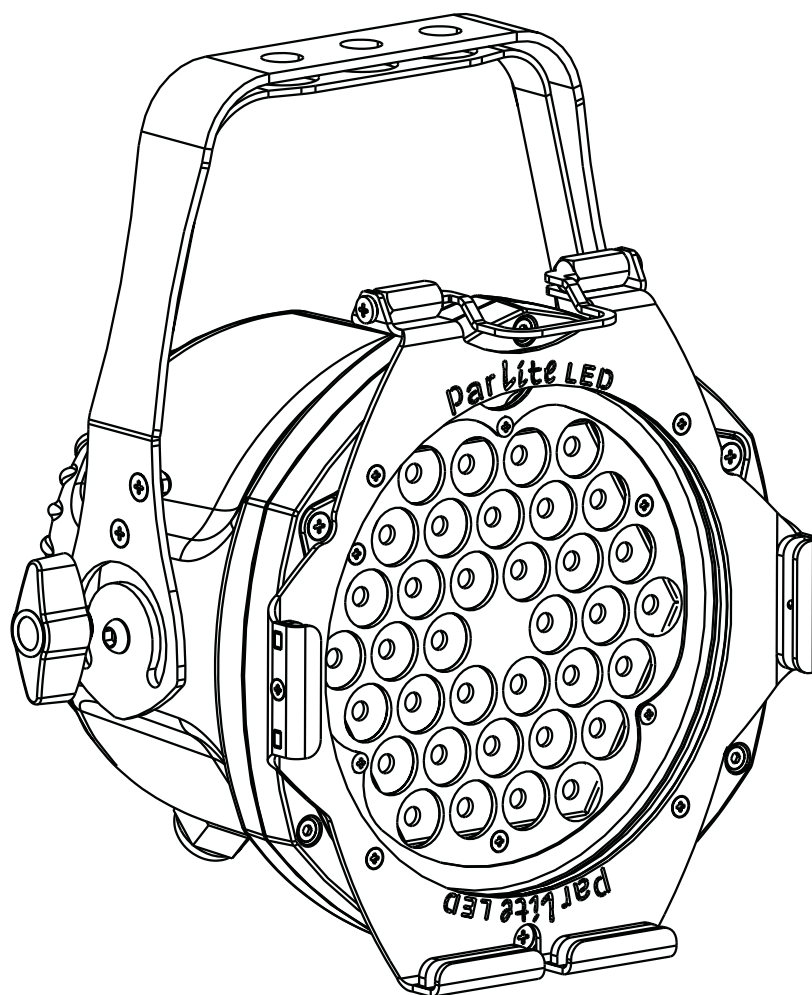


par *lite* LED RGBA



manuale di istruzioni instructions manual

Version 1.0
DIS156

 **coemar**
Light Emotion

par *Lite* LED

numero di serie/serial number

data di acquisto/date of purchase

fornitore/retailer

indirizzo/address

cap/città/suburb

provincia/capital city

stato/state

tel./fax/

Prendete nota, nello spazio apposito, dei dati relativi al modello e al rivenditore del vostro **Par Lite LED**: questi dati ci permetteranno di assistervi con la massima rapidità e precisione.

*Please note in the space provided above the relative service information of the model and the retailer from whom you purchased your **Par Lite LED**: this information will assist us in providing spare parts, repairs or in answering any technical enquiries with the utmost speed and accuracy.*

ATTENZIONE: la sicurezza dell'apparecchio è garantita solo con l'uso appropriato delle presenti istruzioni, pertanto è necessario conservarle.

WARNING: the security of the fixture is granted only if these instructions are strictly followed; therefore it is absolutely necessary to keep this manual.

Index

1. Packaging and transportation	Pag. 5
1.1. Packaging	" 5
1.2. Transportation	" 5
2. General information	Pag. 5
2.1. Important safety information	" 5
2.2. Warranty conditions	" 5
2.3. Certification	" 5
3. Product specifications	Pag. 6
3.1. Technical characteristics	" 6
3.2. Dimensions	" 6
3.3. Projector components	" 6
4. Installation	Pag. 7
4.1. Mechanical installation	" 7
4.2. Attaching a safety chain	" 8
4.3. Adjusting beam direction	" 8
4.4. Opening and closing up the projector	" 9
4.5. Adjusting the beam angle	" 9
5. Powering up	Pag. 11
5.1. Operating voltage and frequency	" 11
5.2. Mains connection	" 11
6. DMX signal functions	Pag. 12
6.1. Connecting DMX signal	" 12
6.2. Powering up	" 12
6.3. DMX addressing	" 13
6.4. DMX functions	" 14
7. Auto function	Pag. 15
7.1. Master/Slave mode	" 15
8. Function	Pag. 16
8.1. Functions (MODE)	" 16
8.2. Setting up functionality (FUNC)	" 17
8.3. Diagnostic functions (MEAS)	" 18
8.4. Electronic alignment	" 18
8.5. Error messages	" 20
9. Thermal protection	Pag. 20
10. Maintenance	Pag. 20
10.1. Replacing blown fuses	" 20
10.2. Periodic maintenance	" 21
11. Spare parts	Pag. 21
12. Frequently asked questions	Pag. 21

English

Congratulations on having purchased a **Coemar** product. You have assured yourself of a fixture of the highest quality, both in componentry and in the technology used. We renew our invitation to you to complete the service information on the previous page, to expedite any request for service information or spares (in case of problems encountered either during, or subsequent to, installation). This information will assist in providing prompt and accurate advice from your **Coemar** service centre..

Following the instructions and procedures outlined in this manual will ensure the maximum efficiency of this product for years to come.

1. Packaging and transportation

1.1. Packaging

Open the packaging and ensure that no part of the equipment has suffered damage in transit. In case of damage to the equipment, contact your carrier immediately by telephone or fax, following this with formal notification in writing.

Packing list

Ensure the packaging contains:

- 1 Par Lite LED
- 1 Instruction manual

1.2. Transportation

The **Par Lite LED** should be transported in either its original packaging or in an appropriate flight case.

2. General information

2.1. Important safety information

Fire prevention:

- 1. Never locate the fixture on a flammable surface.
- 2. Minimum distance from flammable materials: 0.5 m.
- 3. Minimum distance from the closest illuminable surface: 0,5 m.
- 4. Replace any blown or damaged fuses only with those of identical values. Refer to the schematic diagram if there is any doubt.
- 5. Connect the projector to mains power via a thermal magnetic circuit breaker.

Prevention against electric shock:

- 1. High voltage is present in the internal of the unit. Isolate the projector from mains supply prior to performing any function which involves touching the internal of the unit.
- 2. For mains connection, adhere strictly to the guidelines outlined in this manual.
- 3. The level of technology inherent in the **Par Lite LED** requires the use of specialised personnel for all service applications; refer all work to your authorised **Coemar** service centre.
- 4. A good earth connection is essential for proper functioning of the projector. Never operate the unit without proper earth connection.
- 5. The mains cable should not come into contact with other cabling.
- 6. Never handle the unit with wet hands or in a damp environment.

Safety:

- 1. The projector should always be installed with bolts, clamps, and other fixings which are suitably rated to support the weight of the unit.
- 2. Always use a secondary safety chain of a suitable rating to sustain the weight of the unit in case of the failure of the primary fixing point.
- 3. Never install the fixture in an enclosed area lacking sufficient air flow; the ambient temperature should not exceed 35°C.
- 4. The external surface of the unit, at various points, may exceed 80°C. Never handle the unit until at least 10 minutes have elapsed since the unit was turned off..

Protection rating of the body against liquids and solids:

- 1. The standard version of the fixture is classified ordinary apparatus; its protection grade against penetration by external agents, solid or liquid, is **IP 20**
- 2. The IP version of the projector has an **IP 65** protection rating; this indicates that it is protected against dust and significant showers of water. This protection rating allows the fixture to be installed in an exposed location in inclement weather.

2.2. Warranty conditions

- 1. The fixture is guaranteed for a period of 12 months against manufacturing faults and faulty materials.
- 2. Faults due to incorrect operation or operation in an inappropriate manner are not covered by the warranty.
- 3. The warranty is immediately void if the fixture has been operated or serviced by unqualified or unauthorised personnel.
- 4. The warranty does not include fixture replacement.
- 5. The model and serial numbers must be supplied for any warranty claims or advice from our authorised service personnel.

2.3. Certification



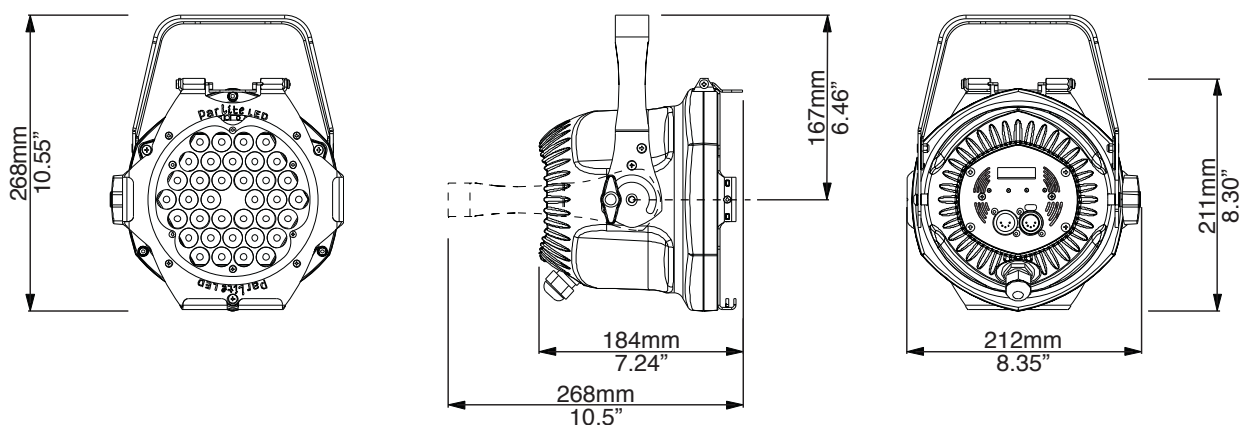
- 1. The fixture satisfies the essential requirements of the directive EMC 89/336/EEC, 93/68/EEC, BT73/23/EEC.
- 2. The fixture is in accordance with the standard EN 50419 (RoHS) and satisfies the requirements of the directive 2002/96/EC & 2003/108/EC (WEEE).

3. Product specifications

3.1. Technical characteristics

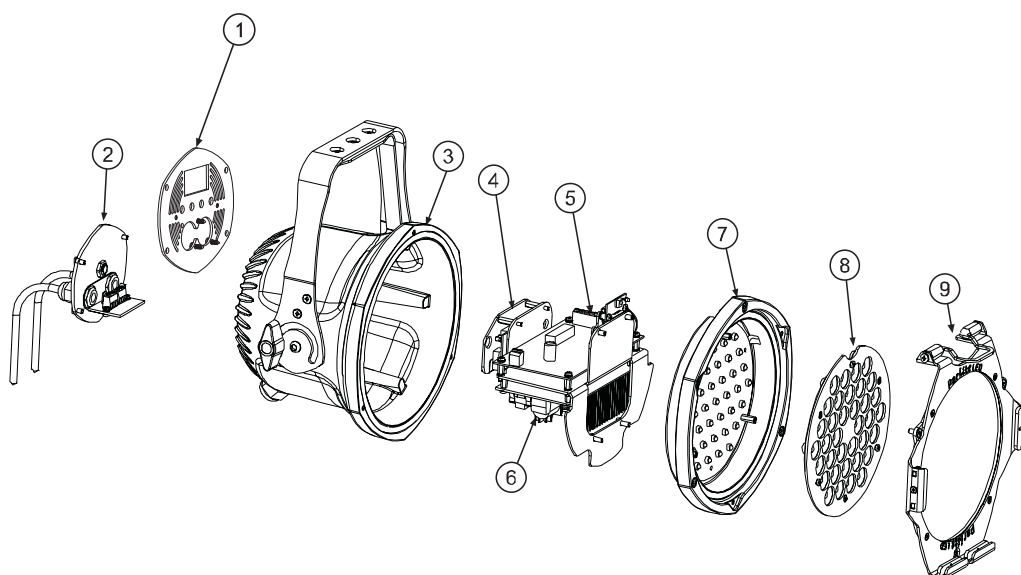
Power:	100/250 Vac 50/60Hz Autosensing
Nominal current:	0.2A @ 230Vac 0.5A @ 115V
Power factor:	$\cos \varphi = 0.9$
Led power:	36 Led x 1W
Minimum ambient temperature:	-15°C / 5°F
Maximum ambient temperature:	35°C / 95°F
Weight:	3.6 Kg / 7.9 lbs
IP Rating:	IP20 (standard version) IP65 (IP version)

3.2. Dimensions



3.3. Projector components

The principal components of the Par Lite LED are shown in the diagram below.



Descriptions of the components

1. IP20 rear panel
2. IP65 rear panel
3. Projector body
4. Display
5. Led control PCB
6. Switching power supply
7. Head
8. Lens group
9. Front frame (optional)

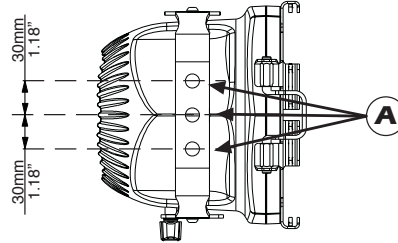
4. Installation

4.1. Mechanical installation

Par Lite LED may be floor mounted or hung from an appropriate structure in any position.

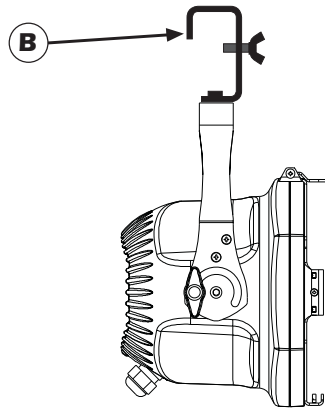
Permanent installation

Use the three holes "A" on the yoke of the Par Lite LED for robust, permanent installation.



Mobile installations

If hanging the fixture from a lighting truss or similar, we recommend the use of appropriate clamps "B", affixed to the yoke in the holes "A" provided, as shown in the following diagram.



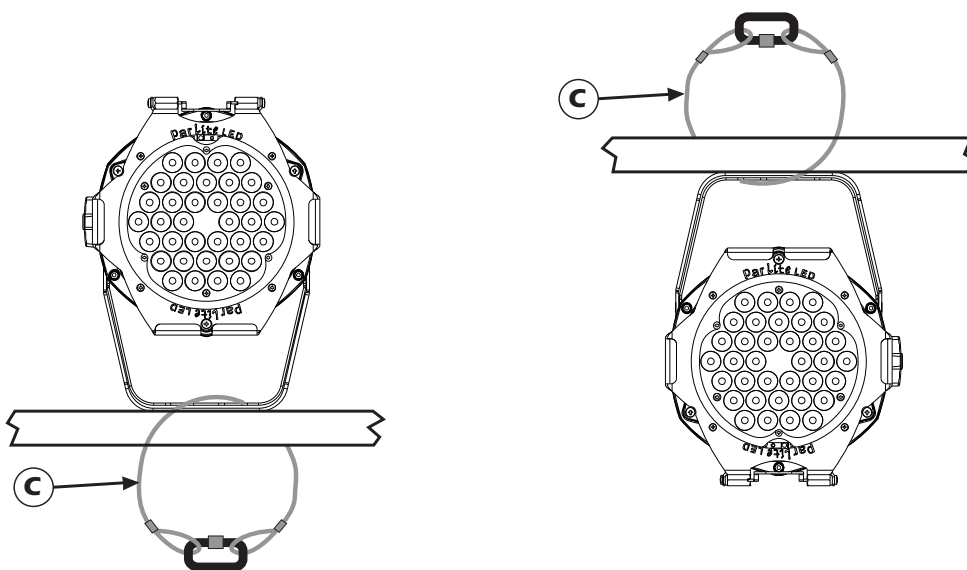
ATTENTION!!

Always ensure that your support structure and fixings (bolts, clamps, etc.) are rated to support the weight of the fixture.

Never install the fixture in a position in an accessible position to personnel who may ignore or be unaware of the safety directions mentioned in this manual.

4.2. Safety chain

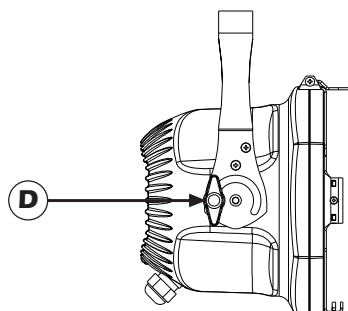
When hanging the **Par Lite LED** we recommend the use of a safety chain "**C**" affixed to the yoke and to the suspension device. The safety chain should be either a metal wire rope or a metal chain, both suitably rated for the purpose.



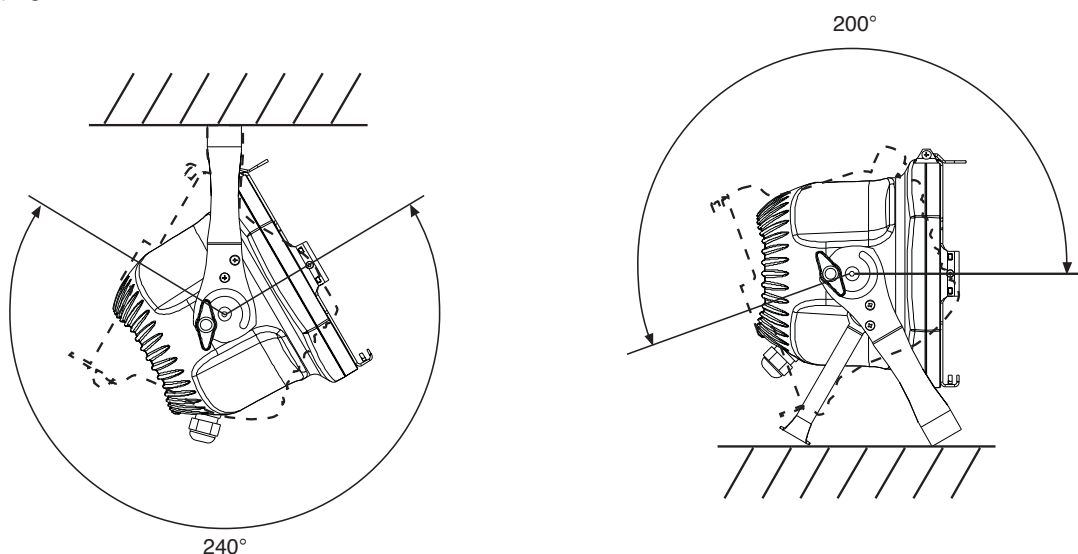
4.3. Adjusting beam direction

The **Par Lite LED** can be tilted to adjust the beam output. To perform this adjustment, follow the instructions set out below.

1. Loosen the handle "**D**" located on the side of the projector, thus allowing the inclination to be changed.



2. Adjust the projector's tilt.



3. Refasten the handle "**D**" on the side of the projector.

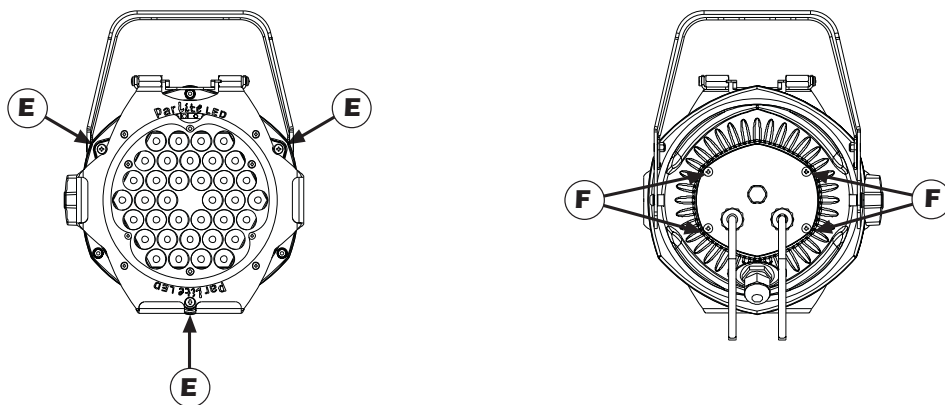
English

4.4. Opening and closing up the projector

The various procedures which follow can only be performed with the projector housing removed.

To gain access to the internal of the projector use a suitable screwdriver to remove the 3 screws "E" which affix the front frame and remove it.

In the IP version, to access the rear area (switch panel), fully untighten the 4 screws "F" that fix of the rear panel and remove it from the unit.



You should now have complete access to the internal of the projector and can proceed to carry out the procedures described below. Close the unit by following the previous points the other way round.

ATTENTION!!

Remove mains power prior to opening up the projector.
In the IP version, before close up the unit, check that the garnishings are inserted in their places.
Both screws "E" and "F" must be uniformly fixed, screwing them alternately in short steps.

4.5. Adjusting the beam angle

Several optional optical groups are available for **Par Lite Led**. They are used to vary the beam dimension and make it suitable for different lighting applications and specifically: a group of lenses for a larger projection angle, a flood reflector and several filters that can be fitted either internally or externally to the unit.

The standard optical group, fitted on **Par Lite Led**, is composed by a group of lenses that gives 12° beam angle.

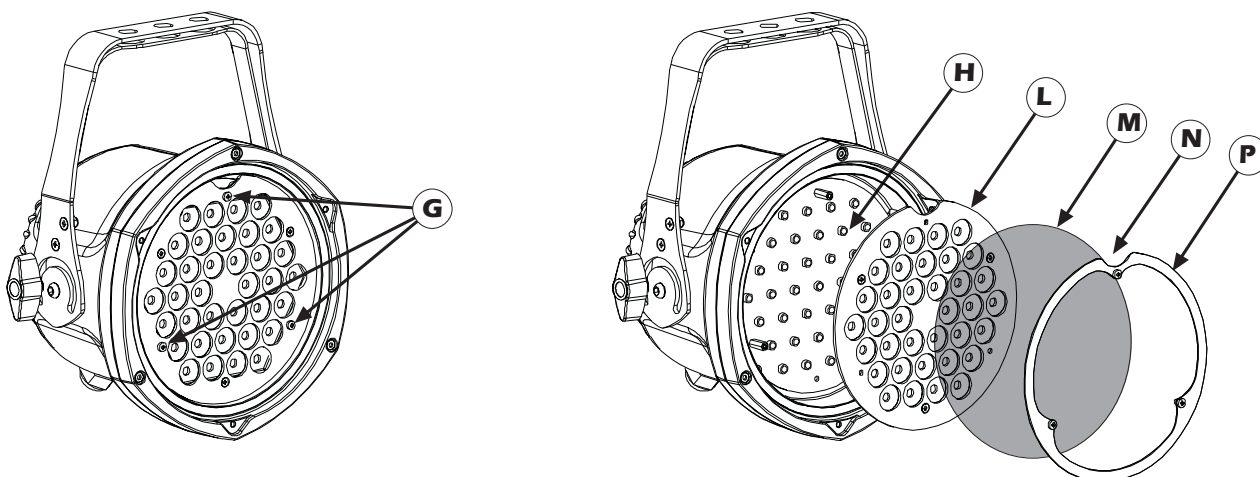
Here following you will find instructions to install different optical groups.

1. Open the unit as shown on paragraph 4.4 Open and close the unit
2. Remove the 3 screws "G".
3. Replace the lenses "L" and ensure that the led of "H" disc fit perfectly in the lenses seats

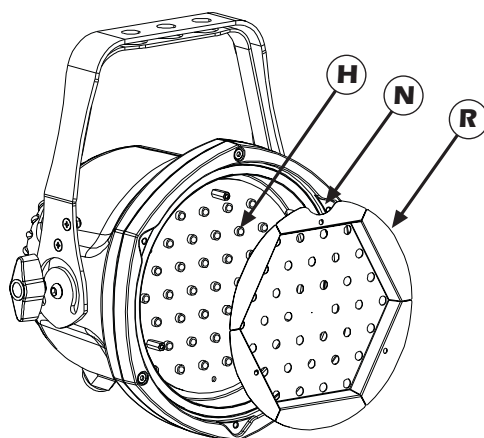
If you wish to use an optional filter holder (code **CO9169**) follow the instructions as per point 4 and 5.

4. After having positioned the lenses group insert the "M" filter
5. Lock it with the "P" filter holder

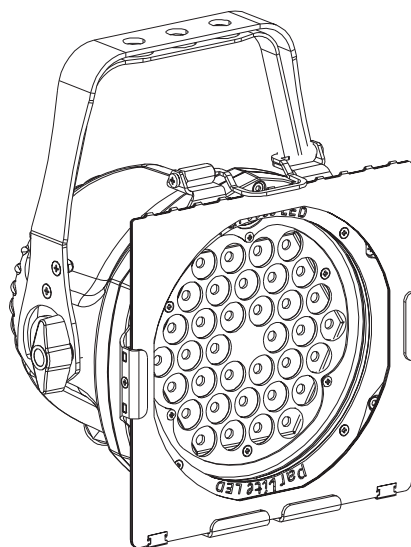
6. Tighten the 3 "G" fixing screws
7. Close the unit



To further increase the beam angle the **"R"** flood reflector is available (code **CO9168**) and it must be fitted instead of the lenses group and filter holder.



To vary the wideness of the beam without opening the unit, it's possible to install an external filter holder **"S"** (code **CO9169/1**), as shown on following drawing.



The following table details the range of beam angle and diffusion filters available for the **Par Lite Led**.

Optical group	Beam angle
Narrow Lenses (standard)	12°
Narrow Lenses + Light Frost Filter	17°
Large Lenses + Frost Filter	25°
Narrow Lenses + Strip Frost Filter	Beam Shake
Medium Lenses (cod. 9167)	30°
Medium Lenses + Light Frost Filter	35°
Medium Lenses + Frost Filter	45°
Medium Lenses + Strip Frost Filter	Beam Shake
Large Lenses (cod. 9167/3)	50°
Large Lenses + Light Frost Filter	55°
Large Lenses + Frost Filter	60°
Large Lenses + Strip Frost Filter	Beam Shake
Flood	130°

To shape the beam you can use an external barndoor (code **CO9164**).

5.1. Operating voltage and frequency

The fixture may operate at voltages ranging from 100 to 250V AC at a frequency of 50 or 60 Hz.

It is not necessary to effect any setup procedures, Par Lite LED will automatically adjust its operation to suit any frequency or voltage within this range.

5.2. Mains connection

Cabling

The mains cable provided is a neoprene type HQ7RN-F suitable for outdoor applications and complying to the most recent international standards: CEI 20-19, UNEL 35364, CENELEC HD 22.

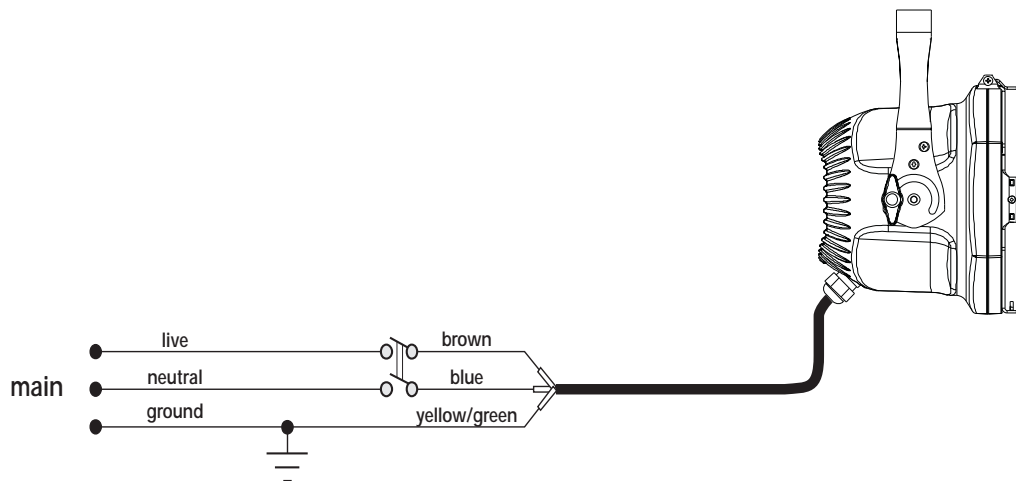
N.B. In case of cable replacement, similar cable with comparable qualities must be used exclusively (cable 3x1.5 ø external 10 mm, rated 450/750V, operating temperature -25° +60°).

Connection to mains power

for connection purposes, ensure you plug is of a suitable rating:

- 230/240V 0.2 amps constant current.
- 208V 0.25 amps constant current.
- 100/115V 0.5 amps constant current.

Locate the mains cable which exits the base of the unit and connect as shown below:



ATTENTION!!

The use of a thermal/magnetic circuit breaker for each fixture is recommended. Strict adherence to regulatory norms is strongly recommended.

Par Lite Led should not be powered through a Dimmer as this may damage the internal switching powersupply.

Prior to connecting the device to mains power, ensure that the mains characteristics are within the recommended range for use with the Par Lite Led.

A good earth connection is essential for the correct operation of the Par Lite Led. Never install the unit unless the yellow/gree earth cable is securely connected.

All cabling and connections should be carried out by suitably qualified personnel.

6. DMX signal functions

6.1. Connecting DMX signal

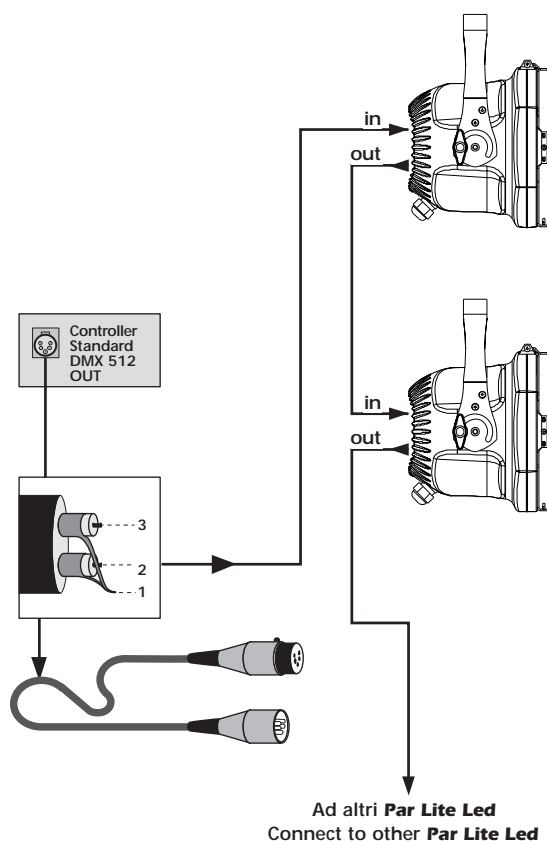
Control signal is digital and is transmitted via two pair screened cable, as recommended in international standards for the transmission of DMX512. Connection is serial, utilising the XLR5 sockets located on the rear panel of the **Par Lite LED**.

Signal connection via the XLR5 connectors

Connection is to international standards. Connection is as indicated below:

- pin 1 = GND
- pin 2 = data -
- pin 3 = data +

Should your DMX 512 controller output signal via a cannon XLR5 (5 pin), pins 4 and 5 should remain unconnected.



ATTENTION!!

Ensure that all data conductors are isolated from one another, the screening and the metal housing of the connector. Pin number 1 and the housing should never be connected to mains power.

6.2. Powering up

After having followed the preceding steps, turn on mains power on to the unit. The **DISPLAY** will come on.

Turning on power with DMX signal connected.

The Display will flash to indicate that **DMX 512** is not being received. If the Display not flash, the DMX signal is being correctly received.

Store the last DMX signal received

ParLite Led maintains in its memory the last DMX scene before its turning off. When turned on again whennot connected to DMX signal, ParLite Led will perform the last DMX scene before being turned off.

6.3. DMX addressing

Via the display it is possible to assign a DMX address to the fixture. The address is determined by the sum of the values associated.

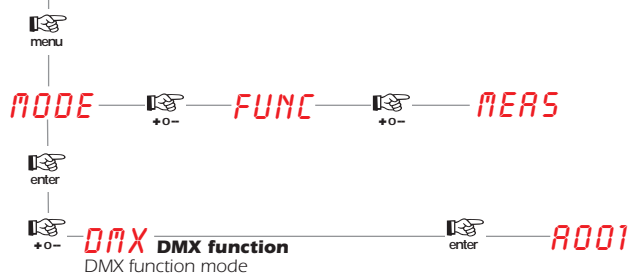
Each **Par Lite LED** utilises **8/4 channels** of **DMX 512** signal for complete control.

IMPORTANT NOTE: the following points are valid for all the instructions which follow.

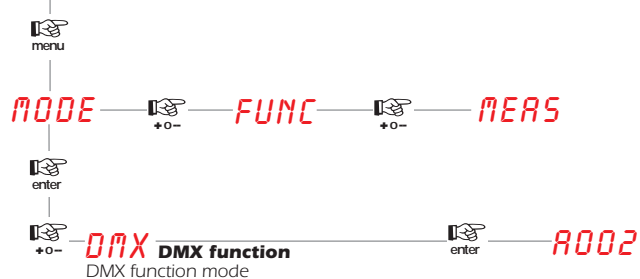
1. The **DMX** address may be altered without the need to turn the **Par Lite LED** off.

The following are examples only for setting DMX addresses.

Ex. 1 **0001**



Ex. 2 **0001**



6.4.DMX functions

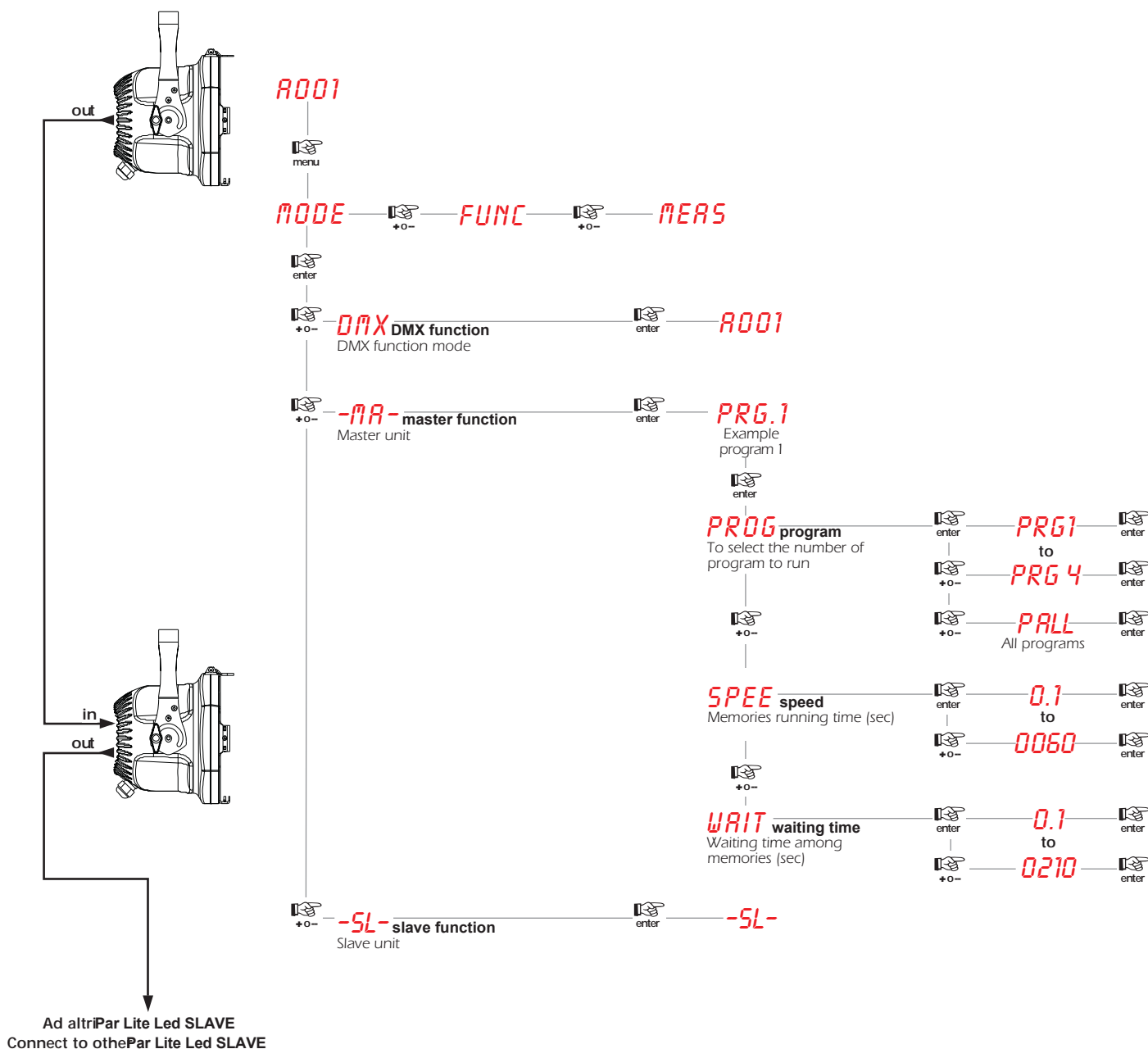
channel 8ch	4ch	function	type of control	effect	decimal		percentage	
1		master dimmer	proportional	adjust luminous output intensity from 0 to 100%	0	- 255	0%	- 100%
2	1	red	proportional	proportional control of the percentage of colour; from 0 to 100%	0	- 255	0%	- 100%
2(A)		speed		if the effects of channel 7 are active this channel controls the speed of execution of the automatic programs				
Nota 1: channel 2 changes function and becomes 2(A) when channel 7 is active								
3	2	green	proportional	propotional control of the percentage of colour; from 0 to 100%	0	- 255	0%	- 100%
3(A)		pause		if the effects of channel 7 are active this channel controls the time between the execution of an automatic program and the other				
Nota 2: channel 3 changes function and becomes 3(A) when channel 7 is active								
4	3	blue	proportional	proportional control of the percentage of colour; from 0 to 100%	0	- 255	0%	- 100%
5	4	ambra	proportional	proportional control of the percentage of colour; from 0 to 100%	0	- 255	0%	- 100%
6		strobe effect	step	no effect	0	- 9	0%	- 4%
			proportional	variable speed strobing effect, from slow to fast	10	- 57	4%	- 22%
			step	stop strobe	58	- 59	23%	- 23%
			proportional	sequenced pulse effect,slow closing, fast opening (variable speed pulsing, from slow to fast)	60	- 108	24%	- 42%
			step	stop strobe	109	- 110	43%	- 43%
			proportional	sequenced pulse effecr, fast closing, slow opening (variable speed pulsing, from slow to fast)	111	- 159	44%	- 62%
			step	stop strobe	160	- 161	63%	- 63%
			proportional	random strobe effect with variable, speed from slow to fast synchronised colours	162	- 207	64%	- 81%
			step	stop strobe	208	- 209	82%	- 82%
		proportional	random strobe effect with variable speed, from slow to fast, non-synchronised colours	210	- 255	82%	- 100%	
7		automated functions	step	no effect	0	- 9	0%	- 4%
				automated program 1	10	- 50	4%	- 20%
				automated program 2	51	- 91	20%	- 36%
				automated program 3	92	- 132	36%	- 52%
				automated program 4	133	- 173	52%	- 68%
				random program repeat	174	- 214	68%	- 84%
				repeat all programs in sequence	215	- 255	84%	- 100%
8		special functions	livello unico step	park/no effect	0	- 9	0%	- 4%
				fixed color light power: best color mixing	10	- 40	4%	- 16%
				dynamic color light power: maximum light output	41	- 71	16%	- 28%
				600 Hz	72	- 84	28%	- 33%
				no effect	85	- 133	33%	- 52%
				LCD display off	134	- 185	53%	- 73%
				LCD display on	186	- 199	73%	- 78%
				led control frequency tuning 1000 Hz	200	- 205	78%	- 80%
				led control frequency tuning 1500 Hz	206	- 211	81%	- 83%
				led control frequency tuning 2000 Hz	212	- 217	83%	- 85%
				led control frequency tuning 2500 Hz	218	- 223	85%	- 87%
				led control frequency tuning 3000 Hz	224	- 229	88%	- 90%
				led control frequency tuning 3500 Hz	230	- 235	90%	- 92%
				led control frequency tuning 4000 Hz	236	- 241	93%	- 95%
				led control frequency tuning 4500 Hz	242	- 247	95%	- 97%
				led control frequency tuning 5000 Hz	248	- 255	97%	- 100%

7. Auto function

This function can be used to determine the operating mode of the projector (**MASTER/SLAVE**), make program selections or alter the crossfade times. Setting this function to on inhibits control via DMX signal.

7.1. MASTER/SLAVE mode

In MASTER/SLAVE mode, it is possible to control, via a projector set as MASTER, a series of **Par Lite LED** units set to act as SLAVE fixtures. The table below displays the settings required for fixtures to be connected in this manner.



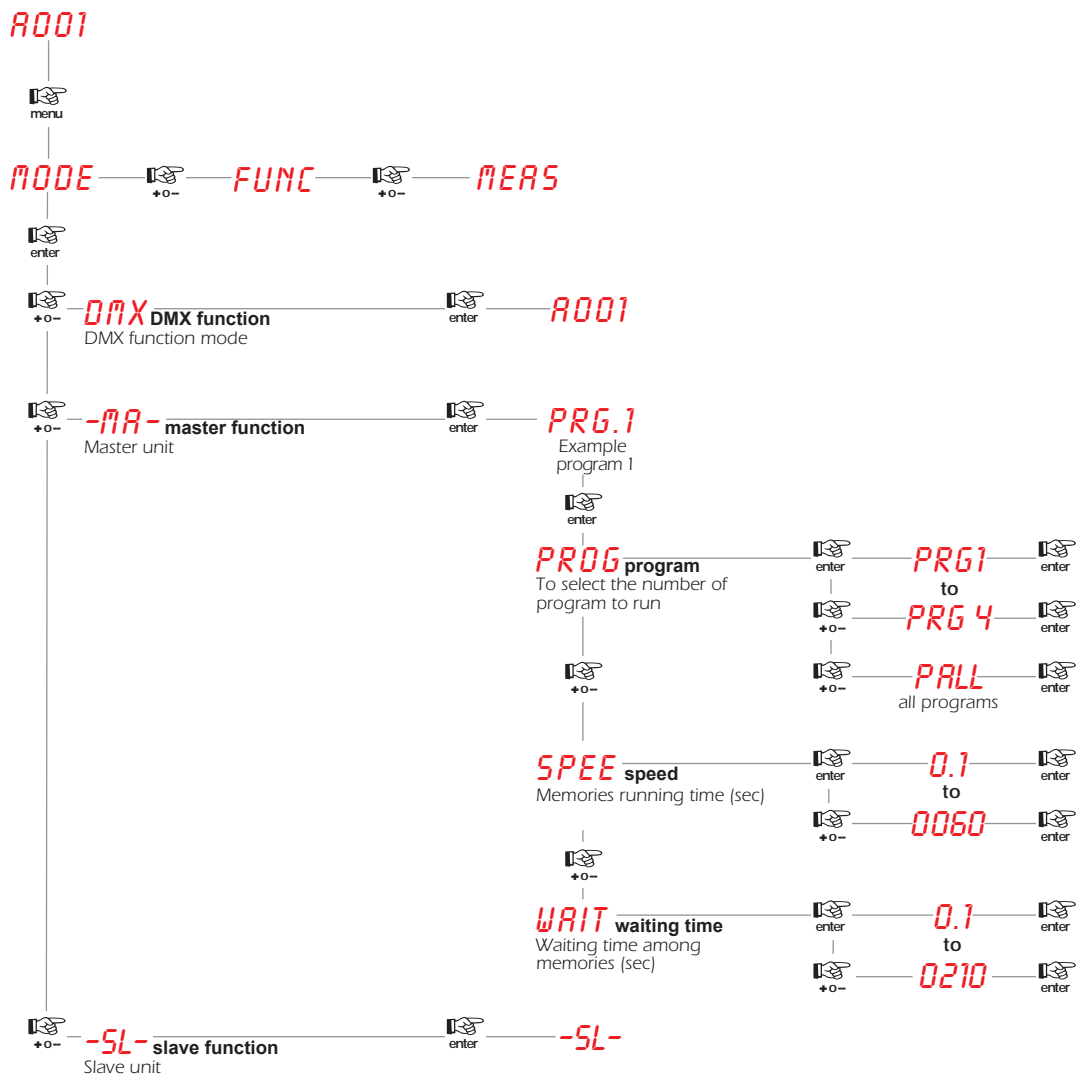
ATTENTION!!

It is only possible to select one program at a time.

8. Function

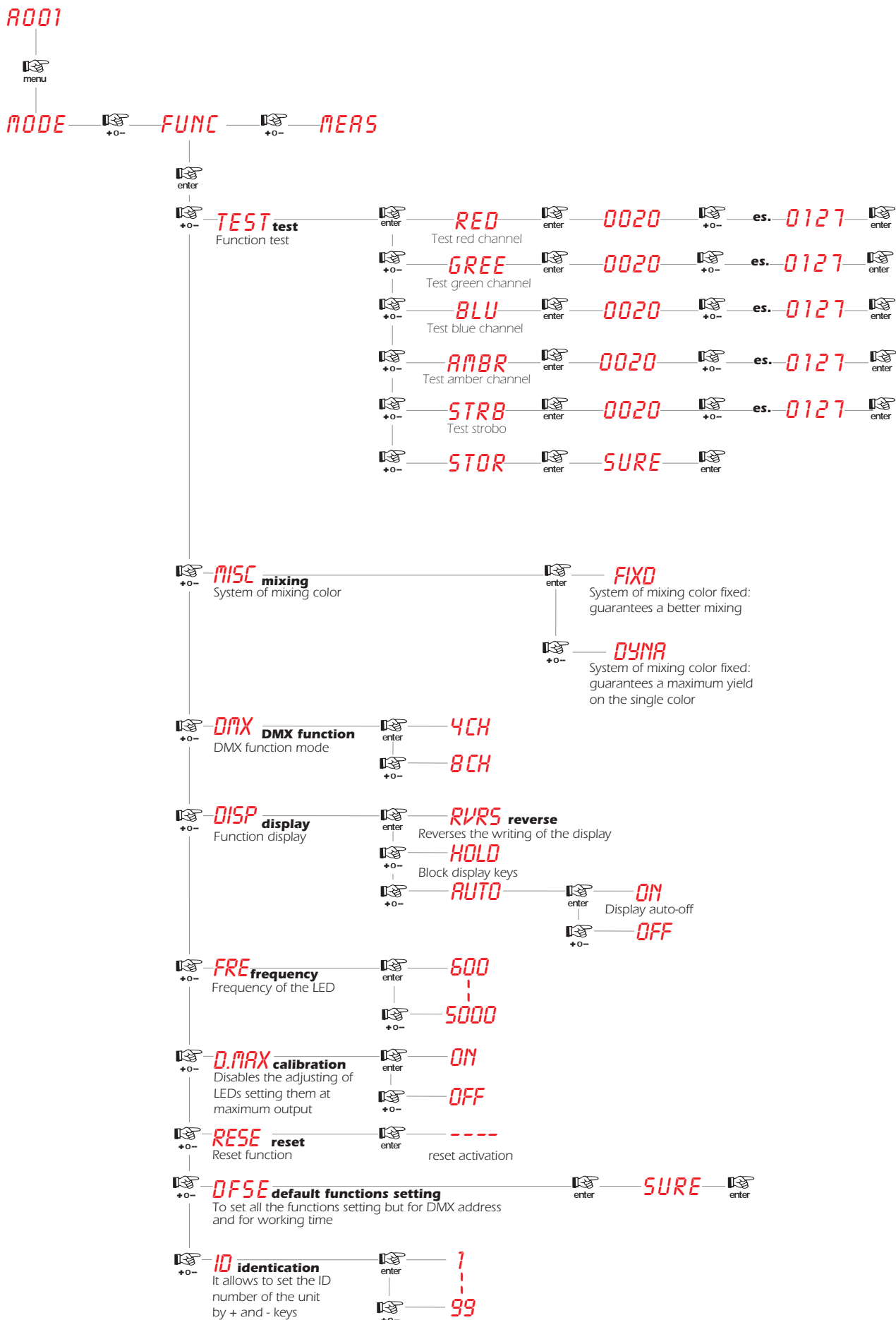
8.1.Function modes

Using the inbuilt functionality of the **Par Lite LED** via the **display**, it is possible to alter the function mode of the fixture.



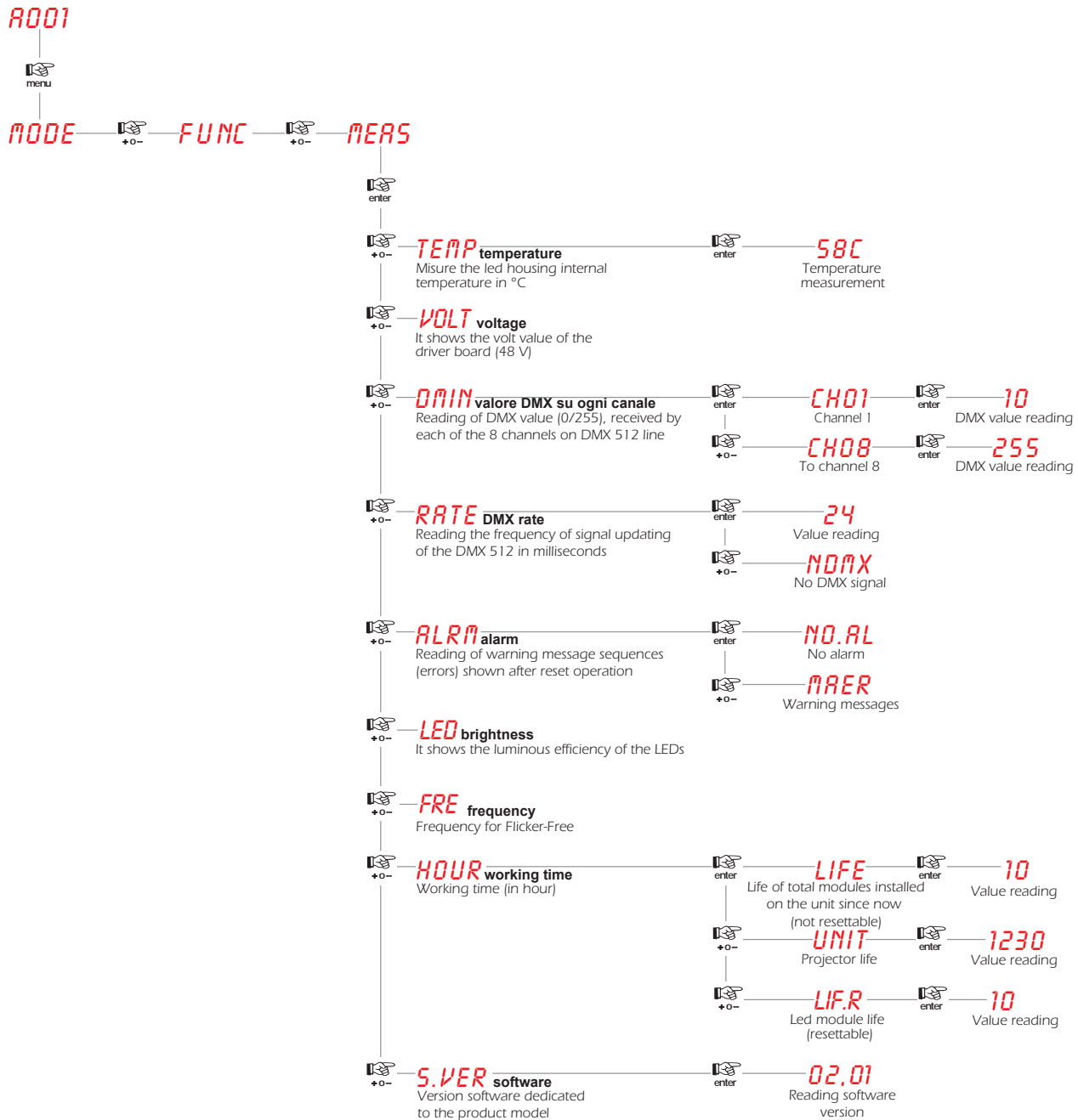
8.2. Setting up (FUNC)

Using the inbuilt of the **Par Lite LED** via the **Display**, it is possible to alter the function settings of the fixture.



8.3. Diagnostic functions (MEAS)

Using **MEAS** mode, it is possible to carry out several digital parameters checks and autodiagnosics. The following diagram illustrates the menu navigation system in **MEAS**.



8.4. Electronic alignment

ATTENTION!!

This procedure should only be undertaken by qualified and experienced technical personnel..

The display panel allows for the electronic alignment of the colors. This procedure is performed by **Coemar** at the factory.

It may be useful to perform this procedure in the case of internal components being replaced (electronic parts).

Altering the factory settings may radically alter the functioning of the projector. Carefully read all of the following prior to attempting any changes.

ATTENTION!!

The alignment procedure can only be carried out when DMX 512 signal is connected.

1. Press the **menu** button.
2. Press the **+** or **-** button until **FUNC** is displayed. Then press **enter**.
3. Press the **+** or **-** button until **RESE** is displayed.
4. Press the **enter** and **menu** buttons simultaneously, holding them for at least **10"**. The projector will perform a reset and the display will show **-- -- -- --** for a few seconds. After this, the display will show **ALIG** confirming that you have entered electronic calibration mode.



8.5. Error messages

MESSAGE CODE	DESCRIPTION
DTERR	DATA Error The initial configuration settings are faulty or have been loaded incorrectly. The projector has loaded its default configuration. Turn the projector off and on again and if the error persists the EEPROM is either defective or absent; refer to your Coemar service centre for a replacement component.
ADDER	DMX ADDRESS Error The projector is not receiving all the DMX channels necessary for its operation. Check the DMX address and the control console operation. Note that some controllers may not generate all 512 channels of signal.
MAERR	MASTER MODE Error This message indicates that the user has attempted to set the unit to MASTER mode whilst DMX signal is still being received. Detach any DMX control signal or remove MASTER mode settings.

9. Thermal protection

A thermal sensor in the body of the **Par Lite LED** protects the fixture against overheating. The sensor operates by reducing progressively power to the leds should the operating temperature exceed the factory preset.

10. Maintenance

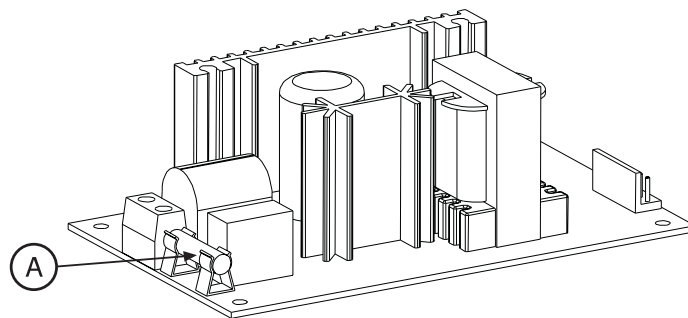
Whilst every possible precaution has been taken to ensure the trouble-free operation of your **Par Lite LED** the following periodic maintenance is highly recommended. We recommend that the voltage to the unit be removed prior to any maintenance procedure taking place.

ATTENTION!!

Always remove mains power prior to opening up the fixture!

10.1. Fuse replacement

Use a multimeter to check the fuse, replacing any faulty or damaged fuses with ones of equal value, dimensions and characteristics. The following diagram indicates the positioning and characteristics of the protection fuse in the fixture.



Fuse A: 4A T 250V

10.2. Periodic maintenance

Mechanicals

Check that the units is not mechanically damaged. Regularly clean the glass by using a soft cloth with a specific cleaning liquid and, if necessary, replace the damaged parts.

Electrical components

Check all electrical components for correct earthing, oxidation and proper attachment of all connectors, cleaning and refastening if necessary.

11. Spare parts

All the components of the **Par Lite LED** are available as spare parts from your **Coemar service centre**.

Accurate description of the fixture, serial number, and type will assist us in providing for your requirements in an efficient and effective manner.

12. Frequently asked questions

The diagram below indicates some possible problems and solutions if they should occur.

Problem	Possible solution
Par Lite LED won't turn on.	Mains power is not available to the Par Lite LED : - Check that the Display is on, if so check the incoming voltage to the Par Lite LED .
Par Lite LED doesn't respond to DMX signal	Incoming DMX may not be being received by the Par Lite LED : - check that the Display not flashes. If flashes, check the DMX console's output and any cabling for continuity. - Par Lite LED may be incorrectly addressed. Check the DMX addressing.
The Par Lite LED is set to auto but is not running any programs	- Check that amongst the interconnected fixtures, only one has been set to Master. - Ensure that there is no incoming DMX signal (this may cause a conflict in signals).



Coemar Lighting Srl

via Inghilterra 2 - 46042 Castel Goffredo (Mantova) Italy
ph. +39 0376/1514412 - fax +39 0376/1514380
info@coemar.com

Coemar si riserva il diritto di apportare modifiche senza preavviso.
Coemar reserves the right to effect modifications without notification