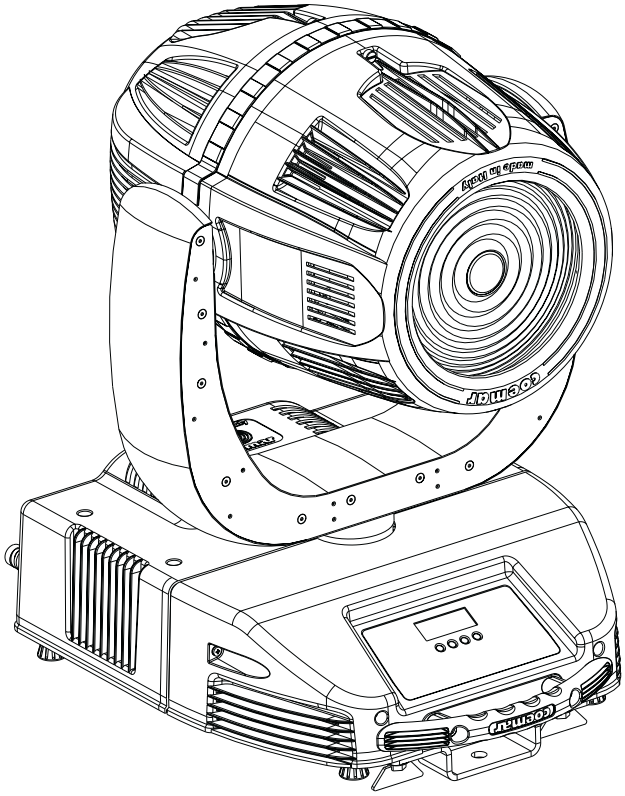
i WASH HALO

....electronic**trasformer** + **pfc**



manuale di istruzioni
instructions manual

Version 1.0

coemar
LIGHT EMOTION

iWASH HALO

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 **iWash Halo**: 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 **iWash Halo***: This information will assist us 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.*

Users Manual Version 1.0
edition November 2005

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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 iWash Halo
1 instruction manual
2 cam-lock support brackets

1.2. Transportation

The **iWash Halo** should be transported in its original packaging or in an appropriate flight case.

2. General information

2.1. Important safety information

Fire prevention:

1. **iWash Halo** utilises a **Philips TXO 750W 100V**; the use of any alternative lamp is not recommended and will null and void the fixture's warranty.
2. Never locate the fixture on any flammable surface.
3. Minimum distance from flammable materials: 0,5 m.
4. Minimum distance from the closest illuminable surface: 2 m.
5. Replace any blown or damaged fuses only with those of identical values. Refer to the schematic diagram if there is any doubt.
6. Connect the projector to mains power via a thermal magnetic circuit breaker.

Preventing electric shock:

1. High voltage is present in the internals of the unit. Isolate the projector from mains supply prior to performing any function which involves touching the internals of the unit, including lamp replacement.
2. For mains connection, adhere strictly to the guidelines outlined in this manual.
3. The level of technology inherent in the **iWash Halo** 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.
5. Mains cables should not come into contact with other cables. Never operate the unit without proper earth connection.
6. Do not operate the projector with wet hands or in an area where water present.
7. The fixture should never be located in an exposed position, or in areas of extreme humidity. A steady supply of circulating air is essential.

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. The external surface of the unit, at various points, may exceed 150°C. Never handle the unit until at least 10 minutes have elapsed since the lamp was turned off.
4. Always replace the lamp if any physical damage is evident.
5. Never install the fixture in an enclosed area lacking sufficient air flow; the ambient temperature should not exceed 35°C.
6. Wait at least 10 minutes after the unit has been turned off prior to attempting to replace the lamp.
7. The proejctor contains electronic and electrical components which should under no circumstances be exposed to contact with water, oil or any other liquid. Failure to do so will compromise the proper functioning of the projector.

Articulated movement

The projector has a pan range of 540° in its base and a tilt range 252° in its yoke; do not obstruct the projector whilst it is undertaking articulated movement.

Forced ventilation

You will note several air vents on the body of the projector. To avoid any problems associated with overheating, never obstruct any of these vents as this may seriously compromise the proper operation of the unit.

Protection rating against penetration by external agents:

1. The fixture is classified ordinary apparatus ; its protection grade against penetration by external agents,solid or liquid, is IP 20

2.2. Warranty conditions

1. The fixture is guaranteed for a period of 12 months from the date of purchase against manufacturing or materials defects.
2. The warranty does not extend to damage caused by inappropriate usage or use by inexperienced operators.
3. The warranty is immediately void if the projector has been operated or dismantled by unauthorised personnel.
4. The warranty does not extend to fixture replacement.
5. The serial number of the projector is required for any advice or service fro your authorised **Coemar** service centre.

2.3. CE norms

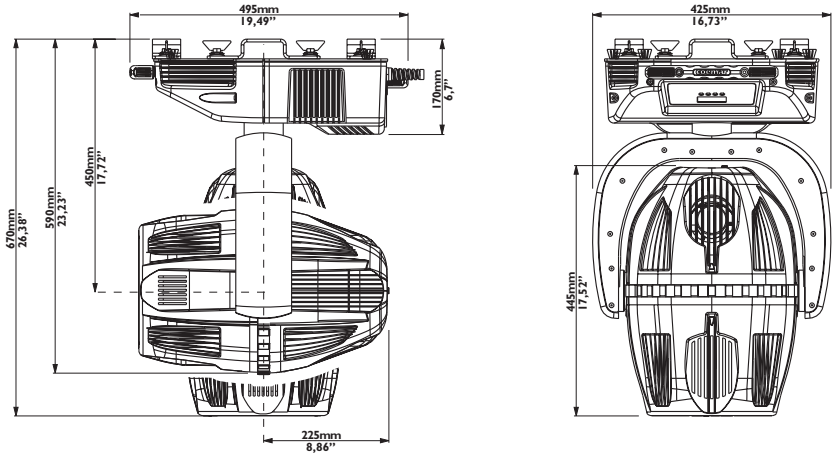
The projector meets or exceeds all applicable CE requirements.

3. Product specifications

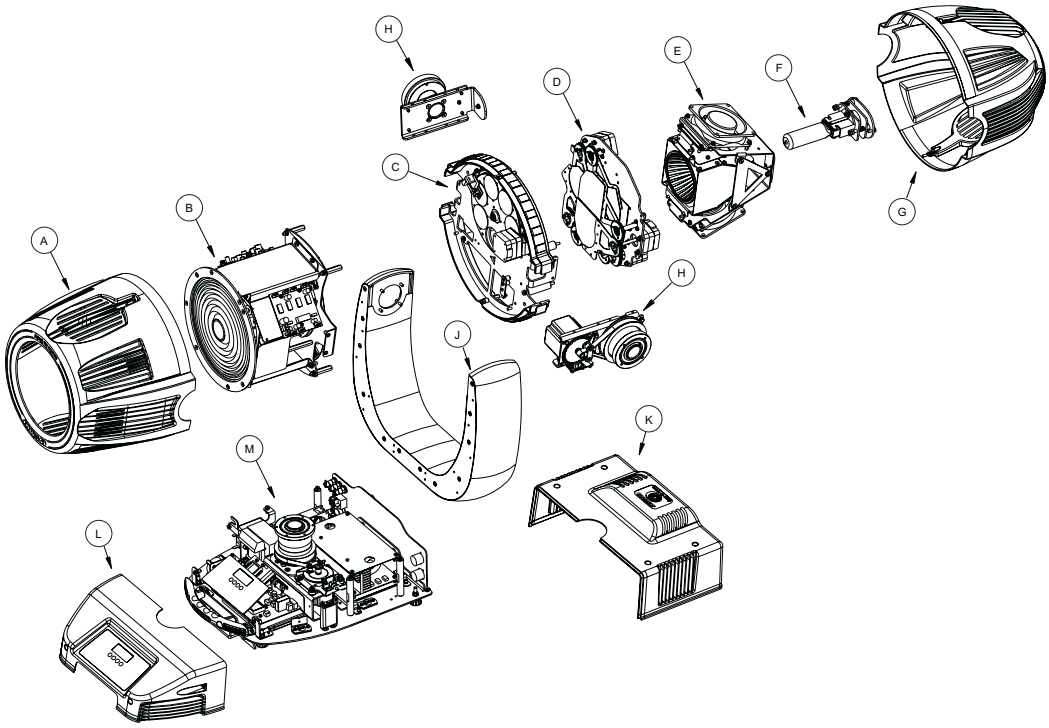
3.1. Technical characteristics

Power:	115/208/230/240 Vac 50/60Hz
Nominal current:	3.9A @ 230V
	7.1A @ 115V
Power factor:	cos φ = 0,98
Lamp wattage:	750W TH
Maximum ambient temperature:	35°C / 95°F
Weight:	25.1 Kg / 55.33 Lbs
IP rating:	IP20

3.2. Dimensions



3.3. Components



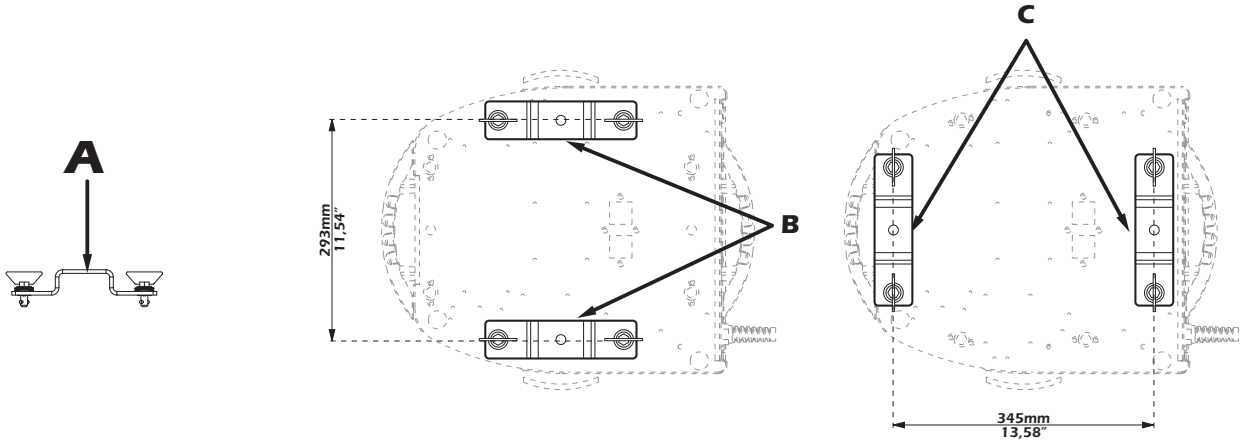
Component description

A. Front body housing
B. Zoom effect group
C. Color wheel group
D. Colors changer group
E. Reflector group
F. Lampholder group
G. Rear body housing
H. Body rotation group
J. Yoke
K. Rear base housing
L. Front base housing
M. Base

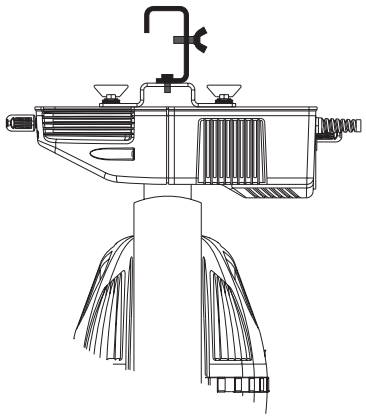
4. Installation

4.1. Mechanical installation

iWash Halo may be either floor or ceiling mounted. For floor mounting, the unit is provided with four rubber mounting feet.
For ceiling mounted installations, **Coemar** includes two cam-lock (**A**) support brackets.
The two cam-lock brackets may be mounted in two different positions (**B** & **C**) on the base of the **iWash Halo.** The cam-lock brackets are affixed via a 1/4 nut. Please ensure that they are correctly seated and firmly tightened into position.



For ceiling mounted installations we suggest the use of appropriate clamps or fixings to attach the fixture to the mounting surface. Clamps may be attached to the central hole provided in the cam-lock brackets, as shown in the following diagram.

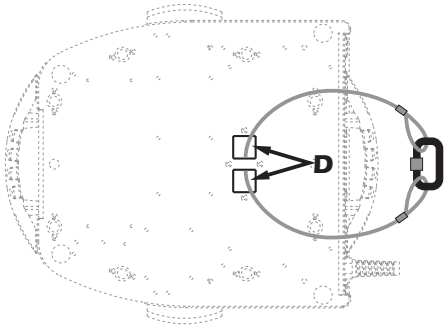


ATTENTION!!
Ensure that the structure from which the unit is hung is of sufficient rating to hold the weight of the unit, as are any clamps, nuts and bolts used to hang the unit.

The structure from which the unit is hung should be of sufficient rating to hold the weight of the unit, as should any clamps used to hang the unit. The structure should also be sufficiently rigid so as not to move or shake whilst the projector moves during its operation.
Do not install the projector in locations where it is readily accessible by aunthorised or untrained personnel.

4.2. Safety connections

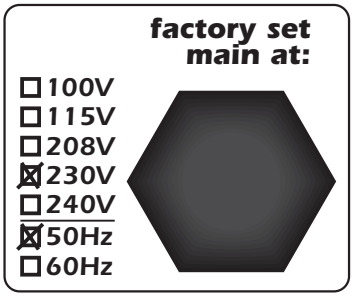
If the **iWash Halo** is affixed to a structure the use of a safety chain designed to meet relevant safety standards is recommended. You may attach the safety chain to the holes **"D"** located on the base of the fixture and to the structure itself.
If using an after-market safety chain not manufactured by **Coemar**, ensure that it is of sufficient rating to hold the weight of the unit.



5. Powering up

5.1. Operating voltage and frequency

The projector may operate at voltages of 115, 208, 230 or 240VAC at a frequency of 50 or 60Hz. **Coemar** presets (barring specific requests) a voltage of 230v at a frequency of 50Hz.. The preset voltage is indicated on the base of the projector.

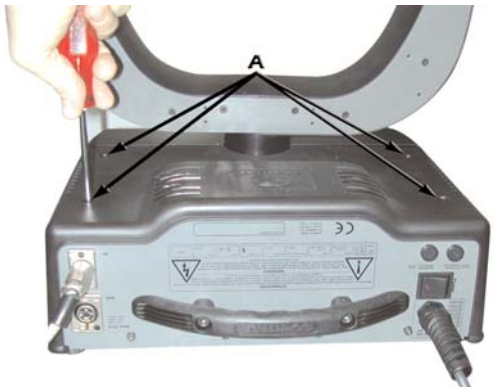


5.2. Altering the operating voltage and frequency (Reserved for technical personnel only)

If the factory preset operating voltage and frequency do not correspond to those in use in your country of operation, you may alter the settings as described in the following paragraphs.

ATTENTION!!

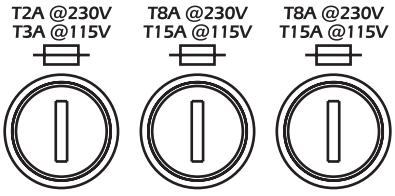
Incorrect selection of operating voltage and frequency will seriously compromise the functioning of the projector and will immediately void the warranty.



1. Loosen the screws on the cover of the base of the unit, as shown in the diagram below, using an appropriate screwdriver, thereby removing the cover completely and allowing access to the internal components of the base of the **iWash Halo.**

2. Locate the transformer in the base of the unit.

3. Select a voltage from amongst 115, 208, 230 or 240V by disconnecting cable n° 5 and moving it to the correct voltage. Refer to the sticker located on the transformer to ensure the proper terminal is selected for your requriements.
Cable number 10 must not have its position altered under any circumstances!



4. If the voltage setting is 115V replace the fuses located on the rear pamnel of the base. The fuse T2A, suitable for 208/230/240 V, must be replaced with a fuse T3A, and the two fuses must be replaced by two fuses T15A. The fuses are in a plastic envelope together with this instruction manual.

5. When you have made changes, note these on the outside of the **iWash Halo**.
6. Replace and fasten all the housings as per their original positions.

5.3. Mains connection

Mains cable characteristics

The mains cable provided is thermally resistant, complying to the most recent international standards. It meets or exceeds VDE and IEC norms, IEC 331,IEC 332 3C,CEI 20 35.

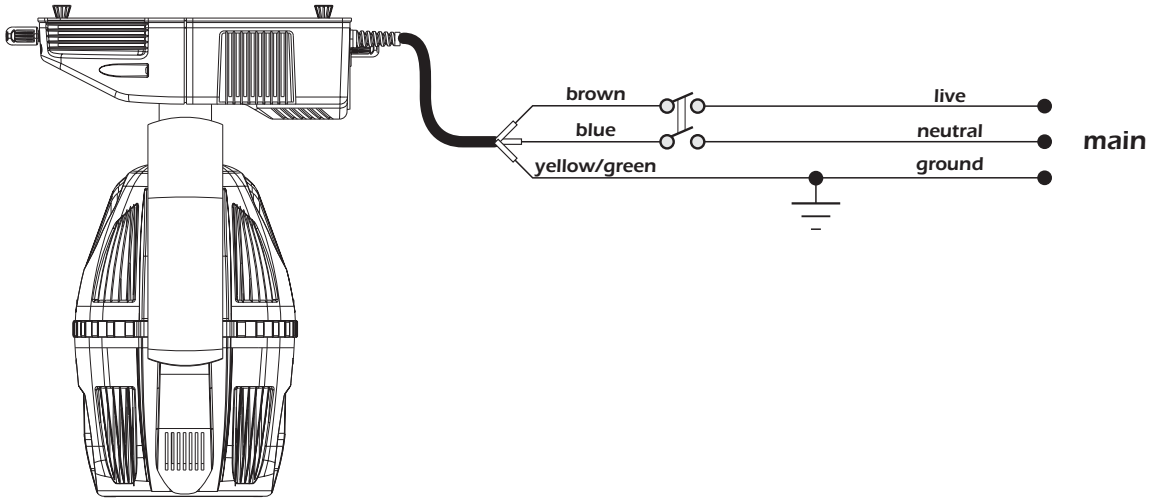
NB: In case of cable replacement, similar cable with comparable thermal resistant qualities must be used exclusively (cable 3x1.5 ø external 10 mm, rated 300/500V, tested to 2KV, operating temperature -40° +180°, **Coemar** cod. CV5309).

Connecting to mains power

For connection purposes, ensure your plug is of a suitable rating to sustain the maximum current:

- 115V 10 amps constant current in normal operation
- 208/230/240V 4.5 amps constant current in normal operation

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 is recommended for each projector. Strict adherance to all regulatory norms is higly recommended.**
- **iWash Halo should never be supplied mains power via a Dimmer; this is potentially dangerous.**
- **Prior to powering up the projector, ensure that the model in your possession correctly mathces the mains supply available to you.**
- **A good earth connection is essential for the correct operation of the iWash Halo. Never connect the projector to main power if the green/yellow earth cable is not correctly connected**
- **All cable and plug connections should be carried out by fully qualified and licenced personnel only.**

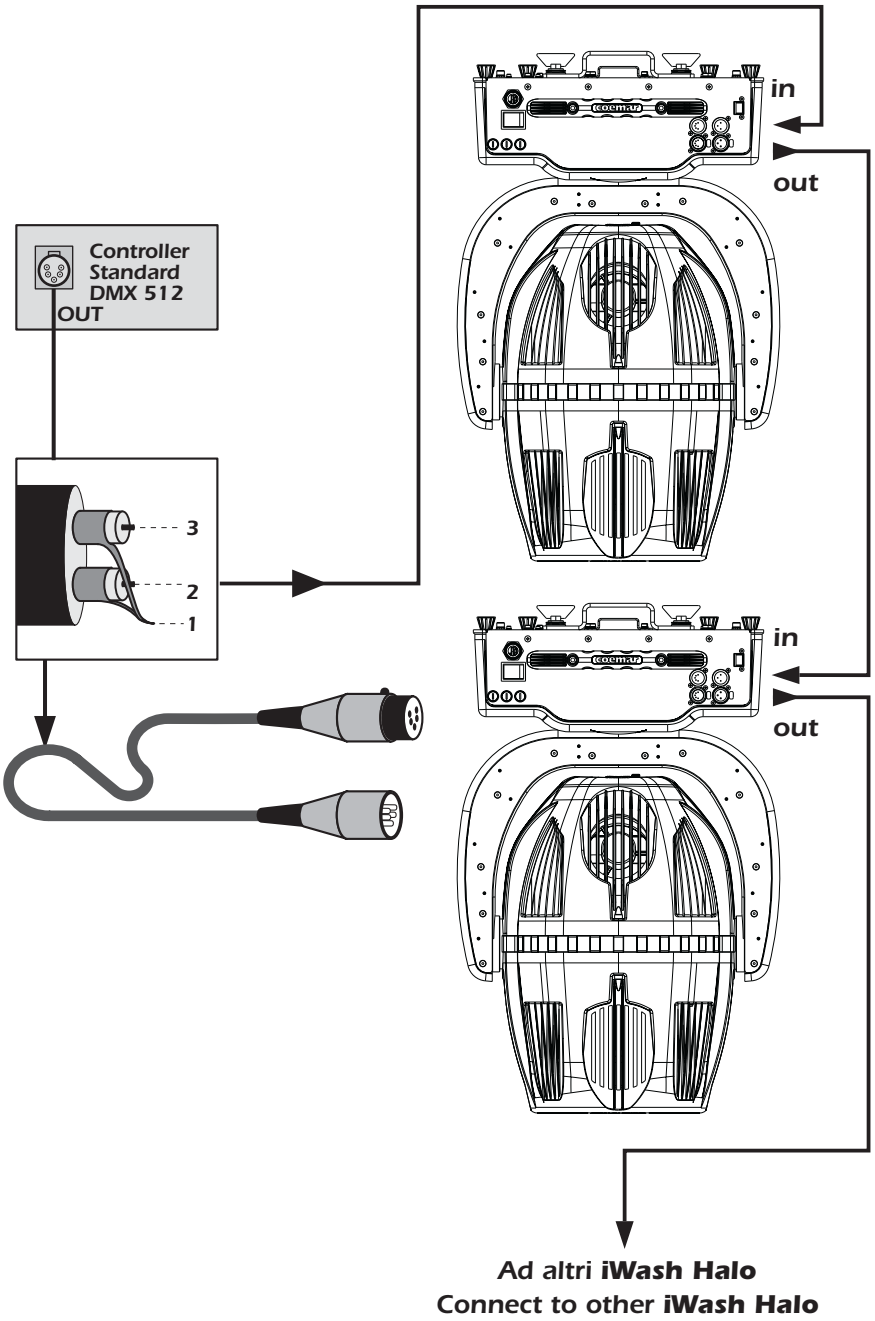
6. DMX signal connection

Control signal is digital and is transmitted via two pair screened ø0.5mm cable as per international standards for the transmission of DMX512 data. Connection is serial, utilising XLR3 and XLR5, male and female sockets located on the base of the **iWash Halo,** labeled **DMX 512 IN** and **OUT** (see diagram).

Plug/socket connections for XLR3 and XLR5 connectors:
Pin connections conform to the international standard as per the following table:

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

If using a controller which output signal via an XLR 5 (5 pin) socket, do not use pins 4 and 5, leave them unconnected.



ATTENTION!!

**Ensure that all data conductors are isolated from one another and the metal housing of the connector.
Pin number 1 should never be connected to the device's power supply.**

7. Turning on the projector

After having followed the preceding steps, turn on the projector via the main **Power** switch**.**

The display and will show in sequence the software version installed in the 2 onboard microprocessors:

the display "D" and the master "M".

For example, upon turning on power, the **iWash Halo** may show:

D1.30 (display pcb "D" software version)

M1.02 (master pcb "M" software version)

The projector will perform a reset function on all the internal and external motors. This will last some few seconds, after which it will be subject to the external signal from the controller. The display will remain fixed on indicating correct **DMX 512** signal reception.
If the display flashed, there is no DMX signal being received. Check your cabling and your controller.

7.1. DMX addressing

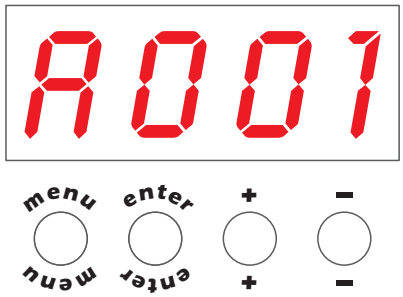
Each projector utilises **16** channels of **DMX 512** for complete control (for further information, see section **7.2. DMX functions**).

DMX addresses

To ensure that each projector accesses the correct signal, it is necessary to correctly address each fixture. Any number between 1 and 497 can be generated via the multifunction panel of the unit. This procedure must be carried out on every projector being used. When powered up initially, each projector will show **A001** which indicates **DMX address 001**; a projector thus addressed will respond to commands on channel **1** to **16** from your **DMX controller**. A second unit should be addresses as **A017**, a third as **A033** and so on until the final projector has been addressed.

Altering DMX addresses

1. Press the **+** or **-** buttons until the display shows the required **DMX** address. The characters in the display will flash to indicate that the selection is not yet stored in memory.
2. Press the **enter** button to confirm your selection. The display panel will cease to flash and the projector will now respond to the new **DMX 512 address**.



Important Note: holding down the **+** or **-** buttons will cause the display to alter at an increased speed, allowing a faster selection to be made.

ATTENTION!!

If you alter the DMX with no DMX controller connected, the characters in the display panel will continue to flash even after you have pressed the ENTER button.

7.2. DMX functions

channel	function	type of control	effect	decimal	percentage
1	**X axis, base movement (pan)**	proportional	control of the pan movement of the beam of light via proportional rotation of the base motor	0 - 255	0% - 100%
2	**X axis, fine base movement (pan)**	proportional	fine control of the pan movement of the beam of light via proportional rotation of the base motor	0 - 255	0% - 100%
3	**Y axis, yoke movement (tilt)**	proportional	control of the tilt movement of the beam of light via proportional rotation of the yoke motor	0 - 255	0% - 100%
4	**Y axis, fine yoke movement (tilt)**	proportional	fine control of the tilt movement of the beam of light via proportional rotation of the yoke motor	0 - 255	0% - 100%
5	**movement speed**	step	standard (fast)	0 - 10	0% - 4%
		step	ultra fast movement (ideal for positioning during programming)	11 - 25	4% - 10%
		proportional	vector mode (from fast to slow)	26 - 127	10% - 50%
		proportional	tracking mode (from fast to slow)	128 - 247	50% - 97%
		step	tracking mode (slow)	248 - 255	97% - 100%
6	**dimmer**	proportional	adjust output intensity from 0 to 100%	0 - 255	0% - 100%
7	**shutter, strobe**	step	shutter closed	0 - 9	0% - 4%
		proportional	variable speed strobing effect, from slow to fast	10 - 66	4% - 26%
		step	shutter open	67 - 68	26% - 27%
		proportional	sequenced pulse effect, slow closing, fast opening (variable speed pulsing, from slow to fast)	69 - 125	27% - 49%
		step	shutter open	126 - 127	49% - 50%
		proportional	sequenced pulse effect, fast closing, slow opening (variable speed pulsing, from fast to slow)	128 - 184	50% - 72%
		step	shutter open	185 - 187	73% - 73%
		proportional	random strobe effect with variable speed from slow to fast	188 - 244	74% - 96%
		step	shutter open	245 - 255	96% - 100%
8	**zoom**	step	spot	0 - 9	0% - 4%
		proportional	from narrow beam (Spot) to wide beam (Flood)	10 - 255	4% - 100%
9	**PAR effect filter and 9° spot lens**	step	no effect	0 - 9	0% - 4%
		proportional	oval beam (par effect) rotatable through 0° to 180°	10 - 230	4% - 90%
		step	9° spot lens	231 - 255	91% - 100%
10	**colour wheel**	step	no colour, white beam	0 - 7	0% - 3%
		step or proportional control selectable via channel 15	colour 1	8 - 27	3% - 11%
			colour 2	28 - 47	11% - 18%
			colour 3	48 - 67	19% - 26%
			colour 4	68 - 87	27% - 34%
			colour 5	88 - 107	35% - 42%
			colour 6	108 - 127	42% - 50%
		proportional	rainbow effect in a counterclockwise direction from fast to slow	128 - 190	50% - 75%
		step	no rotation	191 - 192	75% - 75%
		proportional	rainbow effect in a clockwise direction from slow to fast	193 - 255	76% - 100%
11	**cyan**	step	white, no colour	0 - 9	0% - 4%
		proportional	proportional control of the cyan colour, from white to full cyan	10 - 255	4% - 100%
12	**magenta**	step	white, no colour	0 - 9	0% - 4%
		proportional	proportional control of the magenta colour, from white to full magenta	10 - 255	4% - 100%
13	**yellow**	step	white, no colour	0 - 9	0% - 4%
		proportional	proportional control of the yellow colour, from white to full yellow	10 - 255	4% - 100%
14	**CTB**	step	white, no colour	0 - 9	0% - 4%
		proportional	proportional control of the colour temperature (CTB) from 0 to 100%	10 - 255	4% - 100%
15	**colour positioning mode** (colour selection via channel 10)	step	colours are centred in the optical path	0 - 125	0% - 49%
			colour are positioned proportionately in the optical path	126 - 255	49% - 100%
16	**motors reset + activate black-out synchronised with PAN/TILT movement and colour changing**	step	park, no effect	0 - 29	0% - 11%
			pan and tilt reset (only once)	30 - 65	12% - 25%
			reset all motors except strobo, pan and tilt (only once)	66 - 100	26% - 39%
			reset all motors except strobo (only once)	101 - 135	40% - 53%
			reset all motors (only once)	136 - 170	53% - 67%
			black-out of the beam light during PAN/TILT movement and colour changing	171 - 249	67% - 98%
			park, no effect	250 - 255	98% - 100%

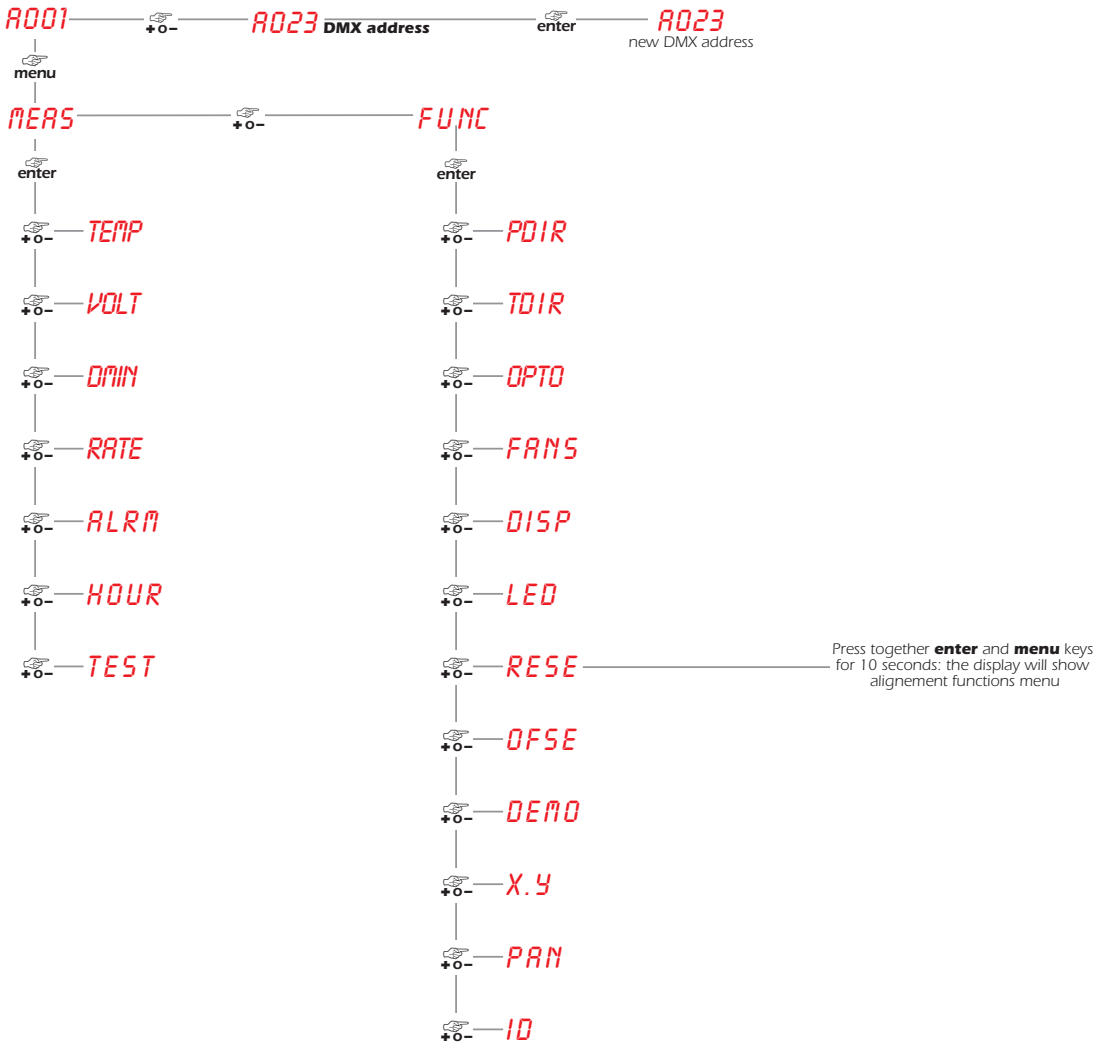
Note 1: all the reset functions are delayed by 6 seconds to prevent accidental activation

8. Display panel functions

The display panel of the **iWash Halo** shows all the functions available; it is possible to change some of those parameters and to add some functions.
Changing the preset settings made by **Coemar** can vary the functions of the device so that it may not respond to a **DMX 512** controller being used to control it. Carefully follow the instructions before applying any variations or selections.
NOTE: the symbol ☞ shows which key has to be pushed to obtain the desired function .

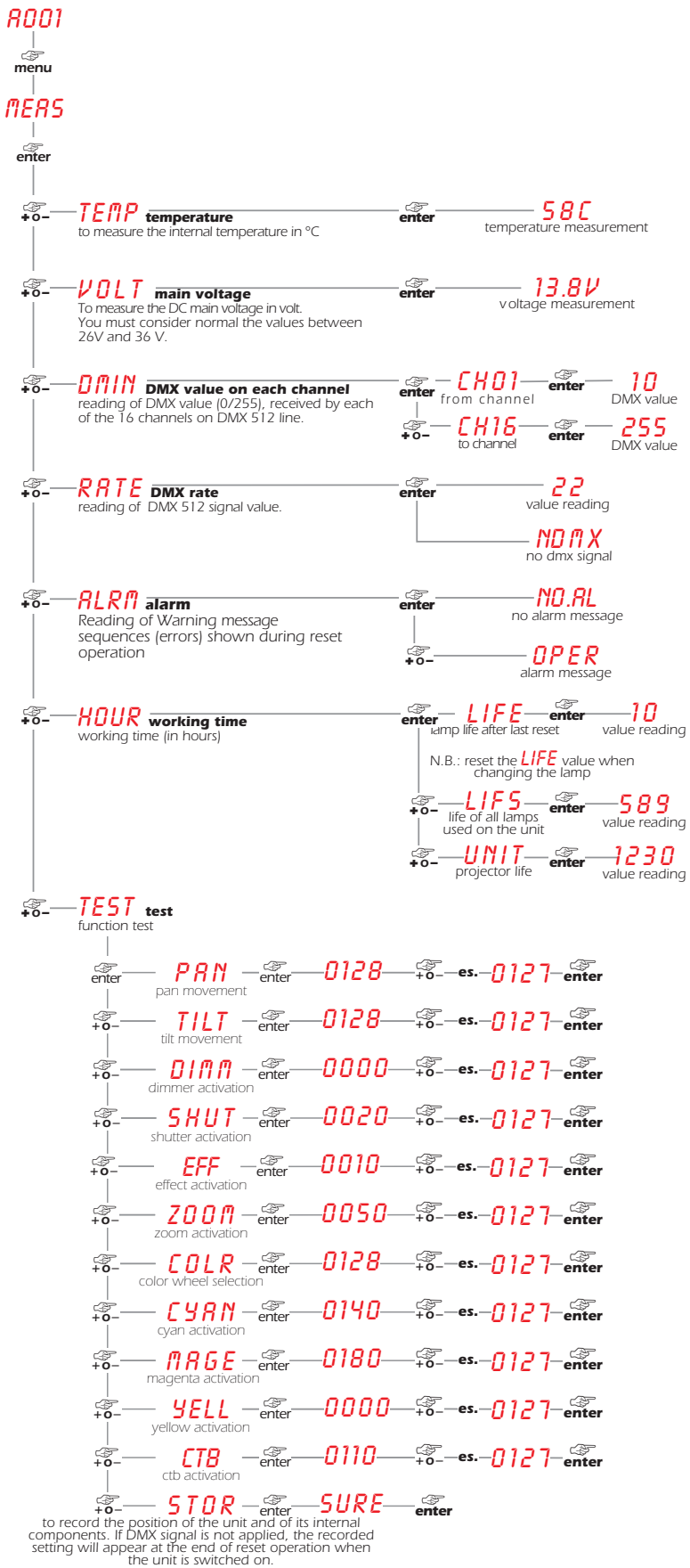
8.1. Quick guide to menu navigation

For your convenience, the following is a guide to navigating the menu system of the projector.



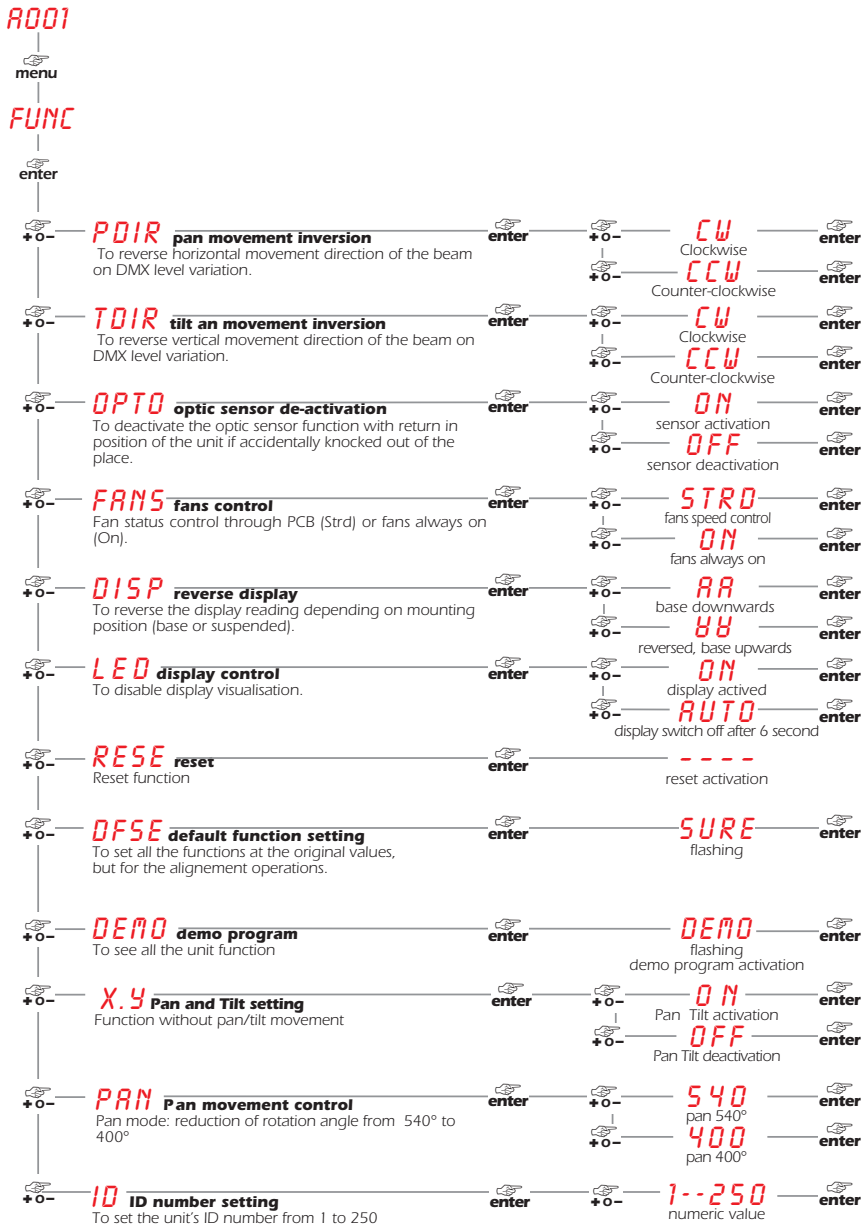
8.2. Measure and test (MEAS)

The internal microprocessor of the **iWash Halo** allows for several diagnostic and output parameters to be displayed. You may record, in this menu, determine the position in which the projector will come to rest when turned on with no dmx signal attached.



8.3. Function settings (FUNC)

The projector allows the altering of several functions and for selecting personalised settings.



8.4. Rapid scrolling

Via the **iWash Halo** display it is possible to rapidly scroll through the various numbers displayed in the menu in the following manner:
1. Pressing the **+** or **-** buttons will cause the number to scroll more quickly.
2. Pressing and holding the **+** button and then the **-** button will cause the numbers to jump to the highest value.
3. Pressing and holding the **-** button and then the **+** button will cause the numbers to jump to the lowest value.

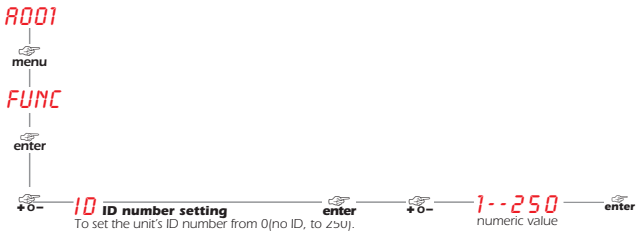
8.5.Connecting the DR1

All the functions available via the display menu are also available via the **DR1** (cod. **9703**).
The **DR1** is a remote device designed for technical users who need to perform tasks on the projectors whilst they may be located in inaccessible positions. It acts as a remote control.
For example, the **DR1** eliminates the need for climbing up truss structures to gain direct physical access to the projector to alter such parameters as **DMX** address, reading outputs such as lamp life as well as all other functions available via the digital display unit on the projector.
In order to utilise the **DR1** remote device, you must first activate the identifying number of the projector **ID**, which must be unique in the particular DMX universe in which it is currently installed.

ATTENTION!!

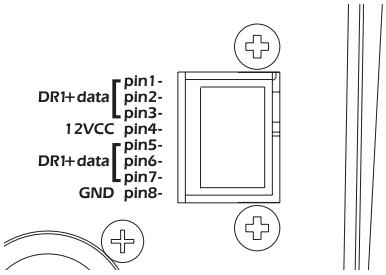
- **If you set a projectors identification number to "0" it will not be able to communicate with the DR1.**
- **Never assign the same ID to two or more projectors. This may jeapordise the functioning of the entire system. (The DR1 will show an error message).**

The method for setting an identification number ID is shown below.



For further information, consult the **DR1** instruction manual.

8.6. Use of RJ45 connector



On rear panel of **iWash Halo** base you find a RJ45 connector , as shown in oicture, that can be used either for display supply and for software upgrade function.
It's possible to supply the display through an external battery, and access to menu functions, without connectinf the unit to the mains.
RJ45 connector can also be used for the connection of **DR1+**, the remote control that allows to supply the display, to upgrade the software and to access to all the functions that are usually selectable from the **DR1**.
For more information pls. Read the manual of the different devices.

8.6. Turning on the projector with no articulated movement

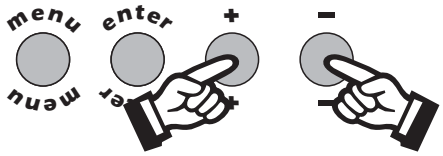
This function may be useful should you need to power up the **iWash Halo** whilst it is in its flight case or to re-address it or alter any parameters and you wish to in the absence of any articulated movement.

1. Turn on the projector whilst holding down the **enter**, **menu** and **– buttons**
The The projector will proceed with a reset of all its motors with the exception of those which control articulated movement, the pan and tilt motors, which remain static.

2. You may alter the DMX address or any other parameter without any articulated movement occuring
3. To return to normal functioning of the **iWash Halo** simply turn the projector off and on via the **Power** switch or activate the **Reset** function.

8.7. Resetting the counter

The lamp life counter needs to be reset to zero at every lamp change to provide accurate information on lamp life.
When turning on the **iWash Halo** , simultaneously hold down the **+** and **– buttons**. The projector will restart with its counter reset.



The projector has reset the LIFE counter.
To verify that this operation has occured:

1. Press the **menu** button and then press **enter**.
2. Press the **+** or **-** buttons until MEAS is displayed, then press **enter**.
3. Press the **+** or **-** buttons until HOUR (hours) is displayed, then press **enter**.
4. Press the **+** or **-** buttons until LIFE (lamp life) is displayed, then press **enter**.
5. If the display shows 0000, the counter has been reset.

N.B. You may also wish to verify that other electronic counters such as LIFS (total lamp operating lives) and UNIT (total proejctor operating life) have remained unaltered.

9. Lamp installation and alignment

iWash Halo uses TXO *(Tungsten eXtreme Output) halogen lamp, high quality, compact and incredibly performing: a result of the co-operation between* **Coemar** *and* **Philips**.
The lamp is available at **Coemar***; its characteristics are listed in the following chart.*

Lamp	**Philips TXO 750W 100V**
Coemar code	105115
Power	750W
Luminous flux	18600 lm
Colour temperature	3200° K
Base	GX 9,5
Approximate lamp life	300 hours

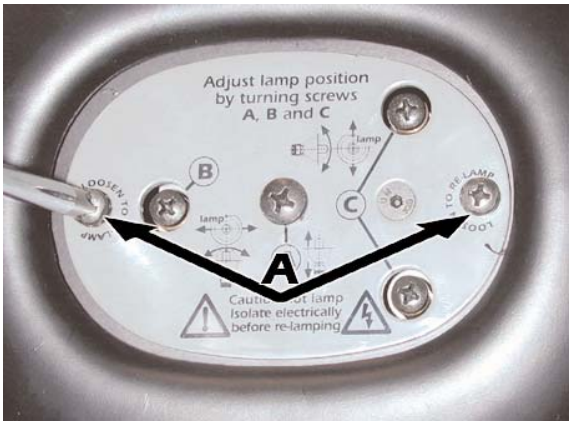
The fixture's internal temperature can reach 250° C after 5 minutes, with a maximum peak of 350° C; ensure that the lamp is cold prior to attempting removal. The fixture should be allowed to stand and cool for 10 minutes prior to its removal.
Lamps must be handled with great care.

ATTENTION!!

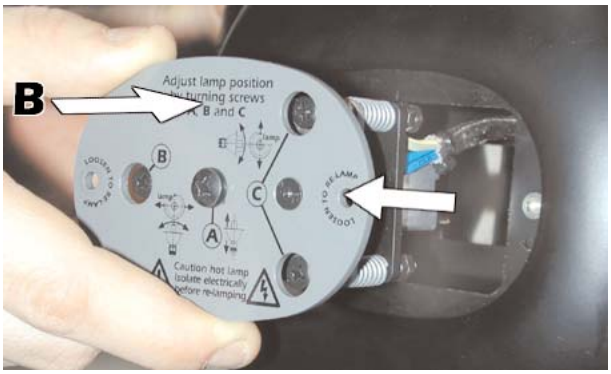
Disconnet the unit from mains power prior to attempting lamp installation or replacement
Make sure the projector is sufficiently cooled.

9.1. Lamp installation

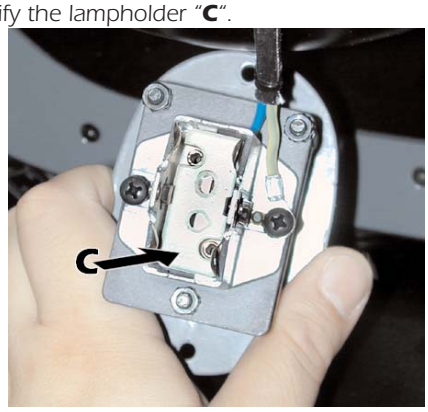
1. *Use a suitable tool to loosen the two screws "***A***" which affix the lampholder assembly at the rear of the projector.*



2. *Remove the lampholder assembly "***B***".*

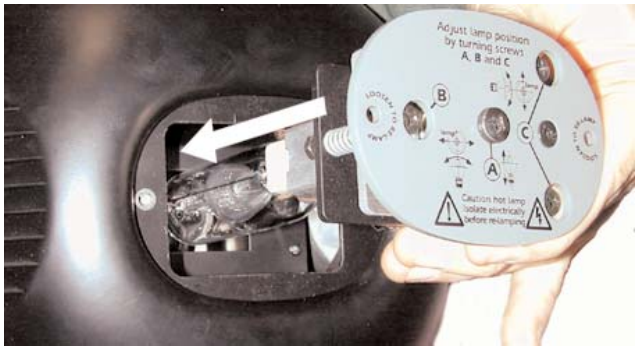


3. *Identify the lampholder "***C***".*



4. Insert the lamp
The lamp used is manufactured from quartz glass and should be handled with care; always adhere to the instructions supplied in the lamp's packaging. Never touch the glass directly, use the tissue provided in the lamp's packaging. The GX 9,5 lampbase is symmetrical in construction. DO NOT USE UNDUE FORCE. In case of difficulty, re-read the instructions and repeat the procedure.

5. Replace the lampholder assembly in its original position and refasten the two screws "**A**" which were previously removed.



ATTENTION!!
Each time you change the lamp, we recommend the following be carried out:
- **realign the lamp in the optical path to avoid overheating dichroics.**
- **reset the lamp life counter (as described in section 8.7. Resetting the counter).**

9.2. Aligning the lamp in the optical path

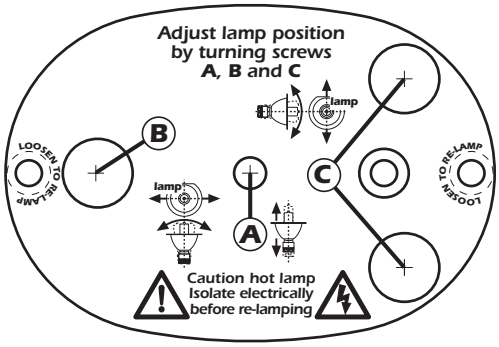
Aligning the lamp in the optical system is achieved via the 3 adjusters at the rear of the projector. This procedure should be undertaken to maximise output, properly align the lamp in the optical system and to avoid the possible overheating of the internal components due to the incorrect focusing of the beam onto components not intended to be exposed to this.

Alignment procedure
Alignment is effected by the 3 adjusters **A**, **B** and **C** located on the lampholder assembly. The lamp should be on, black-out fully open, and no colours selected. If the lamp is not correctly aligned, a hot-spot will be readily noticeable. Using the 3 adjusters in unison, you will need to bring the hot-spot to the centre of the beam (adjusters **B** and **C**) and then flatten the beam to maximum uniformity (adjuster **A**).

Vertical adjustment
Adjuster "**C**" acts on a lever and spring assembly to position the lamp via a vertical movement within the reflector; rotate it until correct positioning is achieved.

Horizontal adjustment
Adjsuter "**B**" acts on a lever and spring assembly to position the lamp via a horizontal movement within the reflector; rotate it until correct positioning is achieved.

Axial adjustment
Adjuster "**A**" moves the entire lamp assembly axially within the unit; rotate it until correct positioning is achieved, resulting in a flat, even beam.



10. Opening up the projector

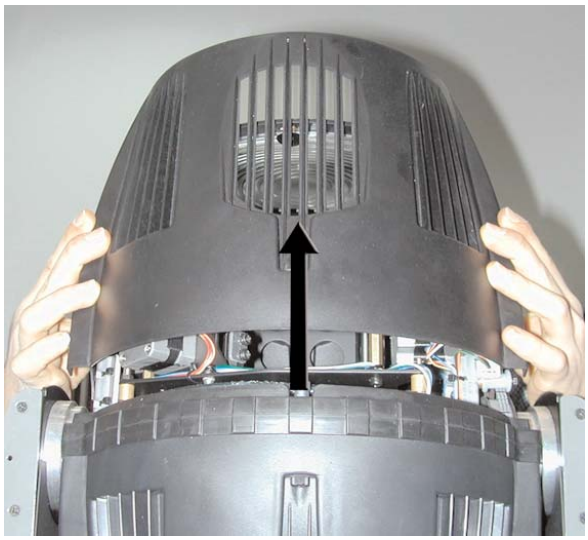
By removing the casing, complete access is available to the internals of the projector.

ATTENTION!!

Disconnet the unit from mains power prior to attempting lamp installation or replacement
Make sure the projector is sufficiently cooled.

1. Use a screwdriver to remove the screws which affix the front and rear housings.

2. Lift the housing to gain access to the internals of the fixture.



11 Thermal protection

A thermal sensor in the body of the **iWash Halo** protects the unit against overheating.
The thermal sensor operates by removing voltage to the lamp if the ambient temperature rises above a preset maximum due to either less than ideal air circulation around the fixture or in the event of cooling fan failure.

12. Maintenance

Whilst every possible precaution has been taken to ensure the trouble-free operation of your **iWash Halo**, the following periodic maintenance is highly recommended.

ATTENTION!!

Always remove mains power and ensure the unit is sufficiently cooled prior to opening up the housing.

To gain access to the internals of the unit refer to chapter **10. Opening up the projector** of this manual.

12.1. Periodic cleaning

Lenses and reflectors
Even a fine layer of dust can reduce the luminous output substantially. Regularly clean all lenses and the reflector using a soft cotton cloth, dampened with a specialist lens cleaning solution.

Fans and air passages
The fans and air passages must be cleaned approximately every 6 weeks; the period for this periodic cleaning will depend, of course, upon the conditions in which the projector is operating. Suitable instruments for performing this type of maintenance are a brush and a common vacuum cleaner or an air compressor.

12.2. Periodic maintenance

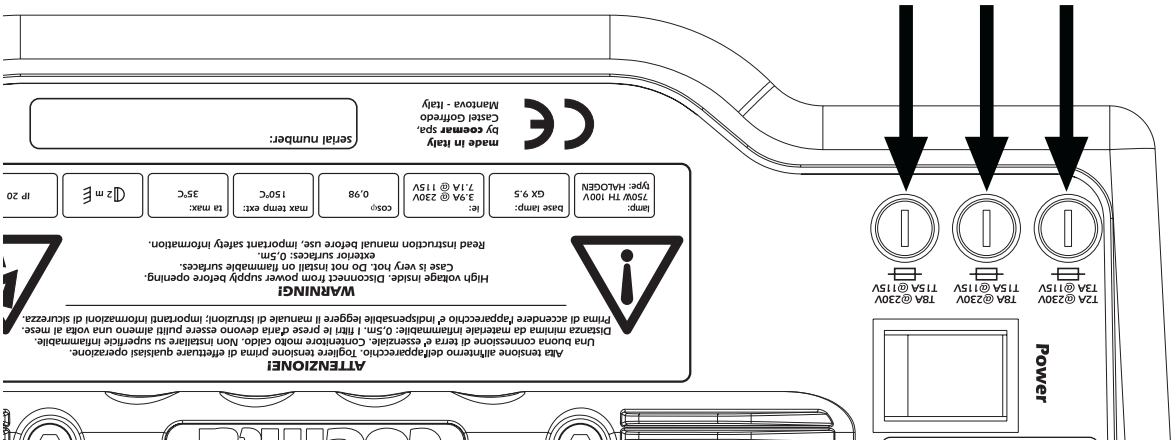
Lamp
Check the lamp and replacing it if there is any observable damage or deformation due to heat.

Mechanicals
Periodically check all mechanical devices for wear and tear; gears, guides, belts, etc., replacing them if necessary. Periodically check the lubrication of all components, particularly the parts subject to high temperatures. If necessary, lubricate with suitable lubricant, available from your **Coemar** distributor.

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

12.3. Fuse replacement

Locate the fuse, which protects the lamp and electronics, in the base of the **iWash Halo**.
Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type if necessary.



12.4. Electronic motor alignment

ATTENTION!!

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

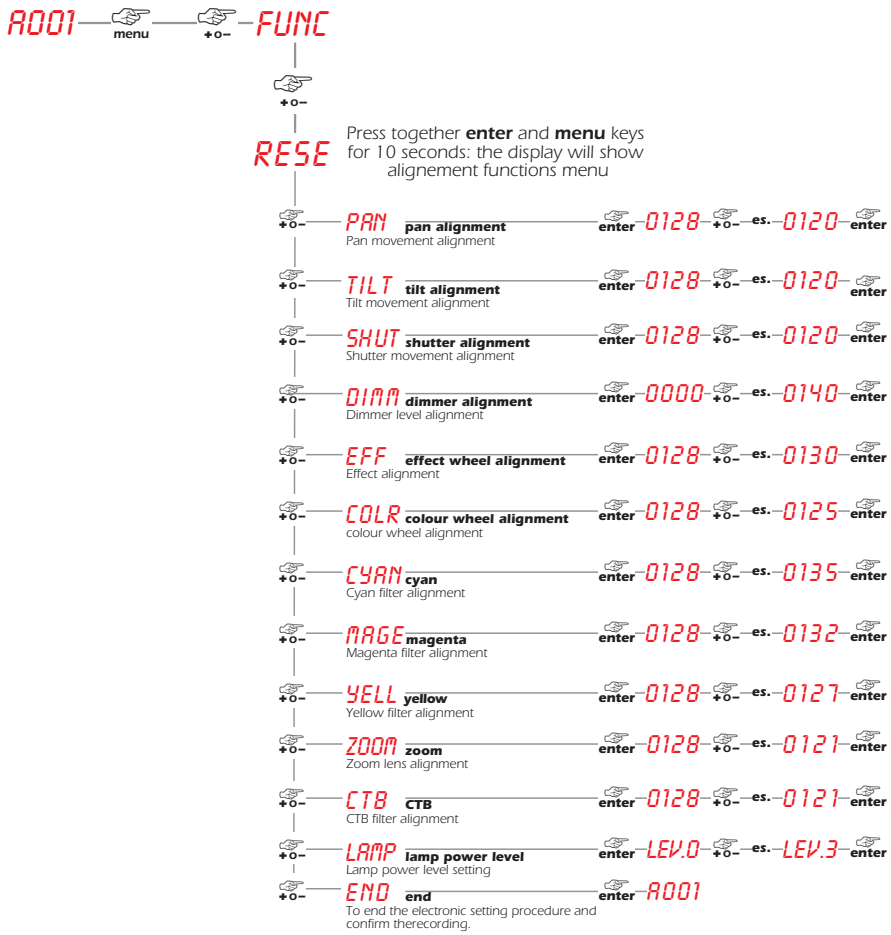
The display panel of the **iWash Halo** allows for the electronic alignment of the projector's motors in the optical system. This procedure is performed by **Coemar** at the factory. It may be useful to perform this procedure in the case of internal components being replaced. Altering the factory settings may radically alter the functioning of the projector. Carefully read all of the following prior to attempting any changes.

Electronic calibration

ATTENTION!!

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

1. Press the **menu** button and then **enter** to confirm.
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 motors will perform a reset and the display will show — — — — for a few seconds. After this, the display will show PAN confirming that you have entered electronic calibration mode.



Note: Simultaneously pressing the **+** and **-** buttons will return the calibration value to 128 (default).

13. Spare parts

All the components of the **iWash Halo** are available as replacement spares from your authorisded **Coemar** service centre. Accurate description of the fixture, model number, and type will assist us in providing for your requirements in an efficient and effective manner.

14. Error messages

MBER:

COMMUNICATION Error
This message indicates that the motherboard within the unit is not communicating properly with the control source. Check the connectors located on both boards.

OPER:

PAN ENCODER Error
This message indicates that there is a problem with the PAN encoders. Check the sensors on the encoder wheel located near the pan movement motor, as well as the relevant cabling.

OTER:

TILT ENCODER Error
This message indicates that there is a problem with the TILT encoder locate on the fixture yoke. Check the sensors on the encoder wheel located near the pan movement motor, as well as the relevant cabling.

SNER:

SYNCHRONISATION Error
Check and possibly replace the U9 opto-isolator.

EPER:

EEPROM Error
The EEPROM is either defective or absent; refer to your **Coemar** service centre for a replacement component.

DTER:

DATA Error
The initial parameter settings are incorrect or corrupt; the projector has reloaded its factory default settings. Turn the projector off and on again. Should the error reoccur, refer the unit to your authorised **Coemar** service centre to have the EEPROM check and possibly replaced.

ADER:

DMX addressing Error
The projector is not receiving all DMX channels needed to operate correctly. Check the DMX address indicated on the display and the channel numbers being outputted from the controller. Note that not all controllers will output all 512 channels.

S1ER:

Control circuit error relating to position sensors for 4 motors (located in the yoke at left when viewed from the rear of the unit):
Check for the presence of power to the PCB and the condition of the connectors and cabling between the PCB and the sensors. Additionally, check motors and/or cogs for any impediments as well as the proper position of the cabling connectors.

S2ER:

Control circuit error relating to position sensors for 4 motors (located in the yoke at right when viewed from the rear of the unit):
Check for the presence of power to the PCB and the condition of the connectors and cabling between the PCB and the sensors. Additionally, check motors and/or cogs for any impediments as well as the proper position of the cabling connectors.

COER:

Position Error in colour wheel
Check the functioning and correct positioning of the magnetic sensor of the colour wheel

EFER:

Position Error in effects wheel
Check the functioning and correct positioning of the magnetic sensor of the effects wheel

ZOER:

Position Error in the zoom lens
Check the functioning and correct positioning of the magnetic sensor of the zoom lens

ER20 ÷ ER99:

SYSTEM Error
Turn the unit off and on again. If the error persists, contact your authorised **Coemar** service centre.

15. Frequently asked questions

Question	Possible cause	Possible solution
The projector is completely immobile.	Projector not powered up.	Check that the mains power cable is connected to power.
	The circuit breaker is switched off.	Set the circuit breaker to ON.
	The protection fuse is blown.	Diconnect the projector and replace the fuse.
The projector resets correctly, but either does not respond, or responds incorrectly, to DMX signal.	Incorrect signal connection.	Inspect the signal cable, rectify any incorrect wiring, repari or replace any damaged cables or connectors.
	Incorrect DMX addressing	Check the DMX address.
	The wiring of the cannon plug may be incorrect.	Repair or replace the signal cable.
The lamp turns off intermittently.	The projector is too hot.	Let the fixture cool down. Check that the air vents above the cooling fans are not obstrucdted and that the fans are working correctly. Ensure that the ambient temperature is below 35 °C.

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