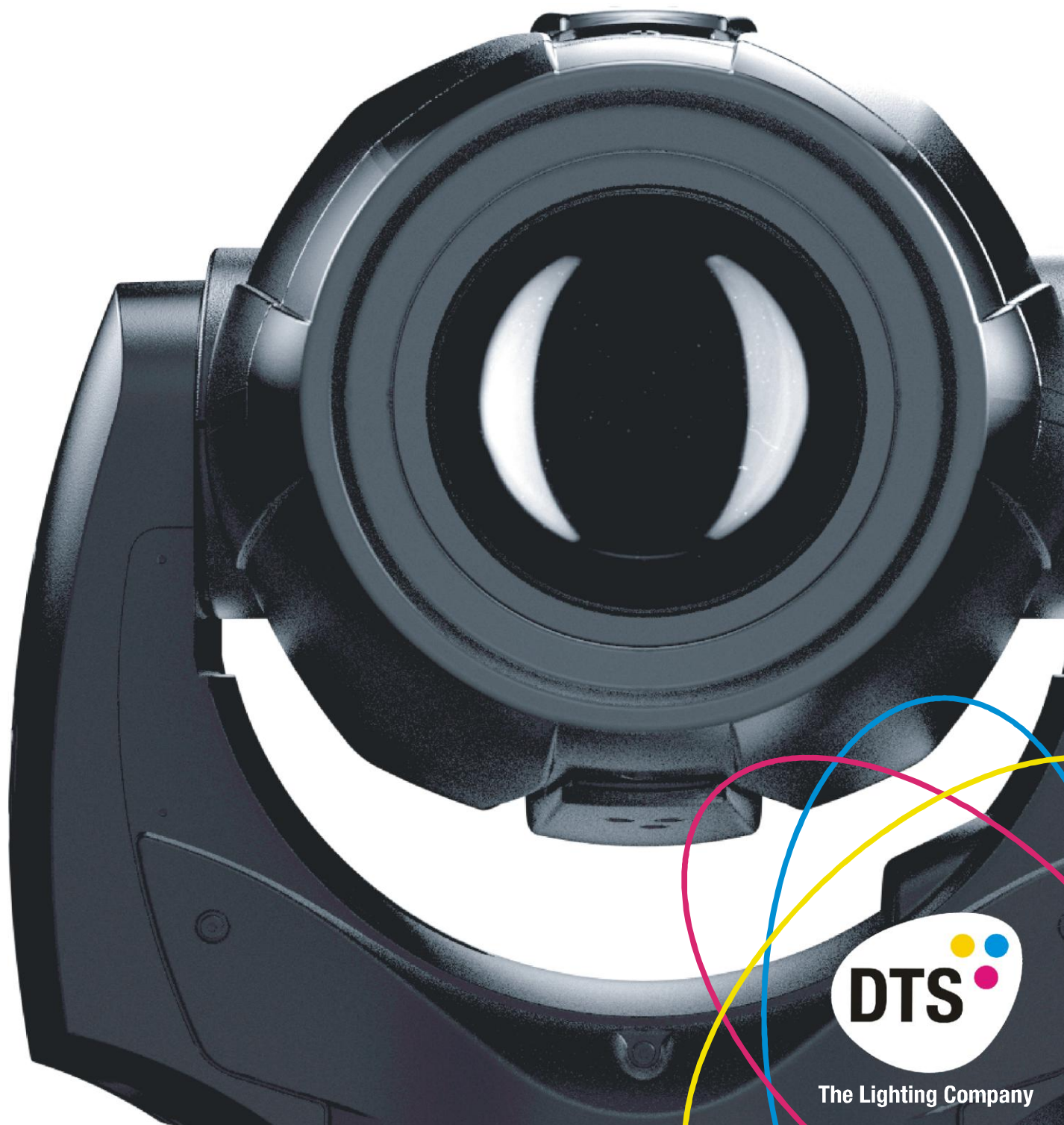




User's Manual rel 1.1 GB



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Made in Italy

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1- SYMBOLS

Graphic symbols used on this manual:



THIS SYMBOL INDICATES A HOT SURFACE



THIS SYMBOL INDICATES ELECTRIC SHOCK RISK



THIS SYMBOL INDICATES GENERAL RISK



THIS SYMBOL MEANS “YOU CAN PLACE THE UNIT ON NORMALLY FLAMMABLE SURFACES”



THIS SYMBOL MEANS “RADIATION FROM LAMP CAN CAUSE DAMAGE TO EYES AND SKIN”



THIS SYMBOL INDICATES THE MINIMUM DISTANCE FROM THE OBJECTS AND THE PEOPLE LIT BY THE LIGHT BEAM



THIS SYMBOL INDICATES THE EUROPEAN COMMUNITY DIRECTIVE 2002/96/EC ON WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)



THIS SYMBOL MEANS “DISPOSE THE INTERNAL BATTERY AT THE END OF ITS LIFE ACCORDING TO THE REGULATION IN FORCE”

2- GENERAL WARNING

Read the instruction contained in this user manual carefully, as they give important information regarding safety during installation, use and maintenance.

The unit is not for residential use and must be installed by a qualified electrician or experienced person.

Always disconnect the device from the mains before replacing the lamp.

The lamp must be replaced if it has been damaged or deformed by prolonged use or overheating.

The device must always be equipped with an efficient ground connection.

MINIMUM DISTANCE FROM THE OBJECTS AND THE PEOPLE

The projector needs to be positioned so that the objects and the people hit by the beam of light are at least 15 meters (49,21 ft) from the unit frontal lens.



3- GENERAL WARRANTY CONDITIONS

The unit is guaranteed for 36 months from the date of purchase against manufacturing material defects.

4- TECHNICAL FEATURES

Overview

Introducing EVO, a truly new concept in entertainment lighting.

Just check out the product's features to realize D.T.S. has once again broken new ground. Forget any compromises found in other moving heads: EVO features a true Beam and a true Spot in a single unit. So you get the best of both.

In "Beam" mode, EVO delivers a stunning 61.200 Lux at 25 meters, and more than 15.300 at 50 meters, as it's capable of projecting a super concentrated beam of light over very long distances. A wide variety of gobos for unique mid-air effects is available. In "Spot" mode, EVO offers striking brightness (over 45.000 Lux at 25 meters) and an extra-wide linear zoom (3,5° - 39°).

Thanks to its improved optics, EVO delivers razor-sharp gobo projections over the whole zoom range. EVO features also include:

Cutting edge Color Synthesis featuring Linear CMT, Linear CTO, a 21-color palette going from soft nuances to rich saturated colors, and analogue two-tone generation. The exclusive circular 8-facet or linear Dyna-Prism system (D.T.S. patent pending), capable of enhancing any gobo with spectacular animations and dynamic kaleidoscopic effects never seen before.

Super-fast effects: color change, gobo scrolling, dynamic prism animation, zoom movement, etc. are done at lighting speed, thanks to the built-in stepper motors.

EVO is fitted with the 'FPR' system. The 'FPR' system (D.T.S. patent) allows limitless pan rotation, in both directions, never having to invert movement, offering lighting designers unmatched creative control.

EVO addresses all top-level applications: from concerts to special events and television studios to theatres. The ultra-luminous multi-function EVO is perfect for rental companies, who need compact feature-packed units that are easy to handle, install and store.

EVO FPR

D.T.S. Product Code: 03.MS016.LFP

• Electronic ballast 90-260Vac 50-60 Hz • FPR (Free Pan Rotation) • Black finish

Lamp

Osram SIRIUS HRI 440W (24.000 Lumens)

Colour temperature: 7.500K typ.

Type of connection: Male FASTON pins 2.8 x 0.8 mm or screw terminals

Remote lamp On-Off

Average lamp life: 1.500 hrs

Optical group

Improved optical group:

1.530.000 Lux at 5 m (Beam mode)

1.125.000 Lux at 5 m (Spot mode)

16-bit motorized wide-excursion linear zoom

Beam opening:

2° - 36° (Beam projection)

3.5° - 39° (Spot projection)

16-bit motorized linear focus

Linear dimmer / shutter / strobe (0,85 flash/sec to 10 flash/sec)

Effect glass filters

Frost filter

4- TECHNICAL FEATURES

Colour generation

Linear CMY
Linear CTO
21-colour wheel
Two-tone generation

Dynamic effects

Overlapping wheels for multiple effects:
Customizable rotating gobo wheel (8 gobos + Studio Open + Open)
Fixed gobo wheel (17 gobos + Animation sector + Open)
Circular 8-facet and linear rotating prisms
Dyna-Prism (D.T.S. Patent Pending)

Interface / Control / Programming

Li-Fe backup battery for controlling the main parameters even when EVO is not powered
LCD graphic display + 4 soft-keys (control / management / monitoring of the main parameters)
RDM
Art-Net ready
Wireless ready
Updatable internal operating system

DMX

32 DMX channels

Pan & Tilt

'FPR' system (D.T.S. patent)
Pan: limitless rotation, in both directions;
360° rotation in 1.56 sec.; Tilt 270°: 1,5 sec.
Tri-phase stepper motor technology for ultra-fast silent movements
16-bit resolution
Selectable speed ranges
Pan / Tilt lock

Power supply

Electronic ballast: 90-260Vac 50-60 Hz
Power consumption: 600W with PFC
Power saving mode (the lamp dims to 80% after shutter closure)

Connection

DMX: XLR panel connectors (3 poles In/Out; 5 poles In/Out)
Power supply: POWERCON panel connectors (In/Out)

Operating ambient temperature

-10° / 40°

Internal safety devices

Overvoltage circuit protection and overtemperature circuit protection

International certifications

Safety: EN 60598-1: 1993
 EN 60598-2-17: 1989
 A1-A3: 1993

EMC: EN 55015

Dimensions

Unit Dimensions (LxWxH)

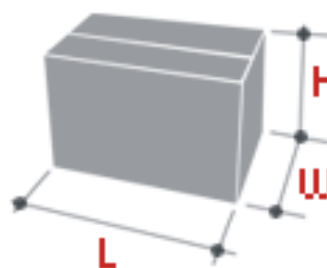
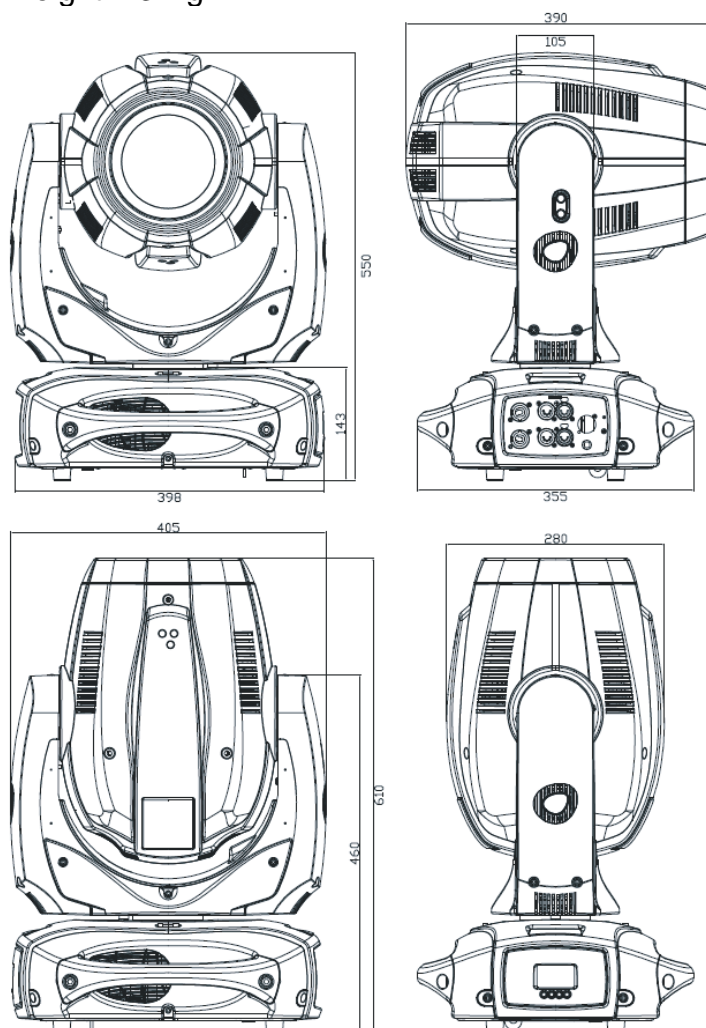
400 x 400 x 610 mm

Weight: 23 Kg

Packaging Dimensions (LxWxH)

665x510x525mm

Weight: 27 Kg

**5- ACCESSORIES****As standard**

- * 1 x SIRIUS HRI 440W lamp (already installed in the projector) (Code 0505S039)
- * 1 x POWERCON male cable connector (Code 0520P014)
- * 1 x XLR 5 Pins male cable connector (Code 0508B066)
- * 1 x XLR 5 Pins female cable connector (Code 0508B065)
- * 2 x Omega clamp with "Fast Lock" connection 1/4 turn (Code 02K00549)
- * 1 x User's manual

Optional (on request)

- "C" Clamp G100 black / professional (max. load 200Kg) (Code 0521A015)
- Aliscaf Clamp (max. capacity load 100Kg) (Code 0521A008)
- Safety wire (3mm x 60 cm), ring spring catch, max. capacity load 60Kg (Code 0521A010)

6- IMPORTANT SAFETY INFORMATION

6.1 Fire prevention:

- EVO uses a SIRIUS HRI 440W lamp.

The use of any other alternative lamp is not recommended and will null and void the fixture's warranty.



-It is permissible to place the unit on normally flammable surfaces
Suitable for mounting on normally flammable materials surfaces greater than 200°C with some combustion time lag.

-Minimum distance from the objects and the people lit by the light beam: 15 m. ^{440W Lamp} 15 m

-Replace any blown or damaged fuses only with those of identical value (8AT).

Refer to the wiring diagrams if there is any doubt.

-Connect the projector to mains power via a thermal magnetic circuit breaker.

6.2 Prevention of electric shock:



-High voltage is present inside the unit.

Unplug the unit prior to performing any function which involves touching the inside of the moving head, including lamp replacement.

-The level of technology inherent in the EVO requires the assistance of specialised personnel for all servicing. Please refer to an authorised D.T.S. service centre.

-A good earth connection is essential for proper functioning of the projector.

-Never connect the unit without proper earth connection.

-The fixture should be located in places with a good air ventilation.

6.3 Protection against ultraviolet radiation:



-Never turn on the lamp if any of the lenses, filters or plastic covering are damaged. Their respective shielding functions will only operate efficiently if they are in perfect working order.

-Never look directly the lamp when it is on.

6.4 Safety:



-The projector should always be installed with bolts, clamps and other tools that are capable of supporting the weight of the unit.

-Always use a second safety cable to sustain the weight of the unit in case of the failure of the main fixing point.

-The external surface of the unit, at various points, may exceed 70°C. Never handle the unit until at least 20 minutes have elapsed since the lamp was turned off.

-Always replace the lamp if any physical damage is evident.

-Never install the fixture in an enclosed area lacking sufficient air flow.

The ambient temperature should not exceed 40°C.

-A hot lamp may explode, so always wait for at least 20 minutes prior to attempting to replace the lamp.

-Always wear suitable hand protection when handling the lamp.



6.5 Level of protection against the penetration of solid and liquid objects:



-The projector is classified as an ordinary appliance and its protection level against the penetration of solid and liquid objects is IP20.

For outdoor use, D.T.S. recommend the use of the dedicated raincovers.

6.6 Waste Electrical and Electronic Equipment (WEEE) directive:

-The machine, accessories and packaging should be sorted for environmental-friendly recycling.

For EC countries: according to the European Directive 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national right, luminaires that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

6.7 Long-life auto-charging buffer battery:

-The projector contains a rechargeable lead-acid or lithium iron tetraphosphate battery. To preserve the environment, please dispose the battery at the end of its life according to the regulation in force.

7- MOUNTING / REPLACING THE LAMP



WARNING

Turn off the lamp, switch off the unit and unplug the Mains power cable before opening the unit head covers.



Let the projector cool for at least 20 minutes before replacing the lamp.



Wear protective gloves prior to performing the replacement.



REPLACEMENT LAMP (D.T.S. Code 0505S039) :

Osram SIRIUS HRI

Power 440W

Luminous flux 24.000 lm

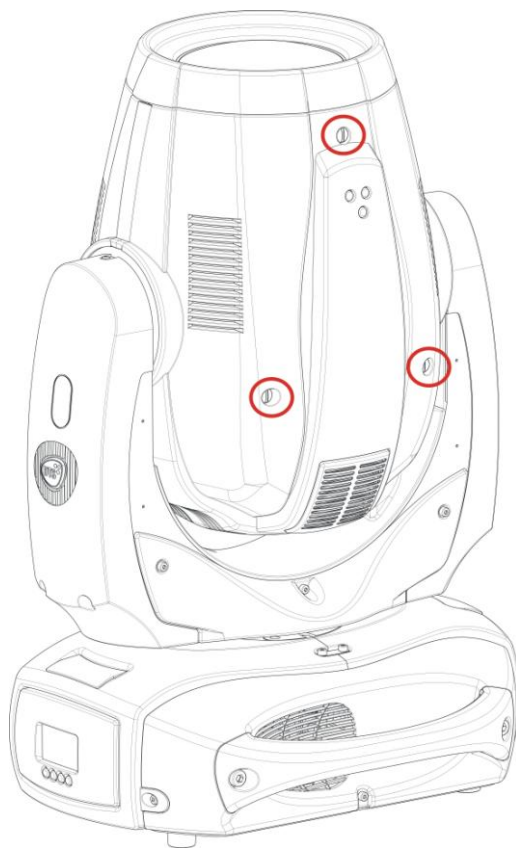
Colour temperature 7.500K typ.

Rated life 1.500 hours

Type of connection: Male FASTON pins 2.8 x 0.8 mm or screw terminals

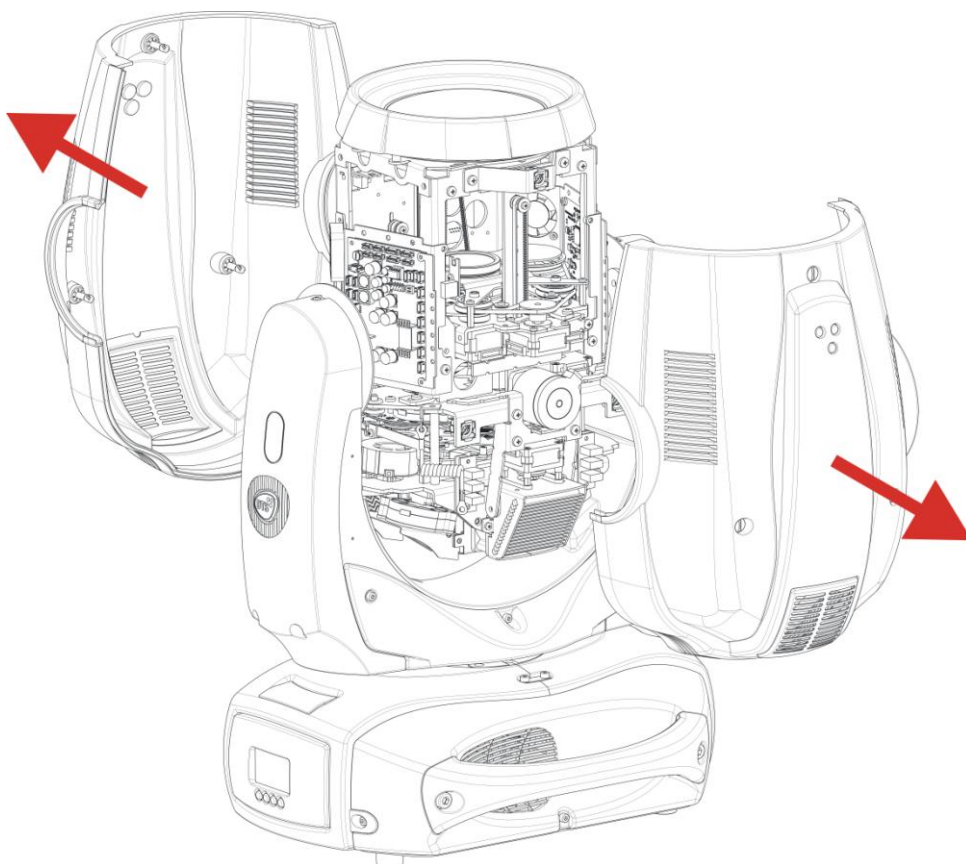
The use of any other alternative lamp is not recommended and will null and void the fixture's warranty.

1) Loose the 3 “¼ turn” screws which fix the head covers on both sides (picture 1) .



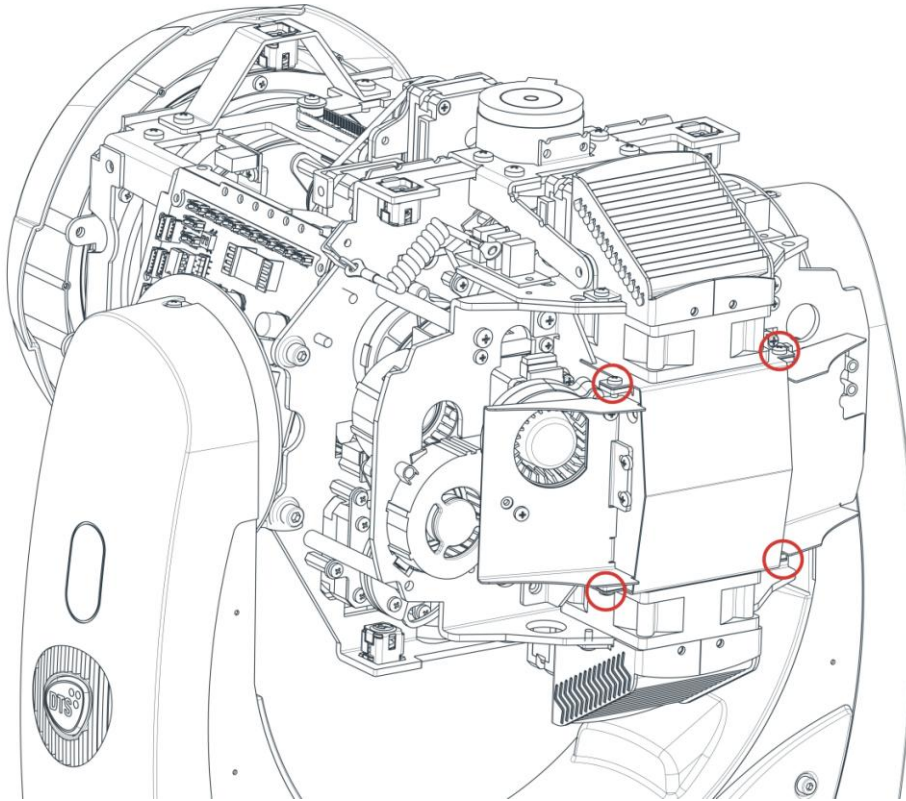
PICTURE 1

2) Pull out the covers to access the internal head components (picture 2).



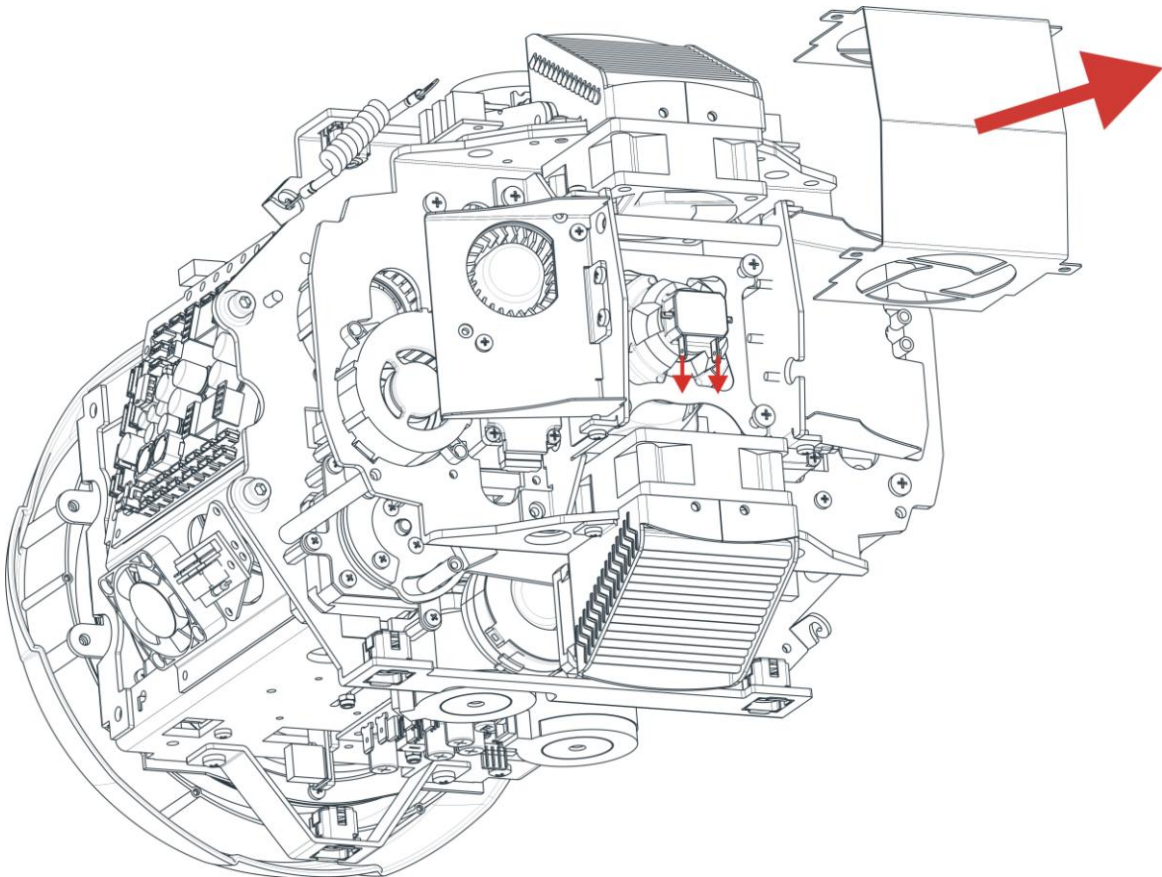
PICTURE 2

3) Using a phillips screwdriver, loose the marked 4 screws which fix the lamp rear metal plate (picture 3);



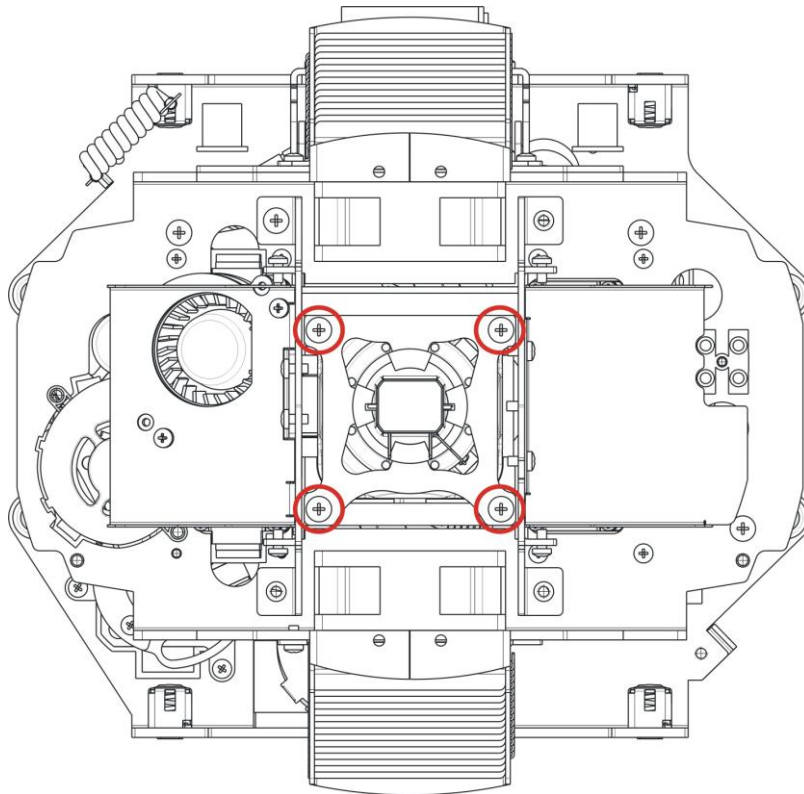
PICTURE 3

4) Remove the lamp rear metal plate (picture 4) and unplug the two fast-on cable connectors from the lamp terminals.



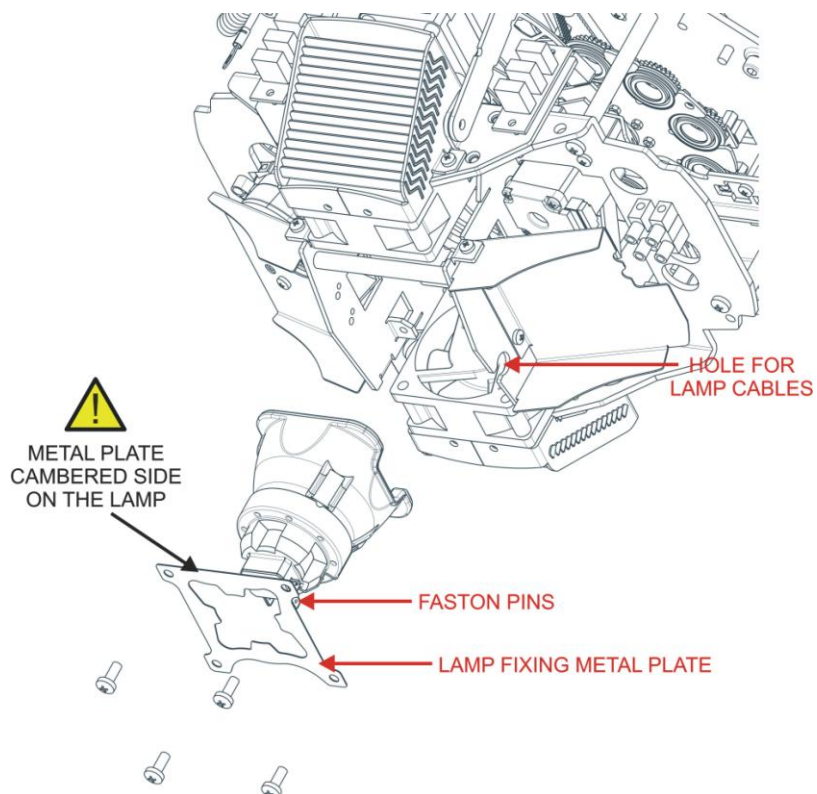
PICTURE 4

5) Loose the marked 4 screws on the metal plate that fix the lamp (picture 5) and remove it.



PICTURE 5

6) Put in place the new lamp with FASTON pins up or down depending on the hole for lamp cables position (picture 6) and fix it with the "lamp fixing metal plate" as showed in the picture.



PICTURE 6

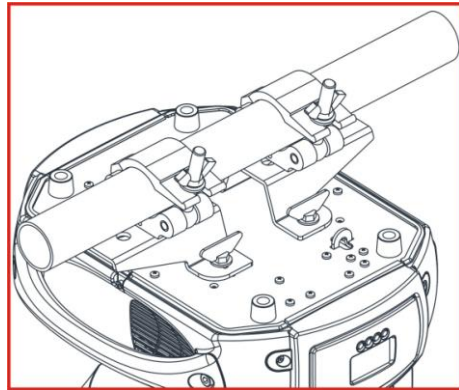
7) Lamp rear metal plate can now be re-installed, following backward all the above listed steps.

8- VOLTAGE AND FREQUENCY

EVO with electronic ballast can operate at 90-260Vac 50-60 Hz.

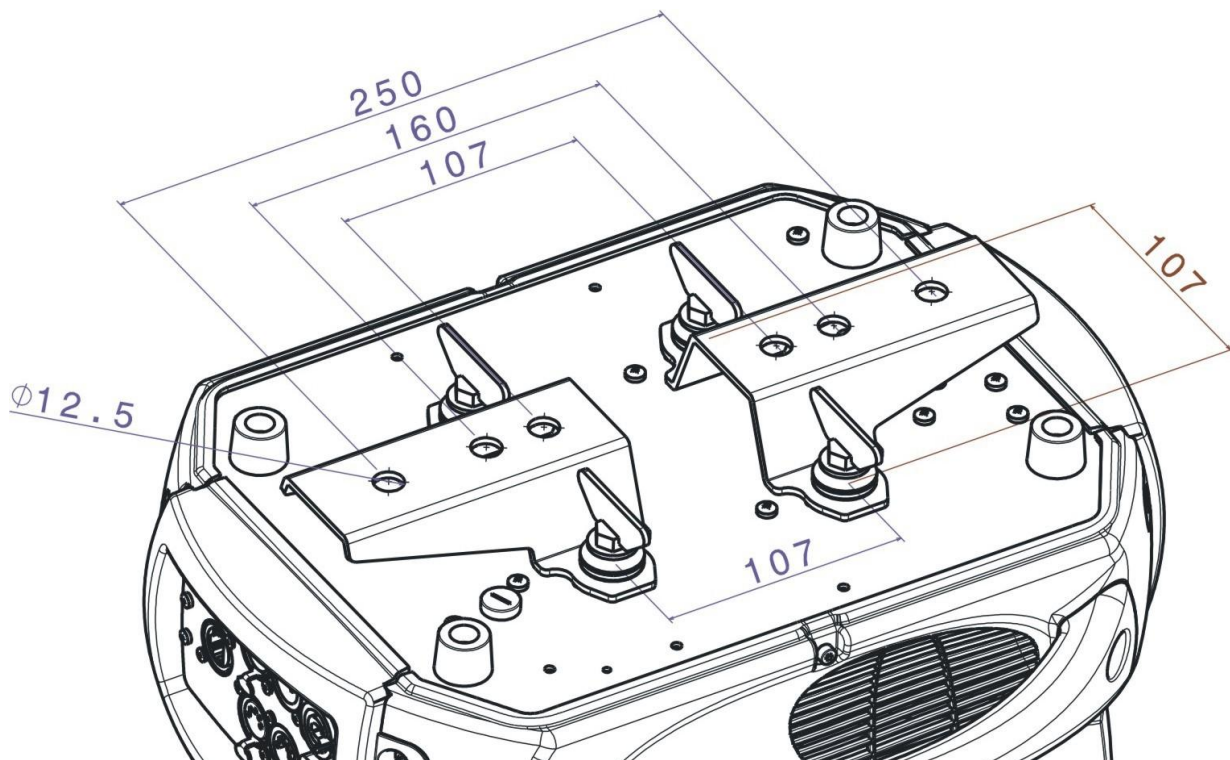
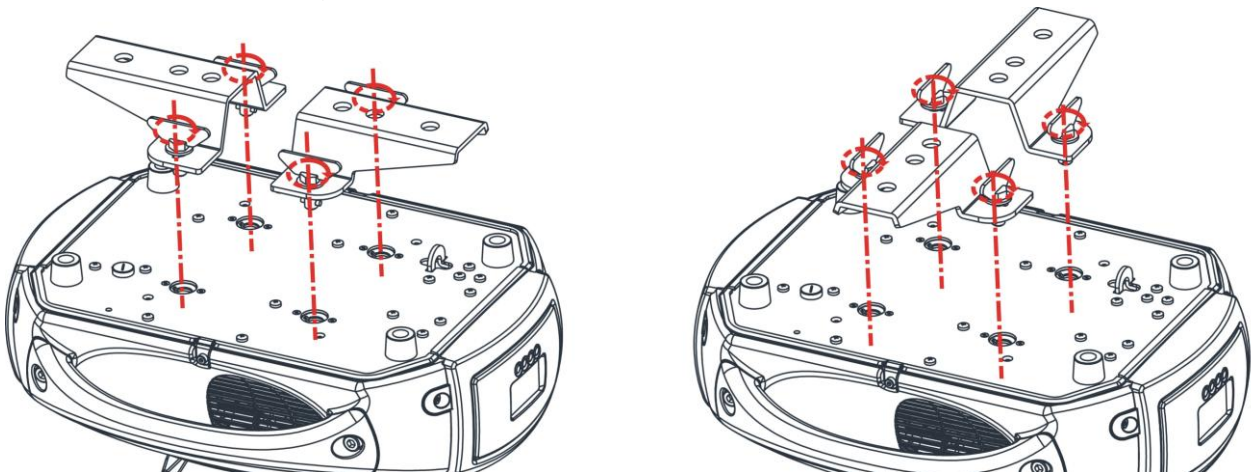
9- INSTALLATION

EVO may be either floor or ceiling mounted. For floor mounting installations, EVO is supplied with four rubber mounting feet on the base. For ceiling mounted installations, we recommend the use of appropriate clamps to fix the unit to the mounting surface.



The supporting structure from which the unit is hung should be capable of bearing the weight of the unit, as should any clamps used to hang it. The structure should also be sufficiently rigid so as not to move or shake whilst the EVO is moving.

Four 1/4 turn Fast Locks connections placed in the base of the unit allow to hang the EVO by using the two omega clamps (provided in the box) in conjunction with fixing clamps for truss (fixing clamps are not included into the unit box).



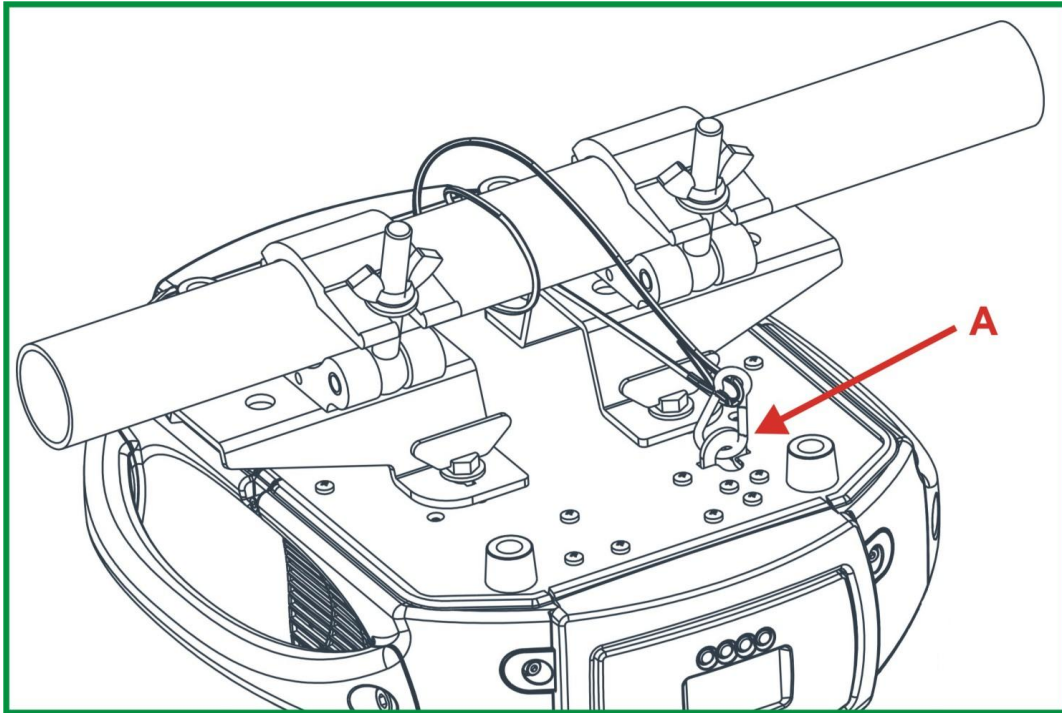
9.1- Safety cable



We recommend the use of a safety cable or chain connected to the EVO and to the suspension truss in order to avoid the fixture accidentally falling should the main fixing point fail.

Make sure that the iron cable or chain can bear the weight of the entire unit.

You may attach the safety chain/cord to the attachment point (A) located on the base of the fixture, as shown in the picture below.



9.2 Protection against liquids

The projector contains electric and electronic components which should under no circumstances come into contact with oil, water or any other liquid.

The proper unit functioning would be compromised should this occur.

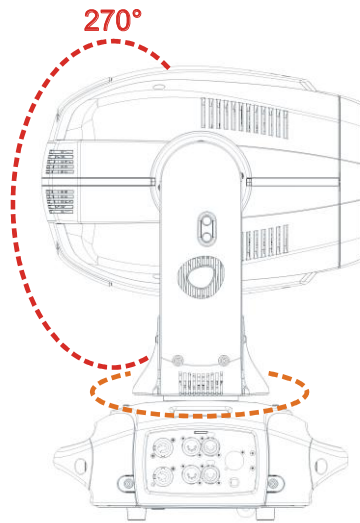
9.3- Movement

Pan: limitless rotation, in both directions; 360° rotation in 1.56 sec.; Tilt 270°: 1,5 sec.



WARNING

Do not place any object in the path of the projector's movement



Free Pan Rotation ('FPR')

9.4- Risk of fire

Each fixture produces heat and must be installed in a well-ventilated place.



It is permissible to place the unit on normally flammable surfaces.

Suitable for mounting on normally flammable materials surfaces greater than 200°C with some combustion time lag.

Minimum distance from the objects and the people lit by the light beam: 15 m. ^{440W Lamp} 15 m

9.5- Forced ventilation

You will note, on inspection, that the unit features various air inlets and cooling fans located on both the base and head of the fixture.

These should, under no circumstances, be blocked or obstructed whilst the projector is in operation. Doing so could cause the fixture to seriously overheat thereby compromising its proper operation.

9.6- Ambient temperature

The projector should never be installed in places that lack a constant air flow. The ambient temperature should not exceed 40°C.

10- MAINS CONNECTION

EVO with electronic ballast operates at 90-260Vac 50-60 Hz.

Prior to connecting the unit to your mains supply, ensure that the model in your possession correctly matches the mains supply available.

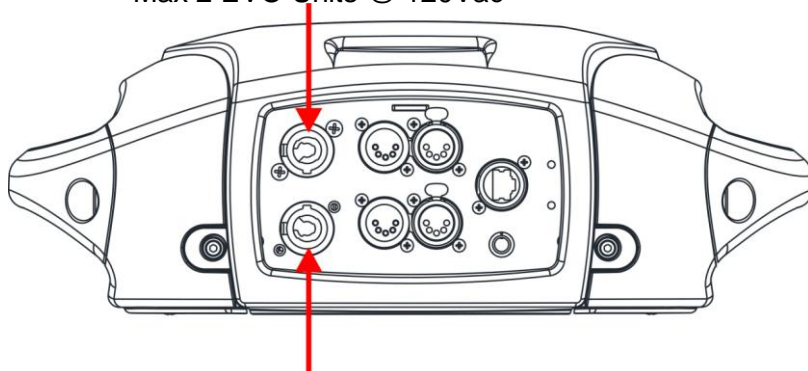
For connection purposes, ensure that your plug is capable of supporting 3,5 amps at 230Vac, or 7,5 amps at 90Vac each unit connected.

Strict adherence to regulatory norms is strongly recommended.

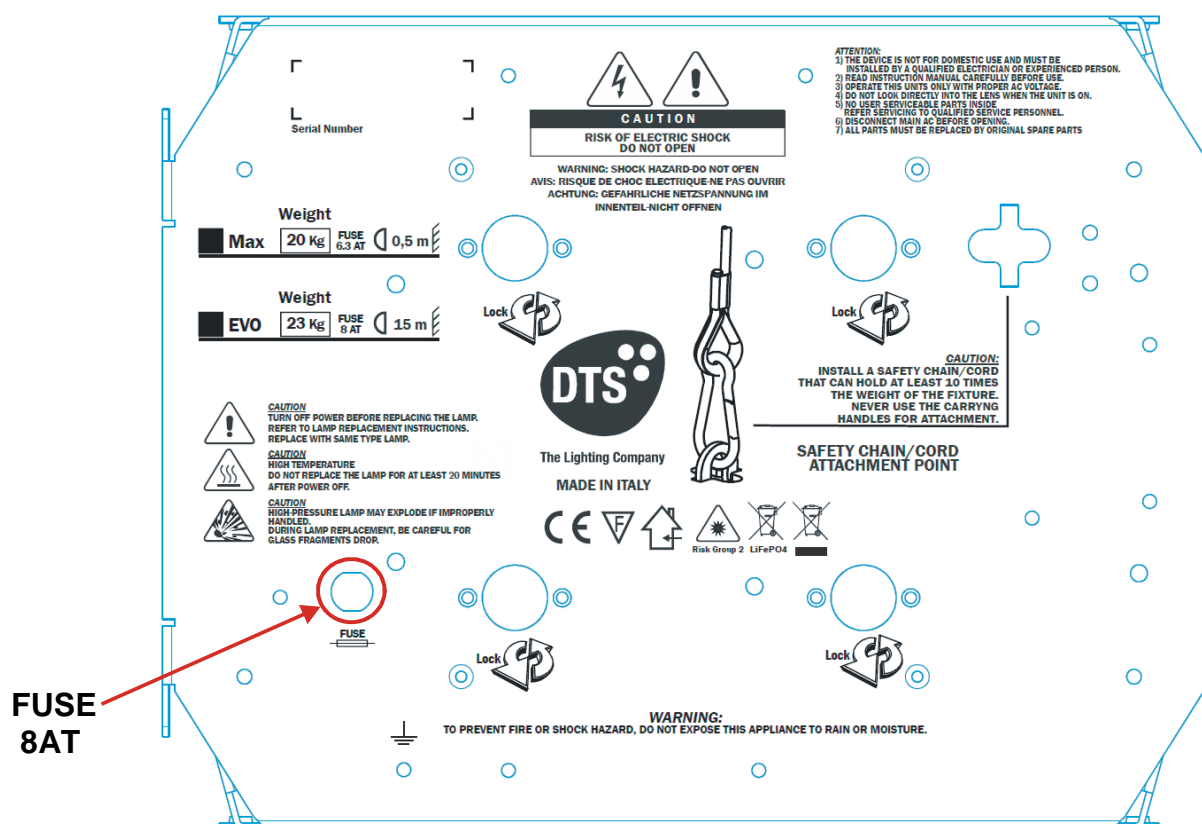
MAINS OUTPUT 90-260Vac 50-60 Hz (16A Max)

Max 4 EVO Units @ 230Vac

Max 2 EVO Units @ 120Vac



MAINS INPUT 90-260Vac 50-60 Hz



10.1- Protection



The use of a thermal magnetic circuit breaker is recommended for each EVO. A good earth connection is essential for the correct operation of the projector.

11- DMX SIGNAL CONNECTION

The unit operates using the digital DMX 512 signal.

Connection between the mixer and the projector or between projectors must be carried out using a two pair screened \varnothing 0.5 mm cable and a XLR 5 or 3 pins connector.

Ensure that the conductors do not touch each other.

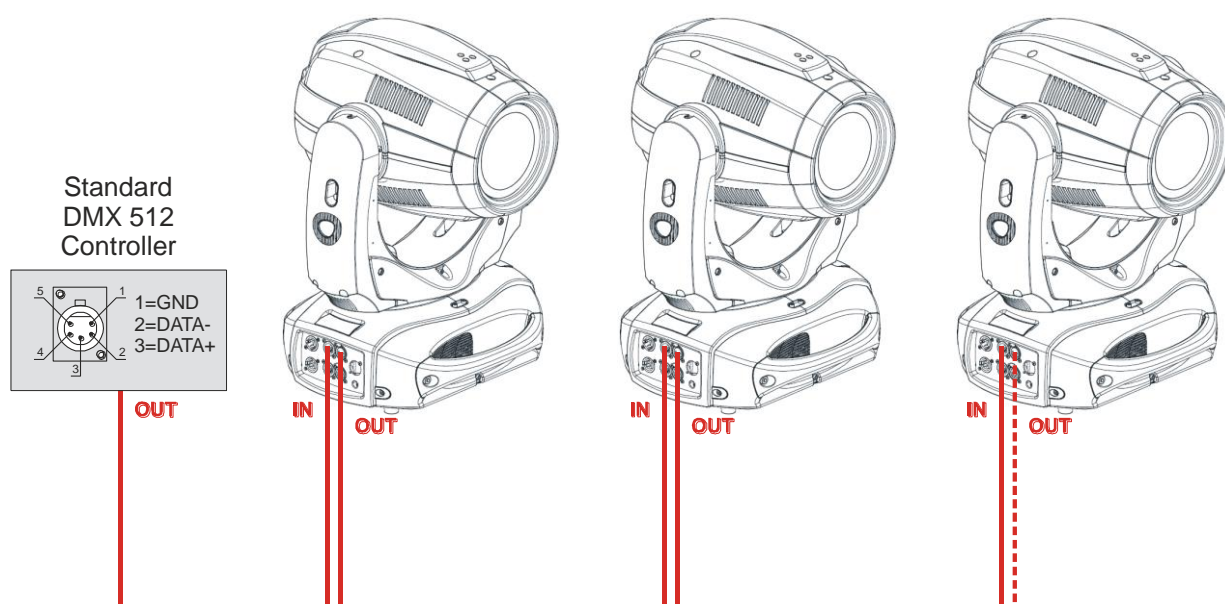
Do not connect the cable ground to the XLR chassy.

The plug housing must be isolated. Connect the mixer signal to the DMX IN projector plug and connect it to the next projector by connecting the DMX OUT plug on the first projector to the DMX IN plug of the second one.

This way, all the projectors are cascade connected.

NB. If the display showing the DMX address flashes, then one of the following errors has occurred:

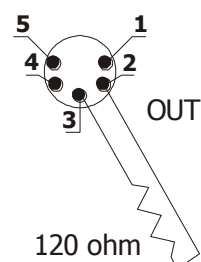
- DMX signal not present
- DMX address not valid
- DMX reception problem



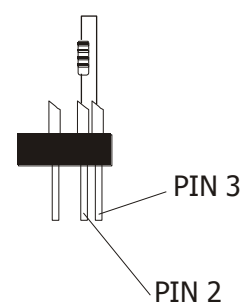
For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.

The DMX terminator is a male XLR 3-5 pins connector with a 120 ohm resistor between pin 2 and 3.

The DMX terminator must be plugged into the last unit (DMX out panel connector) of the DMX line.



PLACE A 120 OHM RESISTOR BETWEEN PIN 2 AND 3 OF A MALE XLR CONNECTOR AND PLUG IT INTO THE DMX OUT PANEL CONNECTOR OF THE LAST UNIT CONNECTED TO THE DMX LINE



11.1-DMX Addresses

EVO can be used in 2 different DMX modes: 32 DMX control channels (Default) or 24 DMX control channels.

Here below is described the DMX channels addressing for the controller when EVO is set to 32 and 24 DMX control channels:

32 channels mode (Default)

Projector 1	A001	
Projector 2	A033	If you want to select the next projector, just add "32"
Projector 3	A065	
.....	A....	
projector 6	A161	

24 channels mode

Projector 1	A001	
Projector 2	A025	If you want to select the next projector, just add "24"
Projector 3	A049	
.....	A....	
projector 6	A121	

11.2-Selecting the DMX address

- 1) Press the UP-DOWN key until you reach the required DMX channel. The numbers on the display will start to flash (but the new DMX address hasn't yet been set).
- 2) Press ENTER to confirm your selection. The numbers on the display will stop flashing and the projector is now setted to the new DMX address.

TRICKS:

If you keep pushed the UP or DOWN keys, the channels are calculated more quickly and you get a faster selection.

12- FIRMWARE UPDATING

Warning:

This procedure require a base knowledge of computer applications and Windows Hyperterminal program. **Please refer to an authorised D.T.S. service centre.**



To update the software version of EVO you need:

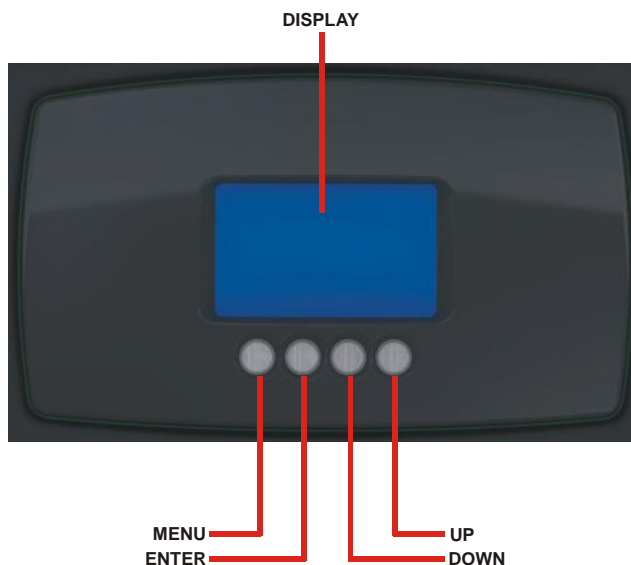
- D.T.S. RED BOX interface (D.T.S. Code: 03.LA.008)
- USB-DMX Driver for the D.T.S. RED BOX interface
- "D.T.S. Firmware upgrade utility" program installed on the PC
- Latest software release available for EVO unit

Updating the software version.

Please follow the procedure below to perform the update:


1. Install the D.T.S. RED BOX USB-DMX driver on the PC you will use to update the unit software.
2. Connect the D.T.S. RED BOX interface to the PC by using a USB cable.
3. Connect the D.T.S. RED BOX interface to the fixture by using a DMX cable.
4. Send the new software version into the unit by using "D.T.S. Firmware upgrade utility" program.

13- DISPLAY FUNCTIONS























DISPLAY FUNCTIONS

The EVO display panel shows all the available functions. Using these functions, it is possible to change some of the parameters and add some functions. Changing the D.T.S. setting can vary the functions of the unit so that it does not respond to the DMX 512 used to control it. Carefully follow the instructions below before carrying out any variations or selections.

NOTE: the symbol  shows which key has to be pushed to obtain the desired function.

Software version: 23.35

  Pan Direction PAN DIRECTION This menu allows to set the Pan movement Normal or Reversed	 	<div style="border: 2px solid black; padding: 5px; text-align: center;"> <div style="background-color: #0056b3; color: white; padding: 2px;">PAN DIRECTION</div> <div style="background-color: #0056b3; color: white; padding: 20px 0;">NORMAL</div> <div style="background-color: #0056b3; color: white; padding: 2px; display: flex; justify-content: space-around; font-size: small;"> MENU ENTER DOWN UP </div> </div>	Pan movement Normal or Reversed Default = Normal 
  Tilt Direction TILT DIRECTION This menu allows to set the Tilt movement Normal or Reversed	 	<div style="border: 2px solid black; padding: 5px; text-align: center;"> <div style="background-color: #0056b3; color: white; padding: 2px;">TILT DIRECTION</div> <div style="background-color: #0056b3; color: white; padding: 20px 0;">NORMAL</div> <div style="background-color: #0056b3; color: white; padding: 2px; display: flex; justify-content: space-around; font-size: small;"> MENU ENTER DOWN UP </div> </div>	Tilt movement Normal or Reversed Default = Normal 
  Pan Speed PAN SPEED Pan Speed control (1-8)	 	<div style="border: 2px solid black; padding: 5px; text-align: center;"> <div style="background-color: #0056b3; color: white; padding: 2px;">PAN SPEED</div> <div style="background-color: #0056b3; color: white; padding: 20px 0; font-size: 2em;">4</div> <div style="background-color: #0056b3; color: white; padding: 2px; display: flex; justify-content: space-around; font-size: small;"> MENU ENTER DOWN UP </div> </div>	Pan Speed control (1-8) Default = 4 
  Tilt Speed TILT SPEED Tilt Speed control (1-8)	 	<div style="border: 2px solid black; padding: 5px; text-align: center;"> <div style="background-color: #0056b3; color: white; padding: 2px;">TILT SPEED</div> <div style="background-color: #0056b3; color: white; padding: 20px 0; font-size: 2em;">4</div> <div style="background-color: #0056b3; color: white; padding: 2px; display: flex; justify-content: space-around; font-size: small;"> MENU ENTER DOWN UP </div> </div>	Tilt Speed control (1-8) Default = 4 

13- DISPLAY FUNCTIONS



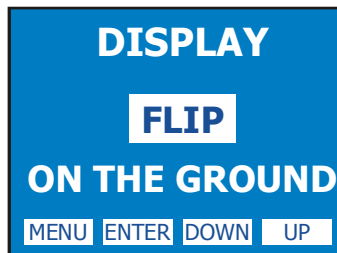
Display

DISPLAY FLIP / STAND BY / CONTRAST

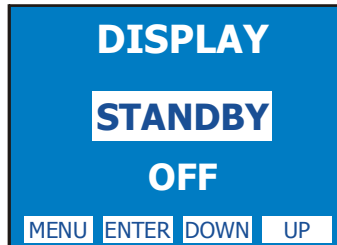
Display Flip:
Reverses display's reading depending on the mounting position (on the ground or suspended).

Display Standby:
To turn off the display (after 5 seconds) or leave it always on.

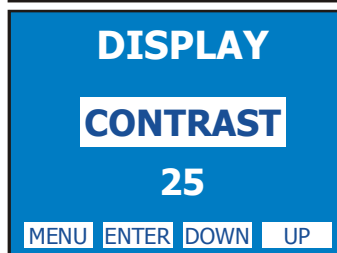
Display Contrast:
Display contrast regulation (1-40)



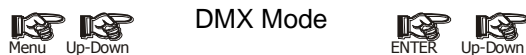
Display Flip
ON THE GROUND (Default)
SUSPENDED



Display Standby
OFF = Display Standby disabled (Default)
ON = Display goes OFF after 5 seconds

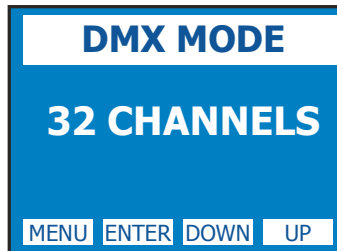


Display Contrast
1-40 (Default = 25)



DMX Mode

DMX MODE
To select DMX mode:
32 channels (Default) or 24 channels



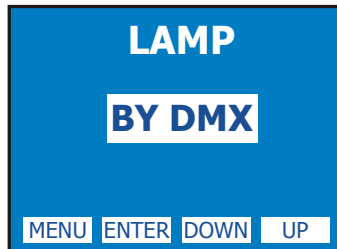
DMX Mode
32 channels (Default)
24 channels



Lamp

LAMP
Lamp always ON, Lamp always OFF, lamp ON-OFF selectable via DMX and lamp life time reset

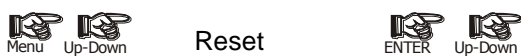
ADJUST
To adjust the lamp with no mixer connected.
It's possible to set the parameters for PAN-TILT, FOCUS-FOCUS FINE and ZOOM.



BY DMX = Lamp ON / OFF via DMX (Default)
ALWAYS ON = Forced ON
ALWAYS OFF = Forced OFF
RESET COUNTER = Lamp life time reset

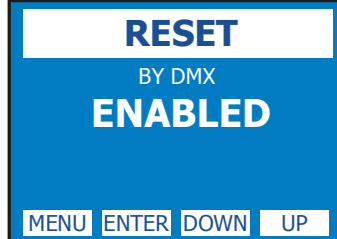


LAMP ADJUST = To adjust the lamp with no mixer connected.
It's possible to set the parameters for PAN-TILT, FOCUS-FOCUS FINE and ZOOM



Reset

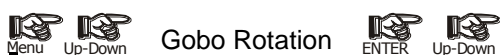
RESET
Reset via DMX ENABLED / DISABLED and unit motors reset



ENABLED = Reset via DMX enabled (Default)
DISABLED = Reset via DMX disabled
NOW = Unit motors reset



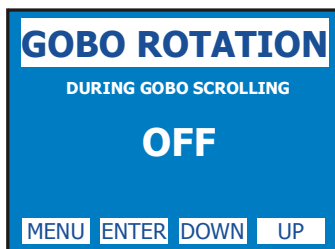
13- DISPLAY FUNCTIONS



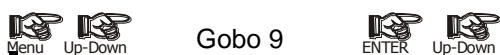
Gobo Rotation

GOBO ROTATION

Gobo rotation during gobo scrolling for rotating gobo wheel



OFF = Default
ON



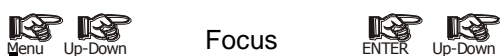
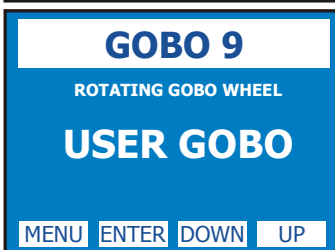
Gobo 9

GOBO 9

To use the gobo 9 of the rotating gobo wheel with gobo Open-Studio or with the user gobo (provided in the box). The parameter lets you have the correct focusing for each situation.



OPEN-STUDIO = To have the gobo Open-Studio focusing
USER GOBO = To have the user gobo focusing



Focus

FOCUS FINE

Range Ctrl 5% or 16 Bit Ctrl (Default)
To select the Focus Fine change on the Focus channel.

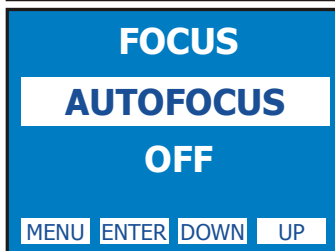


FOCUS FINE
RANGE CTRL 5% = To have a 5% Focus Fine change on the Focus channel.
16 BIT CTRL = To have a Focus Fine function same as the real 16 bit Focus Fine channel (Default).

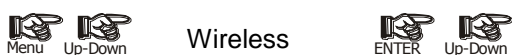


AUTOFOCUS

Automatic focusing



AUTOFOCUS
ON
OFF = Default

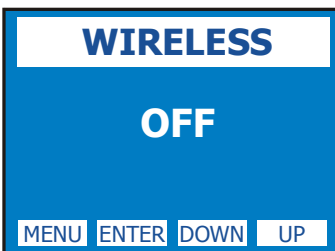


Wireless

WIRELESS

Wireless DMX enabled / disabled.

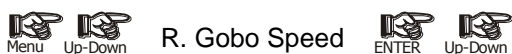
(Wireless module on request)



ON = Enabled
OFF = Disabled (Default)
UNLINK = Log out



(Wireless module on request)



R. Gobo Speed

ROTATING GOBO SPEED

To decrease the rotating gobo wheel speed from fastest (default) to fast



Fastest speed (Default)
or Fast speed



13- DISPLAY FUNCTIONS



System Info



SYSTEM INFO

Lamp life time, lamp strikes, unit life time, 10 motors boards and Pan&Tilt board software version, RDM ID, electronic ballast board temperature and unit model

SYSTEM INFO

LAMP LIFE: 0087H STRIKE:045
 UNIT LIFE: 0099H 51 °C
 10M R.06
 PT R.25 RDM: 000000BB
 MODEL: EVO FPR

MENU ENTER DOWN UP

SYSTEM INFO

Lamp life time, lamp strikes, unit life time, 10 motors boards and Pan&Tilt board software version, RDM ID, electronic ballast board temperature and unit model



Black-out



BLACK-OUT

CMY filters blades inserted at 100% and fixed gobo wheel inserted between gobo 1 and 2 when Dimmer is closed.

By activating this function, it will be possible to reduce substantially any visible light reflection coming out from the front lens.

BLACKOUT

OFF

MENU ENTER DOWN UP

OFF = Black-out disabled (Default)

SNAP = Immediate Black-out

DELAY 1-5 SEC = Black-out enabled after 1, 2, 3, 4 or 5 seconds from Dimmer closed



Reserved



RESERVED

(Code = 100)

Pan lock-Tilt lock

Pan free-Tilt free

Lock Detector

Reboot

Exit To Main

RESERVED

ENTER CODE

000

MENU ENTER DOWN UP

Pan Lock = Lock the Pan to the desired value

Tilt Lock = Lock the Tilt to the desired value

Pan Free = Remove power to Pan motor

Tilt Free = Remove power to Tilt motor



PAN LOCK

NO

MENU ENTER DOWN UP

Lock Detector OFF = Default
 Lock Detector ON: This function let the user to activate the Lock detector on Pan and Tilt.

When Lock detector is set to ON, the unit start the Pan&Tilt motors reset normally, but if for any reason there is something blocking the movement for Pan&Tilt motors during the initial reset (example unit into the fly case and power connected), it automatically will stop to reset Pan&Tilt motors after 5 seconds from the startup and a warning message (Pan Locked-Tilt locked) will appear on unit display .

LOCK DETECTOR

OFF

MENU ENTER DOWN UP

REBOOT

MENU ENTER DOWN UP

Reboot = Unit Reboot without needing of turning OFF the unit

Exit To Main = Exit from Reserved menu



Default



DEFAULT

To restore main settings

DEFAULT

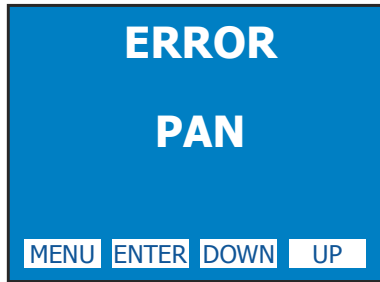
RESTORE MAIN SETTINGS

MENU ENTER DOWN UP

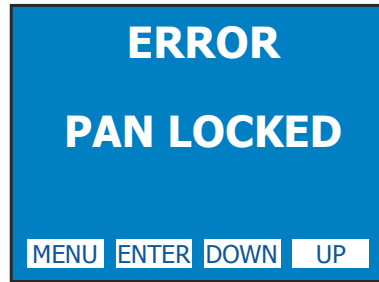
Default

To restore main settings

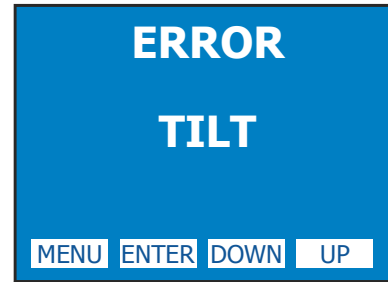


14- ERROR MESSAGES

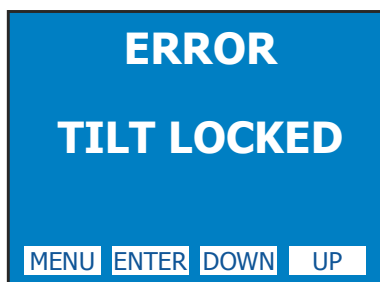
PAN ENCODER
REPOSITIONING ERROR



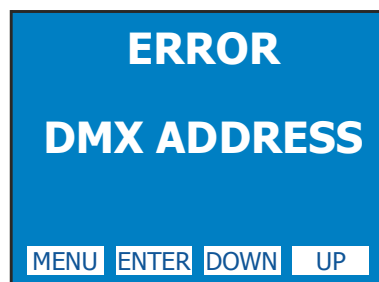
PAN MOTOR LOCKED



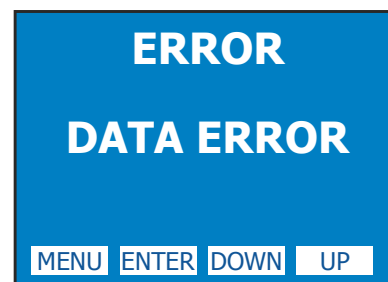
TILT ENCODER
REPOSITIONING ERROR



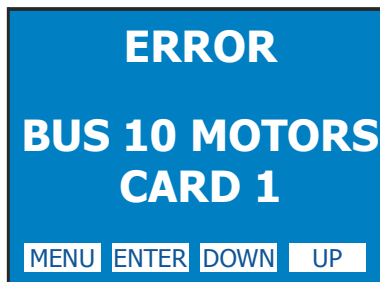
TILT MOTOR LOCKED



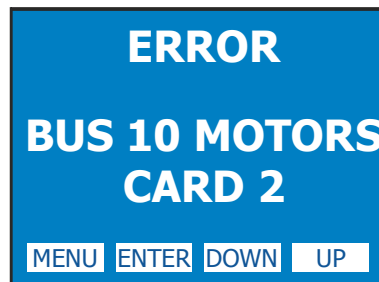
DMX ADDRESS SETTING ERROR



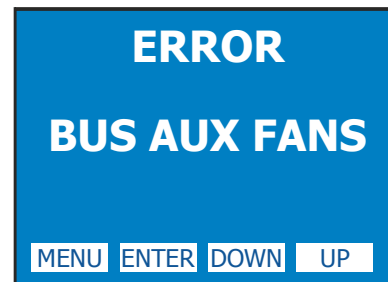
PARAMETERS STORING ERROR



COMMUNICATION PROBLEM
BETWEEN THE 10 MOTORS CARD 1
AND THE PAN&TILT CARD



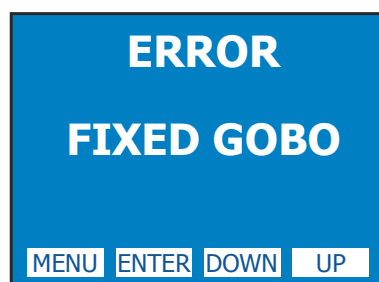
COMMUNICATION PROBLEM
BETWEEN THE 10 MOTORS CARD 2
AND THE PAN&TILT CARD



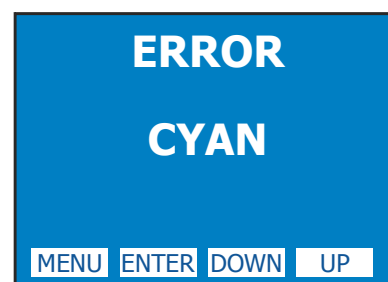
COMMUNICATION PROBLEM
BETWEEN THE FANS CONTROL
CARD AND PAN&TILT CARD



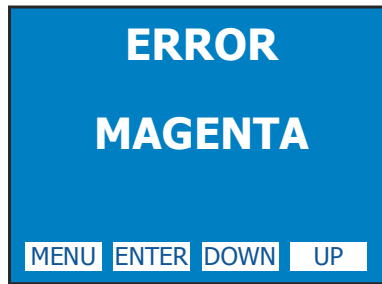
COLOUR WHEEL POSITION ERROR



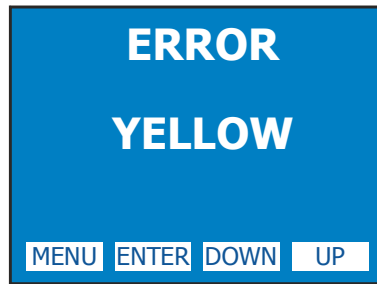
FIXED GOBO WHEEL POSITION
ERROR



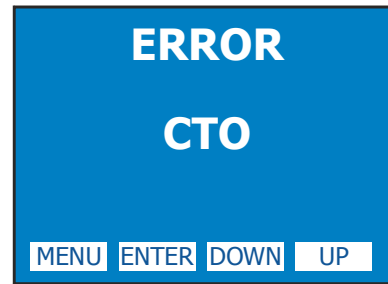
CYAN BLADE POSITION ERROR

14- ERROR MESSAGES

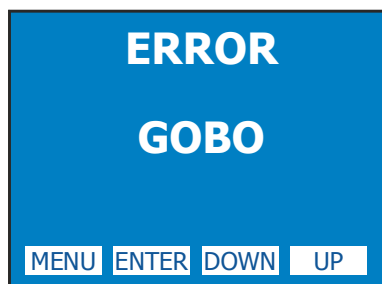
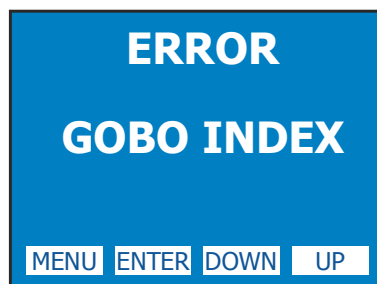
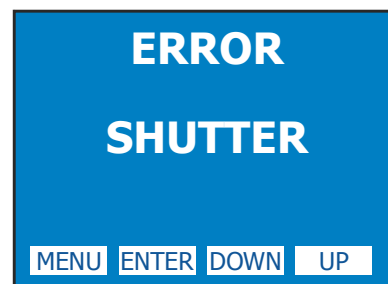
MAGENTA BLADE POSITION ERROR



YELLOW BLADE POSITION ERROR



CTO BLADE POSITION ERROR

ROTATING GOBO WHEEL
POSITION ERRORROTATING GOBOS INDEX POSITION
ERROR

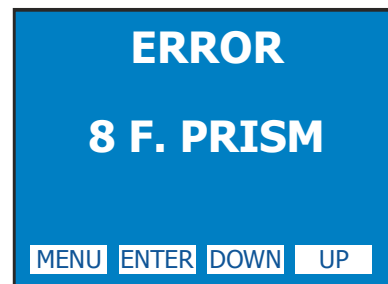
SHUTTER BLADE POSITION ERROR



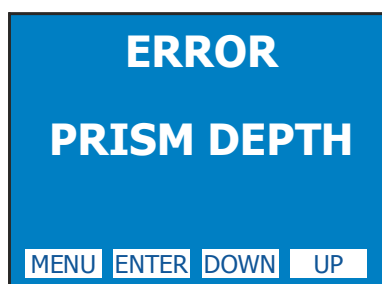
PRISMS INDEX POSITION ERROR



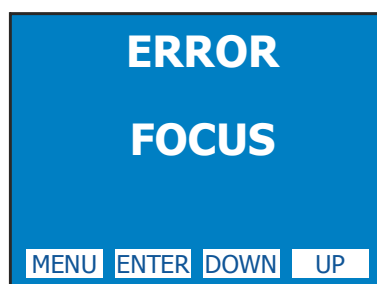
DYNA PRISM POSITION ERROR



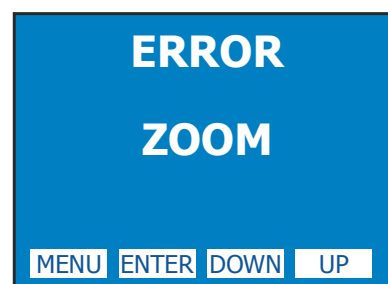
8 FACET PRISM POSITION ERROR



PRISMS GROUP POSITION ERROR



FOCUS LENS POSITION ERROR

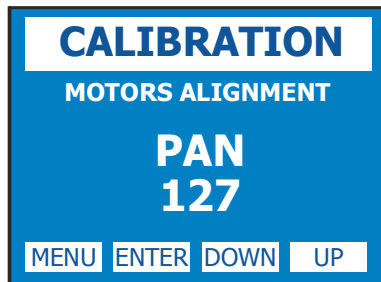


ZOOM LENS POSITION ERROR

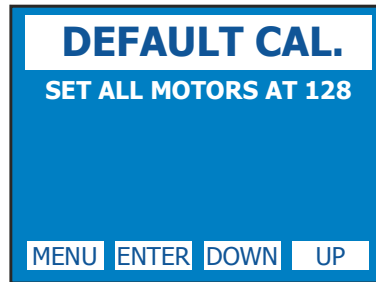
15- HIDDEN MENU (only for technical personnel)

To operate this menu:

- Connect the projector to the DMX controller (DMX SIGNAL MUST BE CORRECTLY RECEIVED)
- Reset EVO (reset from the MENU, not from the DMX controller).
- While reset is running, press the MENU and ENTER keys at the same time.



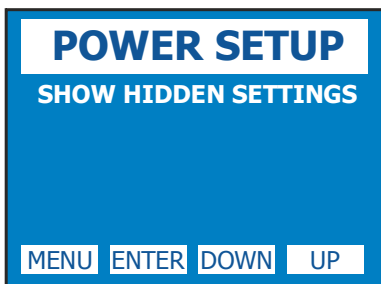
ELECTRONIC CALIBRATION OF THE MOTORS



RESET ALL SETTINGS TO VALUE 128



FANS SETTING MENU



FANS / POWER SETTINGS MENU



EXIT FROM HIDDEN MENU

15.1 Calibration mode

<p>CALIBRATION MOTORS ALIGNMENT PAN</p> <p>127</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT TILT</p> <p>145</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT DIMMER 1 ZERO</p> <p>81</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT DIMMER 2 ZERO</p> <p>86</p> <p>MENU ENTER DOWN UP</p>
<p>PAN ALIGNMENT To align Pan position</p>	<p>TILT ALIGNMENT To align Tilt position</p>	<p>DIMMER 1 ZERO ALIGNMENT Dimmer blade 1 zero position setting</p>	<p>DIMMER 2 ZERO ALIGNMENT Dimmer blade 2 zero position setting</p>
<p>CALIBRATION MOTORS ALIGNMENT DIMMER 1 PATH</p> <p>156</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT DIMMER 2 PATH</p> <p>159</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT SHUTTER ZERO</p> <p>128</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT SHUTTER PATH</p> <p>128</p> <p>MENU ENTER DOWN UP</p>
<p>DIMMER 1 PATH ALIGNMENT Dimmer blade 1 max excursion calibration</p>	<p>DIMMER 2 PATH ALIGNMENT Dimmer blade 2 max excursion calibration</p>	<p>SHUTTER ZERO ALIGNMENT Shutter blade zero position setting</p>	<p>SHUTTER PATH Shutter blade max excursion calibration</p>
<p>CALIBRATION MOTORS ALIGNMENT COLOUR WHEEL</p> <p>120</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT CYAN ZERO</p> <p>129</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT CYAN PATH</p> <p>190</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT MAGENTA ZERO</p> <p>109</p> <p>MENU ENTER DOWN UP</p>
<p>COLOUR WHEEL ALIGNMENT To align Colour wheel</p>	<p>CYAN ZERO ALIGNMENT Cyan filter blade zero position setting</p>	<p>CYAN PATH ALIGNMENT Cyan filter blade max excursion calibration</p>	<p>MAGENTA ZERO ALIGNMENT Magenta filter blade zero position setting</p>
<p>CALIBRATION MOTORS ALIGNMENT MAGENTA PATH</p> <p>190</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT YELLOW ZERO</p> <p>97</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT YELLOW PATH</p> <p>181</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT CTO ZERO</p> <p>112</p> <p>MENU ENTER DOWN UP</p>
<p>MAGENTA PATH ALIGNMENT Magenta filter blade max excursion calibration</p>	<p>YELLOW ZERO ALIGNMENT Yellow filter blade zero position setting</p>	<p>YELLOW PATH ALIGNMENT Yellow filter blade max excursion calibration</p>	<p>CTO ZERO ALIGNMENT CTO filter blade zero position setting</p>
<p>CALIBRATION MOTORS ALIGNMENT CTO PATH</p> <p>168</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT GOBO 0-8</p> <p>121</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT GOBO 9</p> <p>122</p> <p>MENU ENTER DOWN UP</p>	<p>CALIBRATION MOTORS ALIGNMENT GOBO INDEX</p> <p>128</p> <p>MENU ENTER DOWN UP</p>
<p>CTO PATH ALIGNMENT CTO filter blade max excursion calibration</p>	<p>GOBO 0-8 ALIGNMENT To align the global position of the Rotating gobo wheel (gobo 0 – 8)</p>	<p>GOBO 9 ALIGNMENT To align Gobo 9 / Open Studio of the Rotating gobo wheel</p>	<p>GOBO INDEX ALIGNMENT To adjust Gobo index position of the Rotating gobos</p>

15.1 Calibration mode

CALIBRATION MOTORS ALIGNMENT FIXED GOBO 134 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT FIXED G. 12 MM 129 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT SM-FR ZERO 125 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT SMOOTH 1 PATH 195 MENU ENTER DOWN UP
---	---	---	--

FIXED GOBO WHEEL ALIGNMENT
To align Fixed gobo wheel

FIXED GOBO 12 mm ALIGNMENT
To align the 12 mm fixed gobo open

SMOOTH-FROST ZERO ALIGNMENT
Effects-Frost blade zero position setting

SMOOTH 1 PATH ALIGNMENT
Effect 1 filter max excursion calibration

CALIBRATION MOTORS ALIGNMENT SMOOTH 2 PATH 210 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT FROST PATH 222 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT PR.DEPTH ZERO 85 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT PR.DEPTH PATH 128 MENU ENTER DOWN UP
--	---	---	--

SMOOTH 2 PATH ALIGNMENT
Effect 2 filter max excursion calibration

FROST PATH ALIGNMENT
Frost filter max excursion calibration

PRISM DEPTH ZERO ALIGNMENT
Prisms group zero position setting

PRISM DEPTH PATH ALIGNMENT
Prisms group max excursion calibration

CALIBRATION MOTORS ALIGNMENT DYNA-PR. ZERO 117 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT DYNA-PR. PATH 135 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT 8F-PRISM ZERO 130 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT 8F-PRISM PATH 139 MENU ENTER DOWN UP
--	--	--	--

DYNA-PRISM ZERO ALIGNMENT
Dyna Prism Zero position setting

DYNA-PRISM PATH ALIGNMENT
Dyna Prism max excursion calibration

8 FACET PRISM ZERO ALIGNMENT
8 facet prism zero position setting

8 FACET PRISM PATH ALIGNMENT
8 facet prism max excursion calibration

CALIBRATION MOTORS ALIGNMENT PRISM INDEX 128 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT FOCUS ZERO 97 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT ZOOM ZERO 81 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT ZOOM PATH 182 MENU ENTER DOWN UP
--	--	---	--

PRISM INDEX ALIGNMENT
To adjust index position of the prisms

FOCUS ZERO ALIGNMENT
Focus lens zero position setting

ZOOM ZERO ALIGNMENT
Zoom lens zero position setting

ZOOM PATH ALIGNMENT
Zoom lens max excursion calibration

CALIBRATION MOTORS ALIGNMENT FOCUS GOBO 0 138 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT FOCUS GOBO 9 171 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT FOCUS F.G. 1 138 MENU ENTER DOWN UP	CALIBRATION MOTORS ALIGNMENT FOCUS F.G. 17 134 MENU ENTER DOWN UP
---	---	---	--

FOCUS GOBO 0-9
Focusing of the 9 rotating gobos

FOCUS FIXED GOBOS 1-17
Focusing of the 17 fixed gobos

16- PAN SPEED & TILT SPEED

You can set the Pan and Tilt motors at high speed on your EVO. Scroll till “PAN SPEED” or “TILT SPEED” menu, press ENTER and select a speed with UP-DOWN (there are 8 speeds). Confirm by pressing ENTER.

17- OPENING THE PROJECTOR HOUSING

It is possible to inspect the inside of the projector by removing the cover as indicated below.

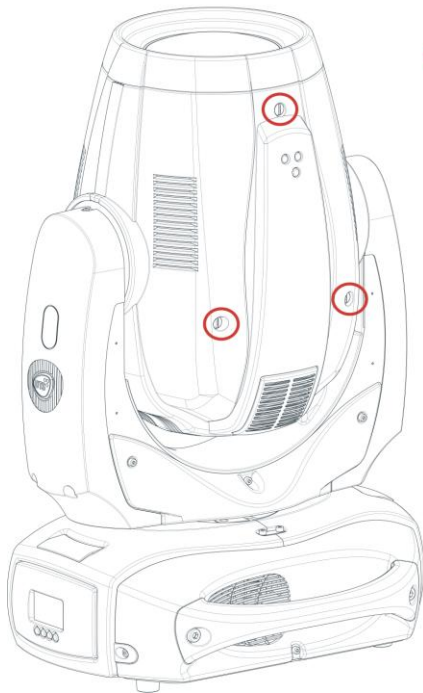


ATTENTION

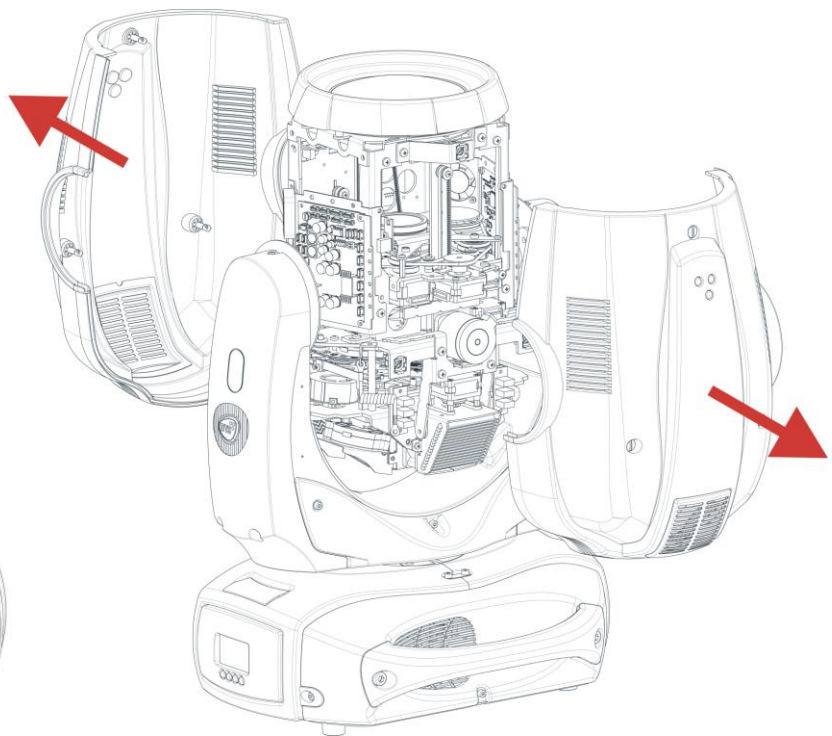
REMOVE MAINS POWER PRIOR TO ACCESSING THE PROJECTOR'S INTERNAL COMPONENTS.

Loose the 3 marked “1/4 turn” screws which fix the head covers on both sides (picture 1).

Once loosened the screws, simply lift the covers to access the internal components (picture 2).



PICTURE 1



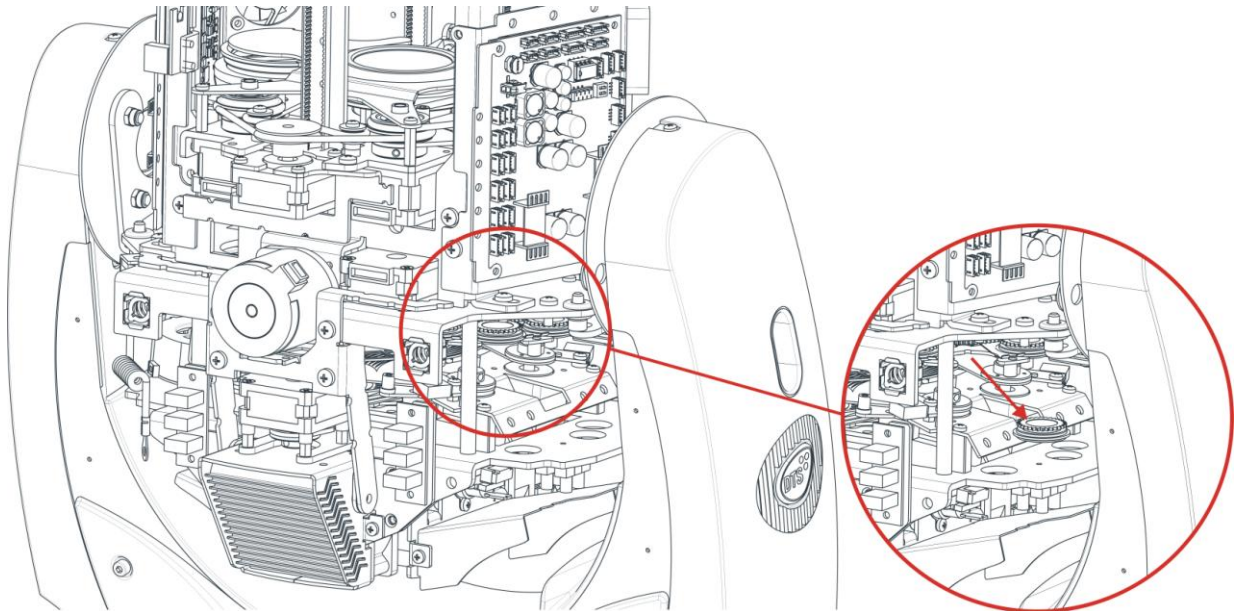
PICTURE 2

18- REMOVING / REPLACING THE ROTATING GOBOS

EVO uses a mechanical system which allows the fixture's gobos to be removed without the use of special tools.

When replacing gobos, ensure that the projector is switched off.

Open the projector housing as described on page 31 and pull out the gobo holder on the rotating gobo wheel as showed in the picture below.



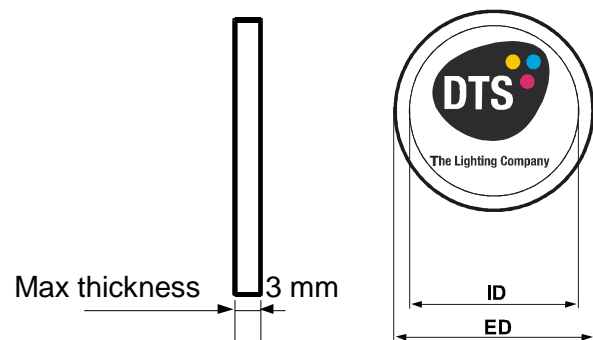
REPLACEMENT GOBOS

Replacement gobos must be made only of glass with special high temperature treatment. Please refer to an authorised D.T.S. dealer for details.

Gobo dimensions are as follows:

Rotating gobos

ø external (ED) = 13.93 mm + 0 / - 0,1 mm
 ø of image with defined edge (ID) = 9.0 mm
 thickness = from 0.2 to 3 mm (see catalogue)



Coated side

When an object is held up the coated side of the glass gobo there is no space between the object and its reflection.



Coated side

Uncoated side

When an object is held up the uncoated side of the glass gobo there is a space between the object and its reflection.



Uncoated side

Load with coated surface toward the light source.

19- PERIODIC CLEANING

19.1- Lenses and reflectors

Even a fine layer of dust can reduce the luminous output substantially.

Regularly clean all lenses and the reflector using a soft cotton cloth, dampened with a specialist lens cleaning solution.

19.2- Fans and air passages

The fans and air passages must be cleaned approximately every 6 weeks.

This periodic cleaning will depend of course, on 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, clean the fans and air passages more frequently.

20- PERIODIC CONTROLS

Attention



Disconnect mains power prior to opening the projector housing.

Lamp



The lamp should be replaced if there is any visible damage or deformation due to heat. This will help to avoid the danger of the lamp exploding.

EVO lamp lifespan is about 1500 hours, then it is necessary to replace it.

Mechanical parts

Periodically check all mechanical parts, gears, guides, belts, etc. for wear and tear, replacing them if necessary.

Periodically check the lubrication of all components, particularly the parts subject to high temperatures.

If necessary, lubricate with suitable lubricant, available from your D.T.S. distributor.

Check the tension of the belts and adjust it if necessary.

Electrical components



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

Fuse replacement

Locate the fuse, which protects the lamp and electronics, in the base of EVO.

Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type (8AT) if necessary.

21- DMX PROTOCOL**32 CHANNELS MODE**

1	PAN msb
2	PAN lsb
3	TILT msb
4	TILT lsb
5	SPEED MOVEMENT
6	FPR
7	DIMMER
8	SHUTTER
9	COLOUR
10	COLOUR MODE
11	CYAN
12	MAGENTA
13	YELLOW
14	CTO
15	SPEED CMY
16	MACRO CMY
17	GOBO
18	GOBO MODE
19	GOBO ROTATION / INDEX
20	GOBO INDEX FINE
21	GOBO SHAKE
22	FIXED GOBO
23	FIXED GOBO SHAKE
24	PRISM MODE
25	EFFECTS
26	PRISM INSERTION
27	PRISM ROTATION / INDEX
28	DYNA PRISM
29	FOCUS
30	FOCUS FINE
31	ZOOM
32	RESET + LAMP

DMX CHANNEL	1	Parameter: PAN msb
DMX CHANNEL	2	Parameter: PAN lsb

DMX CHANNEL	3	Parameter: TILT msb
DMX CHANNEL	4	Parameter: TILT lsb

DMX CHANNEL	5	Parameter: SPEED MOVEMENT
DMX value	Function	
000-010	Standard	
011-025	Fast movement	
026-127	Vector mode from fast to slow	
128-247	Variable time reaction to dmx signal (fast to slow)	
248-255	Silent movement	

DMX CHANNEL	6	Parameter: FPR
DMX value	Function	
000-010	Position mode 540° (standard path)	
011-020	Position mode 360° (1 turn)	
021-030	Position mode 720° (2 turns)	
031-040	Position mode 1080° (3 turns)	
041-050	Position mode 1440° (4 turns)	
051-060	Position mode 1800° (5 turns)	
061-070	Position mode 2160° (6 turns)	
071-080	Position mode 2520° (7 turns)	
081-090	Position mode 2880° (8 turns)	
091-100	Position mode 3240° (9 turns)	
101-110	Position mode 3600° (10 turns)	
111-120	Position mode 360° smart path	
121-182	Forward spin rotation speed from max to min	
183-193	Stop	
194-255	Reverse spin rotation speed from min to max	

DMX CHANNEL	7	Parameter: DIMMER
DMX value	Function	
000-007	Black-out	
008-255	Proportional dimmer	

DMX CHANNEL	8	Parameter: SHUTTER
DMX value	Function	
000-019	Black-out	
020-039	Open	
040-059	Black-out	
060-079	Strobe random speed	
080-084	Strobe speed 1 (1 flash/sec)	
085-089	Strobe speed 2 (2 flash/sec)	
090-094	Strobe speed 3 (3 flash/sec)	
095-099	Strobe speed 4 (4 flash/sec)	
100-104	Strobe speed 5 (5 flash/sec)	
105-109	Strobe speed 6 (6 flash/sec)	
110-114	Strobe speed 7 (7 flash/sec)	
115-119	Strobe speed 8 (8 flash/sec)	
120-124	Strobe speed 9 (10 flash/sec)	
125-129	Strobe speed 10 (12 flash/sec)	
130-134	Strobe speed 11 (15 flash/sec)	
135-139	Strobe speed 12 (18 flash/sec)	
140-149	Flash open speed 1	
150-159	Flash open speed 2	
160-169	Flash open speed 3	
170-179	Flash open speed 4	
180-189	Flash closed speed 1	
190-199	Flash closed speed 2	
200-209	Flash closed speed 3	
210-219	Flash closed speed 4	
220-227	Colours/Gobo in black-out	
228-233	Pan/Tilt in black-out	
234-255	Open	

DMX CHANNEL	9	Parameter: COLOUR
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FULL COLOUR (CH10 = 0-63)

DMX value	Function
000-010	White
011-021	Colour 1 (Orange)
022-032	Colour 2 (Light Pink)
033-043	Colour 3 (Light Red)
044-054	Colour 4 (Purple)
055-065	Colour 5 (Full CTO)
066-076	Colour 6 (Pink)
077-087	Colour 7 (Yellow 2)
088-098	Colour 8 (Light Blue)
099-109	Colour 9 (Light Green)
110-120	Colour 10 (Magenta)
121-131	Colour 11 (Blue)
132-142	Colour 12 (Full CTB)
143-153	Colour 13 (Amber)
154-164	Colour 14 (Dark Green)
165-175	Colour 15 (Half CTB)
176-186	Colour 16 (Lime)
187-197	Colour 17 (Deep Blue)
198-208	Colour 18 (Amethyst)
209-219	Colour 19 (Red)
220-230	Colour 20 (Yellow 1)
231-255	Colour 21 (Green)

HALF COLOUR (CH10 = 64-127)

DMX value	Function
000-010	White
011-021	White-Colour 1 (Orange)
022-032	Colour 1-2 (Orange-Light Pink)
033-043	Colour 2-3 (Light Pink-Light Red)
044-054	Colour 3-4 (Light Red-Purple)
055-065	Colour 4-5 (Purple-Full CTO)
066-076	Colour 5-6 (Full CTO-Pink)
077-087	Colour 6-7 (Pink-Yellow 2)
088-098	Colour 7-8 (Yellow 2-Light Blue)
099-109	Colour 8-9 (Light Blue-Light Green)
110-120	Colour 9-10 (Light Green-Magenta)
121-131	Colour 10-11 (Magenta-Blue)
132-142	Colour 11-12 (Blue-Full CTB)
143-153	Colour 12-13 (Full CTB-Amber)
154-164	Colour 13-14 (Amber-Dark Green)
165-175	Colour 14-15 (Dark Green-Half CTB)
176-186	Colour 15-16 (Half CTB-Lime)
187-197	Colour 16-17 (Lime-Deep Blue)
198-208	Colour 17-18 (Deep Blue-Amethyst)
209-219	Colour 18-19 (Amethyst-Red)
220-230	Colour 19-20 (Red-Yellow 1)
231-241	Colour 20-21 (Yellow 1-Green)
242-255	Colour 21 (Green)-White

PROPORTIONAL COLOUR (CH10 = 128-191)

DMX value	Function
000-010	No colour
011-255	Proportional colour

RAINBOW (CH10 = 192-255)

DMX value	Function
000-009	No colour
010-127	Right rotation speed from max to min
128-137	Stop
138-255	Left rotation speed from min to max

DMX CHANNEL	10	Parameter: COLOUR MODE
DMX value	Function	
000-063	Full colour	
064-127	Half colour	
128-191	Proportional colour	
192-255	Rainbow	

DMX CHANNEL	11	Parameter: CYAN
DMX value	Function	
000-255	Proportional colour	

DMX CHANNEL	12	Parameter: MAGENTA
DMX value	Function	
000-255	Proportional colour	

DMX CHANNEL	13	Parameter: YELLOW
DMX value	Function	
000-255	Proportional colour	

DMX CHANNEL	14	Parameter: CTO
DMX value	Function	
000-007	No function	
008-255	Linear CTO from min to max	

DMX CHANNEL	15	Parameter: SPEED CMY
DMX value	Function	
000-007	No function	
008-255	Variable speed from max to min	

DMX CHANNEL	16	Parameter: MACRO CMY
DMX value	Function	
000-009	No function	
010-014	Macro 1	
015-019	Macro 2	
020-024	Macro 3	
025-029	Macro 4	
030-034	Macro 5	
035-039	Macro 6	
040-044	Macro 7	
045-049	Macro 8	
050-054	Macro 9	
055-059	Macro 10	
060-064	Macro 11	
065-069	Macro 12	
070-074	Macro 13	
075-079	Macro 14	
080-084	Macro 15	
085-089	Macro 16	
090-094	Macro 17	
095-099	Macro 18	
100-104	Macro 19	
105-109	Macro 20	
110-114	Macro 21	
115-121	Macro rainbow wait = 0	
122-128	Macro rainbow wait = 2	
129-135	Macro rainbow wait = 3	
136-142	Macro rainbow wait = 4	
143-149	Macro rainbow wait = 5	
150-156	Macro rainbow wait = 6	
157-163	Macro rainbow wait = 7	
164-170	Macro rainbow wait = 8	
171-177	Macro rainbow wait = 9	
178-185	Macro rainbow wait = 10	
186-192	Full colours rainbow wait = 0	
193-199	Full colours rainbow wait = 2	
200-206	Full colours rainbow wait = 3	
207-213	Full colours rainbow wait = 4	
214-220	Full colours rainbow wait = 5	
221-227	Full colours rainbow wait = 6	
228-234	Full colours rainbow wait = 7	
235-241	Full colours rainbow wait = 8	
242-248	Full colours rainbow wait = 9	
249-255	Full colours rainbow wait = 10	

DMX CHANNEL	17	Parameter: GOBO
DMX value	Function	
000-020	Open	
021-041	Gobo 1	
042-062	Gobo 2	
063-083	Gobo 3	
084-104	Gobo 4	
105-125	Gobo 5	
126-146	Gobo 6	
147-167	Gobo 7	
168-188	Gobo 8	
189-207	Gobo 9 / Studio Open	
208-213	Speed rotation 1 min	
214-219	Speed rotation 2	
220-225	Speed rotation 3	
226-231	Speed rotation 4	
232-237	Speed rotation 5	
238-243	Speed rotation 6	
244-249	Speed rotation 7	
250-255	Speed rotation 8 max	

DMX CHANNEL	18	Parameter: GOBO MODE
DMX value	Function	
000-127	Gobo rotation mode	
128-255	Gobo index mode	

DMX CHANNEL	19	Parameter: GOBO ROTATION/INDEX
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GOBO MODE ROTATION

DMX value	Function
000-009	Stop
010-127	Left rotation (max to min)
128-137	Stop
138-255	Right rotation (min to max)

GOBO MODE INDEX

DMX value	Function
000-255	Gobo index coarse

DMX CHANNEL	20	Parameter: GOBO INDEX FINE
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DMX value	Function
000-255	Gobo index fine

DMX CHANNEL	21	Parameter: GOBO SHAKE
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DMX value	Function
000-009	Stop
010-022	Gobo shake R-L speed 1
023-035	Gobo shake R-L speed 2
036-048	Gobo shake R-L speed 3
049-061	Gobo shake R-L speed 4
062-074	Gobo shake R-L speed 5
075-087	Gobo shake R-L speed 6
088-100	Gobo shake R-L speed 7
101-113	Gobo shake R-L speed 8
114-126	Gobo shake R-L speed 9
127-138	Stop
139-151	Gobo shake L-R speed 1
152-164	Gobo shake L-R speed 2
165-177	Gobo shake L-R speed 3
178-190	Gobo shake L-R speed 4
191-203	Gobo shake L-R speed 5
204-216	Gobo shake L-R speed 6
217-229	Gobo shake L-R speed 7
230-242	Gobo shake L-R speed 8
234-255	Gobo shake L-R speed 9

DMX CHANNEL	22	Parameter: FIXED GOBO
DMX value	Function	
000-010	Open	
011-021	Gobo 1	
022-032	Gobo 2	
033-043	Gobo 3	
044-054	Gobo 4	
055-065	Gobo 5	
066-076	Gobo 6	
077-087	Gobo 7	
088-098	Gobo 8	
099-109	Gobo 9	
110-120	Gobo 10	
121-131	Gobo 11	
132-142	Gobo 12	
143-153	Gobo 13	
154-164	Gobo 14	
165-175	Gobo 15	
176-186	Gobo 16	
187-197	Gobo 17 (Glass)	
198-255	Animation	

DMX CHANNEL	23	Parameter: FIXED GOBO SHAKE
DMX value	Function	
000-009	Stop	
010-126	Gobo shake R-L speed from min to max	
127-138	Stop	
139-255	Gobo shake L-R speed from min to max	

DMX CHANNEL	24	Parameter: PRISM MODE
DMX value	Function	
000-127	Prism rotation mode	
128-255	Prism index mode	

DMX CHANNEL	25	Parameter: EFFECTS
DMX value	Function	
000-010	No effect	
011-050	Effect glass 1	
051-090	Effect glass 2	
091-100	Effect glass 3	
101-127	Frost	
128-255	Beam shape (indexable 0°-360°)	

DMX CHANNEL	26	Parameter: PRISM INSERTION
DMX value	Function	
000-050	No effect	
051-100	5 facets linear prism inserted (between focus and zoom)	
101-150	8 facets prism inserted (between focus and zoom)	
151-200	5 facets linear prism inserted (in front of zoom)	
201-255	8 facets prism inserted (in front of zoom)	

DMX CHANNEL	27	Parameter: PRISM ROTATION/INDEX
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PRISM MODE ROTATION

DMX value	Function
000-009	Stop
010-127	Left rotation from fast to slow
128-137	Stop
138-255	Right rotation from slow to fast

PRISM MODE INDEX

DMX value	Function
000-255	Prism index

DMX CHANNEL	28	Parameter: DYNA PRISM
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DMX value	Function
000-255	Dyna prism linear position

DMX CHANNEL	29	Parameter: FOCUS
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DMX value	Function
000-255	Linear focus (0-95%)

DMX CHANNEL	30	Parameter: FOCUS FINE
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DMX value	Function
000-255	Linear focus (95-100%)

DMX CHANNEL	31	Parameter: ZOOM
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DMX value	Function
000-255	Linear zoom

DMX CHANNEL	32	Parameter: RESET + LAMP
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DMX value	Function
000-009	No effect
010-060	Lamp OFF (3 sec)
061-129	No effect
130-179	Lamp ON (3 sec)
180-200	No effect
201-239	Internal motor reset
240-255	Total reset

21- DMX PROTOCOL**24 CHANNELS MODE**

1	PAN msb
2	PAN lsb
3	TILT msb
4	TILT lsb
5	SPEED MOVEMENT
6	FPR
7	DIMMER
8	SHUTTER
9	COLOUR
10	CYAN
11	MAGENTA
12	YELLOW
13	CTO
14	GOBO
15	GOBO ROTATION / INDEX
16	FIXED GOBO
17	Not used
18	EFFECTS
19	PRISM INSERTION
20	PRISM ROTATION / INDEX
21	DYNA PRISM
22	FOCUS
23	ZOOM
24	RESET + LAMP

DMX CHANNEL	1	Parameter: PAN msb
DMX CHANNEL	2	Parameter: PAN lsb

DMX CHANNEL	3	Parameter: TILT msb
DMX CHANNEL	4	Parameter: TILT lsb

DMX CHANNEL	5	Parameter: SPEED MOVEMENT
DMX value	Function	
000-010	Standard	
011-025	Fast movement	
026-127	Vector mode from fast to slow	
128-247	Variable time reaction to dmx signal (fast to slow)	
248-255	Silent movement	

DMX CHANNEL	6	Parameter: FPR
DMX value	Function	
000-010	Position mode 540° (standard path)	
011-020	Position mode 360° (1 turn)	
021-030	Position mode 720° (2 turns)	
031-040	Position mode 1080° (3 turns)	
041-050	Position mode 1440° (4 turns)	
051-060	Position mode 1800° (5 turns)	
061-070	Position mode 2160° (6 turns)	
071-080	Position mode 2520° (7 turns)	
081-090	Position mode 2880° (8 turns)	
091-100	Position mode 3240° (9 turns)	
101-110	Position mode 3600° (10 turns)	
111-120	Position mode 360° smart path	
121-182	Forward spin rotation speed from max to min	
183-193	Stop	
194-255	Reverse spin rotation speed from min to max	

DMX CHANNEL	7	Parameter: DIMMER
DMX value	Function	
000-007	Black-out	
008-255	Proportional dimmer	

DMX CHANNEL	8	Parameter: SHUTTER
DMX value	Function	
000-019	Black-out	
020-039	Open	
040-059	Black-out	
060-079	Strobe random speed	
080-084	Strobe speed 1 (1 flash/sec)	
085-089	Strobe speed 2 (2 flash/sec)	
090-094	Strobe speed 3 (3 flash/sec)	
095-099	Strobe speed 4 (4 flash/sec)	
100-104	Strobe speed 5 (5 flash/sec)	
105-109	Strobe speed 6 (6 flash/sec)	
110-114	Strobe speed 7 (7 flash/sec)	
115-119	Strobe speed 8 (8 flash/sec)	
120-124	Strobe speed 9 (10 flash/sec)	
125-129	Strobe speed 10 (12 flash/sec)	
130-134	Strobe speed 11 (15 flash/sec)	
135-139	Strobe speed 12 (18 flash/sec)	
140-149	Flash open speed 1	
150-159	Flash open speed 2	
160-169	Flash open speed 3	
170-179	Flash open speed 4	
180-189	Flash closed speed 1	
190-199	Flash closed speed 2	
200-209	Flash closed speed 3	
210-219	Flash closed speed 4	
220-227	Colours/Gobo in black-out	
228-233	Pan/Tilt in black-out	
234-255	Open	

DMX CHANNEL	9	Parameter: COLOUR
DMX value	Function	
000-003	White	
004-007	White-Colour 1 (Orange)	
008-011	Colour 1 (Orange)	
012-015	Colour 1-2 (Orange-Light Pink)	
016-019	Colour 2 (Light Pink)	
020-023	Colour 2-3 (Light Pink-Light Red)	
024-027	Colour 3 (Light Red)	
028-031	Colour 3-4 (Light Red-Purple)	
032-035	Colour 4 (Purple)	
036-039	Colour 4-5 (Purple-Full CTO)	
040-043	Colour 5 (Full CTO)	
044-047	Colour 5-6 (Full CTO-Pink)	
048-051	Colour 6 (Pink)	
052-055	Colour 6-7 (Pink-Yellow 2)	
056-059	Colour 7 (Yellow 2)	
060-063	Colour 7-8 (Yellow 2-Light Blue)	
064-067	Colour 8 (Light Blue)	
068-071	Colour 8-9 (Light Blue-Light Green)	
072-075	Colour 9 (Light Green)	
076-079	Colour 9-10 (Light Green-Magenta)	
080-083	Colour 10 (Magenta)	
084-087	Colour 10-11 (Magenta-Blue)	
088-091	Colour 11 (Blue)	
092-095	Colour 11-12 (Blue-Full CTB)	
096-099	Colour 12 (Full CTB)	
100-103	Colour 12-13 (Full CTB-Amber)	
104-107	Colour 13 (Amber)	
108-111	Colour 13-14 (Amber-Dark Green)	
112-115	Colour 14 (Dark Green)	
116-119	Colour 14-15 (Dark Green-Half CTB)	
120-123	Colour 15 (Half CTB)	
124-127	Colour 15-16 (Half CTB-Lime)	
128-131	Colour 16 (Lime)	
132-135	Colour 16-17 (Lime-Deep Blue)	
136-139	Colour 17 (Deep Blue)	
140-143	Colour 17-18 (Deep Blue-Amethyst)	
144-147	Colour 18 (Amethyst)	
148-151	Colour 18-19 (Amethyst-Red)	
152-155	Colour 19 (Red)	
156-159	Colour 19-20 (Red-Yellow 1)	
160-163	Colour 20 (Yellow 1)	
164-167	Colour 20-21 (Yellow 1-Green)	
168-171	Colour 21 (Green)	
172-197	Colour 21 (Green)-White	
198-200	Right rotation speed 9 max	
201-203	Right rotation speed 8	
204-206	Right rotation speed 7	
207-209	Right rotation speed 6	
210-212	Right rotation speed 5	
213-215	Right rotation speed 4	
216-218	Right rotation speed 3	
219-221	Right rotation speed 2	
222-224	Right rotation speed 1 min	
225-228	Stop	
229-231	Left rotation speed 1 min	
232-234	Left rotation speed 2	
235-237	Left rotation speed 3	
238-240	Left rotation speed 4	
241-243	Left rotation speed 5	
244-246	Left rotation speed 6	
247-249	Left rotation speed 7	
250-252	Left rotation speed 8	
253-255	Left rotation speed 9 max	

DMX CHANNEL	10	Parameter: CYAN
DMX value	Function	
000-255	Proportional colour	

DMX CHANNEL	11	Parameter: MAGENTA
DMX value	Function	
000-255	Proportional colour	

DMX CHANNEL	12	Parameter: YELLOW
DMX value	Function	
000-255	Proportional colour	

DMX CHANNEL	13	Parameter: CTO
DMX value	Function	
000-007	No function	
008-255	Linear CTO from min to max	

DMX CHANNEL	14	Parameter: GOBO
DMX value	Function	
000-020	Open	
021-041	Gobo 1	
042-062	Gobo 2	
063-083	Gobo 3	
084-104	Gobo 4	
105-125	Gobo 5	
126-146	Gobo 6	
147-167	Gobo 7	
168-188	Gobo 8	
189-207	Gobo 9 / Studio Open	
208-213	Speed rotation 1 min	
214-219	Speed rotation 2	
220-225	Speed rotation 3	
226-231	Speed rotation 4	
232-237	Speed rotation 5	
238-243	Speed rotation 6	
244-249	Speed rotation 7	
250-255	Speed rotation 8 max	

DMX CHANNEL	15	Parameter: GOBO ROTATION/INDEX
DMX value	Function	
000-127	Proportional index 0°-360°	
128-180	Left rotation	
181-202	Stop	
203-255	Right rotation	

DMX CHANNEL	16	Parameter: FIXED GOBO
DMX value	Function	
000-010	Open	
011-021	Gobo 1	
022-032	Gobo 2	
033-043	Gobo 3	
044-054	Gobo 4	
055-065	Gobo 5	
066-076	Gobo 6	
077-087	Gobo 7	
088-098	Gobo 8	
099-109	Gobo 9	
110-120	Gobo 10	
121-131	Gobo 11	
132-142	Gobo 12	
143-153	Gobo 13	
154-164	Gobo 14	
165-175	Gobo 15	
176-186	Gobo 16	
187-197	Gobo 17 (Glass)	
198-255	Animation	

DMX CHANNEL	17	Parameter: NOT USED
DMX value	Function	
000-255	No effect	

DMX CHANNEL	18	Parameter: EFFECTS
DMX value	Function	
000-010	No effect	
011-050	Effect glass 1	
051-090	Effect glass 2	
091-100	Effect glass 3	
101-127	Frost	
128-255	Beam shape (indexable 0°-360°)	

DMX CHANNEL	19	Parameter: PRISM INSERTION
DMX value	Function	
000-050	No effect	
051-100	5 facets linear prism inserted (between focus and zoom)	
101-150	8 facets prism inserted (between focus and zoom)	
151-200	5 facets linear prism inserted (in front of zoom)	
201-255	8 facets prism inserted (in front of zoom)	

DMX CHANNEL	20	Parameter: PRISM ROTATION/INDEX
DMX value	Function	
000-127	Proportional index 0°-360°	
128-186	Left rotation from fast to slow	
187-196	Stop	
197-255	Right rotation from slow to fast	

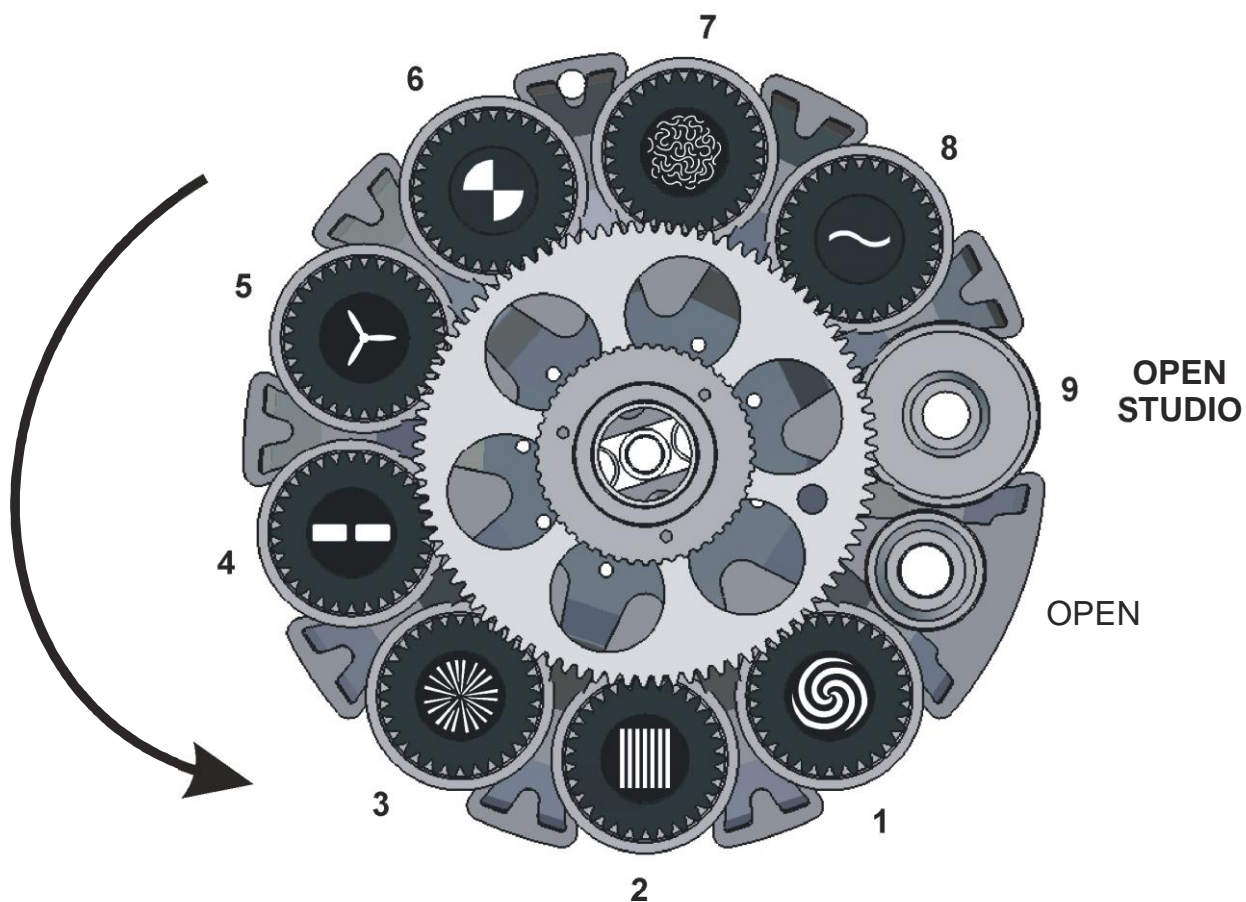
DMX CHANNEL	21	Parameter: DYNA PRISM
DMX value	Function	
000-255	Dyna prism linear position	

DMX CHANNEL	22	Parameter: FOCUS
DMX value	Function	
000-255	Linear focus	

DMX CHANNEL	23	Parameter: ZOOM
DMX value	Function	
000-255	Linear zoom	

DMX CHANNEL	24	Parameter: RESET + LAMP
DMX value	Function	
000-009	No effect	
010-060	Lamp OFF (3 sec)	
061-129	No effect	
130-179	Lamp ON (3 sec)	
180-200	No effect	
201-239	Internal motor reset	
240-255	Total reset	

22- ROTATING GOBO WHEEL



GOBO 1 DICRO



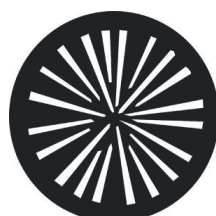
D.T.S. Code:
0516G097

GOBO 2 DICRO



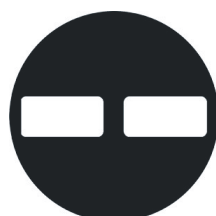
D.T.S. Code:
0516G098

GOBO 3 DICRO



D.T.S. Code:
0516G099

GOBO 4 DICRO



D.T.S. Code:
0516G100

GOBO 5 DICRO



D.T.S. Code:
0516G101

GOBO 6 DICRO



D.T.S. Code:
0516G103

GOBO 7 DICRO



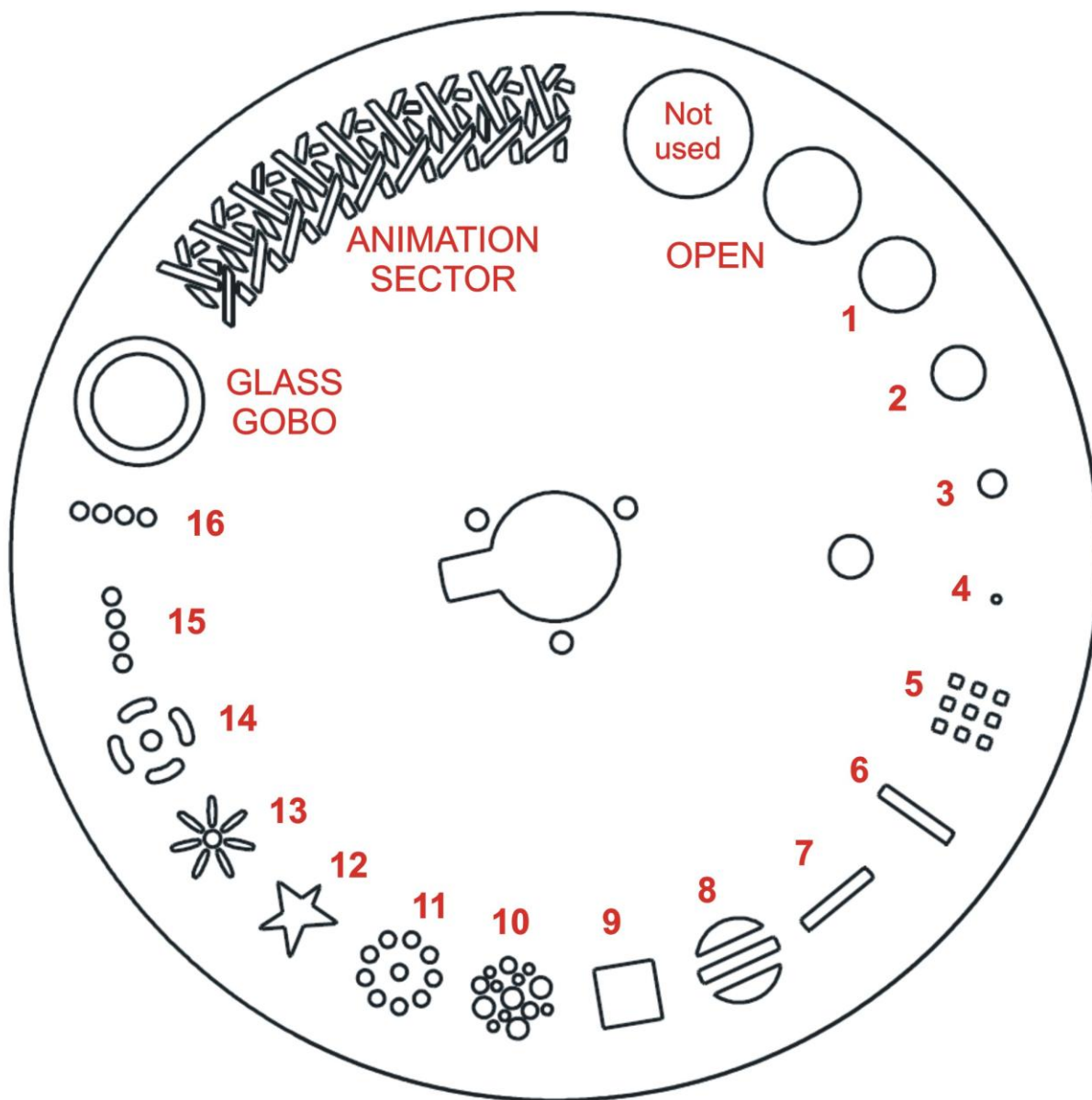
D.T.S. Code:
0516G102

GOBO 8 DICRO

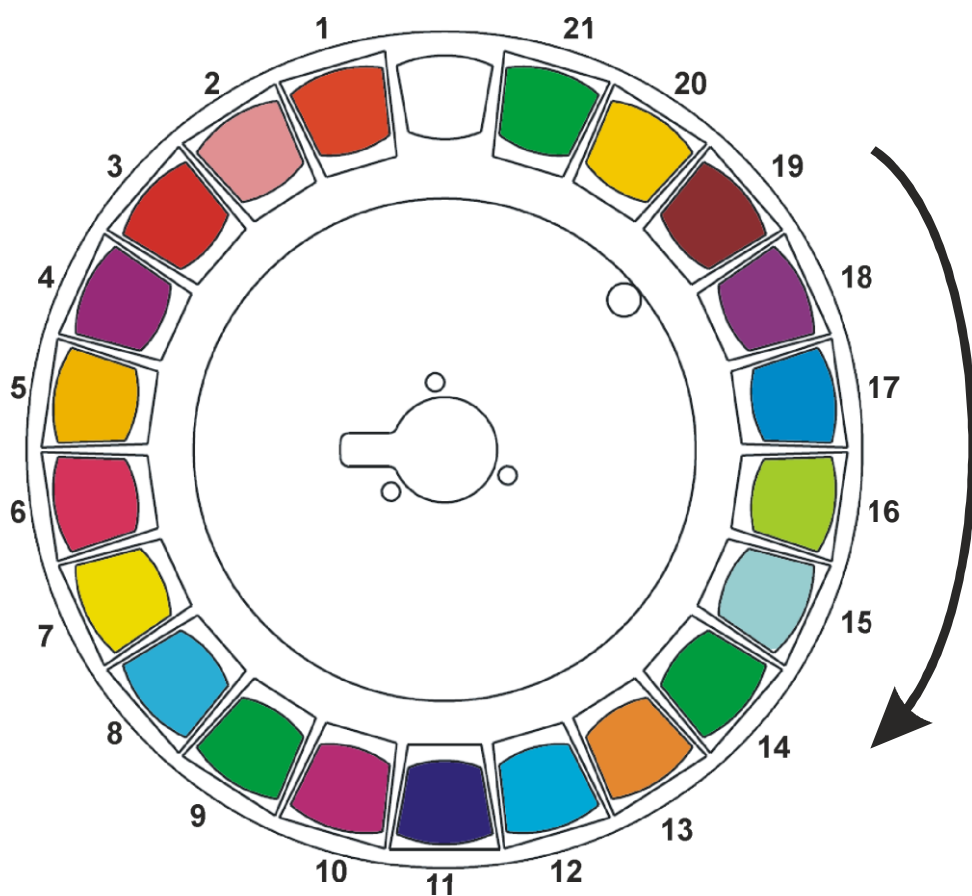


D.T.S. Code:
0516G106

23- FIXED GOBO WHEEL



24- COLOUR WHEEL



COLOUR 1  ORANGE 0507C063.D14	COLOUR 2  LIGHT PINK 0507C058.D14	COLOUR 3  LIGHT RED 0507C062.D14	COLOUR 4  PURPLE 0507C082.D14	COLOUR 5  FULL CTO FILTER 0507C061.D14	COLOUR 6  PINK 0507C071.D14	COLOUR 7  YELLOW 2 0507C066.D14
COLOUR 8  LIGHT BLUE 0507C075.D14	COLOUR 9  LIGHT GREEN 0507C073.D14	COLOUR 10  MAGENTA 0507C074.D14	COLOUR 11  BLUE 0507C070.D14	COLOUR 12  FULL CTB FILTER 0507C060.D14	COLOUR 13  AMBER 0507C064.D14	COLOUR 14  DARK GREEN 0507C067.D14
COLOUR 15  HALF CTB 0507C085.D14	COLOUR 16  LIME 0507C081.D14	COLOUR 17  DEEP BLUE 0507C077.D14	COLOUR 18  AMETHYST 0507C078.D14	COLOUR 19  RED 0507C059.D14	COLOUR 20  YELLOW 1 0507C065.D14	COLOUR 21  GREEN 0507C068.D14

NOTES

NOTES

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The Lighting Company

ISO 9001:2008

D.T.S. quality system
is certified to the
ISO 9001:2008 standard



D.T.S. products are designed
and manufactured at the D.T.S.
plants in Italy



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