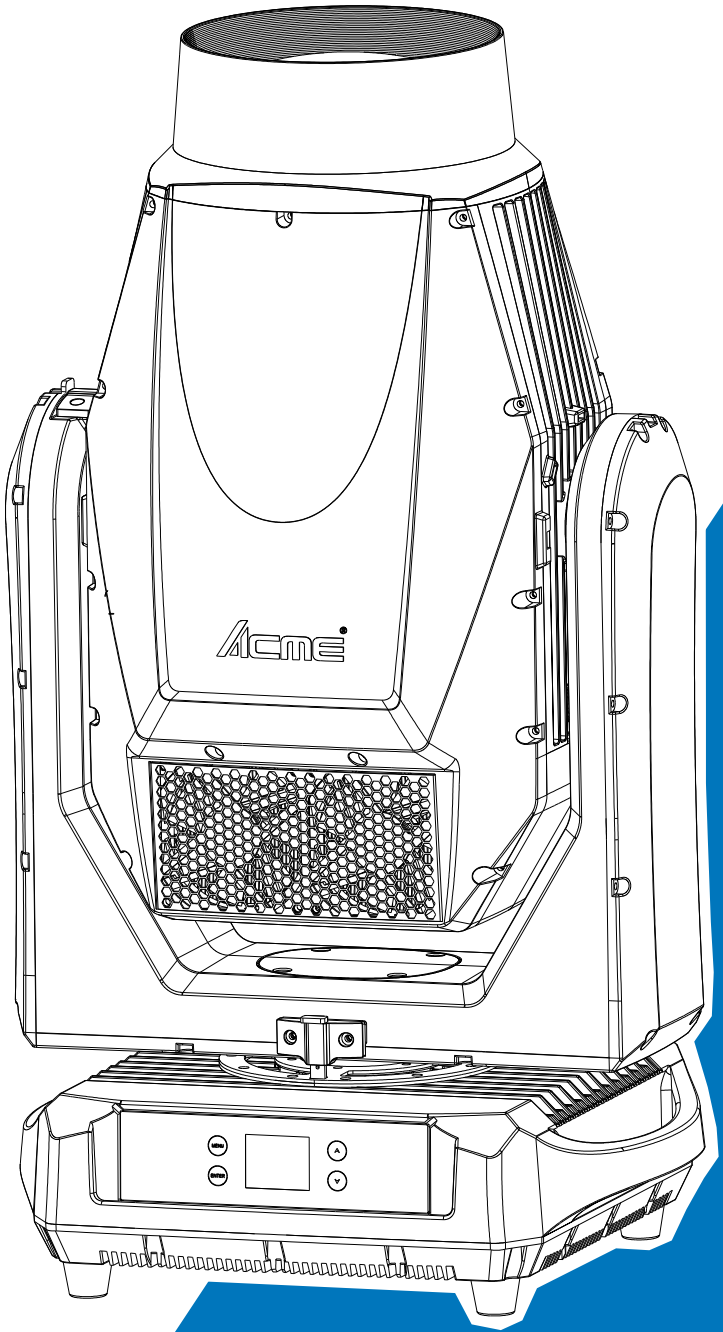
LYRA BW



Intertek
5000057

User Manual

Please read the instruction carefully before use

CONTENTS

01/ 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 to ensure that there is no transportation damage before using the unit.
- This product is suitable for wet locations. Do not immerse in water.
- 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 3 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.

01/ Consignes de sécurité

Veuillez lire attentivement les instructions qui contiennent des informations importantes sur l'installation, l'utilisation et l'entretien.

ATTENTION

Veuillez conserver ce guide de l'utilisateur pour une consultation future. Si vous vendez l'appareil à un autre utilisateur, assurez-vous qu'il reçoive également ce manuel d'instructions.

Important:

Les dommages causés par le non-respect de ce manuel d'utilisation ne sont pas couverts par la garantie. Le revendeur n'acceptera aucune responsabilité pour les défauts ou problèmes qui en résultent.

- Déballez et vérifiez soigneusement qu'il n'y a pas de dommages dus au transport avant d'utiliser l'appareil.
- Ce produit convient aux endroits humides. Ne pas immerger dans l'eau.
- L'installation et la mise en fonctionnement doit être effectué par un opérateur qualifié.
- NE PAS permettre aux enfants d'utiliser l'appareil.
- Utilisez une chaîne de sécurité lors de la fixation de l'unité. Manipulez l'appareil en portant sa base au lieu de la tête uniquement.
- L'unité doit être installée dans un endroit avec une ventilation adéquate, à au moins 50cm des surfaces adjacentes.
- Assurez-vous qu'aucune fente d'aération du luminaire n'est obstruée, sinon il risque de surchauffer.
- Avant toute utilisation, assurez-vous que vous connectez ce luminaire à la tension appropriée conformément aux spécifications que vous trouverez dans ce manuel ou sur l'étiquette des spécifications collée sur la base du luminaire.
- Il est important de relier le file jaune/vert à la terre afin d'éviter tout choc électrique.
- Température ambiante minimale TA: 0˚C. Température ambiante maximale TA: 40˚C. N'utilisez pas ce luminaire à des températures inférieures ou supérieures.
- NE PAS connecter le luminaire à un pack de gradateurs.
- Gardez les matériaux inflammables à l'écart du luminaire pendant le fonctionnement pour éviter tout risque d'incendie.

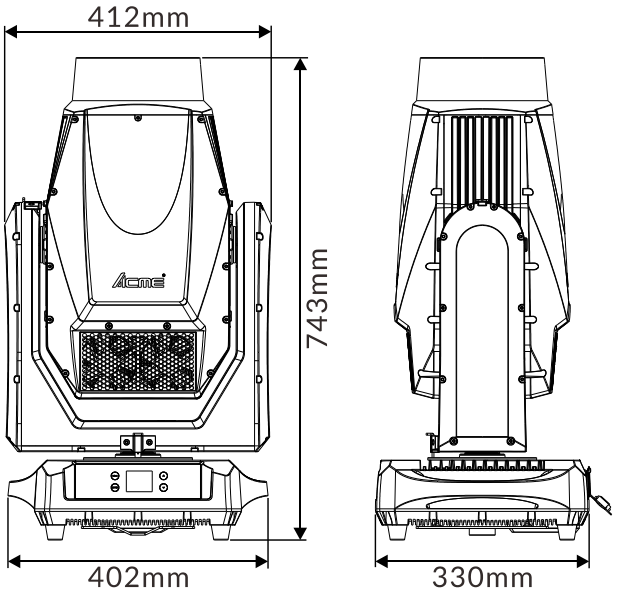
- Assurez-vous que le cordon d'alimentation n'est pas pincé ou endommagé; remplacez-le immédiatement s'il est endommagé.
- La température de surface de l'unité peut atteindre 75˚C. NE PAS toucher les capots à mains nues pendant son fonctionnement.
- Évitez que des liquides inflammables, de l'eau ou du métal ne pénètrent dans l'appareil. Si cela se produit, coupez immédiatement l'alimentation secteur.
- NE PAS utiliser le luminaire dans un environnement sale ou poussiéreux. Cette appareil doit être nettoyer régulièrement.
- NE touchez AUCUN file pendant le fonctionnement car il pourrait y avoir un risque de choc électrique.
- Évitez l'enchevêtrement du cordon d'alimentation avec d'autres fils.
- La distance minimale de projection sur des objets ou sur des surfaces doit être supérieure à 3 mètres.
- En cas de problème de fonctionnement grave, arrêtez immédiatement d'utiliser l'appareil.
- N'allumez et n'éteignez jamais ce luminaire à maintes reprises.
- Le boîtier, les lentilles ou le filtre ultraviolet doivent être remplacés s'ils sont visiblement endommagés.
- NE PAS ouvrir le boîtier car il ne contient aucune pièce réparable par l'utilisateur.
- NE PAS mettre ce luminaire en fonctionnement s'il est endommagé. N'effectuez pas de réparations vous-même. Les réparations ne doivent être effectuées par des personnes non qualifiées, cela peut entraîner des dommages ou des dysfonctionnements. Veuillez contacter le centre d'assistance technique agréé le plus proche si nécessaire.
- Débranchez ce produit du secteur avant de procéder à l'entretien.
- Utiliser l'emballage d'origine si l'appareil doit être transporté.
- Évitez une exposition directe des yeux à la source lumineuse lorsque le produit est allumé.
- N'utilisez PAS ce produit si vous constatez des dommages sur le boîtier, les blindages ou les câbles. Faites remplacer immédiatement les pièces endommagées par un technicien agréé.

02/ Technical Specifications

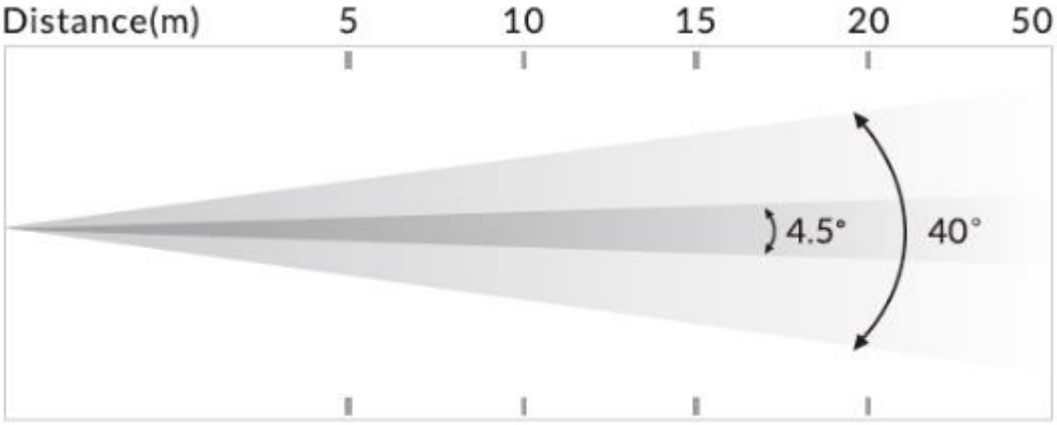
Power Voltage	100-240V~ 50/60Hz	
Power Consumption	1455W	
Light Source	SCL1001YCF-80-R72	
Color Temperature	6700K	
Beam Angle	4.5°-40°	
Field Angle	5°-60°	
Dimmer/Strobe	0-100% smooth dimming; Outstanding strobe effect with variable speed	
Color Wheel	Color Wheel	5 colors + cri filter + open with rainbow effect
Gobo Wheel	Rotating Gobo Wheel	6 replaceable gobos + open
Movement	Pan	540°
	Tilt	260°
	Pan/Tilt Resolution	16 bit
	Automatic pan/tilt position correction	
	Fixation	Pan/Tilt lock
Control	DMX Channel	18/30 Channels
	Control Mode	DMX512
		RDM
	Firmware Upgrade	Firmware Upgrade via DMX link
Construction	Display	LCD display
	Data In/Out	5-pin IP XLR (3-pin IP XLR is optional)
	Power In/Out	Waterproof Power Connector in/out
	Protection Rating	IP66

Description for power cord set should be used: Listed SJOW flexible cord with rating: 300V, 105°C, VW-1, 16AWGx3C, molded with 5-15P attachment plug and terminated with cord connector model SAC3FX with rating 250V, 16A by NINGBO SEETRONIC ELECTRONIC CO., LTD. The power cord shall be at least 914mm (It is to be measured from the face of attachment plug to the face of connector).

Features	Standard Mode: Ra>70	
	High CRI Mode: Ra>90	
	High CRI filter used to switch to HCRI mode	
	Linear CMY color mixing	
	Variable CTO	
	Independent frost effect	
	Motorized zoom	
	Motorized focus	
	4 x fast and smooth framing shutters; The position and the angle of each shutter blade can be controlled individually; Each shutter blade can block out light completely; The framing module can be rotated at ±60 degrees	
	IP66 protection rotating, can be used outdoors all year round	
Dimensions	412x330x743mm	16.2"x13"x29.3"in
Weight	42.5kgs	93.7lbs

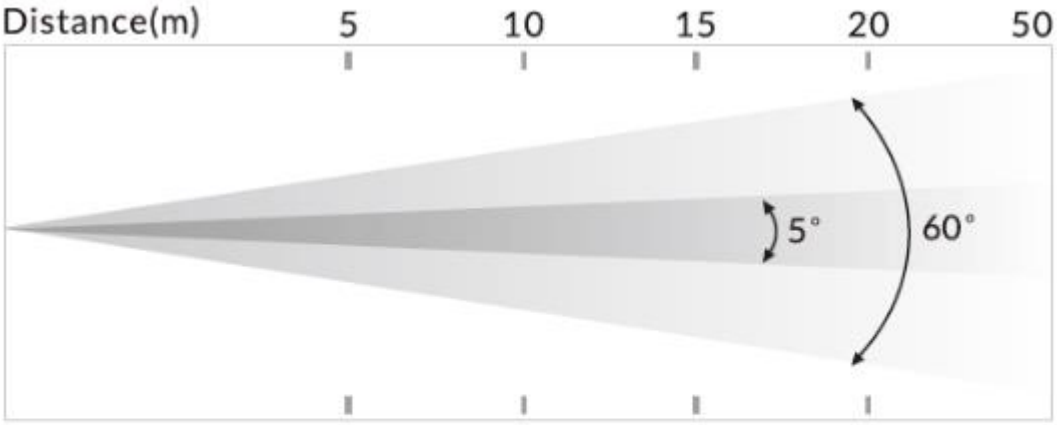


Photometric Diagram (Beam Angle):



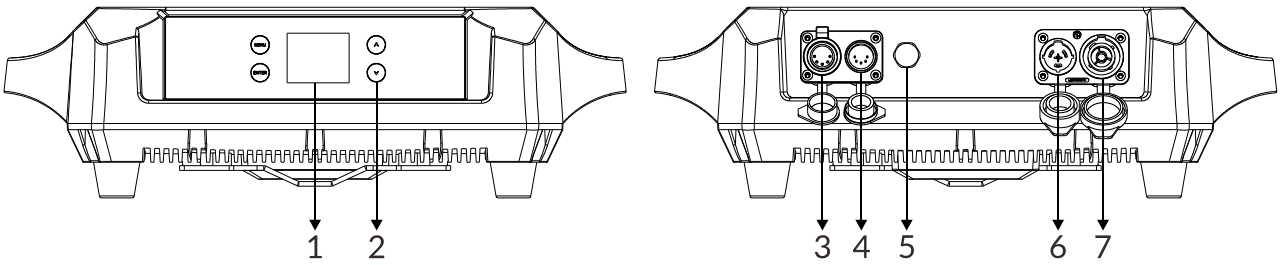
4.5° W Lux	147,470	36,867	16,385	9,216	1,475
Diameter(m)	0.39	0.79	1.18	1.57	3.93
40° W Lux	3760	940	418	235	38
Diameter(m)	3.64	7.28	10.92	14.56	36.4

Photometric Diagram (Field Angle):



5° W Lux	137,000	34,250	15,222	8,562	1,370
Diameter(m)	0.44	0.87	1.31	1.75	4.37
60° W Lux	3400	850	378	212	34
Diameter(m)	5.77	11.55	17.32	23.09	57.74

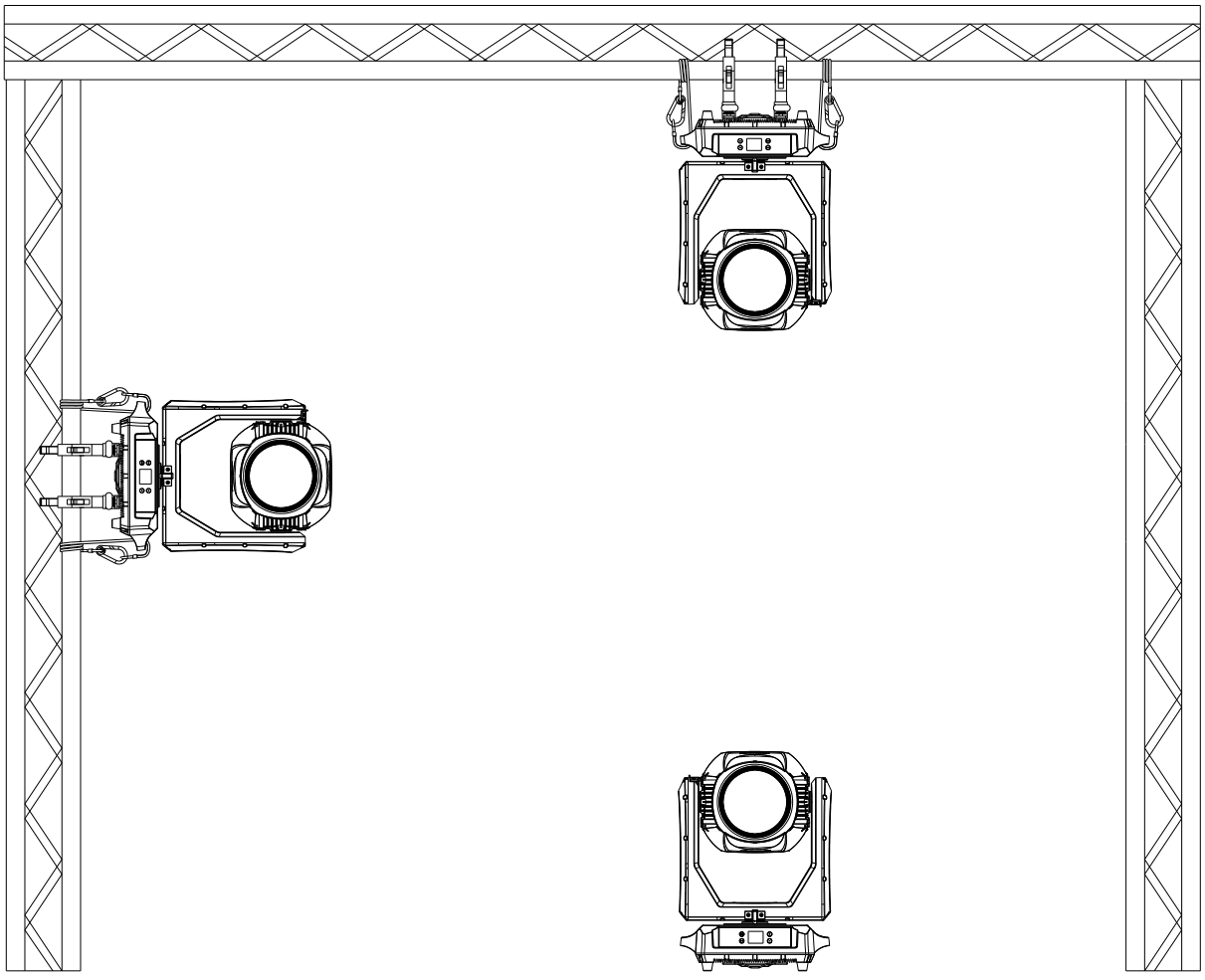
03/ Control Panel

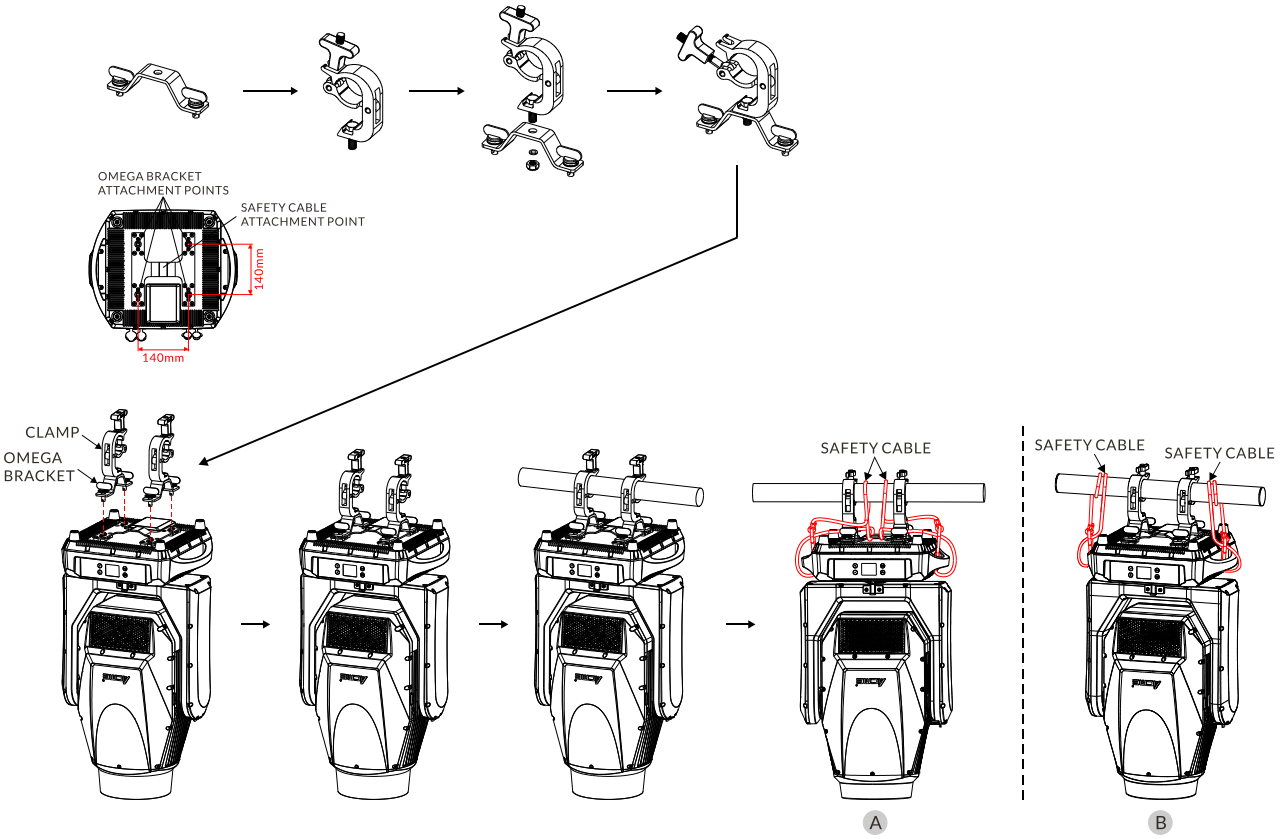


1. Display	To show the various menus and the selected function	
2. Buttons	MENU	To enter into move backward or leave the menu
	▲ UP	To go backward to move up in the menu
	▼ DOWN	To go forward to move down in the menu
	ENTER	To perform the desired functions
3. DMX OUT	For DMX512 link, use 5-pin XLR cable to link the next units to output DMX signal (3-pin XLR cable is optional)	
4. DMX IN	For DMX512 link, use 5-pin XLR cable to link the unit and DMX controller to input DMX signal (3-pin XLR cable is optional)	
5. RELEASE VALVE		
6. POWER IN	To connect to supply power	
7. POWER OUT	To connect to the next fixture	

04/ 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 the supplied safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.



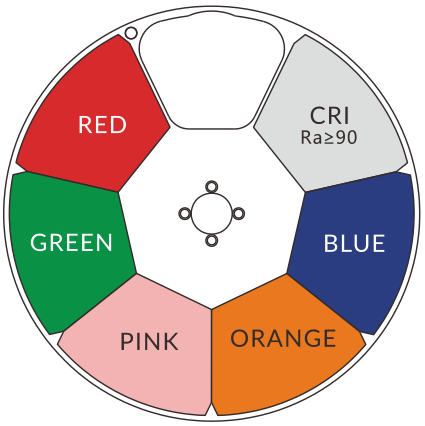


Wrap the safety cables as A or B shows.

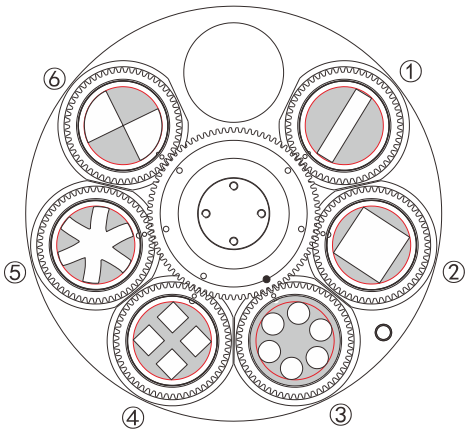
Caution: For security reasons, you need to loop and wrap safety cables through fixture base handle and route and wrap through center bracket on fixture base (A). Or pull the safety cables through the handle and around the truss (B).

The safety cable must be secured to keep from interfering with the pan and tilt movement of the fixture.

05/ Effect Wheels



COLOR WHEEL



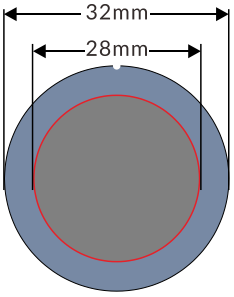
ROTATING GOBO WHEEL

DANGER!

Install the rotating gobos with the device switched off only.

Unplug from mains before changing the rotating gobos!

R-Gobos	Part Number
① Gobo1	3011001487
② Gobo2	3011001488
③ Gobo3	3011001489
④ Gobo4	3011001490
⑤ Gobo5	3011001491
⑥ Gobo6	3011001492



Rotating Gobos Dimensions

06/ How To Set The Unit

6.1 Main Functions

- 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 screen will be automatically locked if there is no operation for a long time, and can be unlocked by long-pressing the [MENU] button.

The main functions are shown below:

MENU	SUBMENU	OPTIONS	
DMX Settings	DMX Address	1-495 (18 ch.)	(Default=1)
		1-483 (30 ch.)	
	DMX Channel Mode	18 ch.	
		30 ch.	
	No DMX Status	Blackout	
		Hold	
		Manual	
	View DMX Value		
Fixture Settings	Pan Invert	No	
		Yes	
	Tilt Invert	No	
		Yes	
	P/T Feedback	No	
		Yes	
	Dimmer Speed	Fast	
		Smooth	
	Dimmer Curve	Linear	
		Square Law	
		Inv SQ Law	
		S Curve	

MENU	SUBMENU	OPTIONS	
	Led Refresh Rate	900Hz	
		1000Hz	
		1100Hz	
		1200Hz	
		1300Hz	
		1400Hz	
		1500Hz	
		2500Hz	
		4000Hz	
		5000Hz	
		6000Hz	
		10KHz	
		15KHz	
		20KHz	
		25KHz	
	Cooling Mode	Standard	
		Quiet	
		Theatre	
	Bright Calibration	50-100	(Default=100)
	Blade Mode	Mode 1	
		Mode 2	
	Color Short Cut	Enable	
		Disable	
	Gobo Short Cut	Enable	
		Disable	
Display Settings	Display Invert	No	
		Yes	
	Backlight Intensity	1-10	(Default=10)
	Temperature Unit	℃	
		°F	
	Language	English	
		Chinese	

MENU	SUBMENU	OPTIONS	
Fixture Test	Auto Test		
	Manual Test	Clear	No/Yes
		Pan	0-255
		Tilt	0-255
		Cyan	0-255
		Magenta	0-255
		Yellow	0-255
		Cto	0-255
		Color	0-255
		Gobo	0-255
		R-Gobo	0-255
		R-Gobo Fine	0-255
		CRI	0-255
		Lens	0-255
		Frost	0-255
		Zoom	0-255
		Focus	0-255
		Strobe	0-255
		Dimmer	0-255
		Blade	0-255
		Blade Down 1	0-255
		Blade Down 2	0-255
		Blade Up 1	0-255
		Blade Up 2	0-255
		Blade Left 1	0-255
		Blade Left 2	0-255
		Blade Right 1	0-255
		Blade Right 2	0-255

MENU	SUBMENU	OPTIONS		
Fixture Information	Fixture Use Hour			
	LED Use Hour	Total LED Hour		
		LED On Hour		
		LED Hours Reset	Password=050	
	Humidity		Current	Max
		Base		
		Head		
	Temperature		Current	Max
		Led		
		Base		
		NTC-A		
	Fan State	B_FAN 1~4		
		A_FAN 1		
		H_FAN 1~11		
	Firmware Version			
	RDM UID			
	Error Logs	Fixture Errors		
		Reset Error Log	No	
			Yes	Password=050
Reset Function	Pan/Tilt Reset	No		
		Yes		
	Effect Reset	No		
		Yes		
	All Reset	No		
		Yes		
Special Function	Factory Settings	No		
		Yes		

DMX Settings

Enter the control menu and select **DMX Settings**, press ENTER. Use the UP/DOWN button to select **DMX Address, DMX Channel 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
18 ch.	1-495
30 ch.	1-483

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 **18 ch.** and **30 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:

Blackout (Fixture blacks out if DMX signal stops)

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

Manual (The device accepts the DMX value stored in the 'Manual Test' 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.

Fixture Settings

Enter the control menu and select **Fixture Settings**, press ENTER. Use the UP/DOWN button to select **Pan Invert, Tilt Invert, P/T Feedback, Dimmer Speed, Dimmer Curve, Led Refresh Rate, Cooling Mode, Bright Calibration, Blade Mode, Color Short Cut** or **Gobo Short Cut.**

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.

Dimmer Speed

Select **Dimmer Speed,** press ENTER.

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

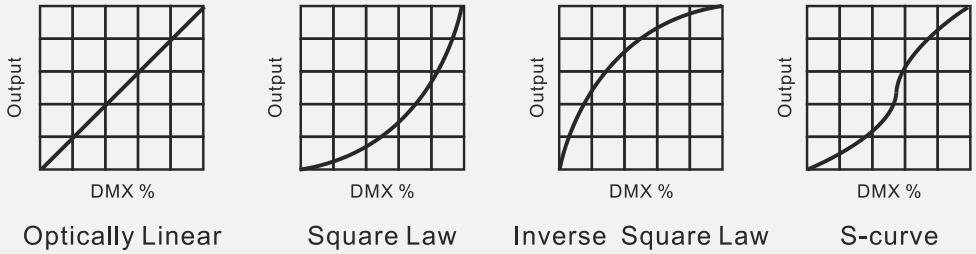
To exit the menu, press MENU, or wait 30 seconds.

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.

Led Refresh Rate

Select **Led Refresh Rate,** press ENTER.

Use UP/DOWN button to select **900Hz, 1000Hz, 1100Hz, 1200Hz, 1300Hz, 1400Hz, 1500Hz, 2500Hz, 4000Hz, 5000Hz, 6000Hz, 10KHz, 15KHz, 20KHz** or **25KHz**, 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 **Standard, Quiet** or **Theatre**, confirm your selection with ENTER.

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

Bright Calibration

Select **Bright Calibration,** press ENTER.
Use UP/DOWN button to select a value between **50** and **100**, confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Blade Mode

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

Color Short Cut

Select **Color Short Cut,** press ENTER.
Use UP/DOWN button to select **Enable** or **Disable**, confirm your selection with ENTER.
To exit the menu, press MENU, or wait 30 seconds.

Gobo Short Cut

Select **Gobo Short Cut,** press ENTER.
Use UP/DOWN button to select **Enable** or **Disable**, 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, Backlight Intensity, 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.

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.

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 Test.**

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 Test

Select **Manual Test,** 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.)

Fixture Information

Enter the control menu and select **Fixture Information**, press ENTER. Use the UP/DOWN button to select **Fixture Use Hour, LED Use Hour, Humidity, Temperature, Fan State, 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.
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.

Humidity

Select **Humidity,** press ENTER.
The device humidity is displayed.
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.

Fan State

Select **Fan State,** press ENTER.
The fan status 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 **Pan/Tilt Reset, Effect Reset** or **All Reset.**

Pan/Tilt Reset

Select **Pan/Tilt Reset,** 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.

Effect Reset

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

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.

Special Function

Enter the control menu and select **Special Function**, press ENTER. Use the UP/DOWN button to select **Factory Settings.**

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		√	√
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
Frequency(Hz)	1072~1327
Dimming Start	0~999
Dim 1 Offset	-128~127
Dim 2 Offset	-128~127
Dim 3 Offset	-128~127
Dim 4 Offset	-128~127
Dim 5 Offset	-128~127
Dim 6 Offset	-128~127
Dim 7 Offset	-128~127
Pan	-128~127
Tilt	-128~127
Cyan	-128~127
Magenta	-128~127
Yellow	-128~127
Cto	-128~127
Color	-128~127
Gobo	-128~127
R-Gobo	-128~127
Lens	-128~127
Frost	-128~127
Zoom	-128~127
Focus	-128~127
Blade	-128~127
Blade Down 1	-128~127
Blade Down 2	-128~127

Blade Up 1	-128~127
Blade Up 2	-128~127
Blade Left 1	-128~127
Blade Left 2	-128~127
Blade Right 1	-128~127
Blade Right 2	-128~127

Frequency(Hz)

Select **Frequency(Hz),** press ENTER.

Use UP/DOWN button to select a value, confirm your selection with ENTER.

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

Frequency	VALUES
900Hz	772~1027
1000Hz	872~1127
1100Hz	972~1227
1200Hz	1072~1327
1300Hz	1172~1427
1400Hz	1272~1527
1500Hz	1372~1627
2500Hz	2372~2627
4000Hz	3872~4127
5000Hz	4872~5127
6000Hz	5872~6127
10KHz	9872~10127
15KHz	14872~15127
20KHz	19872~20127
25KHz	24872~25127

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.

Dim 1 Offset

Select **Dim 1 Offset,** 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.

Dim 2 Offset

Select **Dim 2 Offset,** 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.

Dim 3 Offset

Select **Dim 3 Offset,** 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.

Dim 4 Offset

Select **Dim 4 Offset,** 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.

Dim 5 Offset

Select **Dim 5 Offset,** 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.

Dim 6 Offset

Select **Dim 6 Offset,** 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.

Dim 7 Offset

Select **Dim 7 Offset,** 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.

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.

Cyan

Select **Cyan,** 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.

Magenta

Select **Magenta,** 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.

Yellow

Select **Yellow,** 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.

Cto

Select **Cto,** 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.

Color

Select **Color,** 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.

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.

R-Gobo

Select **R-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.

Lens

Select **Lens,** 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.

Frost

Select **Frost,** 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 -128 and 127, confirm your selection with ENTER.
To exit the offset menu, press MENU, or wait 30 seconds.

Focus

Select **Focus,** 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.

Blade

Select **Blade,** 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.

Blade Down 1

Select **Blade Down 1,** 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.

Blade Down 2

Select **Blade Down 2,** 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.

Blade Up 1

Select **Blade Up 1,** 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.

Blade Up 2

Select **Blade Up 2,** 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.

Blade Left 1

Select **Blade Left 1,** 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.

Blade Left 2

Select **Blade Left 2,** 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.

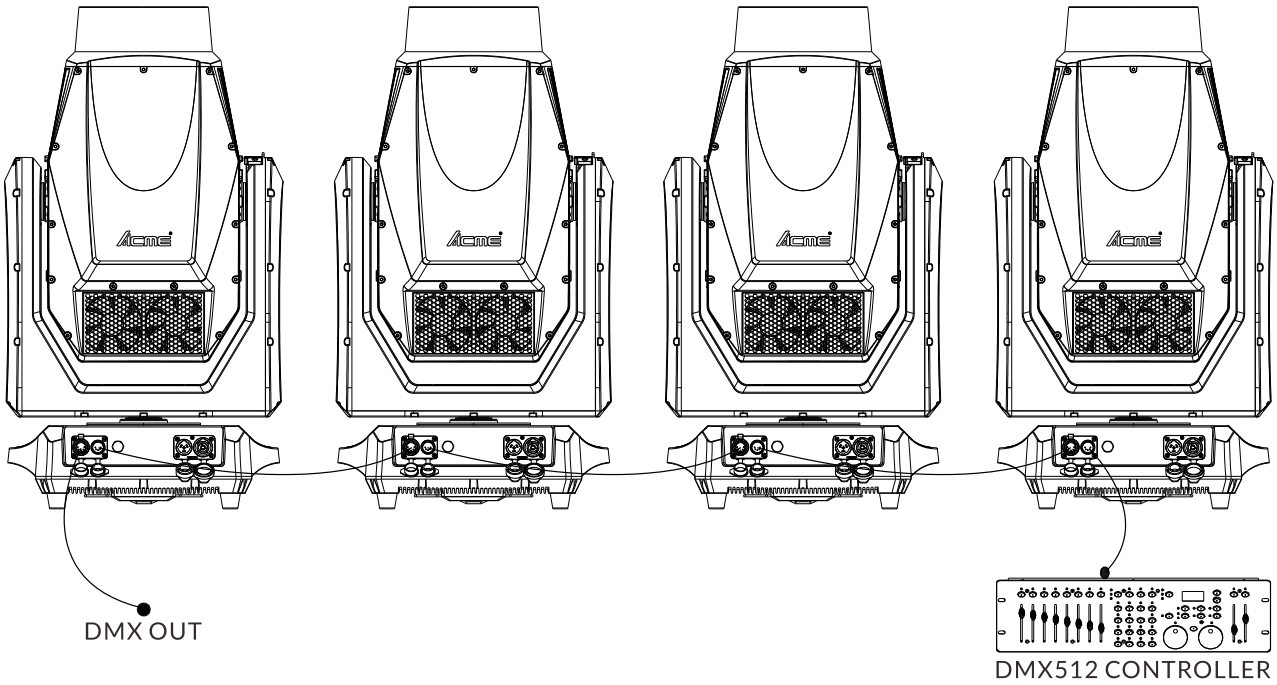
Blade Right 1

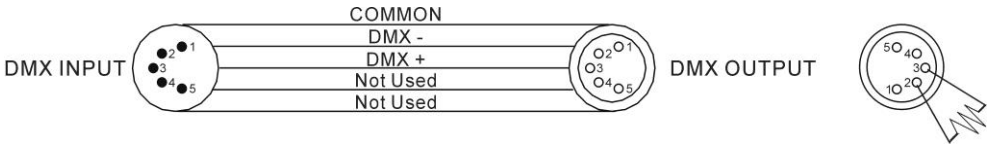
Select **Blade Right 1,** press ENTER.
Use UP/DOWN button to select a value between -128 and 127, confirm your selection with ENTER.
To exit the offset menu, press MENU, or wait 30 seconds.

Blade Right 2

Select **Blade Right 2,** 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.

7.1 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 can only be used in series and cannot be connected in parallel. 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.

7.2 Address Setting

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

Press the MENU button to access the control menus, select DMX Settings, press the ENTER button to confirm. Use the UP/DOWN button to select DMX Address, press the ENTER button to confirm, the present address will show on the display. Use the UP/DOWN button to adjust the address between 001 and 512, press the ENTER button to store. To exit the menu, press MENU, or wait 30 seconds.

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
18 channels	1	19	37	55
30 channels	1	31	61	91

7.3 DMX512 Configuration

Please control the fixture by referring to the configurations below.

Attentions:

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

CHANNEL		VALUE	FUNCTION
18ch	30ch		
1	1	000-255	**PAN** 0°→540°
2	2	000-255	**PAN FINE**
3	3	000-255	**TILT** 0°→260°
4	4	000-255	**TILT FINE**
5	5	000-255	**PAN/TILT SPEED** Fast to Slow
6	6	000-255	**CYAN** 0%→100%
7	7	000-255	**MAGENTA** 0%→100%
8	8	000-255	**YELLOW** 0%→100%
9	9	000-255	**CTO** 0%→100%
10	10		**COLOR WHEEL**
		000-007	Open
		008-018	Color 1
		019-029	Color 2
		030-040	Color 3
		041-051	Color 4
		052-063	Color 5
		064-127	Color Wheel Indexing
		128-189	Clockwise Rotation, Fast to Slow
		190-193	Stop
		194-255	Counter-Clockwise Rotation, Slow to Fast
11			**GOBO WHEEL**
		000-007	Open
		008-016	Gobo 1
		017-025	Gobo 2
		026-034	Gobo 3
		035-043	Gobo 4
		044-052	Gobo 5
		053-063	Gobo 6
		064-073	Gobo 1 Shaking, Slow to Fast
		074-083	Gobo 2 Shaking, Slow to Fast
		084-093	Gobo 3 Shaking, Slow to Fast
		094-103	Gobo 4 Shaking, Slow to Fast
		104-113	Gobo 5 Shaking, Slow to Fast
		114-127	Gobo 6 Shaking, Slow to Fast
		128-189	Counter-Clockwise Rotation, Fast to Slow
		190-193	Stop
		194-255	Clockwise Rotation, Slow to Fast

	12	000-127 128-189 190-193 194-255	**R-GOBO WHEEL** Index 0°→360° Counter-Clockwise Rotation, Fast to Slow Stop Clockwise Rotation, Slow to Fast
	13	000-255	**R-GOBO WHEEL FINE** 0%→100%
11	14	000-007 008-255	**CRI** Close Open
12	15	000-255	**FROST** 0%→100%
13	16	000-255	**ZOOM** Wide→Narrow
14	17	000-255	**FOCUS** 0%→100%
15	18	000-007 008-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	**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 Open Random Strobe from Slow to Fast Open
16	19	000-255	**DIMMER** 0%→100%
17	20	000-255	**DIMMER FINE**
	21	000-255	**BLADE** 0°→180°
	22	000-255	**BLADE DOWN 1** 0%→100%
	23	000-255	**BLADE DOWN 2** 0%→100%
	24	000-255	**BLADE UP 1** 0%→100%
	25	000-255	**BLADE UP 2** 0%→100%
	26	000-255	**BLADE LEFT 1** 0%→100%
	27	000-255	**BLADE LEFT 2** 0%→100%
	28		**BLADE RIGHT 1**

		000-255	0%→100%
	29		**BLADE RIGHT 2**
		000-255	0%→100%
18	30		**SPECIAL FUNCTION**
		000-009	Null
		010-014	Blade Mode: Mode 1 (Not available on 18ch)
		015-019	Blade Mode: Mode 2 (Not available on 18ch)
		020-024	Lens Open
		025-029	Lens Close
		030-039	Dimmer Curve: Linear
		040-049	Dimmer Curve: Square Law
		050-059	Dimmer Curve: Inv SQ Law
		060-069	Dimmer Curve: S Curve
		070-079	Cooling Mode: Standard
		080-089	Cooling Mode: Quiet
		090-099	Cooling Mode: Theatre
		100-109	Led Frequency Setting Enable
		110-119	Led Frequency Setting Disable
		120-122	Null
		123	900Hz
		124	1000Hz
		125	1100Hz
		126	1200Hz
		127	1300Hz
		128	1400Hz
		129	1500Hz
		130	2500Hz
		131	4000Hz
		132	5000Hz
		133	6000Hz
		134	10KHz
		135	15KHz
		136	20KHz
		137	25KHz
		138-139	Null
		140-149	Pan/Tilt Reset
		150-159	Effect Reset
		160-199	Null
		200-209	All Reset
		210-219	Dimmer Speed: Fast
		220-229	Dimmer Speed: Smooth
		230-231	Gobo Short Cut: Enable (Not available on 18ch)
		232-233	Gobo Short Cut: Disable (Not available on 18ch)
		234-235	Color Short Cut: Enable
		236-237	Color Short Cut: Disable
		238-239	Null
		240-255	Null

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/E/F 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.

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 78℃, it will automatically turn off to protect the fixture.

Base Humi. Error

Check whether the humidity sensor is faulty.
Check whether the lead connecting the humidity sensor is installed in place or disconnected.

Head Humi. Error

Check whether the humidity sensor is faulty.
Check whether the lead connecting the humidity sensor is installed in place or disconnected.

Memory. Error

When the memory IC keeps reporting errors, please replace the motherboard.

Base Humi. Too High

Disassemble the housing of the fixture to dehumidify.

Head Humi. Too High

Disassemble the housing of the fixture to dehumidify.

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.

Cyan Reset Error

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

Magenta Reset Error

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

Yellow Reset Error

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

Cto Reset Error

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

Color Reset Error

Check whether the position of the color wheel 1 where the magnet is installed falls off or is damaged.
Check whether there are obstacles in the color wheel 1 operating range.
Check whether the Hall element on the color wheel 1 is damaged.
Check whether the lead connecting the Hall element on the color wheel 1 and the PCB board is in poor contact or disconnected.
Check whether the motor on the color wheel 1 is damaged.
Check whether the related circuit of the motor drive board on the color wheel 1 is damage.

Gobo Reset Error

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

R-Gobo Reset Error

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

Lens Reset Error

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

Frost Reset Error

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

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.

Focus Reset Error

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

Blade Reset Error

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

BaseFan1/2/3/4 Start Err

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.

BaseFan1/2/3/4 Stop Err

Check whether the fan circuit on the motherboard breaks down.
Check whether the component is damaged.

ArmFan1 Start Err

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.

ArmFan1 Stop Err

Check whether the fan circuit on the motherboard breaks down.
Check whether the component is damaged.

HeadFan1/2/3/4/5/6/7/8/9/10/11 Start Err

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.

HeadFan1/2/3/4/5/6/7/8/9/10/11 Stop Err

Check whether the fan circuit on the motherboard breaks down.

Check whether the component is damaged.

HeadFan1/2/3/4 Too Low

Check whether the fan circuit on the motherboard breaks down.

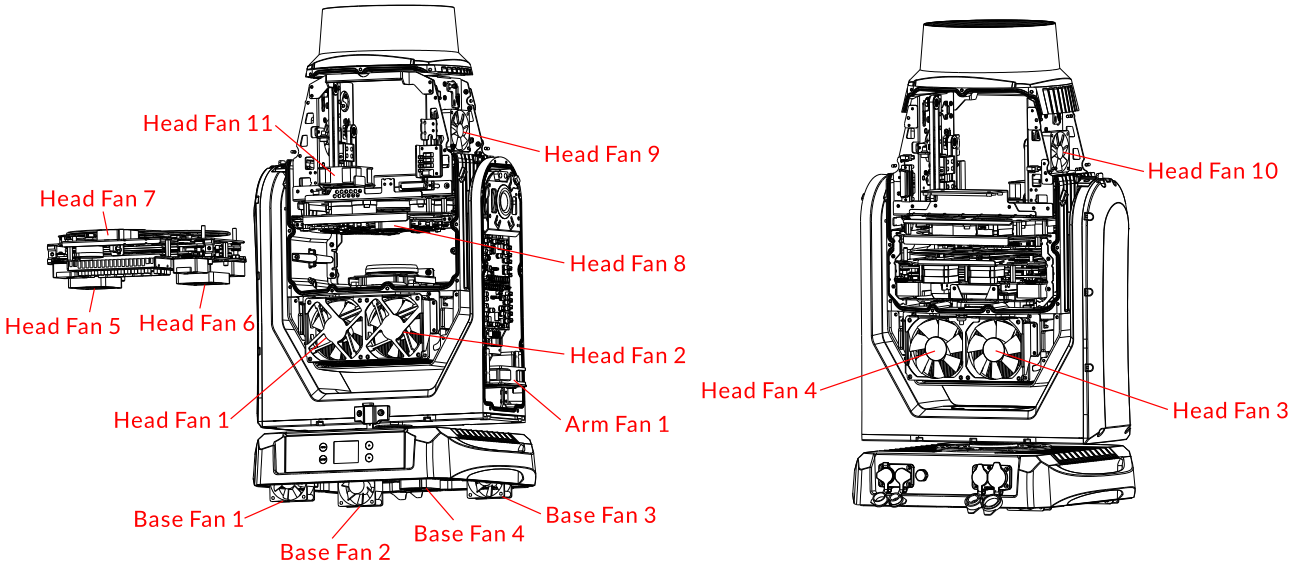
Check whether the component is damaged.

HeadFan1/2/3/4 Too High

Check whether the fan circuit on the motherboard breaks down.

Check whether the component is damaged.

Position of cooling fans:



09/ Troubleshooting

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

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

- Check the connected power.
- Measure the voltage.
- Check the power indicator to see whether it can be lit up or not.

B. Not responding to the DMX controller

- Check whether the DMX connectors and the DMX cables are connected correctly.
- Check whether the DMX address is correctly set.
- If the intermittent DMX signal problem occurs, check whether the XLR socket and the signal cable are well connected.
- Try it with another DMX controller.
- Check whether the DMX cables run near or alongside to the high-voltage cables, which may damage or interfere with the signal circuit.

C. One of the channels is not working well

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

10/ Fixture Cleaning

It is absolutely essential that the fixture is kept clean to ensure the maximum light-output and allow the fixture to function reliably throughout its life. The fixture must be cleaned regularly to avoid dust, dirt and smoke-fluid residues building up on or within the fixture. The cleaning frequency depends on the application environment. Clean the fixture immediately if the dust enters it to avoid damage to the optical lens due to excessive dust.

- A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances should solvents be used.
- Always dry the parts carefully.
- Clean the external optical lens at least every 20 days.