SCENA LED 120 HQS

USER'S MANUAL rel. 1.0 **GB**

CE

INDEX:

1- SYMBOLS

Graphic symbols used on this manual:

THIS SYMBOL INDICATES A HOT SURFACE
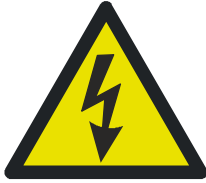
THIS SYMBOL INDICATES ELECTRIC SHOCK RISK

THIS SYMBOL INDICATES GENERAL RISK

t$_a$ 40°C

THIS SYMBOL INDICATES THE MAXIMUM OPERATING AMBIENT TEMPERATURE
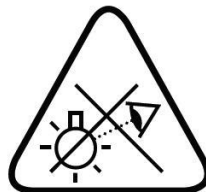
THIS SYMBOL MEANS "DO NOT STARE AT THE OPERATING LIGHT SOURCE"

Risk Group 2

THIS SYMBOL INDICATES PHOTOBIOLOGICAL SAFETY

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

2- GENERAL WARNING

Read the instruction contained in this user manual carefully, as they give important information regarding safety during installation, use and maintenance.
The unit is not for household use and must be installed by a qualified electrician or experienced person.
Always disconnect the device from the mains before maintenance.
The device must always be equipped with an efficient ground connection.

3- GENERAL WARRANTY CONDITIONS

The unit is guaranteed for 36 months from the date of purchase against manufacturing material defects.
The warranty covers defects in materials and workmanship. The warranty is not 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.

4- TECHNICAL FEATURES

SCENA LED 120 HQS is a compact LED-based projector suitable for all demanding applications where a perfect color rendition is paramount, such as theatres and TV studios.
The unit features a high efficiency 120 W 4-color LED source and a 112 mm Fresnel lens with a long-excursion 20° - 74° linear zoom.
White color temperature can be linearly tuned from 2700K to 8000K.
'Hi-Q dimming' technology allows a perfectly smooth fade-in and fade-out at all dimming levels.
The unit features PowerCon TRUE 1 In/Out panel connectors, and DMX In/Out panel connectors.

DTS' HQS (High Quality Spectrum) trademark certifies a projector' superior white light quality, and its ability to generate an extended color palette featuring a wide range of soft shades.

DTS Product code:
03.TS081.46.F   SCENA LED 120 FR HQS 5P BLACK

Output
High-power 4-color LED source
LED lifespan: 50.000 hours (70% lumen output)

Optical group
Ø 112 mm Fresnel lens
20° - 74° linear zoom

Color generation
16 million colors
Wide palette of pure uniform whites with variable linear color temperature (2700K – 8000K)

Control
DMX 512 / RDM
10 DMX channels (Default)
4-digit 7-segment LED display + 4 soft keys
Internal operating system updatable via DTS Dongle Firmware Uploader

Power supply
Full-range 100-240Vac 50-60 Hz
Power consumption: 120W Max

Connections
Power supply: PowerCON TRUE1 In/Out panel connectors
DMX: XLR 5-pole In/Out panel connectors

Internal safety devices
Overvoltage and overtemperature circuits protection

Operating temperature
-10° / 40°C

Physical
IP20
Weight: 4,5 Kg
Finishing: Black

Certifications
$C\epsilon$

DIMENSIONS
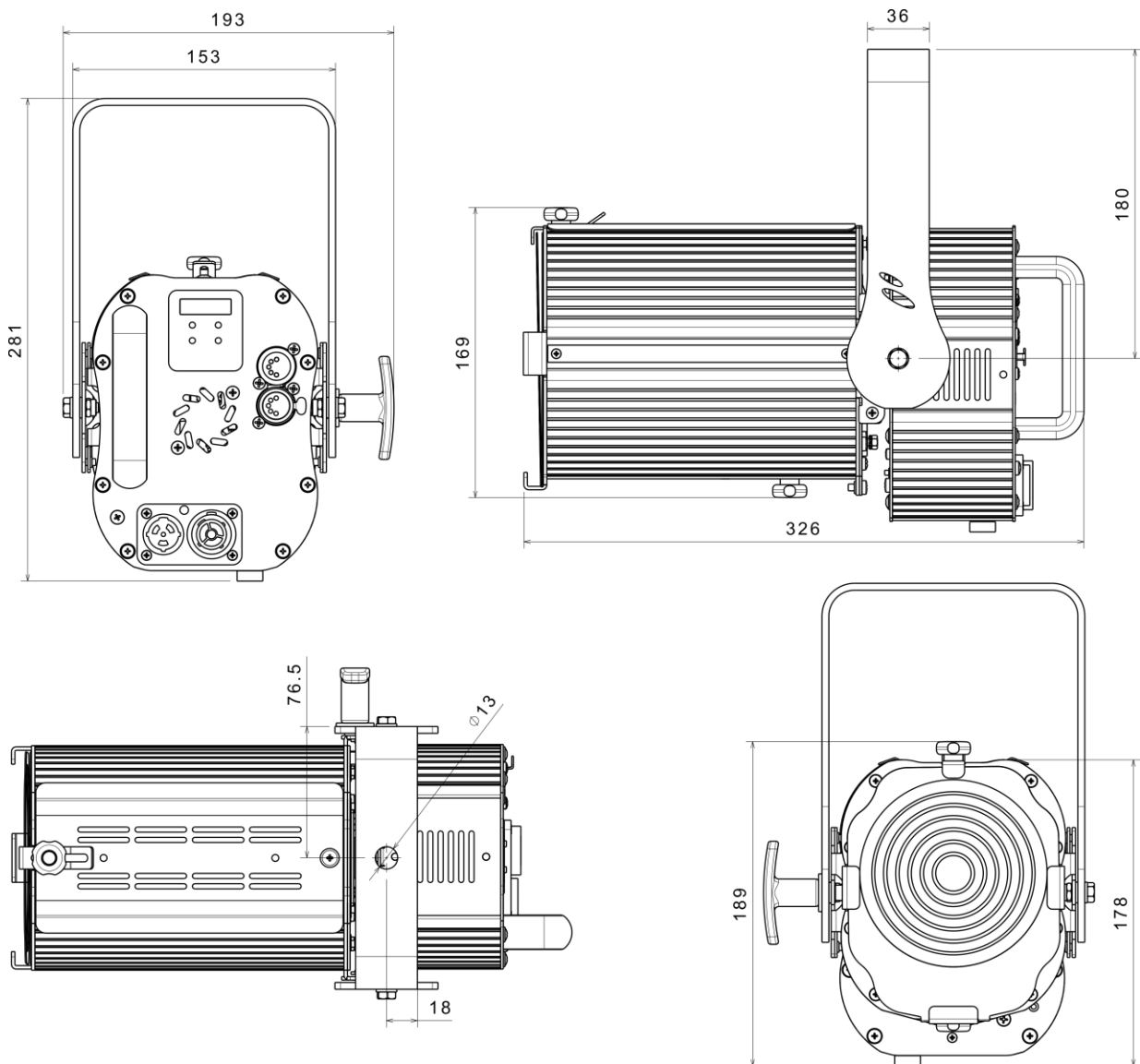
5- ACCESSORIES

As standard

1 x Cable with PowerCON TRUE1 female connector (Code 02K0012267.0015)
1 x Filterframe black finishing (already installed on the projector) (Code 02M00422.46)
1 x User's Manual

Optional (on request)

• Barndoor black finishing (Code 03.TA206)
• "C" Clamp G50 (Max. Load 10 Kg) (Code 0521A012)
• "C" Clamp G60 (Max. Load 50 Kg) (Code 0521A004)
• Safety cable 3 mm x 60 cm, max capacity load 60 Kg (Code 0521A010)
• DTS Dongle firmware uploader (code 03.LA.206)

6- IMPORTANT SAFETY INFORMATION

6.1 Fire prevention:

Replace any blown or damaged fuses only with those of identical value: T 2A 250V.

6.2 Prevention from electric shock:

High voltage is present inside the unit. Unplug the unit prior to performing any operation which involves touching the inside of the unit.
This equipment must be grounded, do not connect to non-grounded supplies.
The use of a thermal magnetic circuit breaker is recommended for each SCENA LED 120 HQS unit.
Use only AC supplies 100-240V 50-60 Hz.
SCENA LED 120 HQS should never be located in position exposed to rain or in areas of extreme humidity.
A good air ventilation is essential for proper equipment work.

6.3 Safety:

Risk Group 2 product according to EN 62471. Risk Group 2
CAUTION. Do not look directly into the light output. 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 6 m is not expected.
The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person.
The unit is not for household use and must be installed by a qualified electrician or experienced person.
The external surface of the unit may exeed 60°C; never handle the unit until at least 5 minutes have elapsed since the unit was turned off.
Never install the unit in an enclosed area lacking sufficient air flow.

The ambient temperature should not exeed 40°C. t_a 40°C

6.4 Waste Electrical and Electronic equipment (WEEE) directive:

The unit, accessories and packaging should be sorted for environmetal-friendly recycling.
For EC countries: according to the European Directive 2012/19/EC for Waste Electrical and Electronic Equipment and its implementation into national right, luminaires that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

7- INSTALLATION

The unit is suitable for dry locations only.
SCENA LED 120 HQS can be installed on a truss or on the ceiling.
It is recommended the use of appropriate clamps to fix the unit to the mounting surface.
ATTENTION:
A safety cable (code 0521A010) must be securely fixed to the unit's mounting bracket and to the support structure of the projector as shown in the picture below.
Fixing clamps and safety cable are available on request.
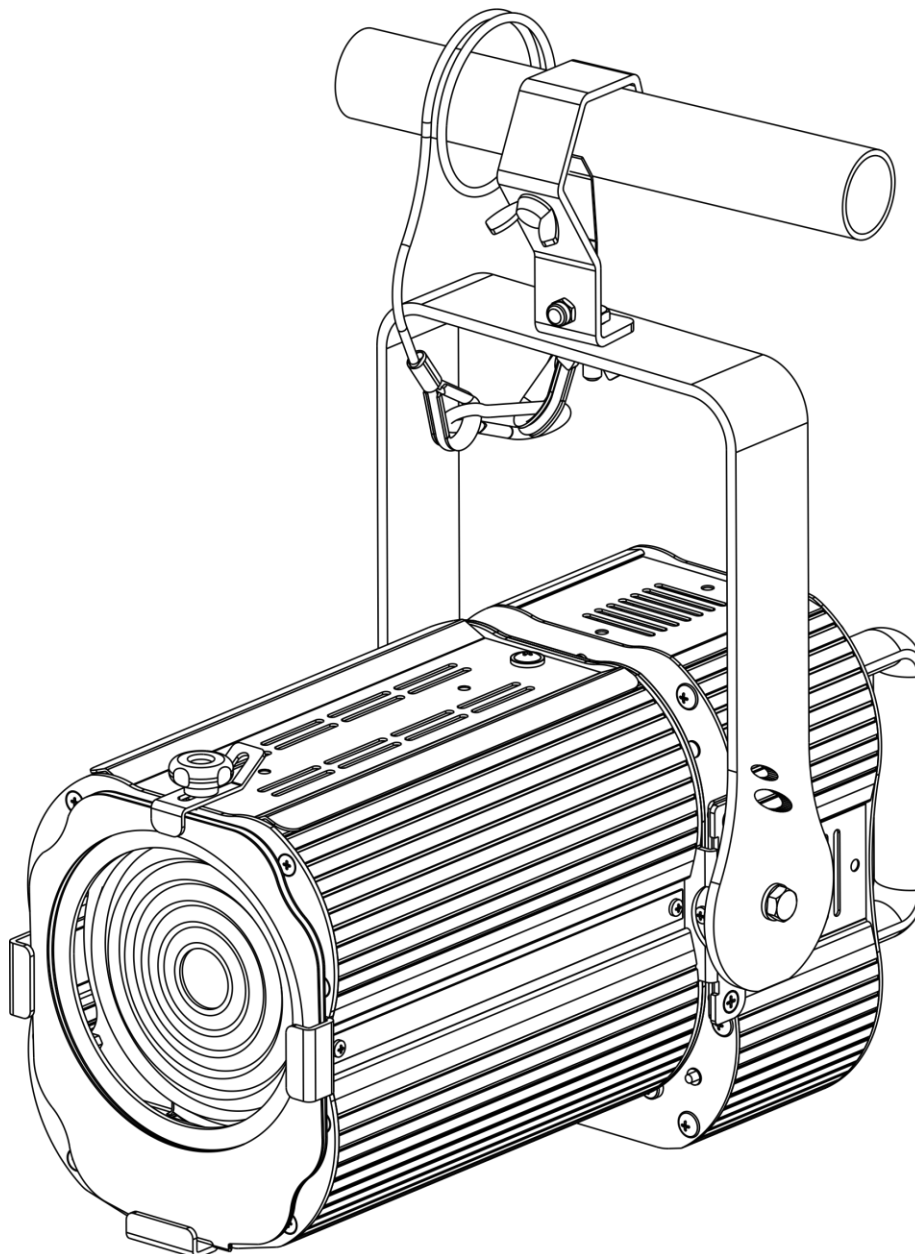
8- INPUT / OUTPUT CONNECTIONS

DISPLAY PANEL

DMX IN
XLR 5-pole male
panel connector

DMX OUT
XLR 5-pole female
panel connector

MAINS IN
100-240Vac 50-60 Hz
PowerCON TRUE1
male panel connector

FUSE
T 2A 250V

MAINS OUT
100-240Vac 50-60 Hz
MAX 16A
PowerCON TRUE1
female panel connector

Max 20 units @ 230Vac
Max 10 units @ 100Vac
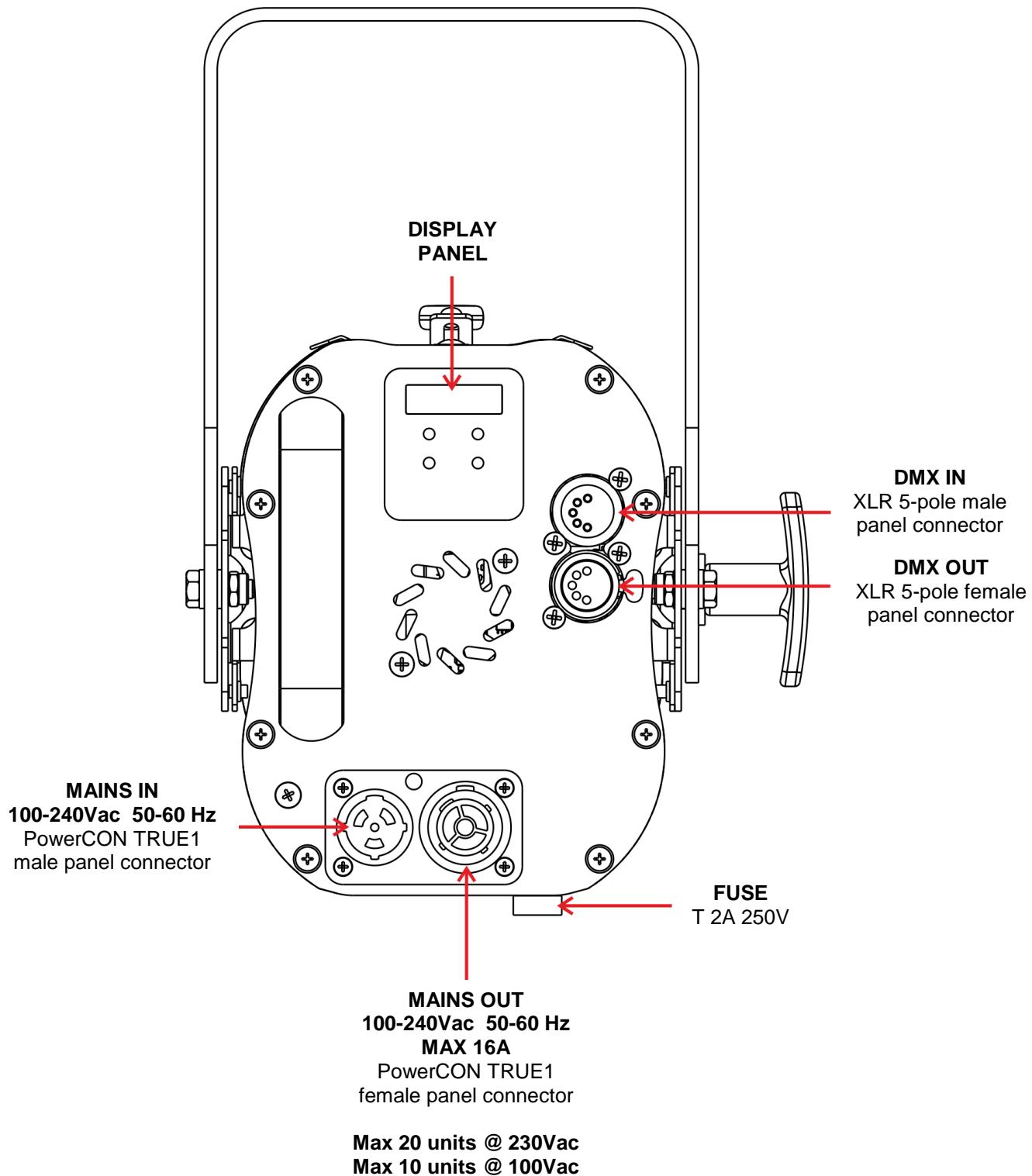
9- DMX SIGNAL CONNECTION:

The unit operates using a digital DMX 512 signal.
Connection between the controller and the unit or between units must be carried out using a two pair screened ⌀ 0.5 mm.
Ensure that the conductors do not touch each other.
Do not connect the cable ground to the DMX connector chassis.
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 unit to the DMX IN plug of the second one.
In this way, all the projectors are cascade connected.
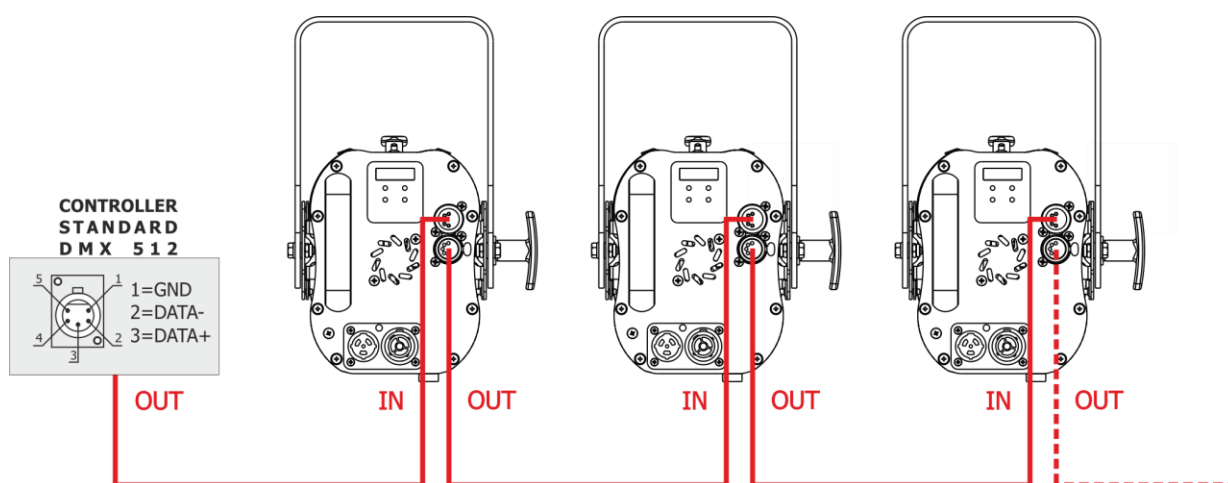
If the display showing the DMX address flashes, then one of the following errors has occurred:
- DMX signal not present
- DMX reception problem

For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.
The DMX terminator is a male XLR 3-5 pins connector with a 120 ohm resistor Between pin 2 and 3.
The DMX terminator must be plugged into the last unit (DMX out panel connector) of the DMX line.
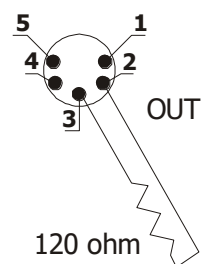
PLACE A 120 OHM RESISTOR BETWEEN PIN 2 AND 3 OF A MALE XRL CONNECTOR AND PLUG IT INTO THE DMX OUT PANEL CONNECTOR OF THE LAST UNIT CONNECTED TO THE DMX LINE
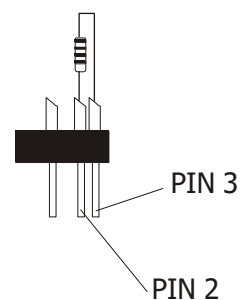
9.1 DMX addresses

SCENA LED 120 HQS can be used in 5 DMX modes:
1. 10 channels (Default)
2. RGBA (4 channels)
3. 6 channels
4. FINE (10 channels)
5. PROM (11 channels)

In order to use the unit in 10 DMX channels mode (Default), set the following addresses on the mixer:

Projector 1   A001
Projector 2   A011   If you want to select the next projector, just add "10"
Projector 3   A021
…..   A….
projector 6   A051

9.2 Selecting the DMX address

1) Press the UP-DOWN key until you reach the required DMX address. 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 controlled by the new DMX address.

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

10- RDM FUNCTIONS

By using a RDM controller it is possible to set DMX address, DMX mode and other parameters.
SCENA LED 120 HQS accepts the following RDM commands:

RDM Device Model ID: 0x0D6F

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 – Control			
IDENTIFY_DEVICE	0x1000	X	
Category – Dimmer Settings (Additional Messages)			
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	

10- RDM FUNCTIONS

RDM PID DESCRIPTION	RDM PID VALUE	GET	SET
Category – Manufacturer-Specific PIDs			
BOOST	0x9007	X	X
FANS SETTING	0x903A	X	X
DISPLAY STANDBY	0x903C	X	X
NO DMX ACTION	0x9002	X	X
RED NO DMX	0x9003	X	X
GREEN NO DMX	0x9004	X	X
BLUE NO DMX	0x9005	X	X
AMBER NO DMX	0x9006	X	X
INT NO DMX	0x900A	X	X
RED FINE NO DMX	0x9014	X	X
GREEN FINE NO DMX	0x9015	X	X
BLUE FINE NO DMX	0x9016	X	X
AMBER FINE NO DMX	0x9017	X	X
INT FINE NO DMX	0x9018	X	X
RED2 NO DMX	0x9019	X	X
GREEN2 NO DMX	0x901A	X	X
BLUE2 NO DMX	0x901B	X	X
AMBER2 NO DMX	0x901C	X	X
INT2 NO DMX	0x901D	X	X
RED2 FINE NO DMX	0x901E	X	X
GREEN2 FINE NO DMX	0x901F	X	X
BLUE2 FINE NO DMX	0x9020	X	X
AMBER2 FINE NO DMX	0x9021	X	X
INT2 FINE NO DMX	0x9022	X	X
RED3 NO DMX	0x9023	X	X
GREEN3 NO DMX	0x9024	X	X
BLUE3 NO DMX	0x9025	X	X
AMBER3 NO DMX	0x9026	X	X
INT3 NO DMX	0x9027	X	X
RED3 FINE NO DMX	0x9028	X	X
GREEN3 FINE NO DMX	0x9029	X	X
BLUE3 FINE NO DMX	0x902A	X	X
AMBER3 FINE NO DMX	0x902B	X	X
INT3 FINE NO DMX	0x902C	X	X
RED4 NO DMX	0x902D	X	X
GREEN4 NO DMX	0x902E	X	X
BLUE4 NO DMX	0x902F	X	X
AMBER4 NO DMX	0x9030	X	X
INT4 NO DMX	0x9031	X	X
RED4 FINE NO DMX	0x9032	X	X
GREEN4 FINE NO DMX	0x9033	X	X
BLUE4 FINE NO DMX	0x9034	X	X
AMBER4 FINE NO DMX	0x9035	X	X
INT4 FINE NO DMX	0x9036	X	X

10- RDM FUNCTIONS

RDM ADDITIONAL MESSAGEs:

CURVE	CURVE DESCRIPTION
1	1: LINEAR
2	2: QUADRATIC (default)
3	3: S-CURVE
4	4: GAMMA 2.2
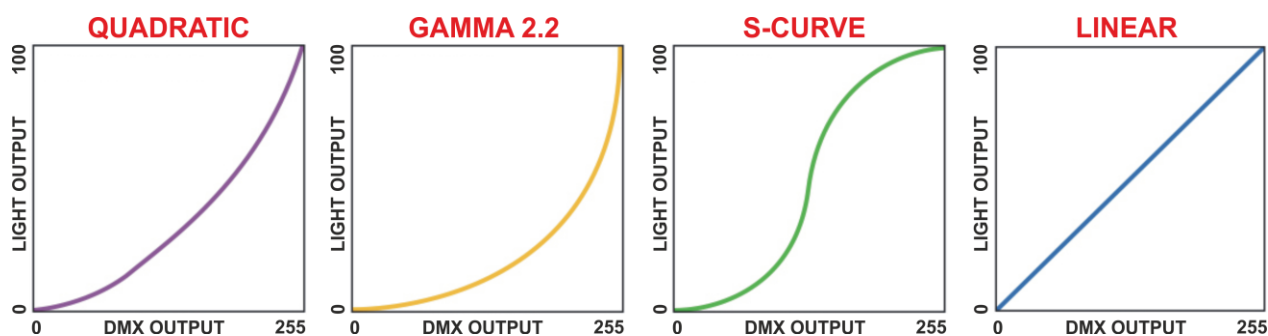
OUTPUT RESPONSE TIME	OUTPUT_RESPONSE_TIME_DESCRIPTION
0	0: SMOOTH OFF
1	1: SMOOTH 1 (25 ms)
2	2: SMOOTH 2 (50 ms)
3	3: SMOOTH 3 (75 ms)
4	4: SMOOTH 4 (100 ms) (default)
5	5: SMOOTH 5 (125 ms)
6	6: SMOOTH 6 (150 ms)
7	7: SMOOTH 7 (175 ms)
8	8: SMOOTH 8 (200 ms)
9	9: SMOOTH 9 (225 ms)
10	10: SMOOTH 10 (250 ms)
11	11: SMOOTH 11 (275 ms)
12	12: SMOOTH 12 (300 ms)
13	13: SMOOTH 13 (325 ms)
14	14: SMOOTH 14 (350 ms)
15	15: SMOOTH 15 (375 ms)
16	16: SMOOTH 16 (400 ms)
17	17: SMOOTH 17 (425 ms)
18	18: SMOOTH 18 (450 ms)
19	19: SMOOTH 19 (475 ms)
20	20: SMOOTH 20 (500 ms)

10- RDM FUNCTIONS

RDM ADDITIONAL MESSAGEs:

MODULATION FREQUENCY	MODULATION FREQUENCY DESCRIPTION
1	1: 610 Hz
2	2: 800 Hz
3	3: 1000 Hz (default)
4	4: 1500 Hz
5	5: 2000 Hz
6	6: 2500 Hz
7	7: 3000 Hz
8	8: 3500 Hz
9	9: 4000 Hz
10	10: 4500 Hz
11	11: 5000 Hz

RDM MANUFACTURER-SPECIFIC PIDs:

MANUFACTURER-SPECIFIC PID	DESCRIPTION
BOOST	0 = Disabled 1 = Enabled (default)
FANS SETTING	0 = Fan mode Standard 1 = Fan mode Silent (default)
DISPLAY STANDBY	0 = OFF (default) 1 = ON 2 = FORCED ON
NO DMX ACTION	1 = BLACKOUT 2 = PROGRAM 1-16 3 = RGB 100% 4 = RGB 60% 5 = CUSTOM 6 = CUSTOM2 7 = CUSTOM3 8 = CUSTOM4 9 = KEEP LAST (default)

10- RDM FUNCTIONS

RDM MANUFACTURER-SPECIFIC PIDs:

MANUFACTURER-SPECIFIC PID	DESCRIPTION
RED NO DMX	Range 0-255 (Default = 128)
GREEN NO DMX	Range 0-255 (Default = 128)
BLUE NO DMX	Range 0-255 (Default = 128)
AMBER NO DMX	Range 0-255 (Default = 128)
INT NO DMX	Range 0-255 (Default = 128)
RED FINE NO DMX	Range 0-255 (Default = 128)
GREEN FINE NO DMX	Range 0-255 (Default = 128)
BLUE FINE NO DMX	Range 0-255 (Default = 128)
AMBER FINE NO DMX	Range 0-255 (Default = 128)
INT FINE NO DMX	Range 0-255 (Default = 128)
RED2 NO DMX	Range 0-255 (Default = 128)
GREEN2 NO DMX	Range 0-255 (Default = 128)
BLUE2 NO DMX	Range 0-255 (Default = 128)
AMBER2 NO DMX	Range 0-255 (Default = 128)
INT2 NO DMX	Range 0-255 (Default = 128)
RED2 FINE NO DMX	Range 0-255 (Default = 128)
GREEN2 FINE NO DMX	Range 0-255 (Default = 128)
BLUE2 FINE NO DMX	Range 0-255 (Default = 128)
AMBER2 FINE NO DMX	Range 0-255 (Default = 128)
INT2 FINE NO DMX	Range 0-255 (Default = 128)
RED3 NO DMX	Range 0-255 (Default = 128)
GREEN3 NO DMX	Range 0-255 (Default = 128)
BLUE3 NO DMX	Range 0-255 (Default = 128)
AMBER3 NO DMX	Range 0-255 (Default = 128)
INT3 NO DMX	Range 0-255 (Default = 128)
RED3 FINE NO DMX	Range 0-255 (Default = 128)
GREEN3 FINE NO DMX	Range 0-255 (Default = 128)
BLUE3 FINE NO DMX	Range 0-255 (Default = 128)
AMBER3 FINE NO DMX	Range 0-255 (Default = 128)
INT3 FINE NO DMX	Range 0-255 (Default = 128)
RED4 NO DMX	Range 0-255 (Default = 128)
GREEN4 NO DMX	Range 0-255 (Default = 128)
BLUE4 NO DMX	Range 0-255 (Default = 128)
AMBER4 NO DMX	Range 0-255 (Default = 128)
INT4 NO DMX	Range 0-255 (Default = 128)
RED4 FINE NO DMX	Range 0-255 (Default = 128)
GREEN4 FINE NO DMX	Range 0-255 (Default = 128)
BLUE4 FINE NO DMX	Range 0-255 (Default = 128)
AMBER4 FINE NO DMX	Range 0-255 (Default = 128)
INT4 FINE NO DMX	Range 0-255 (Default = 128)

10- RDM FUNCTIONS

RDM STATUS MESSAGE IDs:

Status Message ID	Data Value 1	Data Value 2	Status ID Description
0x801F			ERROR TEMPERATURE LED MODULE
0x8020			ERROR TEMPERATURE LED DRIVER %d
0x8021			ERROR TEMPERATURE MICRO
0x9000	1: RED 2: GREEN 3: BLUE 4: AMBER		ERROR LED %%d OPEN
0x9001	1: RED 2: GREEN 3: BLUE 4: AMBER		ERROR LED %%d SHORT

11- FIRMWARE UPDATING

To update the firmware release of the SCENA LED 120 HQS you need:
- DTS Dongle Firmware Uploader (code 03.LA.206).
- "DTS Firmware Upgrade Utility v.2.02" program installed on PC.
- Latest firmware release available for SCENA LED 120 HQS 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.

12- DISPLAY FUNCTIONS

The SCENA LED 120 HQS 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.
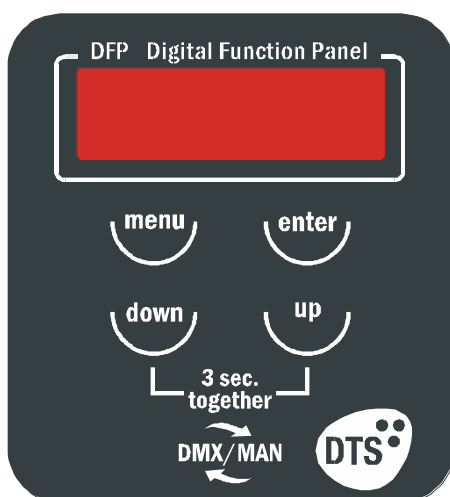
MENU	• To access the control menus in the display panel. • To return to the previous level in the menu structure without making a change. • To exit the menus.
ENTER	• To select any required menu. • To confirm any changes.
UP / DOWN	• To navigate the menus structure. • To change any value.

FIRMWARE RELEASE	1.00
RDM Device Model ID	0x0D6F
DMX Personality IDs	0x01 "RGBA 10 chans" 0x02 "RGBA 4 chans" 0x03 "RGBA 6 chans" 0x04 "RGBA FINE 10 chans" 0x05 "PROM 11 chans"

DISPLAY KEY-LOCK FUNCTION

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

MAIN MENU	LEVEL 1	LEVEL 2	LEVEL 3	FUNCTION
dISP	*PoSi*	*AA*		**Display normal orientation for floor mounting position (Default)**
		BB		Display inverted orientation for suspended mounting position
	Stby	*oFF*		**Display stand-by disabled (Default)**
		on		Display goes OFF after 10 seconds
		Fon		Display forced OFF even if control signal is missing or error messages are shown.
ModE	*10cH*			**Allows to select 10 DMX channels mode (Default)**
	rGbA			Allows to select "RGBA" mode (4 DMX channels).
	6cH			Allows to select 6 DMX channels mode.
	FInE			Allows to select "FINE" mode (10 DMX channels).
	ProM			Allows to select "PROM" mode (11 DMX channels).
LEd	*SMtH*	*oFF-20*		Allows to select the value of the delay (in milliseconds) for Dimmer channel reaction to DMX or Program variation. Off = Instant response to DMX variation. **4 = 100 ms Smooth response to DMX variation (Default)** 20 = 500 ms Smooth response to DMX variation.
	coMP	*9uAd*		**Allows to select Quadratic current output for LED (Default).**
		LInE		Allows to select Linear light output.
		Scur		Allows to set S-curve to emulates light intensity characteristics of the tungsten halogen lamps.
		G2.2		Allows to set gamma curve 2.2 .
	SYnc	*610-5000*		Allows to adjust the PWM frequency value (Hz) in order to reduce flickering in the process of your camera recordings. Range = 610 – 5000 Hz **Default = 1000 Hz**
	bSt	*on*		Allows to increase the LED's current from 70% to 100%
		oFF		**Default = ON**

"COMP" GRAPHICS:

QUADRATIC — GAMMA 2.2 — S-CURVE — LINEAR (LIGHT OUTPUT 0–100 vs DMX OUTPUT 0–255)
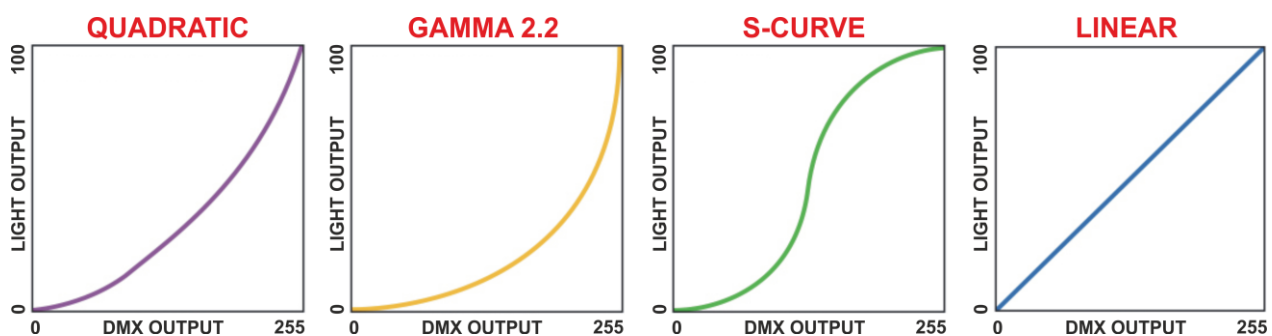
MAIN MENU	LEVEL 1	LEVEL 2	LEVEL 3	FUNCTION
Auto	cHPr - StEP 01-16	SPEE	1-3600	Automatic mode without DMX controller. Chase with 16 steps previously created in REC mode. Speed time and wait time values (in seconds) selectable by user **(Default = 10)**. In Auto mode the unit do generate DMX for slave units.
		UAit	1-3600	
	cP01 ...... cP16	rEd	0-255	16 customizable Colour Macros. RGBA values selectable by user **(Default = 255)**.
		GrEE	0-255	
		bLuE	0-255	
		AnbE	0-255	
	rAin	SPEE	1-3600	Rainbow colours effect. Speed time value (in seconds) selectable by user **(Default = 10)**.
	cU01 ...... cU28			28 Colour Macros as on DMX channel 9 (MACRO COLOR). **Default = 01**
	2700 8000			12 White color temperature from 2700K to 8000K as on DMX channel 8 (CCT). **Default = 2700K**
	dinn			Dimmer level selectable by user as on DMX channel 6 (DIMMER) **Default = 255**
	SHut			Shutter level selectable by user as on DMX channel 5 (SHUTTER) **Default = 15**
	ESc			Esc from automatic mode.

MAIN MENU	LEVEL 1	LEVEL 2	LEVEL 3	FUNCTION
rEc	*10cH*	*r001* *M001* *M016*		In DMX Recorder mode it is possible to create and store the scenes of the CHPR menu by using an external DMX controller. The unit must be set to 10 DMX channels mode. Refer to "REC MODE" for details.
SLAU	*SurE*	*SLU*		Slave mode. The unit is forced to DMX address 1 and 10 DMX channels mode receiving signal from the unit set in Auto mode.
		ESc		Esc from slave mode
FAn	*Std* *SIL*			Allows to select the internal fans speed. Standard mode: High fans speed. Silent mode: Low fans speed for a very low noise operation. **Default = SIL**
ndMH	*LdMH*			No DMX action. **Keep last valid DMX signal (Default)**
	oFF			Black-out
	cHPr	*SPEE* *UAIt*	*1-3600* *1-3600*	Chase with 16 steps previously created in REC mode as per AUTO > CHPR menu. Speed time and wait time values (in seconds) selectable by user **(Default = 10)**. In Auto mode the unit do generate DMX for slave units.
	100			RGBA @ 100%
	60			RGBA @ 60%
	cuS	*rEd* *GrEE* *bLuE* *AMbE* *dIMM* *rEdF* *GrEF* *bLuF* *AMbF* *dIMF*	*0-255* *0-255* *0-255* *0-255* *0-255* *0-255* *0-255* *0-255* *0-255* *0-255*	Custom. RGBA, RGBA Fine, Dimmer and Dimmer Fine values selectable by user. **(Default = 128)**.
	cuS2			Custom2. RGBA, RGBA Fine, Dimmer and Dimmer Fine values selectable by user only via PROM mode or via RDM.
	cuS3			Custom3. RGBA, RGBA Fine, Dimmer and Dimmer Fine values selectable by user only via PROM mode or via RDM
	cuS4			Custom4. RGBA, RGBA Fine, Dimmer and Dimmer Fine values selectable by user only via PROM mode or via RDM
dFSE	*SurE*			To restore default settings
tEMP	*LEd*	*025.0*		LED temperature monitoring
	Mcr	*025.0*		Micro controller temperature monitoring
	drU1	*025.0*		Outputs 1 and 2 of LED Driver board temperature monitoring
	drU2	*025.0*		Output 3 and 4 of LED Driver board temperature monitoring
tIME	*rEd* *GrEE* *bLuE* *AMbE* *unIt*			Shows the total unit life time and the RGBA LEDs life time
SoFt	*u.1.00*			Firmware release

13- REC MODE

DMX Recorder mode
For the programming of ChPr by using a DMX controller, besides the 10 channels necessary to control the unit a further 3 DMX channels are needed.
So that in RECORDER mode (via DMX) the unit will need 13 channels to be correctly programmed.
The three new DMX channels are:

DMX channel 11 = SCENES channel
From 0-10 = no function (r001)
From 11-255 are displayed the programmable scenes (max 16 scenes from M001 to M0016)

DMX channel 12 = EDIT channel:
-From 0-19 = no function
-From 20-234 the unit runs the configuration given by the received input DMX values.
With the channel SCENES it is possible to pass from one step to the next while with REC it is possible to record the selected scene.
-From 235-255 the unit runs the configuration given by the received input DMX values closing the sequence as last scene.
With the channel REC it is possible to record the selected scene as last scene.

DMX channel 13 = RECORDING channel
 Records the set scene with a variation between 0 to 255 (the display flashes indicating that the scene has been recorded). It is advised that you keep the REC channel set to 0 and to run through the 255 only once you have decided to save the scene. If ChPr is not closed, by indicating the last scene (Edit channel between 235-255), in playback mode all 16 scenes will be played through even if not programmed.

14- MANUAL MODE

Manual mode can be activated by pressing at the same time 'UP' and 'DOWN' keys on unit display for 3 seconds (A001).
In Manual mode it is possible to select:

rEd	0-255	RGBA levels selectable by user. **Default = 255**
GrEE	0-255	
bLuE	0-255	
ANbE	0-255	
SHut	0-255	Shutter level selectable by user as on DMX channel 5 (SHUTTER) **Default = 15**
diNN	0-255	Dimmer level selectable by user as on DMX channel 6 (DIMMER) **Default = 255**
cct	oFF 2700 8000	12 White color temperature selection from 2700K to 8000K as on DMX channel 8 (CCT). CCT has priority on RGBA channels. **Default = OFF**
ESc		Esc from Manual mode

When Manual mode is active, unit switch OFF/ON cycle will maintain Manual Mode selection.
In Manual mode the DMX signal is ignored.

15- ERROR MESSAGES

ERROR SHOWED ON DISPLAY	APPEARS WHEN
LEd SEnSor Error	LED thermal sensor damaged (open or in short circuit). Unit immediately goes in black-out.
LEd ouErtEMPErAturE	LED temperature detected over 70°C. Unit immediately goes in black-out.
Micro SEnSor Error	Micro controller thermal sensor damaged (open or in short circuit). Unit immediately goes in black-out.
Micro ouErtEMPErAturE	Micro controller temperature detected over 70°C. Unit immediately goes in black-out.
drU1 SEnSor Error	Thermal sensor on outputs 1 and 2 of LED Driver board damaged (open or in short circuit). Unit immediately goes in black-out.
drU1 ouErtEMPErAturE	Temperature detected over 70°C on outputs 1 and 2 of LED Driver board. Unit immediately goes in black-out.
drU2 SEnSor Error	Thermal sensor on outputs 3 and 4 of LED Driver board damaged (open or in short circuit). Unit immediately goes in black-out.
drU2 ouErtEMPErAturE	Temperature detected over 70°C on outputs 3 and 4 of LED Driver board. Unit immediately goes in black-out.

16- DMX PROTOCOL

10 CHANNELS mode (Default)

1   RED
2   GREEN
3   BLUE
4   AMBER
5   SHUTTER
6   DIMMER
7   DIMMER FINE
8   CCT
9   MACRO COLOR
10   FUNCTIONS

Dmx Personality 1: RGBA 10 chans			
#	*Name*	*Dmx Levels Ranges And Functions*	
1	**RED**	0..255	Proportional color from min to max
2	**GREEN**	0..255	Proportional color from min to max
3	**BLUE**	0..255	Proportional color from min to max
4	**AMBER**	0..255	Proportional color from min to max
5	**SHUTTER**	0..9	Black-out
		10..19	Open
		20..29	Black-out
		30..119	Strobe (from 3,27 s to 30 ms)
		120..149	Pulse up (from 42,6 s to 120 ms)
		150..179	Pulse down (from 42,6 s to 120 ms)
		180..204	Random strobe (R G B W CCT MACRO Dimmer channels active)
		205..229	Full independent random strobe (Dimmer channels active)
		230..235	Single flash 30 ms (R G B W CCT MACRO Dimmer channels active)
		236..255	Open
6	**DIMMER**	0..255	Proportional master dimmer From Off (lev. 0) to Full On (lev.255)
7	**DIMMER FINE**	0..255	Proportional master dimmer fine From Off (lev. 0) to Full On (lev.255)
8	**CCT**	0..9	No Function
		10..255	Correlated color temperature from 2700K to 8000K.
		Relevant CCT values:	
		10	2700 K
		33	3000 K
		55	3200 K
		77	3500 K
		99	4000 K
		121	4500 K
		143	5000 K
		165	5600 K
		187	6000 K
		209	6500 K
		232	7000 K
		255	8000 K

Dmx Personality 1: RGBA 10 chans

#	Name	Dmx Levels Ranges And Functions	
9	**MACRO COLOR**	0..9	No function
		10..20	COL 1: GEL FILTER NO. 19 "FIRE" 255-14-0-17-LINEAR 255-1-0-1-QUADRATIC
		21..25	COL 2: GEL FILTER NO. 20 "MEDIUM AMBER" 255-77-0-255-LINEAR 255-23-0-255-QUADRATIC
		26..30	COL 3: GEL FILTER NO. 25 "SUNSET RED" 255-22-0-66-LINEAR 255-2-0-17-QUADRATIC
		31..35	COL 4: GEL FILTER NO. 68 "SKY BLUE" 0-255-155-35-LINEAR 0-255-94-5-QUADRATIC
		36..40	COL 5: GEL FILTER NO. 101 "YELLOW" 255-135-0-0-LINEAR 255-71-0-0-QUADRATIC
		41..45	COL 6: GEL FILTER NO. 104 "DEEP AMBER" 255-130-0-255-LINEAR 255-66-0-255-QUADRATIC
		46..50	COL 7: GEL FILTER NO. 105 "ORANGE" 255-80-0-50-LINEAR 255-25-0-10-QUADRATIC
		51..55	COL 8: GEL FILTER NO. 106 "PRIMARY RED" 255-0-0-0-LINEAR 255-0-0-0-QUADRATIC
		56..60	COL 9: GEL FILTER NO. 111 "DARK PINK" 255-37-22-255-LINEAR 255-5-2-255-QUADRATIC
		61..65	COL 10: GEL FILTER NO. 113 "MAGENTA" 255-0-3-0-LINEAR 255-0-1-0-QUADRATIC
		66..70	COL 11: GEL FILTER NO. 117 "STEEL BLUE" 196-255-37-0-LINEAR 150-255-5-0-QUADRATIC
		71..75	COL 12: GEL FILTER NO. 118 "LIGHT BLUE" 18-255-72-0-LINEAR 0-255-20-0-QUADRATIC
		76..80	COL 13: GEL FILTER NO. 122 "FERN GREEN" 110-255-4-0-LINEAR 47-255-1-0-QUADRATIC
		81..85	COL 14: GEL FILTER NO. 126 "MAUVE" 255-0-41-0-LINEAR 255-0-7-0-QUADRATIC
		86..90	COL 15: GEL FILTER NO. 132 "MEDIUM BLUE" 0-255-155-0-LINEAR 0-255-94-0-QUADRATIC
		91..95	COL 16: GEL FILTER NO. 136 "PALE LAVANDER" 227-170-50-255-LINEAR 202-113-10-255-QUADRATIC
		96..100	COL 17: GEL FILTER NO. 137 "LAVANDER" 255-218-104-255 LINEAR 255-186-42-255-QUADRATIC
		101..105	COL 18: GEL FILTER NO. 138 "PALE GREEN" 120-255-11-255-LINEAR 56-255-1-255-QUADRATIC
		106..110	COL 19: GEL FILTER NO. 139 "PRIMARY GREEN" 18-255-0-0-LINEAR 2-255-0-0-QUADRATIC
		111..115	COL 20: GEL FILTER NO. 147 "APRICOT" 255-82-3-255-LINEAR 255-26-0-255-QUADRATIC
		116..120	COL 21: GEL FILTER NO. 151 "GOLD TINT" 255-127-16-255-LINEAR 255-63-1-255-QUADRATIC
		121..125	COL 22: GEL FILTER NO. 154 "PALE ROSE" 255-148-20-255-LINEAR 255-86-2-255-QUADRATIC
		126..130	COL 23: GEL FILTER NO. 156 "CHOCOLATE" 255-133-8-255-LINEAR 255-69-1-255-QUADRATIC
		131..135	COL 24: GEL FILTER NO. 181 "CONGO BLUE" 68-22-255-0-LINEAR 18-2-255-0-QUADRATIC
		136..140	COL 25: GEL FILTER NO. 200 "DOUBLE CT BLUE" 145-255-107-0-LINEAR 82-255-45-0-QUADRATIC
		141..145	COL 26: GEL FILTER NO.201 "FULL CT BLUE" 78-255-78-255-LINEAR 23-255-23-255-QUADRATIC
		146..150	COL 27: GEL FILTER NO. 204 "FULL CT ORANGE" 255-120-4-255-LINEAR 255-56-1-255-QUADRATIC

Dmx Personality 1: RGBA 10 chans			
#	**Name**		**Dmx Levels Ranges And Functions**
9	**MACRO COLOR**	151..155	COL 28: GEL FILTER NO. 341 "PLUM" 210-86-24-60-LINEAR 173-29-3-14-QUADRATIC
		156..235	RESERVED
		236..237	RGB RAINBOW COLOR MIXING: SPEED 1 (6 SEC.)
		238.239	RGB RAINBOW COLOR MIXING: SPEED 2 (15 SEC.)
		240..241	RGB RAINBOW COLOR MIXING: SPEED 3 (30 SEC.)
		242..243	RGB RAINBOW COLOR MIXING: SPEED 4 (45 SEC.)
		244..245	RGB RAINBOW COLOR MIXING: SPEED 5 (60 SEC.)
		246..247	RGB RAINBOW COLOR MIXING: SPEED 6 (120 SEC.)
		248..249	RGB RAINBOW COLOR MIXING: SPEED 7 (150 SEC.)
		250..255	RGB RAINBOW COLOR MIXING: SPEED 8 (180 SEC.)
10	**FUNCTIONS** (staying on desired option for 5 seconds)	0..14	No function
		15..24	SMOOTH OFF
		25..26	SMOOTH 1 (25 ms)
		27..28	SMOOTH 2 (50 ms)
		29..30	SMOOTH 3 (75 ms)
		31..32	SMOOTH 4 (100 ms) (DEFAULT)
		33..34	SMOOTH 5 (125 ms)
		35..36	SMOOTH 6 (150 ms)
		37..38	SMOOTH 7 (175 ms)
		39..40	SMOOTH 8 (200 ms)
		41..42	SMOOTH 9 (225 ms)
		43..44	SMOOTH 10 (250 ms)
		45..46	SMOOTH 11 (275 ms)
		47..48	SMOOTH 12 (300 ms)
		49..50	SMOOTH 13 (325 ms)
		51..52	SMOOTH 14 (350 ms)
		53..54	SMOOTH 15 (375 ms)
		55..56	SMOOTH 16 (400 ms)
		57..58	SMOOTH 17 (425 ms)
		59..60	SMOOTH 18 (450 ms)
		61..62	SMOOTH 19 (475 ms)
		63..64	SMOOTH 20 (500 ms)
		65..66	GAMMA CORRECTION ($co\Pi P$) QUADRATIC (DEFAULT)
		67..68	GAMMA CORRECTION ($co\Pi P$) LINEAR
		69..70	GAMMA CORRECTION ($co\Pi P$) S-CURVE
		71..72	GAMMA CORRECTION ($co\Pi P$) 2.2
		73..84	RESERVED
		85..104	OUTPUT FREQUENCY 610 Hz
		105	OUTPUT FREQUENCY 800 Hz
		106	OUTPUT FREQUENCY 1000 Hz (DEFAULT)
		107	OUTPUT FREQUENCY 1500 Hz
		108	OUTPUT FREQUENCY 2000 Hz
		109	OUTPUT FREQUENCY 2500 Hz
		110	OUTPUT FREQUENCY 3000 Hz
		111	OUTPUT FREQUENCY 3500 Hz
		112	OUTPUT FREQUENCY 4000 Hz
		113	OUTPUT FREQUENCY 4500 Hz
		114	OUTPUT FREQUENCY 5000 Hz

Dmx Personality 1: RGBA 10 chans		
#	**Name**	**Dmx Levels Ranges And Functions**
10	**FUNCTIONS** (staying on desired option for 5 seconds)	115..134 — RESERVED
		135..144 — BOOST ON (DEFAULT)
		145..154 — BOOST OFF
		155..164 — DISPLAY STAND-BY OFF (DEFAULT)
		165..172 — DISPLAY STAND-BY ON
		173..174 — DISPLAY STAND-BY FORCED ON
		175..176 — NO DMX ACTION – KEEP LAST DMX (DEFAULT)
		177..178 — NO DMX ACTION – Black-out
		179..180 — NO DMX ACTION – RGB @ 100%
		181..182 — NO DMX ACTION – CHPR (PROGRAM STEPS 01..16) WAIT and SPEED time selectable via NDMX>CHPR menu
		183..184 — NO DMX ACTION – CUSTOM RGBA + RGBA Fine + Dimmer + Dimmer Fine values selectable via NDMX>CUSTOM menu, via RDM Custom PID or via PROM mode
		185..194 — RESERVED
		195..204 — RESERVED
		205..214 — RESERVED
		215..224 — RESERVED
		225..234 — RESERVED
		235..244 — FAN STANDARD MODE
		245..252 — FAN SILENT MODE (DEFAULT)
		253..255 — SET DEFAULTS VALUES FOR FUNCTIONS: SMOOTH = 4 (100 ms) GAMMA CORRECTION ($coПP$) = QUADRATIC OUTPUT FREQUENCY = 800 Hz BOOST = ON DISPLAY STAND-BY = OFF NO DMX ACTION = KEEP LAST DMX FAN MODE = SILENT

"RGBA" mode (4 channels)

1   RED
2   GREEN
3   BLUE
4   AMBER

Dmx Personality 2: RGBA 4 chans			
#	**Name**	**Dmx Levels Ranges And Functions**	
1	**RED**	0..255	Proportional color from min to max
2	**GREEN**	0..255	Proportional color from min to max
3	**BLUE**	0..255	Proportional color from min to max
4	**AMBER**	0..255	Proportional color from min to max

6 CHANNELS mode

1   **RED**
2   **GREEN**
3   **BLUE**
4   **AMBER**
5   **SHUTTER**
6   **DIMMER**

Dmx Personality 3: RGBA 6 chans			
#	**Name**		**Dmx Levels Ranges And Functions**
1	**RED**	0..255	Proportional color from min to max
2	**GREEN**	0..255	Proportional color from min to max
3	**BLUE**	0..255	Proportional color from min to max
4	**AMBER**	0..255	Proportional color from min to max
5	**SHUTTER**	0..9	Black-out
		10..19	Open
		20..29	Black-out
		30..119	Strobe (from 3,27 s to 30 ms)
		120..149	Pulse up (from 42,6 s to 120 ms)
		150..179	Pulse down (from 42,6 s to 120 ms)
		180..204	Random strobe (R G B W CCT MACRO Dimmer channels active)
		205..229	Full independent random strobe (Dimmer channels active)
		230..235	Single flash 30 ms (R G B W CCT MACRO Dimmer channels active)
		236..255	Open
6	**DIMMER**	0..255	Proportional master dimmer From Off (lev. 0) to Full On (lev.255)

"FINE" mode (10 channels)

1   **RED**
2   **RED FINE**
3   **GREEN**
4   **GREEN FINE**
5   **BLUE**
6   **BLUE FINE**
7   **AMBER**
8   **AMBER FINE**
9   **DIMMER**
10   **DIMMER FINE**

Dmx Personality 4: RGBA FINE 10 chans			
#	**Name**		**Dmx Levels Ranges And Functions**
1	**RED**	0..255	Proportional color from min to max
2	**RED FINE**	0..255	Proportional color from min to max
3	**GREEN**	0..255	Proportional color from min to max
4	**GREEN FINE**	0..255	Proportional color from min to max
5	**BLUE**	0..255	Proportional color from min to max
6	**BLUE FINE**	0..255	Proportional color from min to max
7	**AMBER**	0..255	Proportional color from min to max
8	**AMBER FINE**	0..255	Proportional color from min to max
9	**DIMMER**	0..255	Proportional master dimmer From Off (lev. 0) to Full On (lev.255)
10	**DIMMER FINE**	0..255	Proportional master dimmer From Off (lev. 0) to Full On (lev.255)

"PROM" mode (11 channels)

1   **RED**
2   **RED FINE**
3   **GREEN**
4   **GREEN FINE**
5   **BLUE**
6   **BLUE FINE**
7   **AMBER**
8   **AMBER FINE**
9   **DIMMER**
10   **DIMMER FINE**
11   **PROM**

Dmx Personality 5: PROM 11 chans			
#	**Name**	**Dmx Levels Ranges And Functions**	
1	**RED**	0..255	Proportional color from min to max
2	**RED FINE**	0..255	Proportional color from min to max
3	**GREEN**	0..255	Proportional color from min to max
4	**GREEN FINE**	0..255	Proportional color from min to max
5	**BLUE**	0..255	Proportional color from min to max
6	**BLUE FINE**	0..255	Proportional color from min to max
7	**AMBER**	0..255	Proportional color from min to max
8	**AMBER FINE**	0..255	Proportional color from min to max
9	**DIMMER**	0..255	Proportional master dimmer From Off (lev. 0) to Full On (lev.255)
10	**DIMMER FINE**	0..255	Proportional master dimmer From Off (lev. 0) to Full On (lev.255)
11	**PROM** (staying on desired option for 5 seconds)	0..9	No Function
		10..19	NO DMX ACTION – KEEP LAST DMX (DEFAULT)
		20..29	NO DMX ACTION – BLACK OUT
		30..39	NO DMX ACTION – RGB @ 100%
		40..49	NO DMX ACTION – RGB @ 60%
		50..69	RESERVED
		70..79	NO DMX ACTION – CUSTOM flashing RED x2: confirm NO DMX ACTION CUSTOM
		80..89	NO DMX ACTION – CUSTOM 2 flashing GREEN x2: confirm NO DMX ACTION CUSTOM 2
		90..99	NO DMX ACTION – CUSTOM 3 flashing BLUE x2: confirm NO DMX ACTION CUSTOM 3
		100..109	NO DMX ACTION – CUSTOM 4 flashing WHITE x2: confirm NO DMX ACTION CUSTOM 4
		110..129	RESERVED
		130..149	VIEW CUSTOM (to show Custom Preset) RGBA, RGBA FINE, Dimmer, Dimmer Fine = 128 (default) Input DMX signal from channels 1 to 10 is ignored
		150..169	VIEW CUSTOM 2 (to show Custom 2 Preset) RGBA, RGBA FINE, Dimmer, Dimmer Fine = 128 (default) Input DMX signal from channels 1 to 10 is ignored
		170..189	VIEW CUSTOM 3 (to show Custom 3 Preset) RGBA, RGBA FINE, Dimmer, Dimmer Fine = 128 (default) Input DMX signal from channels 1 to 10 is ignored
		190..209	VIEW CUSTOM 4 (to show Custom 4 Preset) RGBA, RGBA FINE, Dimmer, Dimmer Fine = 128 (default) Input DMX signal from channels 1 to 10 is ignored
		210..229	RESERVED

Dmx Personality 5: PROM 11 chans			
#	*Name*		*Dmx Levels Ranges And Functions*
11	**PROM** (staying on desired option for 5 seconds)	230	CREATE AND STORE CUSTOM CREATE: set ch11 to value 0..9 and set desired RGBA+Dimmer levels STORE: set ch11 to value 230 and wait 5 seconds flashing RED x3: confirm CREATE AND STORE CUSTOM
		231	CREATE AND STORE CUSTOM 2 CREATE: set ch11 to value 0..9 and set desired RGBA+Dimmer levels STORE: set ch11 to value 231 and wait 5 seconds flashing GREEN x3: confirm CREATE AND STORE CUSTOM 2
		232	CREATE AND STORE CUSTOM 3 CREATE: set ch11 to value 0..9 and set desired RGBA+Dimmer levels STORE: set ch11 to value 232 and wait 5 seconds flashing BLUE x3: confirm CREATE AND STORE CUSTOM 3
		233	CREATE AND STORE CUSTOM 4 CREATE: set ch11 to value 0..9 and set desired RGBA+Dimmer levels STORE: set ch11 to value 233 and wait 5 seconds flashing WHITE x3: confirm CREATE AND STORE CUSTOM 4
		234..253	RESERVED
		254	SET DEFAULTS FOR PARAMETERS (only if ch1 to ch10 are set to value 0) NO DMX ACTION – KEEP LAST DMX CUSTOM PRESET - RGBW + Dimmer default values CUSTOM 2 PRESET - RGBW + Dimmer default values CUSTOM 3 PRESET - RGBW + Dimmer default values CUSTOM 4 PRESET - RGBW + Dimmer default values sequence R-G-B-W x2: confirm SET DEFAULTS
		255	No Function
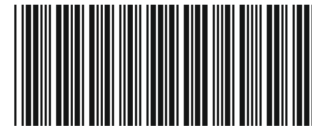
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Product and specifications subjects to change without notice.