i SPOT eXtreme 6000
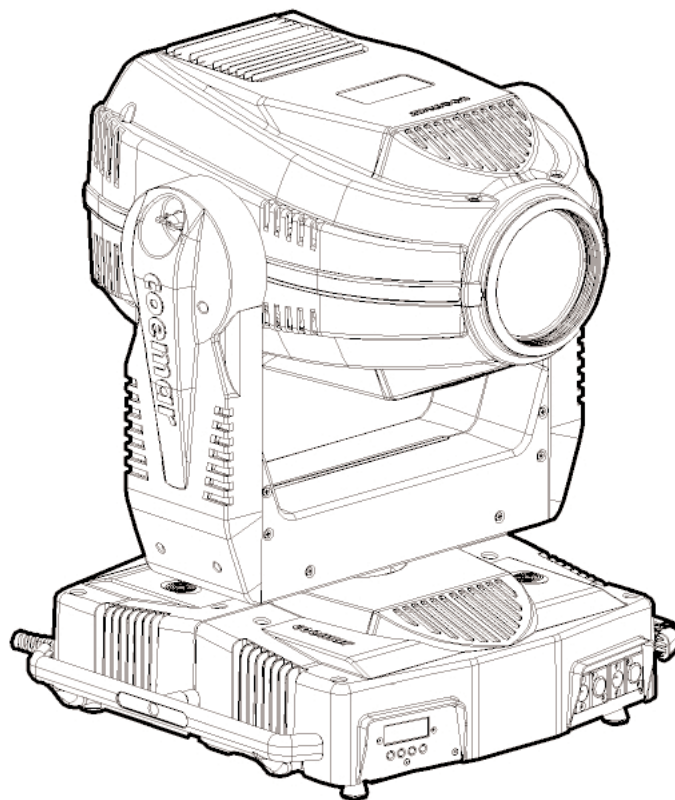
...electronic**ballast** + **pfc**

manuale di istruzioni
instructions manual

Version 1.1

coemar
LIGHT EMOTION

i SPOT eXTREME 6000

...electronic**ballast** + **pfc**

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 **iSpot Extreme 6000**: in caso di richiesta di informazioni, pezzi di ricambio, servizi di riparazione o altro 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 **iSpot Extreme 6000***: 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

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 iSpot Extreme 6000
1 instruction manual
2 cam-lock support brackets

1.2. Transportation

The **iSpot Extreme 6000** should be transported in its original packaging or in an appropriate flight case.

2. General information

2.1. Important safety information

Fire prevention:
1. **iSpot Extreme 6000** utilises a Philips **MSR GOLD 1200 SA/SE**; 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 **iSpot Extreme 6000** 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. Mains cables should not come into contact with other cables.
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.

Protection against ultraviolet radiation:
1. Never turn on the lamp if any of the lenses, filters, or the carbon fibre housing is damaged; their respective functions will only operate efficiently if they are in perfect working order.
2. Never look directly into the lamp when it is operating.

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. A hot lamp may explode. 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:	208/230/240 Vac 50/60Hz
Nominal current:	8A
Maximum current:	10A
Power factor:	cos φ = 0,9
Lamp wattage:	1200W MH
Maximum ambient temperature:	35°C / 95° F
Weight:	38 Kg / 83.77 Lbs
IP rating:	IP20

3.2. Dimensions
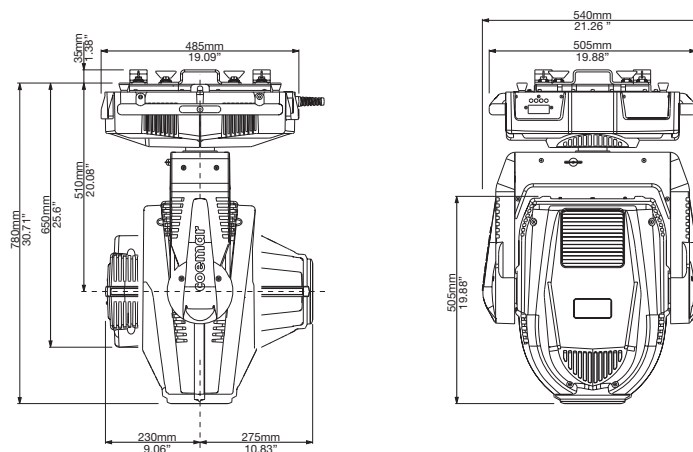
3.3. Components
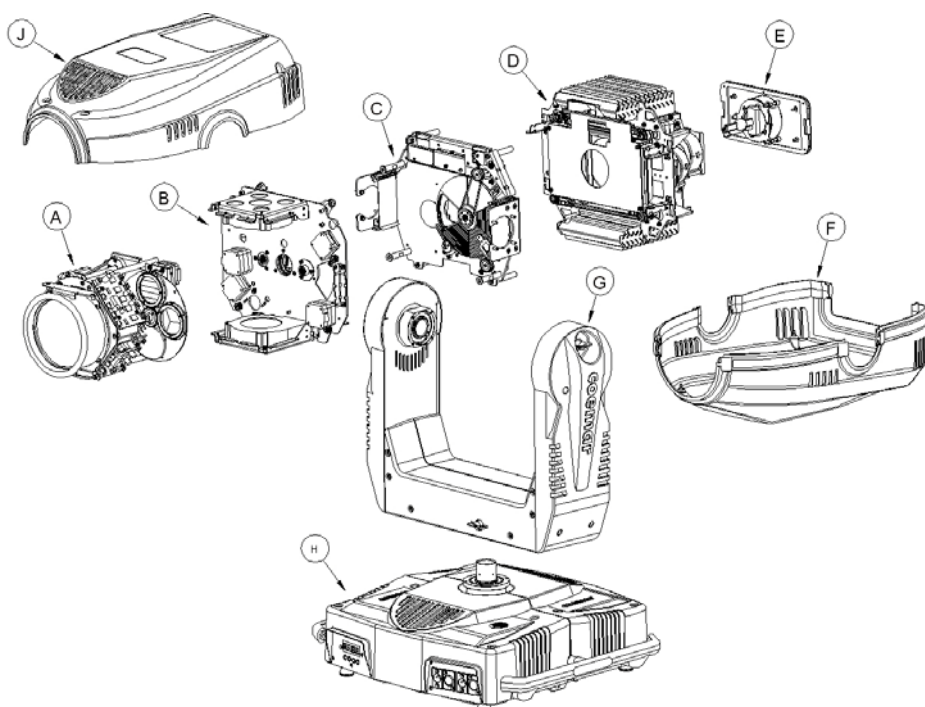
Component description
A. Zoom group
B. Gobo wheel group
C. Colours wheel group
D. Colours changer group
E. Lamp group
F. Lower cover
G. Yoke
H. Base
J. Upper cover

5

4. Installation

4.1. Mechanical installation

iSpot Extreme 6000 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 **iSpot Extreme 6000.** The cam-lock brackets are affixed via a 1/4 nut. Please ensure that they are correctly seated and firmly tightened into position.
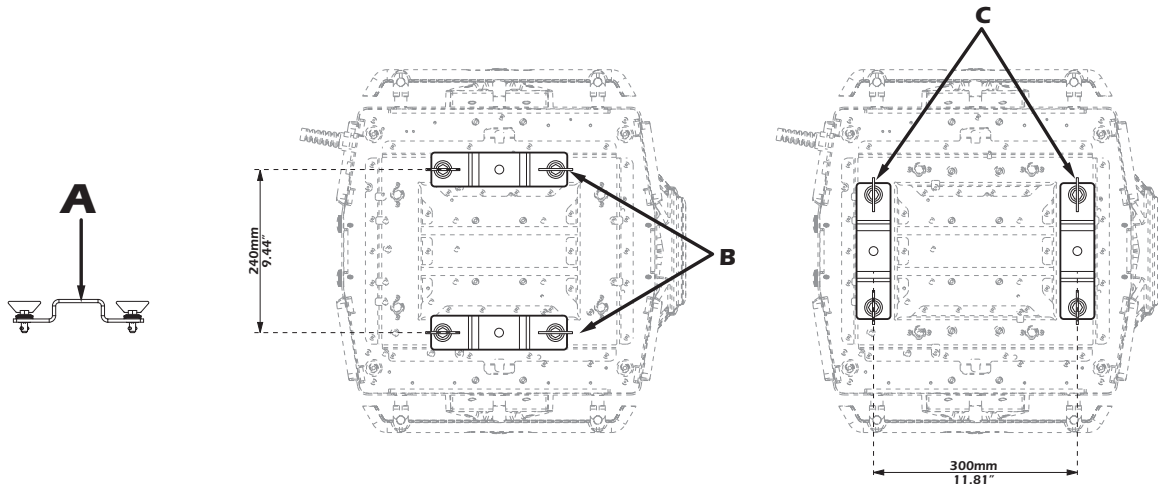
For ceiling mounted installations we suggest the use of appropriate clamps or fixings to attach the fixture to the mounting surface. Clamps may be attached to the central hole provided in the cam-lock brackets, as shown in the following diagram.
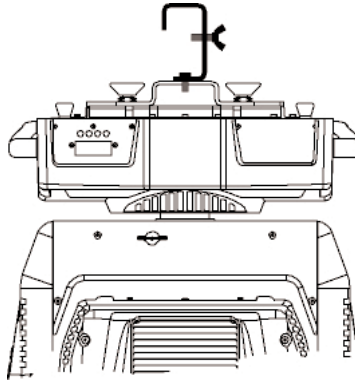
ATTENTION!!
Ensure that the structure from which the unit is hung is of sufficient rating to hold the weight of the unit,
as are any clamps, nuts and bolts used to hang the unit.

The structure 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 **iSpot Extreme 6000** is affixed to a mobile 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.
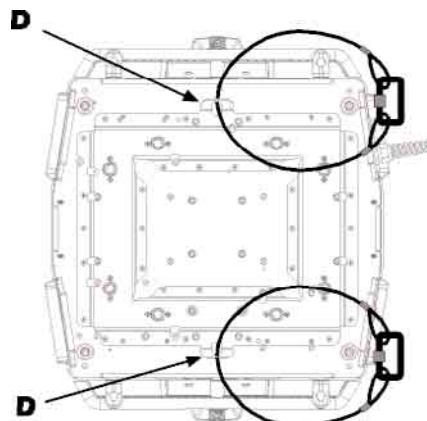
5. Powering up

5.1. Operating voltage and frequency

The projector may operate at voltages of 208, 230 or 240VAC at a frequency of 50 or 60Hz. **Coemar** presets (barring specific requests) a voltage of 240v at a frequency of 50Hz.. The preset voltage is indicated on the base of the projector.
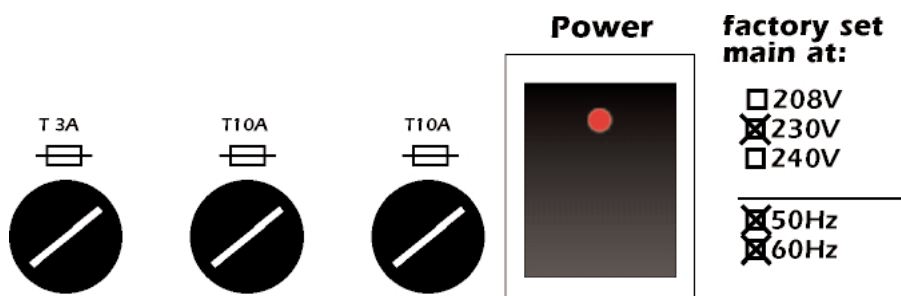
iSpot Extreme 6000 will automatically adjust its operation to suit a frequency of 50Hz or 60Hz.

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.

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 **iSpot Extreme 6000.**
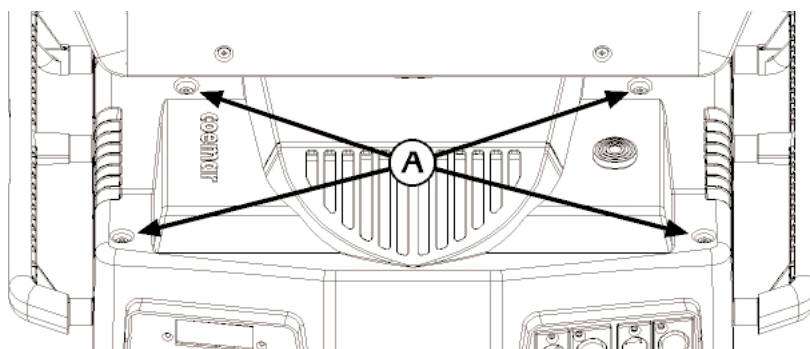
Locate the transformer in the base of the unit.
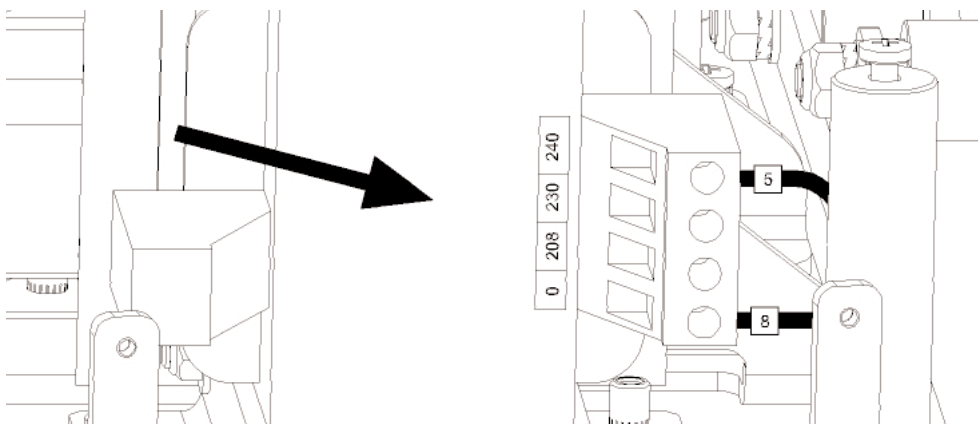
Select a voltage from amongst 208, 230 or 240V by disconnecting cable n° 5 and moving it to the correct voltage. Refer to the sticker located on the transformer to ensure the proper terminal is selected for your requrements.
Cable number 8 must not have its position altered under any circumstances!
When you have made changes, note these on the outside of the **iSpot Extreme 6000**.
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:
▪208/230/240V   8 amps constant current in normal operation

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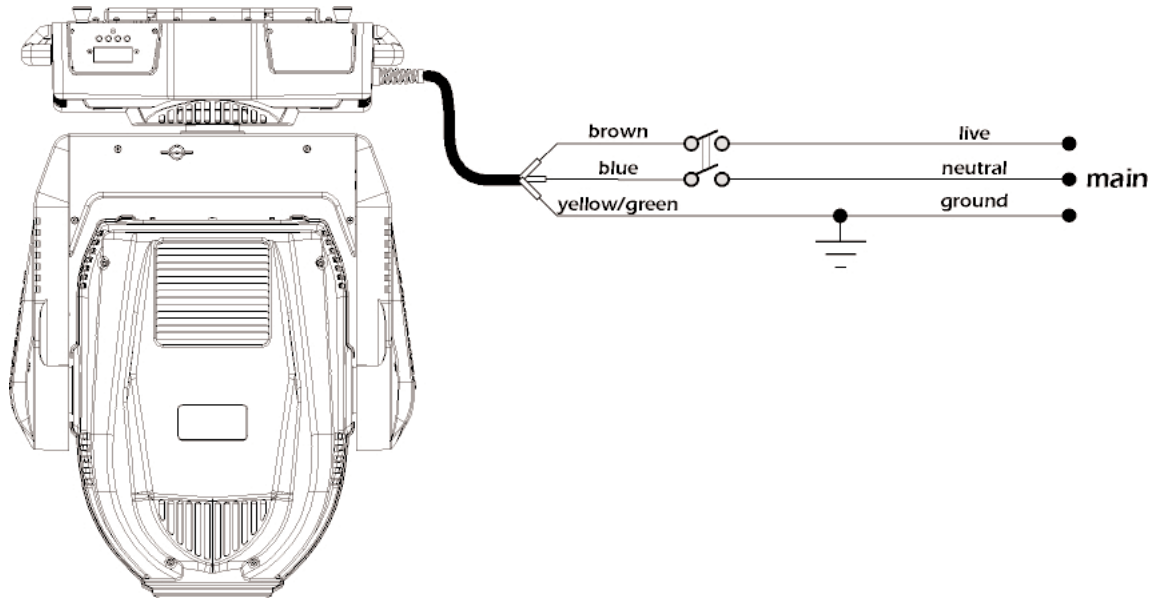
ATTENTION!!

▪ **The use of a thermal magnetic circuit breaker is recommended for each projector. Strict adherance to all regulatory norms is higly recommended.**
▪ **iSpot Extreme 6000 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 iSpot Extreme 6000. 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 **iSpot Extreme 6000,** 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.

Ad altri **iSpot Extreme**
Connect to other **iSpot Extreme**
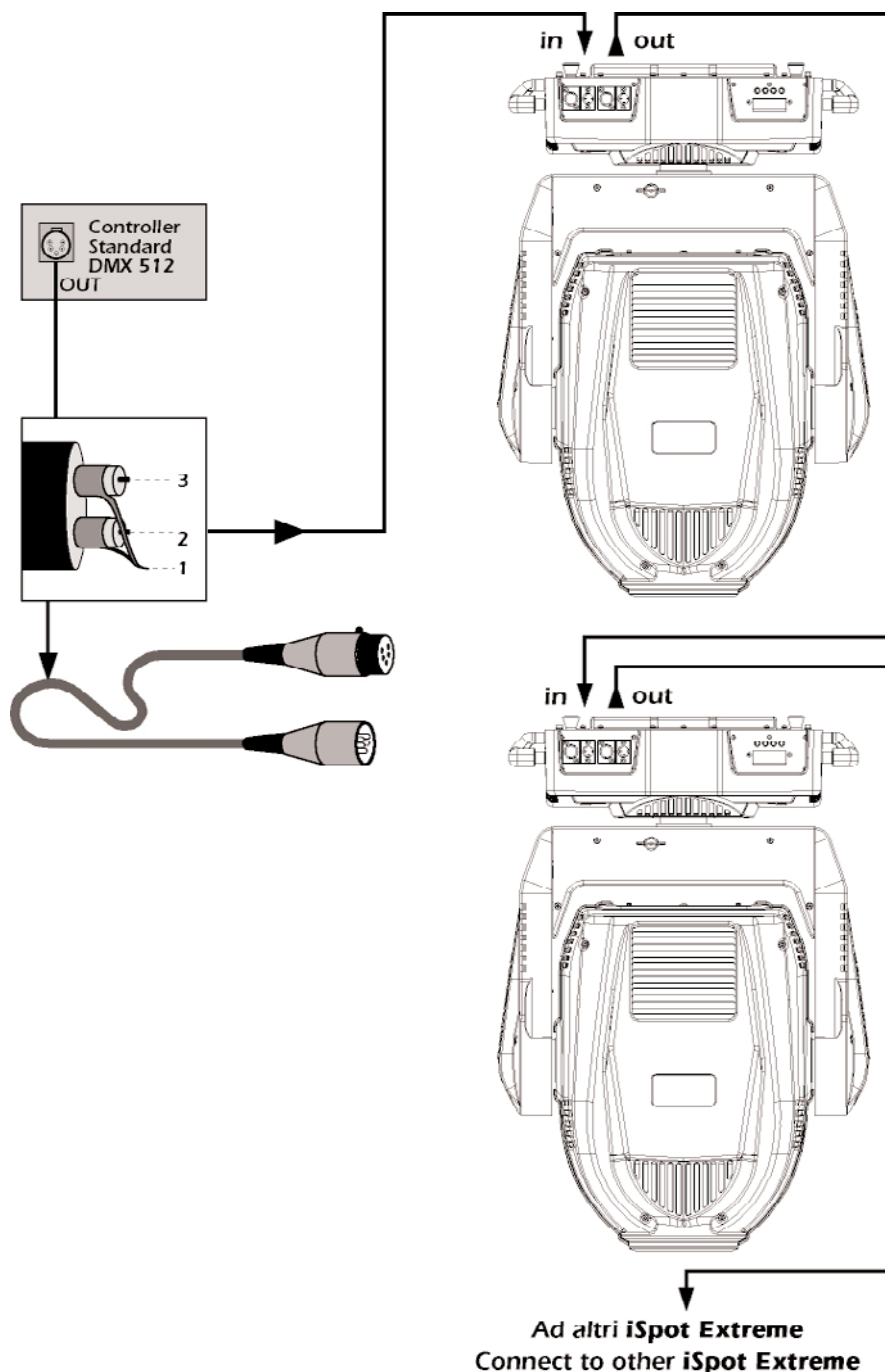
ATTENTION!!

**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 sequnece the software version installed in the 3 onboard microprocessors - the display "*D*" and the two master "*A*" and "*B*".

For example, upon turning on power, the **iSpot Extreme 6000** may show:

D1.02 (display pcb "*D*" software version)

A1.03 (master pcb "*A*" software version)

B1.00 (master pdb "*B*" 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 unit can be set to use either **24** or **26** address channels. When the gobo index resolution is modified (see section **8.3 Functional settings FUNC** GOBO function), the number of channels used by the units varies in number. Changing the resolution from 8 to 16 bits the DMX channels change from 24 to 26.
iSpot Extreme 6000 features are listed in paragraph **7.2 DMX functions chart.**

DMX addresses
To ensure that each projector accesses the correct signal, it is necessary to correctly address each fixture. 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 **26** (16 bit setting) from your **DMX controller**. A second unit should be addresses as **23**, a third as **45** 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**.
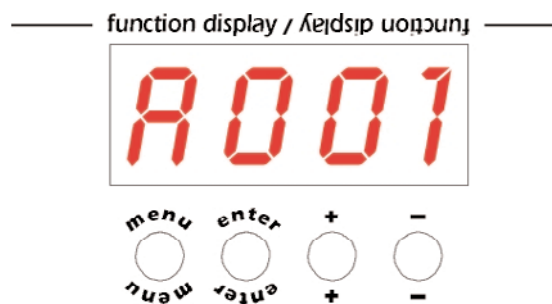
Important Note: holding down the **+** or **-** buttons will cause the display to alter at an increased speed, allowing a faster selection to be made.

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 16 bit	channel 8 bit	function	type of control	effect	decimal		percentage	
1	1	X axis, base movement (pan) coarse	proportional	proportional coarse control of the base motor movement	0	255	0%	100%
2	2	X axis, base movement (pan) fine	proportional	proportional fine control of the base motor movement	0	255	0%	100%
3	3	Y axis, yoke movement (tilt) coarse	proportional	proportional coarse control of the yoke motor movement	0	255	0%	100%
4	4	Y axis, yoke movement (tilt) fine	proportional	proportional fine control of the yoke motor movement	0	255	0%	100%
5	5	movement speed	step	standard (fast)	0	10	0%	4%
			step	ultra fast movement (best for programming positions)	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	6	dimmer	proportional	gradual adjustment of luminous intensity from 0 to 100%	0	255	0%	100%
7	7	shutter, strobe and zap effect	step	shutter closed (zap off)	0	9	0%	4%
			proportional	strobe effect with variable speed from slow to fast	10	66	4%	26%
			step	shutter open (zap off)	67	68	26%	27%
			proportional	sequenced pulse effect, slow closing, fast opening (with variable speed from slow to fast)	69	125	27%	49%
			step	shutter open (zap off)	126	127	49%	50%
			proportional	sequenced pulse effect, fast closing, slow opening (with variable speed from fast to slow)	128	184	50%	72%
			step	shutter open (zap off)	185	187	73%	73%
			proportional	random strobe effect, non-synchronised, variable speed from slow to fast	188	244	74%	96%
			step	shutter open (zap off)	245	255	96%	100%
8	8	iris diaphragm (LIN-Linear)	step	open	0	9	0%	4%
			proportional	from maximum to minimum aperture	10	255	4%	100%
8	8	iris diaphragm (with internal PULS effect)	step	open	0	9	0%	4%
			proportional	from maximum to minimum aperture	10	124	4%	49%
			step	minimum diameter	125	129	49%	51%
			proportional	pulsing with proportional increase in speed	130	189	51%	74%
			step	open	190	192	75%	75%
			proportional	pulse and flash effect with proportional increase in speed	193	255	76%	100%

NOTE 1: the iris diaphragm operation will vary according to the selection made for IRIS on the display panel (linear LIN or with internal PULS effect)

channel 16 bit	channel 8 bit	function	type of control	effect	decimal		percentage	
9	9	focus	proportional	proportional control of focus	0	255	0%	100%
10	10	zoom	proportional	proportional control of zoom from wide beam to narrow	0	255	0%	100%
11	11	rotating gobo selection on wheel 1 (closest to lamp) (STRD standard)	step	nogobo	0	10	0%	4%
			step	gobo 1	11	40	4%	16%
			step	gobo 2	41	70	16%	27%
			step	gobo 3	71	100	28%	39%
			step	gobo 4	101	130	40%	51%
			step	gobo 5	131	160	51%	63%
			step	gobo 6	161	192	63%	75%
			proportional	continuous rotation of the gobo wheel from slow to fast	193	255	76%	100%
11	11	rotating gobo selection on wheel 1 (SPEC special)	step	nogobo	0	10	0%	4%
			proportional	proportional positioning of gobo wheel 1 at 360°	11	192	4%	75%
			proportional	continuous rotation of gobo wheel from slow to fast	193	255	76%	100%

NOTE 2: depending on the gobo selection on display panel (standard STRD or proportional SPEC) the gobo wheel has a different function

channel 16 bit	channel 8 bit	function	type of control	effect	decimal		percentage	
12	12	indexing gobo rotation on wheel 1 through 360°	step	no effect	0	10	0%	4%
			proportional	proportional indexing of the gobos through 360°	11	255	4%	100%
13		fine indexing of the gobos 16 bit	proportional	fine indexing of the gobo (gobo wheel 1)	0	255	0%	100%
14	13	gobo rotation on wheel 1	step	no effect	0	10	0%	4%
			proportional	continuous rotation of the gobo in a clockwise direction with proportional control over decreasing speed	11	131	4%	51%
			step	gobostop	132	134	52%	53%
			proportional	continuous rotation of the gobo in a counter-clockwise direction with proportional control over increasing speed	135	255	53%	100%

NOTE 3: when channel 12 is set to a level between 0 and 10, gobo rotation (channel 14 at 16bit or channel 13 at 8bit) does not effect indexing, the gobo stops instantly

channel 16 bit	channel 8 bit	function	type of control	effect	decimal		percentage	
15	14	rotating gobo selection on wheel 2 (STRD standard)	step	nogobo	0	10	0%	4%
				gobo1	11	40	4%	16%
				gobo2	41	70	16%	27%
				gobo3	71	100	28%	39%
				gobo4	101	130	40%	51%
				gobo5	131	160	51%	63%
				gobo6	161	192	63%	75%
			proportional	continuous rotation of the gobo wheel from slow to fast	193	255	76%	100%
15	14	rotating gobo selection on wheel 2 (SPEC special)	step	nogobo	0	10	0%	4%
			proportional	proportional positioning of gobo wheel 1 at 360°	11	192	4%	75%
			proportional	continuous rotation of gobo wheel from slow to fast	193	255	76%	100%

NOTE 4: depending on the gobo selection on display panel (standard STRD or proportional SPEC) the gobo wheel has a different function

channel 16 bit	channel 8 bit	function	type of control	effect	decimal		percentage	
16	15	indexing gobo rotation on wheel 2 through 360°	step	no effect	0	10	0%	4%
			proportional	proportional indexing of the gobos through 360°	11	255	4%	100%
17		fine indexing of the gobos 16 bit	proportional	fine indexing of the gobo (gobo wheel 2)	0	255	0%	100%
18	16	gobo rotation on wheel 2	step	no effect	0	10	0%	4%
			proportional	continuous rotation of the gobo in a clockwise direction with proportional control over decreasing speed	11	131	4%	51%
			step	gobo stop	132	134	52%	53%
			proportional	continuous rotation of the gobo in a counter-clockwise direction with proportional control over increasing speed	135	255	53%	100%

NOTE 5: when channel 16 or 15 (16bit or 8bit) is set to a level between 0 and 10, gobo rotation (channel 18 at 16bit or channel 16 at 8bit) does not affect indexing, the gobo stops instantly

channel 16 bit	channel 8 bit	function	type of control	effect	decimal		percentage	
19	17	selecting frost and prisms + rotation	step	no effect	0	10	0%	4%
			proportional	insert frost filter in the optical path	11	99	4%	39%
			step	prism 1	100	105	39%	41%
			proportional	continuous rotation of prism 1 in a counter-clockwise direction, with proportional control over speed from maximum to minimum	106	137	42%	54%
			step	stop rotation prism 1	138	142	54%	56%
			proportional	continuous rotation of prism 1 in a clockwise direction, with proportional control over speed from minimum to maximum	143	174	56%	68%
			step	stop rotation prism 1	175	179	69%	70%
			step	prism 2	180	184	71%	72%
			proportional	continuous rotation of prism 2 in a counter-clockwise direction, with proportional control over speed from maximum to minimum	185	216	73%	85%
			step	stop rotation prism 2	217	221	85%	87%
			proportional	continuous rotation of prism 2 in a clockwise direction, with proportional control over speed from minimum to maximum	222	255	87%	100%
20	18	selecting saturated colours from the colour wheel	step	no colour, white beam	0	5	0%	2%
				colour 1	6	14	2%	5%
				colour 2	15	22	6%	9%
				colour 3	23	30	9%	12%
				colour 4	31	38	12%	15%
				colour 5	39	45	15%	18%
			proportional	from colour 5 to colour 1, proportional positioning	46	127	18%	50%
				rainbow effect from fast to slow in an anticlockwise direction	128	190	50%	75%
				rainbow effect from slow to fast in a clockwise direction	191	255	75%	100%
21	19	cyan	proportional	proportional control of the percentage of cyan colour in the light beam from 0 to 100%	0	255	0%	100%
22	20	magenta	proportional	proportional control of the percentage of magenta colour in the light beam from 0 to 100%	0	255	0%	100%
23	21	yellow	proportional	proportional control of the percentage of yellow colour in the light beam from 0 to 100%	0	255	0%	100%
24	22	conversion filters	step	no colour temperature correction, open beam 6300K	0	58	0%	23%
				control of the colour temperature of the light beam to 5400K	59	106	23%	42%
				control of the colour temperature of the light beam to 4900K	107	154	42%	60%
				control of the colour temperature of the light beam to 4100K	155	202	61%	79%
				control of the colour temperature of the light beam to 3200K	203	250	80%	98%
				control of the colour temperature of the light beam to 8000K	251	255	98%	100%
25	23	zap effect (effect varies depending upon channel 7 strobe)	step	no effect	0	10	0%	4%
				zap effect synchronised with the strobe effect, speed and mode selected by strobe channel 7	11	30	4%	12%
				zap effect, flicker and speed adjustable, speed and mode selected by strobe channel 7	31	249	12%	98%
				black-out of the light beam during PAN/TILT movement, colours and gobos	250	255	98%	100%
26	24	lamp on/off, all motor resets	step	park, no function	0	10	0%	4%
				lamp off	11	29	4%	11%
				pan and tilt reset (once only)	30	65	12%	25%
				reset all motors except black-out, pan and tilt (once only)	66	100	26%	39%
				reset all motors except black-out (once only)	101	135	40%	53%
				reset all motors (once only)	136	170	53%	67%
				lamp on	171	255	67%	100%

Note 6: the display panel may be used to disable the switching off of the lamp via DMX

Note 7: turning off the lamp and all reset functions are delayed by 6 seconds to prevent accidental activation

Note 8: the lamp on/off function can only be effected if an opposite level is set

8. Display panel functions

The display panel of the **iSpot Extreme 6000** 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.
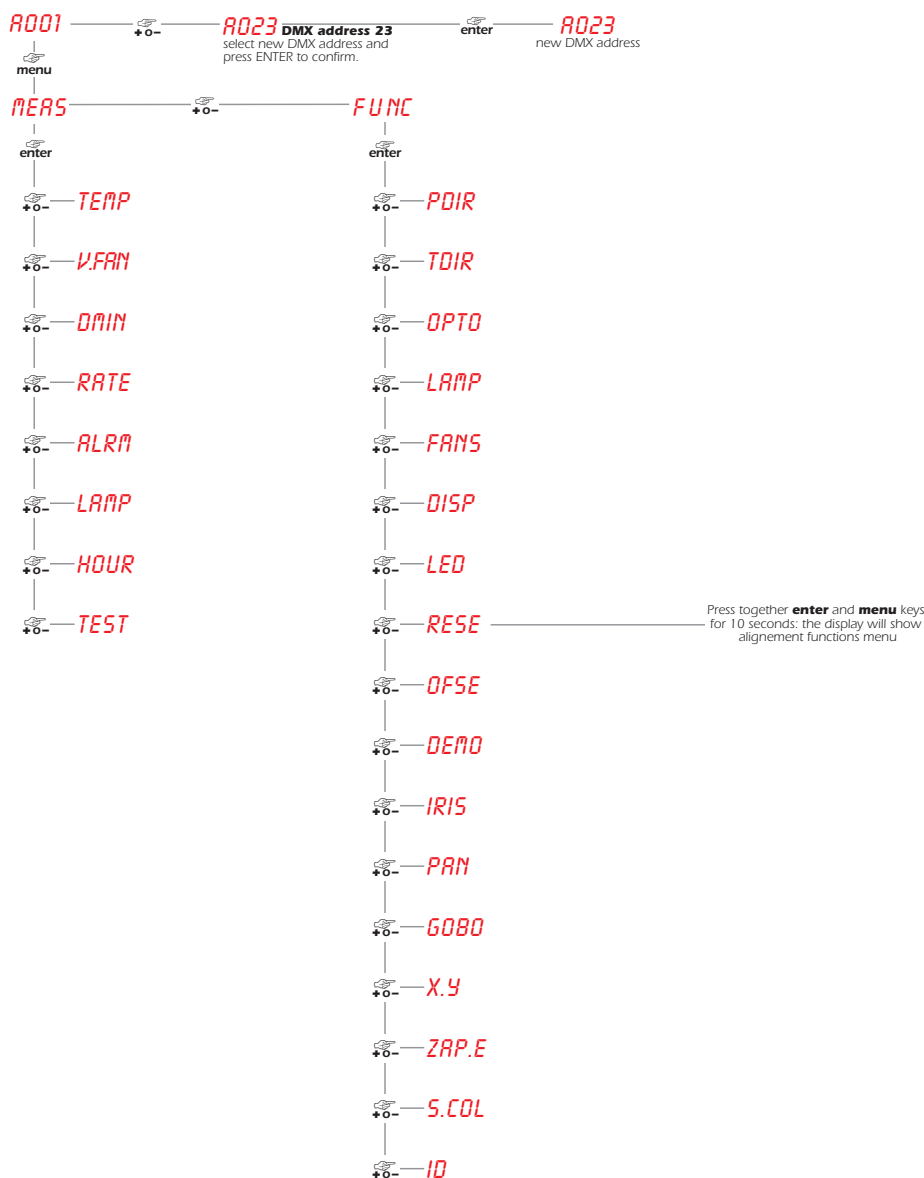
8.2. Measure and test (MEAS)

The internal microprocessor of the **iSpot Extreme 6000** 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.

A001

☞ menu

MEAS

☞ enter

+☞o- *TEMP* **temperature**
to measure the internal temperaturein C°   ☞ enter   *58C*
temperature measurement

+☞o- *V.FAN* **voltage to fans**
to measure the DC voltage to the fans located in the unit. Values higher than 25,8V are anomalous.   ☞ enter   *25.2V*
voltage measurement

+☞o- *DMIN* **DMX value on each channel**
reading of DMX value (0/255), received by each of the 26 channels on DMX 512 line.   ☞ enter *CH01* ☞ enter *10*
from ch 1   DMX value
+☞o- *CH22* ☞ enter *255*
to ch 26   DMX value

+☞o- *RATE* **DMX rate**
reading of DMX 512 signal value.   ☞ enter   *22*
value reading
NDMX
no dmx signal

+☞o- *ALRM* **alarm**
Reading of Warning message sequences (errors) shown during reset operation   ☞ enter   *NO.AL*
no alarm message
+☞o- *OPER*
alarm message

+☞o- *LAMP* **lamp status**
Reading lamp status   ☞ enter   *1400*
reading lamp power
+☞o- *OFF*
lamp off

+☞o- *HOUR* **working time**
working time (in hours)   ☞ enter *LIFE* ☞ enter *10*
lamp life after last reset   value reading
N.B.: reset the *LIFE* value when changing the lamp
+☞o- *LIFS* ☞ enter *589*
life of all lamps used on the unit   value reading
+☞o- *UNIT* ☞ enter *1230*
projector life   value reading

+☞o- *TEST* **test**
function test

☞ enter *PAN* ☞ enter *0128* +☞o- es. *0150* ☞ enter
pan movement

☞ enter *TILT* ☞ enter *0128* +☞o- es. *0150* ☞ enter
tilt movement

☞ enter *DIMM* ☞ enter *0128* +☞o- es. *0150* ☞ enter
dimmer activation

☞ enter *SHUT* ☞ enter *0128* +☞o- es. *0150* ☞ enter
shutter activation

☞ enter *IRIS* ☞ enter *0128* +☞o- es. *0150* ☞ enter
iris activation

☞ enter *ZOOM* ☞ enter *0128* +☞o- es. *0150* ☞ enter
zoom activation

☞ enter *FOCU* ☞ enter *0128* +☞o- es. *0150* ☞ enter
focus activation

☞ enter *GOB1* ☞ enter *0128* +☞o- es. *0150* ☞ enter
gobo wheel 1 selection
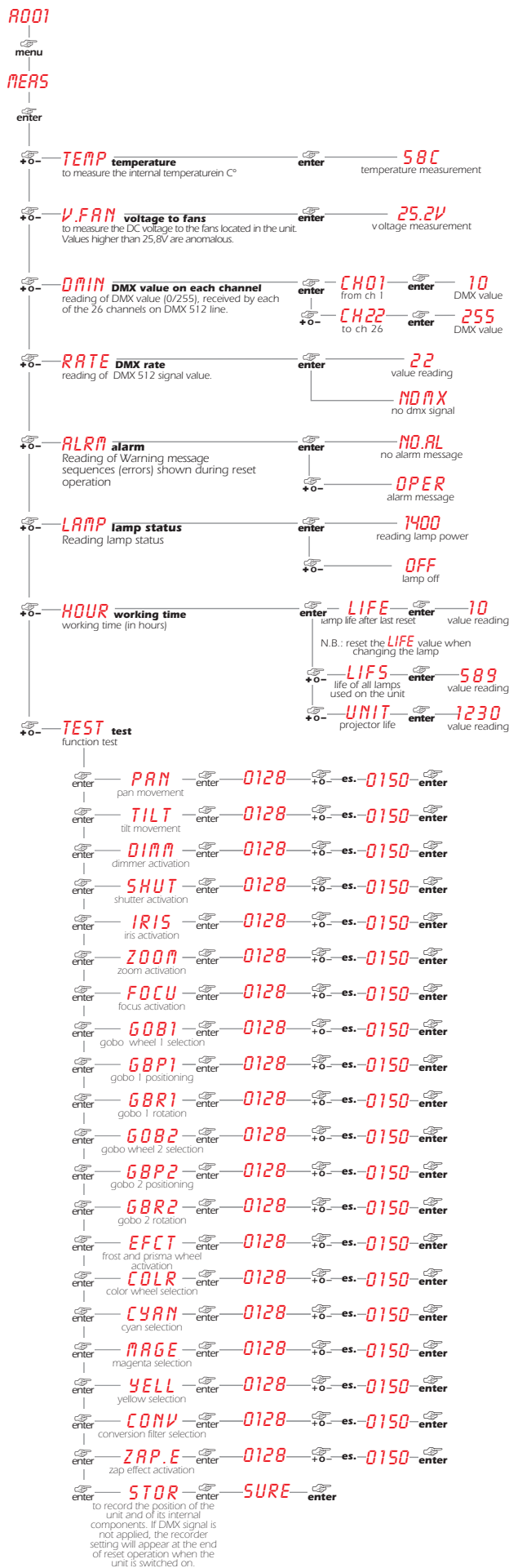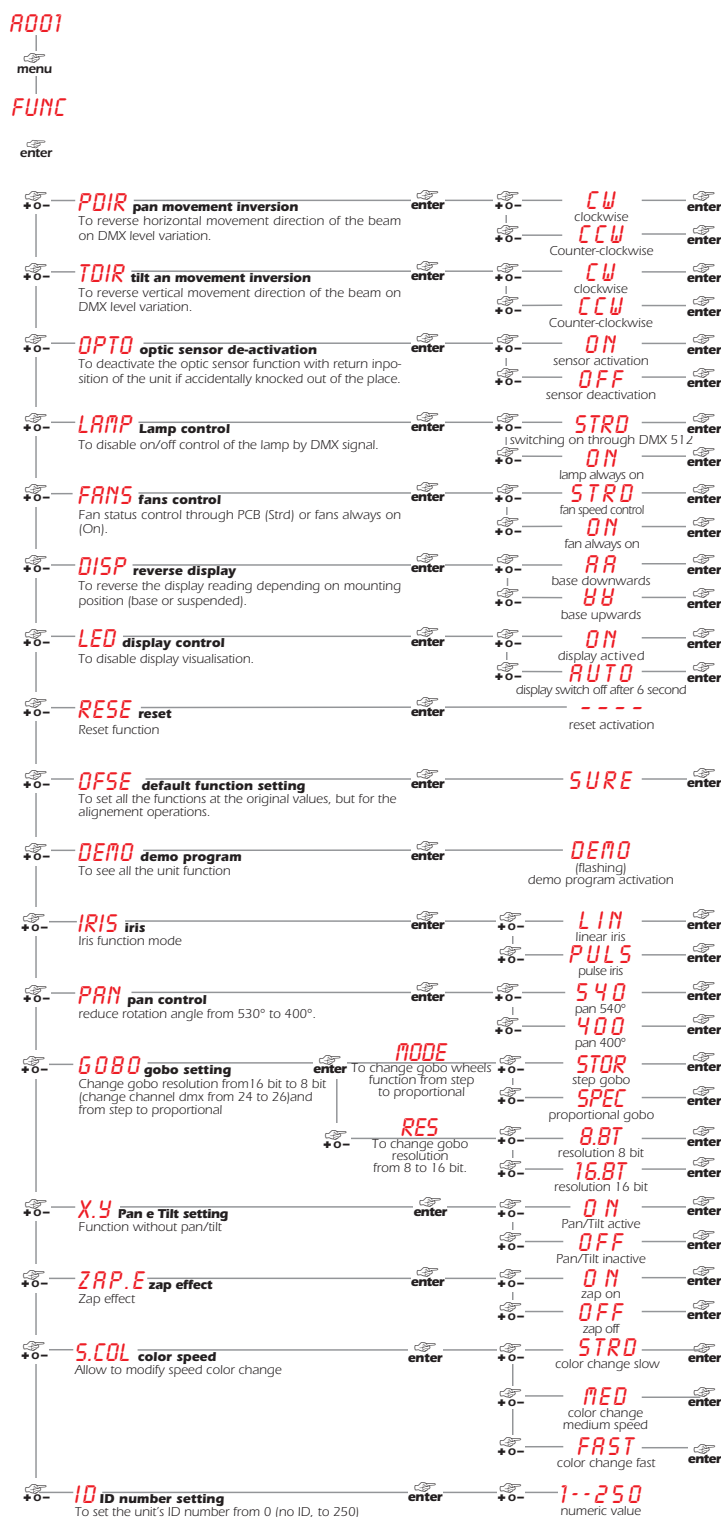
☞ enter *GBP1* ☞ enter *0128* +☞o- es. *0150* ☞ enter
gobo 1 positioning

☞ enter *GBR1* ☞ enter *0128* +☞o- es. *0150* ☞ enter
gobo 1 rotation

☞ enter *GOB2* ☞ enter *0128* +☞o- es. *0150* ☞ enter
gobo wheel 2 selection

☞ enter *GBP2* ☞ enter *0128* +☞o- es. *0150* ☞ enter
gobo 2 positioning

☞ enter *GBR2* ☞ enter *0128* +☞o- es. *0150* ☞ enter
gobo 2 rotation

☞ enter *EFCT* ☞ enter *0128* +☞o- es. *0150* ☞ enter
frost and prisma wheel activation

☞ enter *COLR* ☞ enter *0128* +☞o- es. *0150* ☞ enter
color wheel selection

☞ enter *CYAN* ☞ enter *0128* +☞o- es. *0150* ☞ enter
cyan selection

☞ enter *MAGE* ☞ enter *0128* +☞o- es. *0150* ☞ enter
magenta selection

☞ enter *YELL* ☞ enter *0128* +☞o- es. *0150* ☞ enter
yellow selection

☞ enter *CONV* ☞ enter *0128* +☞o- es. *0150* ☞ enter
conversion filter selection

☞ enter *ZAP.E* ☞ enter *0128* +☞o- es. *0150* ☞ enter
zap effect activation

☞ enter *STOR* ☞ enter *SURE* ☞ enter
to record the position of the unit and of its internal components. If DMX signal is not applied, the recorder setting will appear at the end of reset operation when the unit is switched on.

8.3. Function settings (FUNC)

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

A001

☞ menu

FUNC

☞ enter

☞ +o− **PDIR** pan movement inversion | ☞ enter | ☞ +o− *CW* clockwise ☞ enter
To reverse horizontal movement direction of the beam on DMX level variation. | | ☞ +o− *CCW* Counter-clockwise ☞ enter

☞ +o− **TDIR** tilt an movement inversion | ☞ enter | ☞ +o− *CW* clockwise ☞ enter
To reverse vertical movement direction of the beam on DMX level variation. | | ☞ +o− *CCW* Counter-clockwise ☞ enter

☞ +o− **OPTO** optic sensor de-activation | ☞ enter | ☞ +o− *ON* sensor activation ☞ enter
To deactivate the optic sensor function with return inpo-sition of the unit if accidentally knocked out of the place. | | ☞ +o− *OFF* sensor deactivation ☞ enter

☞ +o− **LAMP** Lamp control | ☞ enter | ☞ +o− *STRD* switching on through DMX 512 ☞ enter
To disable on/off control of the lamp by DMX signal. | | ☞ +o− *ON* lamp always on ☞ enter

☞ +o− **FANS** fans control | ☞ enter | ☞ +o− *STRD* fan speed control ☞ enter
Fan status control through PCB (Strd) or fans always on (On). | | ☞ +o− *ON* fan always on ☞ enter

☞ +o− **DISP** reverse display | ☞ enter | ☞ +o− *AA* base downwards ☞ enter
To reverse the display reading depending on mounting position (base or suspended). | | ☞ +o− *UU* base upwards ☞ enter

☞ +o− **LED** display control | ☞ enter | ☞ +o− *ON* display actived ☞ enter
To disable display visualisation. | | ☞ +o− *AUTO* display switch off after 6 second ☞ enter

☞ +o− **RESE** reset | ☞ enter | *– – – –* reset activation
Reset function

☞ +o− **OFSE** default function setting | ☞ enter | *SURE* ☞ enter
To set all the functions at the original values, but for the alignement operations.

☞ +o− **DEMO** demo program | ☞ enter | *DEMO* (flashing) demo program activation
To see all the unit function

☞ +o− **IRIS** iris | ☞ enter | ☞ +o− *LIN* linear iris ☞ enter
Iris function mode | | ☞ +o− *PULS* pulse iris ☞ enter

☞ +o− **PAN** pan control | ☞ enter | ☞ +o− *540* pan 540° ☞ enter
reduce rotation angle from 530° to 400°. | | ☞ +o− *400* pan 400° ☞ enter

☞ +o− **GOBO** gobo setting | ☞ enter | ☞ *MODE* To change gobo wheels function from step to proportional | ☞ +o− *STOR* step gobo ☞ enter
Change gobo resolution from16 bit to 8 bit (change channel dmx from 24 to 26)and from step to proportional | | | ☞ +o− *SPEC* proportional gobo ☞ enter
| | ☞ +o− *RES* To change gobo resolution from 8 to 16 bit. | ☞ +o− *8.BT* resolution 8 bit ☞ enter
| | | ☞ +o− *16.BT* resolution 16 bit ☞ enter

☞ +o− **X.Y** Pan e Tilt setting | ☞ enter | ☞ +o− *ON* Pan/Tilt active ☞ enter
Function without pan/tilt | | ☞ +o− *OFF* Pan/Tilt inactive ☞ enter

☞ +o− **ZAP.E** zap effect | ☞ enter | ☞ +o− *ON* zap on ☞ enter
Zap effect | | ☞ +o− *OFF* zap off ☞ enter

☞ +o− **S.COL** color speed | ☞ enter | ☞ +o− *STRD* color change slow ☞ enter
Allow to modify speed color change | | ☞ +o− *MED* color change medium speed ☞ enter
| | ☞ +o− *FAST* color change fast ☞ enter

☞ +o− **ID** iD number setting | ☞ enter | ☞ +o− *1--250* numeric value
To set the unit's ID number from 0 (no ID, to 250)

8.4. Rapid scrolling

Via the **iSpot Extreme 6000** 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.

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8.5.Connecting the DR1

All the functions available via the display menu are also available via the **DR1** (cod. **9703**).

The **DR1** duplicates the display of the projector and 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, setting master/slave configurations as well as all other functions available via the digital display unit on the projector.

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.

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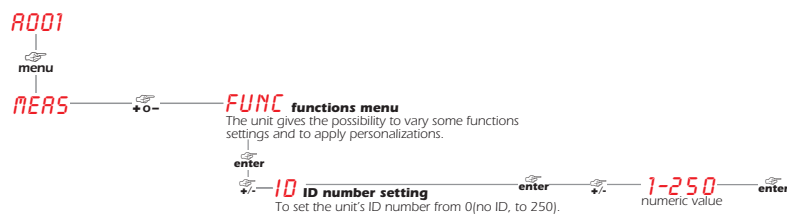
For further information, consult the **DR1** instruction manual.

8.6. Turning on the projector with no articulated movement

This function may be useful should you need to power up the **iSpot Extreme 6000** 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 **iSpot Extreme 6000** 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 **iSpot Extreme 6000** , simultaneously hold down the **+** and **– buttons**. The projector will restart with its counter reset.
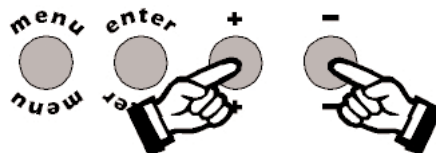
The projector has reset the *LIFE* counter.
To verify that this operation has occured:

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

The **iSpot Extreme 6000** utilises the Philips MSR GOLD 1200 SA/SE PGJ50 base lamps. The use power is 1400W.
These lamps are available via your **Coemar** distributor or service centre.

Lamp	Philips MSR GOLD 1200 SA/SE
Coemar code	105816
Wattage Range	800 - 1400W
Lumen output at 1200W	95.000 lm
Colour temperature	6300° K
Base	PGJ50
Approximate lamp life	750 hours

ATTENTION!!

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

The fixture's internal temperature can reach 250° C after 5 minutes, with a maximum peak of 450° 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.
The lamps are part of the mercury vapour family of discharge lamps and must be handled with great care. The lamp operates at high pressure, and the slight risk of explosion of the lamp exists if operated over its recommended life. We recommend, therefore, that the lamp be replaced within the manufacturer's specified lamp life.

9.1. Lamp installation

1. Use a suitable tool to loosen the four screws "**A**" which affix the lampholder assembly at the rear of the projector.
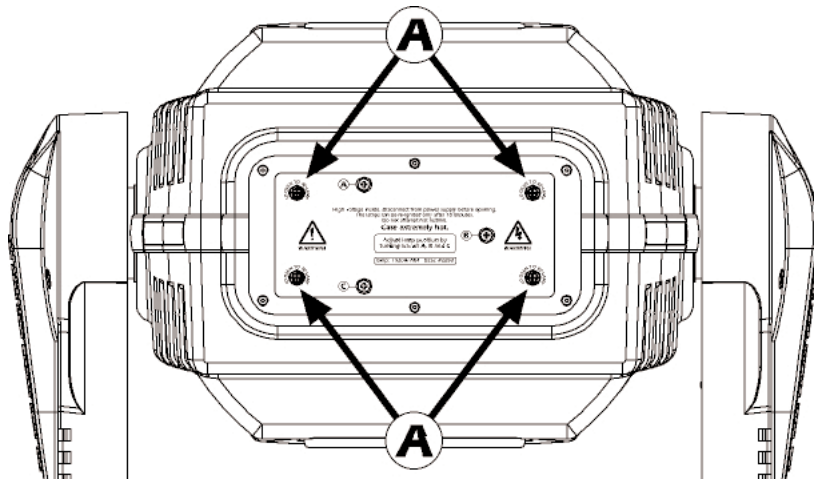
2. Remove the lampholder assembly "**B**".
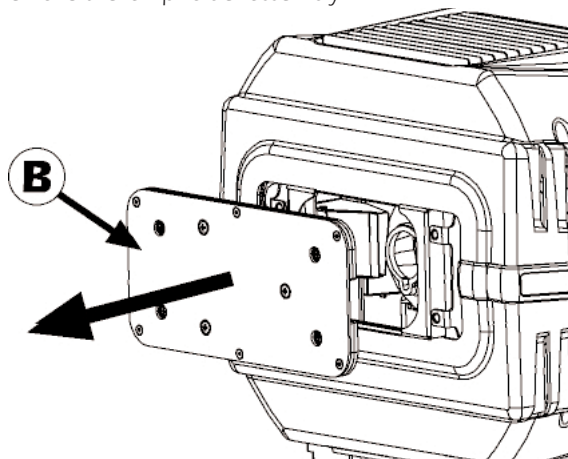
3. Identify the lampholder "**C**".

17
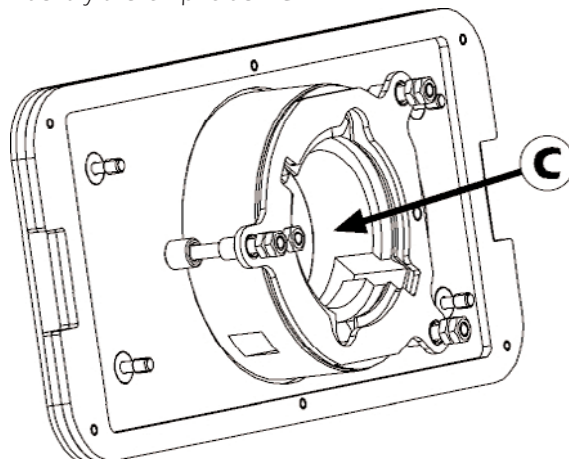
4. Insert the lamp and rotate clockwise.
The lamp used is manufactured from quartz glass and should be handled with care; always adhere to the instructions supplied in the lamp's packaging. Never touch the glass directly, use the tissue provided in the lamp's packaging. DO NOT USE UNDUE FORCE.
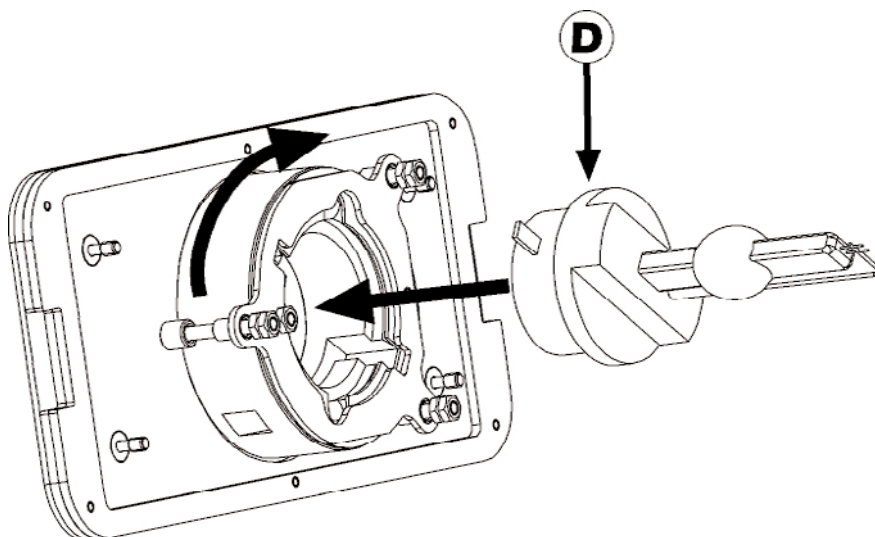
5. Replace the lampholder assembly in its original position and refasten the four screws "**A**" which were previously removed.

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 and/or gobos .**
▪ **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 and dimmer 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 and then flatten the beam to maximum uniformity.
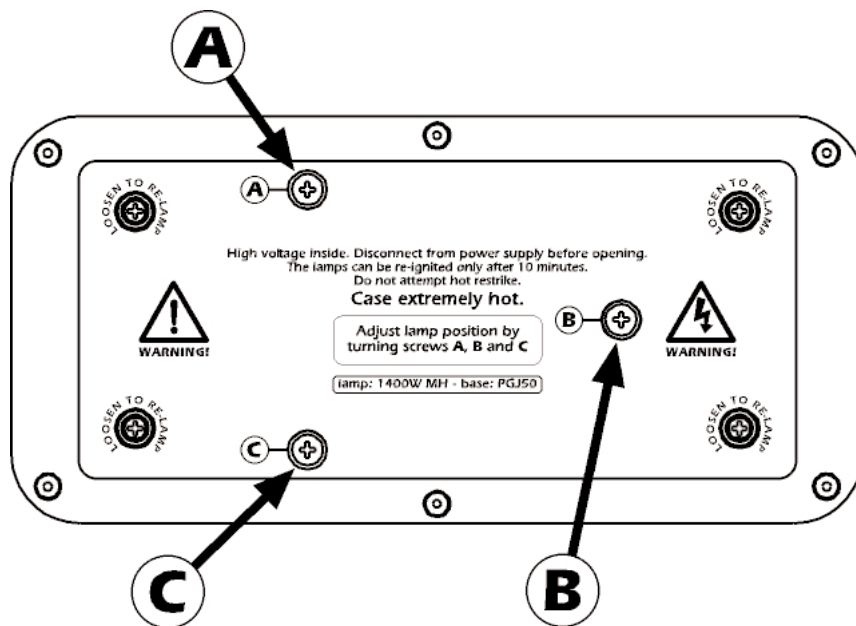
10. Interchanging gobos

iSpot Extreme 6000 utilises a mechanical system which allows the fixture's gobos to be removed without the need for specialised equipment.
Replacement gobos should be made of either heat resistant glass or metal.
*An ever-increasing range of gobos is available from your **Coemar** sales network.*

10.1. Gobo dimensions

iSpot Extreme 6000 utilises gobos with thicknesses between 0.2 and 3.5 mm.
*The external gobo and image dimensions are:*

Gobo dimensions	Ø external (mm)	Ø image (mm)
Metal	33	28
Glass undefined image	32.8	32.8
Glass defined image	32,8	28

10.2. Opening up the projector housing

By removing the housing in the manner shown below, compete access to the projector's internals is possible.

ATTENTION!!

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

---
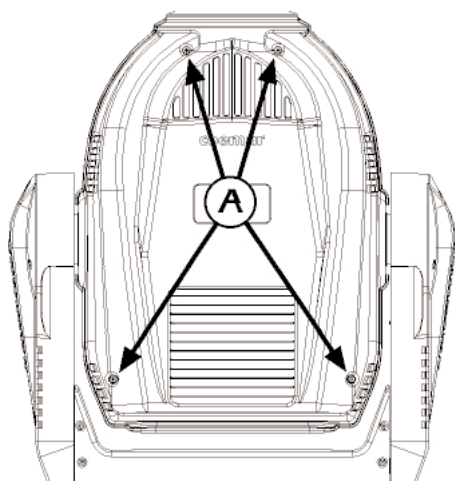
1. *Using an appropriate screwdriver, remove the screws **"A"** which affix the front and rear housings as shown in the diagram.*
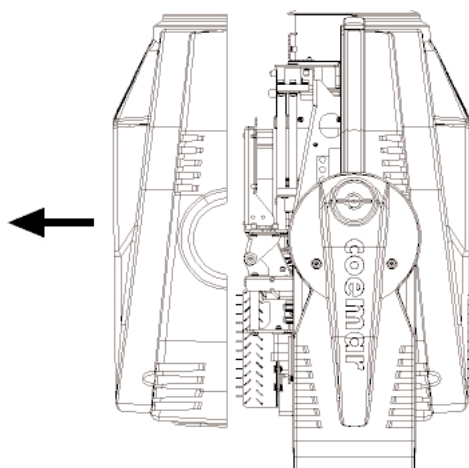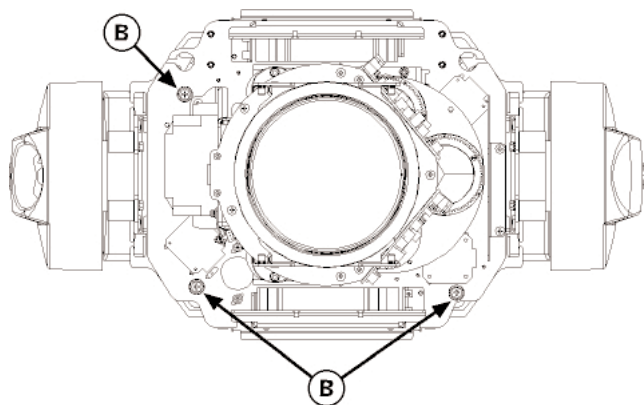
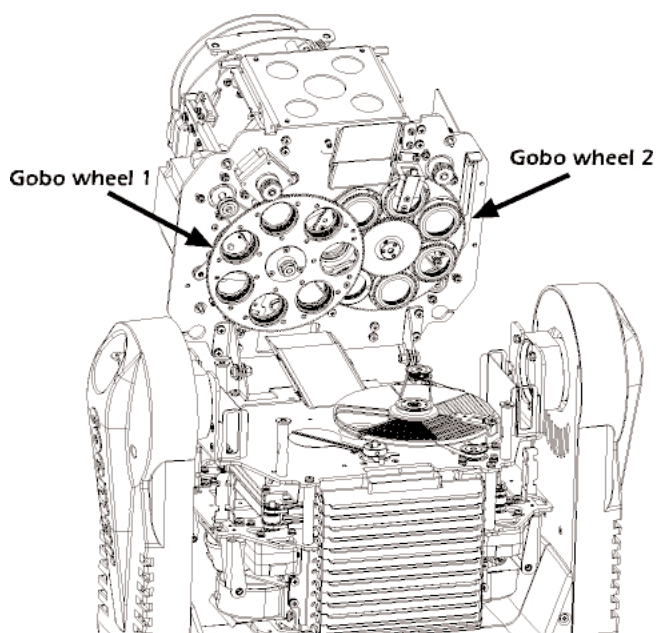**2.** *Remove the housings to expose the projector's internals.*

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10.3. Access to the gobos wheels

To replace gobos, proceed as follows:

1. Open up the projector housing as discussed in section **10.2. Opening up the projector housing.**
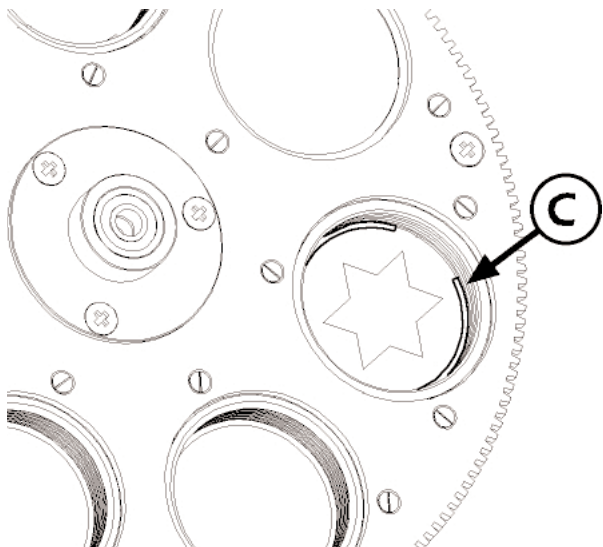
**2.** Loosen the thumbscrews **"B"** as shown in this diagram.

3. Remove the gobo group as shown in the diagram. You will the gobo wheels in a position where access to the individual gobos is quite straightforward.

Gobo wheel 1

Gobo wheel 2

Proceed with the changing of the individual gobos as required.

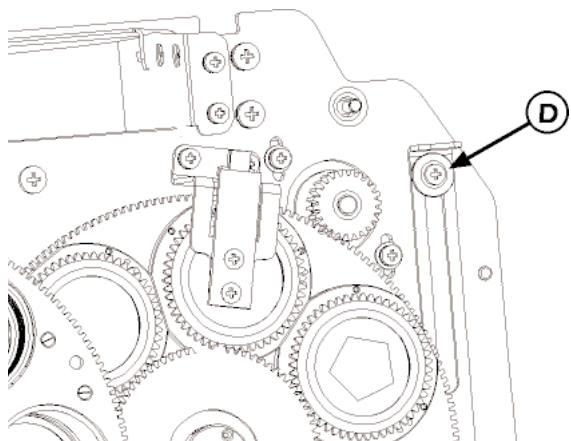## 10.4 Replacing gobos on gobo wheel 1

1. Use a tool such as a screwdriver as a lever on the spring **"C"** on the inside of the gobo wheel.
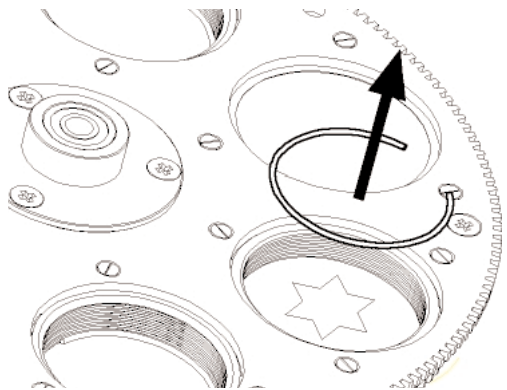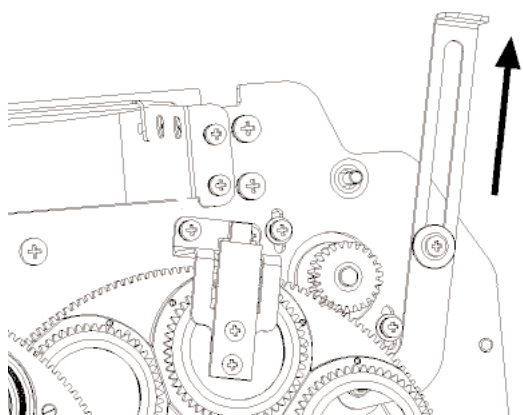
2. Lifting it from its seat, after which you can remove the gobo.

3. Place the new gobo into position and reverse the above procedure, ensuring that the spring sits firmly back in its proper place.
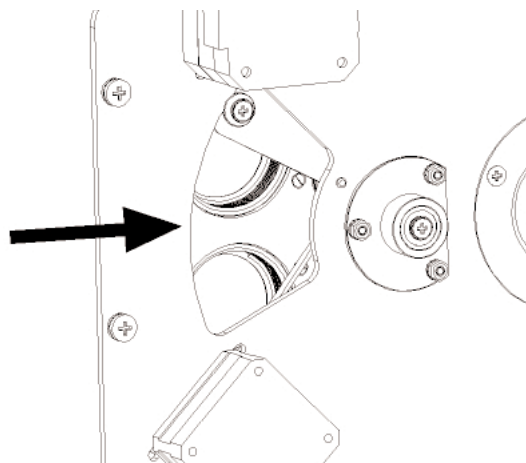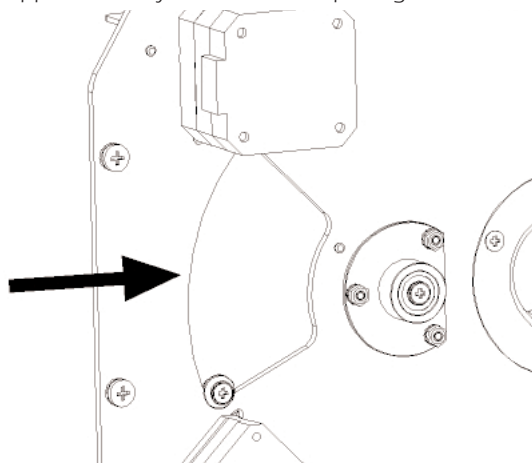
10.5 Replacing gobos on gobo wheel 2

1. Use a screwdriver to loosen the screw **"D"**.

2. Sliding the lever towards the top.

On the opposite side, yo will note an opening as shown in figure.

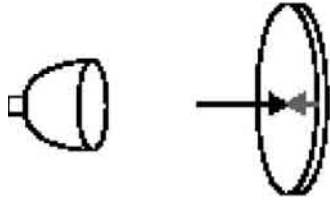At this point proceed as per previous section **10.5 Replacing gobos on gobo wheel 1**.
Ultimate the gobos substitution sliding the lever in the opposite direction in order to close up the opening and retighening screw **"D"**.

10.6. Gobo positioning

The diagrams below illustrate how to correctly position the various types of gobos.

Treated glass Gobos

Treated side facing the lamp   Untreated side facing the projector front
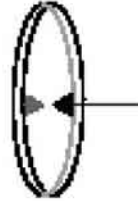
Textrued glass Gobos

Textured side facing the lamp   Smooth side facing the projector front

Metal Gobos

Reflective side facing the lamp   Treated side facing the projector front

Image/Test Gobos

Positive image / readable text facing the lamp   Negative image / reversed text facing the projector front

11 Thermal protection

A thermal sensor in the body of the **iSpot Extreme 6000** protects the unit against overheating.
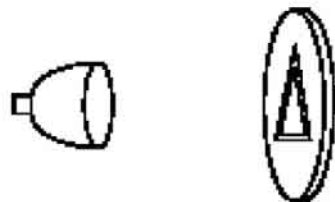The thermal sensor operates by removing voltage to the lamp if the ambient temperature rises above a preset maximum due to either less than ideal air circulation around the fixture or in the event of cooling fan failure.

12. Maintenance

Whilst every possible precaution has been taken to ensure the trouble-free operation of your **iSpot Extreme 6000**, 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 section **10.2. Opening up the projector housing** 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
The lamp should be replaced if there is any observable damage or deformation due to heat. This will avoid the danger of the lamp exploding.

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 **iSpot Extreme 6000**.
Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type if necessary.
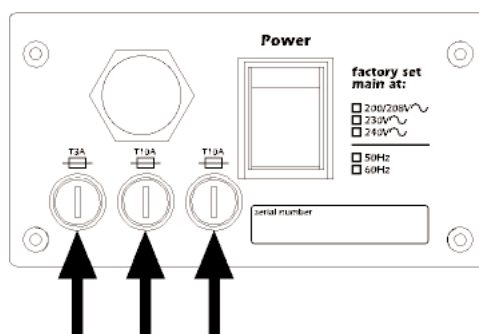
12.4. Electronic motor alignment

ATTENTION!!

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

The display panel of the **iSpot Extreme 6000** 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 (motors, electronic parts, sensor, ecc.).
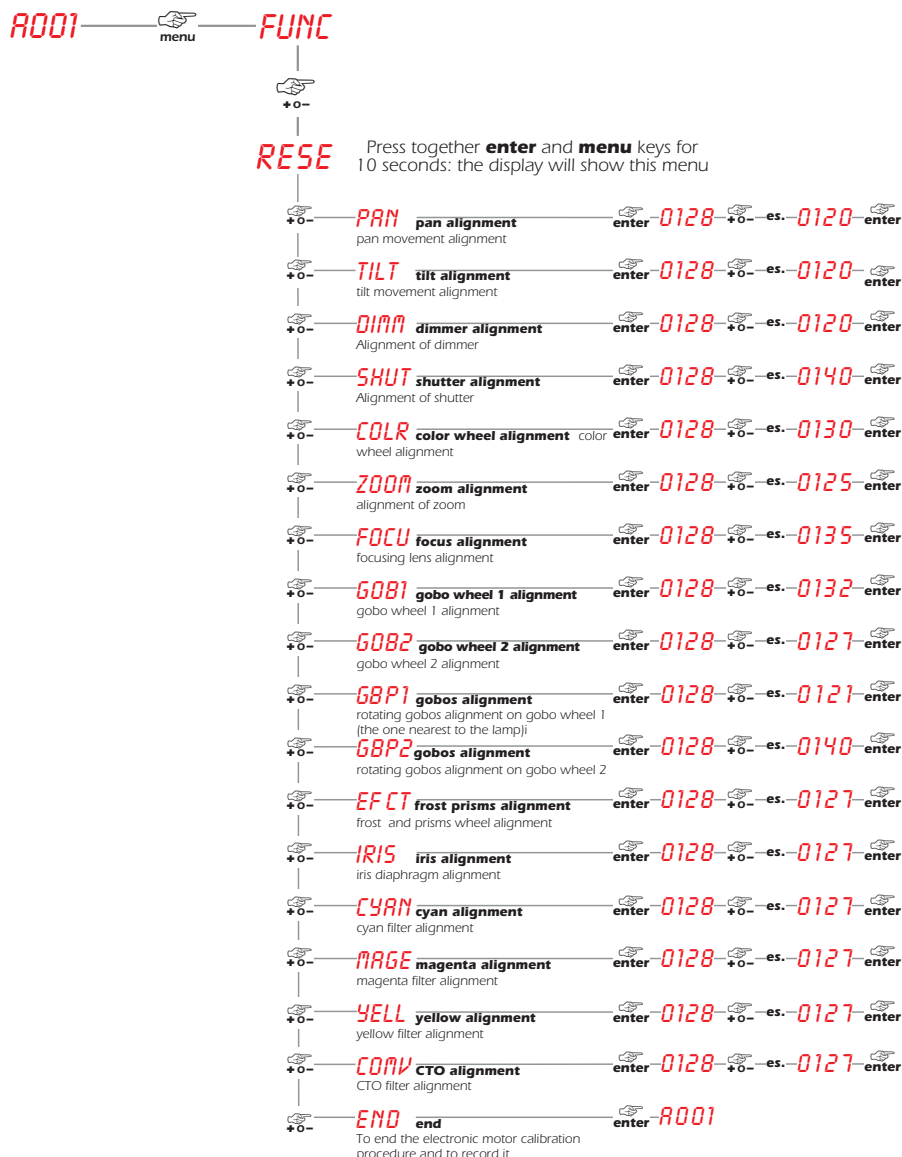
Altering the factory settings may radically alter the functioning of the projector. Carefully read all of the following prior to attempting any changes.

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.

A001 —— ☞menu —— *FUNC*

☞ +o−

RESE   Press together **enter** and **menu** keys for 10 seconds: the display will show this menu

Menu	Description	enter	es.
PAN **pan alignment** — pan movement alignment		0128	0120
TILT **tilt alignment** — tilt movement alignment		0128	0120
DIMM **dimmer alignment** — Alignment of dimmer		0128	0120
SHUT **shutter alignment** — Alignment of shutter		0128	0140
COLR **color wheel alignment** — color wheel alignment		0128	0130
ZOOM **zoom alignment** — alignment of zoom		0128	0125
FOCU **focus alignment** — focusing lens alignment		0128	0135
GOB1 **gobo wheel 1 alignment** — gobo wheel 1 alignment		0128	0132
GOB2 **gobo wheel 2 alignment** — gobo wheel 2 alignment		0128	0127
GBP1 **gobos alignment** — rotating gobos alignment on gobo wheel 1 (the one nearest to the lamp)i		0128	0121
GBP2 **gobos alignment** — rotating gobos alignment on gobo wheel 2		0128	0140
EFCT **frost prisms alignment** — frost and prisms wheel alignment		0128	0127
IRIS **iris alignment** — iris diaphragm alignment		0128	0127
CYAN **cyan alignment** — cyan filter alignment		0128	0127
MAGE **magenta alignment** — magenta filter alignment		0128	0127
YELL **yellow alignment** — yellow filter alignment		0128	0127
CONV **CTO alignment** — CTO filter alignment		0128	0127
END **end** — To end the electronic motor calibration procedure and to record it		☞enter *A001*	

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

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13. Spare parts

All the components of the **iSpot Extreme 6000** 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.

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

OTER: **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 ADDRESS 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.

S2ER: **Control circuit error relating to position sensors controlling the 4 right-hand motors:**
(located in the yoke at right when viewed from the rear or the unit)
Sensor is continuously reading the magnet. Check the cabling and the RESET sensors the motors and the integrity of the connecting belts.

S3ER: **Control circuit error relating to position sensors controlling the 5 rear motors:**
(located in the rear of the body when viewed from the rear of the unit)
Sensor is continuously reading the magnet. Check the cabling and the RESET sensors the motors and the integrity of the connecting belts.

S4ER: **Control circuit error relating to position sensors controlling the 5 front motors:**
(located in the front of the body when viewed from the rear of the unit)
Sensor is continuously reading the magnet. Check the cabling and the RESET sensors the motors and the integrity of the connecting belts.

COER: **COLOUR WHEEL POSITION Error**
Check for correct functioning of the motor and the magnetic sensor and the correct positioning with respect to the sensor and encoder wheel.

CUER: **CONVERSION FILTER POSITION Error**
Check for correct functioning of the motor and the magnetic sensor of the CONVERSION wheel.

G1ER: **GOBO WHEEL 1 POSITION Error**
Check for correct functioning of the motor and the magnetic sensor of GOBO WHEEL 1.
(wheel furthest from lamp).

G2ER: **GOBO WHEEL 2 POSITION Error**
Check for correct functioning of the motor and the magnetic sensor of GOBO WHEEL 2.
(wheel closest to lamp).

R1ER: **GOBO WHEEL 1 INDEXING Error.**
Check for correct functioning of the motor and the magnetic sensor for gobo indexing.

R2ER: **GOBO WHEEL 2 INDEXING Error.**
Check for correct functioning of the motor and the magnetic sensor for gobo indexing.

EFER: **FROST/PRISM FILTER POSITION Error**
Check for correct functioning of the motor and the magnetic sensor of the FROST/FILTER wheel.

ZOER: **ZOOM LENSE POSITION Error**
Check for correct functioning of the motor and the magnetic sensor of the ZOOM lense.

FCER: **FOCUSING LENSE POSITIONING Error**
Check for correct functioning of the motor and the magnetic sensor of the focusing lense.

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	Disconnect 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, repair or replace any damaged cables or connectors.
	Incorrect DMX address	Check the DMX address.
No light output and the display shows the message "LAER".	The lamp may have reached the end of its life.	Disconnect mains power and check the lamp condition, checking the lamp life display.
	The lamp is not installed.	Disconnect mains power and install a lamp.
	The lamp circuit protection fuse may be blown	Check with your coemar service centre prior to replacing the fuse.
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 obstructed and that the fans are working correctly. Ensure that the ambient temperature is below 35 °C. One of the fans does not work correctly and causes the overheating of the projector.

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