# SCENA LED 200 CT







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#### 1- SYMBOLS

Graphic symbols used on this manual:



THIS SYMBOL INDICATES A HOT SURFACE



THIS SYMBOL INDICATES ELECTRIC SHOCK RISK



THIS SYMBOL INDICATES GENERAL RISK

t<sub>a</sub> 40°C

THIS SYMBOL INDICATES THE MAXIMUM OPERATING AMBIENT TEMPERATURE



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



THIS SYMBOL INDICATES PHOTOBIOLOGICAL SAFETY



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

## **2- GENERAL WARNING**

Read the instruction contained in this user manual carefully, as they give important information regarding safety during installation, use and maintenance.

The unit is not for residential 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.

## **4- TECHNICAL FEATURES**

#### **DTS Product code:**

03.TS051.46.F SCENA LED 200 FR CT

## **LED Technology**

Tunable WHITE LED 2700K ÷ 6500K CRI>90

## **Optical group**

Ø 150 mm Fresnel lens 6,5° - 70° linear zoom

## Control

DMX 512 / RDM 7 DMX channels (Default) or 2 DMX channels 4-digit 7-segment LED display + 4 soft keys

## **Power supply**

Full-range 100-240Vac 50-60 Hz Consumption: 200W Max

## **Connections**

Power supply: PowerCON TRUE1 In&Out panel connectors

DMX: XLR 5 pins In&Out panel connectors

## **Operating ambient temperature**

-10° / 40°

## Weight

8,1 Kg

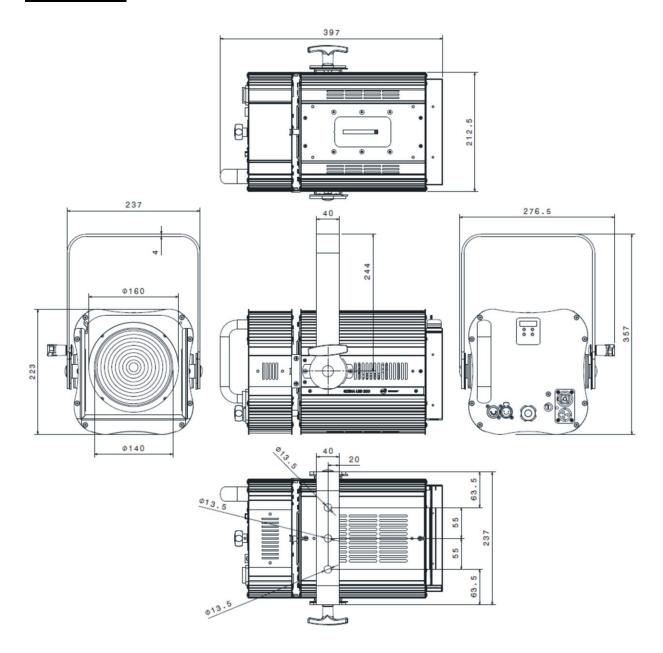
#### **Certifications**

 $\epsilon$ 

2014/35/UE; 2014/30/UE IEC 62471; IEC 695-2-1

EN 60598-1; EN 62471; EN 61347-2-13 EN 60598-2-17; EN 55015 EMC; EN 61347-1

## **DIMENSIONS**



## **5- ACCESSORIES**

## As standard

- 1 x PowerCON TRUE1 female cable connector (DTS Code 0520P066)
- 1 x XLR 5 pins female cable connector (DTS Code 0508B147)
- 1 x XLR 5 pins male cable connector (DTS Code 0508B148)
- 1 x Filterframe black finishing (already installed on the projector) (DTS Code 02M093278.46)
- 1 x User's Manual

## **Optional (on request)**

- Barndoor black finishing (DTS Code 03.TBD02)
- "C" Clamp G60 (Max. Load 50 Kg) (DTS Code 0521A004)
- Safety cable 3 mm x 60 cm, max capacity load 60 Kg (DTS Code 0521A010)

## 6- IMPORTANT SAFETY INFORMATION

## 6.1 Fire prevention:

Replace any blown or damaged fuses only with those of identical value: T 3.15A 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 200 CT unit. Use only AC supplies 100-240V 50-60 Hz.

SCENA LED 200 CT 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 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<sub>a</sub> 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.

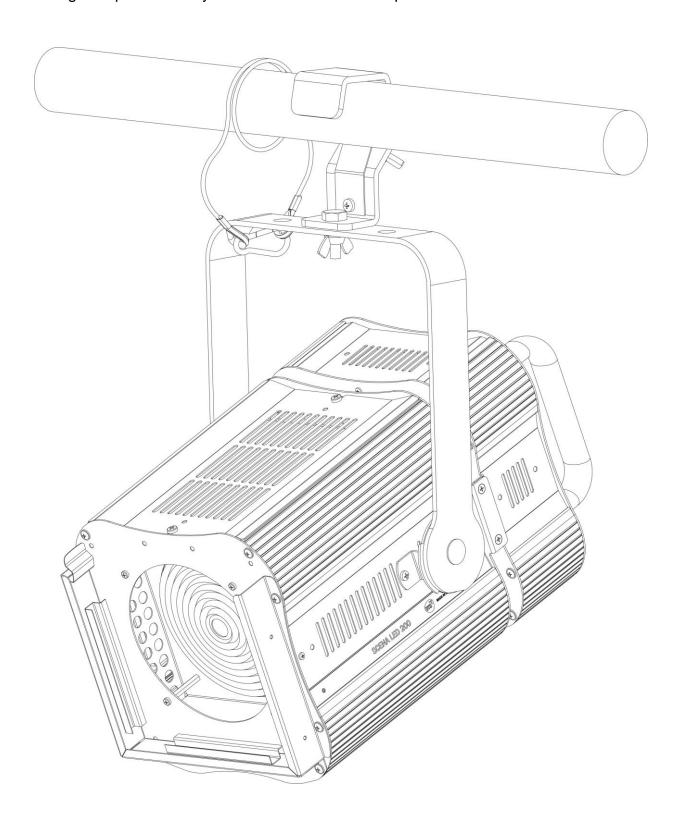
SCENA LED 200 CT can be installed on a truss or on the ceiling.

It is recommend the use of appropriate clamps to fix the unit to the mounting surface.

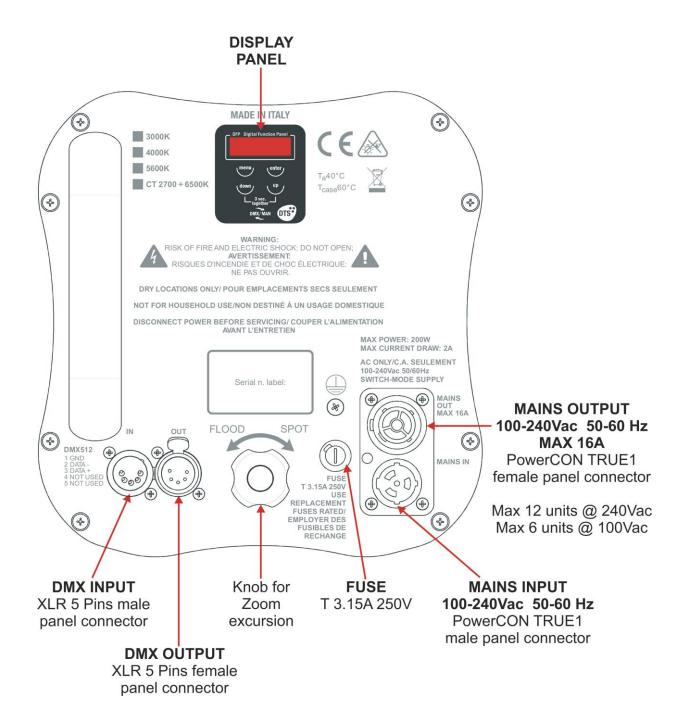
## **ATTENTION:**

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



## 9- DMX SIGNAL CONNECTION:

The unit operates using a digital DMX 512 signal.

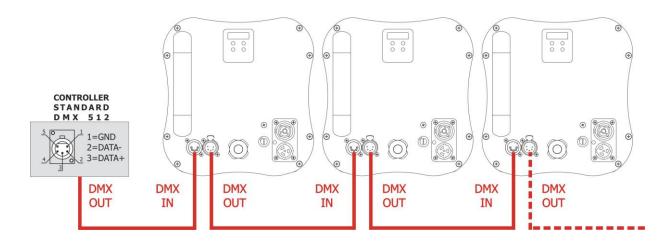
Connection between the controller and the unit or between units must be carried out using a two pair screened Ø 0.5 mm.

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.



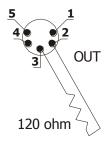
If the display showing the DMX address flashes, then one of the following errors has occurred:

- DMX signal not present
- DMX reception problem

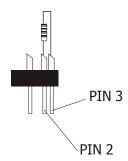
For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.

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 200 CT can be controlled with 7 DMX channels (Default) or 2 DMX channels.

In order to use the unit in 7 DMX channels mode (Default), set the following addresses on the mixer:

Projector 1 A001
Projector 2 A008
Projector 3 A015
..... A....
projector 6 A036

If you want to select the next projector, just add "7"

## 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.

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.

# **10- RDM FUNCTIONS**

By using a RDM controller it is possible to set DMX address, DMX mode and other parameters.

SCENA LED 200 CT accepts the following RDM commands:

DEVICE_INFO	To read the following parameters:
	RDM protocol version
	Fixture model ID
	Fixture type
	Software version ID
	DMX channels
	DMX mode
	DMX address
	Total sub-fixtures
IDENTIFY DEVICE	Total sensors  All LED phannels ON at many power to identify the
IDENTIFY_DEVICE	All LED channels ON at max power to identify the fixture
DMX_START_ADDRESS	To read / set the DMX address
SOFTWARE_VERSION_LABEL	Software version ID
SUPPORTED_PARAMETERS	List of all supported parameters
PARAMETER_DESCRIPTION	Description / details of Manufacturer Specific
_	parameter as "NO DMX ACTION"
DMX_PERSONALITY	To set the DMX mode
DMX_PERSONALITY_DESCRIPTION	Description / details of the DMX mode
DEVICE_MODEL_DESCRIPTION	Description / details of the Fixture model
MANUFACTURER_LABEL	Producer ID
SENSOR_DEFINITION, SENSOR VALUE	Description / values of sensors
	NSORS
1: Led Temperature	LED temperature
2: Micro Temperature	Micro controller temperature
3: Driver 1 Temperature	Output 1 of LED Driver board temperature
4: Driver 2 Temperature	Output 4 of LED Driver board temperature
RDM MANUFACT	URER-SPECIFIC PIDs
NO DMX ACTION	To set the desired fixture's behavior in case DMX
	signal is missing or not available.
	1 = Black-out
	2 = All channels @ 60%
	3 = All channels @ 100%
	4 = White CCT (Correlated Color Temperature): NO DMX SELECTABLE WHITE CCT
	1 = 2700K (Default)
	2 = 3000K
	3 = 3200K
	4 = 3500K
	5 = 4000K
	6 = 4500K
	7 = 5000K
	8 = 5600K
	9 = 6500K
	NO DMX SELECTABLE WHITE INTENS.
	0 ÷ 255 (Default = 0)
	5 = Keep last valid DMX signal (Default)

## 11- FIRMWARE UPDATING

To update the software version of the SCENA LED 200 CT you need:

- DTS RED BOX interface (DTS Code 03.LA.008).
- USB-DMX Driver for the DTS RED BOX interface.
- "DTS Firmware Upgrade Utility v.2.02" program installed on PC.
- Latest firmware release available for SCENA LED 200 CT unit.

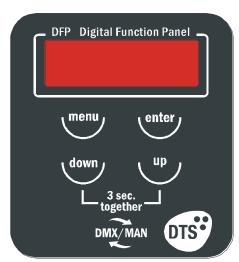
# Updating the software version.

Please follow the procedure below to perform the update:

- 1. Install the DTS RED BOX USB-DMX driver on the PC you will use to update the unit software.
- 2. Connect the DTS RED BOX interface to a spare USB port on the PC (be sure that internal switch on DTS RED BOX is set to COM).
- 3. Connect the unit DMX input to the DTS RED BOX DMX output with a standard DMX cable and turn ON the unit.
- 4. Send the new software version into the unit by using "DTS Firmware upgrade Utility v.2.02" program. At the end of the procedure, the unit will reset.

## **12- DISPLAY FUNCTIONS**

The SCENA LED 200 CT 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	<ul> <li>To select any required menu.</li> </ul>	
	<ul> <li>To confirm any changes.</li> </ul>	
UP / DOWN	<ul> <li>To navigate the menus structure.</li> </ul>	
	<ul> <li>To change any value.</li> </ul>	

Firmware release	1.01	

MAIN MENU	LEVEL 1	LEVEL 2	LEVEL 3	FUNCTION
d15P	Po5 !	88		Display normal orientation for floor mounting position (Default)
		88		Display inverted orientation for
-	ГПП			suspended mounting position  Display always ON (Default)
	5665	<sub>o</sub> FF		Display goes OFF after 10 seconds
<u> </u>	<del></del>	٥٥		Allows to select 7 DMX channels
NodE	7 cH			mode (Default)
	2 cH			Allows to select 2 DMX channel mode
LEd	SNEH	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.
	coNP	9088		Allows to select Quadratic current for linear light output (Default)
		LInE		Allows to select Linear current output
	5 <i>9nc</i>	6 10-5000		Allows to adjust the PWM frequency value (Hz) in order to reduce flickering in the process of your camera recordings.  Default = 610 Hz
	65E	on		Allows to increase the LED's current from 1470mA to 2100mA Default = ON
		oFF		
Ruto	SurE	UHIE	2700 6500	Automatic mode without DMX controller.  9 White color temperature selection from <b>2700K (Default)</b> to 6500K as on DMX channel 6 (CCT).  In Auto mode the unit do generate DMX for slave units.
		9100	0-255	Dimmer level selectable by user as on DMX channel 4 (DIMMER)  Default = 255
		SHuE	0-255	Shutter level selectable by user as on DMX channel 3 (SHUTTER)  Default = 15
		E5c		Esc from automatic mode menu
SLAU	SurE	SLU		Slave mode. The unit is forced to DMX address 1 and 7 DMX channels mode receiving signal from the unit set in Auto mode.
		E5c		Esc from slave mode
FAn	<u>55</u> 51L			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

MAIN MENU	LEVEL 1	LEVEL 2	LEVEL 3	FUNCTION
uqUH	raux			No DMX action.  Keep last valid DMX signal (Default)
	<i>50</i>			All channels ON @ 60%
	100			All channels ON @ 100%
	UHIE	cct	2700	9 White color temperature selection from <b>2700K (Default)</b> to 6500K as on DMX channel 6 (CCT).
			6500	
		9100	0-255	Dimmer level selectable for White Default = 255
	oFF			Black-out
dF5E	2 J L E			To restore default settings
FEUD	757	025.0		LED temperature monitoring
	Mcr	025.0		Micro controller temperature monitoring
	dru I	025.0		Output 1 of LED Driver board temperature monitoring
	drU2	025.0		Output 4 of LED Driver board temperature monitoring
FIUE	UR-N			Shows the total unit life time and the Wam White / Cold White LEDs
	coLd			life time
	unit			
Soft	u. 1.00			Software version

# **13- 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:

UHIE	2700	9 White color temperature selection from 2700K to 6500K as on DMX channel 6 (CCT).  Default = 2700K
	6500	
41NN	0-255	Dimmer level selectable by user as on DMX channel 4 (DIMMER)  Default = 255
5HuE	0-255	Shutter level selectable by user as on DMX channel 3 (SHUTTER)  Default = 15
E5c		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.

# 14- 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 ouErtENPErRturE	LED temperature detected over 70°C.
	Unit immediately goes in black-out.
Nicro SEnSor Error	Micro controller thermal sensor damaged
	(open or in short circuit).
	Unit immediately goes in black-out.
Nicro ouErtENPErAturE	Micro controller temperature detected over
	75°C.
	Unit immediately goes in black-out.
drU I SEnSor Error	Thermal sensor on output 1 of LED Driver
	board damaged (open or in short circuit).
	Unit immediately goes in black-out.
drUIouErtENPErRturE	Temperature detected over 75°C on
	output 1 of LED Driver board.
	Unit immediately goes in black-out.
drU2 5En5or Error	Thermal sensor on output 4 of LED Driver
	board damaged (open or in short circuit).
	Unit immediately goes in black-out.
drU2 ouErtENPErAturE	Temperature detected over 75°C on
	output 4 of LED Driver board.
	Unit immediately goes in black-out.

# **15- DMX PROTOCOL**

# 7 CHANNELS MODE (Default)

- 1 WARM WHITE 2700K
- 2 COLD WHITE 6500K
- 3 SHUTTER
- 4 DIMMER
- 5 DIMMER FINE
- 6 CCT
- 7 FUNCTIONS

Ch	Name	DMX levels		
1	WARM WHITE 2700K	0255	Proportional color from min to max	
2	COLD WHITE 6500K	0255	Proportional color from min to max	
3	SHUTTER	09	Black-out	
		1019	Open	
		2029	Black-out	
		30119	Strobe (da 3,27 s a 30 ms)	
		120149	Pulse up (da 42,6 s a 120 ms)	
		150179	Pulse down (da 42,6 s a 120 ms)	
		180204	Random strobe (Warm White, Cold White, Dimmer, Dimmer Fine active)	
		205229	Independent random strobe (Dimmer, Dimmer Fine active)	
		230235	Single flash 30 ms (Warm White, Cold White, Dimmer, Dimmer Fine active)	
		236255	Open	
4	DIMMER	0255	Proportional dimmer from min to max	
5	DIMMER FINE	0255	Proportional dimmer from min to max	
6	сст	0.010 — No func. 011 — 2700K 054 — 3000K 083 — 3200K 126 — 3500K 169 — 4000K 198 — 4500K 226 — 5000K 241 — 5600K 255 — 6500K	Linear color temperature correction from 2700K to 6500K. Relevant CCT (Correlated Color Temperature) values:  11 = 2700K 54 = 3000K 83 = 3200K 126 = 3500K 169 = 4000K 198 = 4500K 226 = 5000K 241 = 5600K 255 = 6500K	

Ch	Name		DMX levels
7	FUNCTIONS (staying	014	No function
	on desired option for 5 seconds)	1524	SMOOTH OFF
	,	2526	SMOOTH 1 (25 ms)
		2728	SMOOTH 2 (50 ms)
		2930	SMOOTH 3 (75 ms)
		3132	SMOOTH 4 (100 ms) (DEFAULT)
		3334	SMOOTH 5 (125 ms)
		3536	SMOOTH 6 (150 ms)
		3738	SMOOTH 7 (175 ms)
		3940	SMOOTH 8 (200 ms)
		4142	
			SMOOTH 9 (225 ms)
		4344	SMOOTH 10 (250 ms)
		4546	SMOOTH 11 (275 ms)
		4748	SMOOTH 12 (300 ms)
		4950	SMOOTH 13 (325 ms)
		5152	SMOOTH 14 (350 ms)
		5354	SMOOTH 15 (375 ms)
		5556	SMOOTH 16 (400 ms)
		5758	SMOOTH 17 (425 ms)
		5960	SMOOTH 18 (450 ms)
		6162	SMOOTH 19 (475 ms)
		6364	SMOOTH 20 (500 ms)
		6574	GAMMA CORRECTION (coff) QUADRATIC (DEFAULT)
		7584	GAMMA CORRECTION (coff P) LINEAR
		85104	OUTPUT FREQUENCY 610 Hz (DEFAULT)
		105	
			OUTPUT FREQUENCY 800 Hz
		106	OUTPUT FREQUENCY 1000 Hz
		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
		115134	RESERVED
		135144	BOOST ON (DEFAULT)
		145154	BOOST OFF
		155164	DISPLAY STAND-BY OFF (DEFAULT)
		165174	DISPLAY STAND-BY ON
		175176	NO DMX ACTION – KEEP LAST DMX (DEFAULT)
		177178	NO DMX ACTION – Black-out
		179180	NO DMX ACTION – All channels @ 100%
		181182	NO DMX ACTION – All channels @ 60%
		183184	NO DMX ACTION – 2700K6500K (active CCT as per display menu > NDMX > WHIT or via RDM Custom PIDs (Default = 2700K)
		185194	RESERVED
		195204	RESERVED
		205214	RESERVED
		215224	RESERVED
		225234	RESERVED
		225234	
			FAN STANDARD MODE
		245252	FAN SILENT MODE (DEFAULT)
		253255	SET DEFAULTS VALUES FOR FUNCTIONS:  SMOOTH = 4 (100 ms)  GAMMA CORRECTION (coff) = QUADRATIC  OUTPUT FREQUENCY = 610 Hz  BOOST = ON  DISPLAY STAND-BY = OFF  NO DMX ACTION = KEEP LAST DMX
			FAN MODE = SILENT

# 2 CHANNELS MODE

- 1 WARM WHITE 2700K
- 2 COLD WHITE 6500K

Ch	Name	DMX levels		
1	WARM WHITE 2700K	0255	Proportional color from min to max	
2	COLD WHITE 6500K	0255	Proportional color from min to max	



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



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

