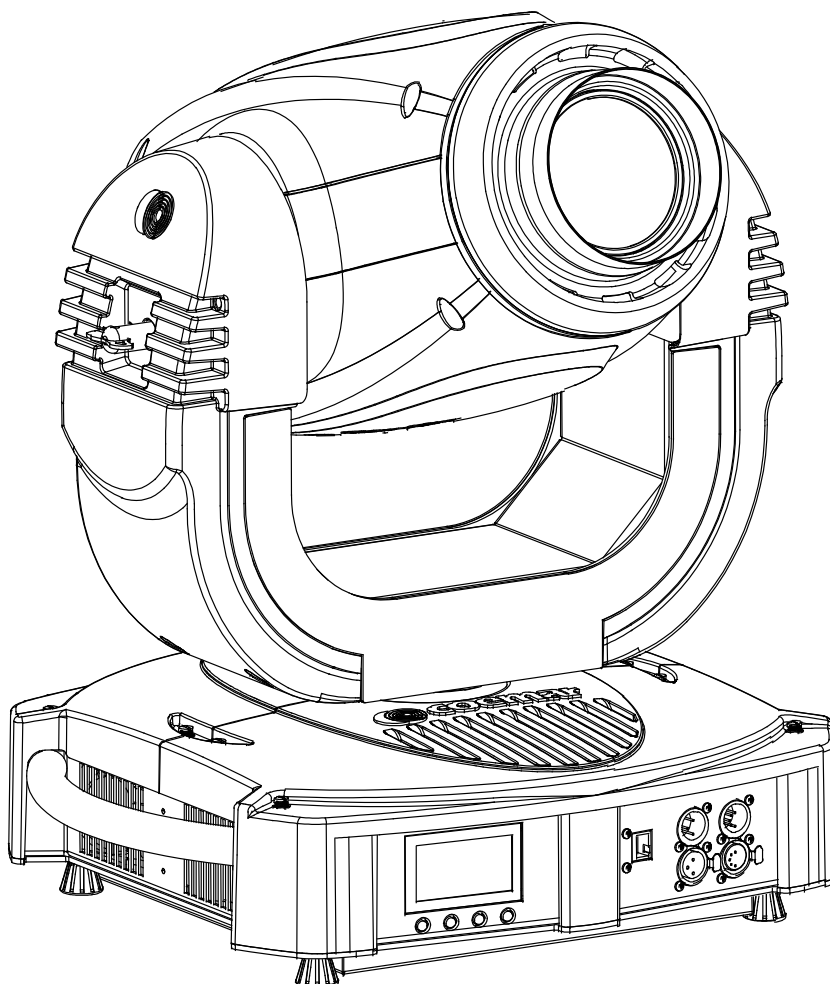


# **∞ Infinity Spot M**



**instruction manual  
manuale di istruzioni**

**Version 2.1  
DIS126**

**coemar**

# **Infinity Spot M**

Serial number/numero di serie

Date of purchase/data di acquisto

Retailer/fornitore

Address/indirizzo

Suburb/cap/città

Capital city/provincial

State/stato

Tel./fax

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

Prendete nota, nello spazio apposite, dei dati relative al modello e al rivenditore del vostro **Infinity Spot M**: questi dati ci permetteranno di assistervi con la massima rapidità e precisione.

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

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

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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 the componentry and in the technology used. We renew our invitation to you to complete the service information form on the previous page. This will assist in providing prompt and accurate advice from your Coemar service centre, which you can thoroughly trust and to which you can submit any requests for service or information. 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 make sure that no part of the equipment has suffered any damage during the transportation. In case of damage to the fixture, contact your carrier and your supplier immediately by telephone, fax or email, and inform them you will formally notify them in writing through registered letter.

##### Packing List

Make sure the packaging contains:

- 1 the **Infinity Spot M** projector.
- 2 the instruction manual.
- 3 the Cam-Lock support brackets.

#### 1.2 Transportation

**Infinity Spot M** must be transported exclusively in its original packaging or in an appropriate flight case.

### 2. General information

#### 2.1 Important safety information.

##### Fire prevention:

1. **Infinity Spot M** utilizes a Philips MSR 700 Gold Mini Fast Fit or a Philips MSR Gold 575 MiniFast Fit lamp, the use of any alternative lamp might be risky and will make the warranty of the fixture null and void.
2. Never locate the fixture on any flammable surface.
3. Minimum distance from flammable materials: 0.5m.
4. Minimum distance from the closest illuminable surface: 0.5m.
5. Replace any blown or damaged fuses only with identical ones, both in size and value. Refer to the connection diagram if there is any doubt.
6. Connect the projector to mains power protected by a thermal magnetic circuit breaker.

##### Preventing electric shock:

1. Presence of high voltage inside of the fixture. Insulate the projector from mains supply before opening or performing any function which involves touching the inside of the fixture, including lamp replacement.
2. For the connection to the mains, adhere strictly to the guidelines outlined in this manual..
3. The level of technology of **Infinity Spot M** 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 the proper functioning of the projector. Never connect the fixture if there is no earth connection.
5. Mains cables must not come into contact with other cables.
6. Do not operate the projector with wet hands or in an area where water is present.
7. The fixture must never be located in an exposed position, or in areas of extreme humidity.

##### Protection against ultraviolet radiation(UV):

1. Never turn on the lamp if any of the lenses, filters, or the plastic housing are damaged; their shielding functions will only operate efficiently if they are in perfect working order.
2. Never look directly in the direction of the lamp when it is operating.

##### Safety:

1. The projector must always be installed with bolts, clamps, or other fixing devices which are suitably rated to support the weight of the projector.
2. Always use a secondary safety fixing device with chain or steel wire of a suitable rating to sustain the weight of the unit in case of failure of the principal fixing point.
3. The external surfaces of the unit, at various points, may reach 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 room temperature must not exceed 35°C.
6. Wait at least 10 minutes after the unit has been turned off before attempting to replace or remove the lamp. Always use protection gloves while replacing the lamp.
7. The projector contains electronic and electrical components which must under no circumstances be in contact with water, oil or any other liquid. Failure to do so will compromise the proper functioning of the projector.

##### Projector movement.

The projector has a pan range of 540° in its base and a tilt range 262° in its yoke; do not obstruct the projector whilst it is moving.

**Forced ventilation** On the body of the projector you will note several air vents housing several cooling fans, both in the basis and in the body. To avoid any problems associated with overheating, never obstruct any of these vents, as this would seriously compromise the proper operation of the unit.

##### Protection rating against penetration by external agents:

The fixture is classified as an ordinary apparatus ; its protection grade against penetration by external agents, solid or liquid, is **IP20**.

## 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, use by inexperienced operators or inadequate maintenance.
3. The warranty is immediately void if the projector has been tampered or opened by unauthorised personnel.
4. The warranty does not extend to fixture replacement.
5. Both the serial number and the model of the projector are required for any advice or service from your authorised service centre.

## 2.3 EC Norms

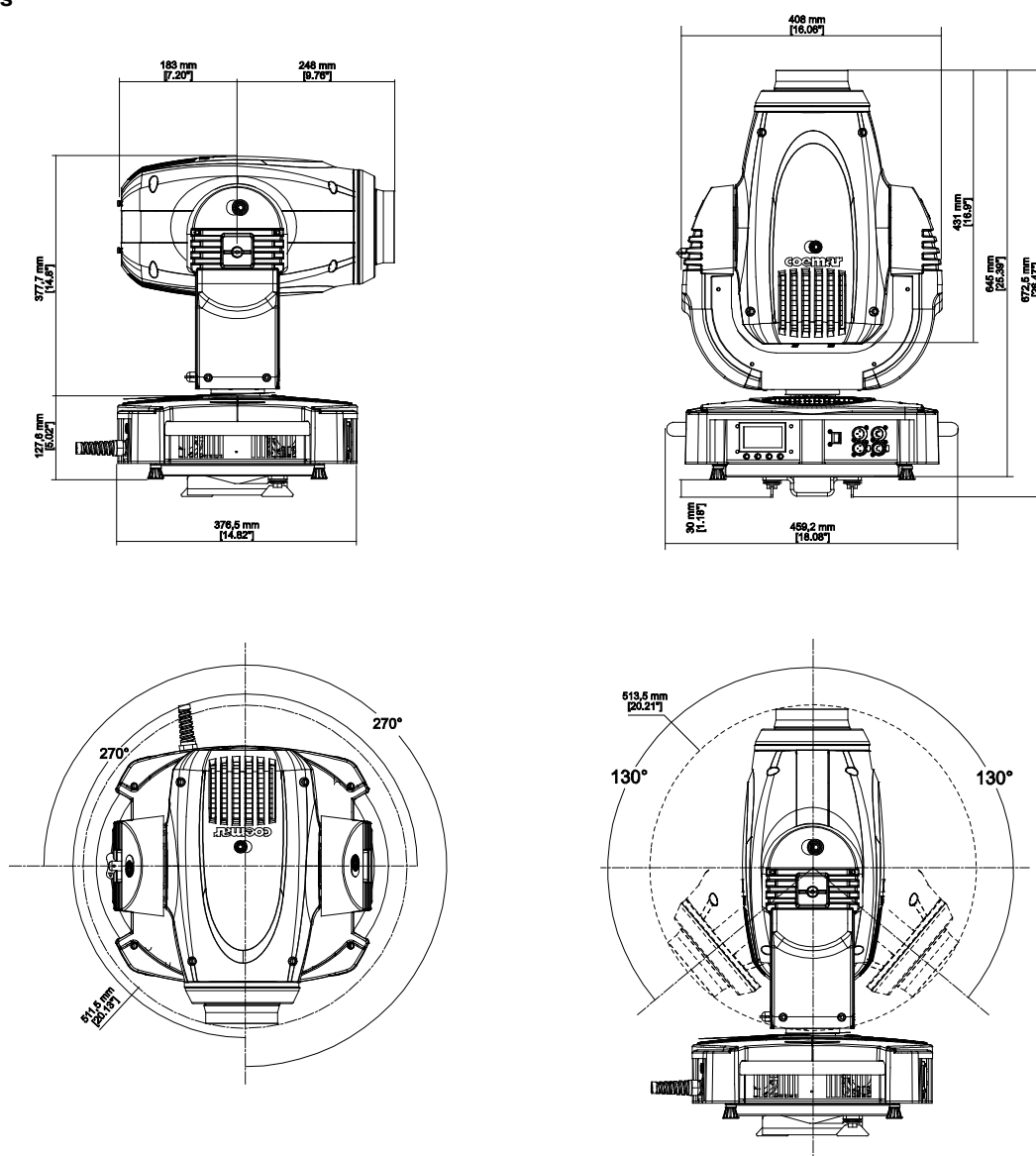
The projector meets all fundamental applicable EC requirements.

## 3. Product specifications

### 3.1 Technical characteristics

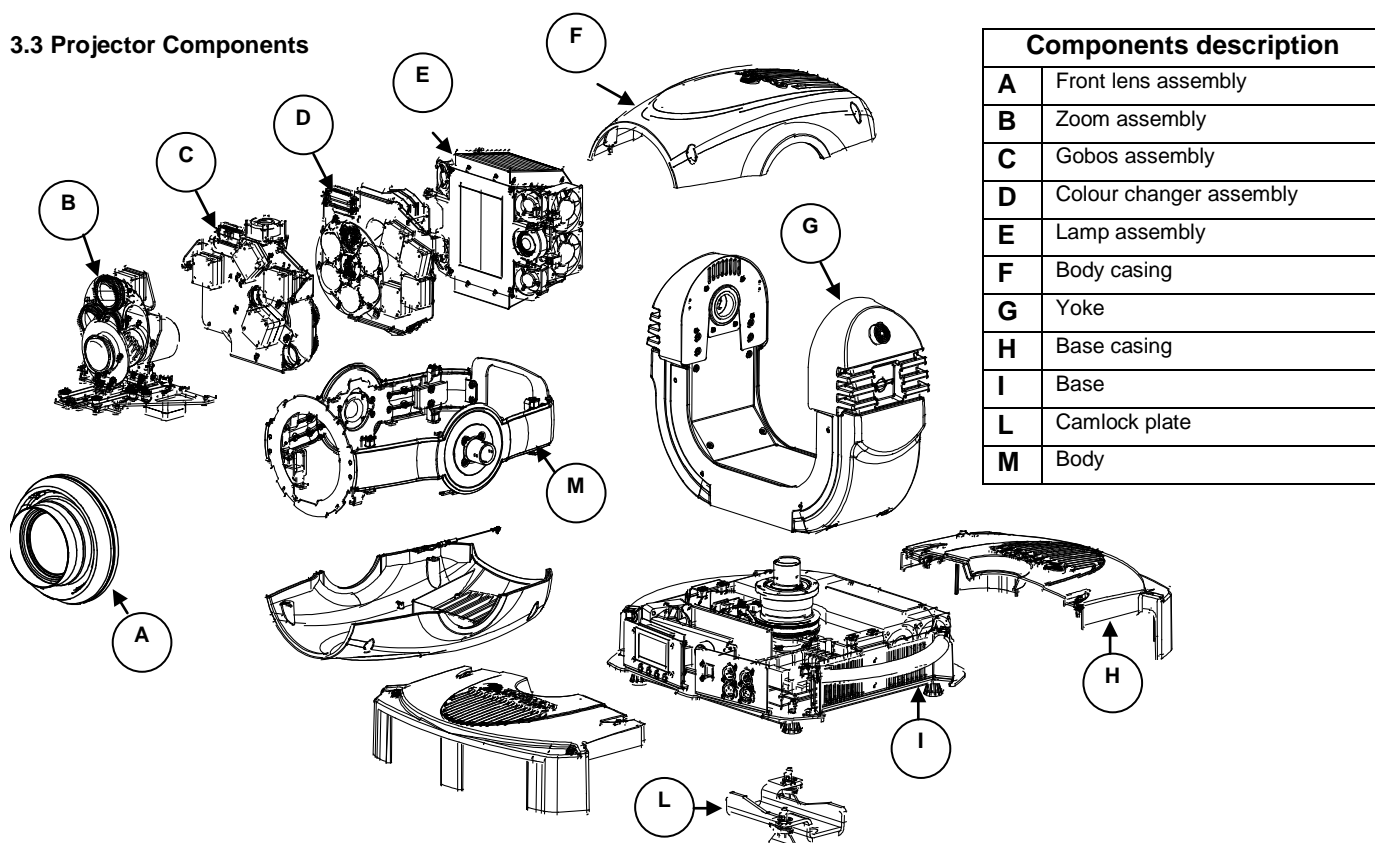
	700 W	575 W
Power	90-260 Vac 50/60Hz Autosensing	
Maximum current	4,5 A	4A.
Power factor	Cos $\varphi$ = 0,9	
Lamp Wattage	700 W	575 W
Maximum room temperature	35°C/95°F	
Weight	27 Kg./59.2 lbs	
IP rating	IP20	

### 3.2 Dimensions



# English

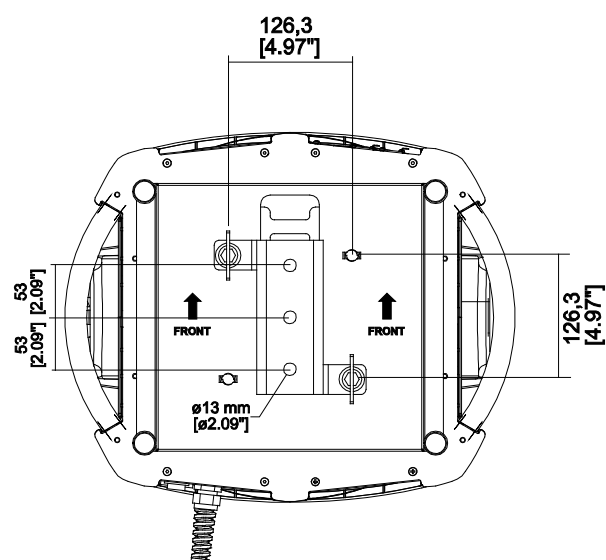
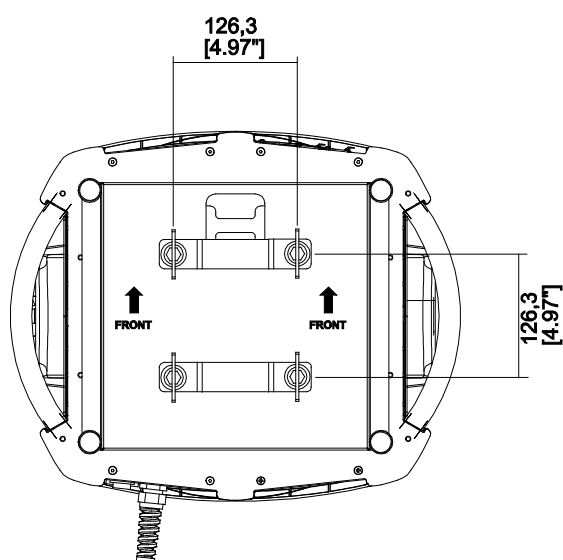
## 3.3 Projector Components



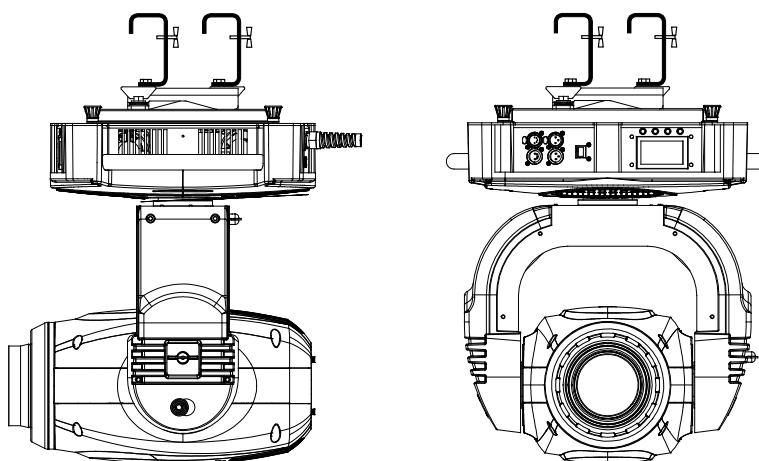
## 4. Installation

### 4.1 Mechanical installation

**Infinity Spot M** may be either floor or ceiling mounted. It may also be installed on a structure. The unit is provided with four rubber feet mounted on its base, allowing it to be placed on a flat surface. For installations on a reticular structure, **Coemar** provides a set of Cam-lock support brackets, which are included in the packaging. The Cam-lock bracket is one-fourth-turn supports. Before using it for supporting the projector, make sure that it is correctly seated and firmly tightened into position).



For installations on a reticular structure, we recommend using specific “C” hooks, suitable for supporting the weight. Normally, the “C” hooks are tightened in the central hole of the cam-lock brackets, as shown in the picture below.



#### WARNING !

**Always make sure that both the structure and the fixing devices (screws, clamps etc.) are suitable for holding the weight of the unit.**

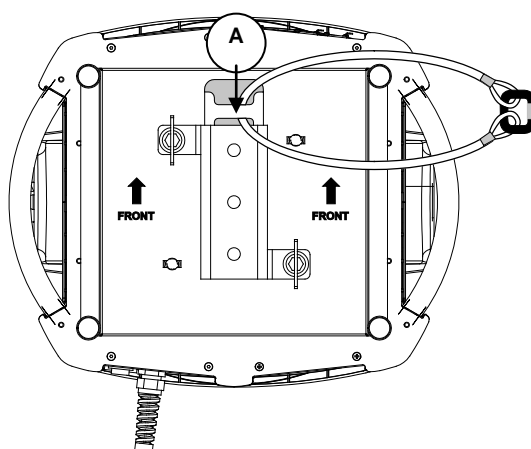
The structure must also be sufficiently rigid so as not to move or shake whilst the **Infinity Spot M** projector moves during its operation. Make sure that the supporting structure is not subject to torsion.

Do not install the projector in locations readily accessible by unauthorised or untrained personnel who is not aware of these safety instructions.

#### 4.2 Safety connection

If the **Infinity Spot M** is fixed to a structure, the use of a safety chain is recommended in order to meet the current relevant safety standards. The safety chain must pass through the holes “A” and then fixed to the structure itself.

If using steel wires or chains which have not been manufactured by **Coemar**, make sure that they are suitable for holding the weight of the unit.



### 5. Powering up

#### 5.1 Connecting to mains power

##### Mains cable characteristics

The mains cable provided is complying with the most recent standards.

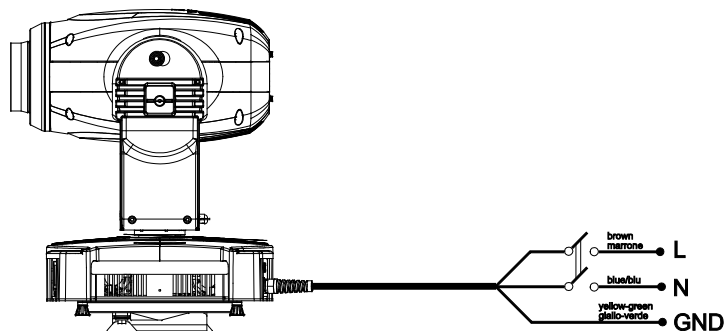
NB: In case of cable replacement, similar cable with comparable thermal resistant qualities must be used exclusively (cable 3X 1,5 ø external 10 mm, rated voltage 300/500V, test voltage 2 KV, operation temperature -40°C + 180°C, **Coemar** cod. CV5311).

##### Connection to mains power

For connection to mains, use a connector of a suitable rating to sustain the maximum current: 200/208/230/240 Vac 8 amps constant current in normal operation.

## English

Identify the mains cable which exits the base of the unit and connect as shown below.



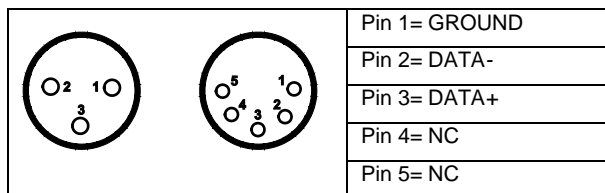
### WARNING !

- The use of a thermal magnetic circuit breaker is recommended for each projector. Strictly adhere to all regulatory norms.
- Infinity Spot XL cannot be powered through Dimmer power units.
- A good earth connection is necessary for the correct operation of the Infinity Spot XL. Never connect the projector to main power if the green/yellow earth cable provided is not correctly connected.
- All cable and plug connections must be carried out by qualified personnel only.

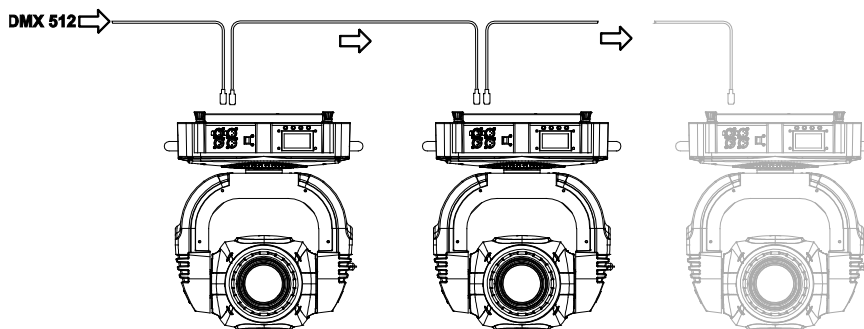
## 6. Control signal connections

The digital control signal is transmitted to the projector via a two pole cable screened as per international standards for the transmission of DMX512 data. The connection must be serial, utilising connectors XLR3 and XLR5, male and female, located on the base of **Infinity Spot M** labelled DMX 512 IN and OUT (see diagram)

### Control signal connection by XLR3 e XLR5 plugs



When signal arrives from a DMX 512 console with Cannon XLR5 ( 5 poles) pins 4 and 5 must not be connected.



### WARNING !

Make sure that screening and conductors are not in contact one another or with the metal housing of the connector.  
Pin n° 1 and housing must never be connected to the unit power supply.

### 6.1 Connection through ArtNet.protocol

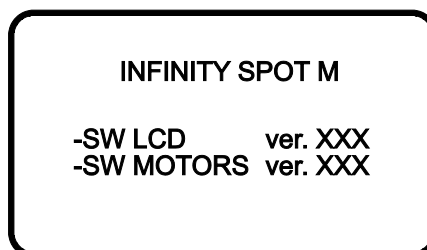
The ArtNet protocol allows enabled projectors to operate and to be seen as a normal network device, such as a standard P.C. connected to a company network.

**Infinity Spot M** leaves the factory ready to be connected to an ArtNet network without any further settings. Just connect the projector by means of the specific RJ45 connector located on the side of the DMX connectors and the relative patch to a common HUB Ethernet which will be connected to an ArtNet controller. Each **Coemar** projector has its own IP address, therefore it is not necessary to set it when connecting it to the network. Should it be necessary to modify the IP address for reasons related to the net, each **Coemar** projector allows customization. In order to modify the net setting, access the MAIN FUNCTION/PROJECTOR CONTROL MODE/ARTNET ONLY menu ( alternatively, Artnet to DMX) /CUSTOM IP ADDRESS (see complete menu, art. 8.3).



## 7. Turning on the projector

After having followed the preceding steps, proceed with the power supply and turn on the projector via the main power switch. The display will show a short welcome message and the software version installed on the internal microprocessors:



The projector will perform the reset function on all motors. This operation will last a few seconds, thus allowing the digital control motors to correctly position themselves. Then the display will turn on in a fixed mode, indicating the correct DMX 512 signal reception.



*During the reset function the display will blink for a few seconds....*



*...then the DMX address of the projector will appear*

If the address continues to blink and the "NO DMX SIGNAL" message appears, it means that the DMX signal has not been received. Check the connection cable and the mixer functioning.

### 7.1 DMX address of the projector

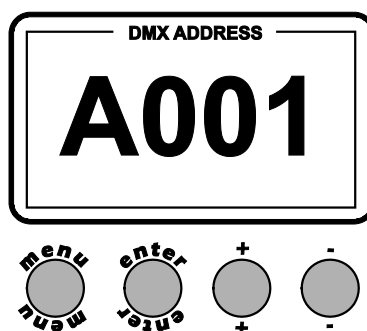
**NB: The following section is valid only in the case where Infinity Spot XL is controlled by the signal DMX 512.**

Each projector utilises 31 address channels (16 bit) for its complete operation and is controlled by a DMX 512 signal (for further information, see section 7.2, DMX functions).

When powered up initially, each projector will show A001, which indicates DMX address 001; a projector thus addressed will respond to commands of channel 1 to 31 from your DMX 512 controller. A second unit must be addressed as A032, a third as A063 and so on. The operation must be carried out every **Infinity Spot M** which has an address different from A001.

### Altering DMX address

1. Press the + or – button until the display shows the required DMX address. The digits on the display will blink to indicate that the variation has not been registered.
2. Press the **enter** key to confirm your selection. The digits on the display panel will cease to blink and the projector will now respond to the new address.



**NB:** by holding the + or – button down the scrolling will be faster; thus allowing a faster selection

### WARNING!

If you alter the DMX address with no DMX signal connected, the digits on the display panel will continue to flash even after you have pressed ENTER button to confirm the address.

# English

## 7.2 DMX functions

**Note:** the default setting is 16 bit/24 channels

channel		function	type of control	effect	decimal		percentage		
16 bit	8 bit								
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	smooth mode	248	- 255	97%	- 100%	
6	6	dimmer	proportional	gradual adjustment of luminous intensity from 0 to 100% (see channel 21/ 22)	0	- 255	0%	- 100%	
7	7	strobe, shutter 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%	
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)									
9	9	zoom	proportional	proportional control of zoom effect wheel from narrow to wide beam	0	- 255	0%	- 100%	
10	10	focus	proportional	proportional control of focus	0	- 255	0%	- 100%	
11	11	aerial gobo selection (standard)	step	no gobo	0	- 10	0%	- 4%	
				gobo 1	11	- 36	4%	- 14%	
				gobo 2	37	- 62	15%	- 24%	
				gobo 3	63	- 88	25%	- 35%	
				gobo 4	89	- 114	35%	- 45%	
				gobo 5	115	- 140	45%	- 55%	
				gobo 6	141	- 166	55%	- 65%	
				gobo 7	167	- 192	65%	- 75%	
proportional	continuous rotation of the gobo wheel from slow to fast	193	- 255	76%	- 100%				
11	11	aerial gobo selection (effect activated from channel 23/ 22)	proportional	no gobo	0	- 10	0%	- 4%	
				from gobo 1 to gobo 7 through 360°					
				gobo 1 (central value 33)					
				gobo 2 (central value 55)					
				gobo 3 (central value 78)					
				gobo 4 (central value 101)					
				gobo 5 (central value 124)					
				gobo 6 (central value 147)					
gobo 7 (central value 169)									
continuous rotation of the gobo wheel from slow to fast	193	- 255	76%	- 100%					

Note 2 : gobo selection movement will vary according to the selection made for channel 23 (16 bit) / 22 (8 bit)

12	12	indexing gobo rotation 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	0	-	255	0%	-	100%
14	13	gobo rotation	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 3: when channel 12 is set to a level between 0 and 10, gobo rotation (channel 14, 16 bit and channel 13, 8 bit) does not effect indexing, the gobo stops instantly										
15	14	break up gobo selection (standard)	step	no gobo	0	-	10	0%	-	4%
				gobo 1	11	-	36	4%	-	14%
				gobo 2	37	-	62	15%	-	24%
				gobo 3	63	-	88	25%	-	35%
				gobo 4	89	-	114	35%	-	45%
				gobo 5	115	-	140	45%	-	55%
				gobo 6	141	-	166	55%	-	65%
				gobo 7	167	-	192	65%	-	75%
proportional	continuous rotation of the gobo wheel from slow to fast	193	-	255	76%	-	100%			
15	14	break up gobo selection (effect activated from channel 23/ 22)	step	no gobo	0	-	10	0%	-	4%
			proportional	from gobo 1 to gobo 7 through 360°	11	-	192	4%	-	75%
				gobo 1 (central value 33)						
				gobo 2 (central value 55)						
				gobo 3 (central value 78)						
				gobo 4 (central value 101)						
				gobo 5 (central value 124)						
gobo 6 (central value 147)										
gobo 7 (central value 169)										
continuous rotation of the gobo wheel from slow to fast	193	-	255	76%	-	100%				
Note 4 : gobo selection movement will vary according to the selection made for channel 23 (16 bit) / 22 (8 bit)										
16	15	effects selection	step	no effect	0	-	10	0%	-	4%
			proportional	frost effect	11	-	92	4%	-	36%
			step	effect 1	93	-	174	36%	-	68%
				effect 2	175	-	255	69%	-	100%
17	16	effect index-rotation through 360°	step	no effect	0	-	10	0%	-	4%
			proportional	proportional indexing of the effect through 360°	11	-	127	4%	-	50%
			proportional	continuous rotation of the effect in a clockwise direction with proportional control over decreasing speed	128	-	190	50%	-	75%
			step	effect stop	191	-	192	75%	-	75%
			proportional	continuous rotation of the effect in a counter-clockwise direction with proportional control over increasing speed	193	-	255	76%	-	100%
18	17	color wheel selection	step	white beam	0	-	5	0%	-	2%
				color 1	6	-	14	2%	-	5%
				color 2	15	-	22	6%	-	9%
				color 3	23	-	30	9%	-	12%
				color 4	31	-	38	12%	-	15%
				color 5	39	-	45	15%	-	18%
			proportional	from white beam to white beam (color 1-2-3-4-5), proportional positions	46	-	127	18%	-	50%
rainbow effect from fast to slow in an counter-clockwise direction	128	-	190	50%	-	75%				
rainbow effect from slow to fast in a clockwise direction	191	-	255	75%	-	100%				
19	18	cyan	proportional	proportional control of the percentage of cyan color in the light beam from 0 to 100%	0	-	255	0%	-	100%
20	19	magenta	proportional	proportional control of the percentage of magenta color in the light beam from 0 to 100%	0	-	255	0%	-	100%
21	20	yellow	proportional	proportional control of the percentage of yellow color in the light beam from 0 to 100%	0	-	255	0%	-	100%
22	21	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, mode selected by strobe channel 7	31	-	249	12%	-	98%
				black-out of the light beam during PAN/ TILT movement, gobos wheel, colors wheel and effects wheel	250	-	255	98%	-	100%

## English

22	21	<b>halogen dimmer curve</b> (effect varies depending upon channel 6 dimmer)	step	standard dimmer (mechanical)	0	-	10	0%	-	4%
				the mechanical dimmer works in sync with the dimming of the lamp	11	-	30	4%	-	12%
				the mechanical dimmer has no effect and is active only that the halogen lamp (variable color temperature)	31	-	249	12%	-	98%
				black-out of the light beam during PAN/ TILT movement, gobos wheel, colors wheel and effects wheel	250	-	255	98%	-	100%

Note 5 : when using halogen lamp, channel 22 (16 bit) / 21 (8 bit), allow the selection of the curve which can be a combination of the characteristic dimming lamp and/ or mechanical dimmer

23	22	<b>gobo effect selection</b>	step	no effect	0	-	10	0%	-	4%
				proportional movement of the gobo wheels through 360°	11	-	133	4%	-	52%
				proportional-step movement of the gobo wheels through 360°	134	-	255	53%	-	100%

24	23	<b>lamp on/ off and motors reset</b>	step	park, no function	0	-	10	0%	-	4%
				lamp off	11	-	29	4%	-	11%
				pan and tilt reset (once only)	30	-	65	12%	-	25%
				all motor reset except black out pan and tilt (once only)	66	-	100	26%	-	39%
				all motor reset except black out (once only)	101	-	135	40%	-	53%
				reset of all the motors (once only)	136	-	170	53%	-	67%
				LCD display off	171	-	185	67%	-	73%
				LCD display on	186	-	199	73%	-	78%
				lamp on - standard focus	200	-	228	78%	-	89%
				lamp on - autofocus	229	-	255	90%	-	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

Projector: **InfinitySpot M**

Table name: DMX 512 functions

Table number: 294

Edition: 2

Date: 20/06/2011

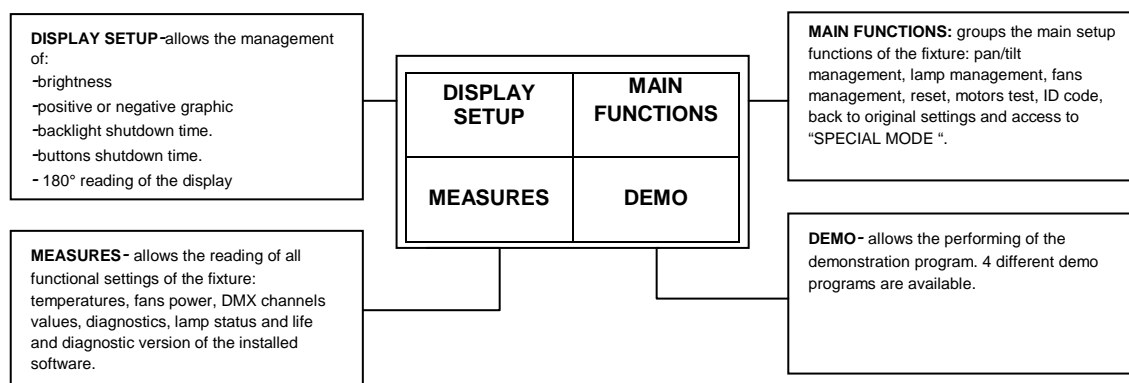
## 8. Display panel functions

By suitably using all the functions of **Infinity Spot M**, which can be activated through its display panel, it is possible to change some of the parameters and to add some functions.

Changing the preset settings made by Coemar can vary the functions of the projector so that it will respond differently to the controller; therefore carefully read about the functions described hereunder before carrying out any possible selection.

### 8.1 Quick guide to menu

In order to access the functions, just press the menu button: the screen you see hereunder, divided into four sections, will appear; the sections will be shown cyclically, one by one, every time the + or – button is pressed. To select the desired function, press *enter*.



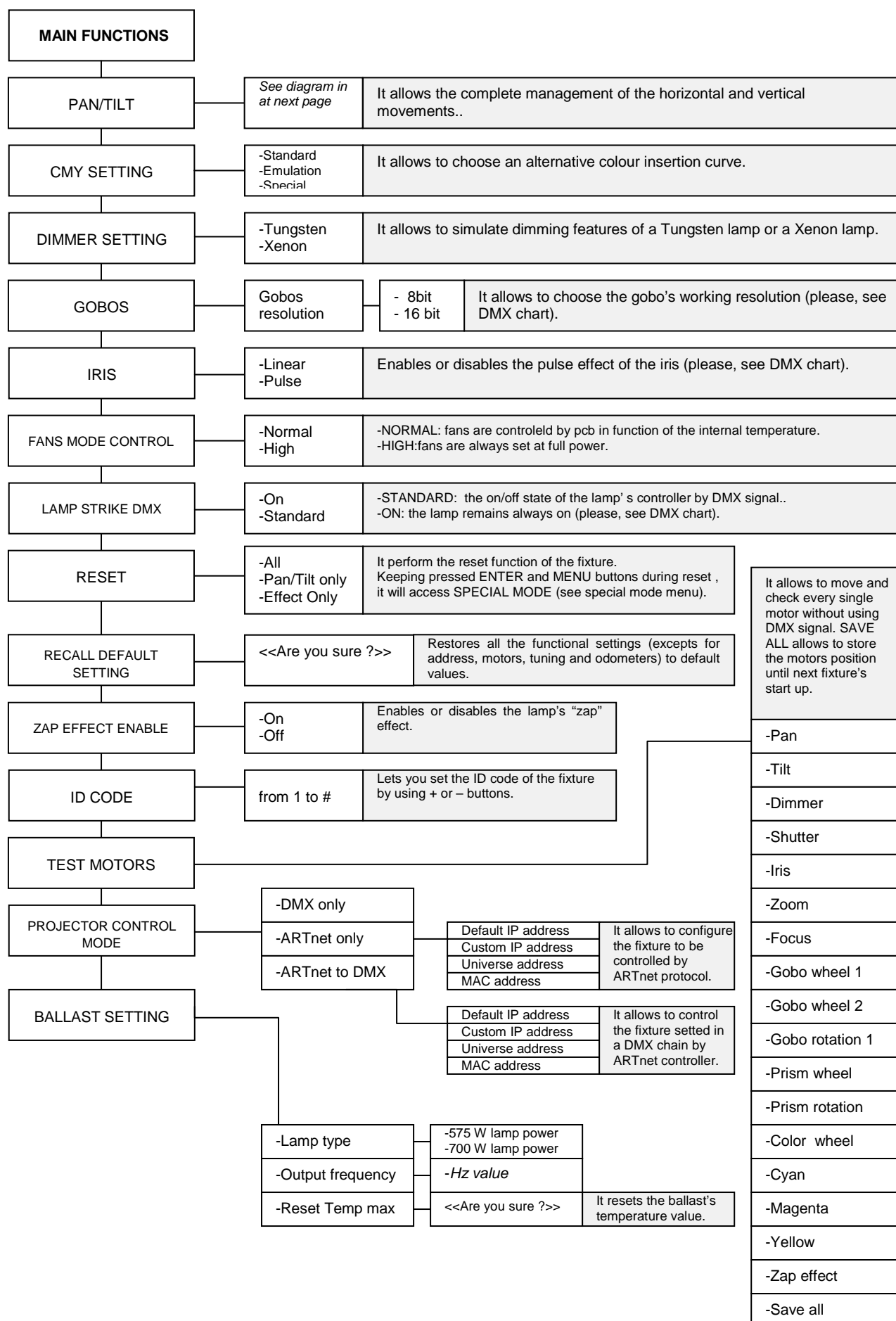
### 8.2 Rapid count

By the display panel of **Infinity Spot M** It is possible to rapidly change the various numbers displayed for the different functions in the following 3 manners:

1. Pressing the + or – buttons will cause the count to be quicker.
2. Pressing first + and then – and then holding them down simultaneously will cause the numbers to jump to the highest value.
3. Pressing first – and then + and then holding them down simultaneously will cause the numbers to jump to the lowest value.

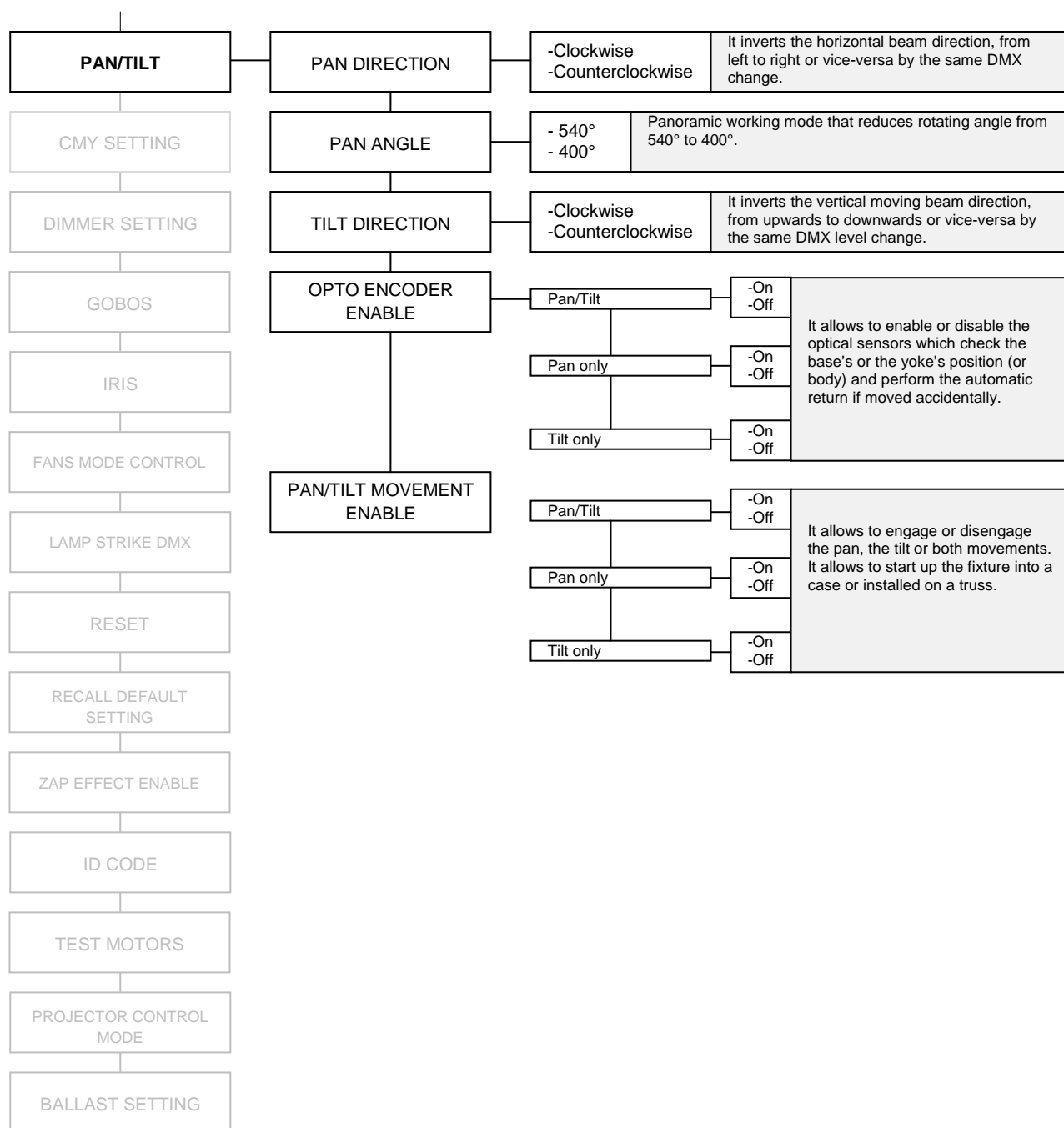
### 8.3 Main functions

The projector gives the opportunity to change and customize some functional settings.



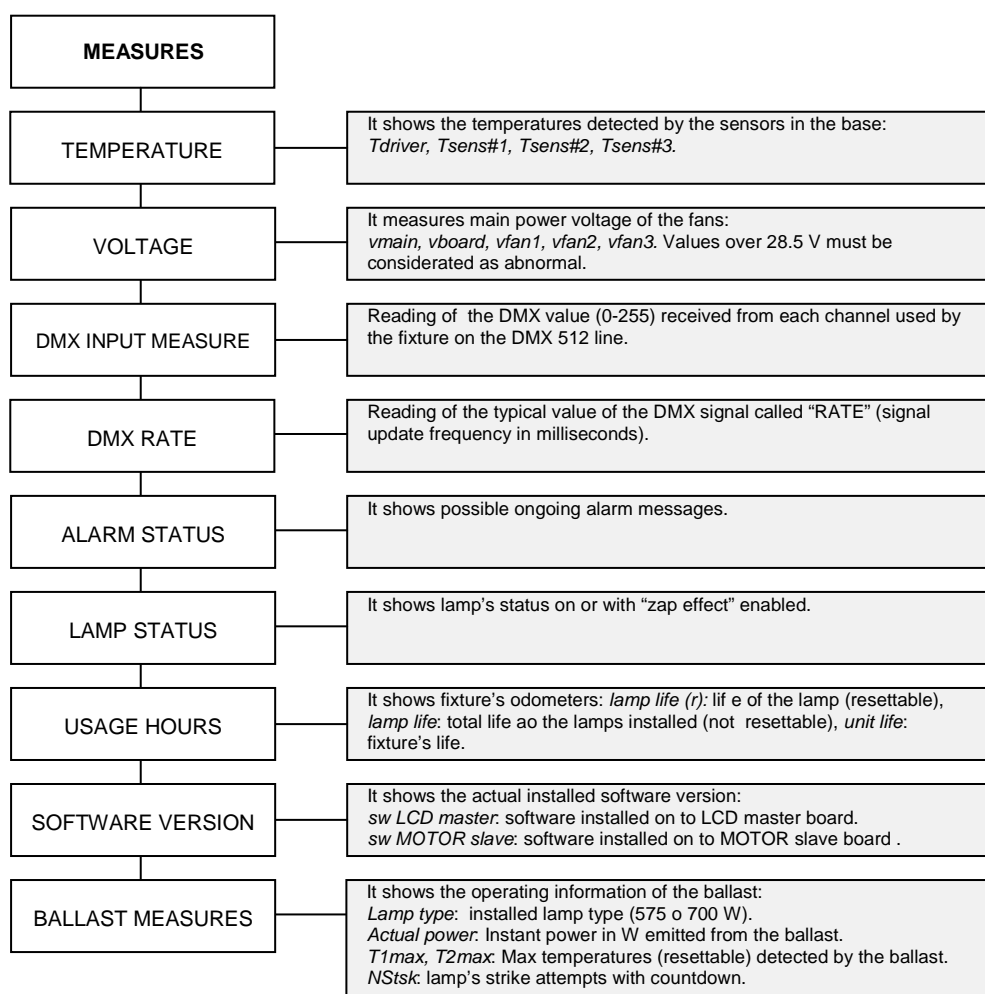
## English

The following diagram explains the sub menu for the management of pan and tilt, regarding the pan/tilt menu item describe in the diagram at previous page.



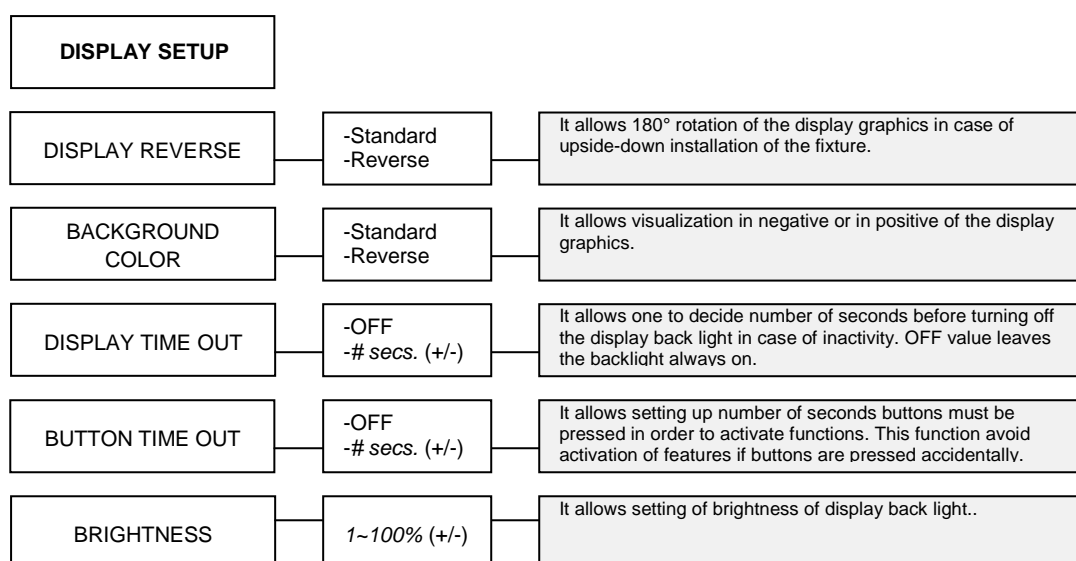
## 8.4 Measures

The internal microprocessor of the Infinity Spot M allows for several diagnostic and output parameters to be displayed.



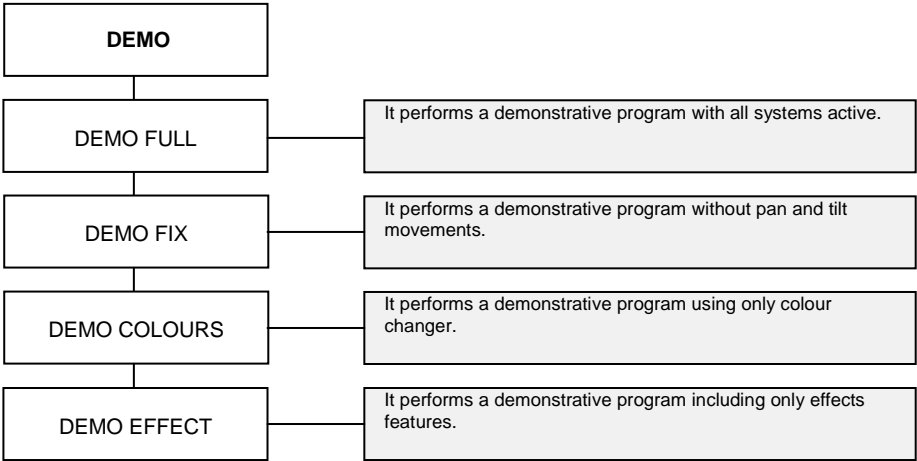
## 8.5 Display setup

The display setup allows to use the **Infinity Spot M** functions according to your needs. The following diagram shows the section features.



8.6 Demo mode

Demo mode allows the fixture to perform up to 4 different demonstration programs **Infinity Spot M**.



8.7 Special mode and electronic motor alignment

**WARNING!**

**This section is for the exclusive use of qualified and experienced personnel.**

SPECIAL MODE menu allows access to the electronic motor alignment section and to special functions, like lamp odometer reset, software upload and download. To enter SPECIAL MODE reach the reset page in the MAIN FUNCTIONS menu, start reset choosing ALL and press simultaneously enter and menu buttons for about 10 seconds.

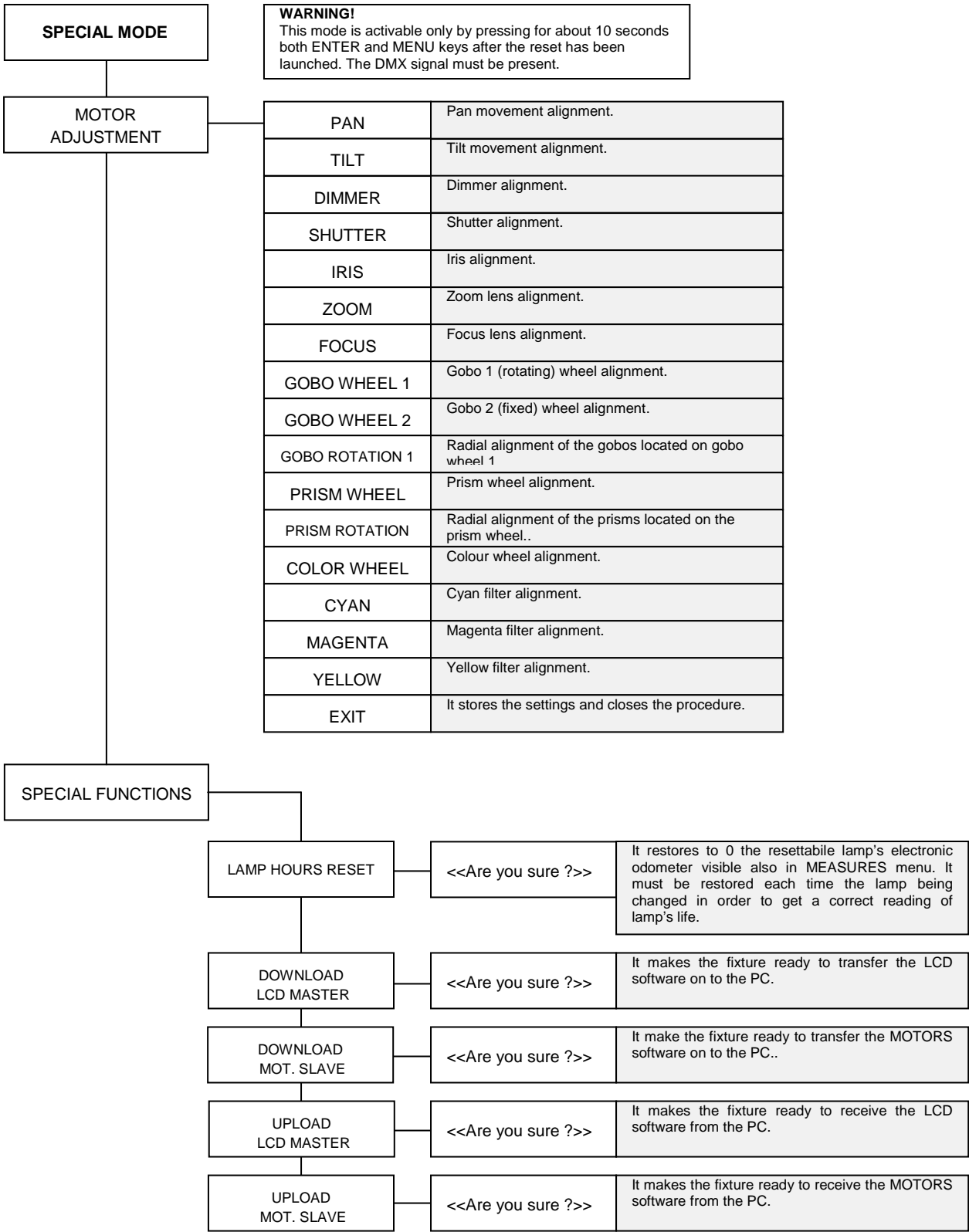
**WARNING!**

**The electronic tuning procedure is only possible when the DMX512 signal is on.**

The display panel of **Infinity Spot M** allows the electronic motor alignment of the projector motors in the optical system; this procedure is performed by **Coemar** at the factory during the testing: in order to obtain particular effects or in the case of internal components being replaced (motors, electronic boards, sensors, etc.) it may be necessary to change this setting. Altering the default settings performed by **Coemar** may radically alter the functioning of the projector. Carefully read all of the following functions before trying to perform any operations.



Note: pressing the buttons + and – simultaneously the setting returns to 128 (default value).



## 9. Lamp installation and alignment

**Infinity M** utilizes a Philips MSR GOLD 700/2 Mini Fast Fit with PGJX28 base lamp at maximum power of 700 W or a Philips MSR GOLD 575/2 Mini Fast Fit with adequate ballast setting. (menu MAIN FUNCTIONS/BALLAST SETTINGS). These lamps are available as a spare part at your **Coemar**'s distributor or service centre.

Lamp	Philips MSR Gold 700/2 Mini Fast Fit	Philips MSR Gold 575/2 Mini Fast Fit	Q750W 100V TAL halogen
Coemar code	105830	105831	BC10013B001
Power range	700 W (full power), 400W (low power)	575 W (full power), 400 W (low power)	750W
Lighting flow	50000 lm	35600 lm	21500lm
Color temp.	7200°K	7400 °K	3200 °K
Base	PGJX28		
Life	750 h.		200 h

**WARNING !**

**Ballast setting and lamp replacement must be done by qualified personnel.  
Disconnect the unit from main power prior to attempting lamp's installation or replacement.**

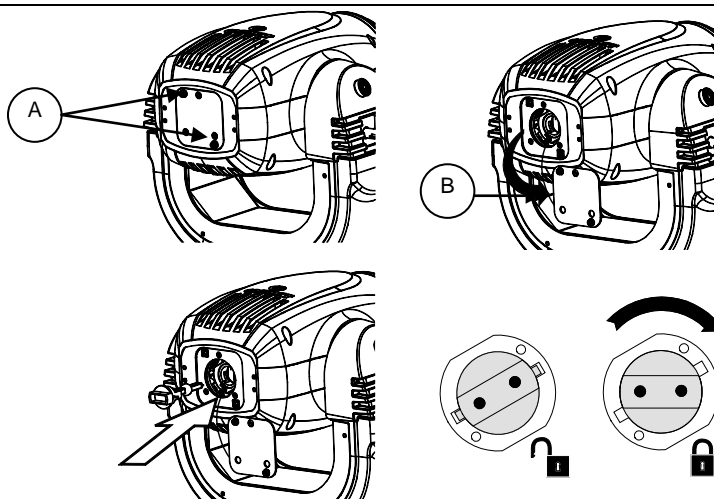
The fixture internal temperature can reach 250° C after 5 minutes, and reach a peak of 350 °C; make sure that the lamp is cold before trying to remove it. In any case the fixture can be opened only 10 minutes after turning off the lamp.  
The lamp is of the mercury vapour type with discharge ignition. This type of lamp operates at high internal pressure, and a slight risk of explosion exists if the lamp is operated beyond its recommended life. Therefore, we recommend to replace the lamp within the specified lamp life. Always handle the lamp with care avoiding to touch it with bare hands.

**9.1 Lamp installation**

1. Use a suitable tool to loosen the 2 fixing screws A of the lamp holder cover at the rear of the projector body.
2. Remove the lamp holder cover "B".
3. Insert the lamp into the holder and gently rotate it clockwise until it blocks.
4. Una volta in sede, ruotate la lampada in senso orario fino a bloccarla. The lamp used is made of quartz glass and must be handled with care; always adhere to the instructions provided in the lamp packaging. Never touch the glass directly, use the polythene wrapping provided in the lamp packaging. **DO NOT USE UNDUE FORCE ON THE GLASS.**
5. Insert the lamp holder cover in its original position and screw the 2 screws "A" back in.

**WARNING !**

- Never use undue force if the procedure becomes difficult.
  - Never put pressure on the glass of the lamp.
- Never touch the glass of the lamp with bare hands.**

**WARNING !**

- Each time you replace the lamp, we recommend the following operations.**
- realign the lamp in the optical system in order to avoid dichroic filters overheating and consequent effects.
  - reset the lamp odometer to obtain reliable information about the residual life of the lamp.

## 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 maximize output, to avoid the possible overheating of the internal components due to the incorrect focusing of the beam onto components not predisposed to high temperature. It is extremely important to obtain a uniform distribution of light on all beams.

### Alignment procedure

Alignment is carried out by using the 3 screws A, B and C showed in the picture below. 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 to the most central part of the beam possible and then flatten the beam to maximum uniformity. The combined regulation of the three adjusters allows horizontal, vertical and axial regulation of the lamp.



## 9.3 Halogen lamp operations

Previous to install the lamp, you should ensure that your Infinity M has the software required to manage the new features. Keep pressed, while turning on the unit, "+" and "-" keys, the display shows a screen like this:

	Version configuration	Situation	Action
A		The halogen lamp cannot be installed because <u>the ballast is not suitable</u> . (SW ballast version must be successive to 1.70)	Replace the ballast with kit BC10013B002 and upgrade LCD and MOT software.
B		The ballast is suitable for the halogen lamp but it is <u>recommended</u> update the <u>ballast software to version 3.70</u>	Update ballast software using DR1+.

In order to upgrade the software on your Infinity M, DR1+ device is strictly required.

Provide yourself with this product if you do not have it. After you have installed DR1 + Lite Interface on your PC and you have correctly connected PC, DR1+ device to Infinity M (remember that in the case you are using a laptop PC you should drive USB patch through a self-powered USB Hub), you are ready to perform the software installation on Infinity M that can vary regarding the two cases mentioned in the previous chapter:

**Case "A":** You'll have to replace the ballast with KIT BC10013B002; this one will come with the correct hardware and software version (3.70), then you'll have to upgrade LCD and MOTORS software to LCD 2.13 and MOTORS 2.09. These software versions are available in the CD included in this kit. Refer to DR1+ user manual to learn how to perform the software upgrade.

**Case "B":** You'll have to upgrade the ballast software to 3.70. This operation is slightly different respect LCD and MOTOR software upgrade.

1-Go with the mouse on the fixture you have to upgrade in the left column of DR1+ Lite Interface.

2-Keep pressed ALT+CTRL+SHIFT and click the right button of the mouse; a pop up menu will appear.

3-Keeping pressed ALT+CTRL+SHIFT Click on SEND COMMAND-SERVICE MENU-SHOW BALLAST. In the list you should now see the ballast device you are going to upload the software on.

4-Upgrade the software ( you'll find the 3.70 file in the CD ROM included) in the same way you did for LCD or MOT.

5-In order to return to fixtures list, repeat the operation in step 3 clicking HIDE BALLAST instead of SHOW BALLAST.

6- Check that software versions are updated LCD at 2.12 and MOT 2.09

## English

### WARNING !

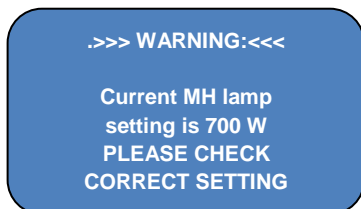
- after the installation of this lamp and each time you replace it, we recommend the following operations.
- realign the lamp in the optical system in order to avoid dichroic filters overheating and consequent effects.
- reset the lamp odometer to obtain reliable information about the residual life of the lamp.

### 9.4 Turning back to discharge lamp (700W or 575W)

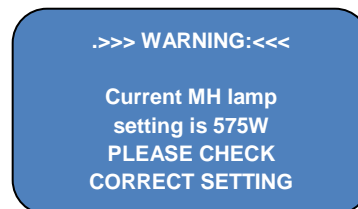
This is a very important chapter if you are going to replace the halogen lamp for the 700W (OEM configuration) or 575 W lamp. Please read it carefully and ensure you have understood the topics.

The transition from discharge lamp (700 or 575W) to halogen lamp requires no settings, in fact the equipment recognizes the type of lamp and set automatically. The reverse operation ( halogen to 700/575W) requires that the projector's setting matches the type of lamp we are going to install; for example, if your Infinity M was set to work with 700W lamp before the transition to halogen, you are going to install a 575W lamp and you forget to set Infinity M, when you'll turn the lamp on, the projector will be damaged. Follow these hints to change the lamp safely:

- 1 Install the discharge lamp.
- 2 Turn on Infinity M keeping pressed MENU ENTER e "+" and follow the instruction to change the lamp setting..
- 3 Turn on again the projector and look at the display, Infinity M will delay the turning on of the lamp to give you the opportunity to check the type of lamp set .



The system warns you that Infinity M has been set to work with 700 W metal halide discharge lamp.



The system warns you that Infinity M has been set to work with 575 W metal halide discharge lamp.

- 4 Check that the setting matches the lamp you've installed; if it doesn't match, turn off immediately the unit and repeat the procedure described above.
- 5 Once made the correct setting, turn on Infinity M, turn on the lamp and don't forget to adjust it.

### Dimmer mode explanation

Halogen dimmer curve channel (see DMX chart above)	Dimmer/shutter status	Lamp status	time
Mechanical dimmer works in sync with the dimming of the lamp	Dimmer closed	Minimum power	0 seconds
		off	5 minutes
	Shutter closed	Minimum power	10 seconds
		off	5 minutes
Mechanical dimmer has no effect and is active only that the halogen lamp (variable color temperature)	Dimmer closed	off	0 seconds
		Minimum power	10 seconds
	Shutter closed	off	5 minutes
		Minimum power	10 seconds
Black-out of the light beam during PAN/TILT movement, gobos wheel, colors wheel and effect wheel.	Dimmer closed	Minimum power	10 seconds
		off	5 minutes
	Shutter closed	Minimum power	10 seconds
		off	5 minutes

## 10. Operating on inside groups

The fixture allows the extraction of both gobos and colour changer assemblies in order to facilitate inspection, gobos replacing and clearing of colour filters and lenses.

### WARNING !

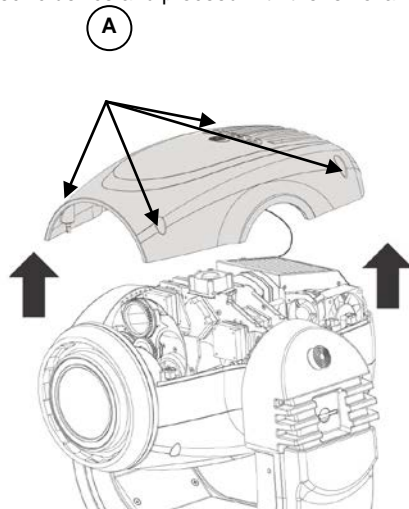
The following procedures should be undertaken by qualified and experienced technical personnel.

Handle with extreme care !

Always disconnect all cables before proceeding and ensure that the unit is sufficiently cool.

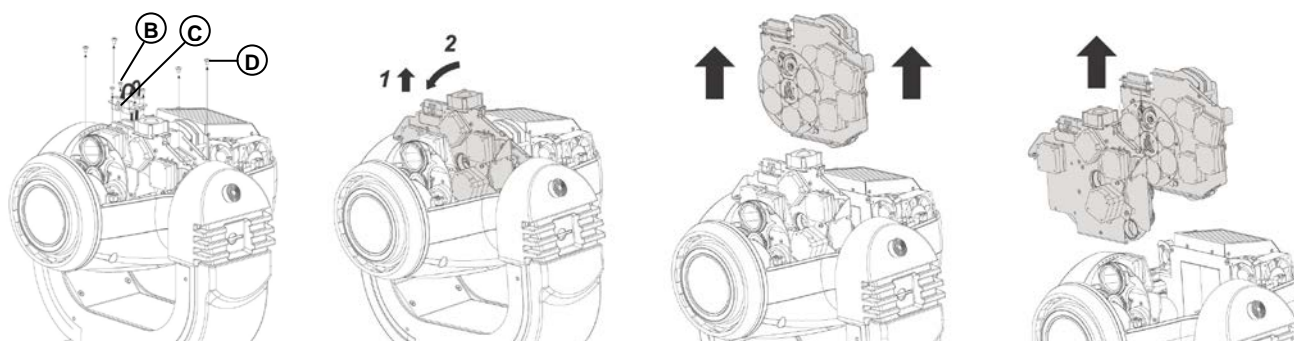
### 10.1 How to open the projector

Using an appropriate screwdriver, remove screws "A" from the upper housing and remove this. In order to identify the upper housing to be removed, position the unit so that the printing on the lamp holder group can be read (the printing must not upside down). Once this operation has been carried out, block the movement of the body through the specific device and proceed with the removal of the upper housing.

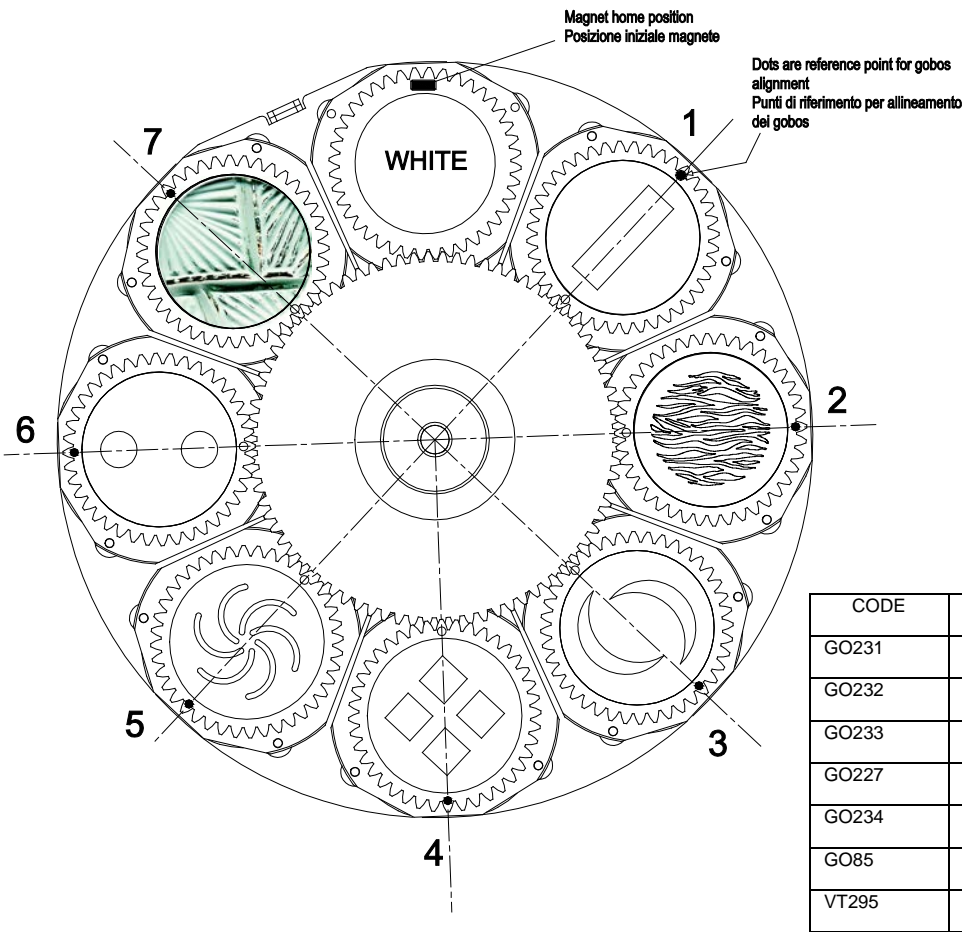


### 10.2 How to extract the gobos and colour changer assembly.

1. Remove "B" screws of the connectors labeled "gobos" and "color changer" and gently remove the "C" connector.
2. Remove "D" screws of the two assembly, manually shift forward the zooms lenses.
3. Gently extract a few centimeters the gobos assembly, tilt it forward.
4. Now, gently extract the colour changer assembly.
5. Finally extract the gobos assembly partially extracted in the step above..



10.3 Standard gobos wheel configuration (gobos wheel 1)



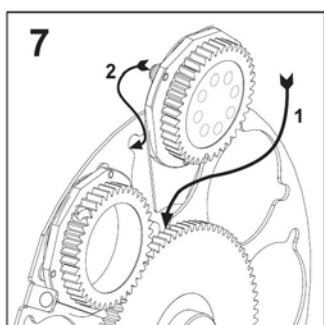
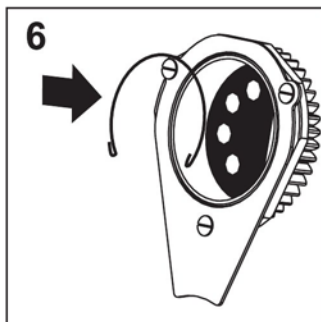
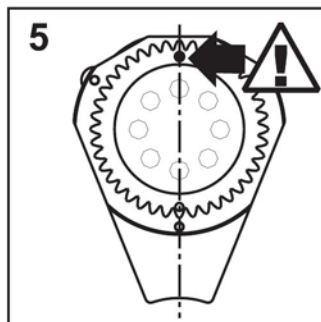
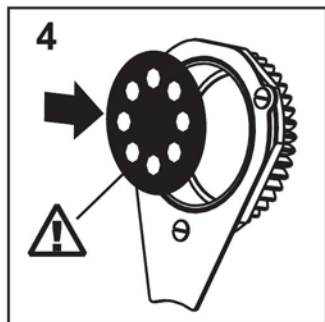
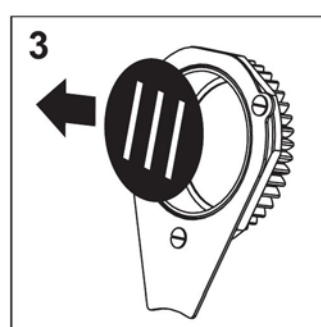
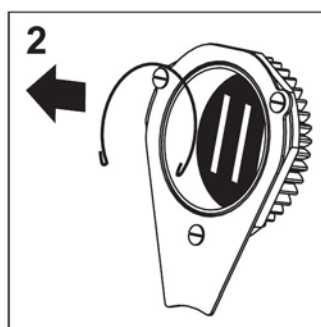
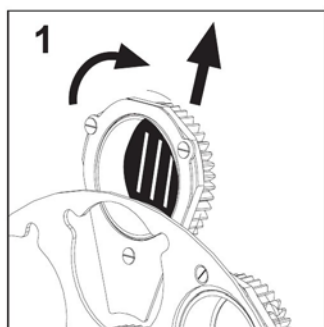
Gobos specifications.

	Metal gobos	Glass gobos undefined	Glass gobos defined
Working area ø mm. Diametro utile mm.	Up to 21 Fino a 21	Up to 27 Fino a 27	Up to 21 Fino a 21
Thickness mm. Spessore mm.	0,5 mm.	From 1 to 4 Da 1 a 4	From 1 to 4 Da 1 a 4
Overall ø mm. Diametro totale mm.	Up to 27 Fino a 27	Up to 26.8 Fino a 26,8	Up to 26.8 Fino a 26,8

In case of replacing of metal gobos, we strongly recommend to use special gobos provided by **Coemar**. In any case gobo's thickness must never be below 0.5 mm.

10.4 How to replace gobos

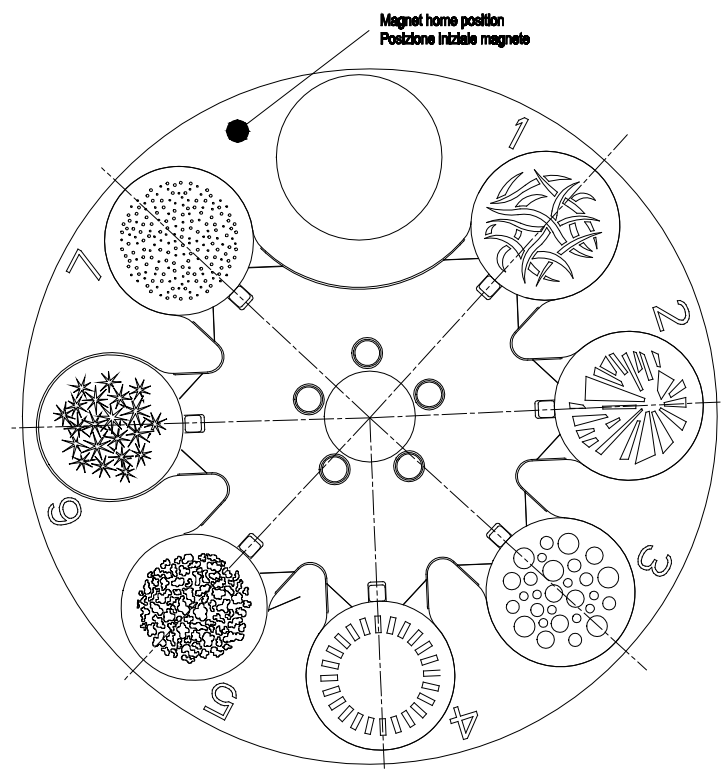
1. Lift and gently extract from the gobo wheel the support which contains the gobo you are going to replace.
2. Remove the spring that fixes the gobo to the support.
3. Remove the old gobo.
4. Insert the new gobo respecting the black side. Avoid to touch the uncoated side.
5. On the gear there is an etched reference point: use it to orient the gobo and fix on to the projector.
6. Mount the spring ensuring it keeps the gobo firm.
7. Check the gobo freely rotate and mount the gobos assembly in the fixture following backwards the procedure explained in the previous section.



## English

### 10.5 Standard fixed gobos wheel configuration (gobos wheel 2)

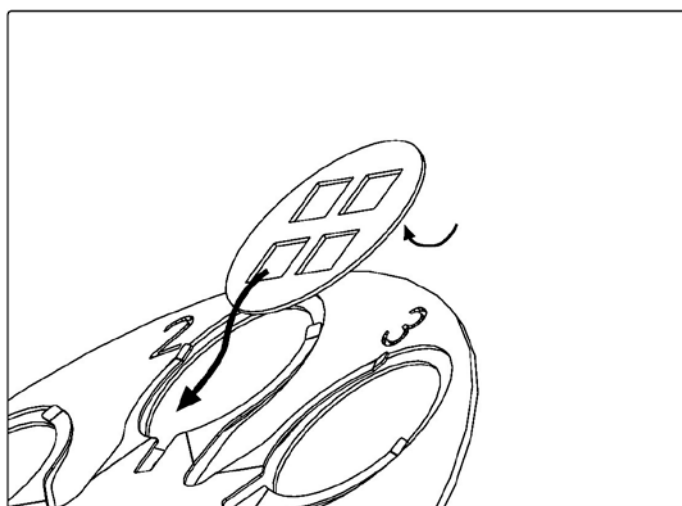
Note: this gobos wheel only accepts gobos made of metal, in case of replacing we strongly recommend to use special gobos supplied by Coemar. In any case, thickness of the gobos never must be under 0,5 mm.



CODE	POS	DESCRIPTION	N. °
GO223	1	Snakes	1
GO221	2	Crash	1
GO224	3	Bubbles	1
GO225	4	Breakup dashes	1
GO230	5	Blobs	1
GO222	6	Sparkles	1
GO226	7	Universe	1

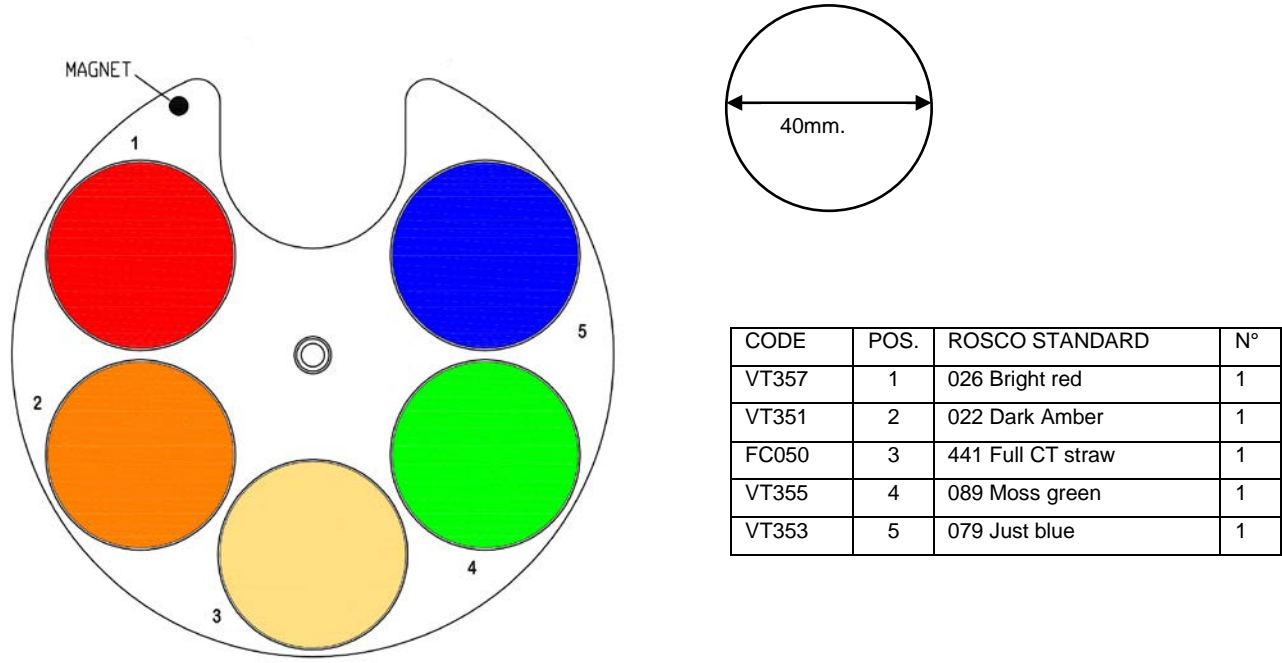
### 10.6 How to replace gobos on gobos 2 wheel

1. Facing the front side of the wheel, gently hold the gobo you want to replace with thumb and finger, then lift it up pushing it with your finger, then remove it.
2. Insert the new gobo making it slip under the spring until it locks; refer to the nick in the spring to keep a useful point of reference to orient the gobos.



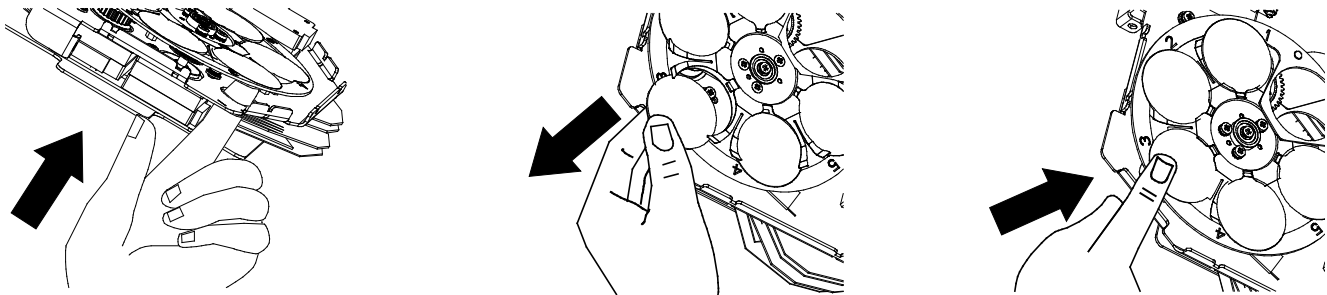


10.7 Standard color wheel configuration

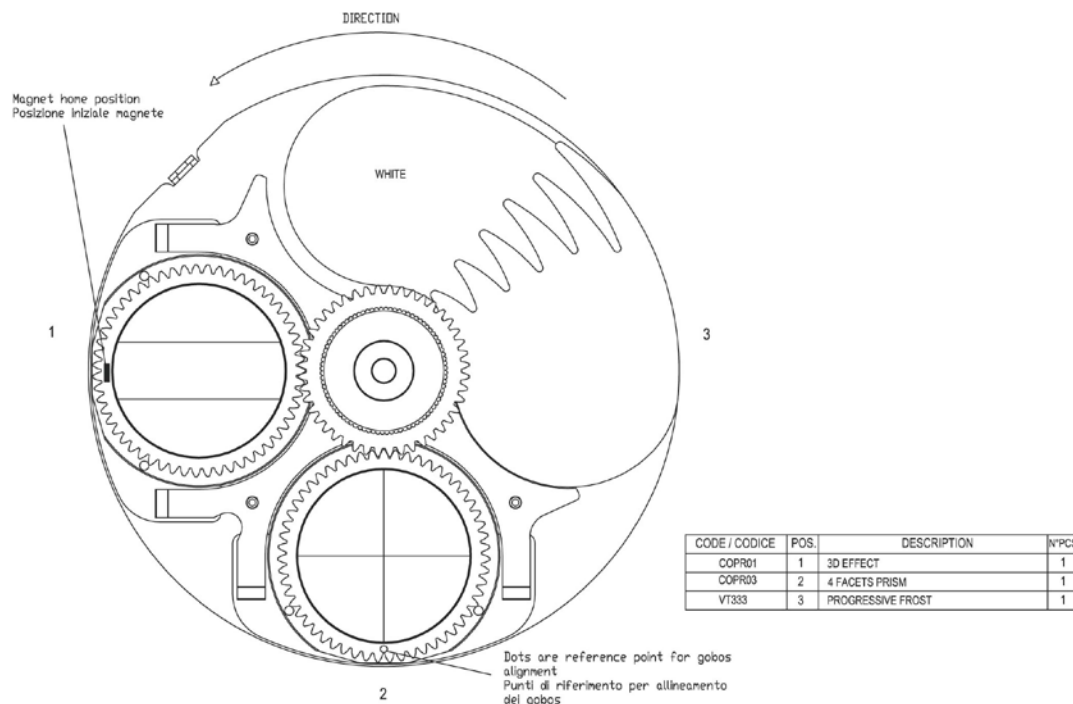


10.8 How to replace filters

1. Facing the front side of the wheel, push up the filter to replace inserting your finger through the plate hole, then remove the filter.
  2. Insert the new filter (facing the coated side downwards) making it slip under the spring until it locks; respect the coated side of the filter (bottom side)..
- NB:** The wheel only accepts glass filters or gobos with a maximum diameter of 40 mm and no more thick than 1 mm.

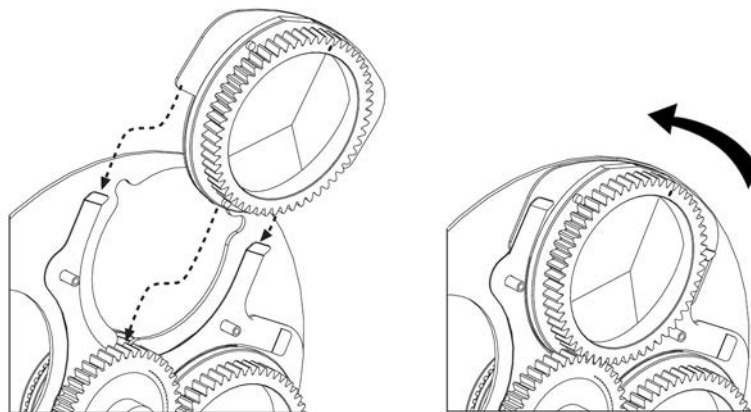


## 10.9 Standard effect wheel configuration



## 10.10 How to replace effects

1. Lift and gently extract from the wheel the support which contains the effect you are going to replace.
2. Slide the new support under the spring, making sure that it enters in place through the two pins on the back of the support..



## 10.11 Reassembly the groups on the projector

In order to reassembly the two groups in place, just follow backwards the procedure explained at the beginning of this chapter: half insert the gobo assembly and incline it toward the front of the fixture, Insert the colour changer and then full insert the gobo assembly. Fix the two groups by their screws, connect the cables and fix them again. Verify that the internal of the body is free from loose pieces ( washers, screws, etc..) then fix the body cover.

## 11. Maintenance

### 11.1 Periodic cleaning

#### Lenses and filters

Even a fine layer of dust can reduce the luminous output and alter the compactness of the beam. Regularly clean all filters and lenses 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 8 weeks; the length of the period between each 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.

If necessary, do not hesitate to carry this out even after a shorter period of time.

### 11.2 Periodic maintenance

#### Lamp

Check the lamp and replace it if there is any observable damage or deformation or if or if the time limit is close (check the resettable counter).

#### Mechanical parts

Periodically check the movement of all mechanical devices, and check driving belts, gears and lens guides. Replace them if necessary. Make sure the projector is not mechanically damaged. If necessary, replace the worn parts. Check the tension of the belts and adjust them if necessary.

#### Electrical components

Check all electrical connections, in particular for correct earthing and correct attachment of all extractable connectors. Press the connectors if necessary and reposition as before.

### 11.3 Fuse replacement

Check the conditions of the fuses using an appropriate instrument; if damaged, replace them with equivalent ones.

## 12. Spare parts

### 12.1 Spare parts

All the components of **Infinity Spot M** are available as replacement spares from your authorized **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.

## 13. Error messages


If you have to check a malfunction, **Infinity Spot M** has an auto diagnostic system that visualizes in the lower part of the display one or more intermittent messages, preceded by "ERR".

The following table will help you to understand these messages correctly. If the problem persists despite carrying out the suggested procedure, contact your Coemar Customer Service Centre.

Error message	Description and suggested solution
ERR: Memory FAILURE	<b>Internal memory writing error.</b> Contact your authorized Coemar Service centre..
ERR: CFG data FAILURE	<b>Configuration data error.</b> The initial parameter setting has failed, the projector has loaded its factory default setting. Turn the projector off and on again. Should the error reoccur, refer to your authorised Coemar service centre.
ERR: DMX address	<b>DMX addressing error.</b> The projector is not receiving all DMX channels needed to operate correctly. Check the DMX address indicated on the display and the number of channels being output from the controller (some controllers do not exceed 12 channels)
ERR: DMX frame	<b>DMX frame error.</b> DMX signal present but frame too short; the controller has not enough channels to control the projector.
ERR: No Slave LINK	<b>Communication error .</b> The LCD board is not communicating properly with the main board. Check the cabling connecting the boards or refer to your authorised Coemar service centre.
ERR: No Ballast LINK	<b>Communication error.</b> The LCD board is not communicating properly with the ballast. Check the cabling connecting the boards or refer to your authorised Coemar service centre.
ERR: Ballast Temp. #1	<b>Primary ballast temperature too high.</b> Check that the ambient temperature does not exceed 40°C check also the proper functioning of the fans.
ERR: Ballast Temp.#2	<b>Secondary ballast temperature too high.</b> Check that the ambient temperature does not exceed 40°C check also the proper functioning of the fans.
ERR: Vinp line low	<b>Too low main power input.</b> Main power voltage is too low, it must be at least 90 Vac.
ERR: Vout lamp high	<b>Too high lamp voltage .</b> Lamp can be exhausted and so consume more power than normal. Replace the lamp and if needed, refer to your authorised Coemar service centre.
ERR: Encoder PAN	<b>PAN encoder not found.</b> Check the sensor on the encoder wheel placed at the base to detect the position of the PAN movement motor; check the motor and the relevant cabling
ERR: Encoder TILT	<b>TILT encoder not found.</b> Check the sensor of the encoder wheel placed on the fixture's yoke to detect the position of the TILT movement motor; check the motor and the relevant cabling
ERR: Sensors Line #2	<b>Sensor line 2 error</b> Control circuit error relating to position sensors for the motors (GOBOS) posta nella forcella: il sensore non rileva il magnete. The sensor does not detect the magnet. Check sensor and motor cabling of the Gobos assembly.
ERR: Sensors Line #3	<b>Sensor line 3 error</b> Control circuit error relating to position sensors for the motors. (EFFECTS, ZOOM, FOCUS) posta nella forcella: il sensore non rileva il magnete. The sensor does not detect the magnet. Check sensor and motor cabling of the Zoom, Focus and effect wheel.
ERR: Sensors Line #5	<b>Sensor line 5 error</b> Control circuit error relating to position sensors for the motors of the colour changer assembly. The sensor does not detect the magnet. Check sensor and motor cabling of the colour changer assembly.
ERR: EFFECT Wheel	<b>Position error of the effect wheel.</b> The sensor does not detect the magnet. Check the functioning and the correct positioning of the magnetic sensor of the effect wheel.
ERR: EFFECT Index	<b>Initial position error of the effect.</b> The sensor does not detect the magnet. Check the functioning and the correct positioning of the magnetic sensor placed on effect #1.
ERR: COLOR Wheel	<b>Position error of the color wheel.</b> The sensor does not detect the magnet. Check the functioning and the correct positioning of the magnetic sensor of the colour wheel. Check the correct tightening of the transmission belt.
ERR: GOBO 1 Wheel	<b>Position error of the gobo wheel 1.</b> The sensor does not detect the magnet. Check the functioning and the correct positioning of the magnetic sensor of the gobos 1 wheel.
ERR: GOBO 1 Index	<b>Initial position error.</b> in the gobos 1 wheel: The sensor does not detect the magnet. Check the functioning and the correct positioning of the magnetic sensor placed on gobos 1.
ERR: GOBO 2 Wheel	<b>Position error of the gobo wheel 2.</b> The sensor does not detect the magnet. Check the functioning and the correct positioning of the magnetic sensor of the gobos 2 wheel.
ERR: ZOOM	<b>Zoom error.</b> The sensor does not detect the magnet. Check the functioning and the correct positioning of the magnetic sensor placed on the Zoom lens carriage. Check the correct tightening of the transmission belt.
ERR: FOCUS	<b>Focus error.</b> The sensor does not detect the magnet. Check the functioning and the correct positioning of the magnetic sensor placed on the Focus lens carriage. Check the correct tightening of the transmission belt.

## 14. Frequently asked questions

Question	Possible cause	Suggested solution
The projector is completely still.	-Projector not powered up: The circuit breaker is switched off. The protection fuse is blown.	Check that the mains power cable is connected to power. Set the circuit breaker to ON. 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. Incorrect DMX address.	Inspect the signal cable, rectify any incorrect wiring, repair or replace any damaged cables or connectors. Check the DMX address.
The lamp functions intermittently or does not turn on at all.	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
Projection brightness appears reduced	Lamp may be exhausted or not properly aligned to optical path.	Replace the lamp if exhausted. Align the lamp to optical path.

Information on disposal of the equipment	
	<p>The equipment at the end of its useful life must be disposed of at an appropriate recycling center for waste electrical and electronic equipment. The treatment and disposal of environmentally friendly, helps prevent potential negative environmental and health and promote the reuse and / or recycling of materials making up the equipment. Illegal disposal by the user includes the application of administrative sanctions provided by law.</p>



**Coemar s.p.a.**

via Inghilterra 2/A - 46042 Castel Goffredo (Mantova) Italy  
ph. +39 0376/77521 - fax +39 0376/780657  
info@coemar.com

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