

ALCHEMY 5



USER'S MANUAL rel. 1.5 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



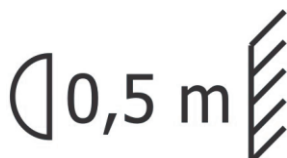
THIS SYMBOL INDICATES GENERAL RISK



THIS SYMBOL MEANS “SUITABLE FOR INDOOR USE ONLY”

t_a 45°C

THIS SYMBOL INDICATES THE MAXIMUM OPERATING AMBIENT TEMPERATURE



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

Risk Group 2



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



LiFePO4

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 household use and must be installed by a qualified electrician or experienced person.

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



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 or any strong artificial light source; 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.

The warranty covers defects in materials and workmanship. The warranty is not applicable where a defect is caused by misuse or unauthorised repair of the product.

Any functional or/and physical modification of the product is not allowed.

4- TECHNICAL FEATURES

DTS Product Code:

03.MW009 ALCHEMY 5

OUTPUT

- Multi-chip LED source
- 10.800 Lumen output
- CRI: up to 98
- TLCI: up to 96
- LED lifespan: 20.000 hours (70% lumen output)

OPTICAL GROUP

- 10° - 47° linear zoom
- Ø 250 mm Fresnel lens
- Beam shaper (2x1 ratio) with endless rotation; indexable
- 2 frost filters (light and heavy) insertable via DMX
- Retractable 'top hat'

COLOR GENERATION

- 6-color LED engine
- Linear CCT (1800K – 10000K)
- Linear 'Green saturation'
- 100 gel filters emulation:
 - Linear balance from gel filters emulation to white
 - Linear balance between gel filters emulation
 - True color of gel filters emulation at any CCT values
- Extra deep colors
- Color mixing by 6-color 'Advanced' mode
- Deep blue and Deep red filters (DMX-selectable)

DIMMER

- Hi-Q Dimming technology
- Tungsten emulation function (not yet implemented)

CONTROL

- Art-Net 4, sACN, RDM/DMX 512 protocols



Art-Net™ Designed by and Copyright Artistic Licence Holdings Ltd

- LCD graphic display + 4 soft keys; Auto-flip; Key-lock function
- 'Standard' and 'Silent' operation modes
 - Noise level at Silent mode: 37 dBA @ 1 m (normal operation, full power)
- Internal operating system updatable via DTS dongle firmware uploader
- Li-Fe backup battery for controlling the display settings even when the unit is not powered

DMX

- 5 DMX modes:
 - 1. CCT (default)
 - 2. Advanced
 - 3. Basic
 - 4. Expo
 - 5. CMY Emulation

PAN & TILT

- Pan 540° (3.8 sec.)
- Tilt 220° (2.1 sec.)
- 16-bit resolution
- Pan / Tilt lock

POWER SUPPLY

- Full-range 100-277Vac 50-60 Hz
- Power consumption: 450W max
- Power Factor: PF >0.90

CONNECTIONS

- Power supply: powerCON TRUE1 In/Out panel connectors
- DMX: XLR 3-pole and 5-pole In/Out panel connectors
- Art-Net / sACN: etherCON RJ45 panel connector

INTERNAL SAFETY DEVICES

Overvoltage and overtemperature circuits protection

OPERATING TEMPERATURE

-10° / 45°C

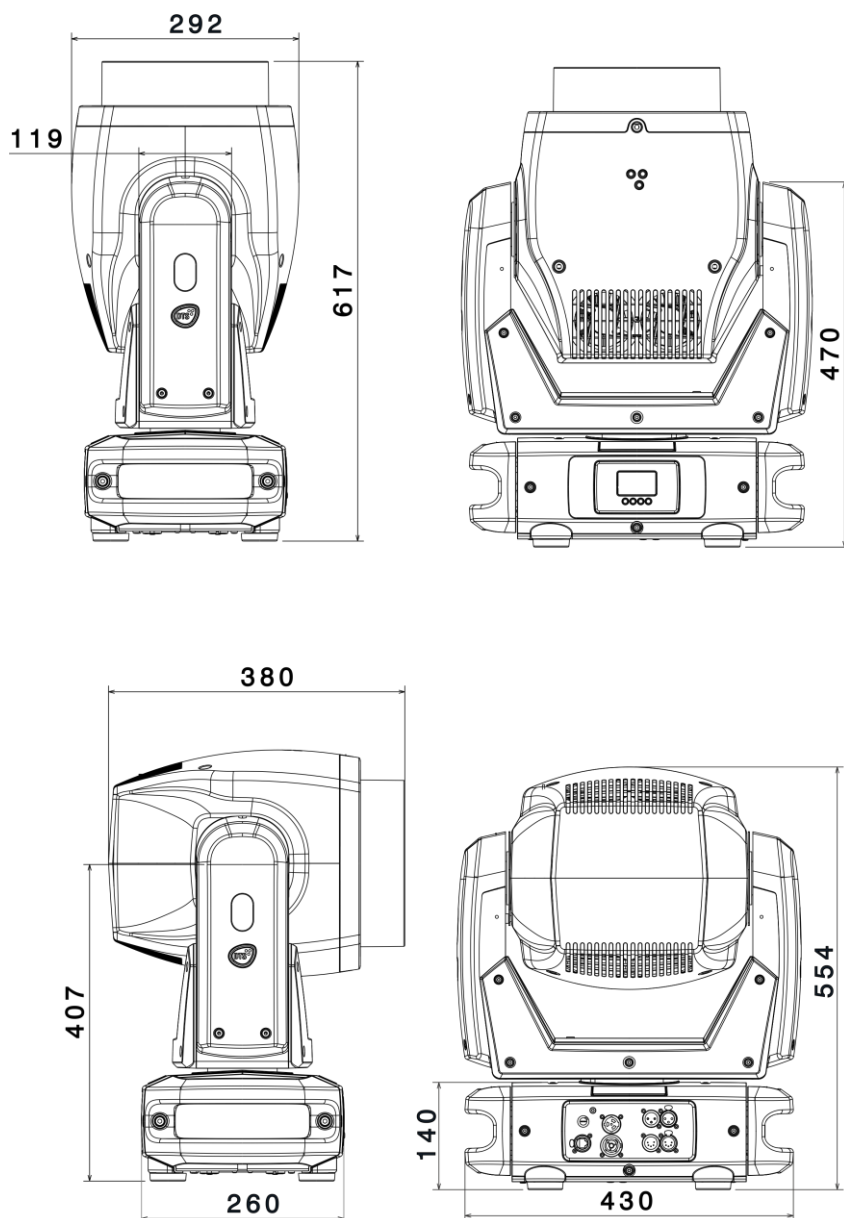
PHYSICAL

- IP20
- Weight: 26.5 Kg
- Finishing: Black

CERTIFICATIONS



DIMENSIONS



5- ACCESSORIES

As standard

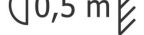
- 1 x Alchemy EZ-shell – 550x490x670 mm – 2 pcs needed in each flightcase (Code 0512K152.1)
- 1 x Cable with PowerCON TRUE1 female connector (Code 02K0012267.0015)
- 2 x Omega clamp with “Fast Lock” connection 1/4 turn (Code 02K00549)
- 1 x User’s manual

Optional (on request)

- Flightcase for 2 units (Code 0521C073)
- Aliscap clamp for tube diameter 48-51 mm (Max load 200 Kg) (code 0521A033)
(indicated for any kind of loads vertical / horizontal)
- Professional Quick trigger clamp (Max load 100 Kg) (code 0521A037) (not indicated for horizontal load)
- Safety cable 5 x 600 mm (Max load 60 Kg) (code 0521A038)
- DTS Dongle firmware uploader (code 03.LA.206)

6- IMPORTANT SAFETY INFORMATION

6.1 Fire prevention:

- Minimum distance from the objects and the people lit by the light beam: 0,5 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.
- The level of technology inherent in the ALCHEMY 5 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 Safety:



- Risk Group 2 product according to EN 62471.  Risk Group 2
- 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 luminaire should be positioned so that prolonged staring into the luminaire at a distance of 38,9 m is not expected.
- The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person.
- 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 50°C. Never handle the unit until at least 5 minutes have elapsed since the unit was turned off.
- Never install the fixture in an enclosed area lacking sufficient air flow. 

The ambient temperature should not exceed 45°C. t_a 45°C

6.4 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. 

6.5 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/EU 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.

6.6 Long-life auto-charging buffer battery:

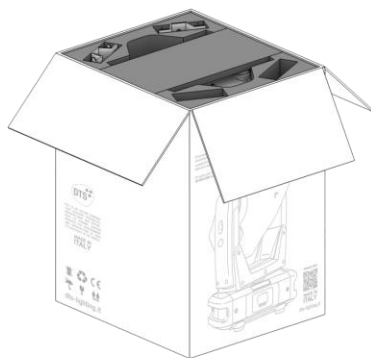


- The projector contains a rechargeable lead-acid or lithium iron tetraphosphate battery.
- To preserve the environment, please dispose the battery at the end of its life according to the regulation in force.

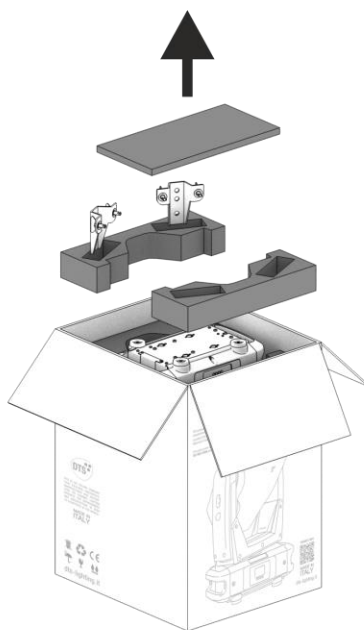
7- EZ-SHELL

How to reuse foam EZ-shell:

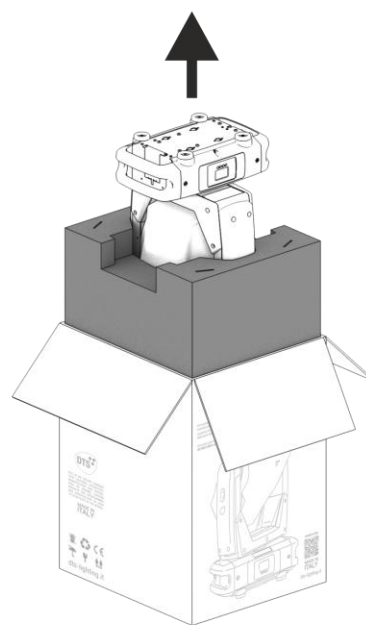
1) Open



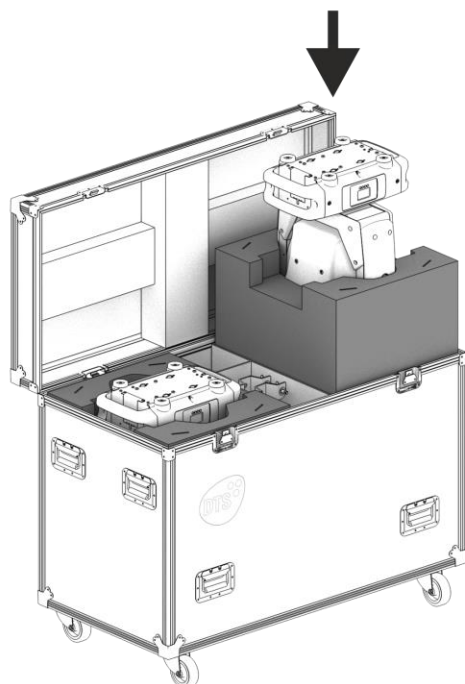
2) Extract cover and accessories



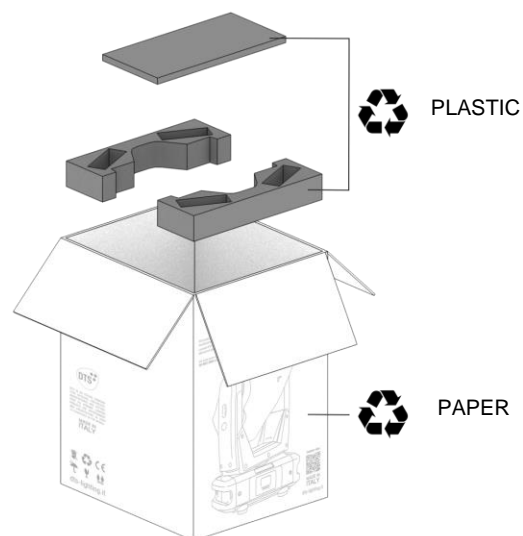
3) Extract unit and EZ-shell



4) Each flight case can contain 2 units and their EZ-shell



5) Don't forget to recycle



8- RETRACTABLE 'TOP HAT'

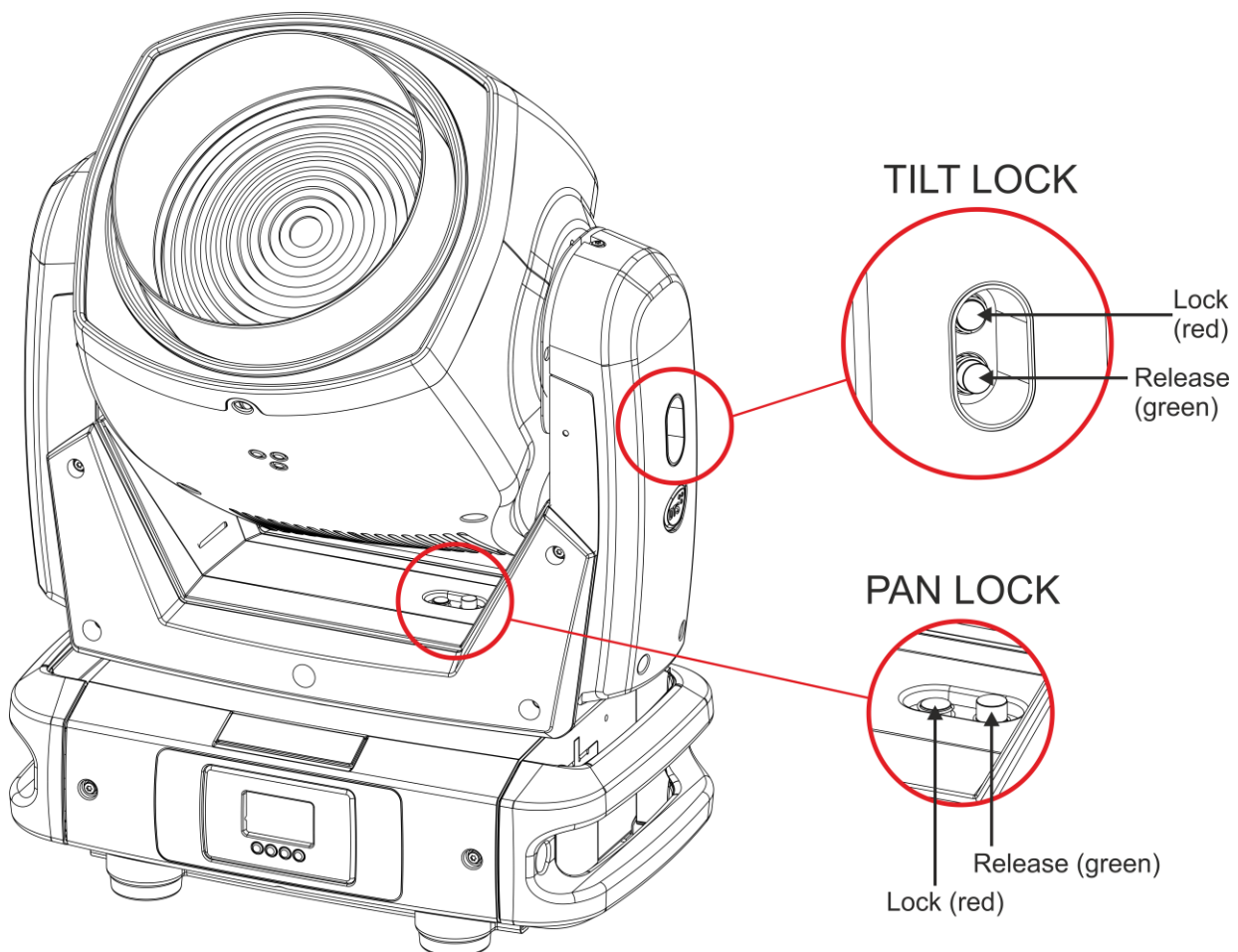
The Top hat retracts automatically when projector is switched off.



To prevent damage, DTS recommend to press for 2 seconds any display button to reset the Top hat position, before extracting the projector from the packaging.

9- 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.



10- VOLTAGE AND FREQUENCY

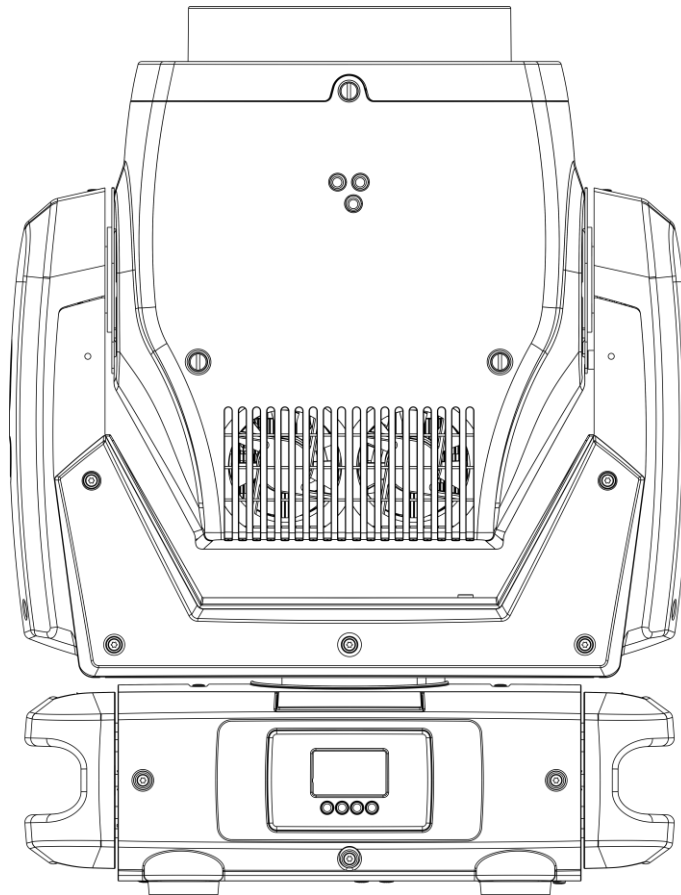
ALCHEMY 5 operates at 100-240Vac 50-60 Hz.

11- INSTALLATION

The unit is suitable for dry locations only.

ALCHEMY 5 may be either floor or ceiling mounted.

For floor mounting installations, ALCHEMY 5 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 ALCHEMY 5 is moving.

Four 1/4 turn Fast Locks connections placed in the base of the unit allow to hang the ALCHEMY 5 by using two Omega brackets (provided in the box) in conjunction with Aliscaf clamp (available on demand).

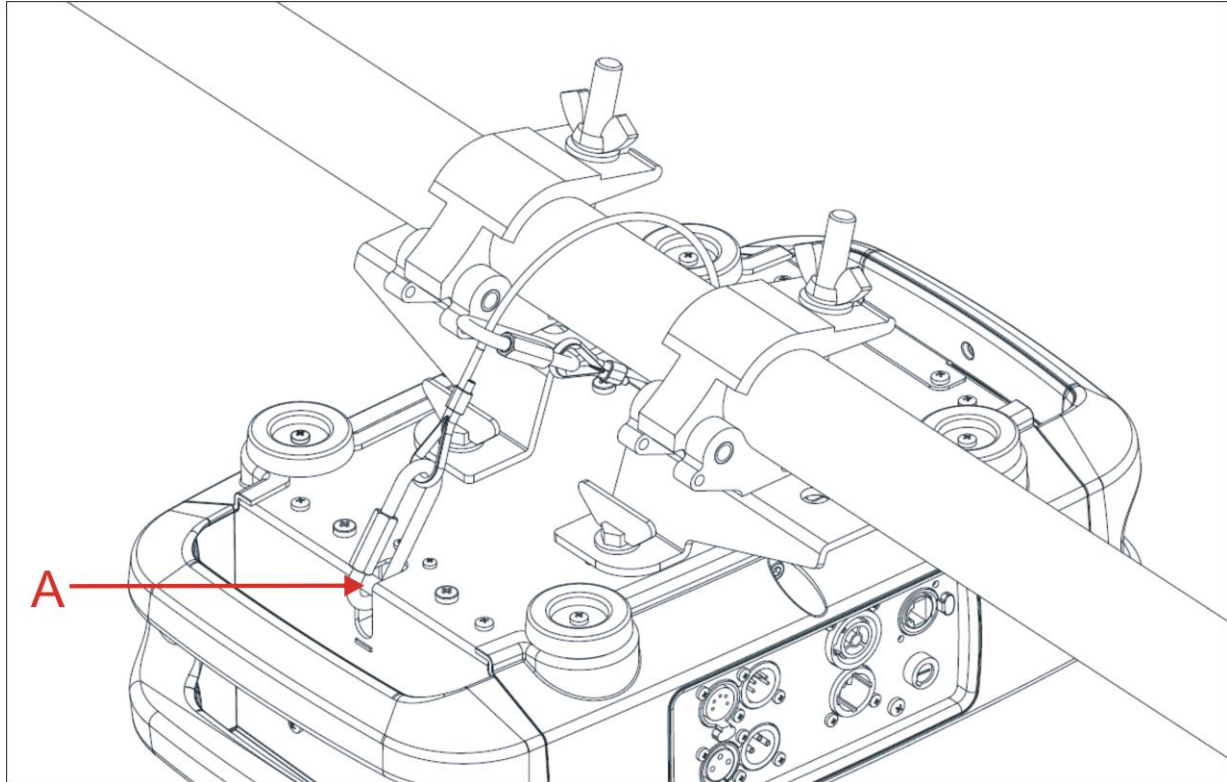
11.1- Safety cable

A safety cable must be securely fixed to the ALCHEMY 5 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 0521A038) is available on demand.

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



11.2 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.

11.3- Movement

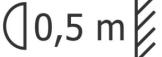
Pan: 540° rotation (3.8 sec.) ; Tilt: 220° rotation (2.1 sec.).

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



11.4- Risk of fire

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

Minimum distance from the objects and the people lit by the light beam: 0,5 m. 

11.5- 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.

11.6- Ambient temperature

The projector should never be installed in places that lack a constant air flow.

The ambient temperature should not exceed 45°C. t_a 45°C

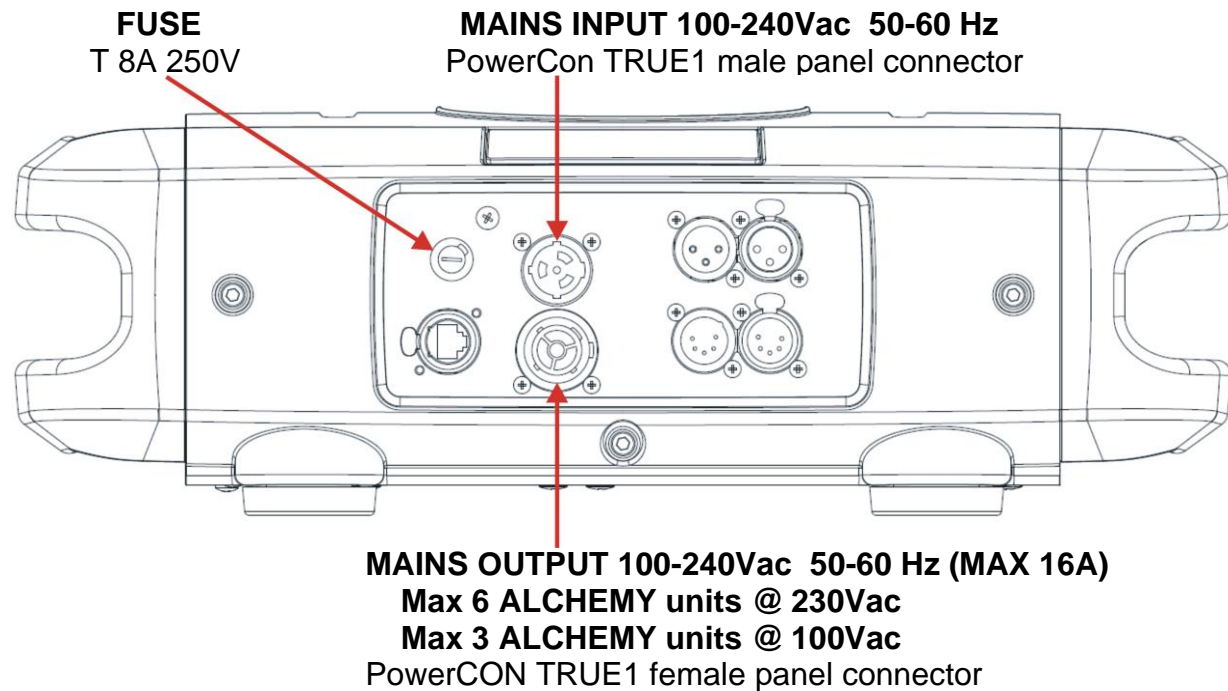
12- MAINS CONNECTION

ALCHEMY 5 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 2,5 amps at 230Vac or 5 amps at 100Vac each unit connected.

Strict adherence to regulatory norms is strongly recommended.



11.1- Protection



The use of a thermal magnetic circuit breaker is recommended for each ALCHEMY 5.

A good earth connection is essential for the correct operation of the projector.

13- 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.

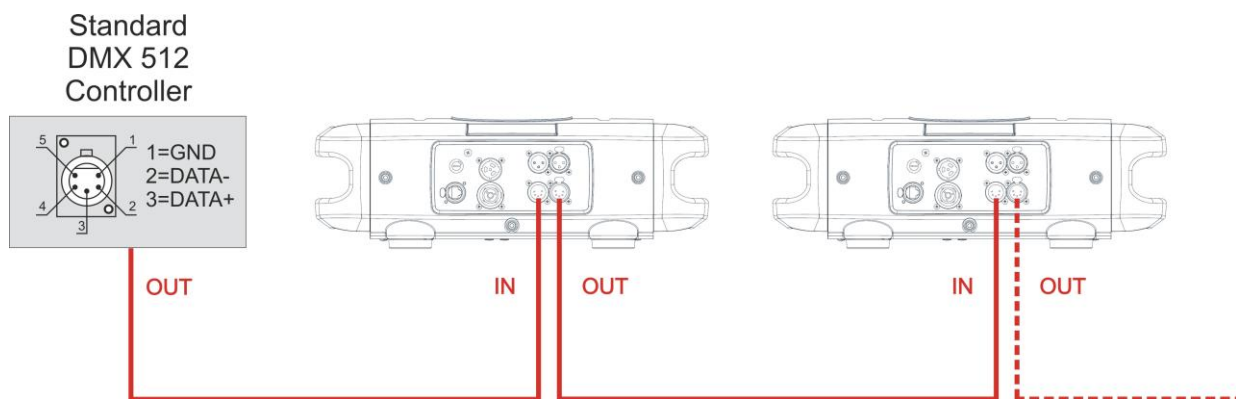
Do not connect the cable ground to the XLR chassy.

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:

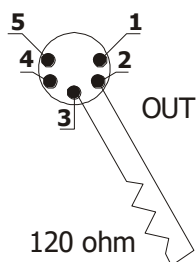
- DMX signal not present
- DMX address not valid
- DMX reception problem



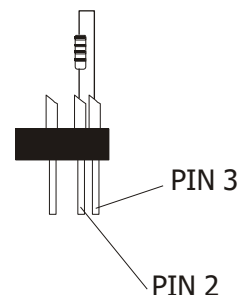
For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.

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



13.1-DMX Addresses

ALCHEMY 5 can be used in 5 DMX modes:

1. CCT (Default)
2. Advanced
3. Basic
4. Expo
5. CMY Emulation

In order to use the unit in “CCT” mode (20 DMX channels) (Default), set the following addresses on the mixer:

Projector 1 A001

Projector 2 A021

Projector 3 A041

..... A....

projector 6 A101

If you want to select the next projector, just add “20”

13.2-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.

14- Art-Net / sACN SIGNAL CONNECTION

The unit operates using the Art-Net / sACN signal.

Connection between the mixer and the projector must be carried out using a category 5 network cable and a standard RJ45 connector.

14.1-Direct Ethernet operation

For direct Ethernet operation connect the mixer Art-Net / sACN signal via Ethernet switch to each unit etherCON RJ45 input connector.

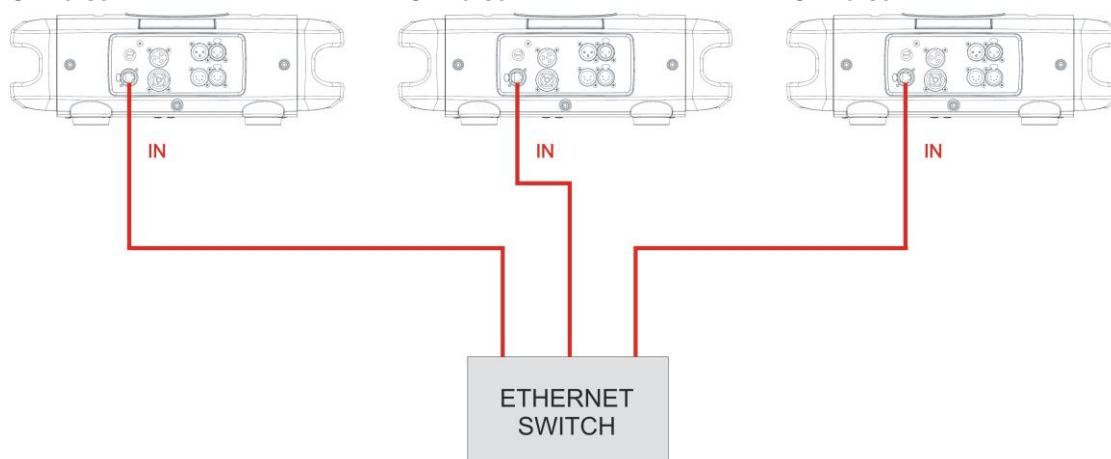
For each unit scroll till NETWORK menu (refer to DISPLAY FUNCTIONS for details):

- Select under INPUT menu “Art-Net” or “sACN” as input control signal.
- Select under IP ADDRESS MODE menu “Default” or “Static” mode.
- Select ETH TO DMX menu to OFF.
- Set the IP address and Net Mask. **IP address must be different for each unit on a network.**
- Set the Art-Net or sACN Universe.

DMX address: 1
IP address: 002.214.192.007
Universe: 1

DMX address: 45
IP address: 002.214.192.008
Universe: 1

DMX address: 89
IP address: 002.214.192.009
Universe: 1



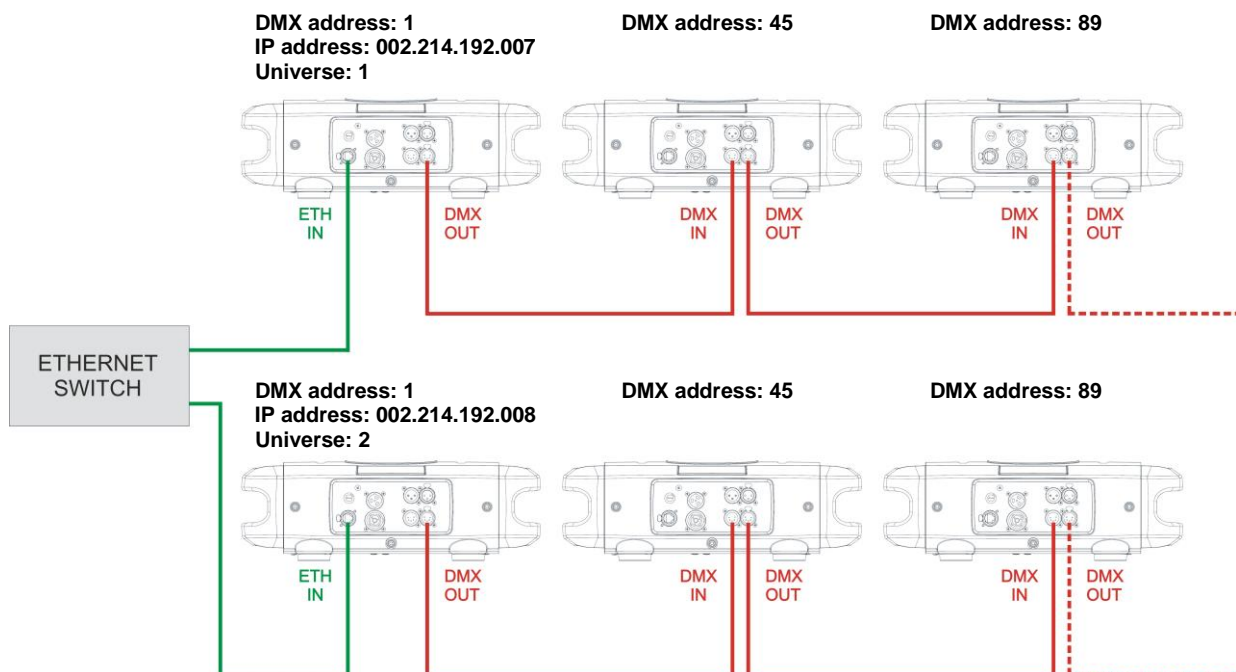
14.2-Ethernet to RDM/DMX operation

For Ethernet to RDM/DMX operation connect the mixer Art-Net / sACN signal via Ethernet switch to the etherCON RJ45 input connector of the first unit only. In this configuration the first unit works as an Ethernet to DMX converter and sends RDM/DMX signal to its DMX output connector.

All the other units must be connected as a DMX chain with standard DMX settings.

Only for the first unit scroll till NETWORK menu (refer to DISPLAY FUNCTIONS for details):

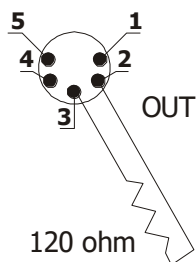
- Select under INPUT menu “Art-Net” or “sACN” as input control signal.
- Select under IP ADDRESS MODE menu “Default” or “Static” mode.
- Select ETH TO DMX menu to ON.
- Set the IP address and Net Mask. **IP address must be different for each unit on a network.**
- Set the Art-Net or sACN Universe.



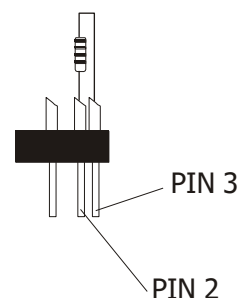
For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.

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



15- RDM FUNCTIONS

By using a RDM controller it is possible to read / set DMX address, DMX mode and other parameters. ALCHEMY 5 accepts the following RDM commands:

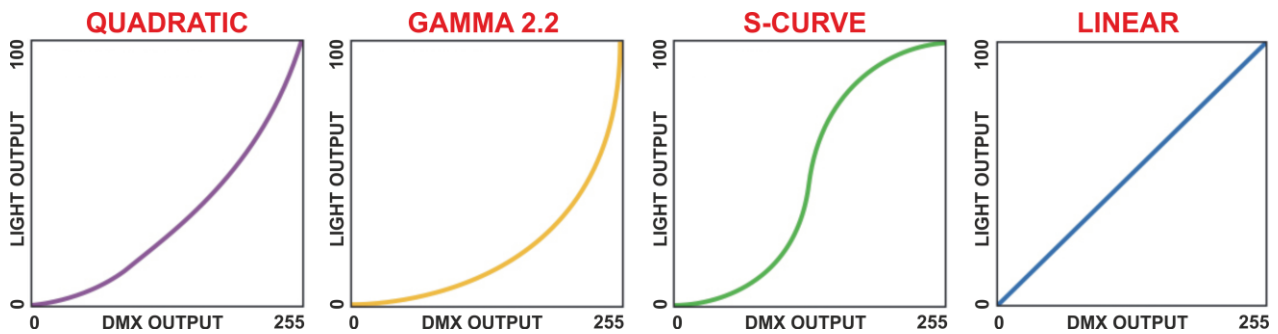
RDM Device Model ID: 0x0016

| RDM PID DESCRIPTION | RDM PID VALUE | GET | SET |
|----------------------------------|---------------|-----|-----|
| Category – Network Management | | | |
| DISC_UNIQUE_BRANCH | 0x0001 | | |
| DISC_MUTE | 0x0002 | | |
| DISC_UN_MUTE | 0x0003 | | |
| Category – Status Collection | | | |
| STATUS_MESSAGES | 0x0030 | X | |
| STATUS_ID_DESCRIPTION | 0x0031 | X | |
| Category - RDM Information | | | |
| SUPPORTED_PARAMETERS | 0x0050 | X | |
| PARAMETERS_DESCRIPTION | 0x0051 | X | |
| Category – Product Information | | | |
| DEVICE_INFO | 0x0060 | X | |
| DEVICE_MODEL_DESCRIPTION | 0x0080 | X | |
| MANUFACTURER_LABEL | 0x0081 | X | |
| DEVICE_LABEL | 0x0082 | X | X |
| SOFTWARE_VERSION_LABEL | 0x00C0 | X | |
| Category - DMX512 Setup | | | |
| DMX_PERSONALITY | 0x00E0 | X | X |
| DMX_PERSONALITY_DESCRIPTION | 0x00E1 | X | |
| DMX_START_ADDRESS | 0x00F0 | X | X |
| Category – Sensors | | | |
| SENSOR_DEFINITION | 0x0200 | X | |
| SENSOR_VALUE | 0x0201 | X | X |
| Category – Power/Lamp Settings | | | |
| DEVICE_HOURS | 0x0400 | X | |
| LAMP_HOURS | 0x0401 | X | |
| Category – Display Settings | | | |
| DISPLAY_INVERT | 0x0500 | X | X |
| Category – Configuration | | | |
| PAN_INVERT | 0x0600 | X | X |
| TILT_INVERT | 0x0601 | X | X |
| Category – Control | | | |
| IDENTIFY_DEVICE | 0x1000 | X | X |
| Category – Dimmer Settings | | | |
| CURVE | 0x0343 | X | X |
| CURVE_DESCRIPTION | 0x0344 | X | |
| OUTPUT_RESPONSE_TIME | 0x0345 | X | X |
| OUTPUT_RESPONSE_TIME_DESCRIPTION | 0x0346 | X | |
| MODULATION_FREQUENCY | 0x0347 | X | X |
| MODULATION_FREQUENCY_DESCRIPTION | 0x0348 | X | |
| Category – Custom PID | | | |
| ETHERNET_TO_DMX | 0x8000 | X | X |
| INPUT_PRIORITY | 0x8001 | X | X |
| DISPLAY_STANDBY | 0x8002 | X | X |

15- RDM FUNCTIONS

RDM ADDITIONAL MESSAGEs:

| CURVE | CURVE DESCRIPTION |
|-------|---------------------|
| 1 | LINEAR |
| 2 | QUADRATIC (default) |
| 3 | GAMMA 2.2 |
| 4 | S-CURVE |



| OUTPUT RESPONSE TIME | OUTPUT_RESPONSE_TIME_DESCRIPTION |
|----------------------|----------------------------------|
| 1 | SMOOTH OFF |
| 2 | SMOOTH 1 (25 ms) |
| 3 | SMOOTH 2 (50 ms) |
| 4 | SMOOTH 3 (75 ms) |
| 5 | SMOOTH 4 (100 ms) (default) |
| 6 | SMOOTH 5 (125 ms) |
| 7 | SMOOTH 6 (150 ms) |
| 8 | SMOOTH 7 (175 ms) |
| 9 | SMOOTH 8 (200 ms) |
| 10 | SMOOTH 9 (225 ms) |
| 11 | SMOOTH 10 (250 ms) |
| 12 | SMOOTH 11 (275 ms) |
| 13 | SMOOTH 12 (300 ms) |
| 14 | SMOOTH 13 (325 ms) |
| 15 | SMOOTH 14 (350 ms) |
| 16 | SMOOTH 15 (375 ms) |
| 17 | SMOOTH 16 (400 ms) |
| 18 | SMOOTH 17 (425 ms) |
| 19 | SMOOTH 18 (450 ms) |
| 20 | SMOOTH 19 (475 ms) |
| 21 | SMOOTH 20 (500 ms) |

15- RDM FUNCTIONS**RDM ADDITIONAL MESSAGEs:**

| MODULATION FREQUENCY | MODULATION FREQUENCY DESCRIPTION |
|-----------------------------|---|
| 1 | 610 Hz |
| 2 | 800 Hz |
| 3 | 1.000 Hz (default) |
| 4 | 1.500 Hz |
| 5 | 2.000 Hz |
| 6 | 2.500 Hz |
| 7 | 3.000 Hz |
| 8 | 3.500 Hz |
| 9 | 4.000 Hz |
| 10 | 4.500 Hz |
| 11 | 5.000 Hz |

RDM MANUFACTURER'S SPECIFIC PIDs:

| RDM CUSTOM PID | DESCRIPTION |
|------------------------|--|
| 0x8000_ETHERNET_TO_DMX | Set parameter NETWORK – ETH TO DMX 0 = OFF (default) 1 = ON |
| 0x8001_INPUT_PRIORITY | Set parameter NETWORK – PRIORITY 0 = DMX PORT (default) 1 = ETHERNET PORT |
| 0x8002_DISPLAY_STANDBY | Set parameter DISPLAY – STANDBY 0 = DISABLED (default) 1 = ENABLED 2 = FORCED ENABLED |

15- RDM FUNCTIONS

RDM STATUS MESSAGE IDs:

| Status Message ID | Data Value 1 | Data Value 2 | Status ID Description |
|--------------------------|---------------------|---------------------|---------------------------------|
| 0x8000 | | | ERROR PAN MOTOR/ENCODER |
| 0x8001 | | | ERROR PAN LOCKED |
| 0x8002 | | | ERROR PAN ZERO SENSOR |
| 0x8003 | | | ERROR TILT MOTOR/ENCODER |
| 0x8004 | | | ERROR TILT LOCKED |
| 0x8005 | | | ERROR TILT ZERO SENSOR |
| 0x8006 | | | ERROR DMX ADDRESS |
| 0x8007 | | | ERROR PARAMETERS MEMORY |
| 0x8008 | | | ERROR SUPPLY VOLTS TOO LOW |
| 0x8009 | | | ERROR SUPPLY VOLTS TOO HIGH |
| 0x800A | | | ERROR BUS ARTNET CARD |
| 0x800B | | | ERROR BUS LED DRIVER CARD |
| 0x800C | card number | | ERROR BUS MOTORS CARD %d |
| 0x8013 | | | ERROR ZOOM |
| 0x801B | | | ERROR EFFECTS |
| 0x801C | prism number | | ERROR PRISM %d |
| 0x801D | prism number | | ERROR PRISM %d INDEX |
| 0x801F | | | ERROR TEMPERATURE LED MODULE |
| 0x8020 | sensor number | | ERROR TEMPERATURE LED DRIVER %d |
| 0x8021 | | | ERROR TEMPERATURE MICRO |
| 0x8022 | | | ERROR RED |
| 0x8023 | | | ERROR GREEN |
| 0x8024 | | | ERROR BLUE |
| 0x8025 | | | ERROR AMBER |
| 0x800E | | | ERROR CYAN |
| 0x8026 | | | ERROR LIME |

16- FIRMWARE UPDATING

To update the firmware release of the ALCHEMY 5 you need:

- DTS Dongle Firmware Uploader (code 03.LA.206).
- “DTS Firmware Upgrade Utility v.2.02” program installed on PC.
- Latest firmware release available for ALCHEMY 5 unit.

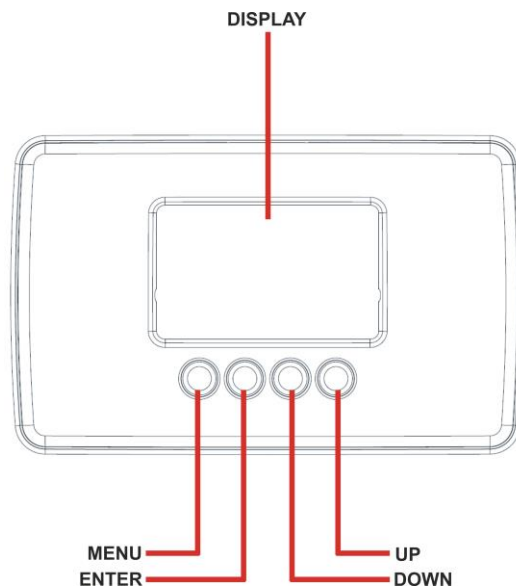
Updating the firmware release.

Please follow the procedure below to perform the update:

1. Connect the DTS Dongle Firmware Uploader to a spare USB port on the PC.
2. Connect the unit DMX input to the DTS Dongle Firmware Uploader DMX output with a standard DMX cable and turn ON the unit.
3. Send the new firmware release into the unit by using “DTS Firmware Upgrade Utility v.2.02” program. At the end of the procedure, the unit will reset.

For more information please refer to an authorised DTS service centre.

17- DISPLAY FUNCTIONS



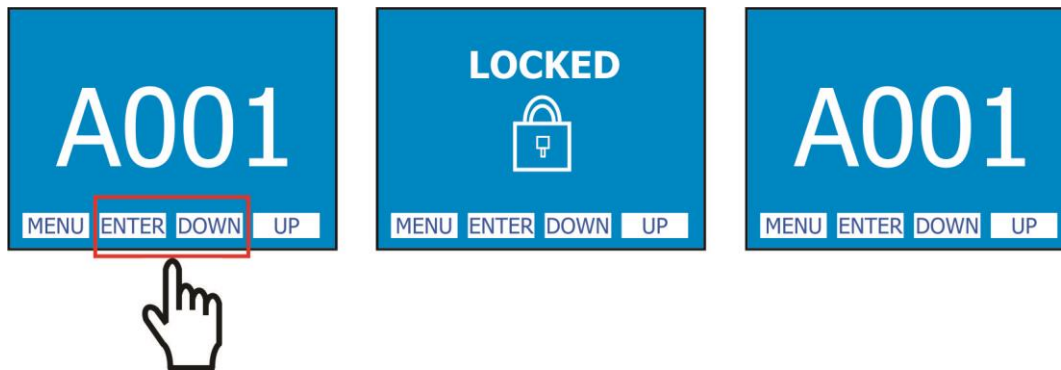
The ALCHEMY 5 display panel shows all the available control menus. Using these options, it is possible to change the fixture's setting. Changing the DTS settings can vary the functions of the unit so that it does not respond to the DMX 512 used to control it. Carefully follow the instructions below before carrying out any variations or selections.

| | |
|------------------|---|
| MENU | <ul style="list-style-type: none"> • To access the control menus in the display panel. • To return to the previous level in the menu structure without making a change. • To exit the menus. |
| ENTER | <ul style="list-style-type: none"> • To select any required menu. • To confirm any changes. |
| UP / DOWN | <ul style="list-style-type: none"> • To navigate the menus structure. • To change any value. |

| | |
|--------------------------------|---|
| MOTORS FIRMWARE RELEASE | 13 |
| LED FIRMWARE RELEASE | 1.01 |
| RDM Device Model ID | 0x0016 |
| DMX Personality IDs | 0x01 "CCT" 0x02 "ADVANCED" 0x03 "BASIC" 0x04 "EXPO" 0x05 "CMY EMULATION" |

DISPLAY KEY-LOCK FUNCTION

Display key-lock function can be enabled/disabled by pressing ENTER + DOWN keys at the same time for 3 seconds.

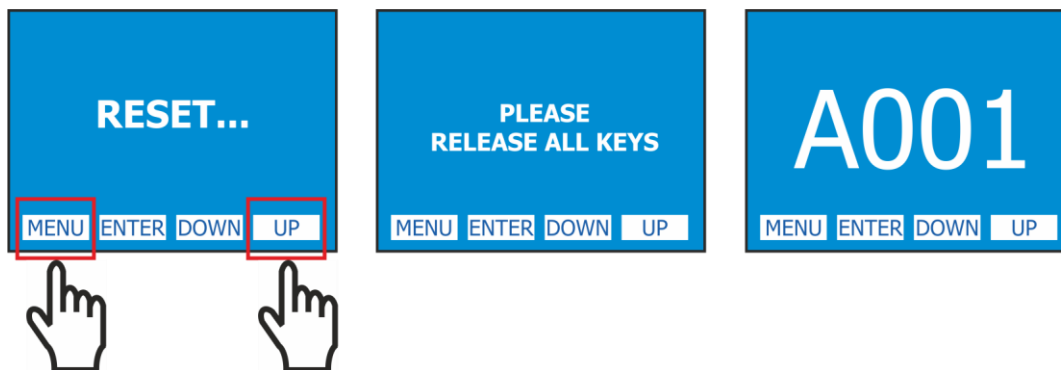


“ZERO SKIP” FUNCTION

“ZERO SKIP” function can be activated by pressing MENU + UP keys at the same time during initial reset.

This function allows to have the display ON and all motors OFF.

Usefull when the unit is powered in the flight case and DMX address or other parameters need to be set.



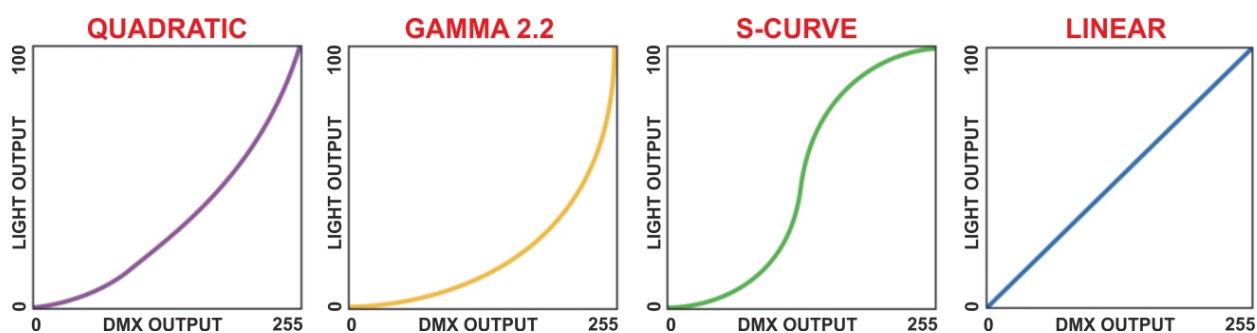
| MAIN MENU | LEVEL 1 | LEVEL 2 | LEVEL 3 | FUNCTION |
|-----------|--|---------------|---------|--|
| NETWORK | INPUT | DISABLED | | Allows to disable Ethernet operation. (Default). |
| | | ARTNET | | Allows to select Art-Net as input control signal protocol. |
| | | SACN | | Allows to select sACN as input control signal protocol. |
| | IP ADDR MODE | DEFAULT | | Allows to select the mode to set the IP address and the Net Mask. Fixed IP address with manual setting of first byte only and fixed Net Mask (Default). |
| | | STATIC | | Manual setting of IP address and Net Mask. |
| | DEFAULT IP IP 2.214.192. 7 MASK 255. 0. 0. 0 | | | Fixed IP address and Net Mask. It is possible to set only first byte of the IP address. IP address must be different for each unit on a network. |
| | ARTNET UNIV. | 00000 - 32767 | | Allows to set the Art-Net Universe (range 0 ÷ 32767). |
| | SACN UNIVERSE | 00001 - 63999 | | Allows to set the sACN Universe (range 1 ÷ 63999). |
| | PRIORITY | DMX512 | | Allows to set the priority between input control signals when the unit is connected via DMX and via ETHERNET at the same time. RDM/DMX signal has the priority on the Art-Net / sACN signal (Default). |
| | | ETHERNET | | Art-Net / sACN signal has the priority on the DMX signal. |
| | ETH TO DMX | OFF | | Allows to enable ETHERNET to RDM/DMX operation. OFF = Default. |
| | | ON | | In this configuration the first unit works as an Ethernet to DMX converter and sends RDM/DMX signal to its DMX output connector. |
| | NO SIGNAL | KEEP LAST | | Allows to set the desired unit's behavior in case Art-Net or sACN signal is missing or not available. Keep last valid Art-Net or sACN signal (Default). |
| | | BLACK OUT | | Black-out. |

| MAIN MENU | LEVEL 1 | LEVEL 2 | LEVEL 3 | FUNCTION |
|---|------------------------------|---------------|---------|---|
| PAN DIRECTION | NORMAL | | | Allows to set the Pan movement. Normal or Reverse. Normal (Default). |
| | REVERSE | | | |
| TILT DIRECTION | NORMAL | | | Allows to set the Tilt movement. Normal or Reverse. Normal (Default). |
| | REVERSE | | | |
| ZOOM DIRECTION | NORMAL | | | Allows to set the Zoom movement. Normal or Reverse. Normal (Default). |
| | REVERSE | | | |
| OPERATING MODE | SILENT | | | Reduced Pan-Tilt-Zoom-Fans speed for low noise operation (Default). |
| | STANDARD | | | Pan-Tilt-Zoom-Fans standard speed. |
| FAN MODE (FAN MODE will work relatively to OPERATING MODE) | CONSTANT | | | Same fans speed in any working condition in SILENT or STANDARD operating mode (Default). |
| | AUTOMATIC | | | Automatic fans speed. <u>If LED temperature <40°C:</u> fans OFF. <u>If LED temperature >40°C:</u> If OPERATING MODE = SILENT, fans speed is increased within the values range set in SILENT mode. If OPERATING MODE = STANDARD, fans speed is increased within the values range set in STANDARD mode. |
| DISPLAY | FLIP | AUTO | | Reverses display's reading depending on the mounting position. Automatic, on the ground or suspended. Automatic (Default). |
| | | ON THE GROUND | | |
| | | SUSPENDED | | |
| | STANDBY | DISABLED | | Display stand-by disabled (Default). |
| | | ENABLED | | Display goes OFF after 5 seconds. |
| | | FORCED EN. | | Display forced OFF even if control signal is missing or error messages are shown. |
| | CONTRAST | 20 - 35 | | Display contrast regulation. Range 20-35. Default = 25. |
| DMX MODE Personality | CCT 20 channels | | | Allows to select CCT mode (20 DMX channels). Default. |
| | ADVANCED 28 channels | | | Allows to select ADVANCED mode (28 DMX channels). |
| | BASIC 23 channels | | | Allows to select BASIC mode (23 DMX channels). |
| | EXPO 13 channels | | | Allows to select EXPO mode (13 DMX channels). |
| | CMY EMULATION 23 channels | | | Allows to select CMY EMULATION mode (23 DMX channels). |

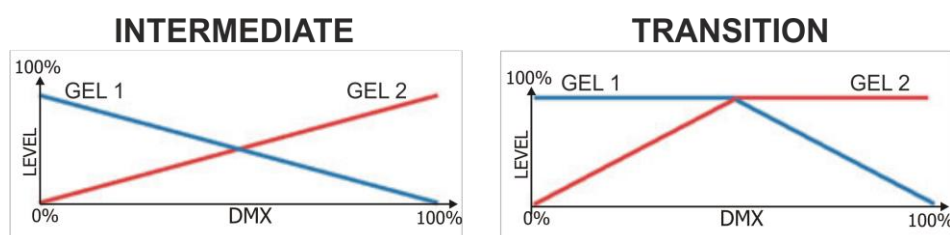
| MAIN MENU | LEVEL 1 | LEVEL 2 | LEVEL 3 | FUNCTION |
|---------------|---------------|----------------|---------|--|
| NO DMX ACTION | KEEP LAST DMX | | | Allows to set the desired unit's behavior in case DMX signal is missing or not available. Keep last valid DMX signal (Default). |
| | PROGRAM 1-48 | 1 - 48 | | 48 pre-programmed steps. Speed time values (range 0.5x – 3x) selectable by user (default 1x). |
| | SINGLE CUE | PAN MSB | 0 - 255 | Fixed cue with values selectable by user. Default = 128 |
| | | PAN LSB | 0 - 255 | Default = 128 |
| | | TILT MSB | 0 - 255 | Default = 128 |
| | | TILT LSB | 0 - 255 | Default = 128 |
| | | SPEED MOVEMENT | 0 - 255 | Default = 0 |
| | | SHUTTER | 0 - 255 | Default = 15 |
| | | DIMMER MSB | 0 - 255 | Default = 255 |
| | | DIMMER LSB | 0 - 255 | Default = 255 |
| | | CCT | 0 - 255 | Default = 0 |
| | | GEL LIBRARY | 0 - 255 | Default = 0 |
| | | RED | 0 - 255 | Default = 255 |
| | | GREEN | 0 - 255 | Default = 255 |
| | | BLUE | 0 - 255 | Default = 255 |
| | | AMBER | 0 - 255 | Default = 255 |
| | | CYAN | 0 - 255 | Default = 255 |
| | | LIME | 0 - 255 | Default = 255 |
| | | FROST/COL. | 0 - 255 | Default = 0 |
| | | BEAM SHAPER | 0 - 255 | Default = 0 |
| | | BEAM SHP R-I | 0 - 255 | Default = 0 |
| | | ZOOM | 0 - 255 | Default = 128 |
| | BLACKOUT | | | Black-out. |
| RESET BY DMX | ENABLED | | | Reset via DMX enabled (Default). |
| | DISABLED | | | Reset via DMX disabled. |
| | NOW | | | Instant unit motors reset. |
| LED | SMOOTH | OFF - 20 | | Allows to select the value of delay (in ms) for DIMMER channel reaction to DMX dimming command. OFF = Instant response. 4 = 100 ms smooth response (Default). 20 = 500 ms smooth response. |

| MAIN MENU | LEVEL 1 | LEVEL 2 | LEVEL 3 | FUNCTION |
|-----------|---------------|---------------|---------|--|
| LED | GAMMA CORR. | QUAD | | Allows to set quadratic current output for LED (Default). |
| | | 2.2 | | Allows to set gamma curve 2.2 . |
| | | S-CURVE | | Allows to set S-curve to emulates light intensity characteristics of the tungsten halogen lamps. |
| | | LINE | | Allows to set linear light output. |
| | FREQUENCY | 610 - 5000 HZ | | Allows to adjust the PWM frequency value (Hz) in order to reduce flickering in the process of your camera recordings. Range = 610 Hz – 5 KHz Default = 1000 Hz |
| | TUNGSTEN EMU. | DISABLED | | Allows to enable Tungsten Emulation. Variation in the dimmer intensity will affect CCT values. Disabled (Default). Not yet implemented. |
| | | ENABLED | | |
| | CROSSFADE | INTERMEDIATE | | Allows to set Crossfade Intermediate for 'GELS X-FADE' channel 12 of "ADVANCED" DMX mode (Default). |
| | | TRANSITION | | Allows to set Crossfade Transition for 'GELS X-FADE' channel 12 of "ADVANCED" DMX mode. |

“GAMMA CORR.” GRAPHICS:



“CROSSFADE” GRAPHICS:



| MAIN MENU | LEVEL 1 | LEVEL 2 | LEVEL 3 | FUNCTION |
|-------------|-------------------------------------|---|---------|--|
| SYSTEM INFO | SOFTWARE | ALCHEMY 5 10 SEP 2019 MOTOR: V.13 LED:V.1.01 | | Unit model, motors firmware release date, Motors board and LED Driver board firmware release. |
| | TEMPERATURES | LED: 041°C DRV-1: 043°C DRV-2: 044°C MICRO: 040°C | | LED: LED temperature monitoring. DRV-1: output 1 and output 2 of LED Driver board temperature monitoring. DRV-2: output 3 and output 4 of LED Driver board temperature monitoring. MICRO: Micro controller temperature monitoring. |
| | TIME COUNTERS | UNIT: 0082H DRIVER: 0080H RED: 0045H GREEN: 0068H BLUE: 0023H AMBER: 0037H CYAN: 0067H LIME: 0058H | | Unit, LED Driver board and LED channels life time. |
| | ADDRESSES | RDM: 0710:000113F1 MAC: 70:B3:D5:D7:C3:A3 | | RDM and MAC IDs. |
| RESERVED | ENTER CODE 0 – 255 (code 100) | PAN LOCK | NO | Lock the Pan to the desired value. NO = Default. |
| | | | YES | |
| | | TILT LOCK | NO | Lock the Tilt to the desired value. NO = Default. |
| | | | YES | |
| | | PAN FREE | NO | Remove power to Pan motor. NO = Default. |
| | | | YES | |
| | | TILT FREE | NO | Remove power to Tilt motor. NO = Default. |
| | | | YES | |
| | | LOCK DETECTOR | ON | Allows to activate the Lock detector on Pan and Tilt. 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 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. ON = Default. |
| | | | OFF | |
| | | REBOOT | | Unit reboot without needing of turning OFF the unit. |
| | | EXIT TO MAIN | | Exit from Reserved menu. |

| MAIN MENU | LEVEL 1 | LEVEL 2 | LEVEL 3 | FUNCTION |
|---------------|----------------|-------------|---------|--|
| DEFAULT | | | | To restore factory settings. |
| MANUAL CONTR. | RESET | HEAD MOTORS | | To reset head motors only. |
| | | PAN TILT | | To reset Pan and Tilt only. |
| | | ALL MOTORS | | To reset all motors. |
| | RESTORE DEF. | | | To restore parameters default settings. |
| | PAN MSB | 0 - 255 | | Manual mode with functions value selectable by user. Default = 128 |
| | PAN LSB | 0 - 255 | | Default = 128 |
| | TILT MSB | 0 - 255 | | Default = 128 |
| | TILT LSB | 0 - 255 | | Default = 128 |
| | SPEED MOVEMENT | 0 - 255 | | Default = 0 |
| | SHUTTER | 0 - 255 | | Default = 15 |
| | DIMMER MSB | 0 - 255 | | Default = 255 |
| | DIMMER LSB | 0 - 255 | | Default = 255 |
| | CCT | 0 - 255 | | Default = 0 |
| | GEL LIBRARY | 0 - 255 | | Default = 0 |
| | RED | 0 - 255 | | Default = 255 |
| | GREEN | 0 - 255 | | Default = 255 |
| | BLUE | 0 - 255 | | Default = 255 |
| | AMBER | 0 - 255 | | Default = 255 |
| | CYAN | 0 - 255 | | Default = 255 |
| | LIME | 0 - 255 | | Default = 255 |
| | FROST/COL. | 0 - 255 | | Default = 0 |
| | BEAM SHAPER | 0 - 255 | | Default = 0 |
| | BEAM SHP R-I | 0 - 255 | | Default = 0 |
| | ZOOM | 0 - 255 | | Default = 128 |

18- ERROR MESSAGES

| ERROR SHOWN ON DISPLAY | APPEARS WHEN |
|--|--|
| PAN | <ul style="list-style-type: none"> -Pan motor fault -Pan encoder fault -Pan motor driver on Pan&Tilt PCB fault -Wiring connection between Pan encoder and Pan&Tilt PCB fault |
| PAN LOCKED | <ul style="list-style-type: none"> -Pan locked -Pan motor fault -Pan encoder fault -Pan motor driver on Pan&Tilt PCB fault -Wiring connection between Pan encoder and Pan&Tilt PCB fault |
| TILT | <ul style="list-style-type: none"> -Tilt motor fault -Tilt encoder fault -Tilt motor driver on Pan&Tilt PCB fault -Wiring connection between Tilt encoder and Pan&Tilt PCB fault |
| TILT LOCKED | <ul style="list-style-type: none"> -Tilt locked -Tilt motor fault -Tilt encoder fault -Tilt motor driver on Pan&Tilt PCB fault -Wiring connection between Tilt encoder and Pan&Tilt PCB fault |
| PAN ZERO SENSOR LINE | <ul style="list-style-type: none"> -Pan magnet missing -Pan hall sensor PCB fault -Wiring connection between Pan hall sensor PCB and Pan&Tilt PCB fault |
| TILT ZERO SENSOR LINE | <ul style="list-style-type: none"> -Tilt magnet missing -Tilt hall sensor PCB fault -Wiring connection between Tilt hall sensor PCB and Pan&Tilt PCB fault |
| TEMP. LED MOD. | LED module temperature detected under -10°C or over 80°C. Unit immediately goes in black-out. |
| TEMP. LED DRV 1 | Output from 1 to 4 of LED Driver PCB temperature detected under -10°C or over 90°C. Unit immediately goes in black-out. |
| TEMP. LED DRV 2 | Output from 5 to 8 of LED Driver PCB temperature detected under -10°C or over 90°C. Unit immediately goes in black-out. |
| TEMP. LED MICRO | Micro controller on LED Driver PCB temperature detected under -10°C or over 80°C. Unit immediately goes in black-out. |
| R/G/B/A/C/L OPEN (not yet implemented) | LED channel in open circuit. Unit immediately goes in black-out. |
| R/G/B/A/C/L SHORT (not yet implemented) | LED channel in short circuit. Unit immediately goes in black-out. |
| SUPPLY VOLTS TOO LOW | PCBs input voltage <46,5Vdc. |
| SUPPLY VOLTS TOO HIGH | PCBs input voltage >49,5Vdc. |
| BUS 5 MOTORS CARD | <ul style="list-style-type: none"> -Pan&Tilt PCB driver fault -5 Motors PCB driver fault -5 Motors PCB input voltage missing -Internal Bus wiring connection fault |
| BUS LED DRIVER CARD | <ul style="list-style-type: none"> -Pan&Tilt PCB driver fault -LED Driver PCB driver fault -LED Driver PCB input voltage missing -Internal Bus wiring connection fault |
| BUS ARTNET CARD | <ul style="list-style-type: none"> -Pan&Tilt PCB driver fault -Art-Net PCB driver fault -Art-Net PCB input voltage missing -Wiring connection between Art-Net PCB and Pan&Tilt PCB fault |
| ZOOM DX OR RESET LINE 4 | <ul style="list-style-type: none"> -Zoom DX motor fault -Zoom DX motor driver on 5 Motors PCB fault -Zoom DX magnet missing -Zoom DX hall sensor PCB fault |
| ZOOM SX OR RESET LINE 3 | <ul style="list-style-type: none"> -Zoom SX motor fault -Zoom SX motor driver on 5 Motors PCB fault -Zoom SX magnet missing -Zoom SX hall sensor PCB fault |
| EFFECTS OR RESET LINE 2 | <ul style="list-style-type: none"> -Effects wheel motor fault -Effects wheel motor driver on 5 Motors PCB fault -Effects wheel magnet missing -Effects wheel hall sensor PCB fault |
| PRISM OR RESET LINE 1 | <ul style="list-style-type: none"> -Prism motor fault -Prism motor driver on 5 Motors PCB fault -Prism magnet missing -Prism hall sensor PCB fault |
| PRISM INDEX OR RESET LINE 5 | <ul style="list-style-type: none"> -Prism Index motor fault -Prism Index motor driver on 5 Motors PCB fault -Prism Index magnet missing -Prism Index hall sensor PCB fault |

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.

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 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 ALCHEMY 5.

Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type (T 8A 250V) if necessary.

21- DMX PROTOCOL

1. “CCT” mode (20 DMX channels) (Default)

- 1 PAN msb
- 2 PAN lsb
- 3 TILT msb
- 4 TILT lsb
- 5 SPEED MOVEMENT
- 6 SHUTTER
- 7 DIMMER msb
- 8 DIMMER lsb
- 9 CCT (1.800K – 10.000K)
- 10 GREEN SATURATION
- 11 GEL LIBRARY 1
- 12 GELS X-FADE
- 13 GEL LIBRARY 2
- 14 GEL FILTER DESATURATION
- 15 FROST/COLOUR WHEEL
- 16 BEAM SHAPER
- 17 BEAM SHAPER INDEX/ROTATION
- 18 ZOOM
- 19 FIXTURE CONTROL
- 20 RESET

| | | |
|-------------|---|---------------------------|
| 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 | |
| 000-009 | Fast movement | |
| 010-025 | Standard movement | |
| 026-127 | Vector mode from fast to slow | |
| 128-247 | Variable time reaction to dmx signal (fast to slow) | |
| 248-250 | Silent movement | |
| 251-255 | Snap movement | |

| | | |
|------------------|---|---------------------------|
| DMX CHANNEL | 6 | Parameter: SHUTTER |
| DMX value | Function | |
| 000-009 | Black Out | |
| 010-019 | Open | |
| 020-029 | Black Out | |
| 030-119 | Strobe (from 3,27s to 30ms) | |
| 120-149 | Pulse up (from 42,6s to 120ms) | |
| 150-179 | Pulse down (from 42,6s to 120ms) | |
| 180-189 | Random strobe | |
| 190-199 | Open | |
| 200-209 | Effect wheel in Black Out while rotating | |
| 210-219 | Pan/Tilt in Black Out while moving | |
| 220-222 | Open | |
| 223-224 | Beam shaper in Black Out while inserting | |
| 225-226 | Zoom in Black Out while moving | |
| 227-229 | Effect wheel/Beam Shaper/Zoom in Black Out while moving | |
| 230-255 | Open | |

| | | |
|-------------|---|------------------------------|
| DMX CHANNEL | 7 | Parameter: DIMMER msb |
| DMX CHANNEL | 8 | Parameter: DIMMER lsb |

| | | |
|------------------|---|-----------------------|
| DMX CHANNEL | 9 | Parameter: CCT |
| DMX value | Function | |
| 000-255 | Correlate colour temperature from 1800K to 10000K. Relevant CCT values (GREEN SATURATION channel 10 @ 128) 1800K = 000 2700K = 070 3000K = 083 3200K = 092 4000K = 119 5000K = 148 5600K = 163 6000K = 174 6500K = 184 7000K = 195 8000K = 215 9000K = 233 10000K = 255 | |

| | | |
|------------------|----------------------------------|------------------------------------|
| DMX CHANNEL | 10 | Parameter: GREEN SATURATION |
| DMX value | Function | |
| 000-127 | From full minus green to neutral | |
| 128 | Neutral (Default) | |
| 129-255 | From neutral to full plus green | |

| | | |
|------------------|------------------------------|--------------------------|
| DMX CHANNEL | 11 | Parameter: GEL LIBRARY 1 |
| DMX value | Function | |
| 000-009 | No function | |
| 010-011 | M001: L 002 Rose Pink | |
| 012-013 | M002: L 007 Pale Yellow | |
| 014-015 | M003: L 015 Deep Straw | |
| 016-017 | M004: L 019 fire | |
| 018-019 | M005: L 020 medium amber | |
| 020-021 | M006: L 021 Gold Amber | |
| 022-023 | M007: L 022 Dark Amber | |
| 024-025 | M008: L 025 sunset red | |
| 026-027 | M009: L 046 Dark Magenta | |
| 028-029 | M010: L 049 Medium Purple | |
| 030-031 | M011: L 058 Lavender | |
| 032-033 | M012: L 068 Sky Blue | |
| 034-035 | M013: L 079 Just Blue | |
| 036-037 | M014: L 085 Deeper Blue | |
| 038-039 | M015: L 088 Lime Green | |
| 040-041 | M016: L 089 moss green | |
| 042-043 | M017: L 100 Spring Yellow | |
| 044-045 | M018: L 101 yellow | |
| 046-047 | M019: L 102 light amber | |
| 048-049 | M020: L 103 Straw | |
| 050-051 | M021: L 104 DEEP AMBER | |
| 052-053 | M022: L 105 Orange | |
| 054-055 | M023: L 106 primary red | |
| 056-057 | M024: L 108 English rose | |
| 058-059 | M025: L 111 dark pink | |
| 060-061 | M026: L 113 magenta | |
| 062-063 | M027: L 115 peacock blue | |
| 064-065 | M028: L 117 Steel Blue | |
| 066-067 | M029: L 118 LIGHT BLU | |
| 068-069 | M030: L 119 dark blue | |
| 070-071 | M031: L 121 lee green | |
| 072-073 | M032: L 122 fern green | |
| 074-075 | M033: L 124 dark green | |
| 076-077 | M034: L 126 mauve | |
| 078-079 | M035: L 132 Medium Blue | |
| 080-081 | M036: L 136 Pale Lavender | |
| 082-083 | M037: L 137 Special lavender | |
| 084-085 | M038: L 138 Pale Green | |
| 086-087 | M039: L 139 primary green | |
| 088-089 | M040: L 142 Pale Violet | |
| 090-091 | M041: L 147 apricot | |
| 092-093 | M042: L 151 Gold Tint | |
| 094-095 | M043: L 152 pale gold | |
| 096-097 | M044: L 154 pale rose | |
| 098-099 | M045: L 156 Chocolate | |
| 100-101 | M046: L 164 flame red | |
| 102-103 | M047: L 170 deep lavender | |
| 104-105 | M048: L 174 dark steel blue | |
| 106-107 | M049: L 176 loving amber | |
| 108-109 | M050: L 179 chrome orange | |
| 110-111 | M051: L 180 dark lavender | |
| 112-113 | M052: L 181 congo blue | |

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|------------------|-------------------------------------|---------------------------------|
| DMX CHANNEL | 11 | Parameter: GEL LIBRARY 1 |
| DMX value | Function | |
| 114-115 | M053: L 182 Light Red | |
| 116-117 | M054: L 194 Surprise Pink | |
| 118-119 | M055: L 195 zenith blue | |
| 120-121 | M056: L 200 Double C.T. Blue | |
| 122-123 | M057: L 201 Full C.T. Blue | |
| 124-125 | M058: L 202 Half C.T Blue | |
| 126-127 | M059: L 203 Quarter C.T. Blue | |
| 128-129 | M060: L 204 Full C.T. Orange | |
| 130-131 | M061: L 205 Half C.T. Orange | |
| 132-133 | M062: L 206 Quarter C.T. Orange | |
| 134-135 | M063: L 242 Fluorescent 4300 Kevin | |
| 136-137 | M064: L 249 1/4 minus green | |
| 138-139 | M065: L 323 jade | |
| 140-141 | M066: L 328 Follies Pink | |
| 142-143 | M067: L 343 special medium lavender | |
| 144-145 | M068: L 345 fuchsia pink | |
| 146-147 | M069: L 341 Plum | |
| 148-149 | M070: L 353 lighter blue | |
| 150-151 | M071: L 506 Marlene | |
| 152-153 | M072: L 601 Silver | |
| 154-155 | M073: L 725 Old Steel Blue | |
| 156-157 | M074: L 728 Steel Green | |
| 158-159 | M075: L 731 Dirty Ice | |
| 160-161 | M076: L 765 LEE Yellow | |
| 162-163 | M077: L 777 rust | |
| 164-165 | M078: L 795 Magical Magenta | |
| 166-167 | M079: L 797 Deep Purple | |
| 168-169 | M080: R 03 Dark Bastard Amber | |
| 170-171 | M081: R 05 Rose tint | |
| 172-173 | M082: R 11 Light Straw | |
| 174-175 | M083: R 23 Orange | |
| 176-177 | M084: R 25 Orange Red | |
| 178-179 | M085: R 31 Salmon Pink | |
| 180-181 | M086: R 35 Light pink | |
| 182-183 | M087: R 40 Light Salmon | |
| 184-185 | M088: R 54 special lavender | |
| 186-187 | M089: R 57 Lavender | |
| 188-189 | M090: R 61 Mist Blue | |
| 190-191 | M091: R 68 Parry Sky Blue | |
| 192-193 | M092: R 75 Twilight Blue | |
| 194-195 | M093: R 79 Bright Blue | |
| 196-197 | M094: R 82 Surprise Blue | |
| 198-199 | M095: R 89 Moss Green | |
| 200-201 | M096: R 303 Warm Peach | |
| 202-203 | M097: R 318 Mayan Sun | |
| 204-205 | M098: R 363 Aquamarine | |
| 206-207 | M099: R 385 Royal Blue | |
| 208-209 | M100: R 386 Leaf Green | |
| 210-255 | No function | |

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|------------------|---|------------------------------|
| DMX CHANNEL | 12 | Parameter: GEL X-FADE |
| DMX value | Function | |
| 000-255 | Crossfade between GEL LIBRARY 1 and GEL LIBRARY 2 0 = 100% GEL LIBRARY 1, 0% GEL LIBRARY 2 128 = 50% GEL LIBRARY 1, 50% GEL LIBRARY 2 255 = 0% GEL LIBRARY 1, 100% GEL LIBRARY 2 | |

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|------------------|------------------------------|--------------------------|
| DMX CHANNEL | 13 | Parameter: GEL LIBRARY 2 |
| DMX value | Function | |
| 000-009 | No function | |
| 010-011 | M001: L 002 Rose Pink | |
| 012-013 | M002: L 007 Pale Yellow | |
| 014-015 | M003: L 015 Deep Straw | |
| 016-017 | M004: L 019 fire | |
| 018-019 | M005: L 020 medium amber | |
| 020-021 | M006: L 021 Gold Amber | |
| 022-023 | M007: L 022 Dark Amber | |
| 024-025 | M008: L 025 sunset red | |
| 026-027 | M009: L 046 Dark Magenta | |
| 028-029 | M010: L 049 Medium Purple | |
| 030-031 | M011: L 058 Lavender | |
| 032-033 | M012: L 068 Sky Blue | |
| 034-035 | M013: L 079 Just Blue | |
| 036-037 | M014: L 085 Deeper Blue | |
| 038-039 | M015: L 088 Lime Green | |
| 040-041 | M016: L 089 moss green | |
| 042-043 | M017: L 100 Spring Yellow | |
| 044-045 | M018: L 101 yellow | |
| 046-047 | M019: L 102 light amber | |
| 048-049 | M020: L 103 Straw | |
| 050-051 | M021: L 104 DEEP AMBER | |
| 052-053 | M022: L 105 Orange | |
| 054-055 | M023: L 106 primary red | |
| 056-057 | M024: L 108 English rose | |
| 058-059 | M025: L 111 dark pink | |
| 060-061 | M026: L 113 magenta | |
| 062-063 | M027: L 115 peacock blue | |
| 064-065 | M028: L 117 Steel Blue | |
| 066-067 | M029: L 118 LIGHT BLU | |
| 068-069 | M030: L 119 dark blue | |
| 070-071 | M031: L 121 lee green | |
| 072-073 | M032: L 122 fern green | |
| 074-075 | M033: L 124 dark green | |
| 076-077 | M034: L 126 mauve | |
| 078-079 | M035: L 132 Medium Blue | |
| 080-081 | M036: L 136 Pale Lavender | |
| 082-083 | M037: L 137 Special lavender | |
| 084-085 | M038: L 138 Pale Green | |
| 086-087 | M039: L 139 primary green | |
| 088-089 | M040: L 142 Pale Violet | |
| 090-091 | M041: L 147 apricot | |
| 092-093 | M042: L 151 Gold Tint | |
| 094-095 | M043: L 152 pale gold | |
| 096-097 | M044: L 154 pale rose | |
| 098-099 | M045: L 156 Chocolate | |
| 100-101 | M046: L 164 flame red | |
| 102-103 | M047: L 170 deep lavender | |
| 104-105 | M048: L 174 dark steel blue | |
| 106-107 | M049: L 176 loving amber | |
| 108-109 | M050: L 179 chrome orange | |
| 110-111 | M051: L 180 dark lavender | |
| 112-113 | M052: L 181 congo blue | |

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| DMX CHANNEL | 13 | Parameter: GEL LIBRARY 2 |
| DMX value | Function | |
| 114-115 | M053: L 182 Light Red | |
| 116-117 | M054: L 194 Surprise Pink | |
| 118-119 | M055: L 195 zenith blue | |
| 120-121 | M056: L 200 Double C.T. Blue | |
| 122-123 | M057: L 201 Full C.T. Blue | |
| 124-125 | M058: L 202 Half C.T Blue | |
| 126-127 | M059: L 203 Quarter C.T. Blue | |
| 128-129 | M060: L 204 Full C.T. Orange | |
| 130-131 | M061: L 205 Half C.T. Orange | |
| 132-133 | M062: L 206 Quarter C.T. Orange | |
| 134-135 | M063: L 242 Fluorescent 4300 Kevin | |
| 136-137 | M064: L 249 1/4 minus green | |
| 138-139 | M065: L 323 jade | |
| 140-141 | M066: L 328 Follies Pink | |
| 142-143 | M067: L 343 special medium lavender | |
| 144-145 | M068: L 345 fuchsia pink | |
| 146-147 | M069: L 341 Plum | |
| 148-149 | M070: L 353 lighter blue | |
| 150-151 | M071: L 506 Marlene | |
| 152-153 | M072: L 601 Silver | |
| 154-155 | M073: L 725 Old Steel Blue | |
| 156-157 | M074: L 728 Steel Green | |
| 158-159 | M075: L 731 Dirty Ice | |
| 160-161 | M076: L 765 LEE Yellow | |
| 162-163 | M077: L 777 rust | |
| 164-165 | M078: L 795 Magical Magenta | |
| 166-167 | M079: L 797 Deep Purple | |
| 168-169 | M080: R 03 Dark Bastard Amber | |
| 170-171 | M081: R 05 Rose tint | |
| 172-173 | M082: R 11 Light Straw | |
| 174-175 | M083: R 23 Orange | |
| 176-177 | M084: R 25 Orange Red | |
| 178-179 | M085: R 31 Salmon Pink | |
| 180-181 | M086: R 35 Light pink | |
| 182-183 | M087: R 40 Light Salmon | |
| 184-185 | M088: R 54 special lavender | |
| 186-187 | M089: R 57 Lavender | |
| 188-189 | M090: R 61 Mist Blue | |
| 190-191 | M091: R 68 Parry Sky Blue | |
| 192-193 | M092: R 75 Twilight Blue | |
| 194-195 | M093: R 79 Bright Blue | |
| 196-197 | M094: R 82 Surprise Blue | |
| 198-199 | M095: R 89 Moss Green | |
| 200-201 | M096: R 303 Warm Peach | |
| 202-203 | M097: R 318 Mayan Sun | |
| 204-205 | M098: R 363 Aquamarine | |
| 206-207 | M099: R 385 Royal Blue | |
| 208-209 | M100: R 386 Leaf Green | |
| 210-255 | No function | |

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| DMX CHANNEL | 14 | Parameter: GEL FILTER DESATURATION |
| DMX value | Function | |
| 000-255 | Gel filters desaturation 0 = 100% color 255 = 0% color | |

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|------------------|--|--------------------------------------|
| DMX CHANNEL | 15 | Parameter: FROST/COLOUR WHEEL |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-050 | Light frost | |
| 051-090 | Heavy frost | |
| 091-130 | Deep blue filter switch ON (BLUE channel forced at full) | |
| 131-170 | Deep red filter switch ON (RED channel forced at full) | |
| 171-210 | Deep blue filter manual control | |
| 211-255 | Deep red filter manual control | |

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| DMX CHANNEL | 16 | Parameter: BEAM SHAPER |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-255 | Beam shaper inserted | |

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|------------------|--------------------------------|--|
| DMX CHANNEL | 17 | Parameter: BEAM SHAPER INDEX/ROTATION |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-127 | Proportional index 0°-360° | |
| 128-180 | CW rotation from fast to slow | |
| 181-202 | Stop | |
| 203-255 | CCW rotation from slow to fast | |

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| DMX CHANNEL | 18 | Parameter: ZOOM |
| DMX value | Function | |
| 000-255 | Linear zoom from min to max | |

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|-------------|----|---|
| DMX CHANNEL | 19 | Parameter: FIXTURE CONTROL |
| | | Function |
| 000-009 | 0 | - No effect |
| 010-024 | 1 | - SMOOTH DIMMING OFF |
| 025-026 | 2 | - SMOOTH DIMMING 1 |
| 027-028 | 3 | - SMOOTH DIMMING 2 |
| 029-030 | 4 | - SMOOTH DIMMING 3 |
| 031-032 | 5 | - SMOOTH DIMMING 4 (Default) |
| 033-034 | 6 | - SMOOTH DIMMING 5 |
| 035-036 | 7 | - SMOOTH DIMMING 6 |
| 037-038 | 8 | - SMOOTH DIMMING 7 |
| 039-040 | 9 | - SMOOTH DIMMING 8 |
| 041-042 | 10 | - SMOOTH DIMMING 9 |
| 043-044 | 11 | - SMOOTH DIMMING 10 |
| 045-046 | 12 | - SMOOTH DIMMING 11 |
| 047-048 | 13 | - SMOOTH DIMMING 12 |
| 049-050 | 14 | - SMOOTH DIMMING 13 |
| 051-052 | 15 | - SMOOTH DIMMING 14 |
| 053-054 | 16 | - SMOOTH DIMMING 15 |
| 055-056 | 17 | - SMOOTH DIMMING 16 |
| 057-058 | 18 | - SMOOTH DIMMING 17 |
| 059-060 | 19 | - SMOOTH DIMMING 18 |
| 061-062 | 20 | - SMOOTH DIMMING 19 |
| 063-064 | 21 | - SMOOTH DIMMING 20 |
| 065-066 | 22 | - GAMMA CORRECTION QUADRATIC (Default) |
| 067-068 | 23 | - GAMMA CORRECTION LINEAR |
| 069-070 | 24 | - GAMMA CORRECTION S-CURVE |
| 071-072 | 25 | - GAMMA CORRECTION 2.2 |
| 073-074 | 26 | - reserved |
| 075-076 | 27 | - TUNGSTEN EMULATION DISABLED (Default) (to be defined) |
| 077-078 | 28 | - TUNGSTEN EMULATION ENABLED (to be defined) |
| 079-080 | 29 | - CROSSFADE CURVE INTERMEDIATE (Default) |
| 081-082 | 30 | - CROSSFADE CURVE TRANSITION |
| 083-084 | 31 | - reserved |
| 085-104 | 32 | - OUTPUT FREQUENCY 610 Hz |
| 105 | 33 | - OUTPUT FREQUENCY 800 Hz |
| 106 | 34 | - OUTPUT FREQUENCY 1000 Hz (Default) |
| 107 | 35 | - OUTPUT FREQUENCY 1500 Hz |
| 108 | 36 | - OUTPUT FREQUENCY 2000 Hz |
| 109 | 37 | - OUTPUT FREQUENCY 2500 Hz |
| 110 | 38 | - OUTPUT FREQUENCY 3000 Hz |
| 111 | 39 | - OUTPUT FREQUENCY 3500 Hz |
| 112 | 40 | - OUTPUT FREQUENCY 4000 Hz |
| 113 | 41 | - OUTPUT FREQUENCY 4500 Hz |
| 114 | 42 | - OUTPUT FREQUENCY 5000 Hz |
| 115 | 43 | - reserved |
| 116 | 44 | - reserved |
| 117 | 45 | - reserved |
| 118 | 46 | - reserved |
| 119 | 47 | - reserved |
| 120 | 48 | - reserved |
| 121 | 49 | - reserved |
| 122 | 50 | - reserved |
| 123 | 51 | - reserved |

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|-------------|--|-----------------------------------|
| DMX CHANNEL | 19 | Parameter: FIXTURE CONTROL |
| | | Function |
| 124 | 52 - reserved | |
| 125 | 53 - reserved | |
| 126 | 54 - reserved | |
| 127 | 55 - reserved | |
| 128 | 56 - reserved | |
| 129 | 57 - reserved | |
| 130 | 58 - reserved | |
| 131 | 59 - reserved | |
| 132 | 60 - reserved | |
| 133 | 61 - reserved | |
| 134 | 62 - reserved | |
| 135-136 | 63 - reserved | |
| 137-138 | 64 - reserved | |
| 139-140 | 65 - reserved | |
| 141-142 | 66 - reserved | |
| 143-144 | 67 - reserved | |
| 145-146 | 68 - reserved | |
| 147-148 | 69 - reserved | |
| 149-150 | 70 - reserved | |
| 151-152 | 71 - reserved | |
| 153-154 | 72 - reserved | |
| 155-156 | 73 - DISPLAY STANDBY DISABLED (Default) | |
| 157-158 | 74 - DISPLAY STANDBY ENABLED | |
| 159-160 | 75 - DISPLAY STANDBY FORCED ENABLED | |
| 161-174 | 76 - reserved | |
| 175-176 | 77 - NO DMX ACTION - KEEP LAST DMX (Default) | |
| 177-178 | 78 - NO DMX ACTION - BLACK OUT | |
| 179-180 | 79 - reserved | |
| 181-182 | 80 - NO DMX ACTION - DEMO PROGRAM (STEPS 01..48) | |
| 183-184 | 81 - NO DMX ACTION - SINGLE CUE | |
| 185-186 | 82 - PAN NORMAL (Default) | |
| 187-188 | 83 - PAN REVERSE | |
| 189-190 | 84 - reserved | |
| 191-192 | 85 - reserved | |
| 193-194 | 86 - reserved | |
| 195-196 | 87 - reserved | |
| 197-198 | 88 - TILT NORMAL (Default) | |
| 199-200 | 89 - TILT REVERSE | |
| 201-202 | 90 - reserved | |
| 203-204 | 91 - reserved | |
| 205-206 | 92 - reserved | |
| 207-208 | 93 - reserved | |
| 209-210 | 94 - ZOOM NORMAL (Default) | |
| 211-212 | 95 - ZOOM REVERSE | |
| 213-214 | 96 - reserved | |
| 215-216 | 97 - reserved | |
| 217-218 | 98 - reserved | |
| 219-220 | 99 - reserved | |
| 221-222 | 100 - reserved | |
| 223-224 | 101 - reserved | |
| 225-226 | 102 - reserved | |
| 227-228 | 103 - reserved | |
| 229-230 | 104 - reserved | |
| 231-232 | 105 - reserved | |
| 233-234 | 106 - reserved | |

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| DMX CHANNEL | 19 | Parameter: FIXTURE CONTROL |
| | | Function |
| 235-236 | 107 | - OPERATING MODE SILENT (Default) |
| 237-238 | 108 | - OPERATING MODE STANDARD |
| 239-240 | 109 | - reserved |
| 241-242 | 110 | - FAN MODE CONSTANT (Default) |
| 243-244 | 111 | - FAN MODE AUTO |
| 245-246 | 112 | - reserved |
| 247-248 | 113 | - reserved |
| 249-250 | 114 | - reserved |
| 251-252 | 115 | - reserved |
| 253-255 | 116 | SET FUNCTION TO DEFAULT: -SMOOTH DIMMING = 4 -GAMMA = QUADRATIC -FREQUENCY = 1000 Hz -DISPLAY STANDBY = DISABLE -NO DMX ACTION = KEEP LAST DMX -OPERATING MODE = SILENT -FAN MODE = CONSTANT -PAN DIRECTION = NORMAL -TILT DIRECTION = NORMAL -ZOOM DIRECTION = NORMAL -TUNGSTEN EMULATION = DISABLED -CROSSFADE CURVE = INTERMEDIATE |

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|------------------|----|---|
| DMX CHANNEL | 20 | Parameter: RESET |
| DMX value | | Function |
| 000-009 | | No effect |
| 010-075 | | PAN TILT reset |
| 076-095 | | HEAD MOTORS reset |
| 096-115 | | reserved |
| 116-135 | | Effects wheel reset |
| 136-155 | | reserved |
| 156-175 | | reserved |
| 176-195 | | BEAM SHAPER reset |
| 196-215 | | reserved |
| 216-239 | | ZOOM reset |
| 240-255 | | Total unit reset (PAN TILT + HEAD MOTORS) |

2. “ADVANCED” mode (28 DMX channels)

- 1 PAN msb
- 2 PAN lsb
- 3 TILT msb
- 4 TILT lsb
- 5 SPEED MOVEMENT
- 6 SHUTTER
- 7 DIMMER msb
- 8 DIMMER lsb
- 9 CCT (1.800K – 10.000K)
- 10 GREEN SATURATION
- 11 GEL LIBRARY 1
- 12 GELS X-FADE
- 13 GEL LIBRARY 2
- 14 GEL FILTER DESATURATION
- 15 CCT/GEL FADE TO RGBACL
- 16 RED
- 17 GREEN
- 18 BLUE
- 19 AMBER
- 20 CYAN
- 21 LIME
- 22 FROST/COLOUR WHEEL
- 23 BEAM SHAPER
- 24 BEAM SHAPER INDEX/ROTATION
- 25 reserved
- 26 ZOOM
- 27 FIXTURE CONTROL
- 28 RESET

| | | |
|-------------|---|---------------------------|
| 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 | |
| 000-009 | Fast movement | |
| 010-025 | Standard movement | |
| 026-127 | Vector mode from fast to slow | |
| 128-247 | Variable time reaction to dmx signal (fast to slow) | |
| 248-250 | Silent movement | |
| 251-255 | Snap movement | |

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|------------------|---|---------------------------|
| DMX CHANNEL | 6 | Parameter: SHUTTER |
| DMX value | Function | |
| 000-009 | Black Out | |
| 010-019 | Open | |
| 020-029 | Black Out | |
| 030-119 | Strobe (from 3,27s to 30ms) | |
| 120-149 | Pulse up (from 42,6s to 120ms) | |
| 150-179 | Pulse down (from 42,6s to 120ms) | |
| 180-189 | Random strobe | |
| 190-199 | Open | |
| 200-209 | Effect wheel in Black Out while rotating | |
| 210-219 | Pan/Tilt in Black Out while moving | |
| 220-222 | Open | |
| 223-224 | Beam shaper in Black Out while inserting | |
| 225-226 | Zoom in Black Out while moving | |
| 227-229 | Effect wheel/Beam Shaper/Zoom in Black Out while moving | |
| 230-255 | Open | |

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|-------------|---|------------------------------|
| DMX CHANNEL | 7 | Parameter: DIMMER msb |
| DMX CHANNEL | 8 | Parameter: DIMMER lsb |

| | | |
|------------------|---|-----------------------|
| DMX CHANNEL | 9 | Parameter: CCT |
| DMX value | Function | |
| 000-255 | Correlate colour temperature from 1800K to 10000K. Relevant CCT values (GREEN SATURATION channel 10 @ 128) 1800K = 000 2700K = 070 3000K = 083 3200K = 092 4000K = 119 5000K = 148 5600K = 163 6000K = 174 6500K = 184 7000K = 195 8000K = 215 9000K = 233 10000K = 255 | |

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|------------------|----------------------------------|------------------------------------|
| DMX CHANNEL | 10 | Parameter: GREEN SATURATION |
| DMX value | Function | |
| 000-127 | From full minus green to neutral | |
| 128 | Neutral (Default) | |
| 129-255 | From neutral to full plus green | |

| | | |
|------------------|------------------------------|--------------------------|
| DMX CHANNEL | 11 | Parameter: GEL LIBRARY 1 |
| DMX value | Function | |
| 000-009 | No function | |
| 010-011 | M001: L 002 Rose Pink | |
| 012-013 | M002: L 007 Pale Yellow | |
| 014-015 | M003: L 015 Deep Straw | |
| 016-017 | M004: L 019 fire | |
| 018-019 | M005: L 020 medium amber | |
| 020-021 | M006: L 021 Gold Amber | |
| 022-023 | M007: L 022 Dark Amber | |
| 024-025 | M008: L 025 sunset red | |
| 026-027 | M009: L 046 Dark Magenta | |
| 028-029 | M010: L 049 Medium Purple | |
| 030-031 | M011: L 058 Lavender | |
| 032-033 | M012: L 068 Sky Blue | |
| 034-035 | M013: L 079 Just Blue | |
| 036-037 | M014: L 085 Deeper Blue | |
| 038-039 | M015: L 088 Lime Green | |
| 040-041 | M016: L 089 moss green | |
| 042-043 | M017: L 100 Spring Yellow | |
| 044-045 | M018: L 101 yellow | |
| 046-047 | M019: L 102 light amber | |
| 048-049 | M020: L 103 Straw | |
| 050-051 | M021: L 104 DEEP AMBER | |
| 052-053 | M022: L 105 Orange | |
| 054-055 | M023: L 106 primary red | |
| 056-057 | M024: L 108 English rose | |
| 058-059 | M025: L 111 dark pink | |
| 060-061 | M026: L 113 magenta | |
| 062-063 | M027: L 115 peacock blue | |
| 064-065 | M028: L 117 Steel Blue | |
| 066-067 | M029: L 118 LIGHT BLU | |
| 068-069 | M030: L 119 dark blue | |
| 070-071 | M031: L 121 lee green | |
| 072-073 | M032: L 122 fern green | |
| 074-075 | M033: L 124 dark green | |
| 076-077 | M034: L 126 mauve | |
| 078-079 | M035: L 132 Medium Blue | |
| 080-081 | M036: L 136 Pale Lavender | |
| 082-083 | M037: L 137 Special lavender | |
| 084-085 | M038: L 138 Pale Green | |
| 086-087 | M039: L 139 primary green | |
| 088-089 | M040: L 142 Pale Violet | |
| 090-091 | M041: L 147 apricot | |
| 092-093 | M042: L 151 Gold Tint | |
| 094-095 | M043: L 152 pale gold | |
| 096-097 | M044: L 154 pale rose | |
| 098-099 | M045: L 156 Chocolate | |
| 100-101 | M046: L 164 flame red | |
| 102-103 | M047: L 170 deep lavender | |
| 104-105 | M048: L 174 dark steel blue | |
| 106-107 | M049: L 176 loving amber | |
| 108-109 | M050: L 179 chrome orange | |
| 110-111 | M051: L 180 dark lavender | |
| 112-113 | M052: L 181 congo blue | |

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|------------------|-------------------------------------|---------------------------------|
| DMX CHANNEL | 11 | Parameter: GEL LIBRARY 1 |
| DMX value | Function | |
| 114-115 | M053: L 182 Light Red | |
| 116-117 | M054: L 194 Surprise Pink | |
| 118-119 | M055: L 195 zenith blue | |
| 120-121 | M056: L 200 Double C.T. Blue | |
| 122-123 | M057: L 201 Full C.T. Blue | |
| 124-125 | M058: L 202 Half C.T Blue | |
| 126-127 | M059: L 203 Quarter C.T. Blue | |
| 128-129 | M060: L 204 Full C.T. Orange | |
| 130-131 | M061: L 205 Half C.T. Orange | |
| 132-133 | M062: L 206 Quarter C.T. Orange | |
| 134-135 | M063: L 242 Fluorescent 4300 Kevin | |
| 136-137 | M064: L 249 1/4 minus green | |
| 138-139 | M065: L 323 jade | |
| 140-141 | M066: L 328 Follies Pink | |
| 142-143 | M067: L 343 special medium lavender | |
| 144-145 | M068: L 345 fuchsia pink | |
| 146-147 | M069: L 341 Plum | |
| 148-149 | M070: L 353 lighter blue | |
| 150-151 | M071: L 506 Marlene | |
| 152-153 | M072: L 601 Silver | |
| 154-155 | M073: L 725 Old Steel Blue | |
| 156-157 | M074: L 728 Steel Green | |
| 158-159 | M075: L 731 Dirty Ice | |
| 160-161 | M076: L 765 LEE Yellow | |
| 162-163 | M077: L 777 rust | |
| 164-165 | M078: L 795 Magical Magenta | |
| 166-167 | M079: L 797 Deep Purple | |
| 168-169 | M080: R 03 Dark Bastard Amber | |
| 170-171 | M081: R 05 Rose tint | |
| 172-173 | M082: R 11 Light Straw | |
| 174-175 | M083: R 23 Orange | |
| 176-177 | M084: R 25 Orange Red | |
| 178-179 | M085: R 31 Salmon Pink | |
| 180-181 | M086: R 35 Light pink | |
| 182-183 | M087: R 40 Light Salmon | |
| 184-185 | M088: R 54 special lavender | |
| 186-187 | M089: R 57 Lavender | |
| 188-189 | M090: R 61 Mist Blue | |
| 190-191 | M091: R 68 Parry Sky Blue | |
| 192-193 | M092: R 75 Twilight Blue | |
| 194-195 | M093: R 79 Bright Blue | |
| 196-197 | M094: R 82 Surprise Blue | |
| 198-199 | M095: R 89 Moss Green | |
| 200-201 | M096: R 303 Warm Peach | |
| 202-203 | M097: R 318 Mayan Sun | |
| 204-205 | M098: R 363 Aquamarine | |
| 206-207 | M099: R 385 Royal Blue | |
| 208-209 | M100: R 386 Leaf Green | |
| 210-255 | No function | |

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|------------------|---|------------------------------|
| DMX CHANNEL | 12 | Parameter: GEL X-FADE |
| DMX value | Function | |
| 000-255 | Crossfade between GEL LIBRARY 1 and GEL LIBRARY 2 0 = 100% GEL LIBRARY 1, 0% GEL LIBRARY 2 128 = 50% GEL LIBRARY 1, 50% GEL LIBRARY 2 255 = 0% GEL LIBRARY 1, 100% GEL LIBRARY 2 | |

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| DMX CHANNEL | 13 | Parameter: GEL LIBRARY 2 |
| DMX value | Function | |
| 000-009 | No function | |
| 010-011 | M001: L 002 Rose Pink | |
| 012-013 | M002: L 007 Pale Yellow | |
| 014-015 | M003: L 015 Deep Straw | |
| 016-017 | M004: L 019 fire | |
| 018-019 | M005: L 020 medium amber | |
| 020-021 | M006: L 021 Gold Amber | |
| 022-023 | M007: L 022 Dark Amber | |
| 024-025 | M008: L 025 sunset red | |
| 026-027 | M009: L 046 Dark Magenta | |
| 028-029 | M010: L 049 Medium Purple | |
| 030-031 | M011: L 058 Lavender | |
| 032-033 | M012: L 068 Sky Blue | |
| 034-035 | M013: L 079 Just Blue | |
| 036-037 | M014: L 085 Deeper Blue | |
| 038-039 | M015: L 088 Lime Green | |
| 040-041 | M016: L 089 moss green | |
| 042-043 | M017: L 100 Spring Yellow | |
| 044-045 | M018: L 101 yellow | |
| 046-047 | M019: L 102 light amber | |
| 048-049 | M020: L 103 Straw | |
| 050-051 | M021: L 104 DEEP AMBER | |
| 052-053 | M022: L 105 Orange | |
| 054-055 | M023: L 106 primary red | |
| 056-057 | M024: L 108 English rose | |
| 058-059 | M025: L 111 dark pink | |
| 060-061 | M026: L 113 magenta | |
| 062-063 | M027: L 115 peacock blue | |
| 064-065 | M028: L 117 Steel Blue | |
| 066-067 | M029: L 118 LIGHT BLU | |
| 068-069 | M030: L 119 dark blue | |
| 070-071 | M031: L 121 lee green | |
| 072-073 | M032: L 122 fern green | |
| 074-075 | M033: L 124 dark green | |
| 076-077 | M034: L 126 mauve | |
| 078-079 | M035: L 132 Medium Blue | |
| 080-081 | M036: L 136 Pale Lavender | |
| 082-083 | M037: L 137 Special lavender | |
| 084-085 | M038: L 138 Pale Green | |
| 086-087 | M039: L 139 primary green | |
| 088-089 | M040: L 142 Pale Violet | |
| 090-091 | M041: L 147 apricot | |
| 092-093 | M042: L 151 Gold Tint | |
| 094-095 | M043: L 152 pale gold | |
| 096-097 | M044: L 154 pale rose | |
| 098-099 | M045: L 156 Chocolate | |
| 100-101 | M046: L 164 flame red | |
| 102-103 | M047: L 170 deep lavender | |
| 104-105 | M048: L 174 dark steel blue | |
| 106-107 | M049: L 176 loving amber | |
| 108-109 | M050: L 179 chrome orange | |
| 110-111 | M051: L 180 dark lavender | |
| 112-113 | M052: L 181 congo blue | |

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|------------------|-------------------------------------|---------------------------------|
| DMX CHANNEL | 13 | Parameter: GEL LIBRARY 2 |
| DMX value | Function | |
| 114-115 | M053: L 182 Light Red | |
| 116-117 | M054: L 194 Surprise Pink | |
| 118-119 | M055: L 195 zenith blue | |
| 120-121 | M056: L 200 Double C.T. Blue | |
| 122-123 | M057: L 201 Full C.T. Blue | |
| 124-125 | M058: L 202 Half C.T Blue | |
| 126-127 | M059: L 203 Quarter C.T. Blue | |
| 128-129 | M060: L 204 Full C.T. Orange | |
| 130-131 | M061: L 205 Half C.T. Orange | |
| 132-133 | M062: L 206 Quarter C.T. Orange | |
| 134-135 | M063: L 242 Fluorescent 4300 Kevin | |
| 136-137 | M064: L 249 1/4 minus green | |
| 138-139 | M065: L 323 jade | |
| 140-141 | M066: L 328 Follies Pink | |
| 142-143 | M067: L 343 special medium lavender | |
| 144-145 | M068: L 345 fuchsia pink | |
| 146-147 | M069: L 341 Plum | |
| 148-149 | M070: L 353 lighter blue | |
| 150-151 | M071: L 506 Marlene | |
| 152-153 | M072: L 601 Silver | |
| 154-155 | M073: L 725 Old Steel Blue | |
| 156-157 | M074: L 728 Steel Green | |
| 158-159 | M075: L 731 Dirty Ice | |
| 160-161 | M076: L 765 LEE Yellow | |
| 162-163 | M077: L 777 rust | |
| 164-165 | M078: L 795 Magical Magenta | |
| 166-167 | M079: L 797 Deep Purple | |
| 168-169 | M080: R 03 Dark Bastard Amber | |
| 170-171 | M081: R 05 Rose tint | |
| 172-173 | M082: R 11 Light Straw | |
| 174-175 | M083: R 23 Orange | |
| 176-177 | M084: R 25 Orange Red | |
| 178-179 | M085: R 31 Salmon Pink | |
| 180-181 | M086: R 35 Light pink | |
| 182-183 | M087: R 40 Light Salmon | |
| 184-185 | M088: R 54 special lavender | |
| 186-187 | M089: R 57 Lavender | |
| 188-189 | M090: R 61 Mist Blue | |
| 190-191 | M091: R 68 Parry Sky Blue | |
| 192-193 | M092: R 75 Twilight Blue | |
| 194-195 | M093: R 79 Bright Blue | |
| 196-197 | M094: R 82 Surprise Blue | |
| 198-199 | M095: R 89 Moss Green | |
| 200-201 | M096: R 303 Warm Peach | |
| 202-203 | M097: R 318 Mayan Sun | |
| 204-205 | M098: R 363 Aquamarine | |
| 206-207 | M099: R 385 Royal Blue | |
| 208-209 | M100: R 386 Leaf Green | |
| 210-255 | No function | |

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| DMX CHANNEL | 14 | Parameter: GEL FILTER DESATURATION |
| DMX value | Function | |
| 000-255 | Gel filters desaturation 0 = 100% color 255 = 0% color | |

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| DMX CHANNEL | 15 | Parameter: CCT/GEL FADE TO RGBACL |
| DMX value | Function | |
| 000-255 | Crossfade from CCT/GEL to RGBACL 0 = 100% CCT/GEL, 0% RGBACL 255 = 0% CCT/GEL, 100% RGBACL | |

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| DMX CHANNEL | 16 | Parameter: RED |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

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|------------------|------------------------------------|-------------------------|
| DMX CHANNEL | 17 | Parameter: GREEN |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

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|------------------|------------------------------------|------------------------|
| DMX CHANNEL | 18 | Parameter: BLUE |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

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|------------------|------------------------------------|-------------------------|
| DMX CHANNEL | 19 | Parameter: AMBER |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

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|------------------|------------------------------------|------------------------|
| DMX CHANNEL | 20 | Parameter: CYAN |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

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|------------------|------------------------------------|------------------------|
| DMX CHANNEL | 21 | Parameter: LIME |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

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|------------------|--|--------------------------------------|
| DMX CHANNEL | 22 | Parameter: FROST/COLOUR WHEEL |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-050 | Light frost | |
| 051-090 | Heavy frost | |
| 091-130 | Deep blue filter switch ON (BLUE channel forced at full) | |
| 131-170 | Deep red filter switch ON (RED channel forced at full) | |
| 171-210 | Deep blue filter manual control | |
| 211-255 | Deep red filter manual control | |

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| DMX CHANNEL | 23 | Parameter: BEAM SHAPER |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-255 | Beam shaper inserted | |

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|------------------|--------------------------------|--|
| DMX CHANNEL | 24 | Parameter: BEAM SHAPER INDEX/ROTATION |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-127 | Proportional index 0°-360° | |
| 128-180 | CW rotation from fast to slow | |
| 181-202 | Stop | |
| 203-255 | CCW rotation from slow to fast | |

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|------------------|-----------------|----------------------------|
| DMX CHANNEL | 25 | Parameter: Reserved |
| DMX value | Function | |
| 000-255 | Reserved | |

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|------------------|-----------------------------|------------------------|
| DMX CHANNEL | 26 | Parameter: ZOOM |
| DMX value | Function | |
| 000-255 | Linear zoom from min to max | |

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|-------------|----|---|
| DMX CHANNEL | 27 | Parameter: FIXTURE CONTROL |
| | | Function |
| 000-009 | 0 | - No effect |
| 010-024 | 1 | - SMOOTH DIMMING OFF |
| 025-026 | 2 | - SMOOTH DIMMING 1 |
| 027-028 | 3 | - SMOOTH DIMMING 2 |
| 029-030 | 4 | - SMOOTH DIMMING 3 |
| 031-032 | 5 | - SMOOTH DIMMING 4 (Default) |
| 033-034 | 6 | - SMOOTH DIMMING 5 |
| 035-036 | 7 | - SMOOTH DIMMING 6 |
| 037-038 | 8 | - SMOOTH DIMMING 7 |
| 039-040 | 9 | - SMOOTH DIMMING 8 |
| 041-042 | 10 | - SMOOTH DIMMING 9 |
| 043-044 | 11 | - SMOOTH DIMMING 10 |
| 045-046 | 12 | - SMOOTH DIMMING 11 |
| 047-048 | 13 | - SMOOTH DIMMING 12 |
| 049-050 | 14 | - SMOOTH DIMMING 13 |
| 051-052 | 15 | - SMOOTH DIMMING 14 |
| 053-054 | 16 | - SMOOTH DIMMING 15 |
| 055-056 | 17 | - SMOOTH DIMMING 16 |
| 057-058 | 18 | - SMOOTH DIMMING 17 |
| 059-060 | 19 | - SMOOTH DIMMING 18 |
| 061-062 | 20 | - SMOOTH DIMMING 19 |
| 063-064 | 21 | - SMOOTH DIMMING 20 |
| 065-066 | 22 | - GAMMA CORRECTION QUADRATIC (Default) |
| 067-068 | 23 | - GAMMA CORRECTION LINEAR |
| 069-070 | 24 | - GAMMA CORRECTION S-CURVE |
| 071-072 | 25 | - GAMMA CORRECTION 2.2 |
| 073-074 | 26 | - reserved |
| 075-076 | 27 | - TUNGSTEN EMULATION DISABLED (Default) (to be defined) |
| 077-078 | 28 | - TUNGSTEN EMULATION ENABLED (to be defined) |
| 079-080 | 29 | - CROSSFADE CURVE INTERMEDIATE (Default) |
| 081-082 | 30 | - CROSSFADE CURVE TRANSITION |
| 083-084 | 31 | - reserved |
| 085-104 | 32 | - OUTPUT FREQUENCY 610 Hz |
| 105 | 33 | - OUTPUT FREQUENCY 800 Hz |
| 106 | 34 | - OUTPUT FREQUENCY 1000 Hz (Default) |
| 107 | 35 | - OUTPUT FREQUENCY 1500 Hz |
| 108 | 36 | - OUTPUT FREQUENCY 2000 Hz |
| 109 | 37 | - OUTPUT FREQUENCY 2500 Hz |
| 110 | 38 | - OUTPUT FREQUENCY 3000 Hz |
| 111 | 39 | - OUTPUT FREQUENCY 3500 Hz |
| 112 | 40 | - OUTPUT FREQUENCY 4000 Hz |
| 113 | 41 | - OUTPUT FREQUENCY 4500 Hz |
| 114 | 42 | - OUTPUT FREQUENCY 5000 Hz |
| 115 | 43 | - reserved |
| 116 | 44 | - reserved |
| 117 | 45 | - reserved |
| 118 | 46 | - reserved |
| 119 | 47 | - reserved |
| 120 | 48 | - reserved |
| 121 | 49 | - reserved |
| 122 | 50 | - reserved |
| 123 | 51 | - reserved |

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|-------------|--|-----------------------------------|
| DMX CHANNEL | 27 | Parameter: FIXTURE CONTROL |
| | | Function |
| 124 | 52 - reserved | |
| 125 | 53 - reserved | |
| 126 | 54 - reserved | |
| 127 | 55 - reserved | |
| 128 | 56 - reserved | |
| 129 | 57 - reserved | |
| 130 | 58 - reserved | |
| 131 | 59 - reserved | |
| 132 | 60 - reserved | |
| 133 | 61 - reserved | |
| 134 | 62 - reserved | |
| 135-136 | 63 - reserved | |
| 137-138 | 64 - reserved | |
| 139-140 | 65 - reserved | |
| 141-142 | 66 - reserved | |
| 143-144 | 67 - reserved | |
| 145-146 | 68 - reserved | |
| 147-148 | 69 - reserved | |
| 149-150 | 70 - reserved | |
| 151-152 | 71 - reserved | |
| 153-154 | 72 - reserved | |
| 155-156 | 73 - DISPLAY STANDBY DISABLED (Default) | |
| 157-158 | 74 - DISPLAY STANDBY ENABLED | |
| 159-160 | 75 - DISPLAY STANDBY FORCED ENABLED | |
| 161-174 | 76 - reserved | |
| 175-176 | 77 - NO DMX ACTION - KEEP LAST DMX (Default) | |
| 177-178 | 78 - NO DMX ACTION - BLACK OUT | |
| 179-180 | 79 - reserved | |
| 181-182 | 80 - NO DMX ACTION - DEMO PROGRAM (STEPS 01..48) | |
| 183-184 | 81 - NO DMX ACTION - SINGLE CUE | |
| 185-186 | 82 - PAN NORMAL (Default) | |
| 187-188 | 83 - PAN REVERSE | |
| 189-190 | 84 - reserved | |
| 191-192 | 85 - reserved | |
| 193-194 | 86 - reserved | |
| 195-196 | 87 - reserved | |
| 197-198 | 88 - TILT NORMAL (Default) | |
| 199-200 | 89 - TILT REVERSE | |
| 201-202 | 90 - reserved | |
| 203-204 | 91 - reserved | |
| 205-206 | 92 - reserved | |
| 207-208 | 93 - reserved | |
| 209-210 | 94 - ZOOM NORMAL (Default) | |
| 211-212 | 95 - ZOOM REVERSE | |
| 213-214 | 96 - reserved | |
| 215-216 | 97 - reserved | |
| 217-218 | 98 - reserved | |
| 219-220 | 99 - reserved | |
| 221-222 | 100 - reserved | |
| 223-224 | 101 - reserved | |
| 225-226 | 102 - reserved | |
| 227-228 | 103 - reserved | |
| 229-230 | 104 - reserved | |
| 231-232 | 105 - reserved | |
| 233-234 | 106 - reserved | |

| | | |
|-------------|---|-----------------------------------|
| DMX CHANNEL | 27 | Parameter: FIXTURE CONTROL |
| | | Function |
| 235-236 | 107 - OPERATING MODE SILENT (Default) | |
| 237-238 | 108 - OPERATING MODE STANDARD | |
| 239-240 | 109 - reserved | |
| 241-242 | 110 - FAN MODE CONSTANT (Default) | |
| 243-244 | 111 - FAN MODE AUTO | |
| 245-246 | 112 - reserved | |
| 247-248 | 113 - reserved | |
| 249-250 | 114 - reserved | |
| 251-252 | 115 - reserved | |
| 253-255 | 116 - SET FUNCTION TO DEFAULT: -SMOOTH DIMMING = 4 -GAMMA = QUADRATIC -FREQUENCY = 1000 Hz -DISPLAY STANDBY = DISABLE -NO DMX ACTION = KEEP LAST DMX -OPERATING MODE = SILENT -FAN MODE = CONSTANT -PAN DIRECTION = NORMAL -TILT DIRECTION = NORMAL -ZOOM DIRECTION = NORMAL -TUNGSTEN EMULATION = DISABLED -CROSSFADE CURVE = INTERMEDIATE | |

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|------------------|---|-------------------------|
| DMX CHANNEL | 28 | Parameter: RESET |
| DMX value | | Function |
| 000-009 | No effect | |
| 010-075 | PAN TILT reset | |
| 076-095 | HEAD MOTORS reset | |
| 096-115 | reserved | |
| 116-135 | Effects wheel reset | |
| 136-155 | reserved | |
| 156-175 | reserved | |
| 176-195 | BEAM SHAPER reset | |
| 196-215 | reserved | |
| 216-239 | ZOOM reset | |
| 240-255 | Total unit reset (PAN TILT + HEAD MOTORS) | |

3. “BASIC” mode (23 DMX channels)

- 1 PAN msb
- 2 PAN lsb
- 3 TILT msb
- 4 TILT lsb
- 5 SPEED MOVEMENT
- 6 SHUTTER
- 7 DIMMER msb
- 8 DIMMER lsb
- 9 CCT (1.800K – 10.000K) (*priority on GEL LIBRARY and RGBACL channels*)
- 10 GEL LIBRARY (*priority on RGBACL channels*)
- 11 RED
- 12 GREEN
- 13 BLUE
- 14 AMBER
- 15 CYAN
- 16 LIME
- 17 FROST/COLOUR WHEEL
- 18 BEAM SHAPER
- 19 BEAM SHAPER INDEX/ROTATION
- 20 reserved
- 21 ZOOM
- 22 FIXTURE CONTROL
- 23 RESET

| | | |
|-------------|---|---------------------------|
| 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 | |
| 000-009 | Fast movement | |
| 010-025 | Standard movement | |
| 026-127 | Vector mode from fast to slow | |
| 128-247 | Variable time reaction to dmx signal (fast to slow) | |
| 248-250 | Silent movement | |
| 251-255 | Snap movement | |

| | | |
|------------------|---|---------------------------|
| DMX CHANNEL | 6 | Parameter: SHUTTER |
| DMX value | Function | |
| 000-009 | Black Out | |
| 010-019 | Open | |
| 020-029 | Black Out | |
| 030-119 | Strobe (from 3,27s to 30ms) | |
| 120-149 | Pulse up (from 42,6s to 120ms) | |
| 150-179 | Pulse down (from 42,6s to 120ms) | |
| 180-189 | Random strobe | |
| 190-199 | Open | |
| 200-209 | Effect wheel in Black Out while rotating | |
| 210-219 | Pan/Tilt in Black Out while moving | |
| 220-222 | Open | |
| 223-224 | Beam shaper in Black Out while inserting | |
| 225-226 | Zoom in Black Out while moving | |
| 227-229 | Effect wheel/Beam Shaper/Zoom in Black Out while moving | |
| 230-255 | Open | |

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|-------------|---|------------------------------|
| DMX CHANNEL | 7 | Parameter: DIMMER msb |
| DMX CHANNEL | 8 | Parameter: DIMMER lsb |

| | | |
|------------------|---|---|
| DMX CHANNEL | 9 | Parameter: CCT (priority on GEL LIBRARY and RGBACL channels) |
| DMX value | Function | |
| 000-009 | No function | |
| 010-255 | Correlated colour temperature from 1800K to 10000K. Relevant CCT values: 1800K = 010 2700K = 070 3000K = 083 3200K = 092 4000K = 119 5000K = 148 5600K = 163 6000K = 174 6500K = 184 7000K = 195 8000K = 215 9000K = 233 10000K = 255 | |

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|------------------|------------------------------|---|
| DMX CHANNEL | 10 | Parameter: GEL LIBRARY (priority on RGBACL channels) |
| DMX value | Function | |
| 000-009 | No function | |
| 010-011 | M001: L 002 Rose Pink | |
| 012-013 | M002: L 007 Pale Yellow | |
| 014-015 | M003: L 015 Deep Straw | |
| 016-017 | M004: L 019 fire | |
| 018-019 | M005: L 020 medium amber | |
| 020-021 | M006: L 021 Gold Amber | |
| 022-023 | M007: L 022 Dark Amber | |
| 024-025 | M008: L 025 sunset red | |
| 026-027 | M009: L 046 Dark Magenta | |
| 028-029 | M010: L 049 Medium Purple | |
| 030-031 | M011: L 058 Lavender | |
| 032-033 | M012: L 068 Sky Blue | |
| 034-035 | M013: L 079 Just Blue | |
| 036-037 | M014: L 085 Deeper Blue | |
| 038-039 | M015: L 088 Lime Green | |
| 040-041 | M016: L 089 moss green | |
| 042-043 | M017: L 100 Spring Yellow | |
| 044-045 | M018: L 101 yellow | |
| 046-047 | M019: L 102 light amber | |
| 048-049 | M020: L 103 Straw | |
| 050-051 | M021: L 104 DEEP AMBER | |
| 052-053 | M022: L 105 Orange | |
| 054-055 | M023: L 106 primary red | |
| 056-057 | M024: L 108 English rose | |
| 058-059 | M025: L 111 dark pink | |
| 060-061 | M026: L 113 magenta | |
| 062-063 | M027: L 115 peacock blue | |
| 064-065 | M028: L 117 Steel Blue | |
| 066-067 | M029: L 118 LIGHT BLU | |
| 068-069 | M030: L 119 dark blue | |
| 070-071 | M031: L 121 lee green | |
| 072-073 | M032: L 122 fern green | |
| 074-075 | M033: L 124 dark green | |
| 076-077 | M034: L 126 mauve | |
| 078-079 | M035: L 132 Medium Blue | |
| 080-081 | M036: L 136 Pale Lavender | |
| 082-083 | M037: L 137 Special lavender | |
| 084-085 | M038: L 138 Pale Green | |
| 086-087 | M039: L 139 primary green | |
| 088-089 | M040: L 142 Pale Violet | |
| 090-091 | M041: L 147 apricot | |
| 092-093 | M042: L 151 Gold Tint | |
| 094-095 | M043: L 152 pale gold | |
| 096-097 | M044: L 154 pale rose | |
| 098-099 | M045: L 156 Chocolate | |
| 100-101 | M046: L 164 flame red | |
| 102-103 | M047: L 170 deep lavender | |
| 104-105 | M048: L 174 dark steel blue | |
| 106-107 | M049: L 176 loving amber | |
| 108-109 | M050: L 179 chrome orange | |
| 110-111 | M051: L 180 dark lavender | |
| 112-113 | M052: L 181 congo blue | |

| | | |
|------------------|-------------------------------------|---|
| DMX CHANNEL | 10 | Parameter: GEL LIBRARY (priority on RGBACL channels) |
| DMX value | Function | |
| 114-115 | M053: L 182 Light Red | |
| 116-117 | M054: L 194 Surprise Pink | |
| 118-119 | M055: L 195 zenith blue | |
| 120-121 | M056: L 200 Double C.T. Blue | |
| 122-123 | M057: L 201 Full C.T. Blue | |
| 124-125 | M058: L 202 Half C.T Blue | |
| 126-127 | M059: L 203 Quarter C.T. Blue | |
| 128-129 | M060: L 204 Full C.T. Orange | |
| 130-131 | M061: L 205 Half C.T. Orange | |
| 132-133 | M062: L 206 Quarter C.T. Orange | |
| 134-135 | M063: L 242 Fluorescent 4300 Kevin | |
| 136-137 | M064: L 249 1/4 minus green | |
| 138-139 | M065: L 323 jade | |
| 140-141 | M066: L 328 Follies Pink | |
| 142-143 | M067: L 343 special medium lavender | |
| 144-145 | M068: L 345 fuchsia pink | |
| 146-147 | M069: L 341 Plum | |
| 148-149 | M070: L 353 lighter blue | |
| 150-151 | M071: L 506 Marlene | |
| 152-153 | M072: L 601 Silver | |
| 154-155 | M073: L 725 Old Steel Blue | |
| 156-157 | M074: L 728 Steel Green | |
| 158-159 | M075: L 731 Dirty Ice | |
| 160-161 | M076: L 765 LEE Yellow | |
| 162-163 | M077: L 777 rust | |
| 164-165 | M078: L 795 Magical Magenta | |
| 166-167 | M079: L 797 Deep Purple | |
| 168-169 | M080: R 03 Dark Bastard Amber | |
| 170-171 | M081: R 05 Rose tint | |
| 172-173 | M082: R 11 Light Straw | |
| 174-175 | M083: R 23 Orange | |
| 176-177 | M084: R 25 Orange Red | |
| 178-179 | M085: R 31 Salmon Pink | |
| 180-181 | M086: R 35 Light pink | |
| 182-183 | M087: R 40 Light Salmon | |
| 184-185 | M088: R 54 special lavender | |
| 186-187 | M089: R 57 Lavender | |
| 188-189 | M090: R 61 Mist Blue | |
| 190-191 | M091: R 68 Parry Sky Blue | |
| 192-193 | M092: R 75 Twilight Blue | |
| 194-195 | M093: R 79 Bright Blue | |
| 196-197 | M094: R 82 Surprise Blue | |
| 198-199 | M095: R 89 Moss Green | |
| 200-201 | M096: R 303 Warm Peach | |
| 202-203 | M097: R 318 Mayan Sun | |
| 204-205 | M098: R 363 Aquamarine | |
| 206-207 | M099: R 385 Royal Blue | |
| 208-209 | M100: R 386 Leaf Green | |
| 210-255 | No function | |

| | | |
|------------------|------------------------------------|-----------------------|
| DMX CHANNEL | 11 | Parameter: RED |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

| | | |
|------------------|------------------------------------|-------------------------|
| DMX CHANNEL | 12 | Parameter: GREEN |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

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|------------------|------------------------------------|------------------------|
| DMX CHANNEL | 13 | Parameter: BLUE |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

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|------------------|------------------------------------|-------------------------|
| DMX CHANNEL | 14 | Parameter: AMBER |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

| | | |
|------------------|------------------------------------|------------------------|
| DMX CHANNEL | 15 | Parameter: CYAN |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

| | | |
|------------------|------------------------------------|------------------------|
| DMX CHANNEL | 16 | Parameter: LIME |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

| | | |
|------------------|--|--------------------------------------|
| DMX CHANNEL | 17 | Parameter: FROST/COLOUR WHEEL |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-050 | Light frost | |
| 051-090 | Heavy frost | |
| 091-130 | Deep blue filter switch ON (BLUE channel forced at full) | |
| 131-170 | Deep red filter switch ON (RED channel forced at full) | |
| 171-210 | Deep blue filter manual control | |
| 211-255 | Deep red filter manual control | |

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| DMX CHANNEL | 18 | Parameter: BEAM SHAPER |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-255 | Beam shaper inserted | |

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|------------------|--------------------------------|--|
| DMX CHANNEL | 19 | Parameter: BEAM SHAPER INDEX/ROTATION |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-127 | Proportional index 0°-360° | |
| 128-180 | CW rotation from fast to slow | |
| 181-202 | Stop | |
| 203-255 | CCW rotation from slow to fast | |

| | | |
|------------------|-----------------|----------------------------|
| DMX CHANNEL | 20 | Parameter: Reserved |
| DMX value | Function | |
| 000-255 | Reserved | |

| | | |
|------------------|-----------------------------|------------------------|
| DMX CHANNEL | 21 | Parameter: ZOOM |
| DMX value | Function | |
| 000-255 | Linear zoom from min to max | |

| DMX CHANNEL | 22 | Parameter: FIXTURE CONTROL |
|-------------|--|-----------------------------------|
| | Function | |
| 000-009 | 0 - No effect | |
| 010-024 | 1 - SMOOTH DIMMING OFF | |
| 025-026 | 2 - SMOOTH DIMMING 1 | |
| 027-028 | 3 - SMOOTH DIMMING 2 | |
| 029-030 | 4 - SMOOTH DIMMING 3 | |
| 031-032 | 5 - SMOOTH DIMMING 4 (Default) | |
| 033-034 | 6 - SMOOTH DIMMING 5 | |
| 035-036 | 7 - SMOOTH DIMMING 6 | |
| 037-038 | 8 - SMOOTH DIMMING 7 | |
| 039-040 | 9 - SMOOTH DIMMING 8 | |
| 041-042 | 10 - SMOOTH DIMMING 9 | |
| 043-044 | 11 - SMOOTH DIMMING 10 | |
| 045-046 | 12 - SMOOTH DIMMING 11 | |
| 047-048 | 13 - SMOOTH DIMMING 12 | |
| 049-050 | 14 - SMOOTH DIMMING 13 | |
| 051-052 | 15 - SMOOTH DIMMING 14 | |
| 053-054 | 16 - SMOOTH DIMMING 15 | |
| 055-056 | 17 - SMOOTH DIMMING 16 | |
| 057-058 | 18 - SMOOTH DIMMING 17 | |
| 059-060 | 19 - SMOOTH DIMMING 18 | |
| 061-062 | 20 - SMOOTH DIMMING 19 | |
| 063-064 | 21 - SMOOTH DIMMING 20 | |
| 065-066 | 22 - GAMMA CORRECTION QUADRATIC (Default) | |
| 067-068 | 23 - GAMMA CORRECTION LINEAR | |
| 069-070 | 24 - GAMMA CORRECTION S-CURVE | |
| 071-072 | 25 - GAMMA CORRECTION 2.2 | |
| 073-074 | 26 - reserved | |
| 075-076 | 27 - TUNGSTEN EMULATION DISABLED (Default) (to be defined) | |
| 077-078 | 28 - TUNGSTEN EMULATION ENABLED (to be defined) | |
| 079-080 | 29 - CROSSFADE CURVE INTERMEDIATE (Default) | |
| 081-082 | 30 - CROSSFADE CURVE TRANSITION | |
| 083-084 | 31 - reserved | |
| 085-104 | 32 - OUTPUT FREQUENCY 610 Hz | |
| 105 | 33 - OUTPUT FREQUENCY 800 Hz | |
| 106 | 34 - OUTPUT FREQUENCY 1000 Hz (Default) | |
| 107 | 35 - OUTPUT FREQUENCY 1500 Hz | |
| 108 | 36 - OUTPUT FREQUENCY 2000 Hz | |
| 109 | 37 - OUTPUT FREQUENCY 2500 Hz | |
| 110 | 38 - OUTPUT FREQUENCY 3000 Hz | |
| 111 | 39 - OUTPUT FREQUENCY 3500 Hz | |
| 112 | 40 - OUTPUT FREQUENCY 4000 Hz | |
| 113 | 41 - OUTPUT FREQUENCY 4500 Hz | |
| 114 | 42 - OUTPUT FREQUENCY 5000 Hz | |
| 115 | 43 - reserved | |
| 116 | 44 - reserved | |
| 117 | 45 - reserved | |
| 118 | 46 - reserved | |
| 119 | 47 - reserved | |
| 120 | 48 - reserved | |
| 121 | 49 - reserved | |
| 122 | 50 - reserved | |
| 123 | 51 - reserved | |

| | | |
|-------------|--|-----------------------------------|
| DMX CHANNEL | 22 | Parameter: FIXTURE CONTROL |
| | | Function |
| 124 | 52 - reserved | |
| 125 | 53 - reserved | |
| 126 | 54 - reserved | |
| 127 | 55 - reserved | |
| 128 | 56 - reserved | |
| 129 | 57 - reserved | |
| 130 | 58 - reserved | |
| 131 | 59 - reserved | |
| 132 | 60 - reserved | |
| 133 | 61 - reserved | |
| 134 | 62 - reserved | |
| 135-136 | 63 - reserved | |
| 137-138 | 64 - reserved | |
| 139-140 | 65 - reserved | |
| 141-142 | 66 - reserved | |
| 143-144 | 67 - reserved | |
| 145-146 | 68 - reserved | |
| 147-148 | 69 - reserved | |
| 149-150 | 70 - reserved | |
| 151-152 | 71 - reserved | |
| 153-154 | 72 - reserved | |
| 155-156 | 73 - DISPLAY STANDBY DISABLED (Default) | |
| 157-158 | 74 - DISPLAY STANDBY ENABLED | |
| 159-160 | 75 - DISPLAY STANDBY FORCED ENABLED | |
| 161-174 | 76 - reserved | |
| 175-176 | 77 - NO DMX ACTION - KEEP LAST DMX (Default) | |
| 177-178 | 78 - NO DMX ACTION - BLACK OUT | |
| 179-180 | 79 - reserved | |
| 181-182 | 80 - NO DMX ACTION - DEMO PROGRAM (STEPS 01..48) | |
| 183-184 | 81 - NO DMX ACTION - SINGLE CUE | |
| 185-186 | 82 - PAN NORMAL (Default) | |
| 187-188 | 83 - PAN REVERSE | |
| 189-190 | 84 - reserved | |
| 191-192 | 85 - reserved | |
| 193-194 | 86 - reserved | |
| 195-196 | 87 - reserved | |
| 197-198 | 88 - TILT NORMAL (Default) | |
| 199-200 | 89 - TILT REVERSE | |
| 201-202 | 90 - reserved | |
| 203-204 | 91 - reserved | |
| 205-206 | 92 - reserved | |
| 207-208 | 93 - reserved | |
| 209-210 | 94 - ZOOM NORMAL (Default) | |
| 211-212 | 95 - ZOOM REVERSE | |
| 213-214 | 96 - reserved | |
| 215-216 | 97 - reserved | |
| 217-218 | 98 - reserved | |
| 219-220 | 99 - reserved | |
| 221-222 | 100 - reserved | |
| 223-224 | 101 - reserved | |
| 225-226 | 102 - reserved | |
| 227-228 | 103 - reserved | |
| 229-230 | 104 - reserved | |
| 231-232 | 105 - reserved | |
| 233-234 | 106 - reserved | |

| | | |
|-------------|-----|---|
| DMX CHANNEL | 22 | Parameter: FIXTURE CONTROL |
| | | Function |
| 235-236 | 107 | - OPERATING MODE SILENT (Default) |
| 237-238 | 108 | - OPERATING MODE STANDARD |
| 239-240 | 109 | - reserved |
| 241-242 | 110 | - FAN MODE CONSTANT (Default) |
| 243-244 | 111 | - FAN MODE AUTO |
| 245-246 | 112 | - reserved |
| 247-248 | 113 | - reserved |
| 249-250 | 114 | - reserved |
| 251-252 | 115 | - reserved |
| 253-255 | 116 | SET FUNCTION TO DEFAULT: -SMOOTH DIMMING = 4 -GAMMA = QUADRATIC -FREQUENCY = 1000 Hz -DISPLAY STANDBY = DISABLE -NO DMX ACTION = KEEP LAST DMX -OPERATING MODE = SILENT -FAN MODE = CONSTANT -PAN DIRECTION = NORMAL -TILT DIRECTION = NORMAL -ZOOM DIRECTION = NORMAL -TUNGSTEN EMULATION = DISABLED -CROSSFADE CURVE = INTERMEDIATE |

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|------------------|----|---|
| DMX CHANNEL | 23 | Parameter: RESET |
| DMX value | | Function |
| 000-009 | | No effect |
| 010-075 | | PAN TILT reset |
| 076-095 | | HEAD MOTORS reset |
| 096-115 | | reserved |
| 116-135 | | Effects wheel reset |
| 136-155 | | reserved |
| 156-175 | | reserved |
| 176-195 | | BEAM SHAPER reset |
| 196-215 | | reserved |
| 216-239 | | ZOOM reset |
| 240-255 | | Total unit reset (PAN TILT + HEAD MOTORS) |

4. “EXPO” mode (13 DMX channels)

- 1 PAN msb
- 2 PAN lsb
- 3 TILT msb
- 4 TILT lsb
- 5 SHUTTER
- 6 DIMMER
- 7 CCT (1.800K – 10.000K) (*priority on GEL LIBRARY*)
- 8 GEL LIBRARY
- 9 FROST/COLOUR WHEEL
- 10 BEAM SHAPER + BEAM SHP INDEX/ROTATION
- 11 ZOOM
- 12 FIXTURE CONTROL
- 13 RESET

| | | |
|-------------|---|---------------------------|
| 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: SHUTTER |
|-------------|---|---------------------------|
| DMX value | Function | |
| 000-009 | Black Out | |
| 010-019 | Open | |
| 020-029 | Black Out | |
| 030-119 | Strobe (from 3,27s to 30ms) | |
| 120-149 | Pulse up (from 42,6s to 120ms) | |
| 150-179 | Pulse down (from 42,6s to 120ms) | |
| 180-189 | Random strobe | |
| 190-199 | Open | |
| 200-209 | Effect wheel in Black Out while rotating | |
| 210-219 | Pan/Tilt in Black Out while moving | |
| 220-222 | Open | |
| 223-224 | Beam shaper in Black Out while inserting | |
| 225-226 | Zoom in Black Out while moving | |
| 227-229 | Effect wheel/Beam Shaper/Zoom in Black Out while moving | |
| 230-255 | Open | |

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|-------------|---|------------------------------|
| DMX CHANNEL | 6 | Parameter: DIMMER msb |
|-------------|---|------------------------------|

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|------------------|---|--|
| DMX CHANNEL | 7 | Parameter: CCT (<i>priority on GEL LIBRARY</i>) |
| DMX value | Function | |
| 000-009 | No function | |
| 010-255 | Correlated colour temperature from 1800K to 10000K. Relevant CCT values: 1800K = 010 2700K = 070 3000K = 083 3200K = 092 4000K = 119 5000K = 148 5600K = 163 6000K = 174 6500K = 184 7000K = 195 8000K = 215 9000K = 233 10000K = 255 | |

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|------------------|------------------------------|-------------------------------|
| DMX CHANNEL | 8 | Parameter: GEL LIBRARY |
| DMX value | Function | |
| 000-009 | No function | |
| 010-011 | M001: L 002 Rose Pink | |
| 012-013 | M002: L 007 Pale Yellow | |
| 014-015 | M003: L 015 Deep Straw | |
| 016-017 | M004: L 019 fire | |
| 018-019 | M005: L 020 medium amber | |
| 020-021 | M006: L 021 Gold Amber | |
| 022-023 | M007: L 022 Dark Amber | |
| 024-025 | M008: L 025 sunset red | |
| 026-027 | M009: L 046 Dark Magenta | |
| 028-029 | M010: L 049 Medium Purple | |
| 030-031 | M011: L 058 Lavender | |
| 032-033 | M012: L 068 Sky Blue | |
| 034-035 | M013: L 079 Just Blue | |
| 036-037 | M014: L 085 Deeper Blue | |
| 038-039 | M015: L 088 Lime Green | |
| 040-041 | M016: L 089 moss green | |
| 042-043 | M017: L 100 Spring Yellow | |
| 044-045 | M018: L 101 yellow | |
| 046-047 | M019: L 102 light amber | |
| 048-049 | M020: L 103 Straw | |
| 050-051 | M021: L 104 DEEP AMBER | |
| 052-053 | M022: L 105 Orange | |
| 054-055 | M023: L 106 primary red | |
| 056-057 | M024: L 108 English rose | |
| 058-059 | M025: L 111 dark pink | |
| 060-061 | M026: L 113 magenta | |
| 062-063 | M027: L 115 peacock blue | |
| 064-065 | M028: L 117 Steel Blue | |
| 066-067 | M029: L 118 LIGHT BLU | |
| 068-069 | M030: L 119 dark blue | |
| 070-071 | M031: L 121 lee green | |
| 072-073 | M032: L 122 fern green | |
| 074-075 | M033: L 124 dark green | |
| 076-077 | M034: L 126 mauve | |
| 078-079 | M035: L 132 Medium Blue | |
| 080-081 | M036: L 136 Pale Lavender | |
| 082-083 | M037: L 137 Special lavender | |
| 084-085 | M038: L 138 Pale Green | |
| 086-087 | M039: L 139 primary green | |
| 088-089 | M040: L 142 Pale Violet | |
| 090-091 | M041: L 147 apricot | |
| 092-093 | M042: L 151 Gold Tint | |
| 094-095 | M043: L 152 pale gold | |
| 096-097 | M044: L 154 pale rose | |
| 098-099 | M045: L 156 Chocolate | |
| 100-101 | M046: L 164 flame red | |
| 102-103 | M047: L 170 deep lavender | |
| 104-105 | M048: L 174 dark steel blue | |
| 106-107 | M049: L 176 loving amber | |
| 108-109 | M050: L 179 chrome orange | |
| 110-111 | M051: L 180 dark lavender | |
| 112-113 | M052: L 181 congo blue | |

| | | |
|------------------|-------------------------------------|-------------------------------|
| DMX CHANNEL | 8 | Parameter: GEL LIBRARY |
| DMX value | Function | |
| 114-115 | M053: L 182 Light Red | |
| 116-117 | M054: L 194 Surprise Pink | |
| 118-119 | M055: L 195 zenith blue | |
| 120-121 | M056: L 200 Double C.T. Blue | |
| 122-123 | M057: L 201 Full C.T. Blue | |
| 124-125 | M058: L 202 Half C.T Blue | |
| 126-127 | M059: L 203 Quarter C.T. Blue | |
| 128-129 | M060: L 204 Full C.T. Orange | |
| 130-131 | M061: L 205 Half C.T. Orange | |
| 132-133 | M062: L 206 Quarter C.T. Orange | |
| 134-135 | M063: L 242 Fluorescent 4300 Kevin | |
| 136-137 | M064: L 249 1/4 minus green | |
| 138-139 | M065: L 323 jade | |
| 140-141 | M066: L 328 Follies Pink | |
| 142-143 | M067: L 343 special medium lavender | |
| 144-145 | M068: L 345 fuchsia pink | |
| 146-147 | M069: L 341 Plum | |
| 148-149 | M070: L 353 lighter blue | |
| 150-151 | M071: L 506 Marlene | |
| 152-153 | M072: L 601 Silver | |
| 154-155 | M073: L 725 Old Steel Blue | |
| 156-157 | M074: L 728 Steel Green | |
| 158-159 | M075: L 731 Dirty Ice | |
| 160-161 | M076: L 765 LEE Yellow | |
| 162-163 | M077: L 777 rust | |
| 164-165 | M078: L 795 Magical Magenta | |
| 166-167 | M079: L 797 Deep Purple | |
| 168-169 | M080: R 03 Dark Bastard Amber | |
| 170-171 | M081: R 05 Rose tint | |
| 172-173 | M082: R 11 Light Straw | |
| 174-175 | M083: R 23 Orange | |
| 176-177 | M084: R 25 Orange Red | |
| 178-179 | M085: R 31 Salmon Pink | |
| 180-181 | M086: R 35 Light pink | |
| 182-183 | M087: R 40 Light Salmon | |
| 184-185 | M088: R 54 special lavender | |
| 186-187 | M089: R 57 Lavender | |
| 188-189 | M090: R 61 Mist Blue | |
| 190-191 | M091: R 68 Parry Sky Blue | |
| 192-193 | M092: R 75 Twilight Blue | |
| 194-195 | M093: R 79 Bright Blue | |
| 196-197 | M094: R 82 Surprise Blue | |
| 198-199 | M095: R 89 Moss Green | |
| 200-201 | M096: R 303 Warm Peach | |
| 202-203 | M097: R 318 Mayan Sun | |
| 204-205 | M098: R 363 Aquamarine | |
| 206-207 | M099: R 385 Royal Blue | |
| 208-209 | M100: R 386 Leaf Green | |
| 210-255 | No function | |

| | | |
|------------------|--|--------------------------------------|
| DMX CHANNEL | 9 | Parameter: FROST/COLOUR WHEEL |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-050 | Light frost | |
| 051-090 | Heavy frost | |
| 091-130 | Deep blue filter switch ON (BLUE channel forced at full) | |
| 131-170 | Deep red filter switch ON (RED channel forced at full) | |
| 171-210 | Deep blue filter manual control | |
| 211-255 | Deep red filter manual control | |

| | | |
|------------------|---|---|
| DMX CHANNEL | 10 | Parameter: BEAM SHAPER + BEAM SHP INDEX/ROTATION |
| DMX value | Function | |
| 000-009 | No Function (Beam shaper not inserted) | |
| 010-127 | Proportional index 0°-360° (Beam shaper inserted) | |
| 128-180 | CW rotation from fast to slow (Beam shaper inserted) | |
| 181-202 | Stop (Beam shaper inserted) | |
| 203-255 | CCW rotation from slow to fast (Beam shaper inserted) | |

| | | |
|------------------|-----------------------------|------------------------|
| DMX CHANNEL | 11 | Parameter: ZOOM |
| DMX value | Function | |
| 000-255 | Linear zoom from min to max | |

| | | |
|-------------|--|-----------------------------------|
| DMX CHANNEL | 12 | Parameter: FIXTURE CONTROL |
| | | Function |
| 000-009 | 0 - No effect | |
| 010-024 | 1 - SMOOTH DIMMING OFF | |
| 025-026 | 2 - SMOOTH DIMMING 1 | |
| 027-028 | 3 - SMOOTH DIMMING 2 | |
| 029-030 | 4 - SMOOTH DIMMING 3 | |
| 031-032 | 5 - SMOOTH DIMMING 4 (Default) | |
| 033-034 | 6 - SMOOTH DIMMING 5 | |
| 035-036 | 7 - SMOOTH DIMMING 6 | |
| 037-038 | 8 - SMOOTH DIMMING 7 | |
| 039-040 | 9 - SMOOTH DIMMING 8 | |
| 041-042 | 10 - SMOOTH DIMMING 9 | |
| 043-044 | 11 - SMOOTH DIMMING 10 | |
| 045-046 | 12 - SMOOTH DIMMING 11 | |
| 047-048 | 13 - SMOOTH DIMMING 12 | |
| 049-050 | 14 - SMOOTH DIMMING 13 | |
| 051-052 | 15 - SMOOTH DIMMING 14 | |
| 053-054 | 16 - SMOOTH DIMMING 15 | |
| 055-056 | 17 - SMOOTH DIMMING 16 | |
| 057-058 | 18 - SMOOTH DIMMING 17 | |
| 059-060 | 19 - SMOOTH DIMMING 18 | |
| 061-062 | 20 - SMOOTH DIMMING 19 | |
| 063-064 | 21 - SMOOTH DIMMING 20 | |
| 065-066 | 22 - GAMMA CORRECTION QUADRATIC (Default) | |
| 067-068 | 23 - GAMMA CORRECTION LINEAR | |
| 069-070 | 24 - GAMMA CORRECTION S-CURVE | |
| 071-072 | 25 - GAMMA CORRECTION 2.2 | |
| 073-074 | 26 - reserved | |
| 075-076 | 27 - TUNGSTEN EMULATION DISABLED (Default) (to be defined) | |
| 077-078 | 28 - TUNGSTEN EMULATION ENABLED (to be defined) | |
| 079-080 | 29 - CROSSFADE CURVE INTERMEDIATE (Default) | |
| 081-082 | 30 - CROSSFADE CURVE TRANSITION | |
| 083-084 | 31 - reserved | |
| 085-104 | 32 - OUTPUT FREQUENCY 610 Hz | |
| 105 | 33 - OUTPUT FREQUENCY 800 Hz | |
| 106 | 34 - OUTPUT FREQUENCY 1000 Hz (Default) | |
| 107 | 35 - OUTPUT FREQUENCY 1500 Hz | |
| 108 | 36 - OUTPUT FREQUENCY 2000 Hz | |
| 109 | 37 - OUTPUT FREQUENCY 2500 Hz | |
| 110 | 38 - OUTPUT FREQUENCY 3000 Hz | |
| 111 | 39 - OUTPUT FREQUENCY 3500 Hz | |
| 112 | 40 - OUTPUT FREQUENCY 4000 Hz | |
| 113 | 41 - OUTPUT FREQUENCY 4500 Hz | |
| 114 | 42 - OUTPUT FREQUENCY 5000 Hz | |
| 115 | 43 - reserved | |
| 116 | 44 - reserved | |
| 117 | 45 - reserved | |
| 118 | 46 - reserved | |
| 119 | 47 - reserved | |
| 120 | 48 - reserved | |
| 121 | 49 - reserved | |
| 122 | 50 - reserved | |
| 123 | 51 - reserved | |

| | | |
|-------------|--|-----------------------------------|
| DMX CHANNEL | 12 | Parameter: FIXTURE CONTROL |
| | | Function |
| 124 | 52 - reserved | |
| 125 | 53 - reserved | |
| 126 | 54 - reserved | |
| 127 | 55 - reserved | |
| 128 | 56 - reserved | |
| 129 | 57 - reserved | |
| 130 | 58 - reserved | |
| 131 | 59 - reserved | |
| 132 | 60 - reserved | |
| 133 | 61 - reserved | |
| 134 | 62 - reserved | |
| 135-136 | 63 - reserved | |
| 137-138 | 64 - reserved | |
| 139-140 | 65 - reserved | |
| 141-142 | 66 - reserved | |
| 143-144 | 67 - reserved | |
| 145-146 | 68 - reserved | |
| 147-148 | 69 - reserved | |
| 149-150 | 70 - reserved | |
| 151-152 | 71 - reserved | |
| 153-154 | 72 - reserved | |
| 155-156 | 73 - DISPLAY STANDBY DISABLED (Default) | |
| 157-158 | 74 - DISPLAY STANDBY ENABLED | |
| 159-160 | 75 - DISPLAY STANDBY FORCED ENABLED | |
| 161-174 | 76 - reserved | |
| 175-176 | 77 - NO DMX ACTION - KEEP LAST DMX (Default) | |
| 177-178 | 78 - NO DMX ACTION - BLACK OUT | |
| 179-180 | 79 - reserved | |
| 181-182 | 80 - NO DMX ACTION - DEMO PROGRAM (STEPS 01..48) | |
| 183-184 | 81 - NO DMX ACTION - SINGLE CUE | |
| 185-186 | 82 - PAN NORMAL (Default) | |
| 187-188 | 83 - PAN REVERSE | |
| 189-190 | 84 - reserved | |
| 191-192 | 85 - reserved | |
| 193-194 | 86 - reserved | |
| 195-196 | 87 - reserved | |
| 197-198 | 88 - TILT NORMAL (Default) | |
| 199-200 | 89 - TILT REVERSE | |
| 201-202 | 90 - reserved | |
| 203-204 | 91 - reserved | |
| 205-206 | 92 - reserved | |
| 207-208 | 93 - reserved | |
| 209-210 | 94 - ZOOM NORMAL (Default) | |
| 211-212 | 95 - ZOOM REVERSE | |
| 213-214 | 96 - reserved | |
| 215-216 | 97 - reserved | |
| 217-218 | 98 - reserved | |
| 219-220 | 99 - reserved | |
| 221-222 | 100 - reserved | |
| 223-224 | 101 - reserved | |
| 225-226 | 102 - reserved | |
| 227-228 | 103 - reserved | |
| 229-230 | 104 - reserved | |
| 231-232 | 105 - reserved | |
| 233-234 | 106 - reserved | |

| | | |
|-------------|-----|---|
| DMX CHANNEL | 12 | Parameter: FIXTURE CONTROL |
| | | Function |
| 235-236 | 107 | - OPERATING MODE SILENT (Default) |
| 237-238 | 108 | - OPERATING MODE STANDARD |
| 239-240 | 109 | - reserved |
| 241-242 | 110 | - FAN MODE CONSTANT (Default) |
| 243-244 | 111 | - FAN MODE AUTO |
| 245-246 | 112 | - reserved |
| 247-248 | 113 | - reserved |
| 249-250 | 114 | - reserved |
| 251-252 | 115 | - reserved |
| 253-255 | 116 | SET FUNCTION TO DEFAULT: -SMOOTH DIMMING = 4 -GAMMA = QUADRATIC -FREQUENCY = 1000 Hz -DISPLAY STANDBY = DISABLE -NO DMX ACTION = KEEP LAST DMX -OPERATING MODE = SILENT -FAN MODE = CONSTANT -PAN DIRECTION = NORMAL -TILT DIRECTION = NORMAL -ZOOM DIRECTION = NORMAL -TUNGSTEN EMULATION = DISABLED -CROSSFADE CURVE = INTERMEDIATE |

| | | |
|------------------|----|---|
| DMX CHANNEL | 13 | Parameter: RESET |
| DMX value | | Function |
| 000-009 | | No effect |
| 010-075 | | PAN TILT reset |
| 076-095 | | HEAD MOTORS reset |
| 096-115 | | reserved |
| 116-135 | | Effects wheel reset |
| 136-155 | | reserved |
| 156-175 | | reserved |
| 176-195 | | BEAM SHAPER reset |
| 196-215 | | reserved |
| 216-239 | | ZOOM reset |
| 240-255 | | Total unit reset (PAN TILT + HEAD MOTORS) |

5. “CMY EMULATION” mode (23 DMX channels)

- **Source color temperature always 7000K.**
- **CMY / CTO channels variations will affect Gel Library 1 and 2 channels.**

- 1 PAN msb
- 2 PAN lsb
- 3 TILT msb
- 4 TILT lsb
- 5 SPEED MOVEMENT
- 6 SHUTTER
- 7 DIMMER msb
- 8 DIMMER lsb
- 9 GREEN SATURATION
- 10 GEL LIBRARY 1
- 11 GELS X-FADE
- 12 GEL LIBRARY 2
- 13 CYAN
- 14 MAGENTA
- 15 YELLOW
- 16 CTO
- 17 FROST/COLOUR WHEEL
- 18 BEAM SHAPER
- 19 BEAM SHAPER INDEX/ROTATION
- 20 Reserved
- 21 ZOOM
- 22 FIXTURE CONTROL
- 23 RESET

| | | |
|-------------|---|---------------------------|
| 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 | |
| 000-009 | Fast movement | |
| 010-025 | Standard movement | |
| 026-127 | Vector mode from fast to slow | |
| 128-247 | Variable time reaction to dmx signal (fast to slow) | |
| 248-250 | Silent movement | |
| 251-255 | Snap movement | |

| | | |
|------------------|---|---------------------------|
| DMX CHANNEL | 6 | Parameter: SHUTTER |
| DMX value | Function | |
| 000-009 | Black Out | |
| 010-019 | Open | |
| 020-029 | Black Out | |
| 030-119 | Strobe (from 3,27s to 30ms) | |
| 120-149 | Pulse up (from 42,6s to 120ms) | |
| 150-179 | Pulse down (from 42,6s to 120ms) | |
| 180-189 | Random strobe | |
| 190-199 | Open | |
| 200-209 | Effect wheel in Black Out while rotating | |
| 210-219 | Pan/Tilt in Black Out while moving | |
| 220-222 | Open | |
| 223-224 | Beam shaper in Black Out while inserting | |
| 225-226 | Zoom in Black Out while moving | |
| 227-229 | Effect wheel/Beam Shaper/Zoom in Black Out while moving | |
| 230-255 | Open | |

| | | |
|-------------|---|------------------------------|
| DMX CHANNEL | 7 | Parameter: DIMMER msb |
| DMX CHANNEL | 8 | Parameter: DIMMER lsb |

| | | |
|------------------|----------------------------------|------------------------------------|
| DMX CHANNEL | 9 | Parameter: GREEN SATURATION |
| DMX value | Function | |
| 000-127 | From full minus green to neutral | |
| 128 | Neutral (Default) | |
| 129-255 | From neutral to full plus green | |

| | | |
|-------------|------------------------------|--------------------------|
| DMX CHANNEL | 10 | Parameter: GEL LIBRARY 1 |
| DMX value | Function | |
| 000-009 | No function | |
| 010-011 | M001: L 002 Rose Pink | |
| 012-013 | M002: L 007 Pale Yellow | |
| 014-015 | M003: L 015 Deep Straw | |
| 016-017 | M004: L 019 fire | |
| 018-019 | M005: L 020 medium amber | |
| 020-021 | M006: L 021 Gold Amber | |
| 022-023 | M007: L 022 Dark Amber | |
| 024-025 | M008: L 025 sunset red | |
| 026-027 | M009: L 046 Dark Magenta | |
| 028-029 | M010: L 049 Medium Purple | |
| 030-031 | M011: L 058 Lavender | |
| 032-033 | M012: L 068 Sky Blue | |
| 034-035 | M013: L 079 Just Blue | |
| 036-037 | M014: L 085 Deeper Blue | |
| 038-039 | M015: L 088 Lime Green | |
| 040-041 | M016: L 089 moss green | |
| 042-043 | M017: L 100 Spring Yellow | |
| 044-045 | M018: L 101 yellow | |
| 046-047 | M019: L 102 light amber | |
| 048-049 | M020: L 103 Straw | |
| 050-051 | M021: L 104 DEEP AMBER | |
| 052-053 | M022: L 105 Orange | |
| 054-055 | M023: L 106 primary red | |
| 056-057 | M024: L 108 English rose | |
| 058-059 | M025: L 111 dark pink | |
| 060-061 | M026: L 113 magenta | |
| 062-063 | M027: L 115 peacock blue | |
| 064-065 | M028: L 117 Steel Blue | |
| 066-067 | M029: L 118 LIGHT BLU | |
| 068-069 | M030: L 119 dark blue | |
| 070-071 | M031: L 121 lee green | |
| 072-073 | M032: L 122 fern green | |
| 074-075 | M033: L 124 dark green | |
| 076-077 | M034: L 126 mauve | |
| 078-079 | M035: L 132 Medium Blue | |
| 080-081 | M036: L 136 Pale Lavender | |
| 082-083 | M037: L 137 Special lavender | |
| 084-085 | M038: L 138 Pale Green | |
| 086-087 | M039: L 139 primary green | |
| 088-089 | M040: L 142 Pale Violet | |
| 090-091 | M041: L 147 apricot | |
| 092-093 | M042: L 151 Gold Tint | |
| 094-095 | M043: L 152 pale gold | |
| 096-097 | M044: L 154 pale rose | |
| 098-099 | M045: L 156 Chocolate | |
| 100-101 | M046: L 164 flame red | |
| 102-103 | M047: L 170 deep lavender | |
| 104-105 | M048: L 174 dark steel blue | |
| 106-107 | M049: L 176 loving amber | |
| 108-109 | M050: L 179 chrome orange | |
| 110-111 | M051: L 180 dark lavender | |
| 112-113 | M052: L 181 congo blue | |

| | | |
|------------------|-------------------------------------|---------------------------------|
| DMX CHANNEL | 10 | Parameter: GEL LIBRARY 1 |
| DMX value | Function | |
| 114-115 | M053: L 182 Light Red | |
| 116-117 | M054: L 194 Surprise Pink | |
| 118-119 | M055: L 195 zenith blue | |
| 120-121 | M056: L 200 Double C.T. Blue | |
| 122-123 | M057: L 201 Full C.T. Blue | |
| 124-125 | M058: L 202 Half C.T Blue | |
| 126-127 | M059: L 203 Quarter C.T. Blue | |
| 128-129 | M060: L 204 Full C.T. Orange | |
| 130-131 | M061: L 205 Half C.T. Orange | |
| 132-133 | M062: L 206 Quarter C.T. Orange | |
| 134-135 | M063: L 242 Fluorescent 4300 Kevin | |
| 136-137 | M064: L 249 1/4 minus green | |
| 138-139 | M065: L 323 jade | |
| 140-141 | M066: L 328 Follies Pink | |
| 142-143 | M067: L 343 special medium lavender | |
| 144-145 | M068: L 345 fuchsia pink | |
| 146-147 | M069: L 341 Plum | |
| 148-149 | M070: L 353 lighter blue | |
| 150-151 | M071: L 506 Marlene | |
| 152-153 | M072: L 601 Silver | |
| 154-155 | M073: L 725 Old Steel Blue | |
| 156-157 | M074: L 728 Steel Green | |
| 158-159 | M075: L 731 Dirty Ice | |
| 160-161 | M076: L 765 LEE Yellow | |
| 162-163 | M077: L 777 rust | |
| 164-165 | M078: L 795 Magical Magenta | |
| 166-167 | M079: L 797 Deep Purple | |
| 168-169 | M080: R 03 Dark Bastard Amber | |
| 170-171 | M081: R 05 Rose tint | |
| 172-173 | M082: R 11 Light Straw | |
| 174-175 | M083: R 23 Orange | |
| 176-177 | M084: R 25 Orange Red | |
| 178-179 | M085: R 31 Salmon Pink | |
| 180-181 | M086: R 35 Light pink | |
| 182-183 | M087: R 40 Light Salmon | |
| 184-185 | M088: R 54 special lavender | |
| 186-187 | M089: R 57 Lavender | |
| 188-189 | M090: R 61 Mist Blue | |
| 190-191 | M091: R 68 Parry Sky Blue | |
| 192-193 | M092: R 75 Twilight Blue | |
| 194-195 | M093: R 79 Bright Blue | |
| 196-197 | M094: R 82 Surprise Blue | |
| 198-199 | M095: R 89 Moss Green | |
| 200-201 | M096: R 303 Warm Peach | |
| 202-203 | M097: R 318 Mayan Sun | |
| 204-205 | M098: R 363 Aquamarine | |
| 206-207 | M099: R 385 Royal Blue | |
| 208-209 | M100: R 386 Leaf Green | |
| 210-255 | No function | |

| | | |
|------------------|---|------------------------------|
| DMX CHANNEL | 11 | Parameter: GEL X-FADE |
| DMX value | Function | |
| 000-255 | Crossfade between GEL LIBRARY 1 and GEL LIBRARY 2 0 = 100% GEL LIBRARY 1, 0% GEL LIBRARY 2 128 = 50% GEL LIBRARY 1, 50% GEL LIBRARY 2 255 = 0% GEL LIBRARY 1, 100% GEL LIBRARY 2 | |

| | | |
|------------------|------------------------------|--------------------------|
| DMX CHANNEL | 12 | Parameter: GEL LIBRARY 2 |
| DMX value | Function | |
| 000-009 | No function | |
| 010-011 | M001: L 002 Rose Pink | |
| 012-013 | M002: L 007 Pale Yellow | |
| 014-015 | M003: L 015 Deep Straw | |
| 016-017 | M004: L 019 fire | |
| 018-019 | M005: L 020 medium amber | |
| 020-021 | M006: L 021 Gold Amber | |
| 022-023 | M007: L 022 Dark Amber | |
| 024-025 | M008: L 025 sunset red | |
| 026-027 | M009: L 046 Dark Magenta | |
| 028-029 | M010: L 049 Medium Purple | |
| 030-031 | M011: L 058 Lavender | |
| 032-033 | M012: L 068 Sky Blue | |
| 034-035 | M013: L 079 Just Blue | |
| 036-037 | M014: L 085 Deeper Blue | |
| 038-039 | M015: L 088 Lime Green | |
| 040-041 | M016: L 089 moss green | |
| 042-043 | M017: L 100 Spring Yellow | |
| 044-045 | M018: L 101 yellow | |
| 046-047 | M019: L 102 light amber | |
| 048-049 | M020: L 103 Straw | |
| 050-051 | M021: L 104 DEEP AMBER | |
| 052-053 | M022: L 105 Orange | |
| 054-055 | M023: L 106 primary red | |
| 056-057 | M024: L 108 English rose | |
| 058-059 | M025: L 111 dark pink | |
| 060-061 | M026: L 113 magenta | |
| 062-063 | M027: L 115 peacock blue | |
| 064-065 | M028: L 117 Steel Blue | |
| 066-067 | M029: L 118 LIGHT BLU | |
| 068-069 | M030: L 119 dark blue | |
| 070-071 | M031: L 121 lee green | |
| 072-073 | M032: L 122 fern green | |
| 074-075 | M033: L 124 dark green | |
| 076-077 | M034: L 126 mauve | |
| 078-079 | M035: L 132 Medium Blue | |
| 080-081 | M036: L 136 Pale Lavender | |
| 082-083 | M037: L 137 Special lavender | |
| 084-085 | M038: L 138 Pale Green | |
| 086-087 | M039: L 139 primary green | |
| 088-089 | M040: L 142 Pale Violet | |
| 090-091 | M041: L 147 apricot | |
| 092-093 | M042: L 151 Gold Tint | |
| 094-095 | M043: L 152 pale gold | |
| 096-097 | M044: L 154 pale rose | |
| 098-099 | M045: L 156 Chocolate | |
| 100-101 | M046: L 164 flame red | |
| 102-103 | M047: L 170 deep lavender | |
| 104-105 | M048: L 174 dark steel blue | |
| 106-107 | M049: L 176 loving amber | |
| 108-109 | M050: L 179 chrome orange | |
| 110-111 | M051: L 180 dark lavender | |
| 112-113 | M052: L 181 congo blue | |

| | | |
|------------------|-------------------------------------|---------------------------------|
| DMX CHANNEL | 12 | Parameter: GEL LIBRARY 2 |
| DMX value | Function | |
| 114-115 | M053: L 182 Light Red | |
| 116-117 | M054: L 194 Surprise Pink | |
| 118-119 | M055: L 195 zenith blue | |
| 120-121 | M056: L 200 Double C.T. Blue | |
| 122-123 | M057: L 201 Full C.T. Blue | |
| 124-125 | M058: L 202 Half C.T Blue | |
| 126-127 | M059: L 203 Quarter C.T. Blue | |
| 128-129 | M060: L 204 Full C.T. Orange | |
| 130-131 | M061: L 205 Half C.T. Orange | |
| 132-133 | M062: L 206 Quarter C.T. Orange | |
| 134-135 | M063: L 242 Fluorescent 4300 Kevin | |
| 136-137 | M064: L 249 1/4 minus green | |
| 138-139 | M065: L 323 jade | |
| 140-141 | M066: L 328 Follies Pink | |
| 142-143 | M067: L 343 special medium lavender | |
| 144-145 | M068: L 345 fuchsia pink | |
| 146-147 | M069: L 341 Plum | |
| 148-149 | M070: L 353 lighter blue | |
| 150-151 | M071: L 506 Marlene | |
| 152-153 | M072: L 601 Silver | |
| 154-155 | M073: L 725 Old Steel Blue | |
| 156-157 | M074: L 728 Steel Green | |
| 158-159 | M075: L 731 Dirty Ice | |
| 160-161 | M076: L 765 LEE Yellow | |
| 162-163 | M077: L 777 rust | |
| 164-165 | M078: L 795 Magical Magenta | |
| 166-167 | M079: L 797 Deep Purple | |
| 168-169 | M080: R 03 Dark Bastard Amber | |
| 170-171 | M081: R 05 Rose tint | |
| 172-173 | M082: R 11 Light Straw | |
| 174-175 | M083: R 23 Orange | |
| 176-177 | M084: R 25 Orange Red | |
| 178-179 | M085: R 31 Salmon Pink | |
| 180-181 | M086: R 35 Light pink | |
| 182-183 | M087: R 40 Light Salmon | |
| 184-185 | M088: R 54 special lavender | |
| 186-187 | M089: R 57 Lavender | |
| 188-189 | M090: R 61 Mist Blue | |
| 190-191 | M091: R 68 Parry Sky Blue | |
| 192-193 | M092: R 75 Twilight Blue | |
| 194-195 | M093: R 79 Bright Blue | |
| 196-197 | M094: R 82 Surprise Blue | |
| 198-199 | M095: R 89 Moss Green | |
| 200-201 | M096: R 303 Warm Peach | |
| 202-203 | M097: R 318 Mayan Sun | |
| 204-205 | M098: R 363 Aquamarine | |
| 206-207 | M099: R 385 Royal Blue | |
| 208-209 | M100: R 386 Leaf Green | |
| 210-255 | No function | |

| | | |
|------------------|------------------------------------|------------------------|
| DMX CHANNEL | 13 | Parameter: CYAN |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

| | | |
|------------------|------------------------------------|---------------------------|
| DMX CHANNEL | 14 | Parameter: MAGENTA |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

| | | |
|------------------|------------------------------------|--------------------------|
| DMX CHANNEL | 15 | Parameter: YELLOW |
| DMX value | Function | |
| 000-255 | Proportional color from min to max | |

| | | |
|------------------|--|-----------------------|
| DMX CHANNEL | 16 | Parameter: CTO |
| DMX value | Function | |
| 000-255 | Linear CTO from min to max 0 = 7000K 255 = 2700K | |

| | | |
|------------------|--|--------------------------------------|
| DMX CHANNEL | 17 | Parameter: FROST/COLOUR WHEEL |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-050 | Light frost | |
| 051-090 | Heavy frost | |
| 091-130 | Deep blue filter switch ON (BLUE channel forced at full) | |
| 131-170 | Deep red filter switch ON (RED channel forced at full) | |
| 171-210 | Deep blue filter manual control | |
| 211-255 | Deep red filter manual control | |

| | | |
|------------------|----------------------|-------------------------------|
| DMX CHANNEL | 18 | Parameter: BEAM SHAPER |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-255 | Beam shaper inserted | |

| | | |
|------------------|--------------------------------|--|
| DMX CHANNEL | 19 | Parameter: BEAM SHAPER INDEX/ROTATION |
| DMX value | Function | |
| 000-009 | No Function | |
| 010-127 | Proportional index 0°-360° | |
| 128-180 | CW rotation from fast to slow | |
| 181-202 | Stop | |
| 203-255 | CCW rotation from slow to fast | |

| | | |
|------------------|-----------------|----------------------------|
| DMX CHANNEL | 20 | Parameter: Reserved |
| DMX value | Function | |
| 000-255 | Reserved | |

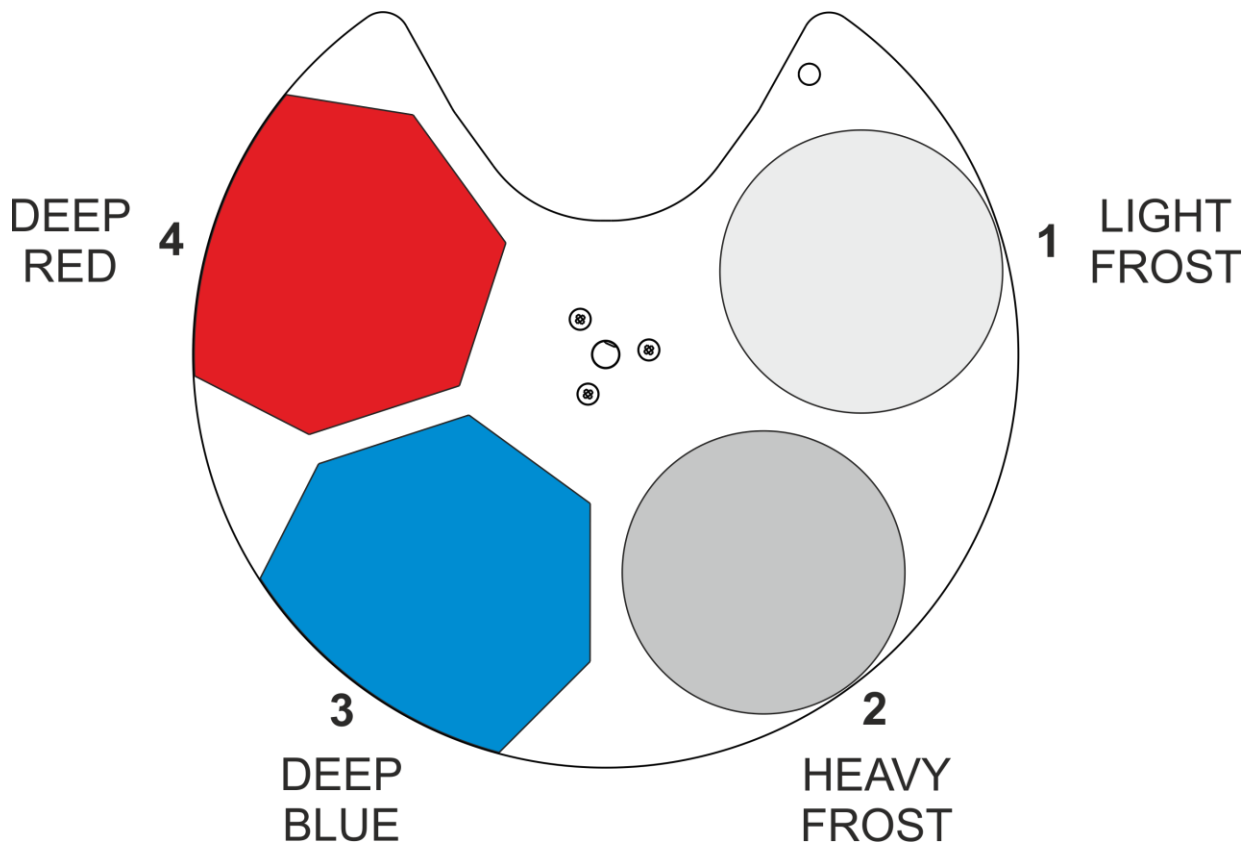
| | | |
|------------------|-----------------------------|------------------------|
| DMX CHANNEL | 21 | Parameter: ZOOM |
| DMX value | Function | |
| 000-255 | Linear zoom from min to max | |

| | | |
|-------------|----|---|
| DMX CHANNEL | 22 | Parameter: FIXTURE CONTROL |
| | | Function |
| 000-009 | 0 | - No effect |
| 010-024 | 1 | - SMOOTH DIMMING OFF |
| 025-026 | 2 | - SMOOTH DIMMING 1 |
| 027-028 | 3 | - SMOOTH DIMMING 2 |
| 029-030 | 4 | - SMOOTH DIMMING 3 |
| 031-032 | 5 | - SMOOTH DIMMING 4 (Default) |
| 033-034 | 6 | - SMOOTH DIMMING 5 |
| 035-036 | 7 | - SMOOTH DIMMING 6 |
| 037-038 | 8 | - SMOOTH DIMMING 7 |
| 039-040 | 9 | - SMOOTH DIMMING 8 |
| 041-042 | 10 | - SMOOTH DIMMING 9 |
| 043-044 | 11 | - SMOOTH DIMMING 10 |
| 045-046 | 12 | - SMOOTH DIMMING 11 |
| 047-048 | 13 | - SMOOTH DIMMING 12 |
| 049-050 | 14 | - SMOOTH DIMMING 13 |
| 051-052 | 15 | - SMOOTH DIMMING 14 |
| 053-054 | 16 | - SMOOTH DIMMING 15 |
| 055-056 | 17 | - SMOOTH DIMMING 16 |
| 057-058 | 18 | - SMOOTH DIMMING 17 |
| 059-060 | 19 | - SMOOTH DIMMING 18 |
| 061-062 | 20 | - SMOOTH DIMMING 19 |
| 063-064 | 21 | - SMOOTH DIMMING 20 |
| 065-066 | 22 | - GAMMA CORRECTION QUADRATIC (Default) |
| 067-068 | 23 | - GAMMA CORRECTION LINEAR |
| 069-070 | 24 | - GAMMA CORRECTION S-CURVE |
| 071-072 | 25 | - GAMMA CORRECTION 2.2 |
| 073-074 | 26 | - reserved |
| 075-076 | 27 | - TUNGSTEN EMULATION DISABLED (Default) (to be defined) |
| 077-078 | 28 | - TUNGSTEN EMULATION ENABLED (to be defined) |
| 079-080 | 29 | - CROSSFADE CURVE INTERMEDIATE (Default) |
| 081-082 | 30 | - CROSSFADE CURVE TRANSITION |
| 083-084 | 31 | - reserved |
| 085-104 | 32 | - OUTPUT FREQUENCY 610 Hz |
| 105 | 33 | - OUTPUT FREQUENCY 800 Hz |
| 106 | 34 | - OUTPUT FREQUENCY 1000 Hz (Default) |
| 107 | 35 | - OUTPUT FREQUENCY 1500 Hz |
| 108 | 36 | - OUTPUT FREQUENCY 2000 Hz |
| 109 | 37 | - OUTPUT FREQUENCY 2500 Hz |
| 110 | 38 | - OUTPUT FREQUENCY 3000 Hz |
| 111 | 39 | - OUTPUT FREQUENCY 3500 Hz |
| 112 | 40 | - OUTPUT FREQUENCY 4000 Hz |
| 113 | 41 | - OUTPUT FREQUENCY 4500 Hz |
| 114 | 42 | - OUTPUT FREQUENCY 5000 Hz |
| 115 | 43 | - reserved |
| 116 | 44 | - reserved |
| 117 | 45 | - reserved |
| 118 | 46 | - reserved |
| 119 | 47 | - reserved |
| 120 | 48 | - reserved |
| 121 | 49 | - reserved |
| 122 | 50 | - reserved |
| 123 | 51 | - reserved |

| | | |
|-------------|--|-----------------------------------|
| DMX CHANNEL | 22 | Parameter: FIXTURE CONTROL |
| | | Function |
| 124 | 52 - reserved | |
| 125 | 53 - reserved | |
| 126 | 54 - reserved | |
| 127 | 55 - reserved | |
| 128 | 56 - reserved | |
| 129 | 57 - reserved | |
| 130 | 58 - reserved | |
| 131 | 59 - reserved | |
| 132 | 60 - reserved | |
| 133 | 61 - reserved | |
| 134 | 62 - reserved | |
| 135-136 | 63 - reserved | |
| 137-138 | 64 - reserved | |
| 139-140 | 65 - reserved | |
| 141-142 | 66 - reserved | |
| 143-144 | 67 - reserved | |
| 145-146 | 68 - reserved | |
| 147-148 | 69 - reserved | |
| 149-150 | 70 - reserved | |
| 151-152 | 71 - reserved | |
| 153-154 | 72 - reserved | |
| 155-156 | 73 - DISPLAY STANDBY DISABLED (Default) | |
| 157-158 | 74 - DISPLAY STANDBY ENABLED | |
| 159-160 | 75 - DISPLAY STANDBY FORCED ENABLED | |
| 161-174 | 76 - reserved | |
| 175-176 | 77 - NO DMX ACTION - KEEP LAST DMX (Default) | |
| 177-178 | 78 - NO DMX ACTION - BLACK OUT | |
| 179-180 | 79 - reserved | |
| 181-182 | 80 - NO DMX ACTION - DEMO PROGRAM (STEPS 01..48) | |
| 183-184 | 81 - NO DMX ACTION - SINGLE CUE | |
| 185-186 | 82 - PAN NORMAL (Default) | |
| 187-188 | 83 - PAN REVERSE | |
| 189-190 | 84 - reserved | |
| 191-192 | 85 - reserved | |
| 193-194 | 86 - reserved | |
| 195-196 | 87 - reserved | |
| 197-198 | 88 - TILT NORMAL (Default) | |
| 199-200 | 89 - TILT REVERSE | |
| 201-202 | 90 - reserved | |
| 203-204 | 91 - reserved | |
| 205-206 | 92 - reserved | |
| 207-208 | 93 - reserved | |
| 209-210 | 94 - ZOOM NORMAL (Default) | |
| 211-212 | 95 - ZOOM REVERSE | |
| 213-214 | 96 - reserved | |
| 215-216 | 97 - reserved | |
| 217-218 | 98 - reserved | |
| 219-220 | 99 - reserved | |
| 221-222 | 100 - reserved | |
| 223-224 | 101 - reserved | |
| 225-226 | 102 - reserved | |
| 227-228 | 103 - reserved | |
| 229-230 | 104 - reserved | |
| 231-232 | 105 - reserved | |
| 233-234 | 106 - reserved | |

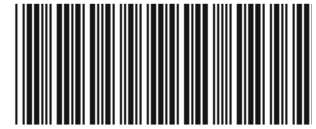
| | | |
|-------------|-----|---|
| DMX CHANNEL | 22 | Parameter: FIXTURE CONTROL |
| | | Function |
| 235-236 | 107 | - OPERATING MODE SILENT (Default) |
| 237-238 | 108 | - OPERATING MODE STANDARD |
| 239-240 | 109 | - reserved |
| 241-242 | 110 | - FAN MODE CONSTANT (Default) |
| 243-244 | 111 | - FAN MODE AUTO |
| 245-246 | 112 | - reserved |
| 247-248 | 113 | - reserved |
| 249-250 | 114 | - reserved |
| 251-252 | 115 | - reserved |
| 253-255 | 116 | SET FUNCTION TO DEFAULT: -SMOOTH DIMMING = 4 -GAMMA = QUADRATIC -FREQUENCY = 1000 Hz -DISPLAY STANDBY = DISABLE -NO DMX ACTION = KEEP LAST DMX -OPERATING MODE = SILENT -FAN MODE = CONSTANT -PAN DIRECTION = NORMAL -TILT DIRECTION = NORMAL -ZOOM DIRECTION = NORMAL -TUNGSTEN EMULATION = DISABLED -CROSSFADE CURVE = INTERMEDIATE |

| | | |
|------------------|----|---|
| DMX CHANNEL | 23 | Parameter: RESET |
| DMX value | | Function |
| 000-009 | | No effect |
| 010-075 | | PAN TILT reset |
| 076-095 | | HEAD MOTORS reset |
| 096-115 | | reserved |
| 116-135 | | Effects wheel reset |
| 136-155 | | reserved |
| 156-175 | | reserved |
| 176-195 | | BEAM SHAPER reset |
| 196-215 | | reserved |
| 216-239 | | ZOOM reset |
| 240-255 | | Total unit reset (PAN TILT + HEAD MOTORS) |

22- FROST/COLOUR WHEEL

ISO 9001:2015

DTS quality system is
certified to the ISO
9001:2015 standard



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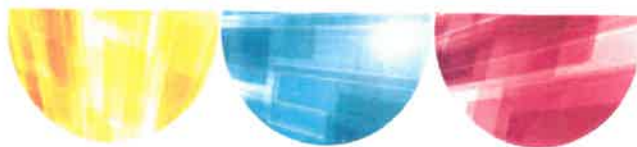


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PROUDLY
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Alchemy 5

The new generation
Fresnel LED wash light



LIGHTING – PRODUCT SPECIFICATION

V1.0

PRODUCT SPECIFICATION ALCHEMY 5



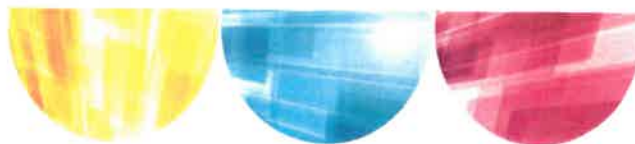
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A. General

1. The luminaire shall be a 400W RGBACL LED Fresnel wash moving head with an electronically controlled LED source with the ability to spot and flood the beam as needed.
2. The luminaire shall be capable to provide fully tuneable white light from 1,800 K to 10,000 K and allow precise manipulation of intensity, green-magenta point (full minus-green and full plus-green) at any given color temperature, single-channel colors and two dedicated DMX channels with 100 digital emulations of the most used gel filters.
3. The precise continuous manipulation of intensity from 0% to 100% in 16 bits is guaranteed by 'Hi-Q Dimming' technology.
4. All functions shall be controllable through USITT DMX 512-A; the unit shall be fully RDM compatible.
5. An on-board management of the main functional parameters shall be available via manual control from the LCD graphic display with 4 soft keys; controllable parameters: pan (MSB and LSB), tilt (MSB and LSB), speed movement, shutter, dimmer (MSB and LSB), correlated colour temperature, green-magenta point, red, green, blue, amber, cyan, lime, frost, deep red and deep blue, beam shaper, beam shaper index / rotation, and zoom. The navigation screen shall feature crisp characters and Auto Flip function.
6. The luminaire shall be stand-mount or hanging in any position thanks to suitable clamps.
7. The luminaire shall have 10,800 Lumen output (after-lens).

B. Physical

1. The luminaire shall be made of rugged bent sheet metal, covered with reinforced thermoplastic shells. Borosilicate glass 250 mm (9.8") Fresnel lens is mandatory. The unit shall have a top hat with a specific antireflection painting and shall automatically slide back inside the unit when it's disconnected from the electric power.
2. The body of the fixture shall be available in matt black finish. Pan (vertical axis) and tilt (horizontal axis) movements of the head can be locked via a dedicated button (red: lock; green: unlock).
3. Technical requirements for the Fresnel luminaire:
 - a. The Fresnel moving head shall have the dimensions not exceeding 451 mm (17.7") in length, 617.1 mm (24.3") in height with top hat fully ejected, 378.7 mm (14.9) in width.
 - b. Fresnel lens made in borosilicate glass shall have a 250 mm (9.8") diameter, featuring a top hat with a specific antireflection painting.
 - c. The unit can be hung via two fast-lock omega brackets. They can be installed in the base of the unit both ways via ¼ turn fast-lock connections.
 - d. Pan rotation shall be no less than 540° in maximum 4 seconds at maximum speed. Tilt rotation shall be no less than 220° in 2.5 second at maximum speed.
 - e. The beam angle shall range from 10° (spot) to 47° (flood). It can be increased to more than 52° by applying the internal frost filters.
 - f. Weight shall be 26.5 kg (58 lb.).
 - g. The photodiode shall be accompanied by a certification indicating that it is part of at least the third step of the MacAdam Lack (MacAdam Ellipses Step 3).
4. The luminaire shall be equipped with cooling fans with the possibility to set constant speed or automatic management of the fans' speed depending on the temperature of the LEDs. In automatic fans' speed mode, the fans can be off if the LED temperature is under 40° C (104° F)
5. The fan noise emission shall not exceed 38 dBA (1m) in 'silent' mode.
6. The LED emitters used in the fixture should be rated for nominal 20,000-hour LED life (70% intensity).
7. The luminaire shall provide monitoring of the total hours of use, as well as the single colours of the LED source; also, it shall monitor the current temperature of the LED, 2 LED drivers and the micro-controller.



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C. Electrical

1. The luminaire shall be provided with a built-in power supply of 100 to 277 V AC 50/60Hz supply voltage.
2. The fixture shall include systems for over-voltage and over-temperature circuits protection.
3. The luminaire shall require power from a stable power line.
4. The nominal power consumption shall not exceed 460 W at full output. The device will be powered by PowerCon In-out plugs.
5. Available optional accessories shall include a power cable with a stripped end and a PowerCON TRUE1 female connector.
6. The fuse holder shall be easily accessible close to the connectors on the back of the fixture.
7. Only integrated light engines that will not emit light in the ultra-violet or the Infrared spectrum are acceptable.
8. A control and indicator panel for on-board control shall be available.
9. The fixture shall be equipped with an RDM/DMX interface.
10. XLR 5-pin DMX In and Out and 3-pin DMX In and Out shall be implemented.
11. The unit can be controlled via EtherCON RJ45 input using Art-Net/s-ACN signal with category 5 network cable.
12. It shall be possible to update the unit internal firmware, adjust operating parameters and service it via DMX connectors.

D. Optical

1. The optical system shall offer a continuous focus range of 12° to 45° (+/- 10%), half peak angle with real Fresnel characteristics, an extremely smooth, uniform light field and clean shadow rendition with the following optical characteristics:
 - a. 250 mm (9.8") diameter Fresnel lens
 - b. 6-colour LED engine
 - c. CRI up to 98 and TLCI up to 96
 - d. Continuously variable correlated color temperature ranging from 1,800 K to 10,000 K. Continuously variable green-magenta adjustment
 - e. Full RGBACL colours with single channels programming or pre-programmed colours with minimum 100 gel filter emulations, and saturation control
 - f. True colour of gel filter emulations at any CCT values. Gel filters' color response fully adapts to linear CCT values
 - g. Two frost filters: light frost for soft edge projection, and heavy frost for hard edge projection.
 - h. Two dichroic filters for deep red and deep blue (Congo UV color)
2. The manufacturer ensures that there will be no differences in the quality of the light field between production batches of the lighting fixtures.

E. Environmental

1. The fixture shall be rated IP 20 for use in a dry location
2. The fixture shall operate in environments with a temperature range of -10°C (-14°F) to 45°C (113°F)
3. The fixture shall be in compliance with CE standards.



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F. Operation

1. It shall be possible to remote control the luminaire via DMX 512-A.
2. The fixture shall be fully RDM compatible and equipped with a feedback channel for reporting.
3. An onboard control featuring LCD graphic display with contrast regulation to access the menu shall be available.
4. The luminaire shall offer five DMX modes: CCT, Advanced, Basic, Expo and CMY emulation.
5. The different modes will include but not be limited to the following operating modes:
 - a. Basic mode shall require no more than 23 DMX channels and provide control over pan and tilt movement (msb and lsb), movement speed, shutter, dimmer intensity (msb and lsb), CCT from 1,800 K to 10,000 K (with the priority on gel library and RGBACL channels), gel library (with the priority on RGBACL), red, green, blue, amber, cyan, lime, frost / colour wheel, beam shaper, beam shaper index / rotation, zoom, fixture control and reset.
 - b. Expo mode shall require no more than 13 DMX channels and provide control over pan and tilt movement (msb and lsb), shutter, dimmer intensity, CCT from 1,800K to 10,000 K (with priority on gel library), gel library, frost / colour wheel, beam shaper + beam shaper index / rotation, zoom, fixture control and reset.
 - c. CMY Emulation mode shall use no more than 23 DMX channels and provide control over pan and tilt movement (msb and lsb), movement speed, shutter, dimmer intensity (msb and lsb), green saturation, two channels with gel library and a x-fade channel, cyan, magenta, yellow, CTO, frost / colour wheel, beam shaper, beam shaper index / rotation, zoom, fixture control and reset. In this mode, colour temperature is set on 7,000 K with addition of CMY and CTO (from 7,000 K to 2,700 K). CMY and CTO variation will affect Gel libraries.
 - d. Advanced mode shall use no more than 28 DMX channels and provide control over pan and tilt movement (msb and lsb), movement speed, shutter, dimmer intensity (msb and lsb), CCT from 1,800 K to 10,000 K, green saturation, two channels with gel library and a x-fade channel, gel filter desaturation, gel fade to single colors, red, green, blue, amber, cyan, lime, frost / colour wheel, beam shaper, beam shaper index / rotation, zoom, fixture control and reset.
 - e. CCT mode shall use no more than 20 DMX channels and provide control over pan and tilt movement (msb and lsb), movement speed, shutter, dimmer intensity (msb and lsb), CCT from 1,800 K to 10,000 K, green saturation, two channels with gel library and a x-fade channel, gel filter desaturation, frost / colour wheel, beam shaper, beam shaper index / rotation, zoom, fixture control and reset.

G. Dimming

1. The fixture shall allow continuous linear and flicker free dimming from 0% to 100% in 16 bit mode.
2. Coarse and fine dimming shall be possible with 2 consecutive DMX channels in 8 bit mode. The first channel shall allow setting of the target value in 256 steps from 0 to 100% output value. The second channel shall allow an additional fine adjustment in 256 steps from 0 to 100% output value.
3. 'Hi-Q Dimming' technology guarantees perfect linear fade-in and fade-out at all dimming levels.
4. The fixture has 4 dimming curves selectable by the LCD graphic display, or via the dedicated DMX 'functions' channel. They can be: Linear, S-curve, Gamma 2.2, Quadratic.
5. PWM frequency can be set from 610 Hz to 5,000 Hz in 11 different steps by the LCD graphic display, or via a dedicated DMX 'functions' channel.



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H. Accessories

Following accessories shall be available

1. General accessories:
 - a. Safety cable with Ring spring catch lift
 - b. Clamp or Aliscaf
 - c. Omega Bracket with 'fast Lock' connection ¼ turn
 - d. Dongle firmware uploader
2. Following accessories included mandatory:
 - a. PowerCON TRUE1 female connector
 - b. Foam shell to protect the units

PRODUCT SPECIFICATION ALCHEMY 5