CORE





User's Manual rel 1.1 GB

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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 "RADIATION FROM LAMP CAN CAUSE DAMAGE TO EYES AND SKIN"



THIS SYMBOL MEANS "SUITABLE FOR INDOOR USE ONLY"



THIS SYMBOL MEANS "SUITABLE FOR MOUNTING ON NORMALLY FLAMMABLE SURFACES"



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



THIS SYMBOL MEANS "DO NOT STARE AT THE OPERATING LIGHT SOURCE"



THIS SYMBOL INDICATES PHOTOBIOLOGICAL SAFETY



THIS SYMBOL INDICATES THE EUROPEAN COMMUNITY DIRECTIVE 2012/19/EC ON WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

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 household 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.



WARNING! MINIMUM DISTANCE FROM THE OBJECTS AND THE PEOPLE

The projector needs to 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.



WARNING! NEVER EXPOSE THE FRONT LENS TO SUNLIGHT FROM ANY ANGLE TO AVOID DAMAGE OF HEAD INTERNAL PARTS.

Front lens could become powerful magnifying glass if exposed towards the sun; this can cause damage of head internal parts, even for few seconds and even when the unit is off.

The last command before switch off: point the front lens down towards the ground.

3- GENERAL WARRANTY CONDITIONS

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

4- TECHNICAL FEATURES

Overview

CORE is a powerful and compact discharge moving head.

SPOT and BEAM all in one with the fastest effects ever seen.

CORE is versatile: thanks to its 440W SIRIUS HRI Lamp, CORE is perfect in a range of applications, from TV studios to live concerts.

All this in only 22 Kg.

DTS Product Code:

03.MS018.L CORE Black finish

Lamp

Osram SIRIUS HRI 440W (24.000 Lumens)

Colour temperature: 7000K

CRI: 80

Remote lamp On-Off

Average lamp life: 1.500 hrs

Optical group

Improved optical group:

1.530.000 Lux at 5 m

16-bit motorized wide-excursion linear zoom

Beam opening: 2° - 39°

16-bit motorized linear focus

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

Frost filter

Colour generation

16-colour wheel

Two-tone generation

Dynamic effects

Overlapping wheels for multiple effects:

Customizable rotating gobo wheel (9 gobos)

Fixed gobo wheel (17 gobos + Animation sector + Open)

8-facet 22° rotating prism

Interface / Control / Programming

Auto flip LCD graphic display + 4 soft-keys (control / management / monitoring of the main parameters)

RDM

Updatable internal operating system

DMX

24 DMX channels (default) or 18 DMX channels

Pan & Tilt

Pan 540°: 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

Full range 100-240Vac 50-60 Hz Power consumption: 600W with PFC

Power saving mode (the lamp dims to 80% after shutter closure)

Connection

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

Power supply: PowerCon In/Out panel connectors

Operating ambient temperature

-10° / 40°

Internal safety devices

Overvoltage circuit protection and overtemperature circuit protection

International certifications

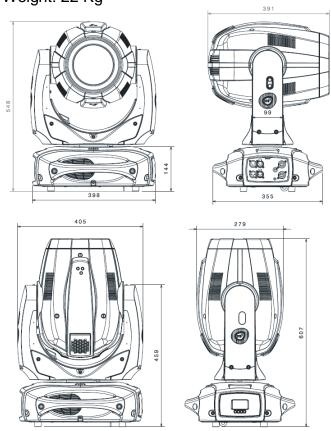
EN 60598-1: 2015 EN 60598-2-17: 1989

A2: 1991

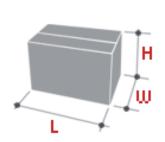
Conforms to UL Std. 1573; Cert. to CSA Std. C22.2 No.166.

Dimensions

Unit Dimensions (LxWxH) 405 x 391 x 607 mm Weight: 22 Kg



Packaging Dimensions (LxWxH) 665 x 510 x 525 mm Weight: 25 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 0508B148)
- * 1 x XLR 5 Pins female cable connector (Code 0508B147)
- * 2 x Omega clamp with "Fast Lock" connection 1/4 turn (Code 02K00549)
- * 1 x User's manual

Optional (on request)

- Aliscaf clamp for tube diameter 50 mm (max. load 100Kg) (Code 0521A008)
- Safety cable (3mm x 60 cm), max. capacity load 60Kg (Code 0521A010)

6- IMPORTANT SAFETY INFORMATION

6.1 Fire prevention:

- CORE 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. V 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. (15 m)

-Replace any blown or damaged fuses only with those of identical value (T 8A 250V). 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 CORE requires the assistance of specialised personnel for all servicing. Please refer to an authorised DTS 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:







CAUTION. Do not look directly into the light output and do not view the light beam with optical instruments or any device that may concentrate the beam.

May be harmful to the eyes and skin.

-Do not stare at the operating light source.



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

Suitable for indoor use only.

6.6 Waste Electrical and Electronic Equipment (WEEE) directive:

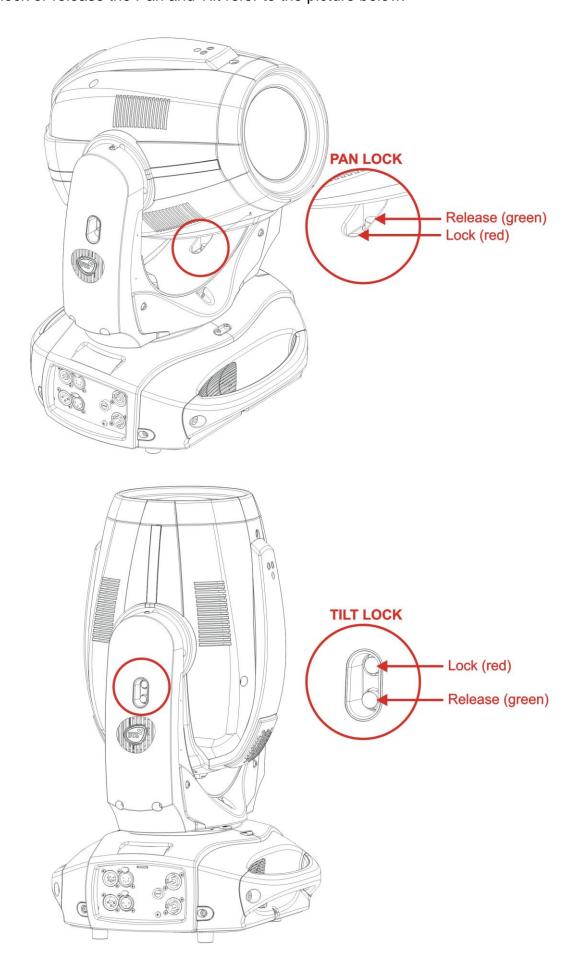


- The projector, accessories and packaging should be sorted for environmental-friendly recycling.

For EC countries: according to the European Directive 2012/19/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.

7- PAN / TILT LOCK

When moving or servicing the unit you can apply the Pan and Tilt Lock. To lock or release the Pan and Tilt refer to the picture below.



8- MOUNTING / REPLACING THE LAMP



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.

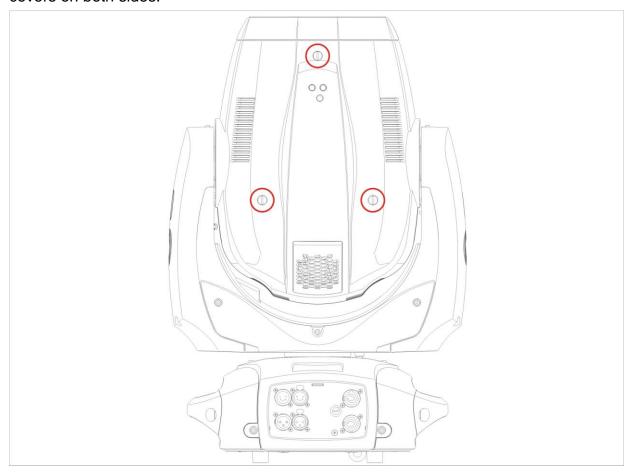


REPLACEMENT LAMP (D.T.S. Code 0505S039):

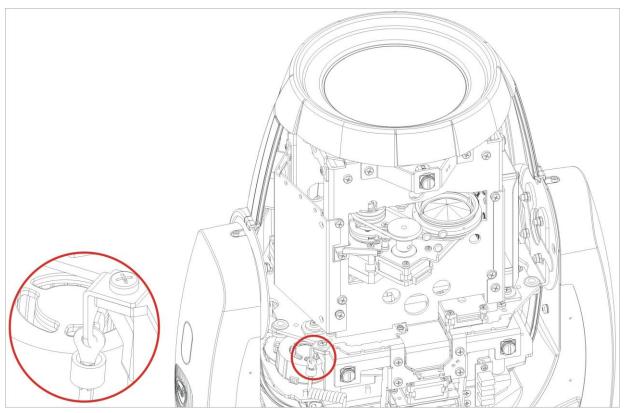
Osram SIRIUS HRI Power 440W Luminous flux 24.000 lm Colour temperature 7000K CRI: 80 Rated life 1.500 hours

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

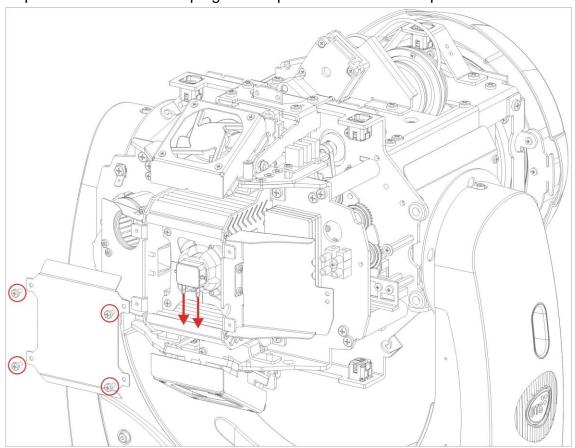
1) Using a flat bladed screwdriver loose the 3 $^{\circ}\!\!\!/_{\!\!4}$ turn" screws which fix the head covers on both sides.



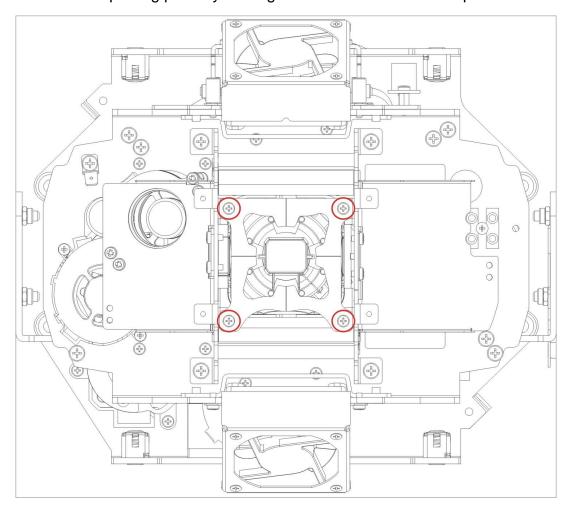
2) Lift each cover and unhook its safety wire to access the internal head components.



3) Using a phillips screwdriver, loose the marked 4 screws which fix the lamp rear metal plate and remove it. Unplug the lamp cables from the lamp faston terminals.

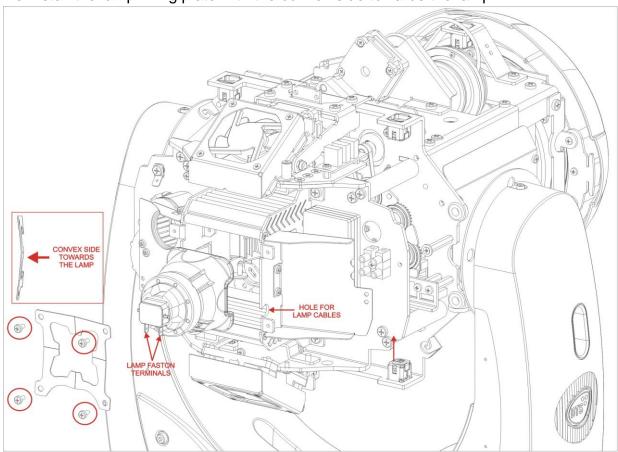


4) Remove the lamp fixing plate by loosing the 4 marked screws and pull out the lamp.

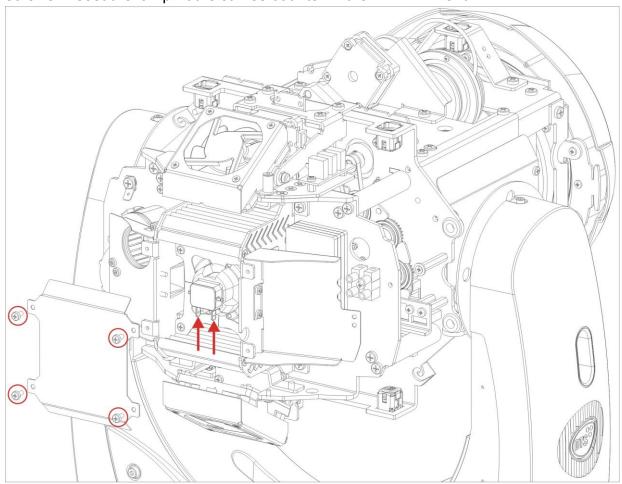


5) Put in place the new lamp orientated with its faston terminals towards the hole for lamp cables as showed in the picture.

Re-install the lamp fixing plate with the convex side towards the lamp.



6) Re-connect the lamp cables and re-install the rear metal plate by fixing the 4 screws. Reset the lamp hours/strikes counter in the "LAMP" menu.

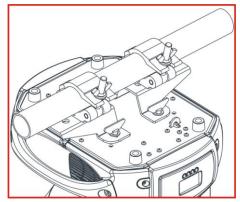


9- VOLTAGE AND FREQUENCY

CORE operates at 100-240Vac 50-60 Hz.

10- INSTALLATION

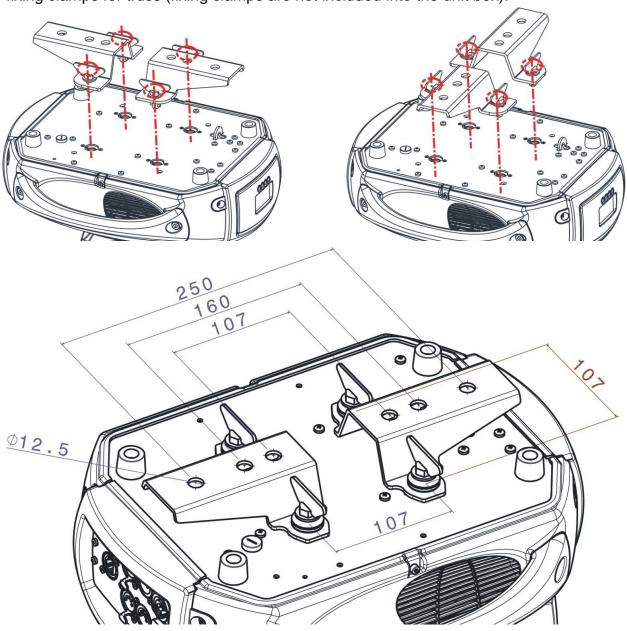
The unit is suitable for dry locations only. CORE may be either floor or ceiling mounted. For floor mounting installations, CORE is supplied with four rubber mounting feet on the base. For ceiling mounted installations, we recommend the use of appropriate clamps to fix the unit to the mounting surface.



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.

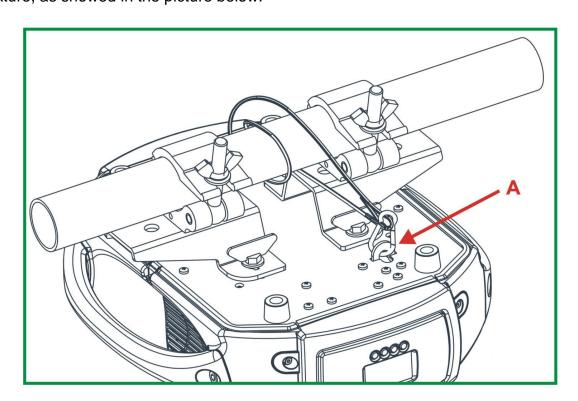
The structure should also be sufficiently rigid so as not to move or shake whilst the CORE is moving.

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





A safety cable must be securely fixed to the CORE and to the suspension truss in order to avoid the fixture accidentally falling should the main fixing point fail. Make sure that the safety cable or chain can bear the weight of the entire unit. A suitable safety cable (code 0521A010) is available on demand. You may attach the safety cable to the attachment point (A) located on the base of the fixture, as showed in the picture below.



10.2 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.

10.3- Movement

Pan 540°: 1.56 sec.; Tilt 270°: 1,5 sec.

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



10.4- 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. 15 m

10.5- 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.

10.6- Ambient temperature

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

11- MAINS CONNECTION

CORE operates at 100-240Vac 50-60 Hz.

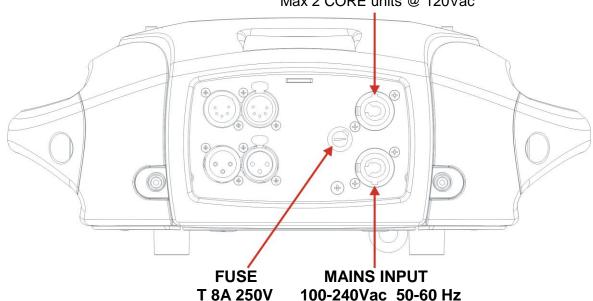
Prior to connecting the unit to your mains supply, ensure that the model in your possession correctly matches the mains supply available.

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 100-240Vac 50-60 Hz (16A Max)

Max 4 CORE units @ 230Vac Max 2 CORE units @ 120Vac





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

12- 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 Ø 0.5 mm cable and a XLR 5 or 3 pins connector.

Ensure that the conductors do not touch each other.

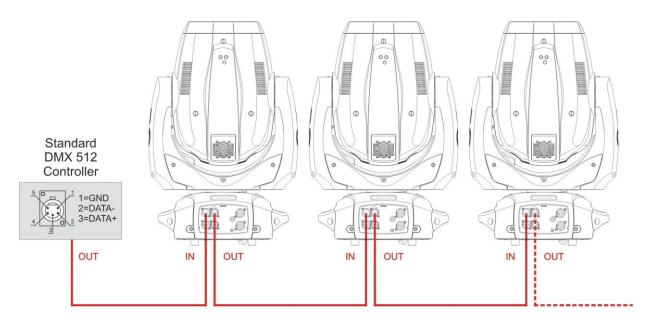
Do not connect the cable ground to the XLR chassy.

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. <u>If the display showing the DMX address flashes, then one of the following errors</u> has occurred:

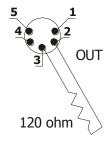
- DMX signal not present
- DMX address not valid
- DMX reception problem



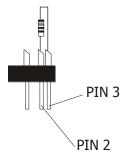
For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.

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 XRL CONNECTOR AND PLUG IT INTO THE DMX OUT PANEL CONNECTOR OF THE LAST UNIT CONNECTED TO THE DMX LINE



12.1-DMX Addresses

CORE can be used in 2 different DMX modes: 24 DMX control channels (Default) or 18 DMX control channels.

Here below is described the DMX channels addressing for the controller when CORE is set to 24 and 18 DMX control channels:

24 channels mode (Default)

Projector 1	A001	
Projector 2	A025	If you want to select the next projector, just add "24"
Projector 3	A049	
	A	
projector 6	A121	
18 channels	<u>mode</u>	
Projector 1	A001	
Projector 2	A019	If you want to select the next projector, just add "18"
Projector 3	A037	
	A	
projector 6	A091	

12.2-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.

13- FIRMWARE UPDATING

Warning:

This procedure requires a base knowledge of computer application.

Please refer to an authorised D.T.S. service centre.

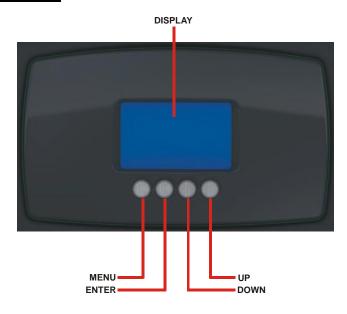
To update the software version of CORE you need:

- 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 CORE 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.

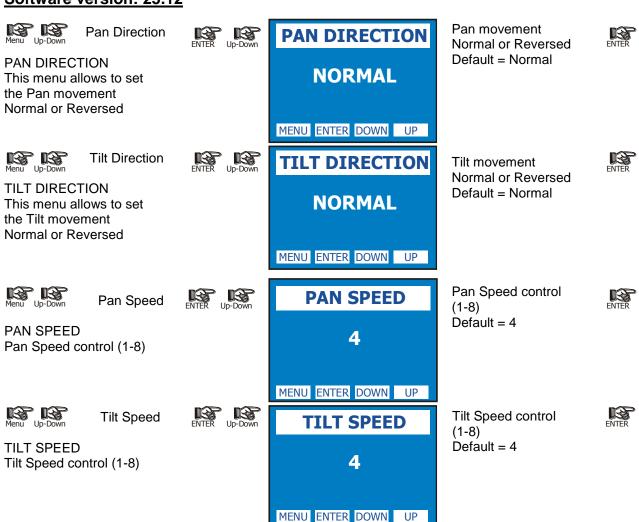


DISPLAY FUNCTIONS

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: 23.12





Display





DISPLAY FLIP / STAND BY / CONTRAST

Display Flip:

Reverses display's reading depending on the mounting position

(Automatic, 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

AUTO

MENU ENTER DOWN UP

Display Flip AUTO (Default) ON THE GROUND SUSPENDED



DISPLAY

STANDBY

OFF

MENU ENTER DOWN UP

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



DISPLAY

CONTRAST

25

MENU ENTER DOWN UP

Display Contrast 1-40 (Default = 25)

18 channels





DMX Mode



ENTER Un-Down



DMX MODE





DMX MODE

To select DMX mode:

24 channels (Default) or 18 channels



MENU ENTER DOWN UP



LAMP

Lamp always ON, Lamp always OFF, lamp ON-OFF selectable via DMX and 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.



BY DMX

MENU ENTER DOWN UP

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



LAMP

ADJUST

MENU ENTER DOWN UP

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



Menu Up-Down

Reset







RESET

Reset via DMX ENABLED / DISABLED and unit motors reset



ENABLED



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





Gobo Rotation





GOBO ROTATION

Gobo rotation during gobo scrolling for rotating gobo wheel



OFF = Default ON



NTER



Focus



FOCUS FINE

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

AUTOFOCUS Automatic focusing

FOCUS FOCUS FINE RANGE CTRL 5%

MENU ENTER DOWN UP

FOCUS AUTOFOCUS ON MENU ENTER DOWN UP **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 ON = Default OFF



WIRELESS

Wireless

Wireless DMX enabled / disabled.

(Wireless module on request)





WIRELESS

OFF

MENU ENTER DOWN UP

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

(Wireless module on request)





R. Gobo Speed



R. GOBO SPEED

FASTEST

MENU ENTER DOWN UP

Fastest speed (Default) or Fast speed



ROTATING GOBO SPEED

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



System Info





UNIT LIFE: 0099H 51 °C 10M R.11 RDM: 0001011C PT R.06 **MODEL: CORE**



SYSTEM INFO

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

monitor and unit model





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











Reserved

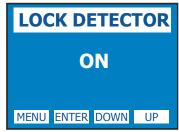


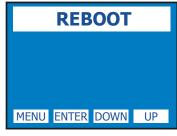


RESERVED (Code = 100) Pan lock-Tilt lock Pan free-Tilt free Lock Detector Reboot Exit To Main









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

Lock Detector OFF
Lock Detector ON (Default):
This function lets 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 flight case and power
connected), it automatically will

on unit display .

Reboot = Unit Reboot without needing of turning OFF the unit

stop to reset Pan&Tilt motors

locked-Tilt locked) will appear

after 5 seconds from the startup and a warning message (Pan

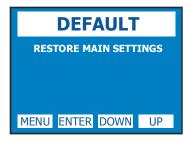
Exit To Main = Exit from



Default



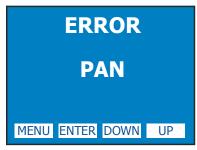
DEFAULT
To restore main settings



Default
To restore main settings



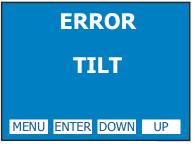
15- ERROR MESSAGES



PAN ENCODER REPOSITIONING ERROR

ERROR PAN LOCKED MENU ENTER DOWN UP

PAN MOTOR LOCKED



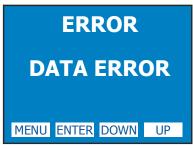
TILT ENCODER REPOSITIONING ERROR



TILT MOTOR LOCKED



DMX ADDRESS SETTING ERROR



PARAMETERS STORAGE PROBLEM



COMMUNICATION PROBLEM BETWEEN THE 10 MOTORS BOARD AND THE PAN&TILT BOARD

ERROR BUS AUX FANS MENU ENTER DOWN UP

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



COLOUR WHEEL POSITION ERROR



FIXED GOBO WHEEL POSITION ERROR

ERROR
GOBO

MENU ENTER DOWN UP

ROTATING GOBO WHEEL POSITION ERROR



ROTATING GOBOS INDEX POSITION ERROR

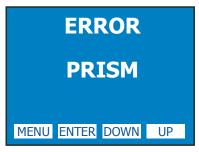
15- ERROR MESSAGES



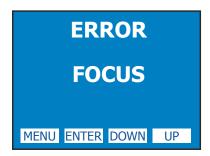
SHUTTER BLADE POSITION ERROR



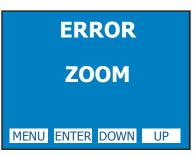
PRISM INDEX POSITION ERROR



PRISM POSITION ERROR



FOCUS LENS POSITION ERROR



ZOOM LENS POSITION ERROR

16- 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



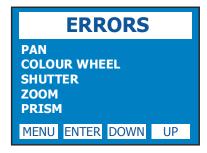
FANS SETTING MENU



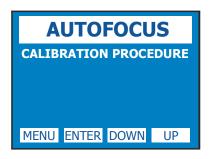
FANS / POWER SETTINGS MENU



RESET HEAD MOTORS ONLY, PAN AND TILT OR ALL MOTORS



SHOW ERROR LIST IN MEMORY



AUTOFOCUS CALIBRATING WIZARD PROCEDURE



EXIT FROM HIDDEN MENU

16.1 Calibration mode

CALIBRATION

MOTORS ALIGNMENT

PAN

127

MENU ENTER DOWN UP

PAN ALIGNMENT To align Pan position **CALIBRATION**

MOTORS ALIGNMENT

TILT

145

MENU ENTER DOWN UP

TILT ALIGNMENT To align Tilt position **CALIBRATION**

MOTORS ALIGNMENT

DIMMER ZERO

81

MENU ENTER DOWN UP

DIMMER ZERO ALIGNMENT Dimmer blade zero position setting **CALIBRATION**

MOTORS ALIGNMENT DIMMER PATH

86

MENU ENTER DOWN UP

DIMMER PATH ALIGNMENT Dimmer blade max excursion calibration

CALIBRATION

MOTORS ALIGNMENT

SHUTTER ZERO

156

MENU ENTER DOWN UP

SHUTTER ZERO ALIGNMENT Shutter blade zero position setting **CALIBRATION**

MOTORS ALIGNMENT SHUTTER PATH

159

MENU ENTER DOWN UP

SHUTTER PATH ALIGNMENT Shutter blade max excursion calibration

CALIBRATION

MOTORS ALIGNMENT COLOUR WHEEL

128

MENU ENTER DOWN UP

COLOUR WHEEL ALIGNMENT

To align colour wheel

CALIBRATION

MOTORS ALIGNMENT

GOBO

128

MENU ENTER DOWN UP

To align rotating gobo wheel

ROT. GOBO WHEEL ALIGNMENT

CALIBRATION

MOTORS ALIGNMENT

GOBO INDEX

120

MENU ENTER DOWN UP

GOBO INDEX ALIGNMENT To adjust Gobo index position of

the Rotating gobos

CALIBRATION

MOTORS ALIGNMENT FIXED GOBO

129

MENU ENTER DOWN UP

FIXED GOBO WHEEL ALIGNMENT To align Fixed gobo wheel **CALIBRATION**

MOTORS ALIGNMENT FIXED G. 12 MM

190

MENU ENTER DOWN UP

FIXED GOBO 12 mm ALIGNMENT To align the 12 mm open gobo **CALIBRATION MOTORS ALIGNMENT**

FIXED G. GLASS

109

MENU ENTER DOWN UP

FIXED GOBO GLASS ALIGNMENT To align the fixed glass gobo

CALIBRATION

MOTORS ALIGNMENT SMOOTH ZERO

190

MENU ENTER DOWN UP

SMOOTH ZERO ALIGNMENT

Smooth blade zero position

setting

CALIBRATION MOTORS ALIGNMENT

SMOOTH 1 PATH

97

MENU ENTER DOWN UP

SMOOTH 1 PATH ALIGNMENT Smooth filter 1 max excursion settina

CALIBRATION

MOTORS ALIGNMENT

SMOOTH 2 PATH

181

MENU ENTER DOWN UP

SMOOTH 2 PATH ALIGNMENT

Smooth filter 2 max excursion

setting

settina

CALIBRATION MOTORS ALIGNMENT

SMOOTH 3 PATH

112

MENU ENTER DOWN UP

setting

SMOOTH 3 PATH ALIGNMENT Smooth filter 3 max excursion

CALIBRATION

MOTORS ALIGNMENT PRISM ZERO

168

MENU ENTER DOWN UP

CALIBRATION MOTORS ALIGNMENT

PRISM PATH

121

MENU ENTER DOWN UP

CALIBRATION

MOTORS ALIGNMENT FROST PATH

122

MENU ENTER DOWN UP

FROST PATH ALIGNMENT

Frost filter max excursion

CALIBRATION

MOTORS ALIGNMENT FOCUS ZERO

128

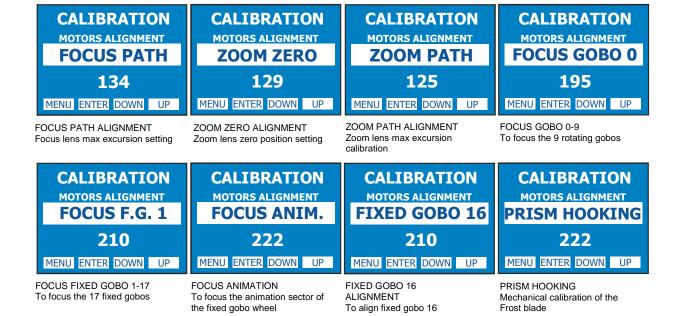
MENU ENTER DOWN UP

FOCUS ZERO ALIGNMENT Focus lens zero position setting

PRISM ZERO ALIGNMENT Prism zero position setting

PRISM PATH ALIGNMENT Prism max excursion setting

16.1 Calibration mode



17- PAN SPEED & TILT SPEED

You can set the Pan and Tilt motors at high speed on your CORE. 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.

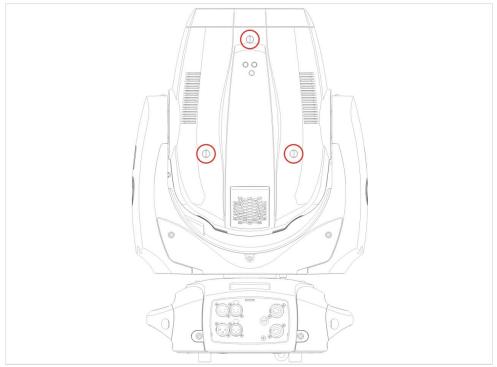
18- OPENING THE PROJECTOR HOUSING

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

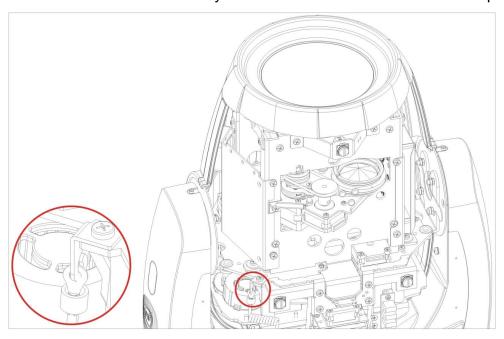


REMOVE MAINS POWER PRIOR TO ACCESSING THE PROJECTOR'S INTERNAL COMPONENTS.

1) Using a flat bladed screwdriver loose the 3 "1/4 turn" screws which fix the head covers on both sides.



2) Lift each cover and unhook its safety wire to access the internal head components.

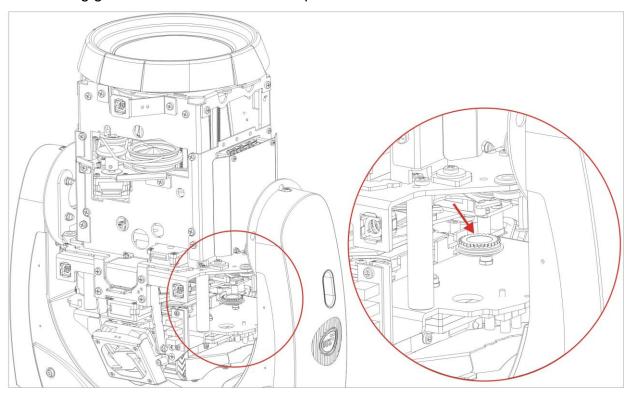


19- REMOVING / REPLACING THE ROTATING GOBOS

CORE 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 30 and pull out the gobo holder from the rotating gobo wheel as showed in the picture below.



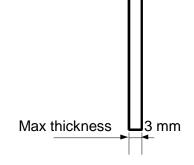
REPLACEMENT GOBOS

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

Gobo dimensions are as follows:

Rotating gobos

ø external (ED) = 13.9 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.

20- PERIODIC CLEANING

20.1- 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.

20.2- 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.

21- PERIODIC CONTROLS





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.

CORE 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 lubrification of all components, particularly the parts subject to high temperatures.

If necessary, lubrificate with suitable lubrificant, available from your DTS 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 CORE. Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type (T 8A 250V) if necessary.

22- DMX PROTOCOL

24 CHANNELS MODE (Default)

- 1 PAN msb
- 2 PAN Isb
- 3 TILT msb
- 4 TILT Isb
- 5 SPEED MOVEMENT
- 6 Reserved
- 7 DIMMER
- 8 SHUTTER
- 9 COLOUR
- 10 COLOUR MODE
- 11 GOBO
- 12 GOBO / PRISM MODE
- 13 GOBO ROTATION / INDEX PRISM ROTATION / INDEX
- 14 GOBO INDEX FINE
- 15 GOBO SHAKE
- 16 FIXED GOBO
- 17 FIXED GOBO SHAKE
- 18 EFFECTS
- 19 FROST
- 20 PRISM
- 21 FOCUS
- 22 FOCUS FINE
- 23 ZOOM

DMX CHANNEL

24 RESET + LAMP

4

DMX CHANNEL	1	Parameter: PAN msb
DMX CHANNEL	2	Parameter: PAN lsb
DMX CHANNEL	3	Parameter: TILT msb

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:	reserved
DMX value			Function
000-255	No ef	fects	

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

FULL COLOUR (if channel 10 "COLOUR MODE" = DMX range value 0-63)

DMX value	Function
000-014	Open
015-029	Colour 1
030-044	Colour 2
045-059	Colour 3
060-074	Colour 4
075-089	Colour 5
090-104	Colour 6
105-119	Colour 7
120-134	Colour 8
135-149	Colour 9
150-164	Colour 10
165-179	Colour 11
180-194	Colour 12
195-209	Colour 13
210-224	Colour 14
225-239	Colour 15
240-255	Colour 16

HALF COLOUR (if channel 10 "COLOUR MODE" = DMX range value 64-127)

DMX value	Function
000-013	Open
014-027	Colour 0-1
028-041	Colour 1-2
042-055	Colour 2-3
056-069	Colour 3-4
070-083	Colour 4-5
084-097	Colour 5-6
098-111	Colour 6-7
112-125	Colour 7-8
126-139	Colour 8-9
140-153	Colour 9-10
154-167	Colour 10-11
168-181	Colour 11-12
182-195	Colour 12-13
196-209	Colour 13-14
210-223	Colour 14-15
224-237	Colour 15-16
238-255	Colour 16-0

PROPORTIONAL COLOUR (if channel 10 "COLOUR MODE" = DMX range value 128-191)

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

RAINBOW (if channel 10 "COLOUR MODE" = DMX range value 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: 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
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	12	Parameter: GOBO/PRISM MODE	
	DMX value	Function		
	000-127	Gobo/	Gobo/Prism rotation mode	
	128-255	Gobo/Prism index mode		

DMX CHANNEL	13	Parameter: GOBO ROTATION/INDEX - PRISM
		ROTATION/INDEX

GOBO/PRISM ROTATION MODE

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

GOBO/PRISM INDEX MODE

DMX value	Function	
000-255	Gobo index coarse - Prism index coarse	

DMX CHANNEL	14	Parameter: GOBO INDEX FINE
DMX value		Function
000-255	Gobo	index fine

DMX CHANNEL	15	Parameter: GOBO SHAKE
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
243-255	Gobo	shake L-R speed 9

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

DMX CHANNEL	17 Parameter: FIXED GOBO SHAKE
DMX value	Function
000-009	Stop
010-126	Gobo shake R-L speed 1
017-023	Gobo shake R-L speed 2
024-030	Gobo shake R-L speed 3
031-037	Gobo shake R-L speed 4
038-044	Gobo shake R-L speed 5
045-051	Gobo shake R-L speed 6
052-058	Gobo shake R-L speed 7
059-065	Gobo shake R-L speed 8
066-072	Gobo shake R-L speed 9
073-079	Gobo shake R-L speed 10
080-086	Gobo shake R-L speed 11
087-093	Gobo shake R-L speed 12
094-100	Gobo shake R-L speed 13
101-107	Gobo shake R-L speed 14
108-114	Gobo shake R-L speed 15
115-126	Gobo shake R-L speed 16
127-138	Stop
139-145	Gobo shake L-R speed 1
146-152	Gobo shake L-R speed 2
153-159	Gobo shake L-R speed 3
160-166	Gobo shake L-R speed 4
167-173	Gobo shake L-R speed 5
174-180	Gobo shake L-R speed 6
181-187	Gobo shake L-R speed 7
188-194	Gobo shake L-R speed 8
195-201	Gobo shake L-R speed 9
202-208	Gobo shake L-R speed 10
209-215	Gobo shake L-R speed 11
216-222	Gobo shake L-R speed 12
223-229	Gobo shake L-R speed 13
230-236	Gobo shake L-R speed 14
237-243	Gobo shake L-R speed 15
244-255	Gobo shake L-R speed 16

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 smooth
101-255	Effect 4 frosted

DMX CHANNEL	19 Parameter: FROST
DMX value	Function
000-050	No effect
051-150	Frost inserted in black-out (in front of zoom)
151-255	Frost inserted in black-out (between focus and zoom)

DMX CHANNEL	20 Parameter: PRISM
DMX value	Function
000-050	No effect
051-150	Prism inserted (in front of zoom)
151-255	Prism inserted (between focus and zoom)

DMX CHANNEL	21	Parameter: FOCUS
DMX value		Function
000-255	Linea	r focus (0-95)%

DMX CHANNEL	22	Parameter: FOCUS FINE
DMX value		Function
000-255	Linea	r focus (95-100)%

DMX CHANNEL	23	Parameter: ZOOM
DMX value		Function
000-255	Linea	r 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)		
180-185	Autofocus OFF		
186-190	Autofocus ON		
191-200	No effect		
201-239	HEAD MOTORS reset		
240-255	Total reset (PAN TILT + HEAD MOTORS)		

22- DMX PROTOCOL

18 CHANNELS MODE

- 1 PAN msb
- 2 PAN Isb
- 3 TILT msb
- 4 TILT Isb
- 5 SPEED MOVEMENT
- 6 Reserved
- 7 DIMMER
- 8 SHUTTER
- 9 COLOUR
- 10 GOBO
- 11 GOBO ROTATION / INDEX PRISM ROTATION / INDEX
- 12 FIXED GOBO
- 13 EFFECTS
- 14 FROST
- 15 PRISM
- 16 FOCUS
- 17 **ZOOM**
- 18 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	Stand	lard
011-025	Fast	movement
026-127	Vecto	r mode from fast to slow
128-247	Varia	ble time reaction to dmx signal (fast to slow)
248-255	Silen	t movement

DMX CHANNEL	6	Parameter: reserved
DMX value		Function
000-255	No ef	fects

DMX CHANNEL	7	Parameter: DIMMER
DMX value		Function
000-007	Black	-out
008-255	Propo	rtional 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
000-004	Open
005-009	Colour 0-1
010-014	Colour 1
015-019	Colour 1-2
020-024	Colour 2
025-029	Colour 2-3
030-034	Colour 3
035-039	Colour 3-4
040-044	Colour 4
045-049	Colour 4-5
050-054	Colour 5
055-059	Colour 5-6
060-064	Colour 6
065-069	Colour 6-7
070-074	Colour 7
075-079	Colour 7-8
080-084	Colour 8
085-089	Colour 8-9
090-094	Colour 9
095-099	Colour 9-10
100-104	Colour 10
105-109	Colour 10-11
110-114	Colour 11 Colour 11-12
115-119	Colour 12
120-124 125-129	Colour 12-13
130-134	Colour 13
135-139	Colour 13-14
140-144	Colour 14
145-149	Colour 14-15
150-154	Colour 15
155-159	Colour 15-16
160-164	Colour 16
165-197	Colour 16-0
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: 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
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	Parameter: GOBO ROTATION/INDEX - PRISM ROTATION/INDEX
DMX value	Function
000-127	GObo/Prism proportional index 0°-360°
128-180	Gobo Left rotation (max to min) - Prism Right rotation (max
	to min)
181-202	Stop
203-255	Gobo Right rotation (min to max) - Prism Left rotation (min to max)

1	
DMX CHANNEL	12 Parameter: FIXED GOBO
DMX value	Function
000-010	Open 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	13 Parameter: SMOOTH
DMX value	Function
000-010	No effect
011-050	Effect glass 1
051-090	Effect glass 2
091-100	Effect glass 3 smooth
101-255	Effect 4 frosted

DMX CHANNEL	14 Parameter: FROST
DMX value	Function
000-050	No effect
051-150	Frost inserted in black-out (in front of zoom)
151-255	Frost inserted in black-out (between focus and zoom)

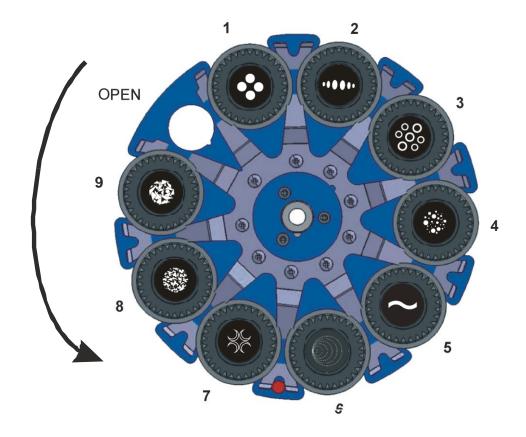
DMX CHANNEL	15 Parameter: PRISM
DMX value	Function
000-050	No effect
051-150	Prism inserted (in front of zoom)
151-255	Prism inserted (between focus and zoom)

DMX CHANNEL	16	Parameter: FOCUS
DMX value		Function
000-255	Linear	focus

DMX CHANNEL	17	Parameter: ZOOM	
DMX value	Function		
000-255	Linea	r zoom	

DMX CHANNEL	18 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)		
180-185	Autofocus OFF		
186-190	Autofocus ON		
191-200	No effect		
201-239	HEAD MOTORS reset		
240-255	Total reset (PAN TILT + HEAD MOTORS)		

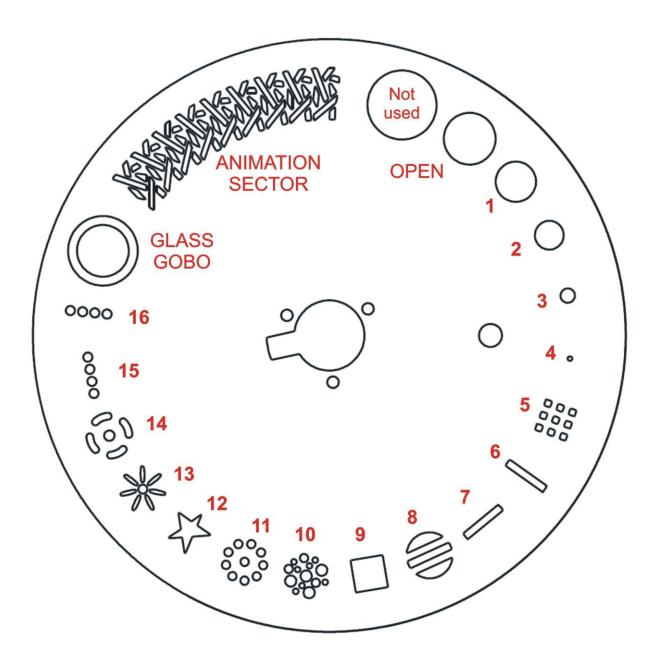
23- ROTATING GOBO WHEEL



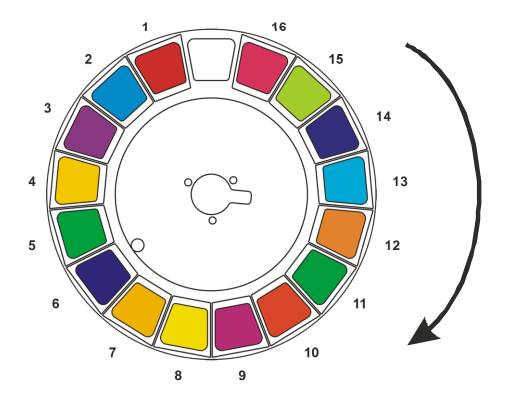




24- FIXED GOBO WHEEL



25- COLOUR WHEEL







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DESIGNED TO SHINE

ISO 9001:2008

DTS quality system is certified to the ISO 9001:2008 standard



DTS products are designed and manufactured at the DTS plants in Italy

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