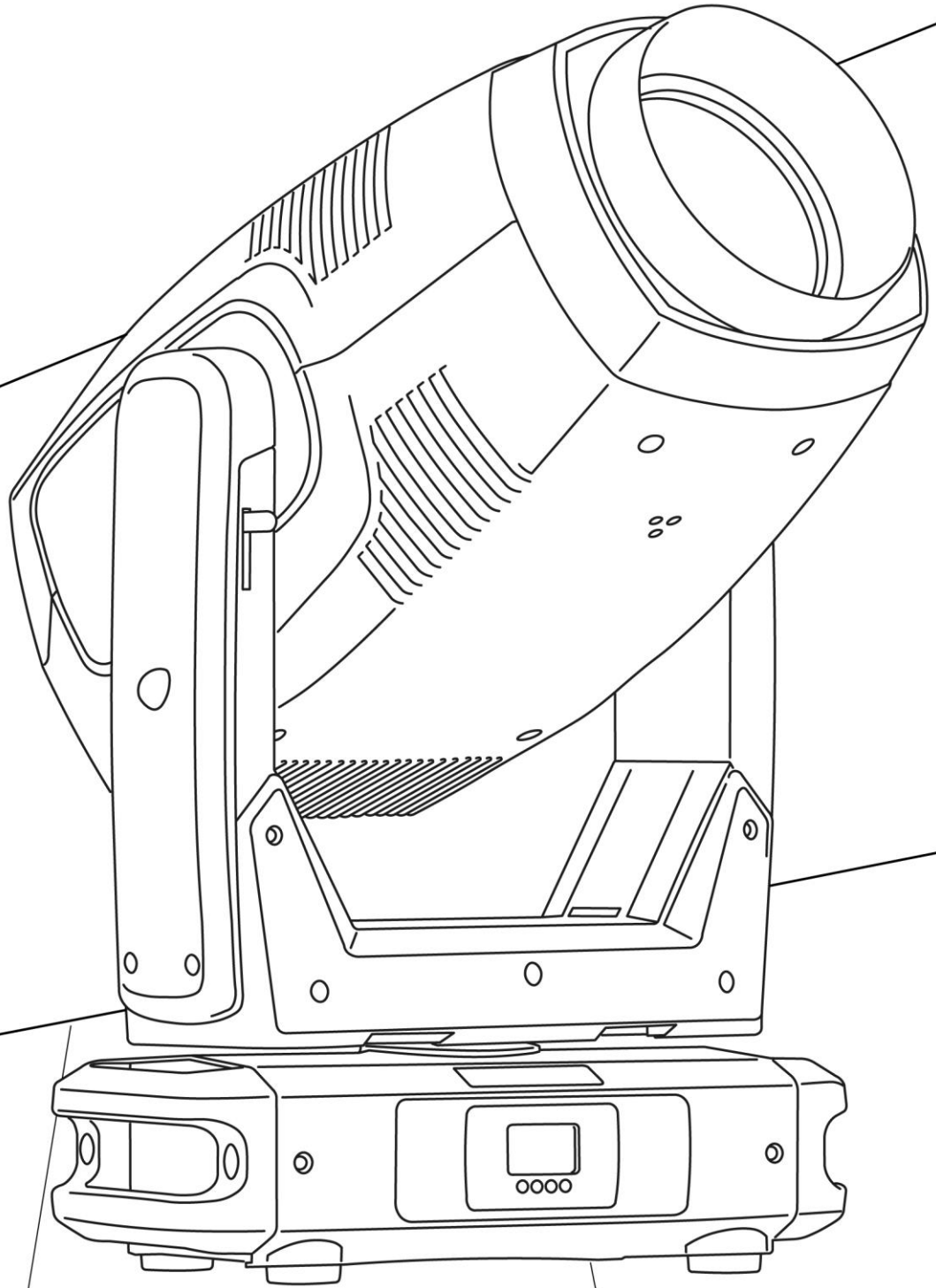
SYNERGY 7 PROFILE

USER'S MANUAL



CE

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INDEX:

1- Symbols

Symbol used:	Meaning:
	General risk.
	Electric shock risk.
	Hot surface.
	Suitable for indoor use only.
T_a 45°C	Maximum operating ambient temperature.
	Minimum distance from illuminated objects.
	Do not stare at the operating light source.
	Photobiological safety risk group.
	Never expose the front lens to sunlight or any strong artificial light source from any angle to avoid damage of head internal parts.
	European Community Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE).
	Dispose the 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 personnel.
The device must always be equipped with an efficient ground connection.

3- Important Safety Information

3.1 Fire prevention:

- **Minimum distance from the illuminated objects: 0,5m.**

- **Never expose the front lens of the unit to sunlight from any angle. Front lens become powerful magnifying glass if exposed toward 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. As last command before switching Off, point the front lens down toward the ground.**

- **The unit features various air inlets and cooling fans located on both the base and head which should, under no circumstances, be blocked or obstructed whilst the projector is in operation to avoid overheating.**
- Each fixture produces heat and must be installed in a well-ventilated place.
- Replace any blown or damaged fuses only with those of identical value (T15A 250V). Refer to the wiring diagrams if there is any doubt.
- Connect the projector to mains power via a thermal magnetic circuit breaker.

3.2 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.**

- **Class I appliance: connection must be made to a mains system fitted with an efficient earthing.**
- The level of technology inherent in the SYNERGY 7 PROFILE requires the assistance of specialised personnel for all servicing.
  Please refer to an authorised DTS service centre.

3- Important Safety Information

3.3 Safety:

- **Risk Group 2 product according to IEC 62471.**
  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 40,39 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 personnel.

- 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.

- **Pan: 540° rotation; Tilt: 260° rotation.**
  Do not place any object in the path of the projector's movement.

- **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.

T_a 45°C

- **The ambient temperature should not exceed 45°C.**

- This fixture is intended for use where humidity does not exceed 90% (non-condensing).

- After storage, before switching On the fixture, must be restored the ambient temperature.

- Never install the fixture in places that lack a constant air flow.

3- Important Safety Information

3.4 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.**
- 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.

- **Suitable for indoor use only.**

3.5 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.

3.5 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.**

4- 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 appliable 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.

5- Technical Features

Output
- 1050 W pure white LED source (7000 K 55.000 Lumens output)
- Double CRI (DMX-selectable): CRI >75 or CRI >90 (R9 >80)
- Average LED life: 50,000 hours (70% lumen output)

Optical group
- 101.000 Lux (7°@ 5 m)
- 7° - 52° linear zoom with autofocus
- Linear Frost filter
- Electronic dimmer / shutter / strobe (0.3 to 33.3 flash/sec)

Color generation
- Linear CMY
- Linear CTO (3000 K – 7000 K)
- Gel filter emulation
- 4-color wheel (white correction + UV)
- 5-color wheel (two-color generation)

Iris
- Linear 16-blade Iris (15% ÷ 100%)

Dynamic effects
- Dynamove FX Engine (DTS Patent)
- Virtual Animation Wheel
- 2 customizable rotating 6-gobo wheel
- Circular 24-facet rotating prism
- Linear 6-facet rotating prism

Rotating framing system
- 4-blade rotating framing system
- Real ‘curtain’ effect for each blade
- 60° rotation for each blade (+/- 30°)
- 90° full system rotation (+/- 45°)

User interface
- LCD graphic display + 4 soft keys; Auto-flip; Key-lock function
- Li-Fe backup battery for controlling the display settings even when the unit is not powered

5- Technical Features

Control
- Art-Net 4, sACN, RDM/DMX 512 protocols
- 52 DMX channels (Default)
- 61 DMX channels
  - 16 bit index for insertion and rotation of each blade
  - 16 bit index for blade system rotation
- Standard, Silent and Ultra-silent operation modes
- Noise level at Ultra-silent mode: 36dBA @ 1 m (normal operation, full power)
- Internal operating system updatable via DTS dongle firmware uploader

Pan & Tilt
- Pan: 540°
- Tilt: 260°
- Tri-phase motor technology
- 16-bit resolution
- Pan / Tilt lock

Power supply
- Wide range 100-240Vac 50-60 Hz
- Power consumption: 1400W max
- Power Factor: PF >0.90

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

Internal protection devices
- Overvoltage and overtemperature circuits protection
- Auto-parking: internal collision protection system

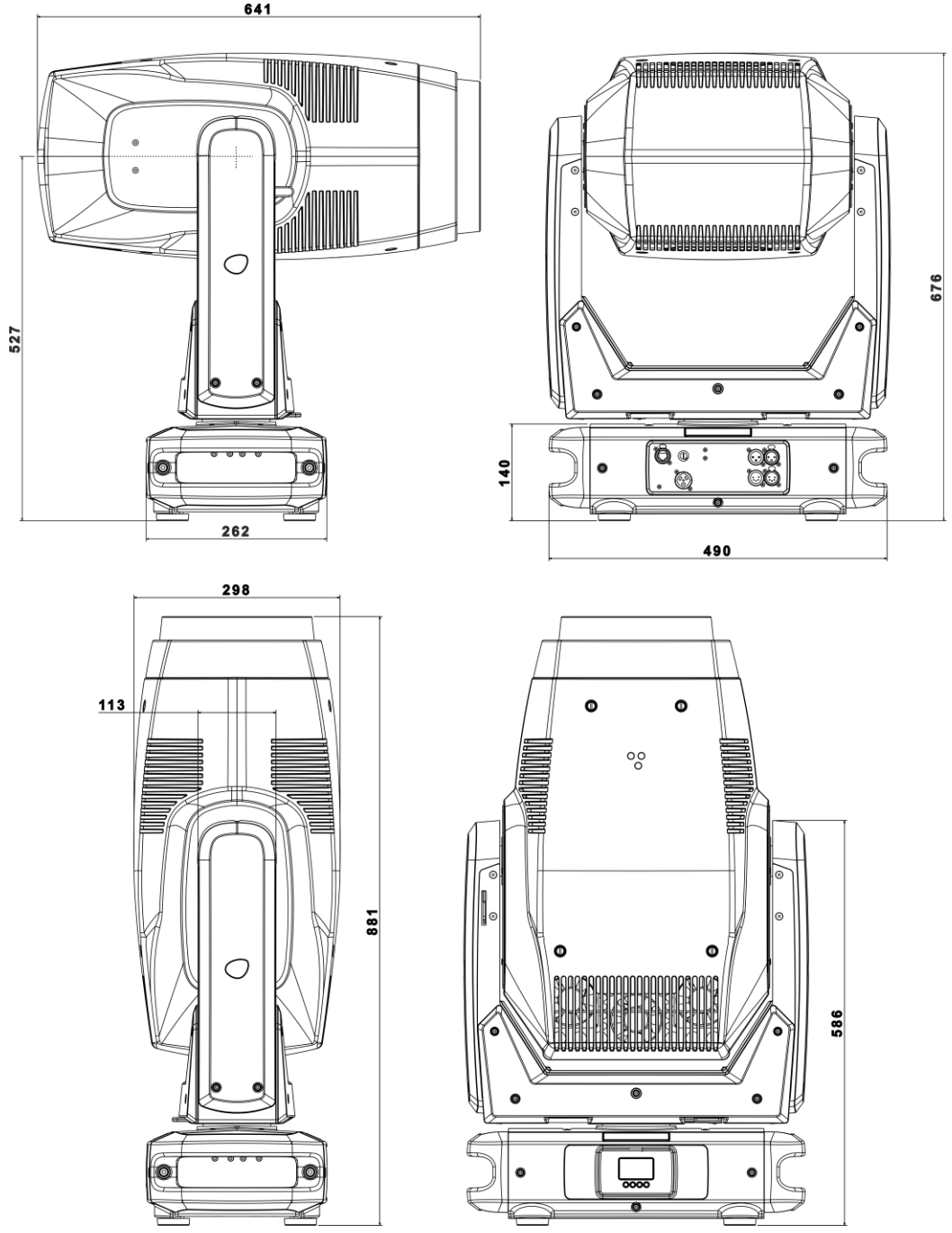
Operating temperature
-10°C / 45°C

Storage temperature
-20°C / 60°C

Physical
- IP20
- Weight: 46,5 Kg
- Finishing: Black

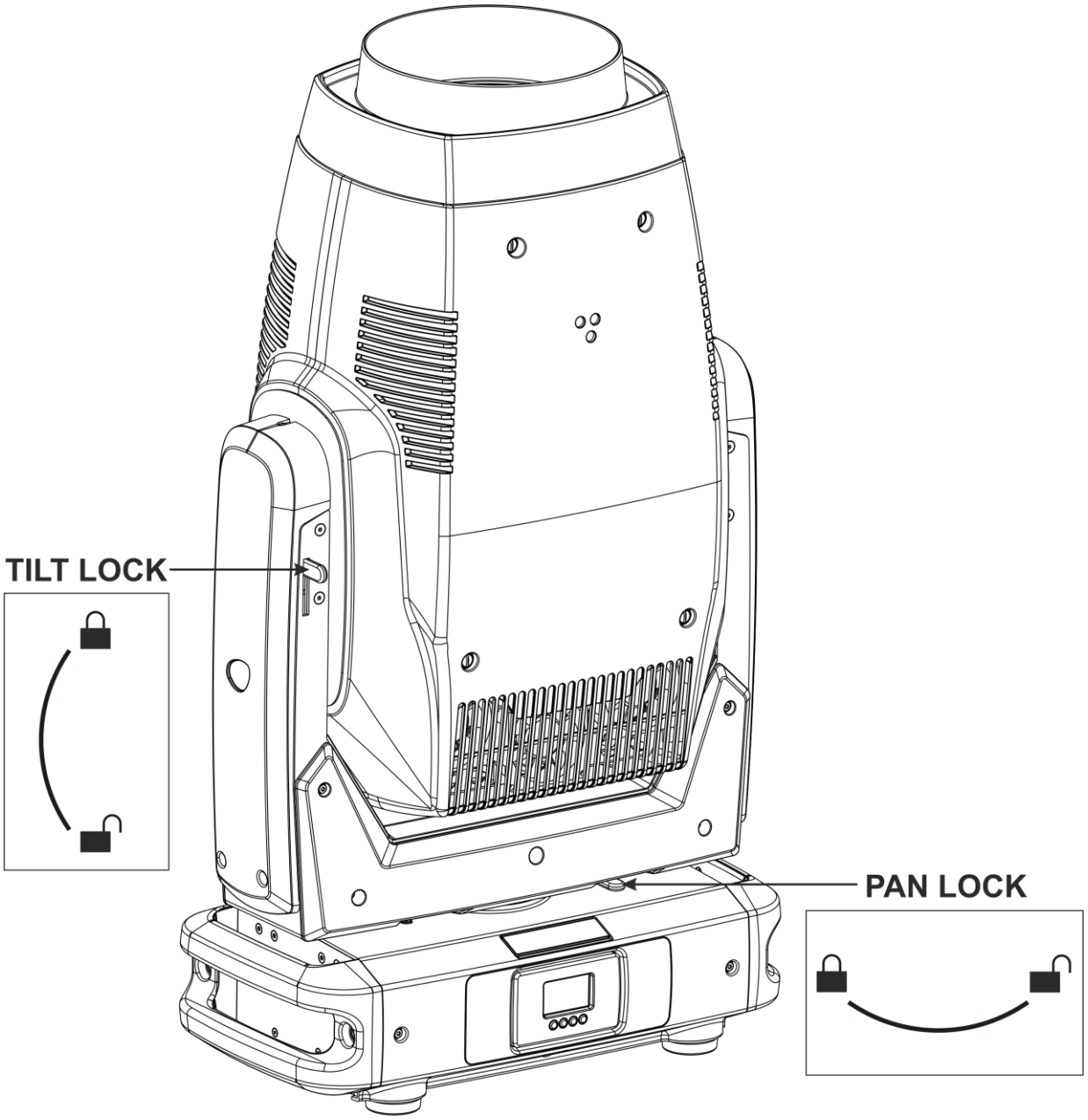
5- Technical Features

Dimensions



6- 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.



7- Included Items

1 x Cable with PowerCON TRUE1 female connector (code 02K0012267.0015)
2 x Omega clamp with “Fast Lock” connection 1/4 turn (code 02K00549)

8- Accessories On Request

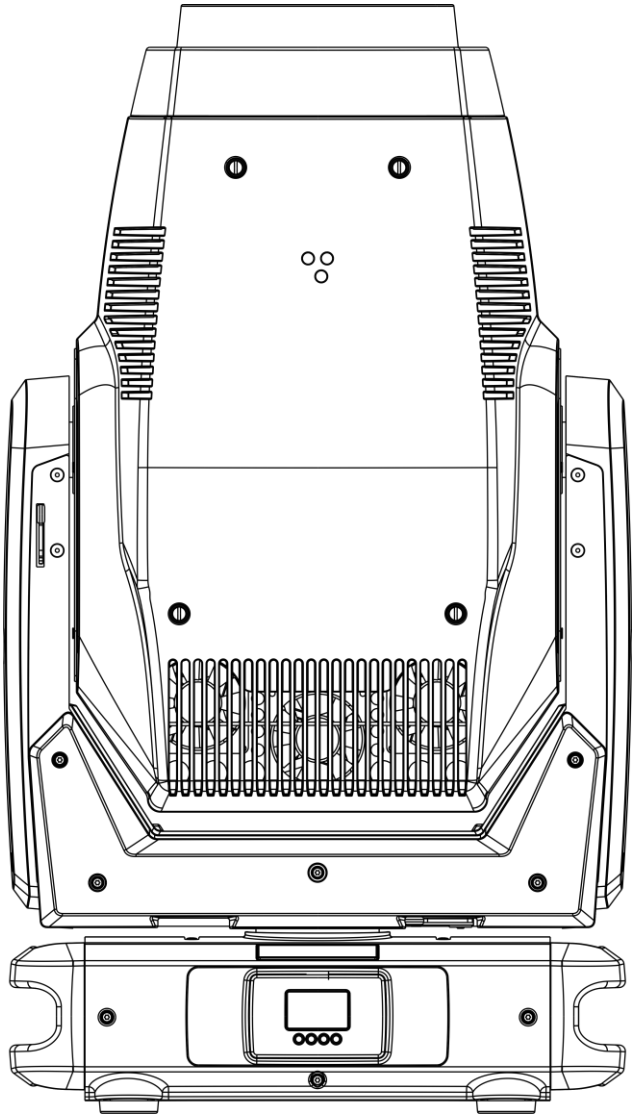
• Aliscaf clamp for tube Ø 48-51 mm - max load 200 Kg (code 0521A033)
indicated for any kind of loads vertical / horizontal.
• Professional G-QUICK clamp - max load 100 Kg (code 0521A037)
not indicated for horizontal load.
• Safety cable 5 x 600 mm (Max load 60 Kg) (code 0521A038)
• DTS Dongle firmware uploader (code 03.LA.206)

9- Installation

The unit is suitable for dry locations only.

SYNERGY 7 PROFILE may be either floor or ceiling mounted.

For floor mounting installations, SYNERGY 7 PROFILE is supplied with four rubber mounting feet on the base.



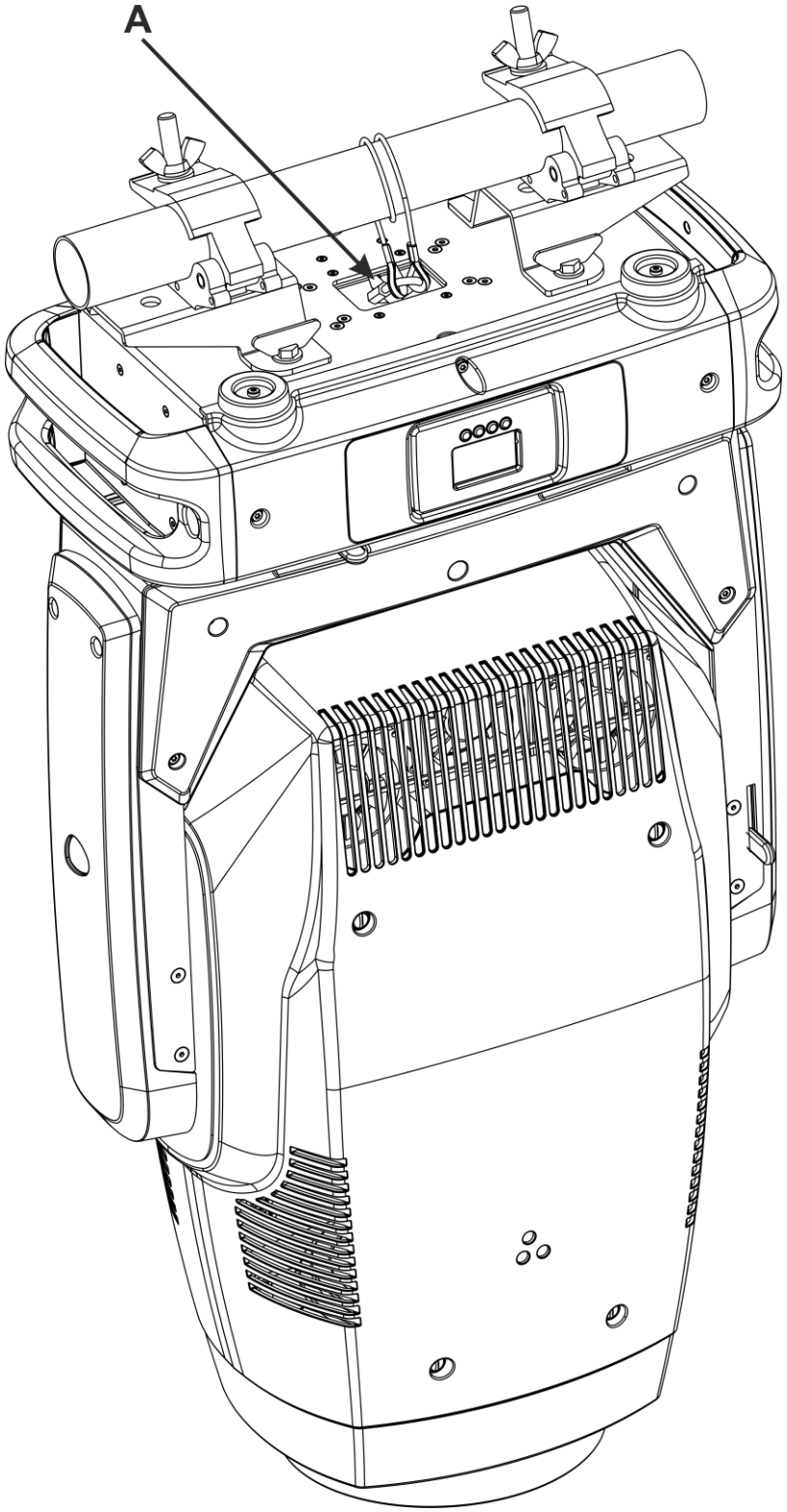
For ceiling mounted installations, we recommend the use of appropriate clamps to fix the unit to the mounting surface.

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 SYNERGY 7 PROFILE is moving.

Four 1/4 turn Fast Locks connections placed in the base of the unit allow to hang the SYNERGY 7 PROFILE by using two Omega brackets (provided in the box) in conjunction with Aliscaf clamp (available on demand).

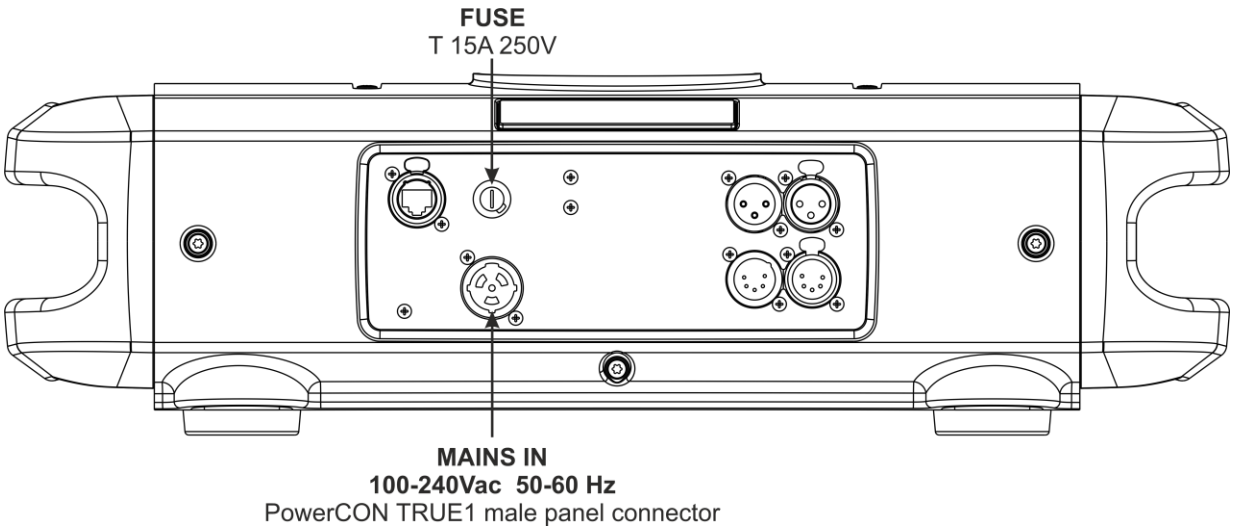
9.1- Safety cable

A safety cable must be securely fixed to the SYNERGY 7 PROFILE and to the suspension truss in order to avoid the fixture accidentally falling should the main fixing point fail.
The safety cable used must be approved by a notified body according to IEC 60598-2-17 and must be capable of bearing at least 10 times the weight of the unit. For more information please refer to an authorised DTS service centre.
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.



10- Mains Connection

SYNERGY 7 PROFILE 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 6,5 amps at 230Vac or 14 amps at 100Vac each unit connected.
Strict adherence to regulatory norms is strongly recommended.



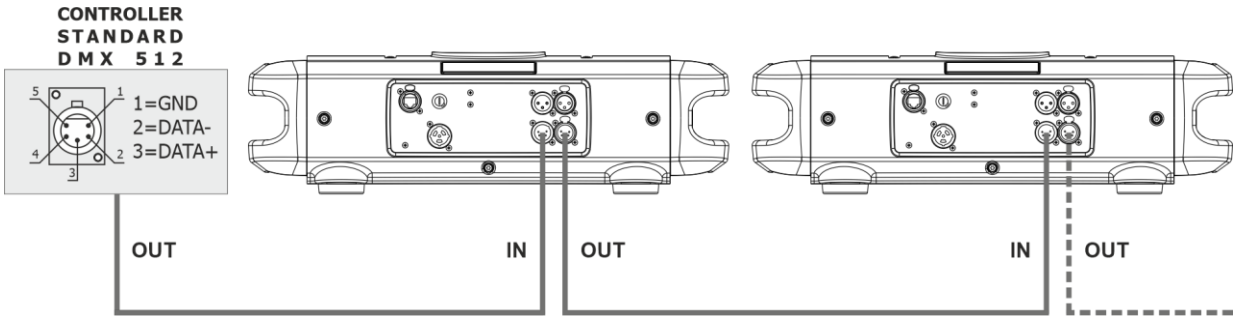
10.1- Protection

The use of a thermal magnetic circuit breaker is recommended for each unit.
Class I appliance: connection must be made to a mains system fitted with an efficient earthing.

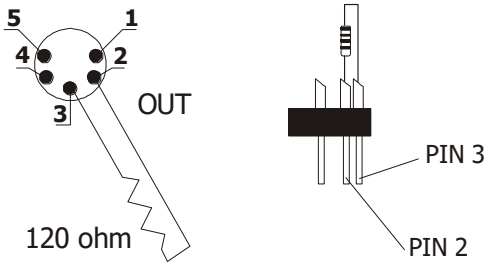
11- DMX Signal Connection

The unit operates using the digital DMX 512 signal.
Connection between the mixer and the projector or between projectors must be carried out using a two pair screened ø 0.5 mm cable and a XLR 5 or 3 pins connector. Ensure that the conductors do not touch each other.
Do not connect the cable ground to the XLR chassy.
The plug housing must be isolated. Connect the mixer signal to the DMX IN projector plug and connect it to the next projector by connecting the DMX OUT plug on the first projector to the DMX IN plug of the second one.
This way, all the projectors are cascade connected.

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



It is suggested the use of the DMX terminator.
The DMX terminator is a male XLR 3-5 pins connector with a 120 Ω resistor between pin 2 and pin 3.
The DMX terminator must be plugged into the last unit (DMX out panel connector) of the DMX line.



Place a 120 Ω 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.

11.1-DMX Addresses

SYNERGY 7 PROFILE can be controlled with 52 DMX channels (Default) or 61 DMX channels. In order to use the unit in 52 DMX channels mode (Default), set the following addresses on the mixer:

Projector 1	A001	
Projector 2	A053	If you want to select the next projector, just add “52”
Projector 3	A105	
…..	A….	
projector 6	A261	

11.2-Selecting the DMX address

1) Press the UP-DOWN key until you reach the required DMX channel. The numbers on the display will start to flash (but the new DMX address hasn't yet been set).
2) Press ENTER to confirm your selection. The numbers on the display will stop flashing and the projector is now setted to the new DMX address.
TRICKS: If you keep pushed the UP or DOWN keys, the channels are calculated more quickly and you get a faster selection.

12- Art-Net / sACN Signal Connection

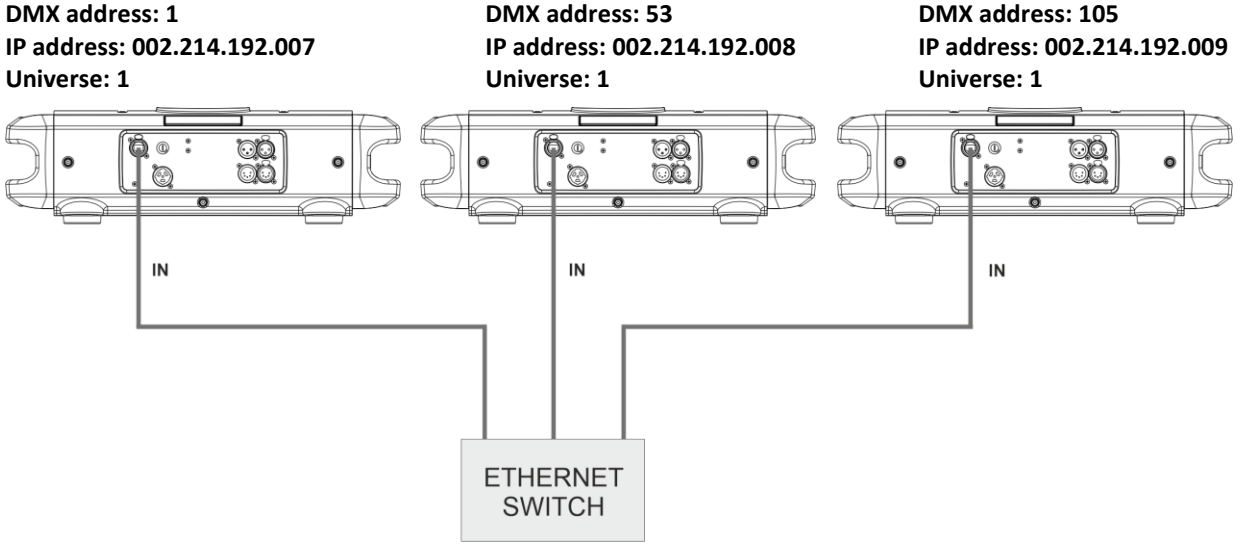
The unit operates using the Art-Net / sACN signal.
Connection between the mixer and the projector must be carried out using a category 5 network cable and a standard RJ45 connector.

12.1-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.



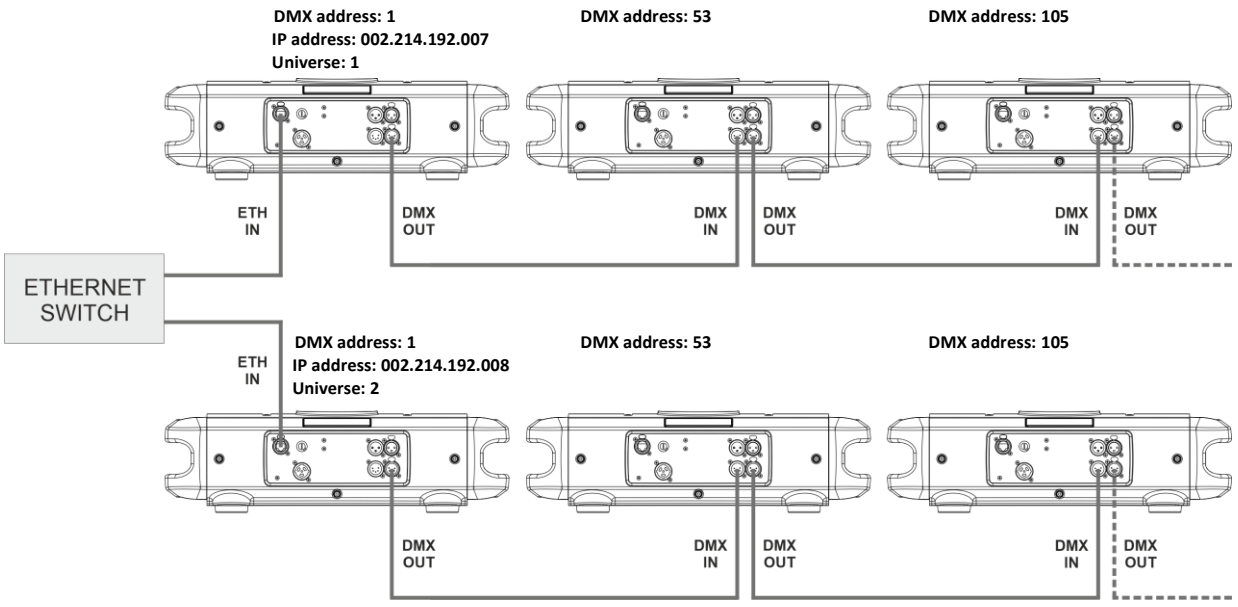
12- Art-Net / sACN Signal Connection

12.2-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.



It is suggested the use of the DMX terminator.
Refer to page 14 for DMX terminator details.

13- RDM Functions

By using a RDM controller it is possible to read / set DMX address, DMX mode and other parameters. SYNERGY 7 PROFILE accepts the following RDM commands:

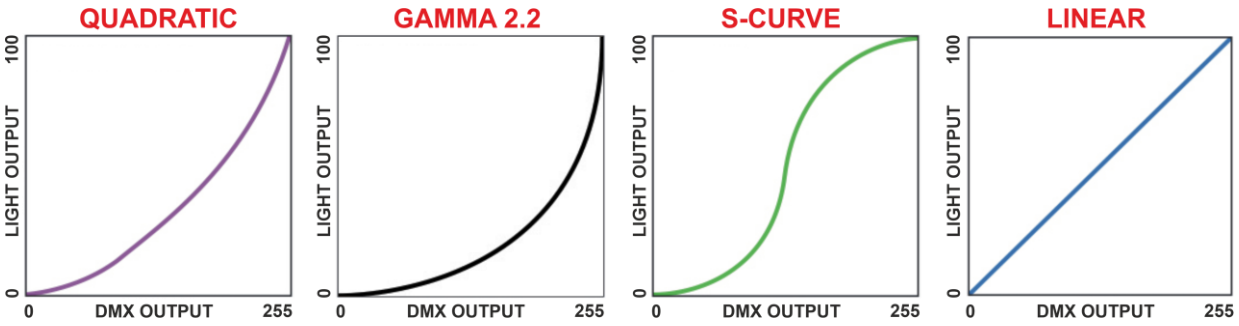
RDM Device Model ID: 0x0019

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

13- 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)

13- 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

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

13- RDM Functions

RDM STATUS MESSAGE IDs:

Status Message ID	Data Value 1	Data Value 2	Status ID Description
0x800E			ERROR CYAN
0x800F			ERROR MAGENTA
0x8010			ERROR YELLOW
0x8011			ERROR CTO
0x8012			ERROR FOCUS
0x8013			ERROR ZOOM
0x8014	wheel number		ERROR COLOUR WHEEL %d
0x8016			ERROR ROTATING GOBO WHEEL
0x8017			ERROR GOBO INDEX
0x8018			ERROR SMOOTH
0x8019	frost number		ERROR FROST %d
0x801A			ERROR PROFILER INDEX
0x801C	prism number		ERROR PRISM %d
0x801D	prism number		ERROR PRISM %d INDEX
0x801E	card number	reset line number	ERROR CARD %d RESET LINE %d
0x801F			ERROR TEMPERATURE LED MODULE
0x8020	sensor number		ERROR TEMPERATURE LED DRIVER %d
0x8021			ERROR TEMPERATURE MICRO
0x8027	sensor number		ERROR TEMPERATURE SENSOR %d
0x8029	output number	board number	ERROR LED OUT %d BOARD %d *(not yet implemented)*
0x802A	fan number	board number	ERROR FAN %d BOARD %d
0x802B			ERROR FILTERS
0x802C			ERROR SYNC BUS
0x802D			ERROR BRAKES

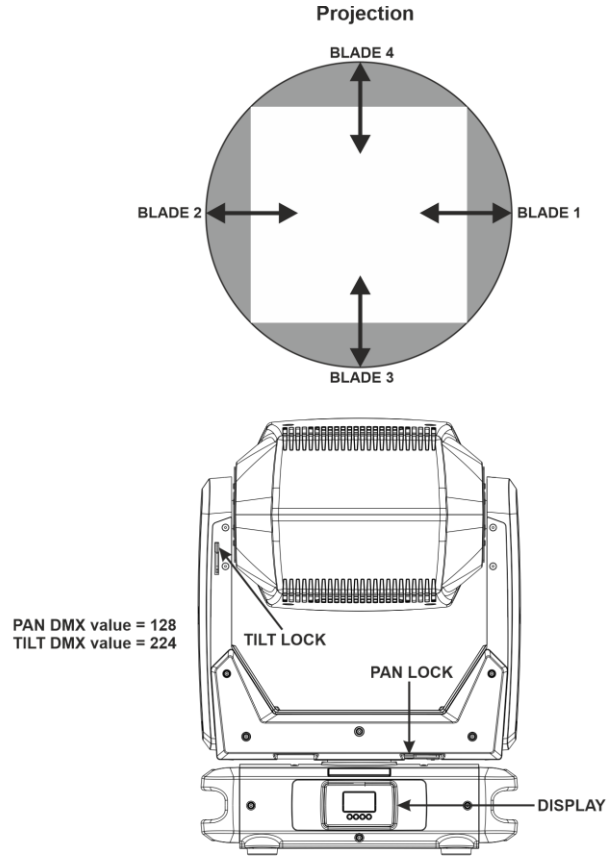
14- Firmware Updating

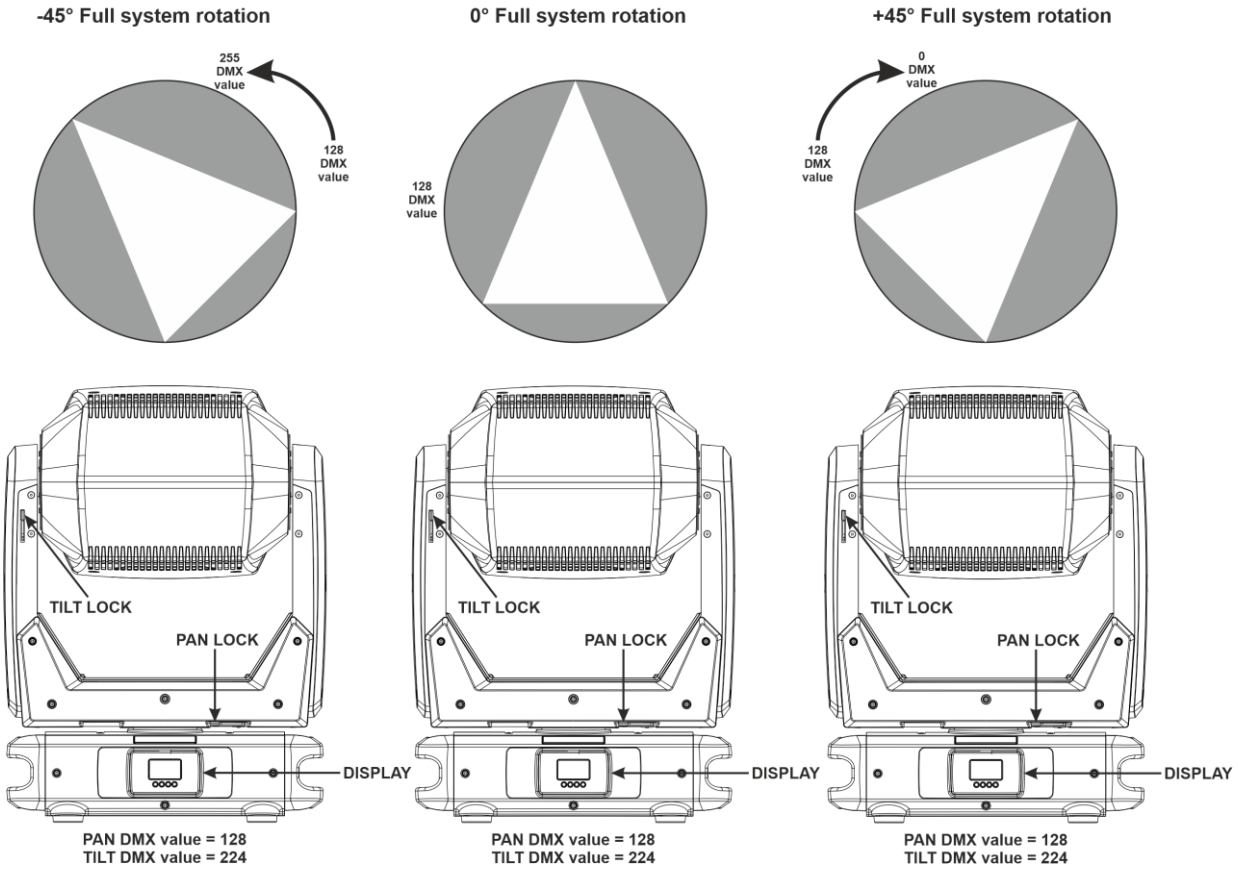
To update the firmware release of the SYNERGY 7 PROFILE you need:
- DTS Dongle Firmware Uploader (code 03.LA.206).
- “DTS Firmware Upgrade Utility v.2.02” program installed on PC (Windows OS).
- Latest firmware release available for SYNERGY 7 PROFILE unit.

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.

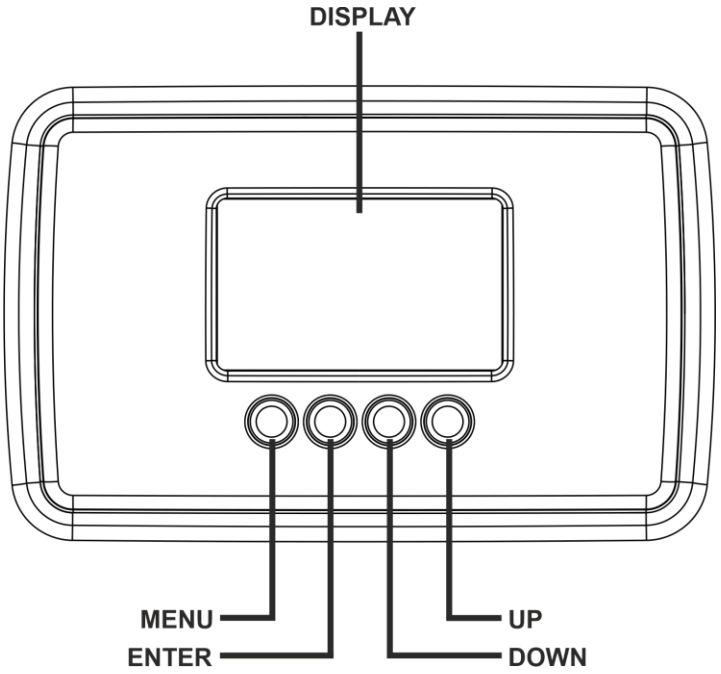
For more information please refer to an authorised DTS service centre.

15- Rotating Framing System





16- Display Functions



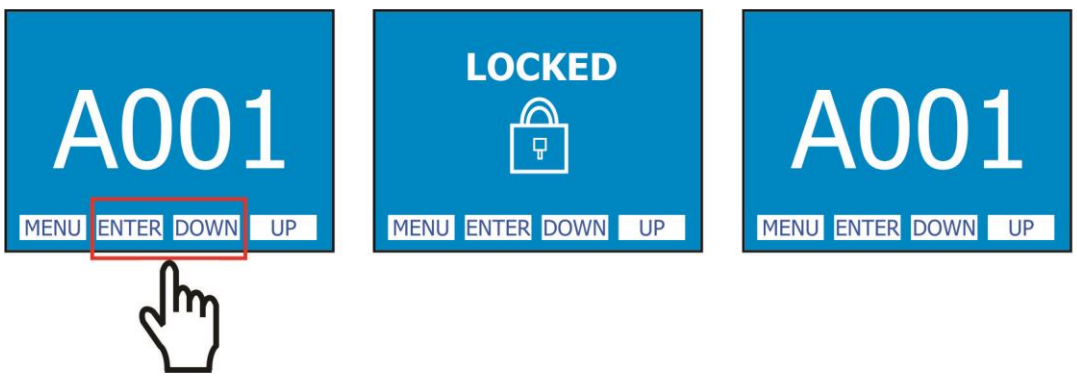
The SYNERGY 7 PROFILE display panel shows all the available control menus.
Using these options, it is possible to change the fixture's setting.
Changing the DTS settings can vary the functions of the unit so that it does not respond to the DMX 512 used to control it. Carefully follow the instructions below before carrying out any variations or selections.

MENU	• 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	• To select any required menu. • To confirm any changes.
UP / DOWN	• To navigate the menus structure. • To change any value.

Motors Firmware Release	**12**
RDM Device Model ID	**0x0019**
DMX Personality IDs	**0x01 "52 CHANNELS"** **0x02 "61 CHANNELS"**

Display Key-Lock Function

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



16- Display Functions

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		**Fixed IP address with manual setting of first byte only and fixed Net Mask (Default).**
		STATIC		Static 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. **Default = OFF.**
		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).**
		BLACKOUT		Black-out.
PAN DIRECTION	NORMAL			Allows to set the Pan movement. **Default = Normal**
	REVERSE			
TILT DIRECTION	NORMAL			Allows to set the Tilt movement. **Default = Normal**
	REVERSE			
SPEED	ZOOM	1 - 4		Zoom Speed control. **Default = 4**
	BLADE	1 - 4		Blades Speed control. **Default = 4** ***WARNING! Speed value must not be set while blades are moving during programming.***
	CMY	1 - 4		CMY Speed control. **Default = 4** ***WARNING! Speed value must not be set while CMY filters are moving during programming.***

16- Display Functions

MAIN MENU	LEVEL 1	LEVEL 2	LEVEL 3	FUNCTION
DISPLAY	FLIP	AUTO		Reverses display's reading depending on the mounting position. Automatic, on the ground or suspended. **Default = AUTO**
		ON THE GROUND		
		SUSPENDED		
	STANDBY	DISABLED		**Display stand-by disabled (Default).**
		ENABLED		Display goes OFF after 5 seconds.
		FORCED ENABLED		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	52 CHANNELS			**Allows to select 52 DMX channels mode (Default).**
	61 CHANNELS			Allows to select 61 DMX channels mode: -16 bit index for insertion and rotation of each blade. -16 bit index for blade system rotation.
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 0.5x - 3x		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 MOV.	0 - 255	**Default = 0**
		DIMMER MSB	0 - 255	**Default = 255**
		DIMMER LSB	0 - 255	**Default = 255**
		SHUTTER	0 - 255	**Default = 15**
		FILTERS WHEEL	0 - 255	**Default = 0**
		COLOUR	0 - 255	**Default = 0**
		COLOUR MODE	0 - 255	**Default = 0**
		CYAN	0 - 255	**Default = 0**
		MAGENTA	0 - 255	**Default = 0**
		YELLOW	0 - 255	**Default = 0**
		CTO	0 - 255	**Default = 0**
		GEL FILTERS	0 - 255	**Default = 0**
		GOBO 1	0 - 255	**Default = 0**
		GOBO 1 R-I MSB	0 - 255	**Default = 0**
		GOBO 1 R-I LSB	0 - 255	**Default = 0**
		GOBO 1 SHAKE	0 - 255	**Default = 0**
		GOBO 2	0 - 255	**Default = 0**
		GOBO 2 R-I MSB	0 - 255	**Default = 0**
		GOBO 2 R-I LSB	0 - 255	**Default = 0**
		GOBO 2 SHAKE	0 - 255	**Default = 0**
		IRIS	0 - 255	**Default = 0**
		IRIS EFFECTS	0 - 255	**Default = 0**

16- Display Functions

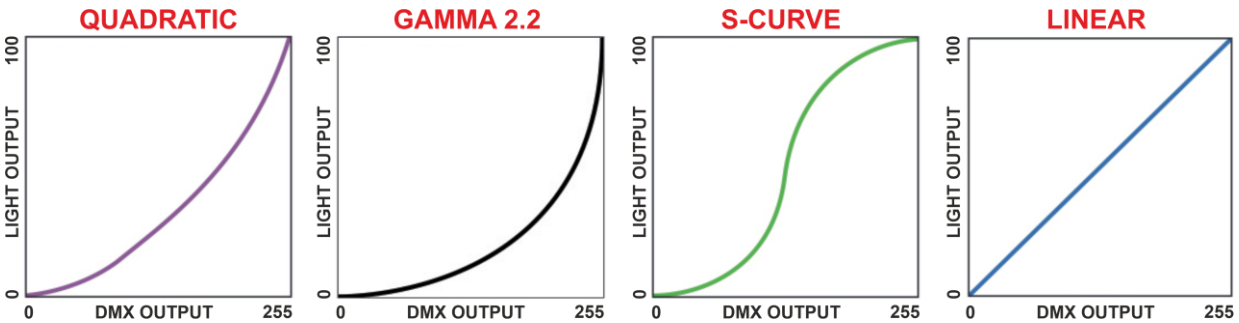
MAIN MENU	LEVEL 1	LEVEL 2	LEVEL 3	FUNCTION
NO DMX ACTION	SINGLE CUE	BLADE SYS ROT	0 - 255	**Default = 0**
		BLADE 1 INS	0 - 255	**Default = 0**
		BLADE 1 ROT	0 - 255	**Default = 128**
		BLADE 2 INS	0 - 255	**Default = 0**
		BLADE 2 ROT	0 - 255	**Default = 128**
		BLADE 3 INS	0 - 255	**Default = 0**
		BLADE 3 ROT	0 - 255	**Default = 128**
		BLADE 4 INS	0 - 255	**Default = 0**
		BLADE 4 ROT	0 - 255	**Default = 128**
		BLADE EFFECTS	0 - 255	**Default = 0**
		DYNAMOVE M.	0 - 255	**Default = 0**
		MACRO SPEED	0 - 255	**Default = 0**
		PRISM MODE	0 - 255	**Default = 0**
		PRISM 1 POS	0 - 255	**Default = 0**
		PRISM 1 R-I	0 - 255	**Default = 0**
		PRISM 2 POS	0 - 255	**Default = 0**
		PRISM 2 R-I	0 - 255	**Default = 0**
		FROST	0 - 255	**Default = 0**
		AUTOFOCUS	0 - 255	**Default = 0**
		FOCUS MSB	0 - 255	**Default = 128**
		FOCUS LSB	0 - 255	**Default = 128**
		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.
OPERATING MODE	STANDARD			**Pan-Tilt-Zoom-Fans standard speed.** **100% Lumens output.** **Default.**
	SILENT			Reduced Pan-Tilt-Zoom-Fans speed for low noise operation. 75% Lumens output.
	ULTRASILENT			Pan-Tilt-Zoom-Fans low speed for a very low noise operation. 55% Lumens output.
FAN MODE ***(FAN MODE will work relatively to OPERATING MODE)***	CONSTANT			**Same fans speed in any working condition in STANDARD, SILENT or ULTRASILENT operating mode (Default).**
	AUTOMATIC			Automatic fans speed. If LED temperature <40°C: fans OFF. If LED temperature >40°C: If OPERATING MODE = STANDARD, fans speed is increased within the values range set in STANDARD mode. If OPERATING MODE = SILENT, fans speed is increased within the values range set in SILENT mode. If OPERATING MODE = ULTRASILENT, fans speed is increased within the values range set in ULTRASILENT mode.
GOBO ROTATION DURING GOBO SCROLLING	ON			Allows to enable gobo rotation during gobo scrolling for rotating gobo wheel. **Default = ON**
	OFF			

16- Display Functions

MAIN MENU	LEVEL 1	LEVEL 2	LEVEL 3	FUNCTION
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.
	GAMMA CORR.	QUAD 2.0		**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.
	HYBRID DIMMING	DISABLED		Allows to enable Hybrid Dimming in order to totally remove flickering at any Dimmer level. **Default = DISABLED**
		ENABLED		
	FREQUENCY	610 - 5000 HZ		Allows to adjust the PWM frequency value (Hz) in order to reduce flickering in the process of camera recordings. Range = 610 Hz – 5 KHz **Default = 1000 Hz**
SYSTEM INFO	SOFTWARE	SYNERGY 7 PROFILE 10 JUN 2020 MOTOR: V.10 LED: V.1.00		Unit model, motors firmware release date, Motors and LED Driver PCBs firmware release.
	TEMP. 1	LED:048°C DRV-1:049°C DRV-1: 047°C DRV-2:048°C DRV-2: 047°C MICRO:045°C MICRO: 043°C		LED: LED temperature monitoring. DRV-1: Out 1 and 2 of LED Driver PCB 1 and 2* temperature monitoring. DRV-2: Out 4 and 5 of LED Driver PCB 1 and 2 temperature monitoring. MICRO: Micro controller on LED Driver PCB 1 and 2* temperature monitoring.
	TEMP. 2	10M-1: 042°C 5M-2: 045°C 5M-3: 045°C 5M-4: 044°C 5M-5: 043°C		10M-1: 10 Motors PCB (1)* temperature monitoring. 5M-2: 5 Motors PCB (2)* temperature monitoring. 5M-3: 5 Motors PCB (3)* temperature monitoring. 5M-4: 5 Motors PCB (4)* temperature monitoring. 5M-5: 5 Motors PCB (5)* temperature monitoring.
	TIME COUNTERS	UNIT LIFE: 0516 HOURS LED LIFE: 0481 HOURS DRV LIFE: 0495 HOURS		Unit, LED module and LED Driver PCB 1 and 2* life time.
	ADDRESSES	RDM:0710:00011788 MAC:70:B3:D5:D7:C3:F6		RDM and MAC IDs.

**** Refer to page 31 for Motors and LED Driver PCBs details.***

"GAMMA CORR." graphics:



16- Display Functions

MAIN MENU	LEVEL 1	LEVEL 2	LEVEL 3	FUNCTION
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.
DEFAULT				To restore factory settings.
MANUAL CONTR. 52 CH DMX PERSONALITY	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.

16- Display Functions

MAIN MENU	LEVEL 1	LEVEL 2	LEVEL 3	FUNCTION
MANUAL CONTR. 52 CH DMX PERSONALITY	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 MOV.	0 - 255		**Default = 0**
	DIMMER MSB	0 - 255		**Default = 255**
	DIMMER LSB	0 - 255		**Default = 255**
	SHUTTER	0 - 255		**Default = 15**
	FILTERS WHEEL	0 - 255		**Default = 0**
	COLOUR	0 - 255		**Default = 0**
	COLOUR MODE	0 - 255		**Default = 0**
	CYAN	0 - 255		**Default = 0**
	MAGENTA	0 - 255		**Default = 0**
	YELLOW	0 - 255		**Default = 0**
	CTO	0 - 255		**Default = 0**
	GEL FILTERS	0 - 255		**Default = 0**
	GOBO 1	0 - 255		**Default = 0**
	GOBO 1 R-I MSB	0 - 255		**Default = 0**
	GOBO 1 R-I LSB	0 - 255		**Default = 0**
	GOBO 1 SHAKE	0 - 255		**Default = 0**
	GOBO 2	0 - 255		**Default = 0**
	GOBO 2 R-I MSB	0 - 255		**Default = 0**
	GOBO 2 R-I LSB	0 - 255		**Default = 0**
	GOBO 2 SHAKE	0 - 255		**Default = 0**
	IRIS	0 - 255		**Default = 0**
	IRIS EFFECTS	0 - 255		**Default = 0**
	BLADE SYS ROT	0 - 255		**Default = 0**
	BLADE 1 INS	0 - 255		**Default = 0**
	BLADE 1 ROT	0 - 255		**Default = 128**
	BLADE 2 INS	0 - 255		**Default = 0**
	BLADE 2 ROT	0 - 255		**Default = 128**
	BLADE 3 INS	0 - 255		**Default = 0**
	BLADE 3 ROT	0 - 255		**Default = 128**
	BLADE 4 INS	0 - 255		**Default = 0**
	BLADE 4 ROT	0 - 255		**Default = 128**
	BLADE EFFECTS	0 - 255		**Default = 0**
	DYNAMOVE M.	0 - 255		**Default = 0**
	MACRO SPEED	0 - 255		**Default = 0**
	PRISM MODE	0 - 255		**Default = 0**
	PRISM 1 POS	0 - 255		**Default = 0**
	PRISM 1 R-I	0 - 255		**Default = 0**
	PRISM 2 POS	0 - 255		**Default = 0**
	PRISM 2 R-I	0 - 255		**Default = 0**
	FROST	0 - 255		**Default = 0**
	AUTOFOCUS	0 - 255		**Default = 0**
	FOCUS MSB	0 - 255		**Default = 128**
	FOCUS LSB	0 - 255		**Default = 128**
	ZOOM	0 - 255		**Default = 128**

17- Error Messages

ERROR SHOWN ON DISPLAY	APPEARS WHEN
PAN	-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	-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	-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	-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	-Pan magnet missing -Pan hall sensor PCB fault -Wiring connection between Pan hall sensor PCB and Pan&Tilt PCB fault
TILT ZERO SENSOR LINE	-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	LED Driver PCB 1 (MASTER)* temperature detected under -10°C or over 90°C. Unit immediately goes in black-out.
TEMP. LED DRV 2	LED Driver PCB 2 (SLAVE)* temperature detected under -10°C or over 90°C. Unit immediately goes in black-out.
TEMP. LED MICRO 1	Micro controller on LED Driver PCB 1 (MASTER)* temperature detected under -10°C or over 80°C. Unit immediately goes in black-out.
TEMP. LED MICRO 2	Micro controller on LED Driver PCB 2 (SLAVE)* temperature detected under -10°C or over 80°C. Unit immediately goes in black-out.
TEMP. 10M1	Micro controller on 10 Motors PCB (1)* temperature detected under -10°C or over 80°C. Unit immediately goes in black-out.
TEMP. 5M2	Micro controller on 5 Motors PCB (2)* temperature detected under -10°C or over 80°C. Unit immediately goes in black-out.
TEMP. 5M3	Micro controller on 5 Motors PCB (3)* temperature detected under -10°C or over 80°C. Unit immediately goes in black-out.
TEMP. 5M4	Micro controller on 5 Motors PCB (4)* temperature detected under -10°C or over 80°C. Unit immediately goes in black-out.
TEMP. 5M5	Micro controller on 5 Motors PCB (5)* temperature detected under -10°C or over 80°C. 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 10 MOTORS CARD 1	-Pan&Tilt PCB driver fault -10 Motors PCB (1)* driver fault -10 Motors PCB (1)* input voltage missing -Internal Bus wiring connection fault
BUS 5 MOTORS CARD 2	-Pan&Tilt PCB driver fault -5 Motors PCB (2)* driver fault -5 Motors PCB (2)* input voltage missing -Internal Bus wiring connection fault
BUS 5 MOTORS CARD 3	-Pan&Tilt PCB driver fault -5 Motors PCB (3)* driver fault -5 Motors PCB (3)* input voltage missing -Internal Bus wiring connection fault
BUS 5 MOTORS CARD 4	-Pan&Tilt PCB driver fault -5 Motors PCB (4)* driver fault -5 Motors PCB (4)* input voltage missing -Internal Bus wiring connection fault

**** Refer to page 33 for Motors and LED Driver PCBs details.***

17- Error Messages

ERROR SHOWN ON DISPLAY	APPEARS WHEN
BUS 5 MOTORS CARD 5	-Pan&Tilt PCB driver fault -5 Motors PCB (5)* driver fault -5 Motors PCB (5)* input voltage missing -Internal Bus wiring connection fault
BUS LED DRIVER CARD 1	-Pan&Tilt PCB driver fault -LED Driver PCB 1 (MASTER)* driver fault -LED Driver PCB 1 (MASTER)* input voltage missing -Internal Bus wiring connection fault
BUS LED DRIVER CARD 2	-Pan&Tilt PCB driver fault -LED Driver PCB 2 (SLAVE)* driver fault -LED Driver PCB 2 (SLAVE)* input voltage missing -Internal Bus wiring connection fault
BUS ARTNET	-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
FOCUS **OR CARD 1 - RESET LINE 3**	-Focus motor fault -Focus motor driver on 10 Motors PCB (1)* fault -Focus magnet missing -Focus hall sensor PCB fault
ZOOM **OR CARD 1 - RESET LINE 4**	-Zoom motor fault -Zoom motor driver on 10 Motors PCB (1)* fault -Zoom magnet missing -Zoom hall sensor PCB fault
24F/6F PRISM **OR CARD 1 - RESET LINE 1**	-24 facet or 6 facet prism motor fault -24 facet or 6 facet prism motor driver on 10 Motors PCB (1)* fault -24 facet or 6 facet prism magnet missing -24 facet or 6 facet prism hall sensor PCB fault
24F/6F PRISM INDEX **OR CARD 1 - RESET LINE 2**	-24 facet or 6 facet prism index motor fault -24 facet or 6 facet prism index motor driver on 10 Motors PCB (1)* fault -24 facet or 6 facet prism index magnet missing -24 facet or 6 facet prism index hall sensor PCB fault
FROST 1/2 **OR CARD 1 - RESET LINE 5**	-Frost 1/2 motor fault -Frost 1/2 motor driver on 10 Motors PCB (1)* fault -Frost 1/2 magnet missing -Frost 1/2 hall sensor PCB fault
MAGENTA 2 **OR CARD 1 - RESET LINE 2**	-Magenta 2 motor fault -Magenta 2 motor driver on 10 Motors PCB (1)* fault -Magenta 2 magnet missing -Magenta 2 hall sensor PCB fault
FILTER WHEEL **OR CARD 2 - RESET LINE 2**	-Filter wheel motor fault -Filter wheel motor driver on 5 Motors PCB (2)* fault -Filter wheel magnet missing -Filter wheel hall sensor PCB fault
CYAN **OR CARD 2 - RESET LINE 1**	-Cyan motor fault -Cyan motor driver on 5 Motors PCB (2)* fault -Cyan magnet missing -Cyan hall sensor PCB fault
MAGENTA **OR CARD 2 - RESET LINE 3**	-Magenta motor fault -Magenta motor driver on 5 Motors PCB (2)* fault -Magenta magnet missing -Magenta hall sensor PCB fault
YELLOW **OR CARD 2 - RESET LINE 2**	-Yellow motor fault -Yellow motor driver on 5 Motors PCB (2)* fault -Yellow magnet missing -Yellow hall sensor PCB fault
CTO **OR CARD 2 - RESET LINE 1**	-CTO motor fault -CTO motor driver on 5 Motors PCB (2)* fault -CTO magnet missing -CTO hall sensor PCB fault
COLOUR WHEEL **OR CARD 5 - RESET LINE 5**	-Colour wheel motor fault -Colour wheel motor driver on 5 Motors PCB (5)* fault -Colour wheel magnet missing -Colour wheel hall sensor PCB fault
GOBO 1 WHEEL / GOBO 1 INDEX **OR CARD 5 - RESET LINE 4**	-Gobo 1 wheel/index motor fault -Gobo 1 wheel/index motor driver on 5 Motors PCB (5)* fault -Gobo 1 wheel/index magnet missing -Gobo 1 wheel/index hall sensor PCB fault

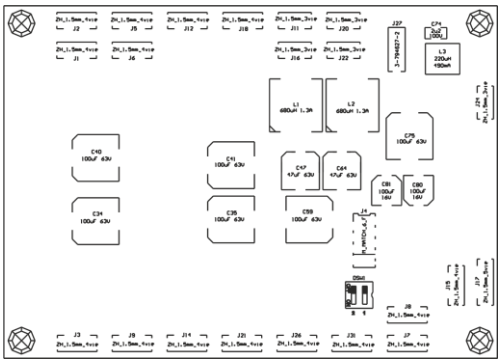
**** Refer to page 33 for Motors and LED Driver PCBs details.***

17- Error Messages

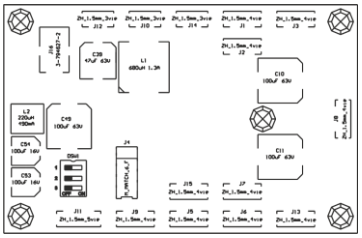
ERROR SHOWN ON DISPLAY	APPEARS WHEN
GOBO 2 WHEEL / GOBO 2 INDEX OR CARD 5 - RESET LINE 3	-Gobo 2 wheel/index motor fault -Gobo 2 wheel/index motor driver on 5 Motors PCB (5)* fault -Gobo 2 wheel/index magnet missing -Gobo 2 wheel/index hall sensor PCB fault
PROFILER INDEX OR CARD 3 - RESET LINE 1	-Profiler index motor fault -Profiler index motor driver on 5 Motors PCB (3)* fault -Profiler index magnet missing -Profiler index hall sensor PCB fault
SYNC BUS CARD 1 - CARD 2	-Wiring connection fault between J24 connector of 10 Motors PCB (1)* and J14 connector of 5 Motors PCB (2)*
BRAKES FOCUS - ZOOM	-Focus / Zoom brakes fault
LED 1 FAN 1	-Fan connected to the output 1 of LED Driver PCB 1 (MASTER)* fault. To remove this error message the unit must be switched OFF.
LED 1 FAN 2	-Fan connected to the output 2 of LED Driver PCB 1 (MASTER)* fault. To remove this error message the unit must be switched OFF.
LED 1 FAN 3	-Fan connected to the output 3 of LED Driver PCB 1 (MASTER)* fault. To remove this error message the unit must be switched OFF.
LED 2 FAN 1	-Fan connected to the output 1 of LED Driver PCB 2 (SLAVE)* fault. To remove this error message the unit must be switched OFF.
LED 2 FAN 2	-Fan connected to the output 2 of LED Driver PCB 2 (SLAVE)* fault. To remove this error message the unit must be switched OFF.
LED 2 FAN 3	-Fan connected to the output 3 of LED Driver PCB 2 (SLAVE)* fault. To remove this error message the unit must be switched OFF.
TEMP. LED 1 SENS. 1	-Sensor on LED Module open or in short circuit.
TEMP. LED 1 SENS. 2	-Sensor between output 1 and 2 on LED Driver PCB 1 (MASTER)* open or in short circuit
TEMP. LED 1 SENS. 3	-Sensor between output 4 and 5 on LED Driver PCB 1 (MASTER)* open or in short circuit
TEMP. LED 1 SENS. 4	-Sensor of micro controller on LED Driver PCB 1 (MASTER)* open or in short circuit
TEMP. LED 2 SENS. 2	-Sensor between output 1 and 2 on LED Driver PCB 2 (SLAVE)* open or in short circuit
TEMP. LED 2 SENS. 3	-Sensor between output 4 and 5 on LED Driver PCB 2 (SLAVE)* open or in short circuit
TEMP. LED 2 SENS. 4	-Sensor of micro controller on LED Driver PCB 2 (SLAVE)* open or in short circuit
LED 1 OUT 1	-Output 1 of LED Driver PCB 1 (MASTER)* open or in short circuit (not yet implemented)
LED 1 OUT 2	-Output 2 of LED Driver PCB 1 (MASTER)* open or in short circuit (not yet implemented)
LED 1 OUT 3	-Output 3 of LED Driver PCB 1 (MASTER)* open or in short circuit (not yet implemented)
LED 1 OUT 4	-Output 4 of LED Driver PCB 1 (MASTER)* open or in short circuit (not yet implemented)
LED 1 OUT 5	-Output 5 of LED Driver PCB 1 (MASTER)* open or in short circuit (not yet implemented)
LED 2 OUT 1	-Output 1 of LED Driver PCB 2 (SLAVE)* open or in short circuit (not yet implemented)
LED 2 OUT 2	-Output 2 of LED Driver PCB 2 (SLAVE)* open or in short circuit (not yet implemented)
LED 2 OUT 3	-Output 3 of LED Driver PCB 2 (SLAVE)* open or in short circuit (not yet implemented)
LED 2 OUT 4	-Output 4 of LED Driver PCB 2 (SLAVE)* open or in short circuit (not yet implemented)
LED 2 OUT 5	-Output 5 of LED Driver PCB 2 (SLAVE)* open or in short circuit (not yet implemented)

**** Refer to page 33 for Motors and LED Driver PCBs details.***

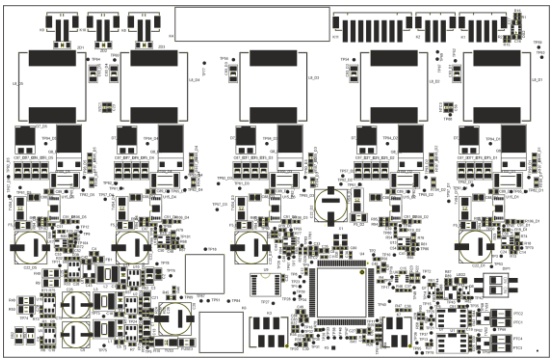
18- Motors and LED Driver PCBs References



PCB Description	*Function*	*Dip Switch*
10M-1 or 10 MOTORS PCB (1)	FOCUS, ZOOM, FROST 1, FROST 2, MAGENTA 2, 6-FACET PRISM, 24-FACET PRISM, PRISMS ROTATION.	1 = OFF 2 = OFF 



PCB Description	*Function*	*Dip Switch*
5M-2 or 5 MOTORS PCB (2)	CMY-CTO	1 = ON 2 = OFF 3 = OFF 
5M-3 or 5 MOTORS PCB (3)	2 BLADES + PROFILER INDEX	1 = OFF 2 = ON 3 = OFF 
5M-4 or 5 MOTORS PCB (4)	2 BLADES + IRIS	1 = ON 2 = ON 3 = OFF 
5M-5 or 5 MOTORS PCB (5)	GOBOS	1 = OFF 2 = OFF 3 = ON 



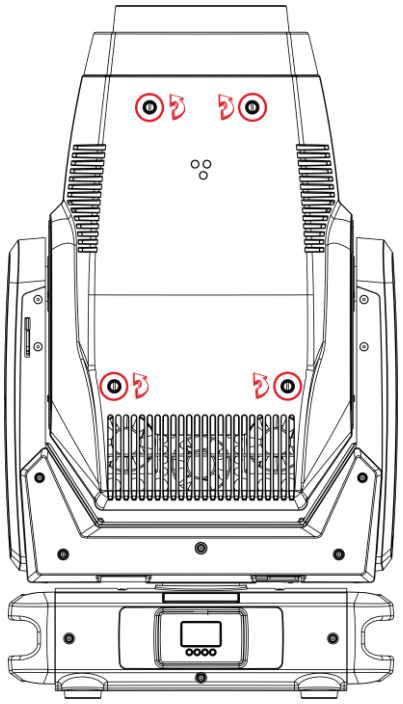
PCB Description	*Function*	*Dip Switch*
DRV-1 or LED DRIVER PCB 1	MASTER	1 = OFF 2 = OFF 
DRV-2 or LED DRIVER PCB 2	SLAVE	1 = ON 2 = OFF 

19- Opening The Projector Housing

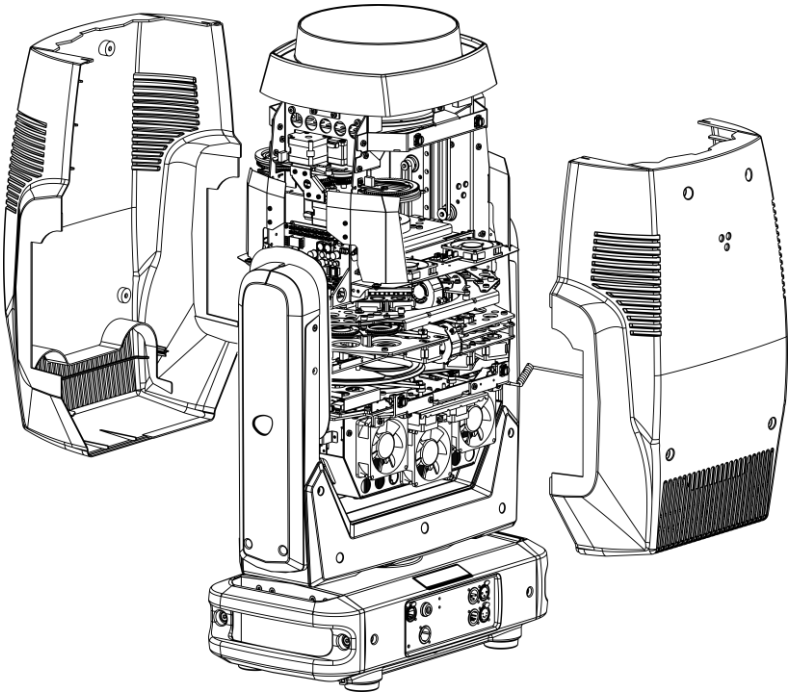
It is possible to inspect the inside of the projector by removing the cover as indicated below.

WARNING! Disconnect mains before opening the projector housing.

1) Using a flat bladed screwdriver loose the 4 “¼ turn” screws which fix the head covers on both sides.



2) Lift each cover, slide the silicone tube down and unhook the safety wire to access the internal head components.

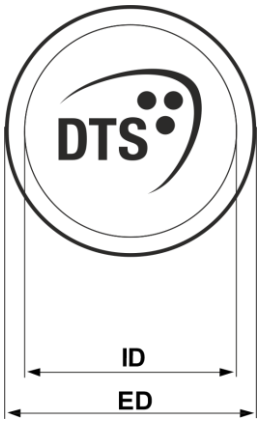


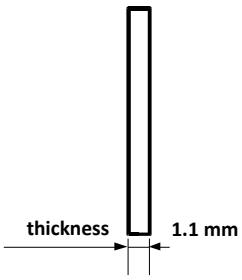
20- Rotating Gobo Dimensions

Replacement / custom gobos should be made in dichroic glass.

For gobos removing/replacing procedure please refer to an authorised DTS service centre.

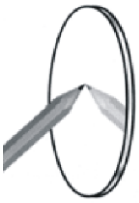
Gobo dimensions are as follows:





ROTATING GOBO WHEEL 1:
ø external (ED) = 34.9 mm + 0 / - 0,2 mm
ø of image (ID) = 26.0 mm
Recommended thickness = 1.1 mm

ROTATING GOBO WHEEL 2:
ø external (ED) = 34.9 mm + 0 / - 0,2 mm
ø of image (ID) = 29.0 mm
Recommended thickness = 1.1 mm



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

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

Load with coated surface toward the light source.

21- Periodic Cleaning

WARNING! Disconnect power before servicing.

21.1- Lenses and filters

Even a fine layer of dust can reduce the luminous output substantially.
Excessive dust, smoke fluid and particle buildup degrades and can seriously damage lenses and dicroic colour filters.
It is recommended to regularly clean all lenses and the glass filters using a soft cotton cloth, dampened with a specialist lens cleaning solution.
Maintenance period can vary depending on environment conditions.

21.2- 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.

22- Periodic Controls

WARNING! Disconnect power before servicing.

Mechanical parts

Periodically check all mechanical parts, gears, guides, belts, etc. for wear and tear, replacing them if necessary.
Periodically check the lubrification of all components, particularly the parts subject to high temperatures.
If necessary, lubrificate with suitable lubrificant, available from your DTS distributor.
Check the tension of the belts and adjust it if necessary.

Electrical components

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

Fuse replacement

Locate the fuse, which protects the electronics, in the connection panel of SYNERGY 7 PROFILE.
Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type (T 15A 250V) if necessary.

23- DMX Protocol

DMX Personality 1: **52 CHANNELS MODE (DEFAULT)**

1	PAN msb
2	PAN lsb
3	TILT msb
4	TILT lsb
5	SPEED MOVEMENT
6	*reserved*
7	DIMMER msb
8	DIMMER lsb
9	SHUTTER
10	FILTERS WHEEL
11	COLOUR WHEEL
12	COLOUR WHEEL MODE
13	CYAN
14	MAGENTA
15	YELLOW
16	CTO
17	GEL FILTERS EMULATION / COLOUR EFFECTS
18	GOBO 1
19	GOBO 1 ROTATION / INDEX msb
20	GOBO 1 ROTATION / INDEX lsb
21	GOBO 1 SHAKE
22	GOBO 2
23	GOBO 2 ROTATION / INDEX msb
24	GOBO 2 ROTATION / INDEX lsb
25	GOBO 2 SHAKE
26	IRIS
27	IRIS EFFECTS
28	BLADES SYSTEM ROTATION
29	BLADE 1 INSERTION
30	BLADE 1 ROTATION
31	BLADE 2 INSERTION
32	BLADE 2 ROTATION
33	BLADE 3 INSERTION
34	BLADE 3 ROTATION
35	BLADE 4 INSERTION
36	BLADE 4 ROTATION
37	BLADE EFFECTS
38	DYNAMOVES MACROS
39	BLADES EFFECTS SPEED / DYNAMOVE MACROS SPEED
40	PRISM MODE
41	PRISM 1 POSITION
42	PRISM 1 ROTATION / INDEX
43	PRISM 2 POSITION
44	PRISM 2 ROTATION / INDEX
45	FROST
46	*reserved for AUTOFOCUS (not yet implemented)*
47	FOCUS msb
48	FOCUS lsb
49	ZOOM
50	FIXTURE CONTROL
51	FREQUENCY FINE
52	RESET

1	PAN msb
2	PAN lsb

3	TILT msb
4	TILT lsb

5	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

6	reserved
DMX value	**Function**
000-255	reserved

7	DIMMER msb
8	DIMMER lsb

9	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
200-204	Gobo wheels in Black Out while rotating
205-209	Colour/Filters/CMY/GEL in Black Out while moving
210-219	Pan/Tilt in Black Out while moving
220-222	Blades in Black Out while inserting
223-224	Prism in Black Out while inserting
225-226	Zoom in Black Out while moving
227-229	Gobo/Colour/Filters/CMY/GEL/Prism/Zoom in Black Out while moving
230-231	Open
232-252	Reserved
253-255	Open

10	FILTERS WHEEL
DMX value	**Function**
000-009	Open
010-071	1: HIGHER CRI
072-133	2: UV
134-195	3: CTB
196-255	4: 1/4 MINUS GREEN

11	COLOUR WHEEL

FULL COLOUR (if channel 12 "COLOUR MODE" = DMX range value 0-63)

DMX value	Function
000-009	Open
010-058	Colour 1
059-107	Colour 2
108-156	Colour 3
157-205	Colour 4
206-255	Colour 5

HALF COLOUR (if channel 12 "COLOUR MODE" = DMX range value 64-127)

DMX value	Function
000-009	Open
010-050	Colour 0-1
051-091	Colour 1-2
092-132	Colour 2-3
133-173	Colour 3-4
174-214	Colour 4-5
215-255	Colour 5-0

PROPORTIONAL COLOUR (if channel 12 "COLOUR MODE" = DMX range value 128-191)

DMX value	Function
000-009	Open
010-255	Proportional colour
030	Colour 0-1
051	Colour 1 center
071	Colour 1-2
092	Colour 2 center
112	Colour 2-3
133	Colour 3 center
153	Colour 3-4
174	Colour 4 center
194	Colour 4-5
215	Colour 5 center
235	Colour 5-0

RAINBOW (if channel 12 "COLOUR MODE" = DMX range value 192-255)

DMX value	Function
000-009	Open
010-127	CW rotation speed from max to min
128-137	Stop
138-255	CCW rotation speed from min to max

12	COLOUR MODE
DMX value	Function
000-063	Full colour
064-127	Half colour
128-191	Proportional colour
192-255	Rainbow

13	CYAN
DMX value	Function
000-255	Proportional colour

14	MAGENTA
DMX value	Function
000-255	Proportional colour

15	YELLOW
DMX value	**Function**
000-255	Proportional colour

16	CTO
DMX value	**Function**
000-255	Proportional colour

17	GEL FILTERS EMULATION
DMX value	**Function**
000-009	No function
010-020	19 FIRE
021-025	20 MEDIUM AMBER
026-030	25 SUNSET RED
031-035	68 SKY BLUE
036-040	101 YELLOW
041-045	104 DEEP AMBER
046-050	105 ORANGE
051-055	106 PRIMARY RED
056-060	111 DARK PINK
061-065	113 MAGENTA
066-070	117 STEEL BLUE
071-075	118 LIGHT BLUE
076-080	122 FERN GREEN
081-085	126 MAUVE
086-090	132 MEDIUM BLUE
091-095	136 PALE LAVENDER
096-100	137 LAVENDER
101-105	138 PALE GREEN
106-110	139 PRIMARY GREEN
111-115	147 APRICOT
116-120	151 GOLD TINT
121-125	154 PALE ROSE
126-130	156 CHOCOLATE
131-135	181 CONGO BLUE
136-140	200 DOUBLE CT BLUE
141-145	201 FULL CT BLUE
146-150	204 FULL CT ORANGE
151-155	341 PLUM
156-255	reserved

18	GOBO 1
DMX value	**Function**
000-009	Open
010-042	Gobo 1
043-075	Gobo 2
076-108	Gobo 3
109-141	Gobo 4
142-174	Gobo 5
175-207	Gobo 6
208-231	CCW wheel scrolling (min to max)
232-255	CW wheel scrolling (min to max)

19	GOBO 1 ROTATION/INDEX msb
20	**GOBO 1 ROTATION/INDEX lsb**
DMX value	**Function**
MSB.LSB-MSB.LSB INT16-INT16	
000.000-127.255 00000-32767	Proportional index 0°-360°
128.000-180.255 32768-46335	CCW gobo rotation (max to min)
181.000-202.255 46336-51967	Stop
203.000-255.255 51968-65535	CW gobo rotation (min to max)

21	GOBO 1 SHAKE
DMX value	**Function**
000-009	Stop
010-019	Gobo shake R-L speed 1
020-029	Gobo shake R-L speed 2
030-039	Gobo shake R-L speed 3
040-049	Gobo shake R-L speed 4
050-059	Gobo shake R-L speed 5
060-069	Gobo shake R-L speed 6
070-079	Gobo shake R-L speed 7
080-089	Gobo shake R-L speed 8
090-099	Gobo shake R-L speed 9
100-109	Gobo shake R-L speed 10
110-126	Gobo shake R-L speed 11
127-138	Stop
139-148	Gobo shake L-R speed 1
149-158	Gobo shake L-R speed 2
159-168	Gobo shake L-R speed 3
169-178	Gobo shake L-R speed 4
179-188	Gobo shake L-R speed 5
189-198	Gobo shake L-R speed 6
199-208	Gobo shake L-R speed 7
209-218	Gobo shake L-R speed 8
219-228	Gobo shake L-R speed 9
229-238	Gobo shake L-R speed 10
239-255	Gobo shake L-R speed 11

22	GOBO 2
DMX value	**Function**
000-009	Open
010-042	Gobo 1
043-075	Gobo 2
076-108	Gobo 3
109-141	Gobo 4
142-174	Gobo 5
175-207	Gobo 6
208-231	CCW wheel scrolling (min to max)
232-255	CW wheel scrolling (min to max)

23	GOBO 2 ROTATION/INDEX msb
24	**GOBO 2 ROTATION/INDEX lsb**
DMX value	**Function**
MSB.LSB-MSB.LSB INT16-INT16	
000.000-127.255 00000-32767	Proportional index 0°-360°
128.000-180.255 32768-46335	CCW gobo rotation (max to min)
181.000-202.255 46336-51967	Stop
203.000-255.255 51968-65535	CW gobo rotation (min to max)

25	GOBO 2 SHAKE
DMX value	**Function**
000-009	Stop
010-019	Gobo shake R-L speed 1
020-029	Gobo shake R-L speed 2
030-039	Gobo shake R-L speed 3
040-049	Gobo shake R-L speed 4
050-059	Gobo shake R-L speed 5
060-069	Gobo shake R-L speed 6
070-079	Gobo shake R-L speed 7
080-089	Gobo shake R-L speed 8
090-099	Gobo shake R-L speed 9
100-109	Gobo shake R-L speed 10
110-126	Gobo shake R-L speed 11
127-138	Stop
139-148	Gobo shake L-R speed 1
149-158	Gobo shake L-R speed 2
159-168	Gobo shake L-R speed 3
169-178	Gobo shake L-R speed 4
179-188	Gobo shake L-R speed 5
189-198	Gobo shake L-R speed 6
199-208	Gobo shake L-R speed 7
209-218	Gobo shake L-R speed 8
219-228	Gobo shake L-R speed 9
229-238	Gobo shake L-R speed 10
239-255	Gobo shake L-R speed 11

26	IRIS
DMX value	**Function**
000-009	Open
010-246	Linear Iris from open to closed
247-255	Closed

27	IRIS EFFECTS
DMX value	**Function**
000-009	No function
010-063	Iris pulse at different speed from min to max
064-117	Iris pulse with flash closing from min to max
118-171	Iris pulse with flash opening from min to max
172-255	Reserved (no function)

28	BLADES SYSTEM ROTATION
DMX value	**Function**
000-126	Position from -45° to 0°
127-128	0° position
129-255	Position from 0° to 45°

29	BLADE 1 INSERTION
DMX value	**Function**
000-255	Open to fully inserted

30	BLADE 1 ROTATION
DMX value	**Function**
000-127	Position from -30° to 0°
128	0° position
129-255	Position from 0° to 30°

31	BLADE 2 INSERTION
DMX value	**Function**
000-255	Open to fully inserted

32	BLADE 2 ROTATION
DMX value	**Function**
000-127	Position from -30° to 0°
128	0° position
129-255	Position from 0° to 30°

33	BLADE 3 INSERTION
DMX value	**Function**
000-255	Open to fully inserted

34	BLADE 3 ROTATION
DMX value	**Function**
000-127	Position from -30° to 0°
128	0° position
129-255	Position from 0° to 30°

35	BLADE 4 INSERTION
DMX value	**Function**
000-255	Open to fully inserted

36	BLADE 4 ROTATION
DMX value	**Function**
000-127	Position from -30° to 0°
128	0° position
129-255	Position from 0° to 30°

37	BLADES EFFECTS		
DMX value	**Function**	**DMX value**	**Function**
000-009	No function	110-111	Macro 51
010-011	Macro 1	112-113	Macro 52
012-013	Macro 2	114-115	Macro 53
014-015	Macro 3	116-117	Macro 54
016-017	Macro 4	118-119	Macro 55
018-019	Macro 5	120-121	Macro 56
020-021	Macro 6	122-123	Macro 57
022-023	Macro 7	124-125	Macro 58
024-025	Macro 8	126-127	Macro 59
026-027	Macro 9	128-129	Macro 60
028-029	Macro 10	130-131	Macro 61
030-031	Macro 11	132-133	Macro 62
032-033	Macro 12	134-135	Macro 63
034-035	Macro 13	136-137	Macro 64
036-037	Macro 14	138-139	Macro 65
038-039	Macro 15	140-141	Macro 66
040-041	Macro 16	142-143	Macro 67
042-043	Macro 17	144-145	Macro 68
044-045	Macro 18	146-147	Macro 69
046-047	Macro 19	148-149	Macro 70
048-049	Macro 20	150-151	Macro 71
050-051	Macro 21	152-153	Macro 72
052-053	Macro 22	154-155	Macro 73
054-055	Macro 23	156-157	Macro 74
056-057	Macro 24	158-159	Macro 75
058-059	Macro 25	160-161	Macro 76
060-061	Macro 26	162-163	Macro 77
062-063	Macro 27	164-165	Macro 78
064-065	Macro 28	166-167	Macro 79
066-067	Macro 29	168-169	Macro 80
068-069	Macro 30	170-171	Macro 81
070-071	Macro 31	172-173	Macro 82
072-073	Macro 32	174-175	Macro 83
074-075	Macro 33	176-177	Macro 84
076-077	Macro 34	178-179	Macro 85
078-079	Macro 35	180-181	Macro 86
080-081	Macro 36	182-183	Macro 87
082-083	Macro 37	184-185	Macro 88
084-085	Macro 38	186-187	Macro 89
086-087	Macro 39	188-255	reserved
088-089	Macro 40		
090-091	Macro 41		
092-093	Macro 42		
094-095	Macro 43		
096-097	Macro 44		
098-099	Macro 45		
100-101	Macro 46		
102-103	Macro 47		
104-105	Macro 48		
106-107	Macro 49		
108-109	Macro 50		

38	DYNAMOVE MACROS	
DMX value	**Function**	**Automatic channels (52 DMX channels mode)**
000-009	No function	
010-011	Macro 1	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
012-013	Macro 2 (same as Macro 1)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
014-015	Macro 3 (same as Macro 1)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
016-017	Macro 4	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
018-019	Macro 5 (same as Macro 4)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
020-021	Macro 6 (same as Macro 4)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
022-023	Macro 7	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
024-025	Macro 8 (same as Macro 7)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
026-027	Macro 9 (same as Macro 7)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
028-029	Macro 10	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
030-031	Macro 11 (same as Macro 10)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
032-033	Macro 12 (same as Macro 10)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
034-035	Macro 13	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
036-037	Macro 14 (same as Macro 13)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
038-039	Macro 15 (same as Macro 13)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
040-041	Macro 16	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
042-043	Macro 17 (same as Macro 16)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
044-045	Macro 18 (same as Macro 16)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
046-047	Macro 19	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
048-049	Macro 20 (same as Macro 19)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
050-051	Macro 21 (same as Macro 19)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**

38	DYNAMOVE MACROS	
DMX value	**Function**	**Automatic channels (52 DMX channels mode)**
052-053	Macro 22	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
054-055	Macro 23 (same as Macro 22)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
056-057	Macro 24 (same as Macro 22)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
058-059	Macro 25	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
060-061	Macro 26 (same as Macro 25)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
062-063	Macro 27 (same as Macro 25)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
064-065	Macro 28	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
066-067	Macro 29 (same as Macro 28)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
068-069	Macro 30 (same as Macro 28)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
070-071	Macro 31	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH49
072-073	Macro 32 (same as Macro 31)	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
074-075	Macro 33 (same as Macro 31)	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
076-077	Macro 34	CH 10; CH 11; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
078-079	Macro 35 (same as Macro 34)	CH 10; CH 11; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
080-081	Macro 36 (same as Macro 34)	CH 10; CH 11; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
082-083	Macro 37	CH 10; CH 11; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
084-085	Macro 38 (same as Macro 37)	CH 10; CH 11; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
086-087	Macro 39 (same as Macro 37)	CH 10; CH 11; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
088-089	Macro 40	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
090-091	Macro 41 (same as Macro 40)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
092-093	Macro 42 (same as Macro 40)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**

38	DYNAMOVE MACROS	
DMX value	**Function**	**Automatic channels (52 DMX channels mode)**
094-095	Macro 43	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
096-097	Macro 44 (same as Macro 43)	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
098-099	Macro 45 (same as Macro 43)	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
100-101	Macro 46	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 24; CH 25; CH 40; CH 41; CH 42; CH 43; CH 44
102-103	Macro 47	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 24; CH 25; CH 40; CH 41; CH 42; CH 43; CH 44
104-105	Macro 48	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 24; CH 25; CH 40; CH 41; CH 42; CH 43; CH 44
106-107	Macro 49	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 24; CH 25; CH 40; CH 41; CH 42; CH 43; CH 44
108-109	Macro 50	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
110-111	Macro 51	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
112-113	Macro 52	CH 22; CH 23; CH 24; CH 25; CH 26; CH 27; CH 28; CH 29; CH 33; CH 37
114-115	Macro 53	CH 22; CH 23; CH 24; CH 25; CH 26; CH 27; CH 28; CH 29; CH 33; CH 34; CH 35; CH 36; CH 37
116-117	Macro 54	CH 22; CH 23; CH 24; CH 25; CH 26; CH 27; CH 28; CH 29; CH 33; CH 37
118-119	Macro 55	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
120-121	Macro 56	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
122-123	Macro 57	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
124-125	Macro 58	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 42
126-127	Macro 59	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
128-129	Macro 60	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
130-131	Macro 61	CH 11; CH 12; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42
132-133	Macro 62	CH 11; CH 12; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44
134-135	Macro 63	CH 11; CH 12; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44
136-255	reserved	

39	BLADES EFFECTS SPEED / DYNAMOVE MACROS SPEED
DMX value	**Function**
000-010	1X
011-050	1.1X to 5X (step 0.1X)
051-090	4.9X to 1X (step 0.1X)
091-159	1X
160-169	0.9X
170-179	0.8X
180-189	0.7X
190-199	0.6X
200-209	0.5X
210-219	0.4X
220-229	0.3X
230-239	0.2X
240-255	0.1X

40	PRISM MODE
DMX value	**Function**
000-009	No function
010-049	Prism 1 inserted after zoom lens
050-089	Prism 2 inserted after zoom lens
090-129	Prism 1+2 inserted after zoom lens
130-169	Prism 1 inserted between focus and zoom lenses
170-209	Prism 2 inserted between focus and zoom lenses
210-255	Prism 1+2 inserted between focus and zoom lenses

41	PRISM 1 POSITION
DMX value	**Function**
000-009	Centre
010-127	Outward left to centre
128-137	Centre
138-255	Centre to outward right

42	PRISM 1 ROTATION/INDEX
DMX value	**Function**
000-127	Proportional index 0°-360°
128-180	CW rotation from fast to slow
181-202	Stop
203-255	CCW rotation from slow to fast

43	PRISM 2 POSITION
DMX value	**Function**
000-009	Centre
010-127	Outward right to centre
128-137	Centre
138-255	Centre to outward left

44	PRISM 2 ROTATION/INDEX
DMX value	**Function**
000-127	Proportional index 0°-360°
128-180	CW rotation from fast to slow
181-202	Stop
203-255	CCW rotation from slow to fast

45	FROST
DMX value	**Function**
000-009	No function
010-255	Frost Filter linear from min to max

46	*reserved for AUTOFOCUS (not yet implemented)*
DMX value	**Function**
000-000	AUTOFOCUS OFF
000-000	GOBO 1
000-000	GOBO 2
000-000	PROFILER
000-000	IRIS

47	FOCUS msb
48	**FOCUS lsb**
DMX value	**Function**
000-255	Linear focus

49	ZOOM
DMX value	**Function**
000-255	Linear zoom

50	FIXTURE CONTROL
DMX value	**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
073-084	26 - Reserved
085-090	27 – HYBRID DIMMING DISABLED (DEFAULT)
091-095	28 – HYBRID DIMMING ENABLED
096-104	29 - OUTPUT FREQUENCY 610 Hz
105	30 - OUTPUT FREQUENCY 800 Hz
106	31 - OUTPUT FREQUENCY 1000 Hz (DEFAULT)
107	32 - OUTPUT FREQUENCY 1500 Hz
108	33 - OUTPUT FREQUENCY 2000 Hz
109	34 - OUTPUT FREQUENCY 2500 Hz
110	35 - OUTPUT FREQUENCY 3000 Hz
111	36 - OUTPUT FREQUENCY 3500 Hz
112	37 - OUTPUT FREQUENCY 4000 Hz
113	38 - OUTPUT FREQUENCY 4500 Hz
114	39 - OUTPUT FREQUENCY 5000 Hz
115-134	40 - Reserved

50	FIXTURE CONTROL
DMX value	**Function**
135-136	41 - CMY / CTO SPEED 1 **(Speed value must not be set while CMY filters are moving during programming)**
137-138	42 - CMY / CTO SPEED 2 **(Speed value must not be set while CMY filters are moving during programming)**
139-140	43 - CMY / CTO SPEED 3 **(Speed value must not be set while CMY filters are moving during programming)**
141-142	44 - CMY / CTO SPEED 4(DEFAULT) **(Speed value must not be set while CMY filters are moving during programming)**
143-144	45 - BLADES SPEED 1 **(Speed value must not be set while blades are moving during programming)**
145-146	46 - BLADES SPEED 2 **(Speed value must not be set while blades are moving during programming)**
147-148	47 - BLADES SPEED 3 **(Speed value must not be set while blades are moving during programming)**
149-150	48 - BLADES SPEED 4 (DEFAULT) **(Speed value must not be set while blades are moving during programming)**
151-152	49 – Reserved
153-154	50 – Reserved
155-156	51 - DISPLAY STANDBY DISABLE (DEFAULT)
157-158	52 - DISPLAY STANDBY ENABLE
159-160	53 - DISPLAY STANDBY FORCED ENABLE
161-174	Reserved
175-176	54 - NO DMX ACTION – KEEP LAST DMX (DEFAULT)
177-178	55 - NO DMX ACTION – BLACK OUT
179-180	56 - RESERVED
181-182	57 - NO DMX ACTION – DEMO PROGRAM (STEPS 01..48)
183-184	58 - NO DMX ACTION – SINGLE CUE
185-186	59 - PAN NORMAL (DEFAULT)
187-188	60 - PAN REVERSE
189-196	61 - Reserved
197-198	62 - TILT NORMAL (DEFAULT)
199-200	63 - TILT REVERSE
201-208	64 - Reserved
209-210	65 – Reserved for ZOOM NORMAL (DEFAULT) **(not yet implemented)**
211-212	66 – Reserved for ZOOM REVERSE **(not yet implemented)**
213-232	67 - Reserved
233-234	68 – OPERATING MODE ULTRASILENT
235-236	69 – OPERATING MODE SILENT
237-238	70 – OPERATING MODE STANDARD (DEFAULT)
239-240	71 - Reserved
241-242	72 - FAN MODE CONSTANT (DEFAULT)
243-244	73 - FAN MODE AUTO
245-246	74 – ZOOM SPEED 1
247-248	75 – ZOOM SPEED 2
249-250	76 – ZOOM SPEED 3
251-252	77 – ZOOM SPEED 4 (DEFAULT)
253-255	78 - SET FUNCTION TO DEFAULT: -SMOOTH DIMMING = 4 -GAMMA = QUADRATIC -HYBRID DIMMING = DISABLED -FREQUENCY = 1000 Hz -CMY/CTO SPEED = 4 -BLADES SPEED = 4 -DISPLAY STANDBY = DISABLE -NO DMX ACTION = KEEP LAST DMX -OPERATING MODE = STANDARD -FAN MODE = CONSTANT -ZOOM SPEED = 4

51	FREQUENCY FINE
DMX value	**Function**
000-009	No effect
010-255	Led frequency: 75% to 125% of base frequency

52	RESET
DMX value	**Function**
000-009	No effect
010-075	PAN TILT reset
076-095	HEAD MOTORS reset
096-115	Gobo wheel reset
116-135	Colour wheel reset
136-155	CMY/CTO reset
156-175	Blades reset
176-195	Prism reset
196-215	Frost - Smooth reset
216-239	Focus/Zoom reset
240-255	Total unit reset (PAN TILT + HEAD MOTORS)

23- DMX Protocol

DMX Personality 2: **61 CHANNELS MODE**

1	PAN msb
2	PAN lsb
3	TILT msb
4	TILT lsb
5	SPEED MOVEMENT
6	*reserved*
7	DIMMER msb
8	DIMMER lsb
9	SHUTTER
10	FILTERS WHEEL
11	COLOUR WHEEL
12	COLOUR WHEEL MODE
13	CYAN
14	MAGENTA
15	YELLOW
16	CTO
17	GEL FILTERS EMULATION / COLOUR EFFECTS
18	GOBO 1
19	GOBO 1 ROTATION / INDEX msb
20	GOBO 1 ROTATION / INDEX lsb
21	GOBO 1 SHAKE
22	GOBO 2
23	GOBO 2 ROTATION / INDEX msb
24	GOBO 2 ROTATION / INDEX lsb
25	GOBO 2 SHAKE
26	IRIS
27	IRIS EFFECTS
28	BLADES SYSTEM ROTATION msb
29	BLADES SYSTEM ROTATION lsb
30	BLADE 1 INSERTION msb
31	BLADE 1 INSERTION lsb
32	BLADE 1 ROTATION msb
33	BLADE 1 ROTATION lsb
34	BLADE 2 INSERTION msb
35	BLADE 2 INSERTION lsb
36	BLADE 2 ROTATION msb
37	BLADE 2 ROTATION lsb
38	BLADE 3 INSERTION msb
39	BLADE 3 INSERTION lsb
40	BLADE 3 ROTATION msb
41	BLADE 3 ROTATION lsb
42	BLADE 4 INSERTION msb
43	BLADE 4 INSERTION lsb
44	BLADE 4 ROTATION msb
45	BLADE 4 ROTATION lsb
46	BLADE EFFECTS
47	DYNAMOVES MACROS
48	BLADES EFFECTS SPEED / DYNAMOVE MACROS SPEED
49	PRISM MODE
50	PRISM 1 POSITION
51	PRISM 1 ROTATION / INDEX
52	PRISM 2 POSITION
53	PRISM 2 ROTATION / INDEX
54	FROST
55	*reserved for AUTOFOCUS (not yet implemented)*
56	FOCUS msb
57	FOCUS lsb
58	ZOOM
59	FIXTURE CONTROL
60	FREQUENCY FINE
61	RESET

1	PAN msb
2	PAN lsb

3	TILT msb
4	TILT lsb

5	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

6	reserved
DMX value	**Function**
000-255	reserved

7	DIMMER msb
8	DIMMER lsb

9	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
200-204	Gobo wheels in Black Out while rotating
205-209	Colour/Filters/CMY/GEL in Black Out while moving
210-219	Pan/Tilt in Black Out while moving
220-222	Blades in Black Out while inserting
223-224	Prism in Black Out while inserting
225-226	Zoom in Black Out while moving
227-229	Gobo/Colour/Filters/CMY/GEL/Prism/Zoom in Black Out while moving
230-231	Open
232-252	Reserved
253-255	Open

10	FILTERS WHEEL
DMX value	**Function**
000-009	Open
010-071	1: HIGHER CRI
072-133	2: UV
134-195	3: CTB
196-255	4: 1/4 MINUS GREEN

11	COLOUR WHEEL

FULL COLOUR (if channel 12 "COLOUR MODE" = DMX range value 0-63)

DMX value	Function
000-009	Open
010-058	Colour 1
059-107	Colour 2
108-156	Colour 3
157-205	Colour 4
206-255	Colour 5

HALF COLOUR (if channel 12 "COLOUR MODE" = DMX range value 64-127)

DMX value	Function
000-009	Open
010-050	Colour 0-1
051-091	Colour 1-2
092-132	Colour 2-3
133-173	Colour 3-4
174-214	Colour 4-5
215-255	Colour 5-0

PROPORTIONAL COLOUR (if channel 12 "COLOUR MODE" = DMX range value 128-191)

DMX value	Function
000-009	Open
010-255	Proportional colour
030	Colour 0-1
051	Colour 1 center
071	Colour 1-2
092	Colour 2 center
112	Colour 2-3
133	Colour 3 center
153	Colour 3-4
174	Colour 4 center
194	Colour 4-5
215	Colour 5 center
235	Colour 5-0

RAINBOW (if channel 12 "COLOUR MODE" = DMX range value 192-255)

DMX value	Function
000-009	Open
010-127	CW rotation speed from max to min
128-137	Stop
138-255	CCW rotation speed from min to max

12	COLOUR MODE
DMX value	Function
000-063	Full colour
064-127	Half colour
128-191	Proportional colour
192-255	Rainbow

13	CYAN
DMX value	Function
000-255	Proportional colour

14	MAGENTA
DMX value	Function
000-255	Proportional colour

15	YELLOW
DMX value	**Function**
000-255	Proportional colour

16	CTO
DMX value	**Function**
000-255	Proportional colour

17	GEL FILTERS EMULATION
DMX value	**Function**
000-009	No function
010-020	19 FIRE
021-025	20 MEDIUM AMBER
026-030	25 SUNSET RED
031-035	68 SKY BLUE
036-040	101 YELLOW
041-045	104 DEEP AMBER
046-050	105 ORANGE
051-055	106 PRIMARY RED
056-060	111 DARK PINK
061-065	113 MAGENTA
066-070	117 STEEL BLUE
071-075	118 LIGHT BLUE
076-080	122 FERN GREEN
081-085	126 MAUVE
086-090	132 MEDIUM BLUE
091-095	136 PALE LAVENDER
096-100	137 LAVENDER
101-105	138 PALE GREEN
106-110	139 PRIMARY GREEN
111-115	147 APRICOT
116-120	151 GOLD TINT
121-125	154 PALE ROSE
126-130	156 CHOCOLATE
131-135	181 CONGO BLUE
136-140	200 DOUBLE CT BLUE
141-145	201 FULL CT BLUE
146-150	204 FULL CT ORANGE
151-155	341 PLUM
156-255	reserved

18	GOBO 1
DMX value	**Function**
000-009	Open
010-042	Gobo 1
043-075	Gobo 2
076-108	Gobo 3
109-141	Gobo 4
142-174	Gobo 5
175-207	Gobo 6
208-231	CCW wheel scrolling (min to max)
232-255	CW wheel scrolling (min to max)

19	GOBO 1 ROTATION/INDEX msb
20	**GOBO 1 ROTATION/INDEX lsb**
DMX value	**Function**
MSB.LSB-MSB.LSB INT16-INT16	
000.000-127.255 00000-32767	Proportional index 0°-360°
128.000-180.255 32768-46335	CCW gobo rotation (max to min)
181.000-202.255 46336-51967	Stop
203.000-255.255 51968-65535	CW gobo rotation (min to max)

21	GOBO 1 SHAKE
DMX value	**Function**
000-009	Stop
010-019	Gobo shake R-L speed 1
020-029	Gobo shake R-L speed 2
030-039	Gobo shake R-L speed 3
040-049	Gobo shake R-L speed 4
050-059	Gobo shake R-L speed 5
060-069	Gobo shake R-L speed 6
070-079	Gobo shake R-L speed 7
080-089	Gobo shake R-L speed 8
090-099	Gobo shake R-L speed 9
100-109	Gobo shake R-L speed 10
110-126	Gobo shake R-L speed 11
127-138	Stop
139-148	Gobo shake L-R speed 1
149-158	Gobo shake L-R speed 2
159-168	Gobo shake L-R speed 3
169-178	Gobo shake L-R speed 4
179-188	Gobo shake L-R speed 5
189-198	Gobo shake L-R speed 6
199-208	Gobo shake L-R speed 7
209-218	Gobo shake L-R speed 8
219-228	Gobo shake L-R speed 9
229-238	Gobo shake L-R speed 10
239-255	Gobo shake L-R speed 11

22	GOBO 2
DMX value	**Function**
000-009	Open
010-042	Gobo 1
043-075	Gobo 2
076-108	Gobo 3
109-141	Gobo 4
142-174	Gobo 5
175-207	Gobo 6
208-231	CCW wheel scrolling (min to max)
232-255	CW wheel scrolling (min to max)

23	GOBO 2 ROTATION/INDEX msb
24	GOBO 2 ROTATION/INDEX lsb
DMX value	**Function**
MSB.LSB-MSB.LSB INT16-INT16	
000.000-127.255 00000-32767	Proportional index 0°-360°
128.000-180.255 32768-46335	CCW gobo rotation (max to min)
181.000-202.255 46336-51967	Stop
203.000-255.255 51968-65535	CW gobo rotation (min to max)

25	GOBO 2 SHAKE
DMX value	**Function**
000-009	Stop
010-019	Gobo shake R-L speed 1
020-029	Gobo shake R-L speed 2
030-039	Gobo shake R-L speed 3
040-049	Gobo shake R-L speed 4
050-059	Gobo shake R-L speed 5
060-069	Gobo shake R-L speed 6
070-079	Gobo shake R-L speed 7
080-089	Gobo shake R-L speed 8
090-099	Gobo shake R-L speed 9
100-109	Gobo shake R-L speed 10
110-126	Gobo shake R-L speed 11
127-138	Stop
139-148	Gobo shake L-R speed 1
149-158	Gobo shake L-R speed 2
159-168	Gobo shake L-R speed 3
169-178	Gobo shake L-R speed 4
179-188	Gobo shake L-R speed 5
189-198	Gobo shake L-R speed 6
199-208	Gobo shake L-R speed 7
209-218	Gobo shake L-R speed 8
219-228	Gobo shake L-R speed 9
229-238	Gobo shake L-R speed 10
239-255	Gobo shake L-R speed 11

26	IRIS
DMX value	**Function**
000-009	Open
010-246	Linear Iris from open to closed
247-255	Closed

27	IRIS EFFECTS
DMX value	**Function**
000-009	No function
010-063	Iris pulse at different speed from min to max
064-117	Iris pulse with flash closing from min to max
118-171	Iris pulse with flash opening from min to max
172-255	Reserved (no function)

28	BLADES SYSTEM ROTATION msb
29	BLADES SYSTEM ROTATION lsb
DMX value	Function
000-126	Position from -45° to 0°
127-128	0° position
129-255	Position from 0° to 45°

30	BLADE 1 INSERTION msb
31	BLADE 1 INSERTION lsb
DMX value	Function
000-255	Open to fully inserted

32	BLADE 1 ROTATION msb
33	BLADE 1 ROTATION lsb
DMX value	Function
000-127	Position from -30° to 0°
128	0° position
129-255	Position from 0° to 30°

34	BLADE 2 INSERTION msb
35	BLADE 2 INSERTION lsb
DMX value	Function
000-255	Open to fully inserted

36	BLADE 2 ROTATION msb
37	BLADE 2 ROTATION lsb
DMX value	Function
000-127	Position from -30° to 0°
128	0° position
129-255	Position from 0° to 30°

38	BLADE 3 INSERTION msb
39	BLADE 3 INSERTION lsb
DMX value	Function
000-255	Open to fully inserted

40	BLADE 3 ROTATION msb
41	BLADE 3 ROTATION lsb
DMX value	Function
000-127	Position from -30° to 0°
128	0° position
129-255	Position from 0° to 30°

42	BLADE 4 INSERTION msb
43	BLADE 4 INSERTION lsb
DMX value	Function
000-255	Open to fully inserted

44	BLADE 4 ROTATION msb

45	BLADE 4 ROTATION lsb
DMX value	**Function**
000-127	Position from -30° to 0°
128	0° position
129-255	Position from 0° to 30°

46	BLADES EFFECTS		
DMX value	**Function**	**DMX value**	**Function**
000-009	No function	110-111	Macro 51
010-011	Macro 1	112-113	Macro 52
012-013	Macro 2	114-115	Macro 53
014-015	Macro 3	116-117	Macro 54
016-017	Macro 4	118-119	Macro 55
018-019	Macro 5	120-121	Macro 56
020-021	Macro 6	122-123	Macro 57
022-023	Macro 7	124-125	Macro 58
024-025	Macro 8	126-127	Macro 59
026-027	Macro 9	128-129	Macro 60
028-029	Macro 10	130-131	Macro 61
030-031	Macro 11	132-133	Macro 62
032-033	Macro 12	134-135	Macro 63
034-035	Macro 13	136-137	Macro 64
036-037	Macro 14	138-139	Macro 65
038-039	Macro 15	140-141	Macro 66
040-041	Macro 16	142-143	Macro 67
042-043	Macro 17	144-145	Macro 68
044-045	Macro 18	146-147	Macro 69
046-047	Macro 19	148-149	Macro 70
048-049	Macro 20	150-151	Macro 71
050-051	Macro 21	152-153	Macro 72
052-053	Macro 22	154-155	Macro 73
054-055	Macro 23	156-157	Macro 74
056-057	Macro 24	158-159	Macro 75
058-059	Macro 25	160-161	Macro 76
060-061	Macro 26	162-163	Macro 77
062-063	Macro 27	164-165	Macro 78
064-065	Macro 28	166-167	Macro 79
066-067	Macro 29	168-169	Macro 80
068-069	Macro 30	170-171	Macro 81
070-071	Macro 31	172-173	Macro 82
072-073	Macro 32	174-175	Macro 83
074-075	Macro 33	176-177	Macro 84
076-077	Macro 34	178-179	Macro 85
078-079	Macro 35	180-181	Macro 86
080-081	Macro 36	182-183	Macro 87
082-083	Macro 37	184-185	Macro 88
084-085	Macro 38	186-187	Macro 89
086-087	Macro 39	188-255	reserved
088-089	Macro 40		
090-091	Macro 41		
092-093	Macro 42		
094-095	Macro 43		
096-097	Macro 44		
098-099	Macro 45		
100-101	Macro 46		
102-103	Macro 47		
104-105	Macro 48		
106-107	Macro 49		
108-109	Macro 50		

47	DYNAMOVE MACROS	
DMX value	**Function**	**Automatic channels (52 DMX channels mode)**
000-009	No function	
010-011	Macro 1	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
012-013	Macro 2 (same as Macro 1)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
014-015	Macro 3 (same as Macro 1)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
016-017	Macro 4	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
018-019	Macro 5 (same as Macro 4)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
020-021	Macro 6 (same as Macro 4)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
022-023	Macro 7	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
024-025	Macro 8 (same as Macro 7)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
026-027	Macro 9 (same as Macro 7)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
028-029	Macro 10	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
030-031	Macro 11 (same as Macro 10)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
032-033	Macro 12 (same as Macro 10)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
034-035	Macro 13	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
036-037	Macro 14 (same as Macro 13)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
038-039	Macro 15 (same as Macro 13)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
040-041	Macro 16	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
042-043	Macro 17 (same as Macro 16)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
044-045	Macro 18 (same as Macro 16)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
046-047	Macro 19	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
048-049	Macro 20 (same as Macro 19)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
050-051	Macro 21 (same as Macro 19)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**

47	DYNAMOVE MACROS	
DMX value	**Function**	**Automatic channels (52 DMX channels mode)**
052-053	Macro 22	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
054-055	Macro 23 (same as Macro 22)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
056-057	Macro 24 (same as Macro 22)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
058-059	Macro 25	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
060-061	Macro 26 (same as Macro 25)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
062-063	Macro 27 (same as Macro 25)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
064-065	Macro 28	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
066-067	Macro 29 (same as Macro 28)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
068-069	Macro 30 (same as Macro 28)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
070-071	Macro 31	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH49
072-073	Macro 32 (same as Macro 31)	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
074-075	Macro 33 (same as Macro 31)	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
076-077	Macro 34	CH 10; CH 11; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
078-079	Macro 35 (same as Macro 34)	CH 10; CH 11; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
080-081	Macro 36 (same as Macro 34)	CH 10; CH 11; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
082-083	Macro 37	CH 10; CH 11; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
084-085	Macro 38 (same as Macro 37)	CH 10; CH 11; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
086-087	Macro 39 (same as Macro 37)	CH 10; CH 11; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 28; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
088-089	Macro 40	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
090-091	Macro 41 (same as Macro 40)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
092-093	Macro 42 (same as Macro 40)	CH 13; CH 14; CH 15; CH 16; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**

47	DYNAMOVE MACROS	
DMX value	**Function**	**Automatic channels (52 DMX channels mode)**
094-095	Macro 43	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49
096-097	Macro 44 (same as Macro 43)	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
098-099	Macro 45 (same as Macro 43)	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 40; CH 41; CH 42; CH 43; CH 44; CH 47; CH 48; CH 49 **(CH 23, CH 42, CH 44, CH 47, CH 48, CH 49 VALUES SELECTABLE BY USER)**
100-101	Macro 46	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 24; CH 25; CH 40; CH 41; CH 42; CH 43; CH 44
102-103	Macro 47	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 24; CH 25; CH 40; CH 41; CH 42; CH 43; CH 44
104-105	Macro 48	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 24; CH 25; CH 40; CH 41; CH 42; CH 43; CH 44
106-107	Macro 49	CH 11; CH 12; CH 18; CH 19; CH 20; CH 21; CH 22; CH 23; CH 24; CH 25; CH 40; CH 41; CH 42; CH 43; CH 44
108-109	Macro 50	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
110-111	Macro 51	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
112-113	Macro 52	CH 22; CH 23; CH 24; CH 25; CH 26; CH 27; CH 28; CH 29; CH 33; CH 37
114-115	Macro 53	CH 22; CH 23; CH 24; CH 25; CH 26; CH 27; CH 28; CH 29; CH 33; CH 34; CH 35; CH 36; CH 37
116-117	Macro 54	CH 22; CH 23; CH 24; CH 25; CH 26; CH 27; CH 28; CH 29; CH 33; CH 37
118-119	Macro 55	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
120-121	Macro 56	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
122-123	Macro 57	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
124-125	Macro 58	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 42
126-127	Macro 59	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
128-129	Macro 60	CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 44
130-131	Macro 61	CH 11; CH 12; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42
132-133	Macro 62	CH 11; CH 12; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44
134-135	Macro 63	CH 11; CH 12; CH 29; CH 30; CH 31; CH 32; CH 33; CH 34; CH 35; CH 36; CH 40; CH 41; CH 42; CH 43; CH 44
136-255	reserved	

48	BLADES EFFECTS SPEED / DYNAMOVE MACROS SPEED
DMX value	**Function**
000-010	1X
011-050	1.1X to 5X (step 0.1X)
051-090	4.9X to 1X (step 0.1X)
091-159	1X
160-169	0.9X
170-179	0.8X
180-189	0.7X
190-199	0.6X
200-209	0.5X
210-219	0.4X
220-229	0.3X
230-239	0.2X
240-255	0.1X

49	PRISM MODE
DMX value	**Function**
000-009	No function
010-049	Prism 1 inserted after zoom lens
050-089	Prism 2 inserted after zoom lens
090-129	Prism 1+2 inserted after zoom lens
130-169	Prism 1 inserted between focus and zoom lenses
170-209	Prism 2 inserted between focus and zoom lenses
210-255	Prism 1+2 inserted between focus and zoom lenses

50	PRISM 1 POSITION
DMX value	**Function**
000-009	Centre
010-127	Outward left to centre
128-137	Centre
138-255	Centre to outward right

51	PRISM 1 ROTATION/INDEX
DMX value	**Function**
000-127	Proportional index 0°-360°
128-180	CW rotation from fast to slow
181-202	Stop
203-255	CCW rotation from slow to fast

52	PRISM 2 POSITION
DMX value	**Function**
000-009	Centre
010-127	Outward right to centre
128-137	Centre
138-255	Centre to outward left

53	PRISM 2 ROTATION/INDEX
DMX value	**Function**
000-127	Proportional index 0°-360°
128-180	CW rotation from fast to slow
181-202	Stop
203-255	CCW rotation from slow to fast

54	FROST
DMX value	**Function**
000-009	No function
010-255	Frost Filter linear from min to max

55	*reserved for AUTOFOCUS (not yet implemented)*
DMX value	**Function**
000-000	AUTOFOCUS OFF
000-000	GOBO 1
000-000	GOBO 2
000-000	PROFILER
000-000	IRIS

56	FOCUS msb
57	FOCUS lsb
DMX value	**Function**
000-255	Linear focus

58	ZOOM
DMX value	**Function**
000-255	Linear zoom

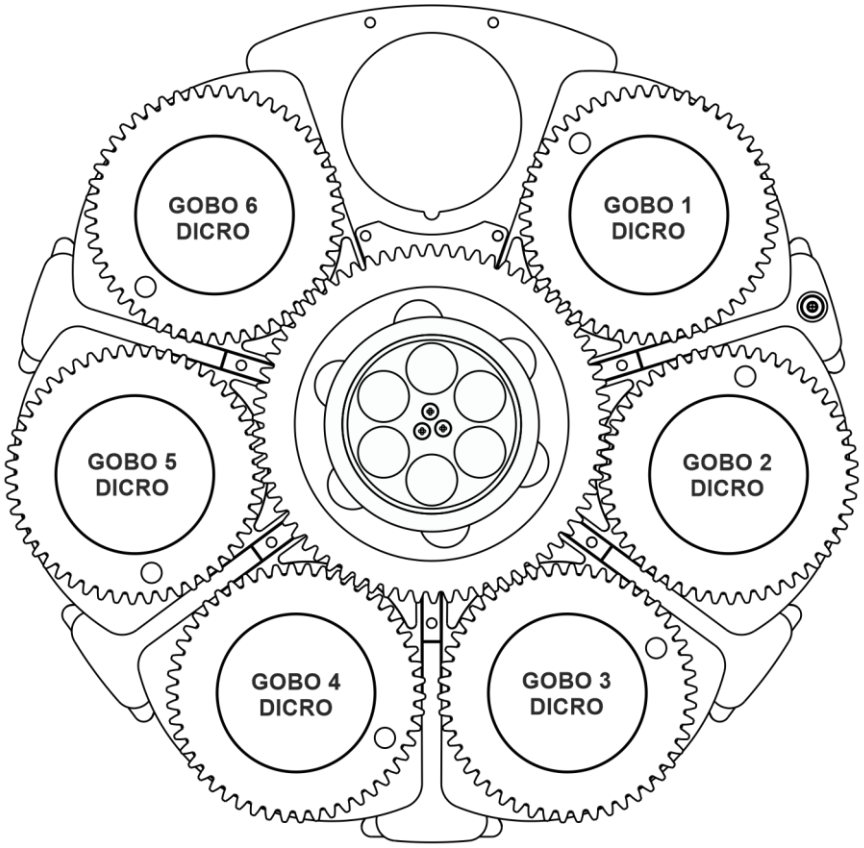
59	FIXTURE CONTROL
DMX value	**Function**
000-009	0 - No effect
010-024	1 – SMOOTH DIMMING OFF
025-026	2 - SMOOTH DIMMING 1
027-028	3 - SMOOTH DIMMING 2
029-030	4 - SMOOTH DIMMING 3
031-032	5 - SMOOTH DIMMING 4 (DEFAULT)
033-034	6 - SMOOTH DIMMING 5
035-036	7 - SMOOTH DIMMING 6
037-038	8 - SMOOTH DIMMING 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
073-084	26 - Reserved
085-090	27 – HYBRID DIMMING DISABLED (DEFAULT)
091-095	28 – HYBRID DIMMING ENABLED
096-104	29 - OUTPUT FREQUENCY 610 Hz
105	30 - OUTPUT FREQUENCY 800 Hz
106	31 - OUTPUT FREQUENCY 1000 Hz (DEFAULT)
107	32 - OUTPUT FREQUENCY 1500 Hz
108	33 - OUTPUT FREQUENCY 2000 Hz
109	34 - OUTPUT FREQUENCY 2500 Hz
110	35 - OUTPUT FREQUENCY 3000 Hz
111	36 - OUTPUT FREQUENCY 3500 Hz
112	37 - OUTPUT FREQUENCY 4000 Hz
113	38 - OUTPUT FREQUENCY 4500 Hz
114	39 - OUTPUT FREQUENCY 5000 Hz
115-134	40 - Reserved

59	FIXTURE CONTROL
DMX value	**Function**
135-136	41 - CMY / CTO SPEED 1 **(Speed value must not be set while CMY filters are moving during programming)**
137-138	42 - CMY / CTO SPEED 2 **(Speed value must not be set while CMY filters are moving during programming)**
139-140	43 - CMY / CTO SPEED 3 **(Speed value must not be set while CMY filters are moving during programming)**
141-142	44 - CMY / CTO SPEED 4(DEFAULT) **(Speed value must not be set while CMY filters are moving during programming)**
143-144	45 - BLADES SPEED 1 **(Speed value must not be set while blades are moving during programming)**
145-146	46 - BLADES SPEED 2 **(Speed value must not be set while blades are moving during programming)**
147-148	47 - BLADES SPEED 3 **(Speed value must not be set while blades are moving during programming)**
149-150	48 - BLADES SPEED 4 (DEFAULT) **(Speed value must not be set while blades are moving during programming)**
151-152	49 – Reserved
153-154	50 – Reserved
155-156	51 - DISPLAY STANDBY DISABLE (DEFAULT)
157-158	52 - DISPLAY STANDBY ENABLE
159-160	53 - DISPLAY STANDBY FORCED ENABLE
161-174	Reserved
175-176	54 - NO DMX ACTION – KEEP LAST DMX (DEFAULT)
177-178	55 - NO DMX ACTION – BLACK OUT
179-180	56 - RESERVED
181-182	57 - NO DMX ACTION – DEMO PROGRAM (STEPS 01..48)
183-184	58 - NO DMX ACTION – SINGLE CUE
185-186	59 - PAN NORMAL (DEFAULT)
187-188	60 - PAN REVERSE
189-196	61 - Reserved
197-198	62 - TILT NORMAL (DEFAULT)
199-200	63 - TILT REVERSE
201-208	64 - Reserved
209-210	65 – Reserved for ZOOM NORMAL (DEFAULT) **(not yet implemented)**
211-212	66 – Reserved for ZOOM REVERSE **(not yet implemented)**
213-232	67 - Reserved
233-234	68 – OPERATING MODE ULTRASILENT
235-236	69 – OPERATING MODE SILENT
237-238	70 – OPERATING MODE STANDARD (DEFAULT)
239-240	71 - Reserved
241-242	72 - FAN MODE CONSTANT (DEFAULT)
243-244	73 - FAN MODE AUTO
245-246	74 – ZOOM SPEED 1
247-248	75 – ZOOM SPEED 2
249-250	76 – ZOOM SPEED 3
251-252	77 – ZOOM SPEED 4 (DEFAULT)
253-255	78 - SET FUNCTION TO DEFAULT: -SMOOTH DIMMING = 4 -GAMMA = QUADRATIC -HYBRID DIMMING = DISABLED -FREQUENCY = 1000 Hz -CMY/CTO SPEED = 4 -BLADES SPEED = 4 -DISPLAY STANDBY = DISABLE -NO DMX ACTION = KEEP LAST DMX -OPERATING MODE = STANDARD -FAN MODE = CONSTANT -ZOOM SPEED = 4

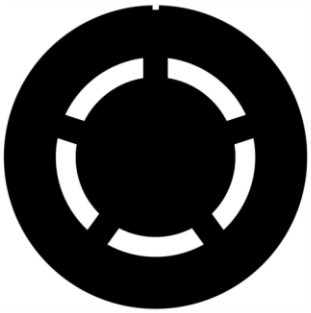
60	FREQUENCY FINE
DMX value	**Function**
000-009	No effect
010-255	Led frequency: 75% to 125% of base frequency

61	RESET
DMX value	**Function**
000-009	No effect
010-075	PAN TILT reset
076-095	HEAD MOTORS reset
096-115	Gobo wheel reset
116-135	Colour wheel reset
136-155	CMY/CTO reset
156-175	Blades reset
176-195	Prism reset
196-215	Frost - Smooth reset
216-239	Focus/Zoom reset
240-255	Total unit reset (PAN TILT + HEAD MOTORS)

24- Rotating Gobo Wheel 1

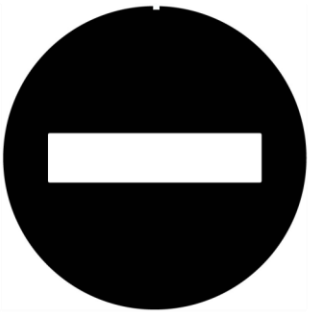


GOBO 1 DICRO



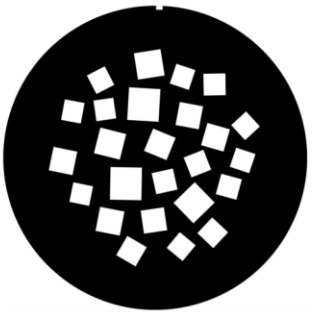
0516G149

GOBO 2 DICRO



0516G150

GOBO 3 DICRO



0516G151

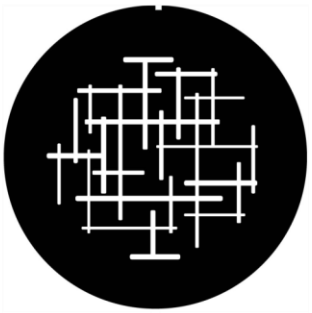
GOBO 4 DICRO

0516G152

GOBO 5 DICRO

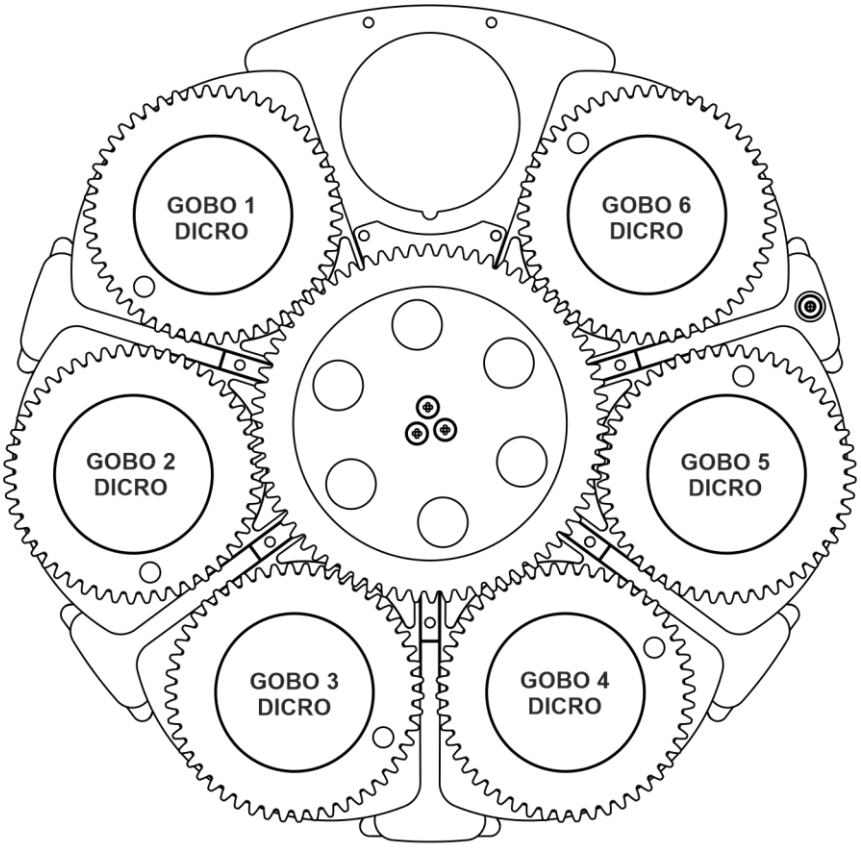
0516G153

GOBO 6 DICRO

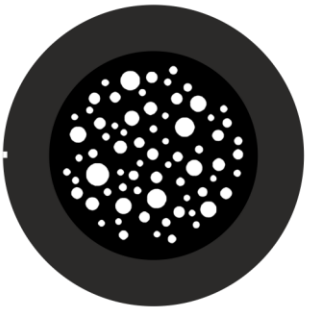


0516G154

25- Rotating Gobo Wheel 2

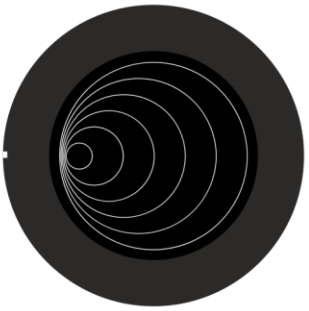


GOBO 1 DICRO



0516G155

GOBO 2 DICRO



0516G156

GOBO 3 DICRO

0516G157

GOBO 4 GLASS

0516G158

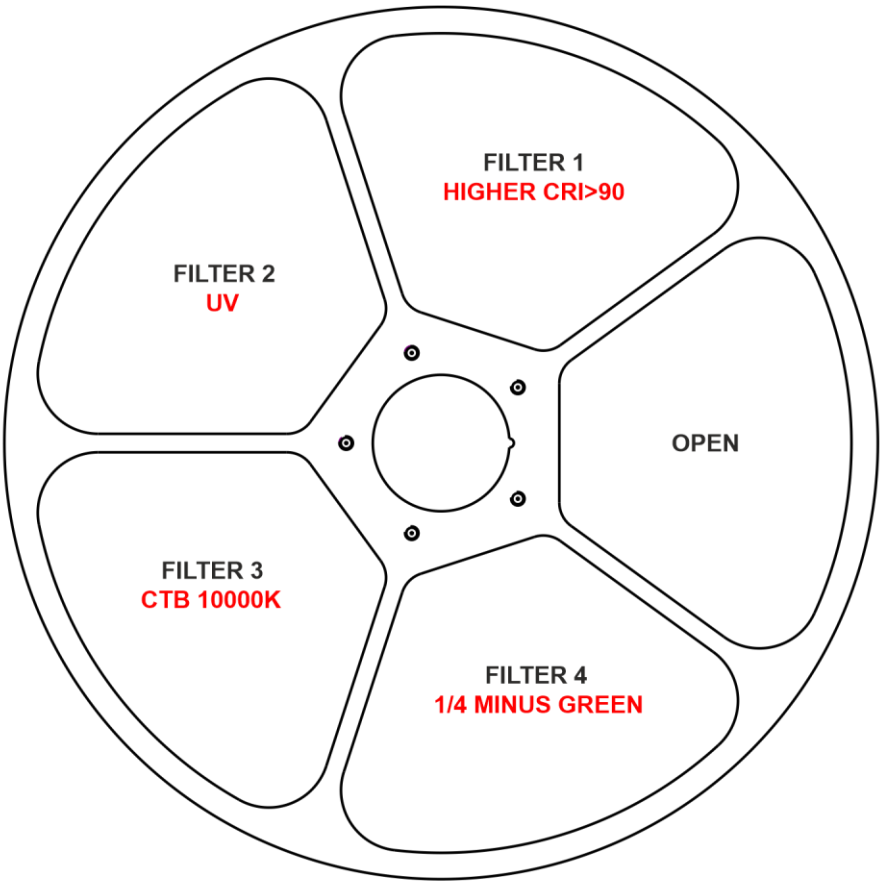
GOBO 5 DICRO

0516G159

GOBO 6 DICRO

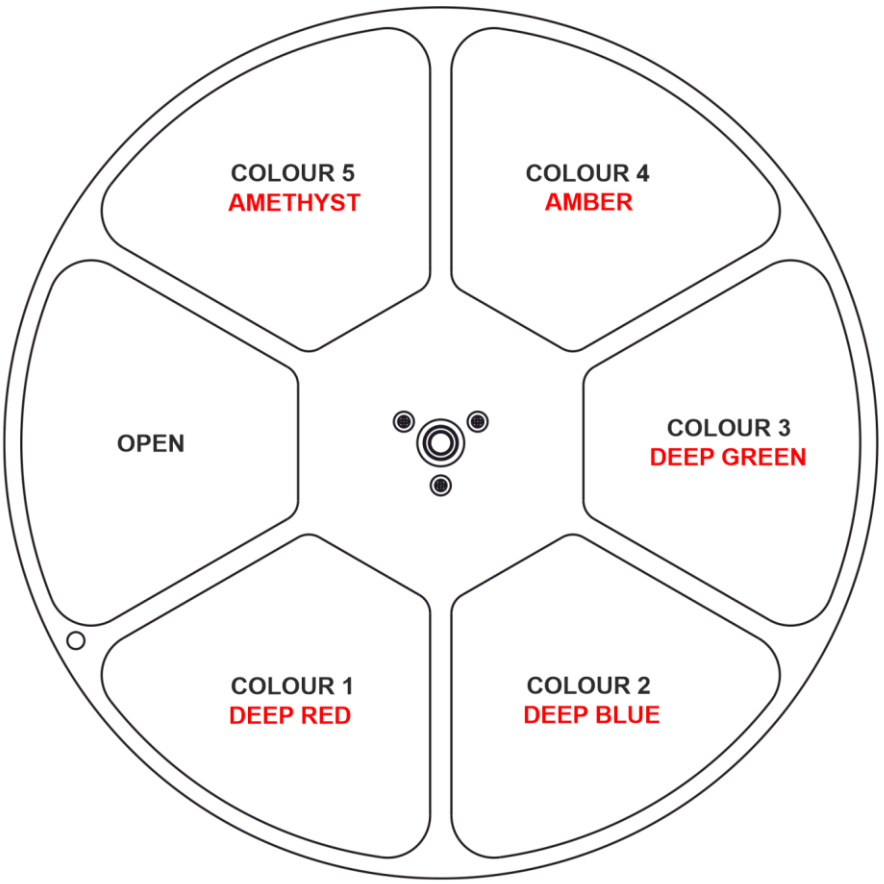
0516G160

26- Filters Wheel



FILTER 1 HIGHER CRI>90	FILTER 2 UV	FILTER 3 CTB 10000K	FILTER 4 1/4 MINUS GREEN
0507K012.D29	0507C090.D29	0507C091.D29	0507C092.D29

27- Colour Wheel



COLOUR 1 DEEP RED	COLOUR 2 DEEP BLUE	COLOUR 3 DEEP GREEN	COLOUR 4 AMBER	COLOUR 5 AMETHYST
0507C093.D27	0507C094.D27	0507C095.D27	0507C096.D27	0507C097.D27

Notes

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

DTS

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