 16
				090-094	Color 17
				095-099	Color 18
				100-104	Color 19
				105-109	Color 20
				110-114	Color 21
				115-119	Color 22
				120-124	Color 23
				125-129	Color 24
				130-134	Color 25
				135-139	Color 26
				140-144	Color 27

				145-149	Color 28
				150-154	Color 29
				155-159	Color 30
				160-164	Color 31
				165-169	Color 32
				170-174	Color 33
				175-179	Open
				180-201	Color change, fast → slow
				202-207	Stop
				208-229	Color change, slow → fast
				230-234	Open
				235-239	Color change: fast
				240-244	Color change: medium
				245-249	Color change: slow
				250-255	Open
14	**6**	**6**	**3**		**ZOOM**
				000-255	Wide→Narrow
	10	**10**			**RING 1 RED**
				000-255	0%→100%
	11	**11**			**RING 1 GREEN**
				000-255	0%→100%
	12	**12**			**RING 1 BLUE**
				000-255	0%→100%
	13	**13**			**RING 1 WHITE**
				000-255	0%→100%
					RING 1 COLOR MACRO
				000-009	Null
				010-017	Color 1
				018-024	Color 2
				025-032	Color 3
				033-039	Color 4
				040-047	Color 5
				048-054	Color 6
				055-061	Color 7
				062-069	Color 8
				070-076	Color 9
				077-084	Color 10
				085-091	Color 11
	14	**14**		092-099	Color 12
				100-106	Color 13
				107-113	Color 14
				114-121	Color 15
				122-128	Color 16
				129-136	Color 17
				137-143	Color 18
				144-151	Color 19
				152-158	Color 20
				159-165	Color 21
				166-173	Color 22
				174-180	Color 23
				181-188	Color 24
				189-195	Color 25
				196-203	Color 26

				204-210 211-217 218-225 226-232 233-240 241-247 248-255	Color 27 Color 28 Color 29 Color 30 Color 31 Color 32 Color 33
	15	15		000-255	**RING 2 RED** 0%→100%
	16	16		000-255	**RING 2 GREEN** 0%→100%
	17	17		000-255	**RING 2 BLUE** 0%→100%
	18	18		000-255	**RING 2 WHITE** 0%→100%
	19	19		000-255	**RING 2 COLOR MACRO** (Same as RING 1 COLOR MACRO)
	20	20		000-255	**RING 3 RED** 0%→100%
	21	21		000-255	**RING 3 GREEN** 0%→100%
	22	22		000-255	**RING 3 BLUE** 0%→100%
	23	23		000-255	**RING 3 WHITE** 0%→100%
	24	24		000-255	**RING 3 COLOR MACRO** (Same as RING 1 COLOR MACRO)
	25	25		000-007 008-022 023-037 038-052 053-067 068-082 083-097 098-112 113-127 128-142 143-157 158-172 173-187 188-202 203-217 218-232 233-247 248-255	**MACRO EFFECT SELECT** Null Macro 1 Macro 2 Macro 3 Macro 4 Macro 5 Macro 6 Macro 7 Macro 8 Macro 9 Macro 10 Macro 11 Macro 12 Macro 13 Macro 14 Macro 15 Macro 16 Macro 17
	26	26		000-255	**MACRO EFFECT SPEED** Slow to Fast
		27		000-009 010-031 032-063	**RING MACRO 1** Null Macro 1 Macro 2

				064-095	Macro 3
				096-127	Macro 4
				128-159	Macro 5
				160-191	Macro 6
				192-223	Macro 7
				224-255	Macro 8
					RING MACRO 2
				000-015	Null
				016-039	Macro 1
				040-063	Macro 2
				064-087	Macro 3
		28		088-111	Macro 4
				112-135	Macro 5
				136-159	Macro 6
				160-183	Macro 7
				184-207	Macro 8
				208-231	Macro 9
				232-255	Macro 10
					RING MACRO 3
				000-015	Null
				016-027	Macro 1
				028-039	Macro 2
				040-051	Macro 3
				052-063	Macro 4
				064-075	Macro 5
				076-087	Macro 6
				088-099	Macro 7
				100-111	Macro 8
		29		112-123	Macro 9
				124-135	Macro 10
				136-147	Macro 11
				148-159	Macro 12
				160-171	Macro 13
				172-183	Macro 14
				184-195	Macro 15
				196-207	Macro 16
				208-219	Macro 17
				220-231	Macro 18
				232-243	Macro 19
				244-255	Macro 20
					RING MACRO SPEED
		30		000-127	Jump: slow→fast
				128-255	Fade: slow→fast

08/ Error Information

Error codes are shown continuously in the display when the fixture fails and they will not disappear until the fixture is repaired.

CPU-B/C/D Error

Check whether the 485 (DATA) leads on the PCB board are installed in place or disconnected.
Check whether the related 485 (DATA) signal circuit on the PCB board is damaged.

Pan Reset Error

Check whether the position of the pan where the magnet is installed falls off or is damaged.
Check whether there are obstacles in the pan operating range.
Check whether the Hall element on the pan is damaged.
Check whether the lead connecting the Hall element on the pan and the PCB board is in poor contact or disconnected.
Check whether the motor on the pan is damaged.
Check whether the related circuit of the motor drive board on the pan is damage.

Pan Encode Error

Check whether the encoder on the pan is damaged.
Check whether the lead connecting the encoder on the pan and the PCB board is in poor contact or disconnected.

Tilt Reset Error

Check whether the position of the tilt where the magnet is installed falls off or is damaged.
Check whether there are obstacles in the tilt operating range.
Check whether the Hall element on the tilt is damaged.
Check whether the lead connecting the Hall element on the tilt and the PCB board is in poor contact or disconnected.
Check whether the motor on the tilt is damaged.
Check whether the related circuit of the motor drive board on the tilt is damage.

Tilt Encode Error

Check whether the encoder on the tilt is damaged.
Check whether the lead connecting the encoder on the tilt and the PCB board is in poor contact or disconnected.

Zoom Reset Error

Check whether the position of the zoom where the magnet is installed falls off or is damaged.
Check whether there are obstacles in the zoom operating range.
Check whether the Hall element on the zoom is damaged.
Check whether the lead connecting the Hall element on the zoom and the PCB board is in poor contact or disconnected.
Check whether the motor on the zoom is damaged.
Check whether the related circuit of the motor drive board on the zoom is damage.

Memory Initial Fail

Check whether the memory IC is damaged. If it is damaged, replace it with a new one.

Led Temp. Error

Check whether the temperature detecting board is normal.
Check whether the components of the temperature detecting board are damaged.
Check whether the lead on the temperature detecting board is installed in place or disconnected.

09/ Troubleshooting

Problem	Potential cause(s)	Remedies
Fixture does not respond or appears to be off.	No power to the fixture.	Confirm that the power is switched on and cables are plugged in.
	No output from PSU.	Replace the PSU.
Fixture suddenly turned off.	Power was turned off.	Check the power supply, switches and breakers.
Light output cuts out intermittently.	Fixture is too hot.	Check fixture's stored error messages for more information. Allow fixture to cool. Clean fixture. Reduce ambient temperature.
Fixture suddenly stopped responding.	DMX cables were disconnected.	Inspect DMX cables.
Fixture operates irregularly / abnormal.	Incorrect DMX address or DMX mode.	Inspect and enter the correct DMX address or mode.
	DMX link is not terminated.	Install a XLR 120ohm DMX termination at the end of the DMX link.
	Bad data link.	Replace or repair defective cables and/or connections.
	One of the fixtures is defective and is disturbing data transmission on the link.	Track and isolate the corrupted fixture. Have the fixture serviced by a qualified technician.
Pan / tilt is skipping / shuddering	Obstacles are within the required pan / tilt clearance.	Inspect and remove any obstacles constraining free operation of the pan / tilt.
	The Hall element is damaged.	Replace the Hall element.
	The magnetic steel fell out.	Replace the magnetic steel.

10/ Fixture Cleaning

Regular cleaning is very important for fixture life and performance. Buildup of dust, dirt, smoke particles, fog fluid residues, etc. degrades the fixture's light output and cooling ability. Cleaning schedules for lighting fixtures vary greatly depending on the operating environment. It is therefore impossible to specify precise cleaning intervals for the fixture. Environmental factors that may result in a need for frequent cleaning include:

- Use of smoke or fog machines.
- High airflow rates (near air conditioning vents, for example).
- Airborne dust (from stage effects, building structures and fittings or the natural environment at outdoor events, for example).

If one or more of these factors is present, inspect fixtures within their first few hours of operation to see whether cleaning is necessary. Check again at frequent intervals. This procedure will allow you to assess cleaning requirements in your particular situation.

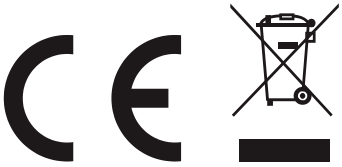
Follow these precautions when cleaning the fixture:

- Work in a clean, dry, well-lit area.
- Use gentle pressure only. A soft lint-free cloth dampened with a solution of water and a mild detergent is recommended, under no circumstances should alcohol, solvents or abrasives be used! Use care when cleaning optical components: surfaces are fragile and easily scratched.

11/ Approvals and Certifications

This product has been tested and found to comply with the following standards:

- 2014/30/EU - Electromagnetic Compatibility (EMC)
- 2014/35/EU - Low Voltage Directive (LVD)



The information in this document is subject to change without notice.

For the latest information, visit www.acmelighting.com.