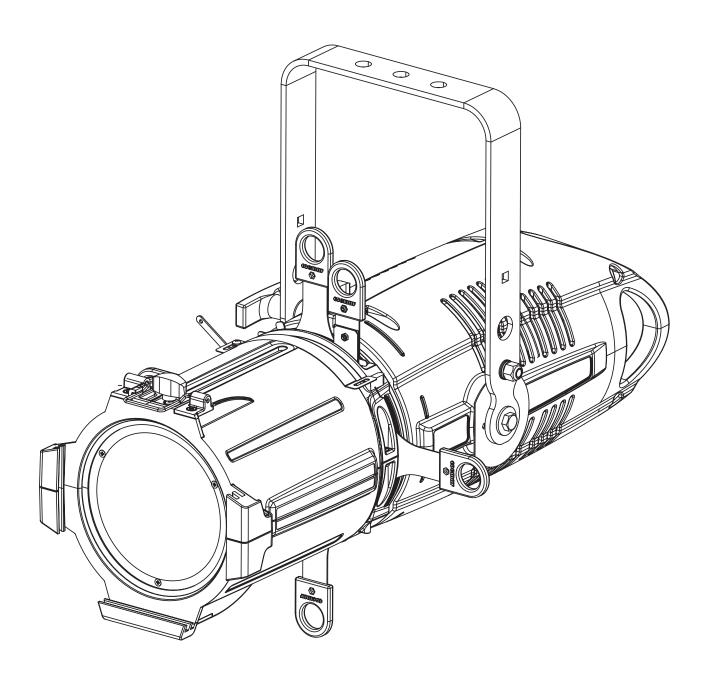
REFLECTION (O

FullSpectrum 6 HD



instruction manual

Version 1.0





| Purchase date: Dealer: Address: Suburb: Country: Phone / Fax: | Fixture code: |
|--|----------------|
| Address: Suburb: Country: Phone / Fax: | Purchase date: |
| Suburb: Country: Phone / Fax: | Dealer: |
| Country: Phone / Fax: | Address: |
| Phone / Fax: | Suburb: |
| | Country: |
| | Phone / Fax: |

Please note in the space provided above the relative service information of the model and the retailer from whom you purchased your **LEDko FullSpectrum 6 HD**: this information will assist us in providing spare parts, repairs or in answering any technical enquiries with the utmost speed and accuracy.

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

User Manual version 1.0

Edition January 2019

Index

| 1. Packaging and transportation | Pag. 5 |
|--|----------|
| 1.1. Packaging | Pag. 5 |
| 1.2. Transportation | Pag. 5 |
| 2. General information | Pag. 5 |
| 2.1 Safety informations | Pag. 5 |
| 2.2 Warranty conditions | Pag. 6 |
| 2.3 EC Norms | Pag. 6 |
| 3. Product specifications | Pag. 7 |
| 3.1 Technical characteristics | |
| 3.2 Dimensions | • |
| 3.3 Unit's main components | <u> </u> |
| 3.4 Back panel description | Pag. 9 |
| 4. Installation | • |
| 4.1 Optical Installation | <u> </u> |
| 4.2 Mechanical installation | <u> </u> |
| 4.3 Safety chain | |
| 4.4 Adjusting unit's tilt | Pag. 11 |
| 5. Powering up | |
| 5.1 Operating voltage and frequency | = |
| 5.2 Connection to mains power | Pag. 12 |
| 6. Control signal connections | |
| 6.1 Control signal connection by XLR5 plugs | Pag. 13 |
| 7. Turning on the projector | • |
| 7.1 DMX address of the unit | Pag. 14 |
| 8. DMX Chart | _ |
| 8.1 DMX Chart: 16, 7, 1 channels | • |
| 8.2 DMX Chart: Studio | Pag. 18 |
| 9. Display panel functions | |
| 9.1 Quick guide to menu | 9 |
| 9.2 Rapid count | |
| 9.3 Main functions menu | |
| 9.4 Measure | |
| 9.5 Color presets | |
| 9.6 Special functions of the fixture | S . |
| 9.7 Error messages | Pag. 28 |
| 10. Accessories and spare parts | Pag. 29 |

| 11. Maintenance | Pag. 31 |
|------------------------|---------|
| 11.1 Firmware update | Pag. 31 |
| 11.2 Periodic cleaning | Pag. 31 |
| 11.3 Periodic controls | Pag. 31 |
| 11.4 Fuses | Pag. 31 |
| 12. F.A.Q. and answers | Pag. 32 |

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 make sure that no part of the equipment has suffered any damage during the transportation. In case of damage to the fixture, contact your currier and your supplier immediately by telephone, fax or email, and inform them you will formally notify them in writing through registered letter.

Packing list

Ensure the packaging contains:

- 1 Reflection LEDko FullSpectrum 6 HD
- 1 Instruction manual
- 1 Main power plugs

1.2 Transportation

The **LEDko FullSpectrum 6 HD** should be transported in either its original packaging or in an appropriate flight case.

2. General information

2.1 Safety informations

Fire prevention:



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

Prevention from 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 **LEDko FullSpectrum 6 HD** 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.

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 60°C. Never handle the unit until at least 10 minutes have elapsed since the LED was turned off.
- **4.** Never install the fixture in an enclosed area lacking sufficient air flow; the room temperature must not exceed 35°C.
- **5.** 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.

2.2 Warranty conditions

- **1.** The fixture is under warranty for 36 months from the purchase date against factory defections
- **2.** Damage ought to unskillfulness, inappropriate use, or lack of suggested maintenance are excluded from the warranty.
- **3.** Warranty expires when the projector is opened by unauthorized personnel.
- **4.** Warranty doesn't include the replacement of the fixture.
- **5.** Serial number and model of the fixture are necessary to retrieve informations and assistance from the dealer.

2.3 EC Norms

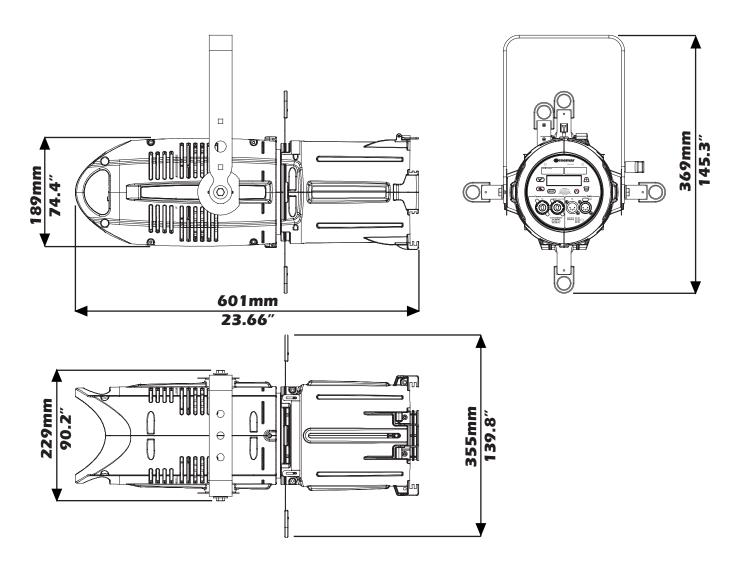
The projector meets all fundamental applicable EC requirements.

3. Product specifications

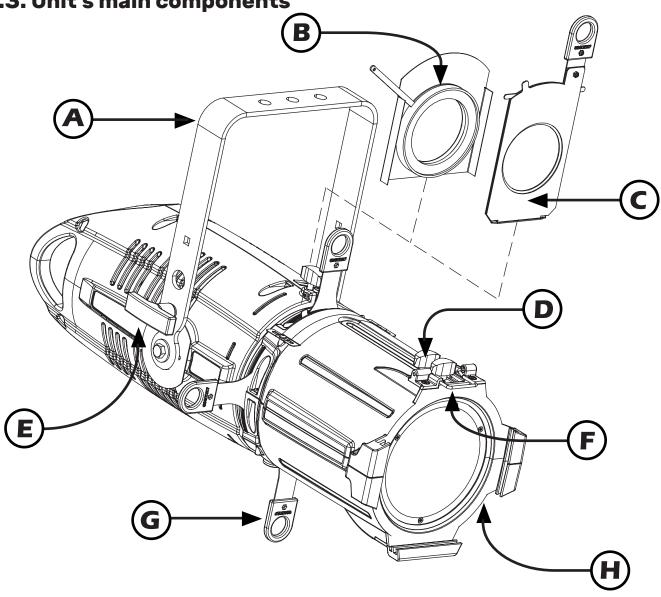
3.1 Technical characteristics

| Power supply | 90-230Vac, 50-60Hz |
|-----------------------------|--|
| Maximum current | 1.06 A at 230 V, 2.71 A at 90 V |
| Power factor | $\cos \phi = 0.9$ |
| Power consumption | 220 watt |
| Color temperature | RGBWLA, with pure color mixing throughout the field and all whites from 2700 to 6500 K |
| Weight (without optic) | 6kg - 13.2lbs |
| Maximum ambient temperature | +35°C / +95°F |
| IP rating | IP20 |

3.2 Dimensions

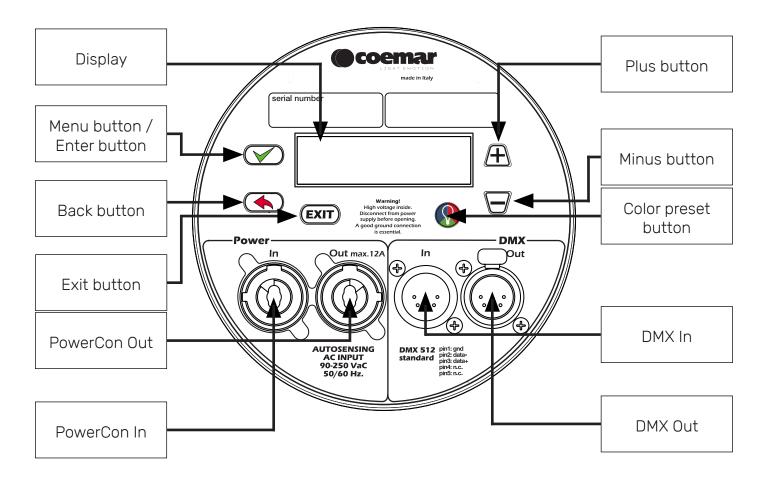


3.3. Unit's main components



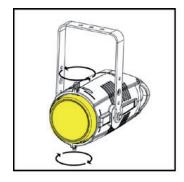
| | Components description | | | | | | | | | | |
|---|--------------------------|--|--|--|--|--|--|--|--|--|--|
| A | Adjustable yoke | | | | | | | | | | |
| В | Iris (optional) | | | | | | | | | | |
| С | Gobo holder (optional) | | | | | | | | | | |
| D | Lens adjusting handles | | | | | | | | | | |
| E | Yoke locking handle | | | | | | | | | | |
| F | Gel frame locking spring | | | | | | | | | | |
| G | Profile blade | | | | | | | | | | |
| Н | Interchangeable optic | | | | | | | | | | |

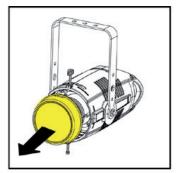
3.4 Back panel description

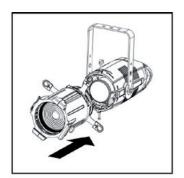


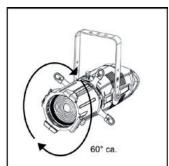
4. Installation

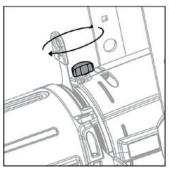
4.1 Optical installation

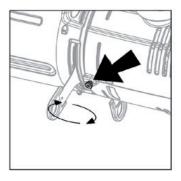


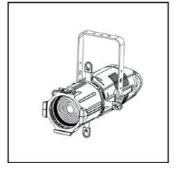










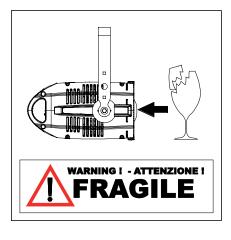


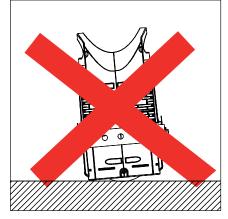
Remove the frontal cap by loosening the upper and lower screws enough to free the cap itself, set the optic's flange tilted about 60°. Insert the optic's flange into the body's receptacle and turn the optic 60° until it is firmly assembled to the projector body, free to rotate but not free to detach itself from the body. Ensure the optic to the body by tightening the two screws previously loosened.

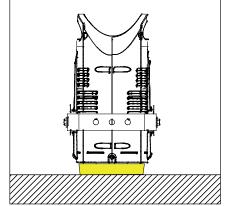
Warning!!

When the protective cap is removed, never lean the fixture facing down.

The front lens can be seriously damaged.

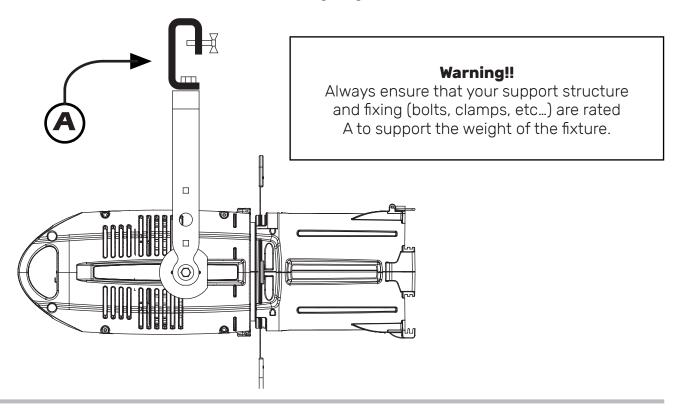






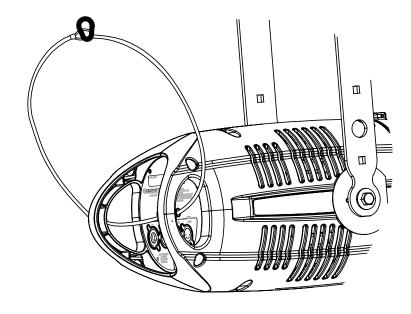
4.2 Mechanical installation

LEDko FullSpectrum 6 HD may be hung from an appropriate structure in any position or on tripode. If hanging the fixture from a lighting truss or similar, we recommend the use of an appropriate clamp "A", as shown in the following diagram.



4.3 Safety chain

When hanging it is recommended to use a safety chain, as required by current legislation. The safety chain must pass through the handles of the unit and then attached to the structure. If using steel cables and chains not 's production, make sure they are suitable to support the weight of the unit according to normative UL/ETL (required: the weight of 6 complete devices for at least one hour).



4.4 Adjusting unit's tilt

In order to adjust the tilt of the unit simply loose the side handle adjust the tilt and lock the yoke by tightening the handle again.

5. Powering up

5.1 Operating voltage and frequency

The unit may operates at voltages ranges from 90 to 250VaC at a frequency of 50 or 60 Hz. It is not needed to effect any setup procedures: **LEDko FullSpectrum 6 HD** will automatically adjust its operation to suit any frequency or voltage within this range.

5.2 Connection to mains power Mains cable characteristics

The mains cable provided is thermally resistant, complying to the most recent International standards.

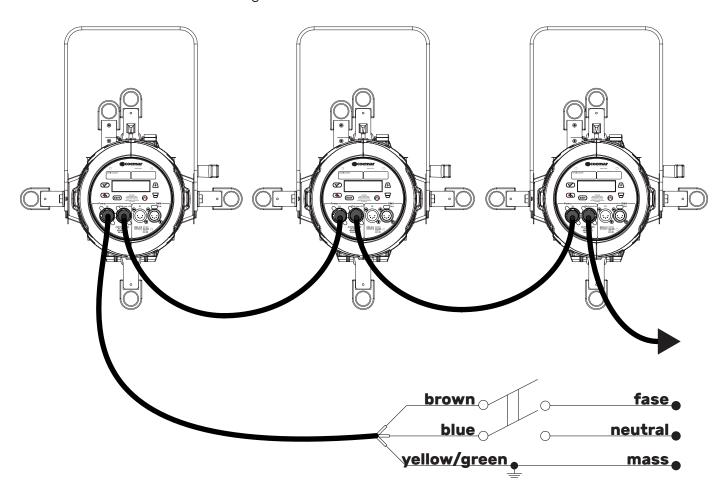
Note: in case of cable replacement, similar cable with comparable thermal resistant qualities must be used exclusively (cable 3 X 1,5 ø external 10 mm, rated 300/500V, tested to 2 KV, operating temperature -40°C + 180°C, Coemar cod. CV5311).

Connection to mains power

LEDko FullSpectrum 6 is equipped with two power connectors, one as input and one as output, which can be used to feed up to 8 (at 230 VAC) or 4 (90 VAC) fixtures.

The max absorption of **LEDko FullSpectrum 6 HD** is reported in the following table:

- 230 VaC 1.06 A constant during normal exercise.
- 90 VaC 2.71 A constant during normal exercise.



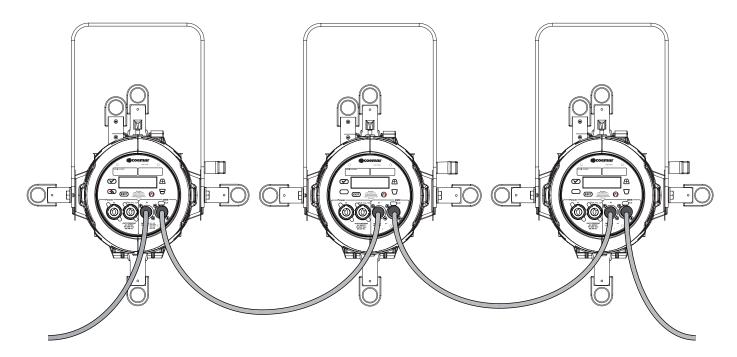
Warning!!

- The use of a thermal/magnetic circuit breaker is recommended. Strict adherence to regulatory norms is strongly recommended.
- **LEDko FullSpectrum 6 HD** should not be powered through a dimmer as this may damage the internal switching power supply.
- Prior to connecting the device to mains power, ensure that the mains characteristics are within the recommended range for the use of **LEDko FullSpectrum 6 HD**.
 - All cabling and connections should be carried out by a suitably qualified personnel.

6. Control signal connections

6.1 Control signal connection by XLR5 plugs

The digital control signal is transmitted to the projector via a two pole cable screened in according to the International standards for DMX 512 data transmission. The connection must be serial, using connectors XLR5 male and female located on the back of **LEDko FullSpectrum 6 HD** labelled DMX512 IN e OUT.



Warning!

Make sure that screening and conductors are not in contact one another or with the metal housing of the connector.

Pin#1 and housing must never be connected to the power supply unit.

7. Turning on the projector

After having followed the preceding steps described, proceed with the power supply and turn on the projector connecting it to the mains power.

The software version installed on the internal microprocessors will be shown on the display, suddenly it will show the current DMX addressing. If the address blinks, it means that the DMX signal has not been received. Check the connection cable and the mixer functioning.

7.1 DMX address of the unit

Each projector can use 16/7/1 or Studio mode for its complete operation and is controlled by a DMX 512 signal.

DMX addressing

When powered up initially, each projector will show A001, which indicates DMX address 001; for example, when set at 16 channels a projector thus addressed will respond to commands of channel 1 to 16 from your DMX 512 controller. A second unit must be addressed as A017, a third one as A033 and so on. The operation must be carried out on every **LEDko FullSpectrum 6 HD** which has an address different from A001.

Altering the 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.

Note: 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.

8. DMX chart

8.1 DMX Chart 16, 7, 1 channels

| cł | nanr | nel | function | type of control | effect | de | ciı | mal | perc | en | tage | |
|----|------|---------------------------|------------------|-----------------|---|---|-----|-----|------|-----|------|-----|
| 1 | 1 | 1 | master dimmer | proportional | adjust luminous output intensity from 0 to 100% | 0 | - | 255 | 0% | - | 100% | |
| 2 | 2 | - | red | proportional | proportional control of the color percentage from 0 to 100% | 0 | - | 255 | 0% | - | 100% | |
| 3 | 3 | - | green | proportional | proportional control of the color percentage from 0 to 100% | 0 | - | 255 | 0% | - | 100% | |
| 4 | 4 | - | blue | proportional | proportional control of the color percentage from 0 to 100% | 0 | - | 255 | 0% | - | 100% | |
| 5 | 5 | - | white | proportional | proportional control of the color percentage from 0 to 100% | 0 | - | 255 | 0% | - | 100% | |
| 6 | 6 | - | lime | proportional | proportional control of the color percentage from 0 to 100% | 0 | - | 255 | 0% | - | 100% | |
| 7 | 7 | - | amber | proportional | proportional control of the color percentage from 0 to 100% | 0 | - | 255 | 0% | - | 100% | |
| | | | step no effect (| 0 | - | 9 | 0% | - | 4% | | | |
| | | | | proportional | variable speed strobing effect, from slow to fast | 10 | - | 57 | 4% | - | 22% | |
| | | | | step | stop strobe | 58 | - | 59 | 23% | - | 23% | |
| | | | | proportional | sequenced pulsed strobe, slow closing, fast operating (variable speed pulsing, from slow to fast) | 60 | _ | 108 | 24% | - | 42% | |
| | | | | step | stop strobe | 109 | - | 110 | 43% | - | 43% | |
| 8 | - | - S [†] | strobe effect | strobe effect | proportional | sequenced pulsed strobe, fast closing, slow operating (variable speed pulsing, from slow to fast) | 111 | _ | 159 | 44% | _ | 62% |
| | | | | step | stop strobe | 160 | - | 161 | 63% | - | 63% | |
| | | | | proportional | random strobe effect with variable speed from slow to fast and synchronized colors | 162 | - | 207 | 64% | - | 81% | |
| | | | | step | stop strobe | 208 | - | 209 | 82% | - | 82% | |
| | | | | proportional | random strobe effect with variable speed from slow to fast and non-synchonized colors | 210 | - | 255 | 82% | - | 100% | |
| 9 | - | - | dimmer fine | proportional | fine dimmer control 16 bit | 0 | - | 255 | 0% | - | 100% | |

| | | | | | no effect | 0 | - | 84 | 0% | - | 33% | | |
|----|---|---|-------------|--------------|---|-----|-----------------------|----------------------|------|----|-------|-----|-----|
| | | | | step | fan at low-noise speed | 85 | - | 96 | 33% | - | 38% | | |
| | | | | эсор | fan at auto-speed | 97 | - | 108 | 38% | - | 42% | | |
| | | | special | | fan at studio speed | 109 | - | 121 | 43% | - | 47% | | |
| 10 | - | - | functions | proportional | fan speed control from minimum to | 122 | _ | 134 | 47% | _ | 52% | | |
| | | | 14110010110 | proportional | maximum | | | | | | | | |
| | | | | | enables the automatic display blackout | 135 | - | 185 | 53% | - | 73% | | |
| | | | | step | disables the automatic display blackout | 186 | - | 199 | 73% | - | 78% | | |
| | | | | | no effect | 200 | - | 255 | 78% | - | 100% | | |
| | | | | | no effect | 0 | - | 9 | 0% | - | 4% | | |
| | | | | | R24 - Scarlet red | 10 | - | 34 | 4% | - | 13% | | |
| | | | | | R02 - Bastard amber | 35 | - | 59 | 14% | - | 23% | | |
| | | | | | R313 - Light relief yellow | 60 | - | 84 | 24% | - | 33% | | |
| | | | | | R18 - Flame | 85 | - | 109 | 33% | - | 43% | | |
| 11 | - | - | red tone | step | R331 - Shell pink | 110 | - | 134 | 43% | - | 53% | | |
| | | | | | R25 - Orange red | 135 | - | 159 | 53% | - | 62% | | |
| | | | | | R46 - Magenta | 160 | - | 184 | 63% | - | 72% | | |
| | | | | | R08 - Pale gold | 185 | - | 209 | 73% | - | 82% | | |
| | | | | | R27 - Medium red | 210 | - | 234 | 82% | - | 92% | | |
| | | | | | R318 - Mayan sun | 235 | - | 255 | 92% | - | 100% | | |
| | | | | | no effect | 0 | _ | 9 | 0% | _ | 4% | | |
| | | | | | R4460 - Calcolor 60 green | 10 | - | 34 | 4% | - | 13% | | |
| | | | green tone | | | | R2004 - Storaro green | 35 | - | 59 | 14% | - | 23% |
| | | | | | | | | E730 - Liberty green | 60 | - | 84 | 24% | - |
| | | | | | E088 - Lime green | 85 | - | 109 | 33% | - | 43% | | |
| 12 | _ | _ | | step | R90 - Kelly green | 110 | - | 134 | 43% | - | 53% | | |
| | | | | | R395 - Teal green | 135 | - | 159 | 53% | - | 62% | | |
| | | | | | R91 - Primary green | 160 | - | 184 | 63% | - | 72% | | |
| | | | | | R393 - Emerald green | 185 | - | 209 | 73% | - | 82% | | |
| | | | | | R393 - Leaf green | 210 | | 234 | 82% | - | 92% | | |
| | | | | | R86 - Pea green | 235 | | 255 | 92% | - | 100% | | |
| | | | | | no effect | 0 | _ | 9 | 0% | _ | 4% | | |
| | | | | | R2008 - Storaro indigo | 10 | - | 34 | 4% | - | 13% | | |
| | | | | | E5058 - French lilac | 35 | - | 59 | 14% | | 23% | | |
| | | | | | R369 - Tahitian blue | 60 | - | 84 | 24% | | 33% | | |
| | | | | | R347 - Belladonna rose | 85 | - | 109 | 33% | | 43% | | |
| 13 | _ | _ | blue tone | step | R381 - Baldassari blue | 110 | - | 134 | 43% | | 53% | | |
| .5 | _ | _ | DIGC LOTTE | Step | R57 - Lavander | 135 | - | 159 | 53% | | 62% | | |
| | | | | | R55 - Lilac | 160 | | 184 | 63% | Ē | 72% | | |
| | | | | | R4790 - Calcolor 90 magenta | 185 | | 209 | 73% | Ē | 82% | | |
| | | | | | R4790 - Calcolor 90 magenta R92 - Turquise | 210 | | 234 | 82% | E | 92% | | |
| | | | | | R370 - Italian blue | 235 | | 255 | 92% | Ē | 100% | | |
| | | | | | 1370 - Italian blue | 233 | - | 2.00 | 7∠/0 | - | 100/6 | | |

| | | | | oton | no effect | 0 | - | 9 | 0% | - | 4% |
|----|---|---|---------------------|--------------|---|-----|---|-----|-----|---|------|
| | | | | step | 2700 K | 10 | - | 30 | 4% | - | 12% |
| | | | | proportional | proportional value from 2700 K to 3200 K | 31 | - | 52 | 12% | - | 20% |
| | | | | step | 3200 K | 53 | - | 74 | 21% | - | 29% |
| | | | | proportional | proportional value from 3200 k to 4000 K | 75 | - | 96 | 29% | - | 38% |
| 14 | _ | _ | white tone | step | 4000 K | 97 | - | 118 | 38% | - | 46% |
| 14 | - | - | write tone | proportional | proportional value from 4000 K to 5000 K | 119 | - | 140 | 47% | - | 55% |
| | | | | step | 5000 K | 141 | - | 162 | 55% | - | 64% |
| | | | | proportional | proportional value from 5000 K to 5600 K | 163 | - | 184 | 64% | - | 72% |
| | | | | step | 5600 K | 185 | - | 206 | 73% | - | 81% |
| | | | | proportional | proportional value from 5600 K to 6500 K | 207 | - | 228 | 81% | - | 89% |
| | | | | step | 6500 K | 229 | - | 255 | 90% | - | 100% |
| | | | | step | no effect | 0 | - | 9 | 0% | - | 4% |
| | | | | proportional | exalts the green color in the mixing and diminishes the presence of magenta | 10 | - | 123 | 4% | - | 48% |
| 15 | - | - | green saturation | step | no effect | 124 | - | 132 | 49% | - | 52% |
| | | | Saturation | proportional | diminishes the presence of green in the mixing and exalts the magenta color | 133 | - | 246 | 52% | - | 96% |
| | | | | step | no effect | 247 | - | 255 | 97% | - | 100% |
| 16 | - | - | saturation | proportional | the white tone fades to the tone built with RGBWLA channels | 0 | - | 255 | 0% | - | 100% |

NOTE 1: channels involving 10 - 11 - 12 macro colors can also be obtained by mixing channels 2 - 3 - 4 - 5 - 6 - 7.

NOTE 2: to use the one channel mode function select the CCT or the color gel from the display.

NOTE 3: the rest position of the green sauration is 128. Diminishing the DMX value augments the presence of the green color. Increasing the DMX value augments the presence of magenta.

NOTE 4: increasing the value of the Saturation DMX channel the white tone (channel 14) will fade to the color selected by the channel 2, 3, 4, 5, 6 or 7.

8.2 DMX Chart Studio mode

| channel | function | type of control | effect | | imal | percentage | | | |
|---------|------------------|-----------------|---|-----|-------|------------|---|------|--|
| 1 | master dimmer | proportional | adjust luminous output intensity from 0 to 100% | 0 | - 255 | 0% | - | 100% | |
| | | | 3200 K | 0 | - 10 | 0% | - | 4% | |
| | | | 2700 K | 11 | - 16 | 4% | - | 6% | |
| | | | 2800 K | 17 | - 22 | 7% | - | 9% | |
| | | | 2900 K | 23 | - 28 | 9% | - | 11% | |
| | | | 3000 K | 29 | - 34 | 11% | - | 13% | |
| | | | 3100 K | 35 | - 40 | 14% | - | 16% | |
| | | | 3200 K | 41 | - 46 | 16% | - | 18% | |
| | | | 3300 K | 47 | - 52 | 18% | - | 20% | |
| | | | 3400 K | 53 | - 58 | 21% | - | 23% | |
| | | | 3500 K | 59 | - 64 | 23% | - | 25% | |
| | | | 3600 K | 65 | - 70 | 25% | - | 27% | |
| | | | 3700 K | 71 | - 76 | 28% | - | 30% | |
| | | | 3800 K | 77 | - 82 | 30% | - | 32% | |
| | | | 3900 K | 83 | - 88 | 33% | - | 35% | |
| | | | 4000 K | 89 | - 94 | 35% | - | 37% | |
| | | | 4100 K | 95 | - 100 | 37% | - | 39% | |
| | white | step | 4200 K | 101 | - 106 | 40% | - | 42% | |
| | | | 4300 K | 107 | - 112 | 42% | - | 44% | |
| | | | 4400 K | 113 | - 118 | 44% | - | 46% | |
| | | | 4500 K | 119 | 124 | 47% | - | 49% | |
| 2 | | | 4600 K | 125 | - 130 | 49% | - | 51% | |
| | temperature | | 4700 K | 131 | - 136 | 51% | - | 53% | |
| | | | 4800 K | 137 | - 142 | 54% | - | 56% | |
| | | | 4900 K | 143 | - 148 | 56% | - | 58% | |
| | | | 5000 K | 149 | - 154 | 58% | - | 60% | |
| | | | 5100 K | 155 | - 160 | 61% | - | 63% | |
| | | | 5200 K | 161 | 166 | 63% | - | 65% | |
| | | | 5300 K | 167 | - 172 | 65% | - | 67% | |
| | | | 5400 K | 173 | - 178 | 68% | - | 70% | |
| | | | 5500 K | 179 | - 184 | 70% | - | 72% | |
| | | | 5600 K | 185 | - 190 | 73% | - | 75% | |
| | | | 5700 K | | - 196 | 75% | - | 77% | |
| | | | 5800 K | | - 202 | 77% | - | 79% | |
| | | | 5900 K | | -208 | 80% | - | 82% | |
| | | | 6000 K | | - 214 | 82% | - | 84% | |
| | | | 6100 K | | - 220 | 84% | | 86% | |
| | | | 6200 K | | - 226 | 87% | - | 89% | |
| | | | 6300 K | | - 232 | 89% | - | 91% | |
| | | | 6400 K | | - 238 | 91% | - | 93% | |
| | | | 6500 K | | - 244 | 94% | - | 96% | |
| | | | 5600 K | | - 255 | 96% | | 100% | |

| | | step | no effect | 0 | - 9 | 0% | - | 4% | |
|---|---------------------|--------------|---|---|-------|-------|----|------|-----|
| | | p | proportional | exalts the green color in the mixing and diminishes the presence of magenta | 10 | - 123 | 4% | - | 48% |
| 3 | green saturation | step | no effect | 124 | - 132 | 49% | - | 52% | |
| | Saturation | proportional | diminishes the presence of green in the mixing and exalts the magenta color | 133 | - 246 | 52% | - | 96% | |
| | | step | no effect | 247 | - 255 | 97% | - | 100% | |
| 4 | saturation | proportional | the white tone fades to the tone built with the RGBW channels | 0 | - 255 | 0% | - | 100% | |
| 5 | hue | proportional | reproduce the color crossfades around the color space | 0 | - 255 | 0% | - | 100% | |
| 6 | dimmer fine | proportional | fine dimmer control 16 bit | 0 | - 255 | 0% | - | 100% | |
| | | | no effect | 0 | - 84 | 0% | - | 33% | |
| | | ston | fan at low-noise speed | 85 | - 96 | 33% | - | 38% | |
| | | step | fan at auto-speed | 97 | - 108 | 38% | - | 42% | |
| 7 | special | | fan at studio speed | 109 | - 121 | 43% | - | 47% | |
| | functions | | fan speed control from minimum to maximum | 122 | - 134 | 47% | - | 52% | |
| | | step | enables the automatic display blackout | 135 | - 185 | 53% | - | 73% | |
| | | sieh | disables the automatic display blackout | 186 | - 199 | 73% | - | 78% | |
| | | | no effect | 200 | - 255 | 78% | - | 100% | |

NOTE 1: the rest position of green saturation is 128. Diminishing the DMX value augments the presence of the green color. Increasing the DMX value augments the presence of magenta.

NOTE 2: Increasing the value of the Saturation DMX channel (channel 4) the white light will fade to the color selected with the HUE channel (channel 5)

9. Display panel functions

9.1 Quick guide to menu

To access the functions menus just press the MENU button. Then press + or – buttons to scroll the pages and press the ENTER button to access to any other function.

By suitably using all the functions of **LEDko FullSpectrum 6 HD**, 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 here before carrying out any possible selection.

9.2 Rapid count

Through the display panel of **LEDko FullSpectrum 6 HD** it is possible to quickly 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 number to jump to the lowest value.

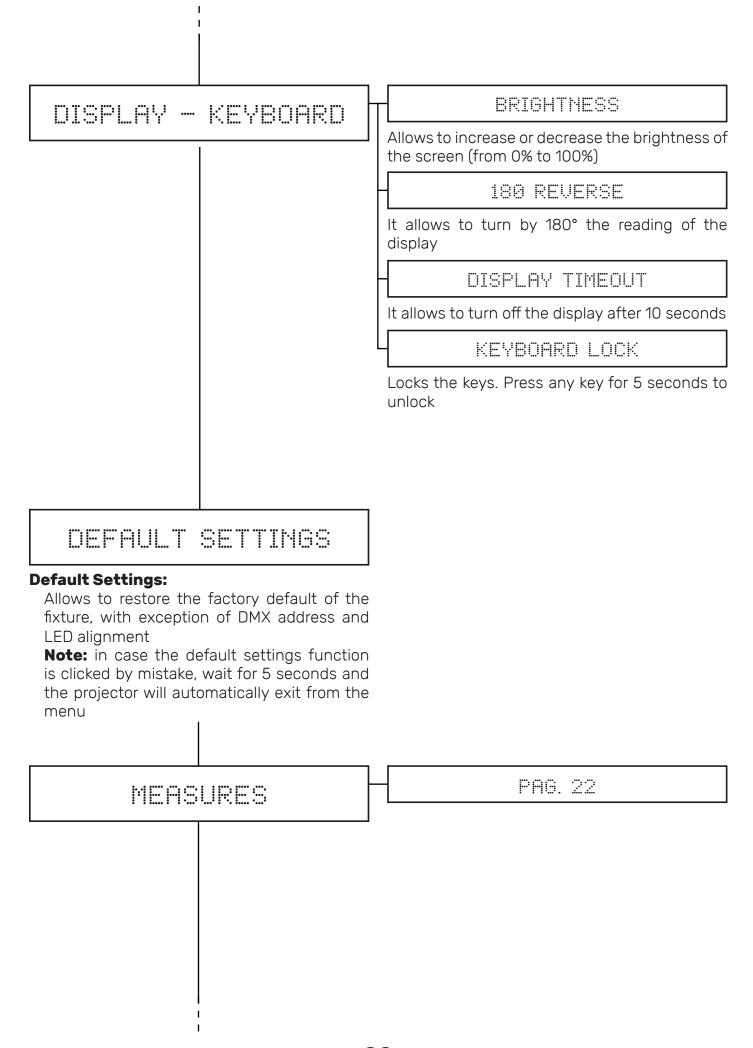
9.3 Main functions menu

By pressing the Enter key "V" you can enter the LEDko FullSpectrum 6 HD's main menu.

EXP DIMMING CURVE **Dimming curve:** It allows the selection of different dimmer curves: linear, exponential (default) and loga-LIMEAR rithmic Halogen: Simulates a halogen curve by inserting a softening of the dimmer dynamics and red shift. It works only for CCT 3000 K and 3200 K DMX PERSONALITY It is possible to choose between 16, 7, 1 channels and Studio in which the projector will work **DMX settings:** Manually sets the strobe DMX channel WIRELESS DMX SIGNAL LOSS It is possible to choose between "maintain" (this function allows to keep the settings even in case of loss of signal) and "blackout" (in case of loss of signal, the projector will go into blackout) AUTOMATIC Fan with automatic operating speed to guarantee maximum light output in all conditions of Fan mode: use, ideal for live events, exhibitions and archi-Manually sets the fan mode tectural installations. Ξ T I II I I I I Fan at automatic operation speed with limited speed to guarantee silent operation of the product (moderately limited light output, will decrease in case of overheat) ideal for broadcast or theatre applications. LOW MOISE This setting will keep the speed of the fan at the

minimum level (moderately limited light output, will decrease in case of overheat) ideal for envi-

ronments that require maximum silence.



9.4 Measures

Temperature:

Shows the current temperature values of the fixture.

| | | BOARD |
|------|--------------|--------------------|
| МОМ: | o []: | l o [∷ I |
| MIN: | o []: | ' o ∷ I |
| MAX: | o []: | l o ∷ I |
| | HIST | ORY |
| МОЫ: | o []: | ' ∘ ∷ I |
| MIN: | o []: | ' ∘ ∷ I |
| MAX: | o | ·• |

LED: shows the LED module temperature; **Board:** shows the electronic board temperature.

History: shows the history temperature of the LED and electronic board temperature

PSU Voltage:

Shows the power supply voltage

Fan level:

Shows the percentage fan usage

LEVEL: -% VOLTAGE: -V

ROTATION: -RPM

DMX REFRESH RATE

DMX Refresh Rate:

Shows the refresh rate of the DMX signal sent by the console

DMX Input:

Shows the value of the DMX channels received by the fixture on every channel that the fixture occupies on the line

LED status:

Shows the percentage value of the LED status

FIXTURE LIFETIME

Fixture lifetime:

Shows the hour counter of the fixture

Alarm:

This menu eventually shows the alarm statuses if there is any (see page 28)

FIRMUARE VERSION

Firmware version:

Shows the firmware version currently installed in the fixture

| PROTEC | TION: | | |
|--------|--------------|--------|--|
| RED: | ;; | GREEM: | |
| BLUE: | : :: : :: | WHITE: | |
| LIME: | | AMBER: | |

Note: under the heading protection will always be displayed the value 100% unless the headlight is overheated and then goes to the point of protection

UMIT LIFE: LED LIFE: MODULE LIFE: -

Unit life: shows the overall hours of life of the fixture:

LED life: shows the overall LED module life; **Module life:** shows the overall LED module life currently installed.

Note: this items can be reset in case of LED module replacement;

9.5 Color presets

By pressing the **color preset** button "O", on the rear panel, you can enter the LEDko FullSpectrum 6 HD's main menu.

INTENSITY

Intensity:

allows adjust luminous output intensity

MHITE TOME SELS

1° 11 1 1 10 1 1000 1 1000° 1 1 1000 1000 1000 1000 1000

White tone gels:

This channel offers a preset library of various white CCT with a range that goes from 2700 K and up to 6500 K, manually selectable without the need of a DMX console

2700 K

3000 K

3200 K

3500 K

4000 K

HEBB K

5000 K

5500 K

5600 K

6000 K

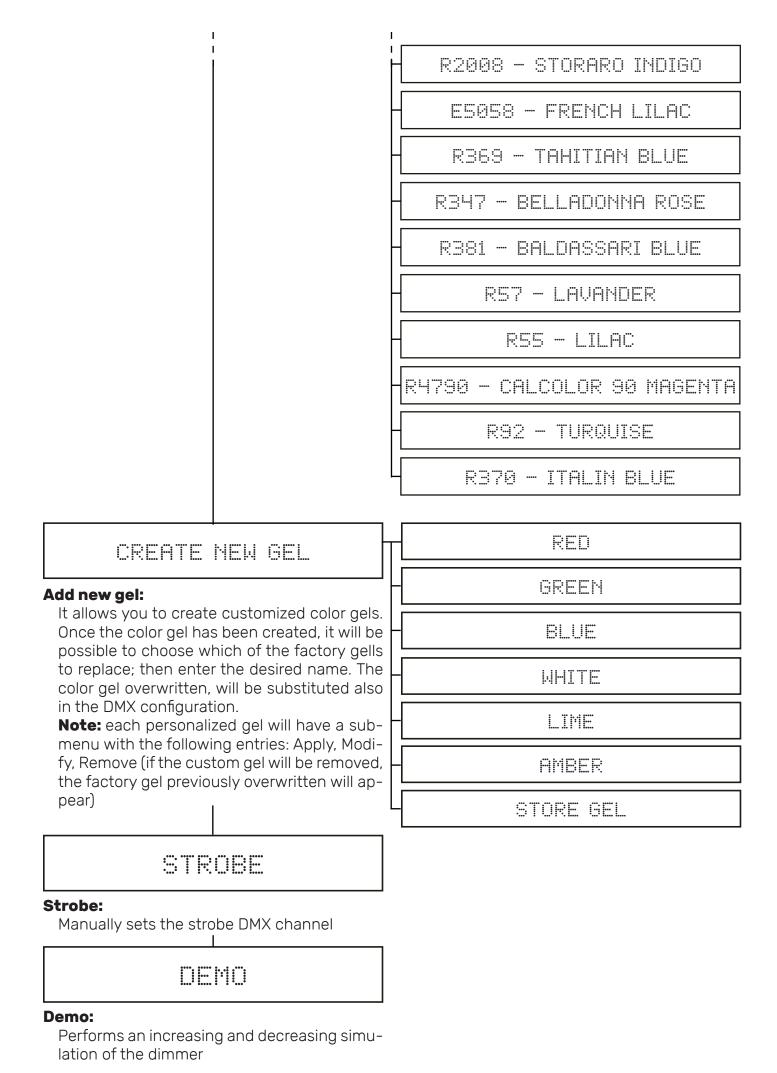
6500 K

GREEN SATURATION

Green saturation:

Once the color temperature is selected, the green saturation function will automatically be activated, which allows to increase or decrease the presence of green and magenta

| COLOR GELS | R24 - SCARLET RED |
|--|----------------------------|
| Factory gels: | RØ2 - BASTARD AMBER |
| This channel offers a preset library of various color gels | R313 - LIGHT RELIEF YELLOW |
| | R18 - FLAME |
| | R331 - SHELL PINK |
| | R25 - ORANGE RED |
| | RH6 - MAGENTA |
| | RØS - PALE GOLD |
| | R27 - MEDIUM RED |
| | R318 - MAYAN SUN |
| | R4460 - CALCOLOR 60 GREEN |
| | R2004 - STORARO GREEN |
| | E730 - LIBERTY GREEN |
| | E088 - LIME GREEN |
| | RS0 - KELLY GREEN |
| | RESE - TEAL GREEN |
| | RS1 - PRIMARY GREEN |
| | R333 - EMERALD GREEN |
| | RESE - LEAF GREEN |
| | R86 - PEA GREEN |



9.6 Special functions of the fixture Storing the DMX signal

To use the fixture without an active DMX console it is possible to store the DMX settings in two ways:

- Through the menu;
- Disconnecting the DMX signal when the fixture is on. When the signal is unconnected the
 fixtures stores the signal;

Automatic fan standby

To decrease the noise and the power consumption the cooling fan turns off after 10 minutes of fixture inactivity.

9.7 Error messages

If a malfunction occurs, **LEDko FullSpectrum 6 HD** has a self-diagnostic system that will show the error message on the display. The following table will explain in detail the most common errors. If, despite of suggested intervention, the problem persists, call the **Coemar** Service Center.

| Error code | Description |
|------------------------|--|
| DATA ERROR | Data error Initial data loading has failed the projector loaded the default data settings: restart the fixture again, and if the error persists contact the Coemar assistance center. |
| ADDRESS ERROR | Address error The projector does not receive all channels of DMX needs to function properly. Check the DMX address indicated on the display and the number of channels generated by the mixer control. We recall in this connection that some controllers do not generate all the 512 channels. |
| SENSOR NOT DETECTED | Sensor not detected LED temperature sensor missing or damaged. |
| SEMSOR SHORTED | Sensor shorted Error of the LED's sensor circuit. |
| FAN NOT ROTATING | Fan not rotating Auto diagnostic routine found that the Fan may be damaged, contact Coemar assistance for the module replacement. IMPORTANT: To ensure the sensor is giving correct readings or that the fan rotates correctly, set the fan to the maximum level. |

10. Accessories and spare parts

is a very versatile fixture, optional accessories for its customization are available under request:

| Accessory name | Code |
|--|-------------|
| Front barrel for lens tube with burnished blades | BC10011A200 |
| Profile 5°, lens tube | BC10011A041 |
| Profile 10°, lens tube | BC10011A042 |
| Profile 14°, lens tube | BC10011A023 |
| Profile 19°, lens tube | BC10011A012 |
| Profile 26°, lens tube | BC10011A013 |
| Profile 36°, lens tube | BC10011A015 |
| Profile 50°, lens tube | BC10011A016 |
| Profile 70°, lens tube | BC10011A024 |
| Profile 90°, lens tube | BC10011A025 |
| Profile Zoom 15°- 35° | BC10011A017 |
| Profile Zoom 25°- 50° | BC10011A019 |
| Profile Zoom 28°- 40° | BC10011A003 |
| Soft Profile Fresnel Zoom 14°- 40° | BC10011A002 |
| Soft Profile PC Zoom 11°- 38° | BC10011A001 |
| 4 leaf barndoor | AC04202 |
| Gobo frame holder | BC10011A006 |
| Iris | BC10011A010 |
| Donut (190.5 mm) | BC10011A028 |
| Half Top Hat (190.5 mm) | BC10011A027 |
| Top Hat (190.5 mm) | BC10011A029 |
| Color Frame Holder (190 mm) | BC10011A040 |
| Donut (185 mm) | BC10011A036 |
| Half Top Hat (185 mm) | BC10011A035 |
| Top Hat (185 mm) | BC10011A037 |
| Color Frame Holder (185 mm) | AC04204 |

| Donut (159 mm) | BC10011A032 |
|---|-------------|
| Half Top Hat (159 mm) | BC10011A031 |
| Top Hat (159 mm) | BC10011A033 |
| Colour Frame Holder (159 mm) | BC10011A021 |
| (Gobo Slot) Glass template holder (93.6 mm) | BC10011A030 |
| Hook clamp, 48-51 mm, max. load 20 Kg. | BC10011A047 |
| Light clamp silver, 48-51 mm, max. load 75 Kg. | BC10011A045 |
| Light clamp black, 48-51 mm, max. load 75 Kg. | BC10011A046 |
| Clamp silver, flat 13-30 mm/ø 15-50 mm, max. load 20 Kg. | BC10011A043 |
| Clamp black, flat 13-30 mm/ø 15-50 mm, max. load 20 Kg. | BC10011A044 |

All the components of **LEDko FullSpectrum 6 HD** are available as spare parts from your Coemar dealer or Service. Accurate description of the fixture, model number and type will assist us in providing for your requirements in an efficient and effective manner.

11. Maintenance

11.1 Firmware update

The firmware of **LEDko FullSpectrum 6 HD** can be updates through the RDM protocol (ANSI E1.20). Contact Coemar assistance to receive the software and the device updater.

11.2 Periodic cleaning

Lenses

Even a thin layer of dust can reduce the luminous output and alter the consistency of the beam. Regularly clean all filters and lenses using a soft cotton cloth, dampened with a special lens cleaning solution.

Cleaning of the unit

Use a soft brush or a common vacuum cleaner or a source of compressed air for removing dust. For the cleaning of the housing use a soft cloth and a non-aggressive cleaner. Check that the internal fans and heat exchanger must be perfectly clean.

11.3 Periodic controls Mechanical components

Check the correct working of the mechanical parts and, if needed, replace them. Make sure the projector is not mechanically damaged. If necessary, replace the worn parts.

Electrical components

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

11.4 Fuses

LEDko FullSpectrum 6 HD has an automatic fuse that in most cases does not need to be replaced.

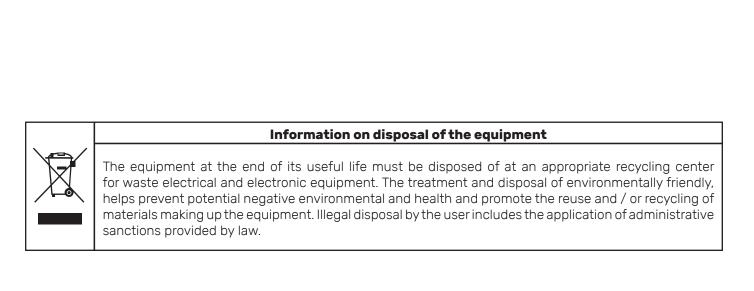
12. F.A.Q. and answers

The following list shows common issues that may be simply solved. If issues persist, the unit must be repaired by a qualified personnel or just contact your **Coemar** service near you.

| Question | Possible solution |
|---|--|
| LEDko FullSpectrum 6 HD does not emit light | Projector not powered on: Make sure the power cord is plugged in or test the input voltage; Wrong DMX address: Check the DMX Address setting and the output signal of the controller; |
| LEDko FullSpectrum 6 HD is not responding to DMX signal | DMX signal may not reach LEDko FullSpectrum 6 HD: Inspect the cable connection, correct poor connections or inefficient repair or replace damaged cables; Check DMX address of the unit; |

User notes

| | | | • • • | • • | | | • • | | • • | • • | • • | | | | | • • • | | | | | | | | | | | • • | | | | •• | | • • | | • • • | • • • | • • • | | | | | | | • • • | • |
|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|---|-----|-----|-----|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|-------|-------|--------------|-----|-----|-----|-----|-------|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | _ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | • |
| • • • | • • • | • • • | • • • | • • | • • | • • | • • | •• | • • | • • | •• | • • | • • | • • | • • | • • | • • | • • | • • | • • | • | • • | • • | • • | • | • | • • | • • | • • | • • | •• | • • | • • | • • | • • • | • • • | • • | • • • | • • | • • | • • | | • • | • • • | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | • • • | | • • • | •• | • • | • • | •• | •• | • • | •• | •• | | •• | • • | • • | • • | • • | • • | • • | • • | | • • | | | | • | • • | | •• | | •• | | | • • | • • • | • • • | • • | | | | | | • • | • • • | • |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • • • | • • • | | • • • | •• | • • | •• | •• | •• | • • | •• | •• | • • | •• | •• | • • | • • | • • | • • | •• | • • | • | • • | • • | • • | • | • | • • | • • | •• | •• | •• | • • | • • | •• | • • • | • • • | • • | • • • | • | • • | • • | | •• | • • • | • |
| | | • • • | | | | | | | | | | | | | | • • | | | | | | | | | | | | | •• | | | | | | • • • | • • • | • • | | | | | | | • • • | • |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • | • | • | • | • | • | ••• | •• | •• | • | • | •• | • | ••• | • | • | • | | •• | ••• | • | • | • • | • | • | • | | •• | • | ••• | • | ••• | • | • | • | ••• | • | | • | • | | •• | • | •• | ••• | • |
| • • • | • • • | • • • | • • • | • • | • • | • • | •• | • • | •• | • • | •• | • • | •• | •• | • • | • • | • • | • • | • • | • • | • | • • | | • • | • | • • | • • | • • | •• | • • | •• | • • | • • | • • | • • • | • • • | • • | • • • | • • | • • | • • | | • • | • • • | • |
| | | | • • • | | | | | | | | | | | | • • | • • • | | | | | | • • | | | | | • • | | | | | | | | | • • • | • • | | | | | | | | • |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • • • | • • • | • • • | • • • | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | • • | • • • | • | • • | •• | • | • | • • | • • | • | • | | • • | • • | •• | • • | •• | • • | • • | • • | • • • | • • • | • • • | • • • | • • | • • | •• | | •• | • • • | • |
| • • • | • • • | | • • • | • • | • • | • • | • • | • • | • • | • • | •• | | • • | • • | • • | • • • | • • | • • | • • | • • | • | • • | | | • | | • • | • • | • • | • • | • • | • • | • • | • • | • • • | • • • | • • | | | | | | • • | • • • | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | . . . | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ••• | • • • | • • • | • • • | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | • • | • • • | • • | • • | •• | • • | • | • • | • • | • • | • | • | • • | • • | • • | •• | •• | • • | • • | • • | • • • | • • • | • • | • • • | • • | • • | •• | | •• | • • • | • |
| • • • | • • • | • • • | • • • | • • | • • | • • | • • | •• | •• | • • | •• | | •• | •• | • • | • • | • • | •• | •• | • • | • | • • | • • | • • | • | • • | • • | • • | •• | • • | •• | • • | • • | •• | • • • | • • | • • | | | • • | • • | | • • | • • • | • |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | . . . | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • • • | • • • | • • • | • • • | •• | •• | •• | •• | • • | • • | •• | •• | • • | • • | • • | • • | • • | • | • • | • • | • • | • | • • | • • | • • | • | • | • • | • • | • • | • • | •• | • • | • • | • • | • • • | • • • | • • | • • • | • • | • • | • • | | •• | • • • | • |
| | | | | | | | • • | | | | | | | | | • • • | | | | | | | | | | | | | | | | | | | • • • | | | | | | | | | • • • | • |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ••• | • | • | • | • | •• | •• | •• | •• | • | •• | •• | • | ••• | ••• | • | • | | •• | ••• | • | • | •• | • • | • | • | | •• | • | •• | • | •• | • | • | • | ••• | • | | • | • | • | •• | | •• | ••• | • |
| • • • | ••• | • • | • • • | •• | • • | •• | •• | •• | • • | •• | •• | • • | •• | •• | • • | • • | • • | • • | • • | • • | • | • • | • • | • • | • | • • | • • | • • | •• | • • | •• | • • | •• | • • | • • • | • • | • • | • • • | • • | • • | • • | • • | •• | • • • | |
| | | | | •• | | | | | | | | | | | | • • • | | | | | | | | | | | | | | | | | | | • • • | • • • | • • • | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • • • | • • • | • • • | • • • | • • | • • | • • | • • | • • | • • | • • | • • | • • | • • | • • | • • | • • • | • • | • • | • • | • • | • | • • | • • | • • | • | • | • • | • • | • • | • • | • • | • • | • • | • • | • • • | • • • | • • | • • • | • • | • • | • • | | • • | • • • | • |





Coemar Lighting s.r.l.Via Carpenedolo 90 46043 Castiglione delle Stiviere, Mantova, Italy phone. +39 0376/1514412 - fax +39 0376/1514380 info@coemar.com

Coemar reserves the right to effect modifications without notification