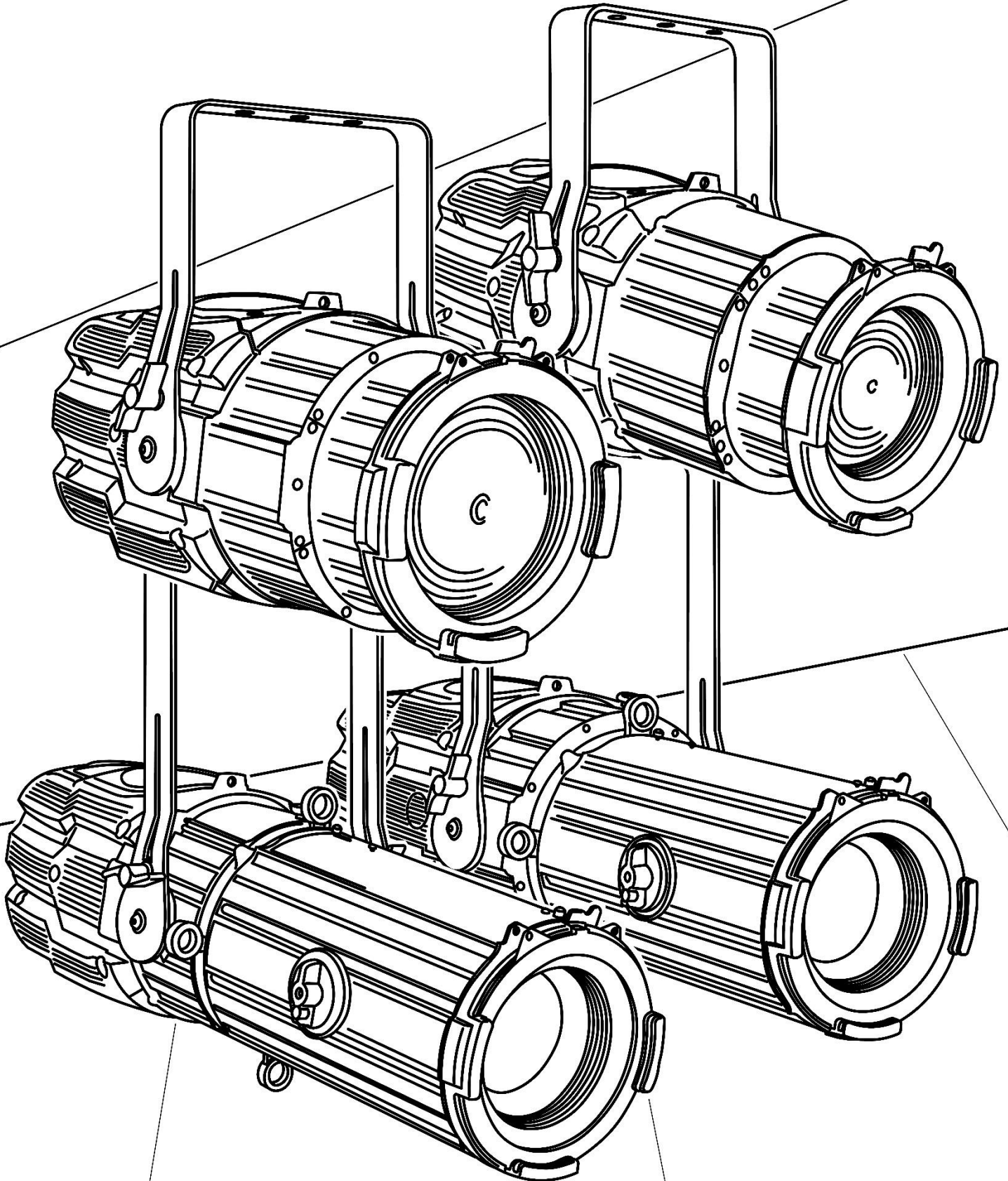



TENORE SOPRANO HQS

RDM-DMX MANUAL



Release	1.0	Code: 05171369	For more information	
Language	EN			

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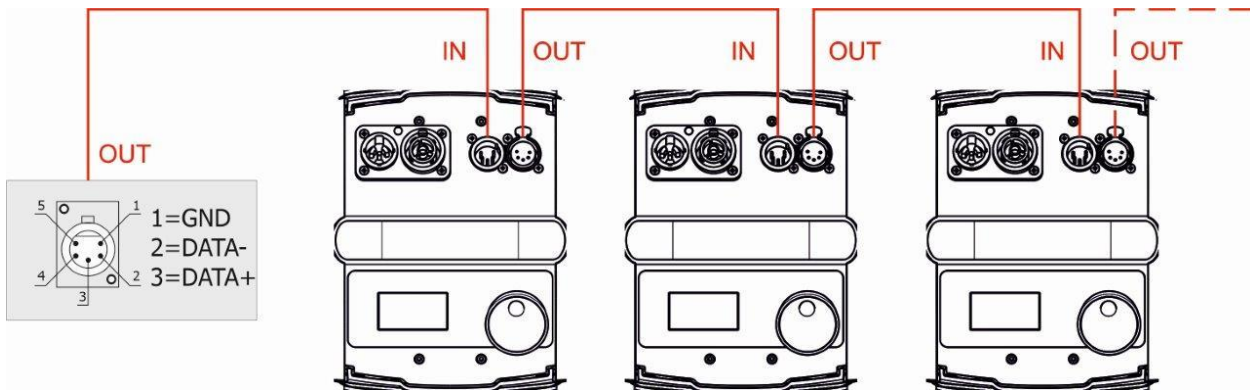
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1 DMX Signal Connection

- The unit operates using the digital USITT DMX512 signal.
- Connection between the light controller and the projector, or between projectors, must be carried out using a two-pair screened \varnothing 0.5 mm cable, and a XLR 5 or 3 pins connector.
- Ensure that the conductors do not touch each other. Do not connect the ground cable to the XLR chassis. The housing of the plug must be isolated.
- Connect the light controller to the DMX IN panel connector of the projector; to create a link to the next projector, simply connect the DMX OUT plug of the former to the DMX IN plug of the new fixture in line. Following this procedure, all the projectors will be cascade connected.



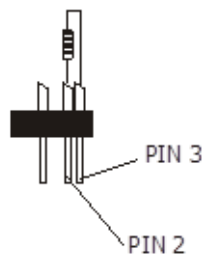
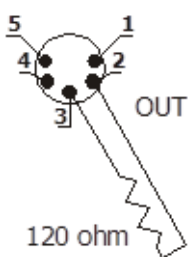
PS. If the display showing the DMX address flashes, then one of the following errors has occurred:

- DMX signal not present
- DMX reception problem

The use of a DMX terminator is recommended.

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

The DMX terminator must be plugged in into the last unit's DMX OUT panel connector of the DMX line.



Place a 120 Ω resistor between pin 2 and 3 of a male XLR connector;

Plug the resistor into the DMX OUT panel connector of the last unit connected to the DMX line.

1.1 DMX Modes

TENORE 3/5 HQS SOPRANO 3/5 HQS can be used in five different DMX modes:

- CCT (Default) -Correlated color Temperature
- Advanced - Correlated Color temperature plus Raw control for color channels RGBACL
- Basic – Correlated Color Temperature with priority on Gel Library and RGBACL color
- Expo - Dimmer 8 bit and Correlated Color Temperature priority on Gel Library
- CMY Emulation – Cyan, Magenta, Yellow and CTO emulation Mode.

e.g., when using the unit in “CCT” (Default) mode (10 DMX channels), set the following addresses on the light desk:

Projector 1	A001	
Projector 2	A011	<i>If you want to select the next projector, just add “10” to the former DMX address</i>
Projector 3	A021	
.....	A....	
Projector 6	A051	

1.2 Setting Up the DMX Address

- 1 Rotate the jog wheel until you reach the desired DMX address. The numbers on the display will start flashing (new DMX address hasn't yet been set).
- 2 Push to confirm your selection. The numbers on the display will stop flashing; the projector is now set to the new DMX address.

2 RDM Functions

By using a RDM controller, it is possible to read/set DMX addresses, DMX modes and other parameters.

TENORE 3/5 HQS - SOPRANO 3/5 HQS accepts the following RDM commands:

RDM version: ANSI E1.20 –2010

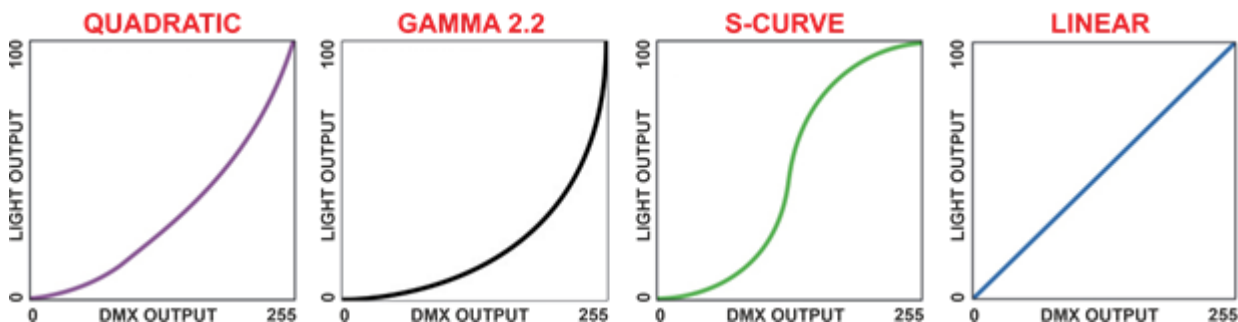
RDM DEVICE MODEL ID			
0710:0D8Axxxx (Tenore/Soprano 3 HQS)			
0710:0D8Dxxxx (Tenore/Soprano 5 HQS)			
RDM PID DESCRIPTION	RDM PID VALUE	GET	SET
Category - Network Management			
DISC_UNIQUE_BRANCH	0x0001		
DISC_MUTE	0x0002		
DISC_UN_MUTE	0x0003		
Category - Status Collection			
STATUS_MESSAGES	0x0030	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 - 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 - 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 - Custom PID			
NO DMX ACTION	0x9002	X	X
FANS SETTING	0x903A	X	X
DISPLAY STANDBY	0x903C	X	X
CROSSFADE CURVE	0x903D	X	X

FURTHER RDM MESSAGES:

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

“GAMMA CORR.” graphics:

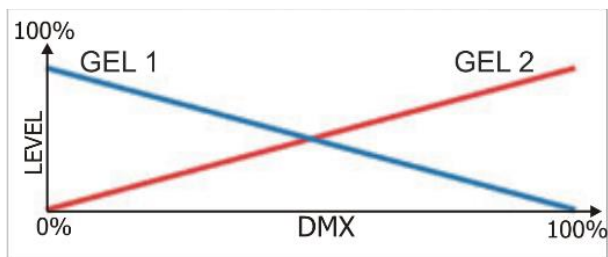
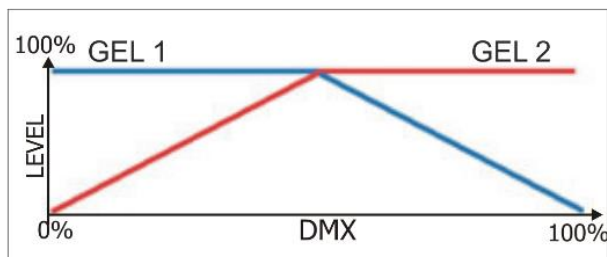


OUTPUT RESPONSE TIME	OUTPUT_RESPONSE_TIME_DESCRIPTION
0	SMOOTH OFF
1	SMOOTH 1 (25 ms)
2	SMOOTH 2 (50 ms)
3	SMOOTH 3 (75 ms)
4	SMOOTH 4 (100 ms) (default)
5	SMOOTH 5 (125 ms)
6	SMOOTH 6 (150 ms)
7	SMOOTH 7 (175 ms)
8	SMOOTH 8 (200 ms)
9	SMOOTH 9 (225 ms)
10	SMOOTH 10 (250 ms)
11	SMOOTH 11 (275 ms)
12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

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
FANS SETTING	0: Fan mode STANDARD 1: Fan mode SILENT (DEFAULT) 2: Fan mode ULTRA-SILENT 3: Fan mode AUTO
NO DMX ACTION	1: KEEP LAST (DEFAULT) 2: BLACKOUT 3: SINGLE CUE 4: PROGRAM01-16
DISPLAY_STANDBY	0 = DISABLED 1 = ENABLED (DEFAULT) 2 = FORCED ENABLED
CROSSFADE CURVE	0: INTERMEDIATE (DEFAULT) 1: TRANSITION

"CROSSFADE" GRAPHICS:
INTERMEDIATE

TRANSITION

RDM STATUS MESSAGE IDs:

Status Message ID	Data Value 1	Data Value 2	Status ID Description
0x8008			ERROR SUPPLY VOLTAGE TOO LOW
0x8009			ERROR SUPPLY VOLTAGE TOO HIGH
0x801F			ERROR TEMPERATURE LED MODULE
0x8020			ERROR TEMPERATURE LED DRIVER
0x8021			ERROR TEMPERATURE MICRO

3 Updating the Firmware

In order to update the unit to the latest firmware release, you will need:

- DTS firmware uploader dongle (code 03.LA.206).
- “DTS Firmware Upgrade Utility” program (v.2.02 or later) installed on PC (Windows OS).
- Latest firmware release available for the unit.

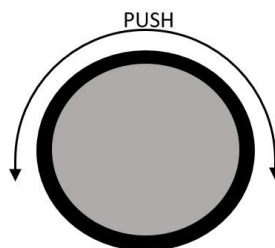
Updating to the latest firmware release:

To perform the update, please follow the procedure as described below:

- 1 Connect the DTS Firmware Uploader Dongle to a spare USB port on the PC.
- 2 Connect the unit’s DMX IN to the DTS Firmware Uploader Dongle’s DMX OUT with a standard DMX cable and turn on the fixture.
- 3 Send the new firmware release into the unit by using “DTS Firmware Upgrade Utility” program.
During software upgrade the leds will blink.
At the end of the procedure, the unit will reboot.

For more information, please refer to an authorized DTS service center.

4 Display Functions



The display panel shows all the available control menus.





You can access the menus by clicking the jog wheel.

Turning the jog wheel performs cycling through the menus.

By selecting the available functions on these menus, you will be able to change the fixture's settings and behavior.

Beware that changing these settings may vary the operating functions of the unit so that it may not respond correctly to the signal given to it. Carefully read the instructions and tables below before carrying out any variations or selections.

4.1 Jog Wheel

 PUSH LongPress>1s	<ul style="list-style-type: none"> • To access the control menus on the display panel. • To return to the previous level in the menu structure without making a change. • To exit the menus.
 PUSH Short Press<1S	<ul style="list-style-type: none"> • To select any required menu. • To confirm any changes.
 ROTATE Cw/Ccw	<ul style="list-style-type: none"> • To navigate the menu's structure. • To change or scroll between any values.
 PUSH Long Press>3s	<ul style="list-style-type: none"> • To return to DMX Address visualization from any menu, without making a change.

FIRMWARE RELEASE	1.00
RDM Device Model ID	0710:0D8Axxxx (Tenore/Soprano 3 HQS) 0710:0D8Dxxxx (Tenore/Soprano 5 HQS)
DMX Personality IDs	0x01 "CCT" 0x02 "ADVANCED" 0x03 "BASIC" 0x04 "EXPO" 0x05 "CMY EMULATION"

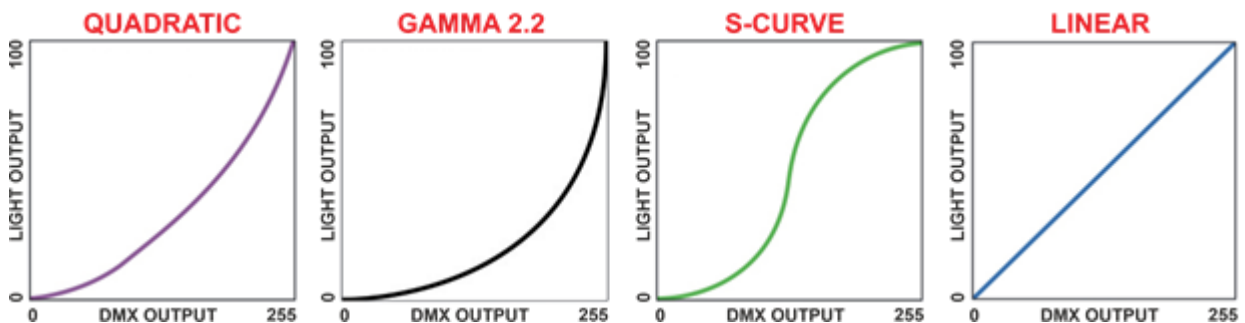
MAIN MENU	LEVEL 1	LEVEL 2	LEVEL 3	FUNCTION
DISPLAY	FLIP	DISABLED / ENABLED / BACK		Reverses display's reading depending on the mounting position. Default = DISABLED
	STANDBY	DISABLED / ENABLED / FORCED ENABLED / BACK		DISABLED: Display stand-by disabled (Default).- ENABLED: Display goes OFF after 10 seconds. -FORCED ENABLED: Display forced OFF even if control signal is missing or error messages are shown.
	BACK			Back to Main Menu
MODE (DMX personalities)	CCT 10 channels		Allows to select CCT mode (10 DMX channels).	Default. Dimmer 16bit with Correlated colour Temperature (1800K to 10000K) and green saturation point selection. Linear cross between gel filters libraries. Mix criteria 1) CCT color is generated 2) The result of step 1 is used as a source for gel filters channels
	ADVANCED 17 channels		Allows to select ADVANCED mode (17 DMX channels).	Same as CCT Mode plus Raw control for RGBACL color channels (Red,Green,Blue,Amber,Cyan and Lime). Linear cross between CCT, Gel filters and RGBACL colours. Mix criteria 1) CCT color is generated 2) The result of step 1 is used as a source for gel filters channels
	BASIC 12 channels		Allows to select BASIC mode (12 DMX channels).	Dimmer 16bit with Correlated colour Temperature (1800K to 10000K) priority on Gel library and RGBACL colours Mix criteria 1) If the CCT channel is active, it is used to set the output 2) Otherwise, if the GEL LIBRARY channel is active, it is used to set the output (Source 3200K - Tungsten emulation is applied if enabled) 3) Otherwise, the RGBACL channels are used to set the output.
	EXPO 5 channels		Allows to select EXPO mode (5 DMX channels).	Dimmer 8bit with Correlated colour Temperature (1800K to 10000K) priority on gel library selection. Mix criteria 1) If the CCT channel is active, it is used to set the output 2) Otherwise, if the GEL LIBRARY channel is active, it is used to set the output
	CMY EMULATION 12 channels		Allows to select CMY EMULATION mode (12 DMX channels).	Cyan,Magenta,Yellow and CTO emulation Mode with Dimmer 16bit, Green saturation point selection and linear cross between gel filters libraries. Mix criteria

				1) CTO color is generated (from 0=7000 K to 255=2700K) 2) The result of step 1 is used as a source for gel filters channels (5, 6 and 7) and CMY filter channels (8, 9 and 10)
	BACK			Back to Main Menu
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.	QUADRATIC		Allows to set quadratic current output for LED (Default) . See "Gamma Correction" graphics for details.
		GAMMA 2.2		Allows to set gamma curve 2.2 current output. See "Gamma Correction" graphics for details.
		S-CURVE		Allows to set S-curve to emulates light intensity characteristics of the tungsten halogen lamps. See "Gamma Correction" graphics for details.
		LINEAR		Allows to set linear light output. See "Gamma Correction" graphics for details.
		BACK		Back to LED Menu
	FREQUENCY	610 - 5000 HZ / BACK		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
	TUNGSTEN EMUL.	DISABLED / ENABLED / BACK		Allows to enable Tungsten Emulation. Default = Disabled When Tungsten Emulation is enabled and CCT channel 2700k<CCT>4200K, as you lower the output, the luminaire will mimic a 1000w tungsten lamp. A Variation in the dimmer intensity will affect the colour temperature so as a dedicated gamma correction and smooth values are applied.
	CROSSFADE	INTERMEDIATE		Allows to set Crossfade "Intermediate" for 'GELS X-FADE' channel (Default) . See "Crossfade" Graphics for details
		TRANSITION		Allows to set Crossfade "Transition" for 'GELS X-FADE' channel See "Crossfade" Graphics for details
	BACK			Back to Led Menu
NO DMX ACTION	Allows to set the desired unit's behavior in case DMX signal is missing or not available			
	KEEP LAST DMX			Keep last valid DMX signal (Default).
	BLACK OUT			BLACK OUT
		HOLD	1...3600 sec	Hold time keeping last valid DMX signal before to go in black out. Default=1s
	SINGLE CUE			Single Cue with values selectable by user in "Manual Control > Single Cue" menu.
PROGRAM 01-16			16 pre-programmed steps with Parameters, Speed Time, and Wait Time selectable by user in "Manual Control > PROGRAM 01-16" menu.	

MANUAL CONTROL	Manual Control forces the fixture to Dmx Personality 3 - BASIC (12ch). DMX input signal is ignored. If MASTER=DISABLED no parameters are transmitted via DMX Line. If MASTER=ENABLED and no DMX is received, the fixture will transmit parameters on DMX line to the "SLAVE" units. In case of MASTER enabled when DMX line is busy, error message "DMX LINE BUSY" will appear on display. When the Fixture is in MANUAL CONTROL>SINGLE CUE or MANUAL CONTROL>PRORAM 01-16, In case of a power cycling, the fixture do restart in MANUAL CONTROL>SINGLE CUE / MANUAL CONTROL>PRORAM 01-16			
	SINGLE CUE Dmx Pers 3: BASIC	Single Cue with parameters selectable by user		
		SHUTT	0..255	Default = 015
		DIM MSB	0..255	Default = 255
		DIM LSB	0..255	Default = 255
		CCT	0..255	Default = 000
		GEL LIBRARY	0..255	Default = 000
		RED	0..255	Default = 255
		GREEN	0..255	Default = 255
		BLUE	0..255	Default = 255
		AMBER	0..255	Default = 255
		CYAN	0..255	Default = 255
LIME	0..255	Default = 255		
PROGRAM 01..16 Dmx Pers 3: BASIC	16 pre-programmed steps with parameters, speed and wait time selectable by user.			
	ACTIVE STEPS	01..16	Selecting how many Steps will run on the Program. Min 1 – Max 16. Default =16	
	STEP SELECTION 01..16	SHUTT DIM MSB DIM LSB CCT GEL LIB RED GREEN BLUE AMBER CYAN LIME	Step 01: Default =015 Default =255 Default =255 Default =000 Default =000 Default =255 Default =000 Default =000 Default =000 Default =000 Default =000 Default =000	
	SPEED	1..3600	Step speed time Default =10s	
	WAIT	1..3600	Step wait time Default =10s	
	BACK		Back to Manual Control Menu	
MASTER	DISABLE / ENABLED / BACK	SURE (YES / NO) .. DMX LINE BUSY	If MASTER=ENABLED and no DMX is received, the fixture will transmit parameters on DMX line for "SLAVE" units. In case of MASTER enabled when DMX line is busy, error message "DMX LINE BUSY" will appear on display. Default=Disabled	
ESC			Exit from Manual control	
SLAVE	Slave mode forces the fixture to Dmx Personality 3 (BASIC -12ch) and DMX ADDR=1. When Slave mode is selected, In case of a power cycling the fixture do restart in SLAVE mode.			
	SURE	YES	SLAVE MODE ON	Slave Mode active; fixture forced to DMX personality "Basic" and DMX address 001.
			ESC	Exit from Slave Mode
	NO		Back to main menu	

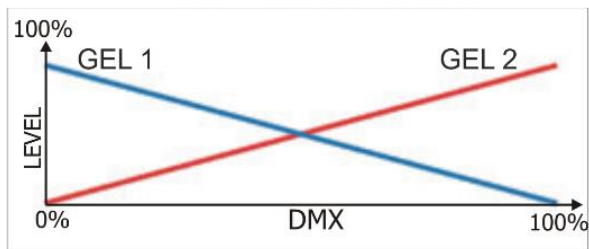
FAN	Standard / Silent / Ultra Silent: Fan Speed is constant. Auto: Variable fans speed depending on detected temperature for Led module and led driver.			
	STANDARD / SILENT / ULTRA SILENT / AUTO / BACK			<p>Tenore / Soprano 3 HQS: Fan Standard: 24dBA @ 1m (100% power) Fan Silent: 23dBA @ 1m (100% power) Fan Ultra Silent: 22dBA @ 1m (91% power)</p> <p>Tenore / Soprano 5 HQS: Fan Standard: 34dBA @ 1m (100% power) Fan Silent: 29dBA @ 1m (87% power) Fan Ultra Silent: 26dBA @ 1m (70% power)</p> <p>Tenore / Soprano HQS all models: Auto: (100% power). $t < 40^{\circ}\text{C}$: fans OFF. $40^{\circ}\text{C} < t < 75^{\circ}\text{C}$: fans from min to max speed.</p> <p>Default=Silent</p>
DEFAULT SET	SURE?	YES		To restore Factory Settings.
		NO		Exit without restoring Factory Settings.
SYSTEM INFO	TEMPERATURE	LED 25,0 MICRO 25,0 DRV-1 25.0 DRV-2 25,0		LED: LED temperature monitoring. DRV-1: output 1/3 of LED Driver board temperature monitoring. DRV-2: output 4/6 of LED Driver board temperature monitoring. MICRO: Micro controller temperature monitoring.
	SOFTWARE	V.1.00		Firmware release
	TIME COUNTERS	RED 00001 GREEN 00001 BLUE 00001 AMBER 00001 CYAN 00001 LIME 00001 UNIT LIFE 00001 Hrs		Unit and LED channels life time.
	RDM INFO	RDM DEVICE ID: 0710:0D8Axxxx / 0710:0D8Dxxxx		RDM ids

“GAMMA CORR.” graphics:

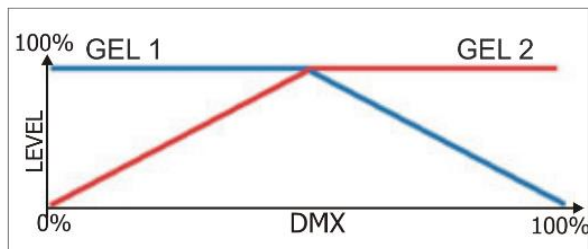


“CROSSFADE” GRAPHICS:

INTERMEDIATE



TRANSITION



5 Error Messages

ERROR SHOWN ON DISPLAY	APPEARS WHEN
DMX NOT PRESENT	DMX signal missing or DMX cable not connected
TEMP. LED MOD.	LED module temperature detected under -20°C or over 80°C. Unit immediately goes in black-out.
TEMP. DRV	Output from 1 to 6 of LED Driver PCB temperature detected under -20°C or over 90°C. Unit immediately goes in black-out.
TEMP. MICRO	Micro controller on LED Driver PCB temperature detected under -20°C or over 75°C. Unit immediately goes in black-out.
SUPPLY VOLTAGE TOO LOW	PCBs input voltage <46,5Vdc.
SUPPLY VOLTAGE TOO HIGH	PCBs input voltage >49,5Vdc.
LED CALIBRATION DATA NOT PRESENT	Led module not calibrated, Led calibration data corrupted or incomplete.
LED CALIBRATION READ ERROR	
LED CALIBRATION INCOMPLETE DATA	

6 DMX Protocol

6.1 DMX Personality 1

DMX Personality 1: "CCT" mode (10 DMX channels) (default)

1. SHUTTER
2. DIMMER Msb
3. DIMMER Lsb
4. CCT (1.800K – 10.000K)
5. GREEN SATURATION
6. GEL LIBRARY 1
7. GELS X-FADE
8. GEL LIBRARY 2
9. GEL FILTER DESATURATION
10. FIXTURE CONTROL

1		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	
190-255	Open	

2		DIMMER Msb
3		DIMMER Lsb

4		CCT
DMX value	Function	
000-255	Linear CCT from 1800K to 10000K Relevant CCT values (GREEN SATURATION channel 5 @ 128) 1800K = 000 2700K = 079 3000K = 092 3200K = 100 4000K = 128 5000K = 156 5600K = 171 6000K = 180 6500K = 191 7000K = 202 8000K = 221 9000K = 239 10000K = 255	

5		GREEN SATURATION
DMX value	Function	
000-127	From full minus green to neutral	
128	Neutral (default)	
129-255	From neutral to full plus green	

6		GEL LIBRARY 1
DMX value	Function	
000-009	No Function	
010-255	See "Gel Library Channel Map" table	

7		GELS X-FADE
DMX value	Function	
000-255	Fade from gel 1 to gel 2 0 = 100% GEL LIBRARY 1, 0% GEL LIBRARY 2 128 = 50% GEL LIBRARY 1, 50% GEL LIBRARY 2 255 = 0% GEL LIBRARY 1, 100% GEL LIBRARY 2	

8		GEL LIBRARY 2
DMX value	Function	
000-009	No Function	
010-255	See "Gel Library Channel Map" table	

9		GEL FILTER DESATURATION
DMX value	Function	
000-255	0 = Gel Filter fully saturated – 255 = Gel Filter fully desaturated	

10		FIXTURE CONTROL
DMX value	Function	
000-255	See "Fixture Control" table	

6.2 DMX Personality 2

DMX Personality 2: "ADVANCED" mode (17 DMX channels)

- 1 SHUTTER
- 2 DIMMER msb
- 3 DIMMER lsb
- 4 CCT (1.800K – 10.000K)
- 5 GREEN SATURATION
- 6 GEL LIBRARY 1
- 7 GELS X-FADE
- 8 GEL LIBRARY 2
- 9 GEL FILTER DESATURATION
- 10 CCT/GEL FADE TO RGBACL
- 11 RED
- 12 GREEN
- 13 BLUE
- 14 AMBER
- 15 CYAN
- 16 LIME
- 17 FIXTURE CONTROL

1		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	
190-255	Open	

2		DIMMER Msb
3		DIMMER Lsb

4		CCT
DMX value	Function	

000-255	Linear CCT from 1800K to 10000K Relevant CCT values (GREEN SATURATION channel 5 @ 128) 1800K = 000 2700K = 079 3000K = 092 3200K = 100 4000K = 128 5000K = 156 5600K = 171 6000K = 180 6500K = 191 7000K = 202 8000K = 221 9000K = 239 10000K = 255
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5 GREEN SATURATION	
DMX value	Function
000-127	From full minus green to neutral
128	Neutral (default)
129-255	From neutral to full plus green

6 GEL LIBRARY 1	
DMX value	Function
000-009	No Function
010-255	See "Gel Library Channel Map" table

7 GELS X-FADE	
DMX value	Function
000-255	Fade from gel 1 to gel 2 0 = 100% GEL LIBRARY 1, 0% GEL LIBRARY 2 128 = 50% GEL LIBRARY 1, 50% GEL LIBRARY 2 255 = 0% GEL LIBRARY 1, 100% GEL LIBRARY 2

8 GEL LIBRARY 2	
DMX value	Function
000-009	No Function
010-255	See "Gel Library Channel Map" table

9 GEL FILTER DESATURATION	
DMX value	Function
000-255	0 = Gel Filter fully saturated – 255 = Gel Filter fully desaturated

10 CCT/GEL FADE TO RGBACL	
DMX value	Function
000-255	Crossfade from CCT/GEL to RGBACL 0 = 100% CCT/GEL, 0% RGBACL 255 = 0% CCT/GEL, 100% RGBACL

11 RED	
DMX value	Function
000-255	Proportional color from min to max

12 GREEN	
DMX value	Function
000-255	Proportional color from min to max

13 BLUE	
DMX value	Function
000-255	Proportional color from min to max

14	AMBER
DMX value	Function
000-255	Proportional color from min to max

15	CYAN
DMX value	Function
000-255	Proportional color from min to max

16	LIME
DMX value	Function
000-255	Proportional color from min to max

17	FIXTURE CONTROL
DMX value	Function
000-255	See "Fixture Control" table

6.3 DMX Personality 3

DMX Personality 3: "BASIC" mode (12 DMX channels)

- 1 SHUTTER
- 2 DIMMER Msb
- 3 DIMMER Lsb
- 4 CCT (1.800K – 10.000K) *(priority on GEL LIBRARY and RGBACL channels)*
- 5 GEL LIBRARY *(priority on RGBACL channels)*
- 6 RED
- 7 GREEN
- 8 BLUE
- 9 AMBER
- 10 CYAN
- 11 LIME
- 12 FIXTURE CONTROL

1	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
190-255	Open

2	DIMMER Msb
3	DIMMER Lsb

4	CCT (priority on GEL LIBRARY and RGBACL channels)
DMX value	Function
000-009	No Function
010-255	Linear CCT from 1800K to 10000K Relevant CCT values 1800K = 010 2700K = 079 3000K = 092 3200K = 100 4000K = 128 5000K = 156 5600K = 171 6000K = 180 6500K = 191



	7000K = 201 8000K = 221 9000K = 239 10000K = 255
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5	GEL LIBRARY (priority on RGBACL channels)
DMX value	Function
000-009	No Function
010-255	See "Gel Library Channel Map" table

6	RED
DMX value	Function
000-255	Proportional color from min to max

7	GREEN
DMX value	Function
000-255	Proportional color from min to max

8	BLUE
DMX value	Function
000-255	Proportional color from min to max

9	AMBER
DMX value	Function
000-255	Proportional color from min to max

10	CYAN
DMX value	Function
000-255	Proportional color from min to max

11	LIME
DMX value	Function
000-255	Proportional color from min to max

12	FIXTURE CONTROL
DMX value	Function
000-255	See "Fixture Control" table

6.4 DMX Personality 4

DMX Personality 4: “EXPO” mode (5 DMX channels)

1. SHUTTER
2. DIMMER
3. CCT (1800K – 10000K) (*priority on GEL LIBRARY*)
4. GEL LIBRARY
5. FIXTURE CONTROL

1		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	
190-255	Open	

2		DIMMER
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3		CCT (priority on GEL LIBRARY)
DMX value	Function	
000-009	No Function	
010-255	Linear CCT from 1800K to 10000K Relevant CCT values 1800K = 010 2700K = 079 3000K = 092 3200K = 100 4000K = 128 5000K = 156 5600K = 171 6000K = 180 6500K = 191 7000K = 201 8000K = 221 9000K = 239 10000K = 255	

4		GEL LIBRARY
DMX value	Function	
000-009	No Function	
010-255	See “Gel Library Channel Map” table	

5		FIXTURE CONTROL
DMX value	Function	
000-255	See “Fixture Control” table	

6.5 DMX Personality 5

DMX Personality 5: “CMY EMULATION” mode (12 DMX channels)

- The luminaire will behave as if its light source is a pure white 7000 K.
- *CMY / CTO channels variations will affect Gel Library 1 and 2 channels.*

- 1 SHUTTER
- 2 DIMMER Msb
- 3 DIMMER Lsb
- 4 GREEN SATURATION
- 5 GEL LIBRARY 1
- 6 GELS X-FADE
- 7 GEL LIBRARY 2
- 8 CYAN
- 9 MAGENTA
- 10 YELLOW
- 11 CTO
- 12 FIXTURE CONTROL

1		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	
190-255	Open	

2		DIMMER Msb
3		DIMMER Lsb

4		GREEN SATURATION
DMX value	Function	
000-127	From full minus green to neutral	
128	Neutral (Default)	
129-255	From neutral to full plus green	

5		GEL LIBRARY 1
DMX value	Function	
000-009	No Function	
010-255	See “Gel Library Channel Map” table	

6		GELS X-FADE
DMX value	Function	
000-255	Crossfade between GEL LIBRARY 1 and GEL LIBRARY 2 0 = 100% GEL LIBRARY 1, 0% GEL LIBRARY 2 128 = 50% GEL LIBRARY 1, 50% GEL LIBRARY 2 255 = 0% GEL LIBRARY 1, 100% GEL LIBRARY 2	

7		GEL LIBRARY 2
DMX value	Function	
000-009	No function	
010-255	See “Gel Library Channel Map” table	

8		CYAN
DMX value	Function	
000-255	Proportional color from min to max	



9	MAGENTA
DMX value	Function
000-255	Proportional color from min to max

10	YELLOW
DMX value	Function
000-255	Proportional color from min to max

11	CTO
DMX value	Function
000-255	Linear CTO from min to max 0 = 7000K 255 = 2700K

12	FIXTURE CONTROL
DMX value	Function
000-255	See "Fixture Control" table



CCT ADVANCED BASIC EXPO CMY EMULATION	GEL LIBRARY 1 - GEL LIBRARY 2 CHANNEL MAP
DMX value	Function
000-009	No Function - Clear
010-011	M001: L 002 Rose Pink
012-013	M002: L 007 Pale Yellow
014-015	M003: L 015 Deep Straw
016-017	M004: L 019 fire
018-019	M005: L 020 medium amber
020-021	M006: L 021 Gold Amber
022-023	M007: L 022 Dark Amber
024-025	M008: L 025 sunset red
026-027	M009: L 046 Dark Magenta
028-029	M010: L 049 Medium Purple
030-031	M011: L 058 Lavender
032-033	M012: L 068 Sky Blue
034-035	M013: L 079 Just Blue
036-037	M014: L 085 Deeper Blue
038-039	M015: L 088 Lime Green
040-041	M016: L 089 moss green
042-043	M017: L 100 Spring Yellow
044-045	M018: L 101 yellow
046-047	M019: L 102 light amber
048-049	M020: L 103 Straw
050-051	M021: L 104 DEEP AMBER
052-053	M022: L 105 Orange
054-055	M023: L 106 primary red
056-057	M024: L 108 English rose
058-059	M025: L 111 dark pink
060-061	M026: L 113 magenta
062-063	M027: L 115 peacock blue
064-065	M028: L 117 Steel Blue
066-067	M029: L 118 LIGHT BLU
068-069	M030: L 119 dark blue
070-071	M031: L 121 lee green
072-073	M032: L 122 fern green
074-075	M033: L 124 dark green
076-077	M034: L 126 mauve
078-079	M035: L 132 Medium Blue
080-081	M036: L 136 Pale Lavender
082-083	M037: L 137 Special lavender
084-085	M038: L 138 Pale Green
086-087	M039: L 139 primary green
088-089	M040: L 142 Pale Violet
090-091	M041: L 147 apricot
092-093	M042: L 151 Gold Tint
094-095	M043: L 152 pale gold
096-097	M044: L 154 pale rose
098-099	M045: L 156 Chocolate
100-101	M046: L 164 flame red
102-103	M047: L 170 deep lavender
104-105	M048: L 174 dark steel blue
106-107	M049: L 176 loving amber
108-109	M050: L 179 chrome orange
110-111	M051: L 180 dark lavender
112-113	M052: L 181 congo blue
114-115	M053: L 182 Light Red
116-117	M054: L 194 Surprise Pink

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

CCT ADVANCED BASIC EXPO CMY EMULATION	FUNCTION CONTROL TABLE
DMX value	Function
000-009	No effect
010-024	SMOOTH DIMMING OFF
025-026	SMOOTH DIMMING 1
027-028	SMOOTH DIMMING 2
029-030	SMOOTH DIMMING 3
031-032	SMOOTH DIMMING 4 (Default)
033-034	SMOOTH DIMMING 5
035-036	SMOOTH DIMMING 6
037-038	SMOOTH DIMMING 7
039-040	SMOOTH DIMMING 8
041-042	SMOOTH DIMMING 9
043-044	SMOOTH DIMMING 10
045-046	SMOOTH DIMMING 11
047-048	SMOOTH DIMMING 12
049-050	SMOOTH DIMMING 13
051-052	SMOOTH DIMMING 14
053-054	SMOOTH DIMMING 15
055-056	SMOOTH DIMMING 16
057-058	SMOOTH DIMMING 17
059-060	SMOOTH DIMMING 18
061-062	SMOOTH DIMMING 19
063-064	SMOOTH DIMMING 20
065-066	GAMMA CORRECTION QUADRATIC (Default)
067-068	GAMMA CORRECTION LINEAR
069-070	GAMMA CORRECTION S-CURVE
071-072	GAMMA CORRECTION 2.2
073-074	reserved
075-076	TUNGSTEN EMULATION DISABLED (Default)
077-078	TUNGSTEN EMULATION ENABLED
079-080	CROSSFADE CURVE INTERMEDIATE (Default)
081-082	CROSSFADE CURVE TRANSITION
083-084	reserved
085-104	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
115-154	reserved
155-156	DISPLAY STANDBY DISABLED
157-158	DISPLAY STANDBY ENABLED (Default)
159-160	DISPLAY STANDBY FORCED ENABLED
161-174	reserved
175-176	NO DMX ACTION – KEEP LAST DMX (Default)
177-178	NO DMX ACTION – BLACK OUT
179-180	reserved
181-182	NO DMX ACTION – PROGRAM 01-16 values selectable via "MANUAL CONTROL> PROGRAM 01-16 menu
183-184	NO DMX ACTION – SINGLE CUE

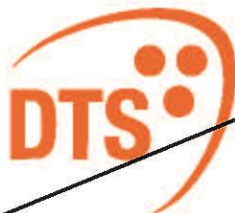
CCT ADVANCED BASIC EXPO CMY EMULATION	FUNCTION CONTROL TABLE
DMX value	Function
185-234	reserved
235-236	FAN MODE SILENT (Default)
237-238	FAN MODE STANDARD
239-240	FAN MODE ULTRA SILENT
241-242	reserved
243-244	FAN MODE AUTO
245-252	reserved
253-255	SET FUNCTION TO DEFAULT: -SMOOTH DIMMING = 4 -GAMMA = QUADRATIC -FREQUENCY = 1000 Hz -DISPLAY STANDBY = ENABLED -NO DMX ACTION = KEEP LAST DMX -FAN MODE = SILENT -TUNGSTEN EMULATION = DISABLED -CROSSFADE CURVE = INTERMEDIATE



NOTES

ISO 9001:2015

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



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