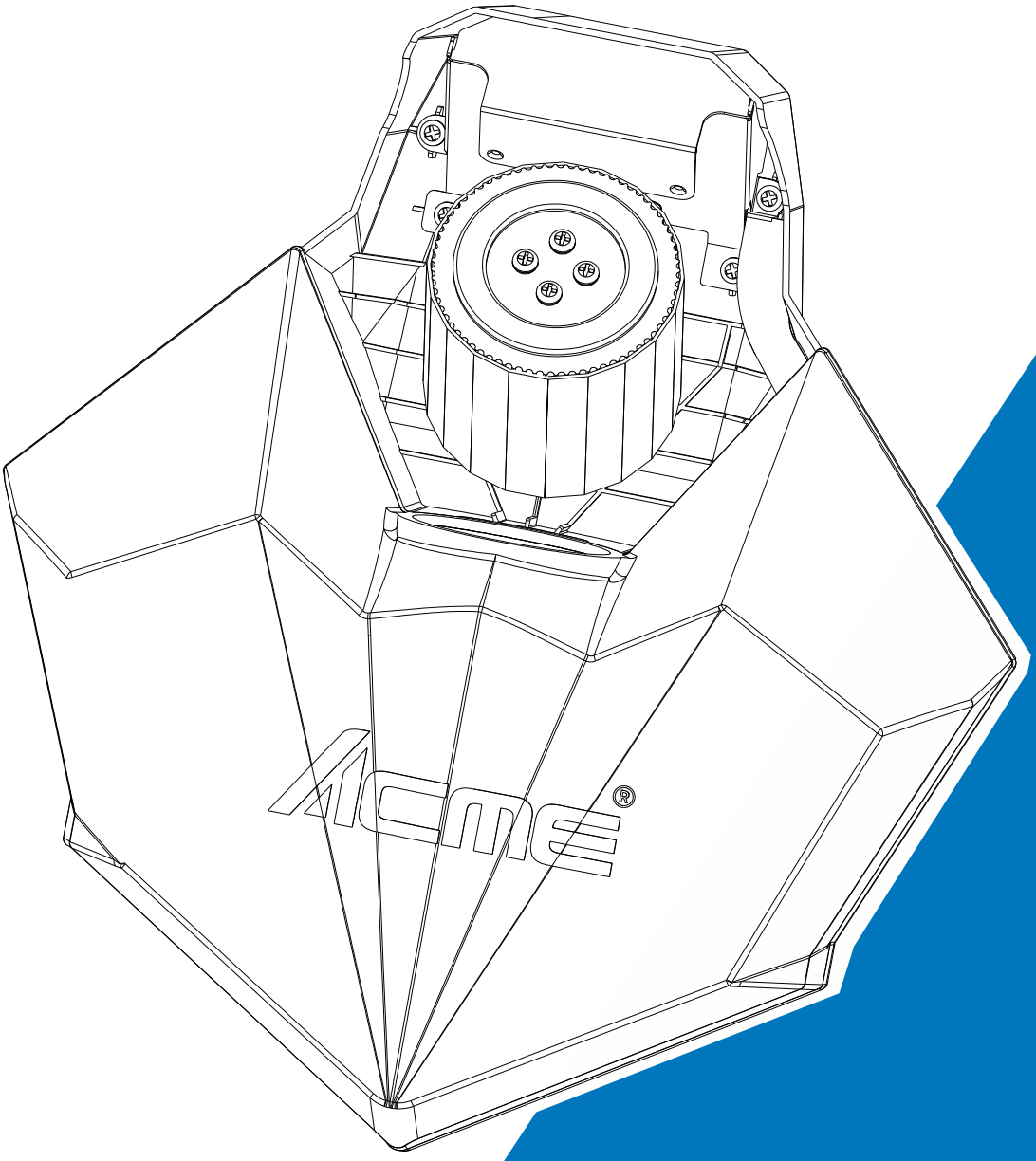
MAGICIAN



User Manual

Please read the instruction carefully before use

CONTENTS

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.

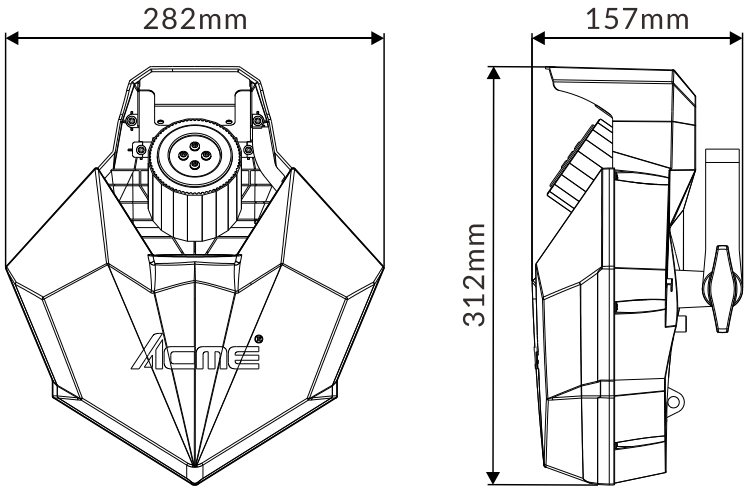
- Unpack and check carefully to ensure that there is no transportation damage before using the unit.
- This product is for indoor use only. Use only in a dry location.
- DO install and operate by qualified operator.
- DO NOT allow children to operate the fixture.
- Use safety chain when fixing the unit. 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 65˚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.
- 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.

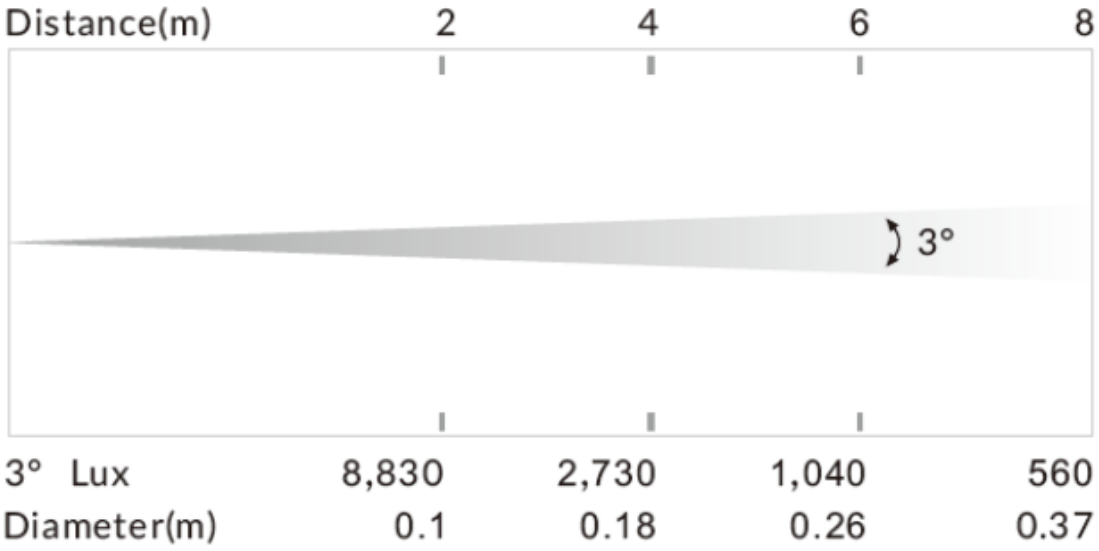
02/ Technical Specifications

AC Power	100-240Vac; 50/60Hz	
Max. Power Consumption	90W	
Light Source	80W LED	
Color Temperature	7500-8000K	
Beam Angle	3°	
Gobo Wheel	Static Gobo Wheel	7 gobos (with fixed colors) + 1 effect gobo + open
Movement	Pan	180°
	Tilt	Infinite
Scanning Angle	Pan	110°
	Tilt	90°
Control and Programming	DMX Channels	8
	Protocols	DMX512
		RDM
	Operational Modes	DMX Control
		Sound Active
		Show Mode
	Firmware Update	via DMX
Construction	Display	OLED display
	DMX and RDM Data In/Out	3-pin XLR (optional with 5-pin XLR)
	Power In/Out	Power Connector in
	Protection Rating	IP20
Dynamic Effects	Compact design, light in weight	
	0-100% continuous dimming and strobe effects	
	Choice of four dimming curves	
	Multiple built-in show modes	
	Intelligent sound control, lighting effect changes with the music rhythm	
Included Items	Power Cable	
	User Manual (this document)	

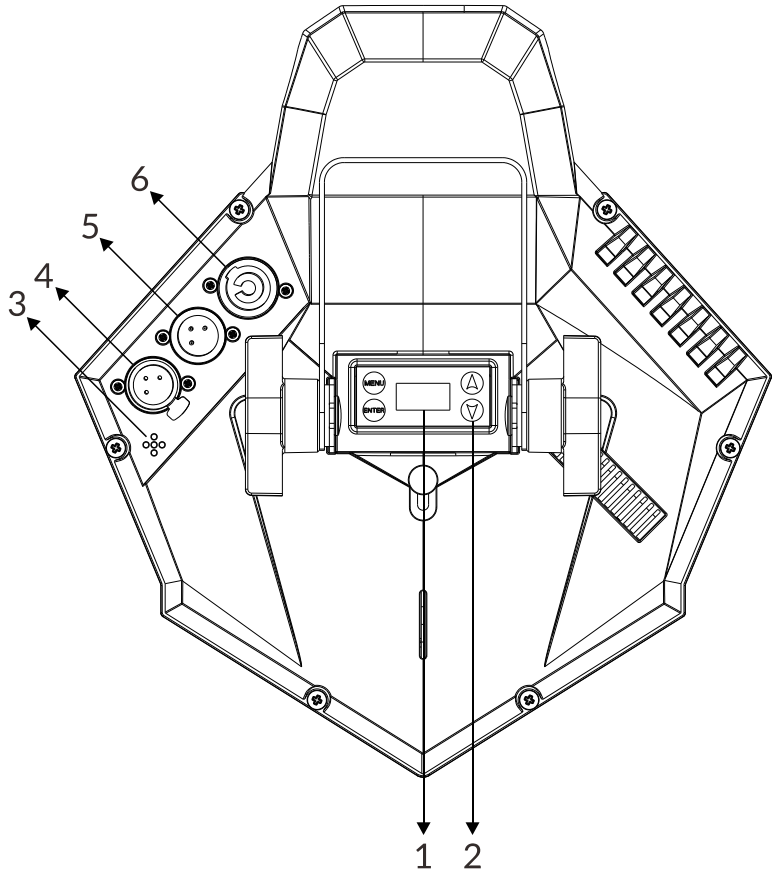
Dimensions	282x157x312mm	11.1"x6.2"x12.3"
Weight	2.8 kg	6.2 lbs



Photometric Diagram:



03/ Overview



1. Display	To show the various menus and the selected function	
2. 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
3. MIC	Picks up the beat of the music in sound active mode	
4. DMX OUT	For DMX512 link, use 3-pin XLR cable to link the next units to output DMX signal (optional with 5-pin XLR)	
5. DMX IN	For DMX512 link, use 3-pin XLR cable to link the unit and DMX controller to input DMX signal (optional with 5-pin XLR)	
6. POWER	To connect to supply power	

04/ Connecting Power and Data

4.1 Connecting Power

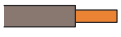
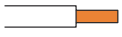
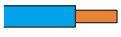
This fixture can operate on any 100-240Vac; 50/60Hz AC mains power supply.

The maximum power consumption is 90W.

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!

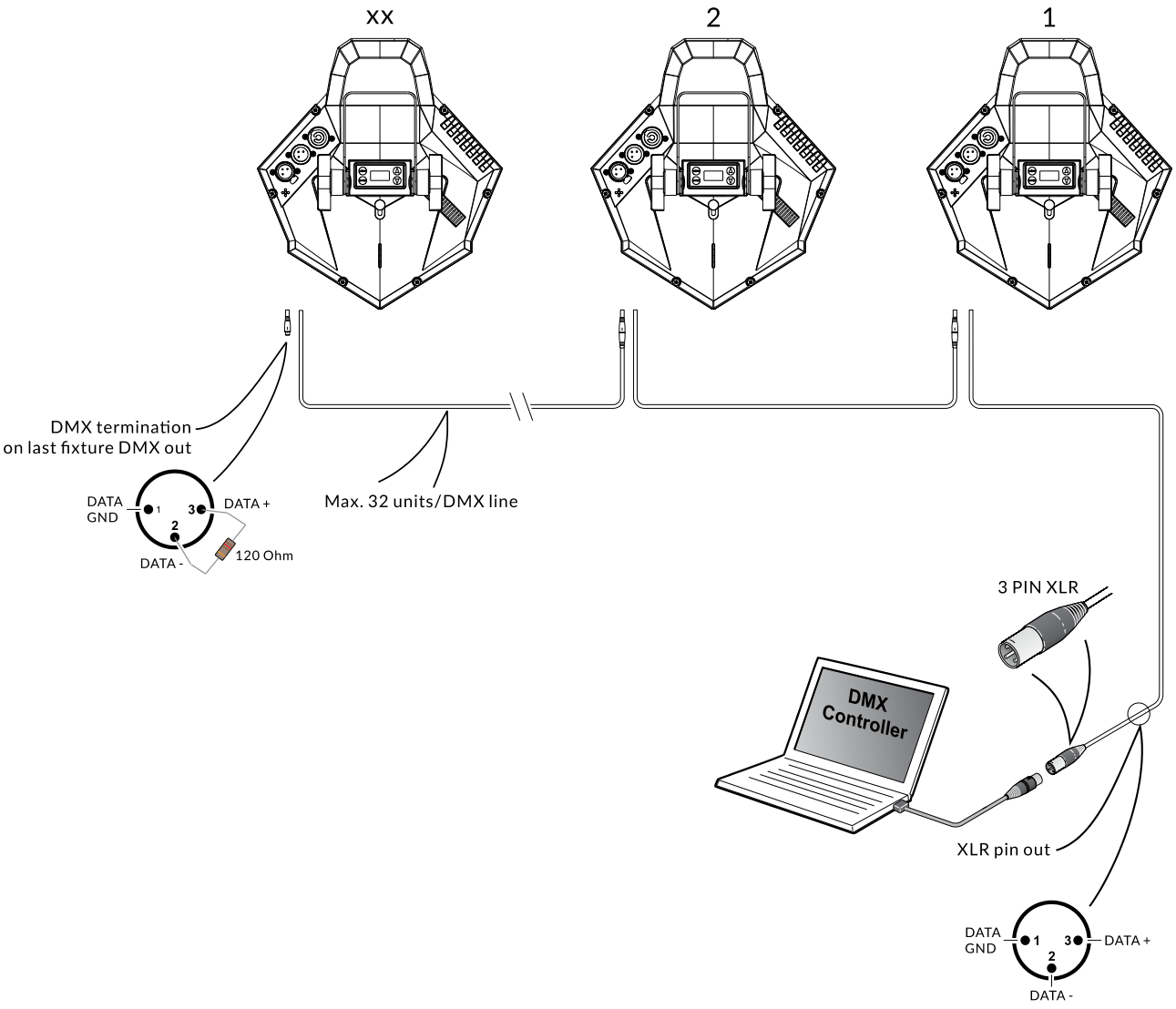
DO NOT CONNECT THE FIXTURE TO AN ELECTRICAL DIMMER SYSTEM AS DOING SO MAY CAUSE DAMAGE.

4.2 Connecting Data

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

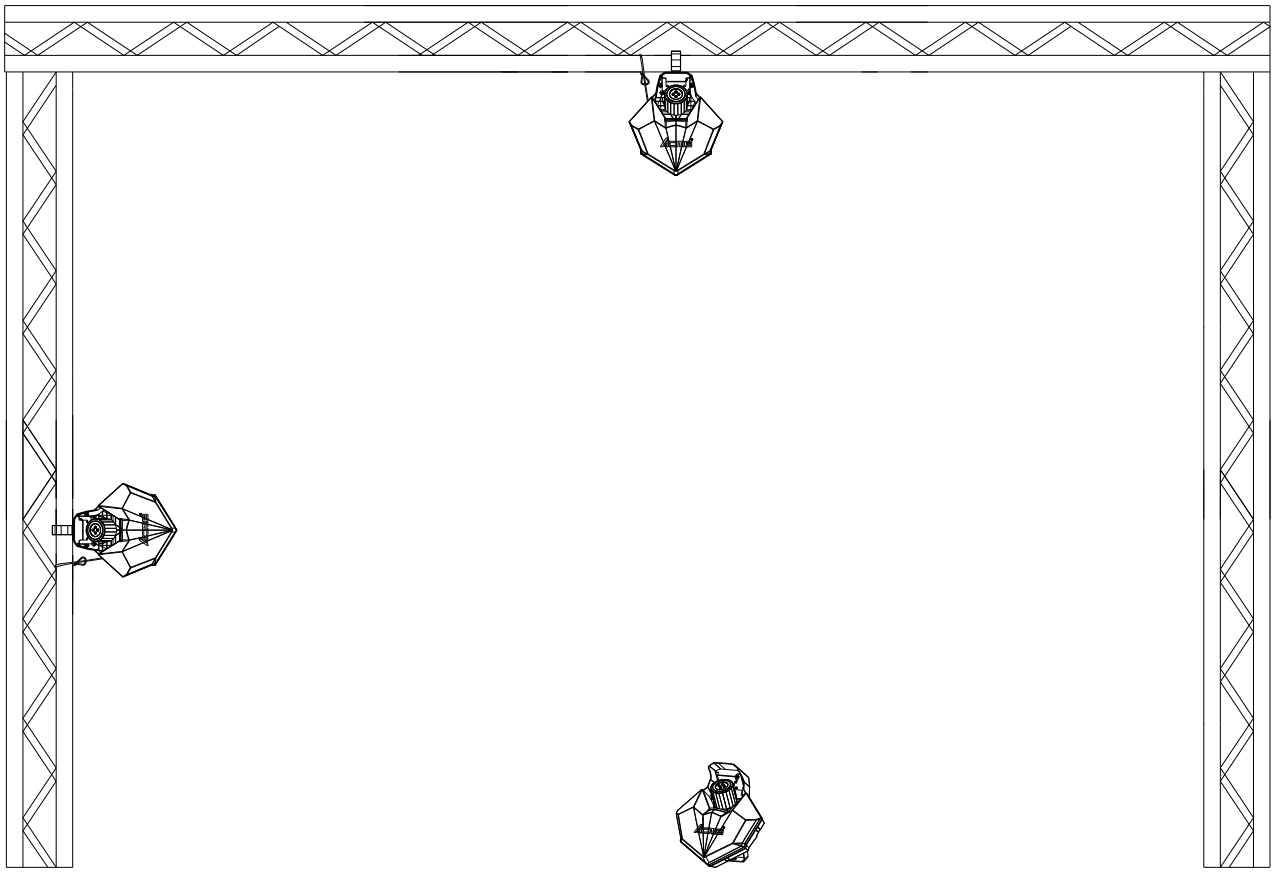
Building a serial DMX chain:

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 on trussing, 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.



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 Settings	DMX Address	1-505	(Default=1)
	DMX CH Mode	8 CH	
	No DMX Status	Hold	
		Blackout	
		Show	
		Manual	
	View DMX Value		
Show	Show 0		
	Show 1		
	Show 2		
	Show 3		
	Show 4		
Pri. Sec. Mode	Primary		
	Secondary 1		
	Secondary 2		
Fixture Settings	Pan Invert	No	
		Yes	
	Dimmer Curve	Linear	
		Square Law	
		Inv SQ Law	
		S Curve	
	Dimmer Speed	Fast	
		Smooth	
	Sound State	Off	
		On	
	Sound Sense	0-100	(Default=90)

MAIN MENU	SUBMENU	CHOICES/VALUES		
Display Settings	Display Invert	No		
		Yes		
	Temperature Unit	℃		
		°F		
	Language	English		
		Chinese		
Fixture Test	Auto Test	Single		
		Cycle		
	Manual Mode	Clear	No/Yes	
		Pan	0-255	
		Tilt	0-255	
		Gobo	0-255	
		Mirror	0-255	
		Strobe	0-255	
		Dimmer	0-255	
Information	Fixture Use Hour			
	LED Use Hour	Total LED Hour		
		LED On Hour		
		LED Hours Reset	No	
			Yes	Password=050
	Temperature	LED	Current	
			Max temp	
	Firmware Version			
	RDM UID			
	Error Logs	Fixture Errors		
		Reset Error Log	No	
			Yes	Password=050
Reset Function	All Reset	No		
		Yes		
Factory Restore	No			
	Yes			

DMX Settings

Enter the control menu and select **DMX Settings**, press ENTER. Use the UP/DOWN button to select **DMX Address, DMX CH Mode, No DMX Status** 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
8 CH	1-505

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

DMX CH Mode

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

Use UP/DOWN button to select **8 CH**, confirm your selection with ENTER.

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

No DMX Status

Select **No DMX Status,** press ENTER.

Use UP/DOWN button to select one of the following status:

Hold (The device continues to operate in the current mode with the last active DMX values until the signal returns)

Blackout (Fixture blacks out if DMX signal stops)

Show (Show mode)

Manual (The device accepts the DMX value stored in the 'Manual Mode' menu)

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.

Show

Select **Show,** press ENTER.
Use UP/DOWN button to select **Show 0, Show 1, Show 2, Show 3** or **Show 4**, confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Pri. Sec. Mode

Select **Pri. Sec. Mode,** press ENTER.
Use UP/DOWN button to select **Primary, Secondary 1** or **Secondary 2**, confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Fixture Settings

Enter the control menu and select **Fixture Settings**, press ENTER. Use the UP/DOWN button to select **Pan Invert, Dimmer Curve, Dimmer Speed, Sound State** or **Sound Sense.**

Pan Invert

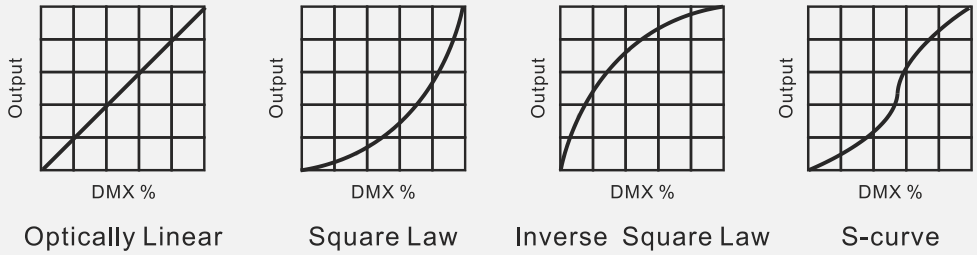
Select **Pan Invert,** press ENTER.
Use UP/DOWN button to select **No** (pan invert deactivated) or **Yes** (pan invert activated), confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

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.

Sound State

Select **Sound State,** press ENTER.

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

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

Sound Sense

Select **Sound Sense,** press ENTER.

Use UP/DOWN button to select a value between **0** and **100**, confirm your selection with ENTER.

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

Display Settings

Enter the control menu and select **Display Settings**, press ENTER. Use the UP/DOWN button to select **Display Invert, Temperature Unit** 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.

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.

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.
Use UP/DOWN button to select **Single** (the device immediately performs a single automatic self-test) or **Cycle** (the device immediately performs a cyclic automatic self-test), confirm your selection with ENTER.
To 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.
(The device returns to its original DMX state after the manual test. The test values are saved automatically when the device is switched off.)

Information

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

Fixture Use Hour

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

LED Use Hour

Select **LED Use Hour,** press ENTER.
Use UP/DOWN button to select **Total LED Hour** (total time) or **LED On Hour** (current switch-on time), confirm your selection with ENTER.
The total time or current switch-on time is displayed.
Use UP/DOWN button to select **LED Hours Reset**, confirm your selection with ENTER.
If you wish to reset the LED operating hours, 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 LED operating hours is reset.
To exit the menu, press MENU, or wait 30 seconds.

Temperature

Select **Temperature,** press ENTER.
The device temperature is displayed.
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.

RDM UID

Select **RDM UID,** press ENTER.
The RDM UID 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.

Reset Function

Enter the control menu and select **Reset Function**, press ENTER. Use the UP/DOWN button to select **All Reset.**

All Reset

Select **All Reset,** 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.

Factory Restore

Select **Factory Restore,** 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			√
RESET_DEVICE		√	
CURVE		√	√
SHOW_MODE		√	√
PRIMARY_SECONDARY		√	√
DMX_STATE		√	√
DIMMER_SPEED		√	√
SOUND_MODE		√	√
SOUND_SENSE		√	√

√ -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
Dimming Start	0~999
Pan	0~255
Tilt	0~255
Gobo	-128~127
Mirror	0~255

Dimming Start

Select **Dimming Start,** press ENTER.
Use UP/DOWN button to select a value between 0 and 999, confirm your selection with ENTER.
To exit the offset menu, press MENU, or wait 30 seconds.

Pan

Select **Pan,** 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.

Tilt

Select **Tilt,** 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.

Gobo

Select **Gobo,** 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.

Mirror

Select **Mirror,** 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 8 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 9. As the first fixture uses all the first 8 DMX channels, the next available channel is 9 (8+1=9 >> 9).

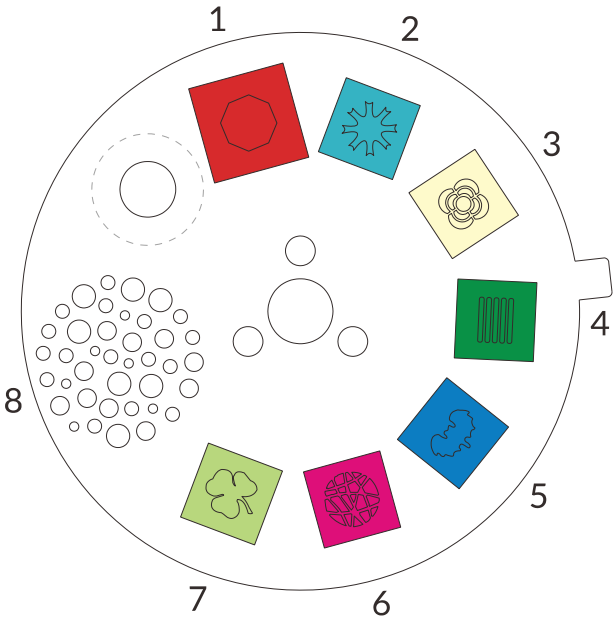
See the chart below for more details:

Channel Mode	Unit 1 Address	Unit 2 Address	Unit 3 Address	Unit 4 Address	Unit xxx Address
8 channels	1	9	17	25	.....

7.2 DMX Protocol

CHANNEL 8ch	VALUE	FUNCTION
1	000-255	**PAN** 0°→180°
2	000-009 010-120 121-134 135-245 246-255	**TILT** Stop Counter-Clockwise Rotation, Fast to Slow Stop Clockwise Rotation, Slow to Fast Stop
3	000-007 008-015 016-023 024-031 032-039 040-047 048-055 056-063 064-071 072-076 077-082 083-088 089-094 095-100 101-106 107-112 113-131 132-255	**GOBO WHEEL** Open Gobo 1 Gobo 2 Gobo 3 Gobo 4 Gobo 5 Gobo 6 Gobo 7 Gobo 8 Gobo 1 Shaking, Slow to Fast Gobo 2 Shaking, Slow to Fast Gobo 3 Shaking, Slow to Fast Gobo 4 Shaking, Slow to Fast Gobo 5 Shaking, Slow to Fast Gobo 6 Shaking, Slow to Fast Gobo 7 Shaking, Slow to Fast Gobo 8 Shaking, Slow to Fast Keep Spinning Back and Forth, Slow to Fast
4	000-009 010-120 121-134 135-245 246-255	**MIRROR ROTATION** Stop Clockwise Rotation, Slow to Fast Stop Counter-Clockwise Rotation, Fast to Slow Stop
5	000-007 008-015 016-131 132-139 140-181 182-189 190-231	**STROBE** Close Open Strobe from Slow to Fast Open Fast Open Slow Close from Slow to Fast Open Slow Open Fast Close from Slow to Fast

	232-239 240-247 248-255	Sound-activated Strobe Random Strobe from Slow to Fast Open
6	000-255	**DIMMER** 0%→100%
7	000-045 046-087 088-129 130-171 172-213 214-255	**SHOW MODE** Null Show 1 Show 2 Show 3 Show 4 Show 0 (Random Show 1-4 Effect)
8	000-029 030-039 040-049 050-059 060-069 070-199 200-209 210-219 220-229 230-255	**FUNCTION** (To activate following functions, stop in DMX value for at least 3 seconds.) Null Dimmer Curve Linear Dimmer Curve Square Law Dimmer Curve Inv Square Law Dimmer Curve S Null All Reset Dimmer Speed Fast Dimmer Speed Smooth Null



Static Gobo Wheel

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.

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.

Led Timeout Use

LED Too Hot Off

When the fixture temperature reaches 85℃, it will automatically turn off to protect the fixture.

Fan 1/2 Start Error

Check whether the fan is not running.
Check whether the fan leads are installed in place or disconnected.
Check whether the fan is damaged.
Check whether there are obstacles in the fan operating range.

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.