



# EclFresnel CT+XS

120 W Led Fresnel with 6 color source,  
130mm-5" glass lens, black



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## USER MANUAL

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## ***Thank you for choosing PROLIGHTS***

Please note that every PROLIGHTS product has been designed in Italy to meet quality and performance requirements for professionals and designed and manufactured for the use and application as shown in this document.

Any other use, if not expressly indicated, could compromise the good condition/operation of the product and/or be a source of danger.

This product is meant for professional use. Therefore, commercial use of this equipment is subject to the respectively applicable national accident prevention rules and regulations.

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Product user manual can be downloaded from the website [www.prolights.it](http://www.prolights.it), or can be inquired to the official PROLIGHTS distributors of your territory ([https://www.prolights.it/sales\\_network.html](https://www.prolights.it/sales_network.html)).

Scanning the below **QR Code**, you will access the download area of the product page, where you can find a broad set of always updated technical documentation: specifications, user manual, technical drawings, photometrics, personalities, fixture firmware updates.



Visit the download area  
of the product page



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# SAFETY INFORMATION



## WARNING!

- See <https://www.prolights.it/product/ECLFRCTPXS#download> for installation instructions.
- Please read carefully the instruction reported in this section before installing, powering, operating or servicing the product and observe the indications also for its future handling.



**This unit is not for household and residential use, only professional applications.**



## Connection to mains supply

- The Connection to the mains supply must be carried out by a qualified electrical installer.
- Use only AC supplies 100-240V 50-60 Hz, the fixture must be electrically connected to ground (earth).
- Select the cable cross section in according with the maximum current draw of the product and the possible number of products connected at the same power line.
- The AC mains power distribution circuit must be equipped with magnetic+residual current circuit breaker protection.
- Do not connect it to a dimmer system; doing so may damage the product.
- The product has XLR sockets for DMX input and output.
- Connection of the control signal: DMX LINE.
- Notice: this control circuit is not isolated.
- Cumulative leakage current of less than 3.5mA on the control circuit.



## Protection and Warning against electrical shock

- Do not remove any cover from the product, always disconnect the product from AC power before servicing.
- Ensure that the fixture is electrically connected to ground (earth). And use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault (earth-fault) protection.
- Before using the fixture, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.
- Isolate the fixture from power immediately if the power plug or any seal, cover, cable, or other components are damaged, defective, deformed or showing signs of overheating.
- Do not reapply power until repairs have been completed.
- Refer any service operation not described in this manual to PROLIGHTS Service team or an authorized PROLIGHTS service center.



## Installation

- Make sure that all visible parts of the product are in good visible condition before its use or installation.
- Make sure the point of anchorage is stable before positioning the projector.
- When suspending the fixture above ground level, secure it against failure of primary attachments by attaching a safety cable that is approved as a safety attachment for the weight of the fixture to the attachment point on the main frame of the product. In case the safety cable, enter in action, it needs to be replaced with a new one.
- Install the product only in well ventilated places.
- For non temporary installations, ensure that the fixture is securely fastened to a load-bearing surface with suitable corrosionresistant hardware.
- For a temporary installation with clamps, ensure that the quarter-turn fastener and/or screws are turned fully, and secured with a suitable safety cable.



### Minimum distance of illuminated objects

- The projector needs to be positioned so that the objects hit by the beam of light are at least 0.3 meters (1.0 ft) from the lens of the projector.

$T_a 45^\circ\text{C}$

### Max operating ambient temperature ( $T_a$ )

- Do not operate the fixture if the ambient temperature ( $T_a$ ) exceeds  $45^\circ\text{C}$  ( $113^\circ\text{F}$ ).

$T_a -20^\circ\text{C}$

### Minimum operating ambient temperature ( $T_a$ )

- Do not operate the fixture if the ambient temperature ( $T_a$ ) is below  $-20^\circ\text{C}$  ( $-4^\circ\text{F}$ ).



### Protection from burns and fire

- The exterior of the fixture becomes hot during use. Avoid contact by persons and materials.
- Ensure that there is free and unobstructed airflow around the fixture.
- Keep flammable materials well away from the fixture
- Do not expose the front glass to sunlight or any other strong light source from any angle. Lenses can focus the sun's rays inside the fixture, creating a potential fire hazard.
- Do not attempt to bypass thermostatic switches or fuses.



### Indoor use

- This product is designed for indoor and dry environments.
- Do not use in wet location and do not expose the fixture to rain or moisture.
- Never use the fixture in places subject to vibrations or bumps.
- Make certain that no inflammable liquids, water or metal objects enter the fixture.
- Excessive dust, smoke fluid, and particle build up degrades performance, causes overheating and will damage the fixture.
- Damages caused by inadequate cleaning or maintenance are not covered by the product warranty.

$T_c 50,6^\circ\text{C}$

### Temperature of the external surface

- The surface of the fixture can reach up to  $50,6^\circ\text{C}$  ( $123^\circ\text{F}$ ) during operation. Avoid contact with people and materials.



### Maintenance

- Warning! Disconnect the fixture from AC mains power and allow to cool for at least 10 minutes before handling.
- Only technicians who are authorized by PROLIGHTS or Authorised service partners are permitted to open the fixture.
- Users may carry out external cleaning, following the warnings and instructions provided, but any service operation not described in this manual must be referred to a qualified service technician.
- Important! Excessive dust, smoke fluid, and particle build up degrades performance, causes overheating and will damage the fixture. Damages caused by inadequate cleaning or maintenance is not covered by the product warranty.



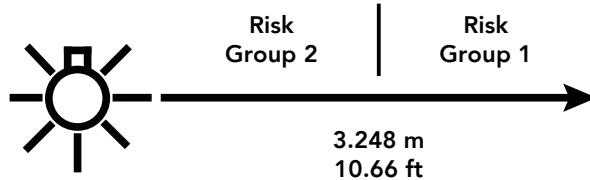
### Photobiological safety

- This device emits potentially dangerous optical radiation and is identified in the category of Risk Group 1 according to EN 62471.



### Do not stare at the operating light source

- Do not look directly at the LED source during operation. It can be harmful to the eyes and skin.
- During Installation, operation and maintenance, be prepared for the fixture to light and move suddenly when connected to power.
- The device should be positioned so that prolonged staring into the luminaire at a distance closer than 3,248 m (10,66 ft) is not expected.



**Disposal**

- This product is supplied in compliance with European Directive 2012/19/EU – Waste Electrical and Electronic Equipment (WEEE). To preserve the environment please dispose/ recycle this product at the end of its life according to the local regulation.



**The products to which this manual refers comply with:**

- 2014/35/EU - Safety of electrical equipment supplied at low voltage (LVD).
- 2014/30/EU - Electromagnetic Compatibility (EMC).
- 2011/65/EU - Restriction of the use of certain hazardous substances (RoHS).



**The products to which this manual refers comply with:**

- UL 1573 + CSA C22.2 No. 166 - Stage and Studio Luminaires and Connector Strips.



**FCC Compliance:**

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
  1. This device may not cause harmful interference, and
  2. This device must accept any interference received, including interference that may cause undesired operation.



**Other approvals**

- The product meets the safety requirements of the certification procedures of the market in which it is placed and sold.

# 1 - PACKAGING

## PACKAGE CONTENT

---

- 1 x ECLFRCTPXSBK
- 1 x ECLFRCTPXSFBBK
- 1 x ECLFRCTPXSBDBK
- 1 x 1,5 meters 3G1,5mmq power cable (BARE END - NEUTRIK POWERCON TRUE1 IP65 power connector)
- User Manual

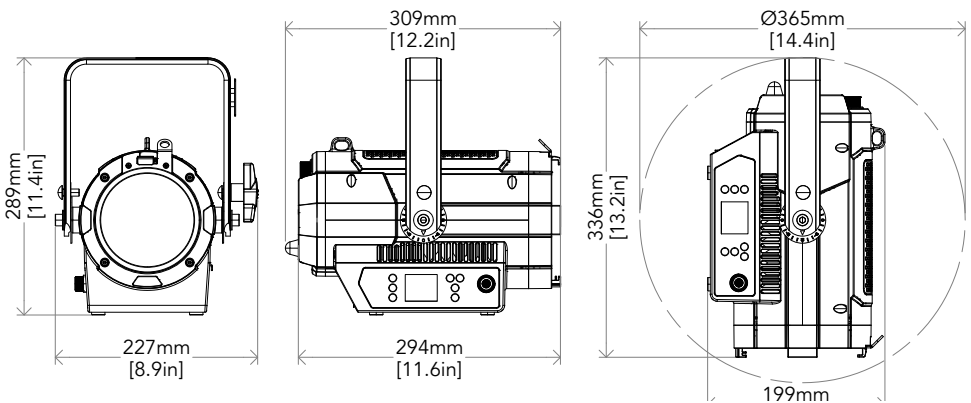
## OPTIONAL ACCESSORIES

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Check the updated accessories list, description and informations of the product at the following link:  
<https://www.prolights.it/product/ECLFRCTPX#accessories>

# 2 - TECHNICAL DRAWING

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Weight: 3,8 kg - 8,38 lbs

# 3 - INSTALLATION

## MOUNTING

Check that the supporting structure can safely bear the weight of all installed fixtures, clamps, cables, auxiliary equipment, etc. and complies with locally applicable regulations.

When suspending the fixture above ground level, secure it against failure of primary attachments by attaching a safety wire that is approved as a safety attachment for the weight of the fixture to an anchor point on the product main frame.

Do not use removable parts or weak anchors for secondary attachment.

Warning! When clamping the fixture to a truss or other structure at any angle, use clamps of half-coupler type. Do not use any type of clamp that does not completely encircle the structure when fastened.

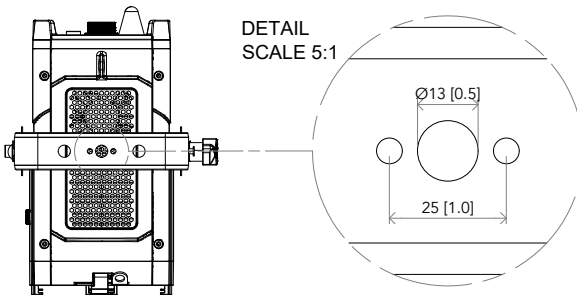
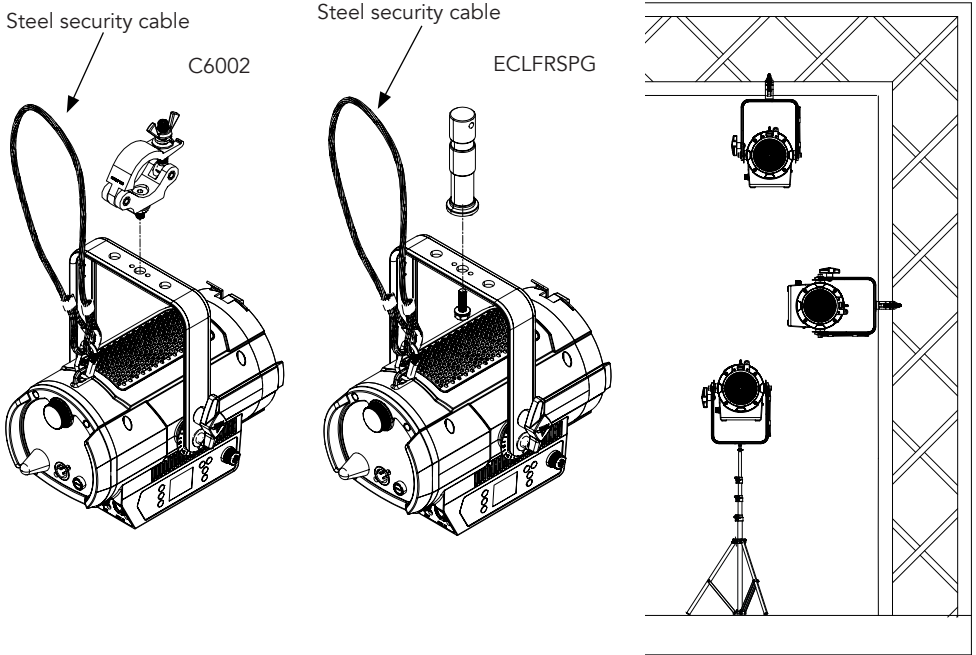


Fig. 02 - Dimensions in mm/in


## 4 - CONNECTION TO THE MAINS SUPPLY

**WARNING:** For protection from electric shock, the fixture must be earthed!

The product is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 100-240 Volts.

If you need to install a power plug on the power cable to allow connection to power outlets, install a grounding-type (earthed) plug, following the plug manufacturer's instructions. If you have any doubts about proper installation, consult a qualified electrician.

The max power consumption is 130W.

Core (EU)	Core (US)	Connection	Plug terminal marking
Brown	Black	Live	L
Blue	White	Neutral	N
Yellow+green	Green	Earth	

## 5 - START UP

### CONNECT AND DISCONNECT POWER FROM THE PRODUCT

To apply and disconnect power to the product:

- Check that the product is installed and secured as indicated in the Safety Informations, and that personal safety will not be put at risk when the fixture lights up.
- Connect the power connector into the Mains input socket (100-240 VAC-50/60 Hz).
- The product is then ready for its operations and can be controlled through the available input signals on board.
- To disconnect power from the product, disconnect the Mains from the socket.

## 6 - PRODUCT OVERVIEW

1. ADJUSTABLE BRACKET;
2. KNOB for bracket;
3. USER INTERFACE with display and ROTATORY KNOB for access to the control panel functions;
4. ZOOM KNOB;
5. SAFETY HOLE to attach safety cable;
6. ANTENNA for wireless operations (Optional);
7. LOW VOLTAGE DC CONNECTOR: 48 V WEIPU SY25 4P Conector;
8. MAIN FUSE HOLDER: replace a burnt-out fuse by one of the same type only (T2A, 250 V);
9. POWER IN-OUT: for connection to the Mains 100-240V~/50-60Hz;
10. DMX IN-OUT (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C;
11. ZOOM SCALE: To fine adjust the zoom angle.

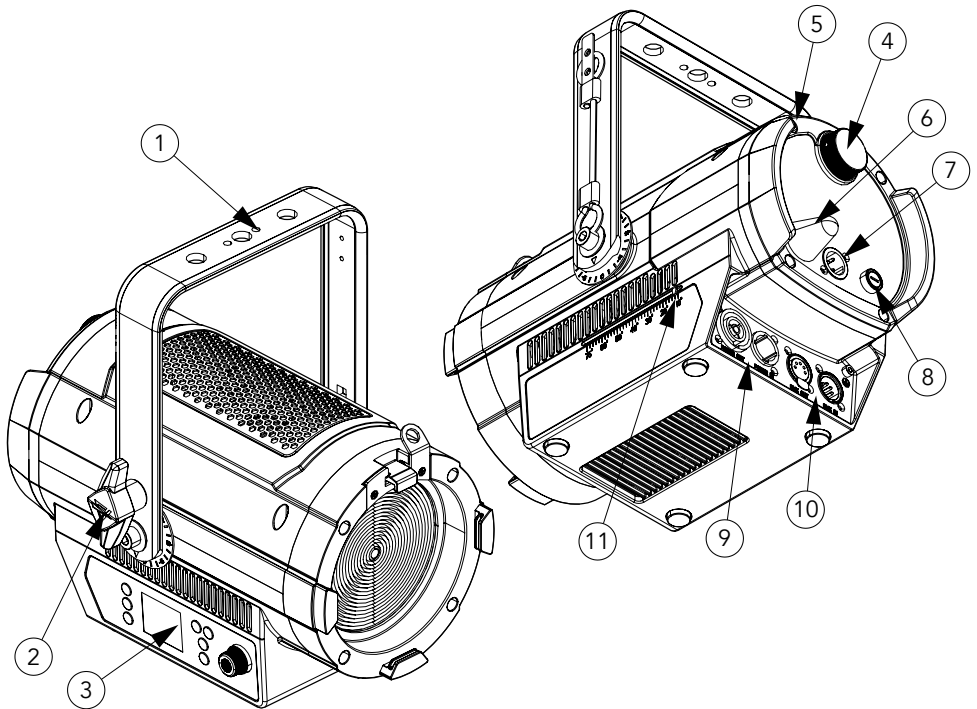


Fig. 03

# 7 - DMX CONNECTION

## CONNECTION OF THE CONTROL SIGNAL: DMX LINE

**DMX - INPUT  
XLR plug**



Pin1 : GND - Shield  
 Pin2 : - Signal  
 Pin3 : + Signal  
 Pin4 : N/C  
 Pin5 : N/C

**DMX - OUTPUT  
XLR socket**

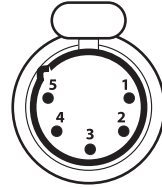


Fig. 04

The product has XLR sockets for DMX input and output.  
 The default pin-out on both socket is as the following diagram:

### INSTRUCTIONS FOR A RELIABLE DMX CONNECTION

Use shielded twisted-pair cable designed for RS-485 devices: standard microphone cable cannot transmit control data reliably over long runs. 24 AWG cable is suitable for runs up to 300 meters (1000 ft). Heavier gauge cable and/or an amplifier is recommended for longer runs.

To split the data link into branches, use splitter-amplifiers in the connection line.  
 Do not overload the link. Up to 32 devices may be connected on a serial link.

### CONNECTION DAISY CHAIN

Connect the DMX data output from the DMX source to the product DMX input (male connector XLR) socket.

Run the data link from the product XLR output (female connector XLR) socket to the DMX input of the next fixture.

Terminate the data link by connecting a 120 Ohm signal termination. If a splitter is used, terminate each branch of the link.

Install a DMX termination plug on the last fixture on the link.

### CONNECTION OF THE DMX LINE

DMX connection employs standard XLR connectors. Use shielded pair-twisted cables with 120Ω impedance and low capacity.

The following diagram shows the connection mode:

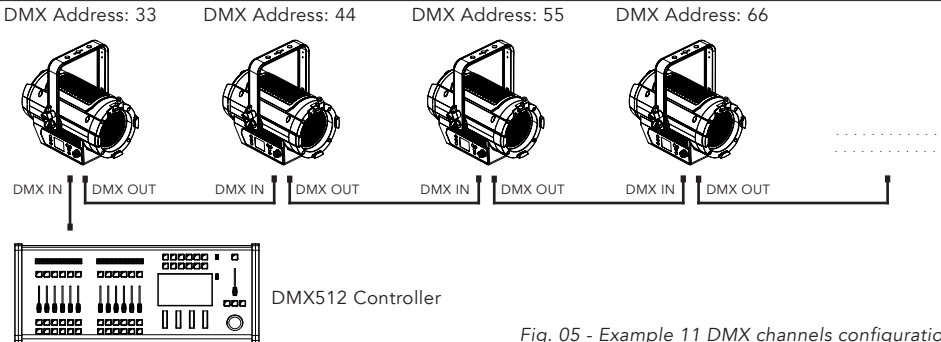


Fig. 05 - Example 11 DMX channels configuration

## CONSTRUCTION OF THE DMX TERMINATION

The termination is prepared by soldering a  $120\Omega$  1/4 W resistor between pins 2 and 3 of the male XLR connector, as shown in figure.

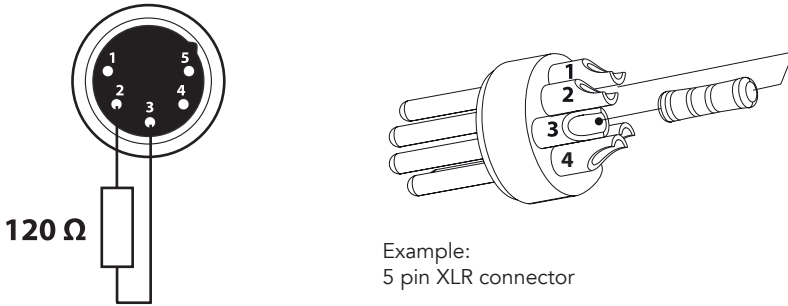


Fig. 06

## DMX ADDRESSING

In order to start controlling the product via DMX, the first step is to select a DMX address, also known as the start channel, this is the first channel used to receive instructions from a DMX controller. If you wish to control the product individually, it is necessary to assign a different starting address channel to each fixture.

The number of channels occupied from the product depends on the DMX mode selected, so always verify the DMX Mode in the MENU before start addressing.

If you assign two fixtures the same address, they will be executing the same behaviour. Selecting the same address to multiple fixtures can be useful for diagnostic purposes and symmetrical control.

DMX addressing is limited to make it impossible to set the DMX address so high that you are left without enough control channels for the product.

To set the fixture's DMX address:

1. Press MENU to open the main menu;
2. Reach the addressing menu, then select the DMX ADDRESS settings;
3. Select the address from 1 to 512 using the navigation arrows/buttons and confirm by pressing ENTER;
4. Press Menu to exit and return to the Home screen.

## 8 - CONTROL PANEL

The product has a display and buttons for access to the control panel functions.

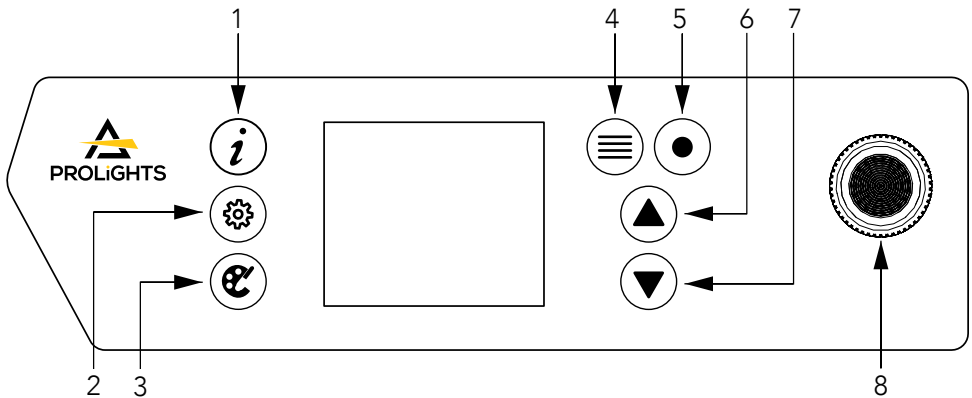


Fig. 07

### DISPLAY AND BUTTONS LAYOUT

The product has a display and buttons for access to the control panel functions:

1. INFO: used to access in "Information", "current output", "documentation" windows;
2. SETTINGS: used to access in "quick settings" window;
3. PRESETS: CCT, RGB, HSI, CIExy, GEL, PRESET, Color Correction;
4. ENTER: used to confirm the current menu or confirm the current value or option within a menu;
5. MENU: used to access the menu tree or to return a previous menu window;
6. UP: browse upwards through the menu list and increases the numeric value displayed;
7. DOWN: browse downwards through the menu list and decreases the numeric value displayed;
8. PUSHABLE ENCODER: used to control stand alone modes.

### SHORTCUT

Keys	Mode	Description
UP + DOWN for 3s in Home Screen	Flip Display	Directly flip display without enter inside menu
Down + Enter then power on	Factory Reload	Lamp waits in Bootloader to receive an update via DMX

# 9 - MENU STRUCTURE

The following chart describes the MENU tree of the product, the terms shown in **BOLD** indicates the default settings.

## MENU: CONNECT

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	DESCRIPTION		
DMX ADDRESS	1-512			Set DMX Address for Main fixture		
DMX MODE	MODE	UNO	USER PRESETS			
			FACTORY PRESETS			
		DUO	USER PRESETS			
			FACTORY PRESETS			
		IRGB				
		STANDARD				
		MULTIMODE 8 BIT				
		MULTIMODE 16 BIT				
		MULTIMODE 8 BIT DUAL				
		MULTIMODE DUAL 16 BIT				
		M2 - CCT 16bit				
		M4 - RGB 16 bit				
		M8 - XY 16 bit				
		M16 - CCT + RGB 16 bit				
		M18 - CCT + RGB 16 bit + GEL 16 bit				
		M28 - CCT + XY 16 bit				
		M30 - CCT + XY + GEL 16 bit				
		M36 - RAW 16 bit				
		M37 - CCT + RAW 16 bit				
		M38 - CCT + GEL 16 bit + RAW 16 bit				
		MODE + COLOR CORRECTION	M4 - RGB 16 bit + CC			
			M8 - XY 16 bit + CC			
			M16 - CC - CCT + RGB 16 bit			
			M18 - CC - CCT + RGB + GEL 16 bit			
			M28 - CC - CCT + XY 16 bit			
			M30 - CC - CCT + XY + GEL 16 bit			
WIRELESS (Optional)	CRMX ON/OFF	ON	Enable/Disable the wireless card. If CRMX@ OFF all other CRMX settings are not available.			
		<b>OFF</b>				
	CRMX MODE	TX CRMX		Allows configuration of the wireless card as either a Transmitter or Receiver. G4s and G3 are supported protocols for connection with Wireless Solution products.		
		TX G3				
		TX G4S				
		<b>RX</b>				
	TX LINK RECEIVERS	YES		Enables the transmission link when the unit is set as a Transmitter.		
		<b>NO</b>				
	TX UNLINK ALL RECEIVERS	YES		Disconnects the transmitter from all connected receivers. TX Unlink can only be used when the unit is in Transmitter mode in CRMX settings.		
		<b>NO</b>				
	RX UNLINK RECEIVER	YES		Disconnects the CRMX card, set as a Receiver, from any connected transmitters.		
		<b>NO</b>				

## MENU: CONNECT

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	DESCRIPTION
WIRELESS (Optional)	USE LINKING KEY	YES		To enable Linking key.
		<b>NO</b>		
	SET LINKING KEY	xxxxxxx	0-9	Set Linking key. Only available if SET LINKING KEY@YES. Encoder 1 = allows the increase/decrease of the digit value and the confirmation of the entire setting. Encoder 4 = Allows switching between the different digits of the Linking Key.
	SET LINKING MODE	<b>CRMX</b>		SET LINKING MODE is available when the unit is set as a receiver.
		CRMX2		
	SET LINKING UNIVERSE	<b>A</b>		SET LINKING UNIVERSE is available when the unit is set as a receiver.
		B (ONLY IN CRMX2)		
		C		
		D (ONLY IN CRMX2)		
		E		
		F (ONLY IN CRMX2)		
		G		
		H (ONLY IN CRMX2)		
	USE BLUETOOTH	YES		To enable Bluetooth.
		<b>NO</b>		
USE BLUETOOTH KEY	YES		To enable bluetooth key.	
	<b>NO</b>			
UNIVERSE RGB COLOR	RED		If CRMX@TX universe color can be set; If CRMX@RX universe color shows the universe set on the TX.	
	GREEN			
	BLUE			
	CYAN			
	MAGENTA			
	YELLOW			
	WHITE			
	<b>OFF</b>			
UNIVERSE NAME	xxx		If CRMX MODE@TX: Universe name coincides with the device name; If CRMX MODE@RX: Universe name shows the one set on the TX.	
CRMX STATUS	Not connected / Not Available / Linked		CRMX status.	
LINK STRENGTH	0 - 100 %		Show Wireless quality by percentage.	
Software Version	V x.x.x.x		Show firmware version of Timo module.	
CRMX MODULE	TimoTwo: V x.x.x.x		Show hardware version of Timo module.	

## MENU: SETUP

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	DESCRIPTION	
LIGHT CONTROL	DIMMER SPEED	<b>AUTO</b>		See pag. 18 for further informations	
		SLOW			
		MEDIUM			
		FAST			
		OFF			
	DIMMER CURVE	LINEAR		See pag. 19 for further informations	
		S-CURVE			
		<b>SQUARE LAW</b>			
		INVERSE SQUARE LAW			
		HIGH RES @ LOW			
	TUNGSTEN EMULATION	<b>OFF</b>		Simulates the natural warm-dimming behavior of tungsten lamps, reducing color temperature as intensity decreases.	
		ON			
	COLOR SPACE	<b>NATIVE</b>			
		PROPHOTO RGB			
		SRGB			
		REC. 2020			
	LED MODE	<b>HIGH BRIGHTNESS</b>			
		HIGH QUALITY			
COLOR BALANCE OUTPUT	<b>0%</b>		0% = maximum brightness 100% = maximum RGB space consistency		
	25%				
	50%				
	75%				
	100%				
COLOR CORRECTION	ON		To enable/disable Color Correction.		
	<b>OFF</b>				
FIXTURE CONTROL	FAN MODE	<b>AUTO</b>			
		TURBO			
		MANUAL	0-100%		
		QUIET 1 DLO			
		QUIET 2 DLO			
		OFF DLO			
		QUIET 1 CLO			
		QUIET 2 CLO			
		OFF CLO			
		SIGNAL FAULT BEHAVIOUR	HOLD		Define the behaviour of fixture in case of DMX signal lost.
	<b>HOLD - ON ENCODER TOUCH</b>		<b>CCT MODE</b>		
			RGB MODE		
			HSI MODE		
			XY MODE		
		GEL MODE			

## MENU: SETUP

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	DESCRIPTION		
FIXTURE CONTROL	SIGNAL FAULT BEHAVIOUR	STANDALONE	<b>CCT MODE</b>			
			RGB MODE			
			HSI MODE			
			XY MODE			
			GEL MODE			
		BLACKOUT				
		EMERGENCY				
		STARTUP BEHAVIOUR	<b>ON ENCODER TOUCH</b>	<b>CCT MODE</b>	<i>Define the behaviour of fixture in case of start up without DMX signal.</i>	
				RGB MODE		
				HSI MODE		
	XY MODE					
	GEL MODE					
	STANDALONE		<b>CCT MODE</b>			
			RGB MODE			
			HSI MODE			
			XY MODE			
			GEL MODE			
	BLACKOUT					
	EMERGENCY					
	LED FREQUENCY	<b>1282HZ</b>		<i>To select LED PWM frequency.</i>		
2000HZ						
4000HZ						
6000HZ						
10KHZ						
12KHZ						
15KHZ						
20KHZ						
POWER LIMIT			100%			<i>To select Power Limit.</i>
					75%	
	50%					
	25%					
UI SETTINGS	VALUES FORMAT	TEMPERATURE	°C	<i>To select the temperature unit.</i>		
			°F			
	BACKLIGHT SETTINGS	BACKLIGHT TIMEOUT	ALWAYS ON		<i>Sets the time after which the display will automatically turn off when inactive.</i>	
				10S		
				<b>30S</b>		
				60S		
		BACKLIGHT DIMMER	25%			
				50%		
				75%		
				<b>100%</b>		
BACKLIGHT ENCODER	OFF		<i>Switch ON or OFF backlight of Push Knob Encoder.</i>			
		<b>ON</b>				
FLIP DISPLAY	<b>OFF</b>		<i>Enables the display to be rotated by 180°.</i>			
		ON				

### MENU: SETUP

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	DESCRIPTION
UI SETTINGS	KEYLOCK	OFF		Lock the buttons on the control panel with a password. To access the user menu, enter the following button sequence (password): UP, DOWN, UP, DOWN, ENTER.
		ON		
CONFIG. PRESETS	PRESET 1	SAVE	YES	
	PRESET 2		NO	
	PRESET 3	RECALL	YES	
	PRESET 4		NO	

### MENU: ADVANCED

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	DESCRIPTION
BASIC RELOAD	RELOAD?			Restores all default settings except the Presets saved in Stand Alone and Configuration Presets.
	CANCEL			
FACTORY RELOAD	RELOAD?			Return all settings to default. Also deletes Presets saved in Stand Alone and Configuration Presets."
	CANCEL			

### MENU: STANDALONE

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	DESCRIPTION
MASTER / SLAVE	MASTER DMX			
	MASTER NO DMX			
	SLAVE			
<b>CCT MODE</b>				
RGB MODE				
HSI MODE				
XY MODE				
GEL MODE				
PRESET MODE				

### MENU: INFORMATION

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	DESCRIPTION
Fixture Hours	<99999H>			
Source Hours	<99999H>			
Power Cycles	<99999>			
Power Consumption	x W			
Fan Speeds				Submenu listing speed of all Fans
Temperatures	LED Temperature			
	CPU Temperature			
Voltages	48V			
	12V			
	5V			
Calibration State				Active / Flash Error / Not Calibrated / Disabled
Error Messages				Submenu listing errors
Version	Vx.x.xx.xxxx			
CRM Module	TimoTwo: Vx.x.x.x			
RDM UID				
Documentation				See Documentation page sheet

## UNO/DUO PRESETS

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USER Presets
Preset 01
Preset 02
Preset 03
Preset 04
Preset 05
Preset 06
Preset 07
Preset 08
Preset 09
Preset 10
Preset 11
Preset 12
Preset 13
Preset 14
Preset 15
Preset 16
Preset 17
Preset 18
Preset 19
Preset 20

FACTORY Presets
CCT 2000K (+/- GN)
CCT 2500K (+/- GN)
CCT 2900K (+/- GN)
CCT 3200K (+/- GN)
CCT 4000K (+/- GN)
CCT 5000K (+/- GN)
CCT 5600K (+/- GN)
CCT 6500K (+/- GN)
CCT 8000K (+/- GN)
CCT 10000K (+/- GN)
HSI - 120° Hue, 100% Saturation
HSI - 240° Hue, 100% Saturation
GEL - RC: 3408, Base CCT 5600K
GEL - Lee 187, Base CCT 3200K
GEL - RC: 3152, Base CCT 3200K
GEL - Lee 162, Base CCT 3200K

## DIMMER SPEEDS

Five dimming speeds are available:

1. **AUTO** - When the DMX value changes by more than 50 DMX values, the intensity will instantly adjust to the new value. For changes less than 50 DMX values, the fast dimming curve will be applied;
2. **FAST** - Indicates the fast speed dimming curve. Refer to the diagram for reference;
3. **MEDIUM** - Indicates the medium speed dimming curve. Refer to the diagram for reference;
4. **SLOW** - Indicates the slow dimming curve. Refer to the diagram for reference;
5. **OFF** - The intensity will immediately adjust to the new value (essentially no delay effect).

NOTE: When setting the dimmer curve @tungsten, the dimmer speed settings is not available.

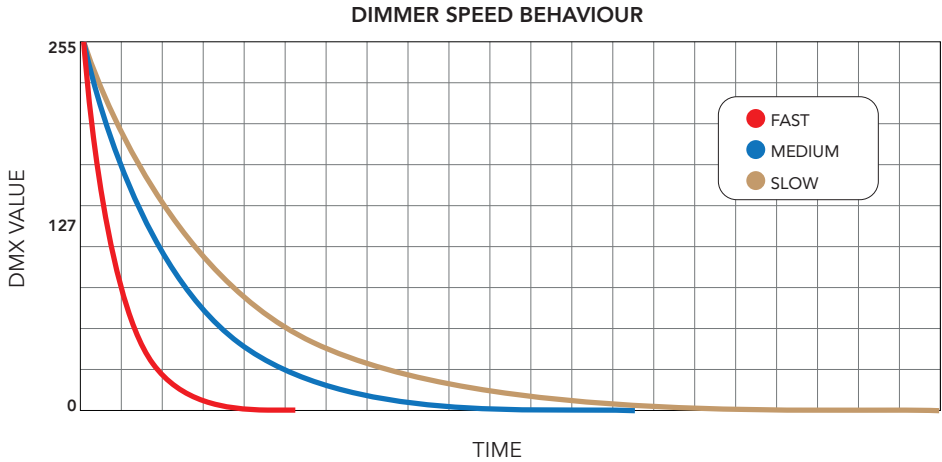


Fig. 08

## DIMMER CURVES

Five dimming modes are available:

1. **LINEAR** - Light intensity increases proportionally to the DMX value, creating a linear perception;
2. **S-CURVE** - Light intensity is finer at low and high levels, with coarser control at mid-levels;
3. **SQUARE LAW** - Light intensity is finer at low levels and becomes coarser at higher levels;
4. **INVERSE SQUARE LAW** - Light intensity is coarser at low levels and finer at higher levels;
5. **HIGHRES@LOW** - Provides very fine control at low light intensities, with coarser control at medium and high levels;
6. **TUNGSTEN** - Emulates the behaviour of an incandescent lamp.

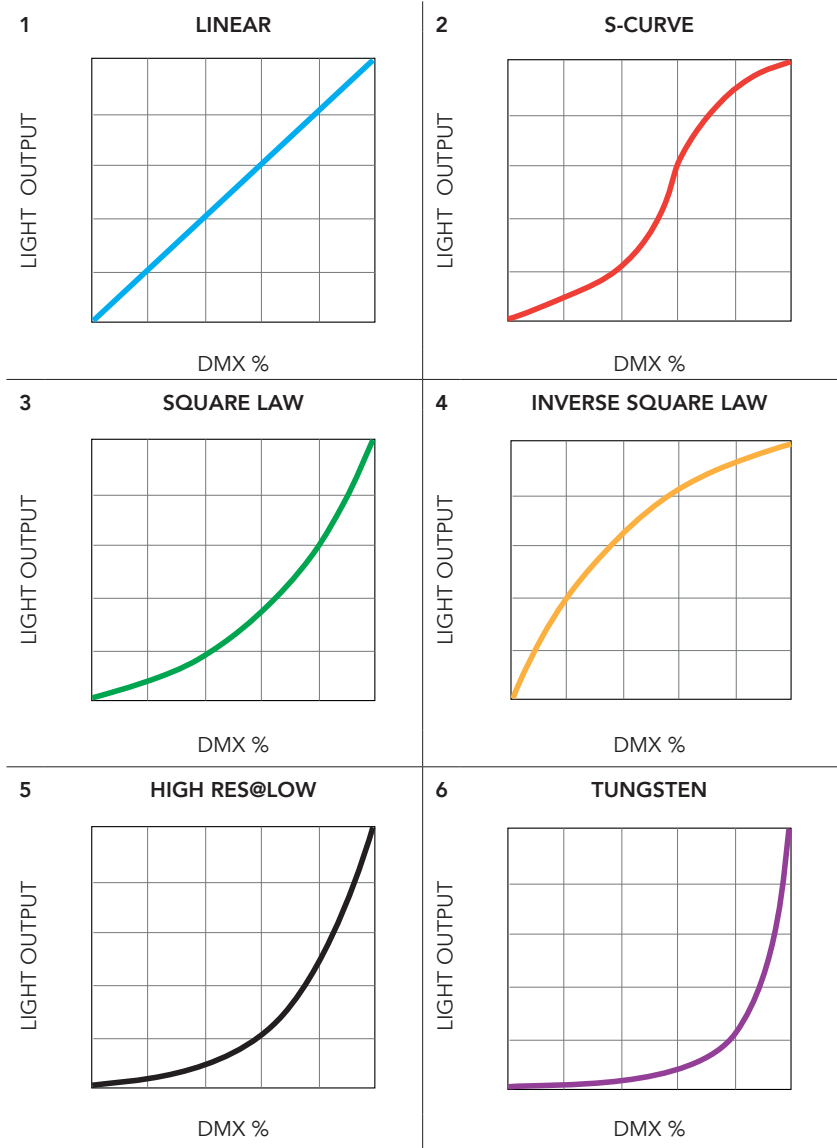


Fig. 09

# 10 - RDM FUNCTIONS

RDM Model ID	HEX	DEC
ECLFRCTPXS	A039	41017

The product can communicate using RDM (Remote Device Management) protocol over a DMX512 Networks.

RDM is a bi-directional communications protocol for use in DMX512 control systems, it is the open standard for DMX512 device configuration and status monitoring.

The RDM protocol allows data packets to be inserted into a DMX512 data stream without affecting existing non-RDM equipment. It allows a console or dedicated RDM controller to send commands to and receive messages from specific fixtures.

The PIDs in the following tables are supported in the product.

Category	Parameter	Value	GET	SET
<b>RDM Information</b>	SUPPORTED PARAMETERS	0x0050	x	
	PARAMETER DESCRIPTION	0x0051	x	
<b>Product Information</b>	DEVICE_MODEL_DESCRIPTION	0x0080	x	
	MANUFACTURER_LABEL	0x0081	x	
<b>DMX512 Setup</b>	DMX_PERSONALITY	0x00E0	x	x
	DMX_PERSONALITY_DESCRIPTION	0x00E1	x	
	DMX_START_ADDRESS	0x00F0	x	x
<b>Sensors</b>	SENSOR_DEFINITION	0x0200	x	
	SENSOR_VALUE	0x0201	x	x
<b>Dimmer Settings</b>	CURVE	0x0343	x	x
	CURVE_DESCRIPTION	0x0344	x	x
	OUTPUT_RESPONSE_TIME	0x0345	x	x
	OUTPUT_RESPONSE_TIME_DESCRIPTION	0x0346	x	

# 11 - DMX CHARTS

RDM Model ID	HEX	DEC
ECLFRCTPXS	A039	41017

## DMX MODES LIST

RDM ID	DMX Mode	Footprint
1	UNO	1 ch
2	DUO	2 ch
3	IRGB	4 ch
4	STANDARD	11 ch
5	MULTIMODE 8bit	19 ch
6	MULTIMODE 16bit	22 ch
7	MULTIMODE DUAL 8bit	25 ch
8	MULTIMODE DUAL 16bit	31 ch
9	M2 - CCT 16bit	11 ch
10	M4 - RGB 16 bit	15 ch
12	M8 - XY 16 bit	17 ch
14	M16 - CCT + RGB 16 bit	21 ch
16	M18 - CCT + RGB 16 bit + GEL 16 bit	25 ch
18	M28 - CCT + XY 16 bit	17 ch
20	M30 - CCT + XY + GEL 16 bit	21 ch
22	M36 - RAW 16 bit	19 ch
23	M37 - CCT + RAW 16 bit	24 ch
24	M38 - CCT + GEL 16 bit + RAW 16 bit	28 ch

RDM ID	DMX Mode	Footprint
<b>Available with Color Correction ON</b>		
11	M4 - RGB 16 bit + CC	24 ch
13	M8 - XY 16 bit + CC	26 ch
15	M16 - CC - CCT + RGB 16 bit	30 ch
17	M18 - CC - CCT + RGB 16 bit + GEL 16 bit	34 ch
19	M28 - CC - CCT + XY 16 bit	26 ch
21	M30 - CC - CCT + XY + GEL 16 bit	30 ch

## BASIC DMX MODES

Ch	UNO	DUO	IRGB	STANDARD
1	Dimmer	Dimmer	Dimmer	Dimmer
2		Dimmer Fine	Red	Dimmer Fine
3			Green	CCT
4			Blue	CCT fine
5				GMP
6				Crossfade CCT to RGB
7				Red
8				Green
9				Blue
10				Strobe
11				Control
12				

**NOTE** CCT channel refers to 2800K - 10000K when the CCT range selector channel is not available.

## MULTIMODE DMX MODES

Ch	MULTIMODE 8 BIT	MULTIMODE 16 BIT	MULTIMODE DUAL 8 BIT	MULTIMODE DUAL 16 BIT
1	Dimmer	Dimmer	Dimmer	Dimmer
2	Dimmer Fine	Dimmer Fine	Dimmer Fine	Dimmer Fine
3	Control Mode 8 bit	Control Mode 16 bit	Control Mode 8bit	Control Mode 16bit
4	Parameter 1	Parameter 1	Parameter 1	Parameter 1
5	Parameter 2	Parameter 2	Parameter 2	Parameter 2
6	Parameter 3	Parameter 3	Parameter 3	Parameter 3
7	Reserved	Parameter 4	Layer Crossfade	Parameter 4
8	Reserved	Parameter 5	Control Mode 8 bit	Parameter 5
9	Reserved	Parameter 6	Parameter 1	Parameter 6
10	Reserved	Reserved	Parameter 2	Layer Crossfade
11	Reserved	Reserved	Parameter 3	Control Mode 16 bit
12	Reserved	Reserved	Reserved	Parameter 1
13	Reserved	Reserved	Reserved	Parameter 2
14	Reserved	Reserved	Reserved	Parameter 3
15	Strobe	Reserved	Reserved	Parameter 4
16	Control	Reserved	Reserved	Parameter 5
17	Preset	Reserved	Reserved	Parameter 6
18	Fan Control	Strobe	Reserved	Reserved
19	Reserved	Control	Reserved	Reserved
20		Preset	Transition Type Selector	Reserved
21		Fan Control	Strobe	Reserved
22		Reserved	Control	Reserved
23			Preset	Reserved
24			Fan Control	Reserved
25			Reserved	Reserved
26				Transition Type Selector
27				Strobe
28				Control
29				Preset
30				Fan Control
31				Reserved

### DMX MODES

Ch	M2 CCT 16bit	M4 RGB 16 bit	M8 XY 16 bit	M16 CCT + RGB 16 bit	M18 CCT + RGB 16 bit + GEL 16 bit
1	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer
2	Dimmer Fine	Dimmer Fine	Dimmer Fine	Dimmer Fine	Dimmer Fine
3	CCT	Red	X1	CCT	CCT
4	CCT Fine	Red Fine	X1 fine	CCT Fine	CCT Fine
5	GMP	Green	Y1	GMP	GMP
6	CCT Range Selector	Green Fine	Y1 fine	Xfade CCT to RGB	Xfade CCT to RGB
7	Strobe	Blue	Xfade XY1 to XY2	Red	Red
8	Control	Blue Fine	X2	Red Fine	Red Fine
9	Preset	White Point	X2 fine	Green	Green
10	Fan Control	White Point Fine	Y2	Green Fine	Green Fine
11	Reserved	Strobe	Y2 fine	Blue	Blue
12		Control	Transition Type	Blue Fine	Blue Fine
13		Preset	Strobe	CCT Range Selector	Xfade RGB to GEL
14		Fan Control	Control	White Point	GEL Source Selector
15		Reserved	Preset	White Point Fine	GEL Brand / Category
16			Fan Control	Transition Type	GEL Selector
17			Reserved	Strobe	CCT Range Selector
18				Control	White Point
19				Preset	White Point Fine
20				Fan Control	Transition Type
21				Reserved	Strobe
22					Control
23					Preset
24					Fan Control
25					Reserved

**NOTE** CCT channel refers to 2800K - 10000K when the CCT range selector channel is not available.

**DMX MODES**

Ch	M28 CCT + XY 16 bit	M30 CCT + XY + GEL 16 bit	M36 RAW 16 bit	M37 CCT + RAW 16 bit	M38 CCT + GEL 16 bit + RAW 16 bit
1	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer
2	Dimmer Fine	Dimmer Fine	Dimmer Fine	Dimmer Fine	Dimmer Fine
3	CCT	CCT	Red	CCT	CCT
4	CCT Fine	CCT Fine	Red Fine	CCT Fine	CCT Fine
5	GMP	GMP	Green	GMP	GMP
6	Xfade CCT to XY	Xfade CCT to XY	Green Fine	Xfade CCT to RAW	Xfade CCT to GEL
7	X	X	Blue	Red	GEL Source Selector
8	X Fine	X Fine	Blue Fine	Red Fine	GEL Brand / Category
9	Y	Y	PC Amber	Green	GEL Selector
10	Y Fine	Y Fine	PC Amber Fine	Green Fine	Xfade GEL to RAW
11	CCT Range Selector	Xfade XY to GEL	Lime	Blue	Red
12	Transition Type	GEL Source Selector	Lime Fine	Blue Fine	Red Fine
13	Strobe	GEL Brand / Category	Cyan	PC Amber	Green
14	Control	GEL Selector	Cyan Fine	PC Amber Fine	Green Fine
15	Preset	CCT Range Selector	Strobe	Lime	Blue
16	Fan Control	Transition Type	Control	Lime Fine	Blue Fine
17	Reserved	Strobe	Preset	Cyan	PC Amber
18		Control	Fan Control	Cyan Fine	PC Amber Fine
19		Preset	Reserved	CCT Range Selector	Lime
20		Fan Control		Strobe	Lime Fine
21		Reserved		Control	Cyan
22				Preset	Cyan Fine
23				Fan Control	CCT Range Selector
24				Reserved	Strobe
25					Control
26					Preset
27					Fan Control
28					Reserved

**CHANNEL DEFINITION**

**Dimmer**

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Dimmer	0	255	0	65535	Default @ 0 (Linear Dimmer 0 - 100%)

**CCT Range Selector**

Function		8 bit value		16 bit value		Note
CCT(K) From	CCT(K) To	From	To	From	To	
1850K	20000K	0	9	-	-	Default @ 0 (Linear from 1850K to 20000K)
2200K	15000K	10	19	-	-	
2800K	10000K	20	29	-	-	
2200K	20000K	30	39	-	-	
Reserved		40	255	-	-	

**CCT (Range Selector @ 1850K - 20000K)**

CCT (K)		8 bit value		16 bit value	
From	To	From	To	From	To
1850	1900	0	1	0	181
1900	2000	1	2	181	542
2000	2100	2	4	542	903
2100	2200	4	5	903	1264
2200	2300	5	6	1264	1625
2300	2400	6	8	1625	1986
2400	2500	8	9	1986	2347
2500	2600	9	11	2347	2708
2600	2700	11	12	2708	3069
2700	2800	12	13	3069	3430
2800	2900	13	15	3430	3791
2900	3000	15	16	3791	4152
3000	3100	16	18	4152	4513
3100	3200	18	19	4513	4875
3200	3300	19	20	4875	5236
3300	3400	20	22	5236	5597
3400	3500	22	23	5597	5958
3500	3600	23	25	5958	6319
3600	3700	25	26	6319	6680
3700	3800	26	27	6680	7041
3800	3900	27	29	7041	7402
3900	4000	29	30	7402	7763
4000	4100	30	32	7763	8124
4100	4200	32	33	8124	8485
4200	4300	33	34	8485	8846
4300	4400	34	36	8846	9207
4400	4500	36	37	9207	9568
4500	4600	37	39	9568	9930
4600	4700	39	40	9930	10291
4700	4800	40	41	10291	10652
4800	4900	41	43	10652	11013
4900	5000	43	44	11013	11374
5000	5100	44	46	11374	11735

5100	5200	46	47	11735	12096
5200	5300	47	48	12096	12457
5300	5400	48	50	12457	12818
5400	5500	50	51	12818	13179
5500	5600	51	53	13179	13540
5600	5700	53	54	13540	13901
5700	5800	54	55	13901	14262
5800	5900	55	57	14262	14624
5900	6000	57	58	14624	14985
6000	6100	58	60	14985	15346
6100	6200	60	61	15346	15707
6200	6300	61	63	15707	16068
6300	6400	63	64	16068	16429
6400	6500	64	65	16429	16790
6500	6600	65	67	16790	17151
6600	6700	67	68	17151	17512
6700	6800	68	70	17512	17873
6800	6900	70	71	17873	18234
6900	7000	71	72	18234	18595
7000	7100	72	74	18595	18956
7100	7200	74	75	18956	19317
7200	7300	75	77	19317	19679
7300	7400	77	78	19679	20040
7400	7500	78	79	20040	20401
7500	7600	79	81	20401	20762
7600	7700	81	82	20762	21123
7700	7800	82	84	21123	21484
7800	7900	84	85	21484	21845
7900	8000	85	86	21845	22206
8000	8100	86	88	22206	22567
8100	8200	88	89	22567	22928
8200	8300	89	91	22928	23289
8300	8400	91	92	23289	23650
8400	8500	92	93	23650	24011
8500	8600	93	95	24011	24372
8600	8700	95	96	24372	24733

**CCT (Range Selector @ 1850K - 20000K)**

CCT (K)		8 bit value		16 bit value	
From	To	From	To	From	To
8700	8800	96	98	24734	25095
8800	8900	98	99	25095	25456
8900	9000	99	100	25456	25817
9000	9100	100	102	25817	26178
9100	9200	102	103	26178	26539
9200	9300	103	105	26539	26900
9300	9400	105	106	26900	27261
9400	9500	106	107	27261	27622
9500	9600	107	109	27622	27983
9600	9700	109	110	27983	28344
9700	9800	110	112	28344	28705
9800	9900	112	113	28705	29066
9900	10000	113	115	29066	29428
10000	10100	115	116	29428	29789
10100	10200	116	117	29789	30150
10200	10300	117	119	30150	30511
10300	10400	119	120	30511	30872
10400	10500	120	122	30872	31233
10500	10600	122	123	31233	31594
10600	10700	123	124	31594	31955
10700	10800	124	126	31955	32316
10800	10900	126	127	32316	32677
10900	11000	127	129	32677	33038
11000	11100	129	130	33038	33399
11100	11200	130	131	33399	33760
11200	11300	131	133	33760	34122
11300	11400	133	134	34122	34483
11400	11500	134	136	34483	34844
11500	11600	136	137	34844	35205
11600	11700	137	138	35205	35566
11700	11800	138	140	35566	35927
11800	11900	140	141	35927	36288
11900	12000	141	143	36288	36649
12000	12100	143	144	36649	37010
12100	12200	144	145	37010	37371
12200	12300	145	147	37371	37732
12300	12400	147	148	37732	38093
12400	12500	148	150	38093	38454
12500	12600	150	151	38454	38815
12600	12700	151	152	38815	39177
12700	12800	152	154	39177	39538
12800	12900	154	155	39538	39899
12900	13000	155	157	39899	40260
13000	13100	157	158	40260	40621
13100	13200	158	159	40621	40982
13200	13300	159	161	40982	41343
13300	13400	161	162	41343	41704
13400	13500	162	164	41704	42065
13500	13600	164	165	42065	42426
13600	13700	165	166	42426	42787
13700	13800	166	168	42787	43148

13800	13900	168	169	43148	43509
13900	14000	169	171	43509	43871
14000	14100	171	172	43871	44232
14100	14200	172	174	44232	44593
14200	14300	174	175	44593	44954
14300	14400	175	176	44954	45315
14400	14500	176	178	45315	45676
14500	14600	178	179	45676	46037
14600	14700	179	181	46037	46398
14700	14800	181	182	46398	46759
14800	14900	182	183	46759	47120
14900	15000	183	185	47120	47481
15000	15100	185	186	47481	47842
15100	15200	186	188	47842	48203
15200	15300	188	189	48203	48565
15300	15400	189	190	48565	48926
15400	15500	190	192	48926	49287
15500	15600	192	193	49287	49648
15600	15700	193	195	49648	50009
15700	15800	195	196	50009	50370
15800	15900	196	197	50370	50731
15900	16000	197	199	50731	51092
16000	16100	199	200	51092	51453
16100	16200	200	202	51453	51814
16200	16300	202	203	51814	52175
16300	16400	203	204	52175	52536
16400	16500	204	206	52536	52897
16500	16600	206	207	52897	53258
16600	16700	207	209	53258	53620
16700	16800	209	210	53620	53981
16800	16900	210	211	53981	54342
16900	17000	211	213	54342	54703
17000	17100	213	214	54703	55064
17100	17200	214	216	55064	55425
17200	17300	216	217	55425	55786
17300	17400	217	218	55786	56147
17400	17500	218	220	56147	56508
17500	17600	220	221	56508	56869
17600	17700	221	223	56869	57230
17700	17800	223	224	57230	57591
17800	17900	224	225	57591	57952
17900	18000	225	227	57952	58313
18000	18100	227	228	58313	58674
18100	18200	228	230	58674	59035
18200	18300	230	231	59035	59396
18300	18400	231	233	59396	59757
18400	18500	233	234	59757	60118
18500	18600	234	235	60118	60480
18600	18700	235	237	60480	60841
18700	18800	237	238	60841	61202
18800	18900	238	240	61202	61563
18900	19000	240	241	61563	61924
19000	19100	241	242	61924	62285
19100	19200	242	244	62285	62646

**CCT (Range Selector @ 1850K - 2000K)**

CCT (K)		8 bit value		16 bit value	
From	To	From	To	From	To
19200	19300	244	245	62646	63007
19300	19400	245	247	63007	63369
19400	19500	247	248	63369	63730
19500	19600	248	249	63730	64091
19600	19700	249	251	64091	64452
19700	19800	251	252	64452	64813
19800	19900	252	254	64813	65174
19900	20000	254	255	65174	65535

**CCT (Range Selector @ 2200K - 15000K)**

CCT (K)		8 bit value		16 bit value	
From	To	From	To	From	To
2200	2300	0	2	0	512
2300	2400	2	4	512	1024
2400	2500	4	6	1024	1536
2500	2600	6	8	1536	2048
2600	2700	8	10	2048	2560
2700	2800	10	12	2560	3072
2800	2900	12	14	3072	3584
2900	3000	14	16	3584	4096
3000	3100	16	18	4096	4608
3100	3200	18	20	4608	5120
3200	3300	20	22	5120	5632
3300	3400	22	24	5632	6144
3400	3500	24	26	6144	6656
3500	3600	26	28	6656	7168
3600	3700	28	30	7168	7680
3700	3800	30	32	7680	8192
3800	3900	32	34	8192	8704
3900	4000	34	36	8704	9216
4000	4100	36	38	9216	9728
4100	4200	38	40	9728	10240
4200	4300	40	42	10240	10752
4300	4400	42	44	10752	11264
4400	4500	44	46	11264	11776
4500	4600	46	48	11776	12288
4600	4700	48	50	12288	12800
4700	4800	50	52	12800	13312
4800	4900	52	54	13312	13824
4900	5000	54	56	13824	14336
5000	5100	56	58	14336	14848
5100	5200	58	60	14848	15360
5200	5300	60	62	15360	15872
5300	5400	62	64	15872	16384
5400	5500	64	66	16384	16896
5500	5600	66	68	16896	17408
5600	5700	68	70	17408	17920
5700	5800	70	72	17920	18432
5800	5900	72	74	18432	18944
5900	6000	74	76	18944	19456
6000	6100	76	78	19456	19968
6100	6200	78	80	19968	20480
6200	6300	80	82	20480	20992
6300	6400	82	84	20992	21504
6400	6500	84	86	21504	22016
6500	6600	86	88	22016	22528
6600	6700	88	90	22528	23040
6700	6800	90	92	23040	23552
6800	6900	92	94	23552	24064
6900	7000	94	96	24064	24576
7000	7100	96	98	24576	25088
7100	7200	98	100	25088	25600
7200	7300	100	102	25600	26112

**CCT (Range Selector @ 2200K - 15000K)**

CCT (K)		8 bit value		16 bit value	
From	To	From	To	From	To
7300	7400	102	104	26112	26624
7400	7500	104	106	26624	27136
7500	7600	106	108	27136	27648
7600	7700	108	110	27648	28160
7700	7800	110	112	28160	28672
7800	7900	112	114	28672	29184
7900	8000	114	116	29184	29696
8000	8100	116	118	29696	30208
8100	8200	118	120	30208	30720
8200	8300	120	122	30720	31232
8300	8400	122	124	31232	31744
8400	8500	124	126	31744	32256
8500	8600	126	128	32256	32768
8600	8700	128	129	32768	33279
8700	8800	129	131	33279	33791
8800	8900	131	133	33791	34303
8900	9000	133	135	34303	34815
9000	9100	135	137	34815	35327
9100	9200	137	139	35327	35839
9200	9300	139	141	35839	36351
9300	9400	141	143	36351	36863
9400	9500	143	145	36863	37375
9500	9600	145	147	37375	37887
9600	9700	147	149	37887	38399
9700	9800	149	151	38399	38911
9800	9900	151	153	38911	39423
9900	10000	153	155	39423	39935
10000	10100	155	157	39935	40447
10100	10200	157	159	40447	40959
10200	10300	159	161	40959	41471
10300	10400	161	163	41471	41983
10400	10500	163	165	41983	42495
10500	10600	165	167	42495	43007
10600	10700	167	169	43007	43519
10700	10800	169	171	43519	44031
10800	10900	171	173	44031	44543
10900	11000	173	175	44543	45055
11000	11100	175	177	45055	45567
11100	11200	177	179	45567	46079
11200	11300	179	181	46079	46591
11300	11400	181	183	46591	47103
11400	11500	183	185	47103	47615
11500	11600	185	187	47615	48127
11600	11700	187	189	48127	48639
11700	11800	189	191	48639	49151
11800	11900	191	193	49151	49663
11900	12000	193	195	49663	50175
12000	12100	195	197	50175	50687
12100	12200	197	199	50687	51199
12200	12300	199	201	51199	51711
12300	12400	201	203	51711	52223

12400	12500	203	205	52223	52735
12500	12600	205	207	52735	53247
12600	12700	207	209	53247	53759
12700	12800	209	211	53759	54271
12800	12900	211	213	54271	54783
12900	13000	213	215	54783	55295
13000	13100	215	217	55295	55807
13100	13200	217	219	55807	56319
13200	13300	219	221	56319	56831
13300	13400	221	223	56831	57343
13400	13500	223	225	57343	57855
13500	13600	225	227	57855	58367
13600	13700	227	229	58367	58879
13700	13800	229	231	58879	59391
13800	13900	231	233	59391	59903
13900	14000	233	235	59903	60415
14000	14100	235	237	60415	60927
14100	14200	237	239	60927	61439
14200	14300	239	241	61439	61951
14300	14400	241	243	61951	62463
14400	14500	243	245	62463	62975
14500	14600	245	247	62975	63487
14600	14700	247	249	63487	63999
14700	14800	249	251	63999	64511
14800	14900	251	253	64511	65023
14900	15000	253	255	65023	65535

**CCT (Range Selector @ 2800K - 10000K)**

CCT (K)		8 bit value		16 bit value	
From	To	From	To	From	To
2800	2900	0	4	0	910
2900	3000	4	7	910	1820
3000	3100	7	11	1820	2731
3100	3200	11	14	2731	3641
3200	3300	14	18	3641	4551
3300	3400	18	21	4551	5461
3400	3500	21	25	5461	6371
3500	3600	25	28	6371	7282
3600	3700	28	32	7282	8192
3700	3800	32	35	8192	9102
3800	3900	35	39	9102	10012
3900	4000	39	43	10012	10923
4000	4100	43	46	10923	11833
4100	4200	46	50	11833	12743
4200	4300	50	53	12743	13653
4300	4400	53	57	13653	14563
4400	4500	57	60	14563	15474
4500	4600	60	64	15474	16384
4600	4700	64	67	16384	17294
4700	4800	67	71	17294	18204
4800	4900	71	74	18204	19114
4900	5000	74	78	19114	20025
5000	5100	78	81	20025	20935
5100	5200	81	85	20935	21845
5200	5300	85	89	21845	22755
5300	5400	89	92	22755	23665
5400	5500	92	96	23665	24576
5500	5600	96	99	24576	25486
5600	5700	99	103	25486	26396
5700	5800	103	106	26396	27306
5800	5900	106	110	27306	28216
5900	6000	110	113	28216	29127
6000	6100	113	117	29127	30037
6100	6200	117	120	30037	30947
6200	6300	120	124	30947	31857
6300	6400	124	128	31857	32768
6400	6500	128	131	32768	33678
6500	6600	131	135	33678	34588
6600	6700	135	138	34588	35498
6700	6800	138	142	35498	36408
6800	6900	142	145	36408	37319
6900	7000	145	149	37319	38229
7000	7100	149	152	38229	39139
7100	7200	152	156	39139	40049
7200	7300	156	159	40049	40959
7300	7400	159	163	40959	41870
7400	7500	163	166	41870	42780
7500	7600	166	170	42780	43690
7600	7700	170	174	43690	44600
7700	7800	174	177	44600	45510
7800	7900	177	181	45510	46421

7900	8000	181	184	46421	47331
8000	8100	184	188	47331	48241
8100	8200	188	191	48241	49151
8200	8300	191	195	49151	50061
8300	8400	195	198	50061	50972
8400	8500	198	202	50972	51882
8500	8600	202	205	51882	52792
8600	8700	205	209	52792	53702
8700	8800	209	213	53702	54613
8800	8900	213	216	54613	55523
8900	9000	216	220	55523	56433
9000	9100	220	223	56433	57343
9100	9200	223	227	57343	58253
9200	9300	227	230	58253	59164
9300	9400	230	234	59164	60074
9400	9500	234	237	60074	60984
9500	9600	237	241	60984	61894
9600	9700	241	244	61894	62804
9700	9800	244	248	62804	63715
9800	9900	248	251	63715	64625
9900	10000	251	255	64625	65535

**CCT Range Selector @ 2200K - 20000K)**

CCT (K)		8 bit value		16 bit value	
From	To	From	To	From	To
2200	2216	0	1	0	59
2216	2232	1	2	59	118
2232	2248	2	3	118	177
2248	2264	3	4	177	236
2264	2281	4	5	236	298
2281	2297	5	6	298	357
2297	2314	6	7	357	420
2314	2331	7	8	420	482
2331	2348	8	9	482	545
2348	2365	9	10	545	607
2365	2382	10	11	607	670
2382	2399	11	12	670	733
2399	2417	12	13	733	799
2417	2434	13	14	799	862
2434	2452	14	15	862	928
2452	2469	15	16	928	990
2469	2487	16	17	990	1057
2487	2505	17	18	1057	1123
2505	2524	18	19	1123	1193
2524	2542	19	20	1193	1259
2542	2560	20	21	1259	1325
2560	2579	21	22	1325	1395
2579	2598	22	23	1395	1465
2598	2616	23	24	1465	1532
2616	2635	24	25	1532	1602
2635	2654	25	26	1602	1672
2654	2674	26	27	1672	1745
2674	2693	27	28	1745	1815
2693	2713	28	29	1815	1889
2713	2732	29	30	1889	1959
2732	2752	30	31	1959	2032
2752	2772	31	32	2032	2106
2772	2792	32	33	2106	2180
2792	2812	33	34	2180	2253
2812	2833	34	35	2253	2331
2833	2853	35	36	2331	2404
2853	2874	36	37	2404	2481
2874	2895	37	38	2481	2559
2895	2916	38	39	2559	2636
2916	2937	39	40	2636	2713
2937	2958	40	41	2713	2791
2958	2980	41	42	2791	2872
2980	3001	42	43	2872	2949
3001	3023	43	44	2949	3030
3023	3045	44	45	3030	3111
3045	3067	45	46	3111	3192
3067	3089	46	47	3192	3273
3089	3112	47	48	3273	3358
3112	3134	48	49	3358	3439
3134	3157	49	50	3439	3523
3157	3180	50	51	3523	3608

3180	3203	51	52	3608	3693
3203	3226	52	53	3693	3777
3226	3249	53	54	3777	3862
3249	3273	54	55	3862	3951
3273	3297	55	56	3951	4039
3297	3321	56	57	4039	4127
3321	3345	57	58	4127	4216
3345	3369	58	59	4216	4304
3369	3393	59	60	4304	4392
3393	3418	60	61	4392	4484
3418	3443	61	62	4484	4576
3443	3468	62	63	4576	4668
3468	3493	63	64	4668	4760
3493	3518	64	65	4760	4853
3518	3544	65	66	4853	4948
3544	3569	66	67	4948	5040
3569	3595	67	68	5040	5136
3595	3621	68	69	5136	5232
3621	3647	69	70	5232	5327
3647	3674	70	71	5327	5427
3674	3700	71	72	5427	5523
3700	3727	72	73	5523	5622
3727	3754	73	74	5622	5721
3754	3782	74	75	5721	5825
3782	3809	75	76	5825	5924
3809	3837	76	77	5924	6027
3837	3864	77	78	6027	6126
3864	3892	78	79	6126	6230
3892	3921	79	80	6230	6336
3921	3949	80	81	6336	6439
3949	3978	81	82	6439	6546
3978	4006	82	83	6546	6649
4006	4036	83	84	6649	6760
4036	4065	84	85	6760	6866
4065	4094	85	86	6866	6973
4094	4124	86	87	6973	7084
4124	4154	87	88	7084	7194
4154	4184	88	89	7194	7305
4184	4214	89	90	7305	7415
4214	4245	90	91	7415	7529
4245	4276	91	92	7529	7643
4276	4307	92	93	7643	7757
4307	4338	93	94	7757	7872
4338	4369	94	95	7872	7986
4369	4401	95	96	7986	8104
4401	4433	96	97	8104	8221
4433	4465	97	98	8221	8339
4465	4497	98	99	8339	8457
4497	4530	99	100	8457	8578
4530	4563	100	101	8578	8700
4563	4596	101	102	8700	8821
4596	4629	102	103	8821	8943
4629	4663	103	104	8943	9068
4663	4696	104	105	9068	9190

**CCT Range Selector @ 2200K - 20000K)**

CCT (K)		8 bit value		16 bit value	
From	To	From	To	From	To
4696	4730	105	106	9190	9315
4730	4765	106	107	9315	9444
4765	4799	107	108	9444	9569
4799	4834	108	109	9569	9698
4834	4869	109	110	9698	9827
4869	4904	110	111	9827	9955
4904	4940	111	112	9955	10088
4940	4976	112	113	10088	10221
4976	5012	113	114	10221	10353
5012	5048	114	115	10353	10486
5048	5085	115	116	10486	10622
5085	5122	116	117	10622	10758
5122	5159	117	118	10758	10894
5159	5196	118	119	10894	11030
5196	5234	119	120	11030	11170
5234	5272	120	121	11170	11310
5272	5310	121	122	11310	11450
5310	5348	122	123	11450	11590
5348	5387	123	124	11590	11734
5387	5426	124	125	11734	11877
5426	5466	125	126	11877	12025
5466	5505	126	127	12025	12168
5505	5545	127	128	12168	12315
5545	5585	128	129	12315	12463
5585	5626	129	130	12463	12614
5626	5667	130	131	12614	12765
5667	5708	131	132	12765	12916
5708	5749	132	133	12916	13067
5749	5791	133	134	13067	13221
5791	5833	134	135	13221	13376
5833	5875	135	136	13376	13530
5875	5917	136	137	13530	13685
5917	5960	137	138	13685	13843
5960	6004	138	139	13843	14005
6004	6047	139	140	14005	14164
6047	6091	140	141	14164	14326
6091	6135	141	142	14326	14488
6135	6180	142	143	14488	14653
6180	6224	143	144	14653	14815
6224	6269	144	145	14815	14981
6269	6315	145	146	14981	15150
6315	6361	146	147	15150	15320
6361	6407	147	148	15320	15489
6407	6453	148	149	15489	15658
6453	6500	149	150	15658	15831
6500	6570	150	151	15831	16089
6570	6641	151	152	16089	16351
6641	6712	152	153	16351	16612
6712	6784	153	154	16612	16877
6784	6857	154	155	16877	17146
6857	6931	155	156	17146	17418

6931	7006	156	157	17418	17694
7006	7081	157	158	17694	17971
7081	7157	158	159	17971	18250
7157	7234	159	160	18250	18534
7234	7312	160	161	18534	18821
7312	7391	161	162	18821	19112
7391	7470	162	163	19112	19403
7470	7551	163	164	19403	19701
7551	7632	164	165	19701	19999
7632	7714	165	166	19999	20301
7714	7797	166	167	20301	20607
7797	7881	167	168	20607	20916
7881	7966	168	169	20916	21229
7966	8052	169	170	21229	21546
8052	8138	170	171	21546	21862
8138	8226	171	172	21862	22186
8226	8314	172	173	22186	22510
8314	8404	173	174	22510	22842
8404	8494	174	175	22842	23173
8494	8586	175	176	23173	23512
8586	8678	176	177	23512	23850
8678	8772	177	178	23850	24196
8772	8866	178	179	24196	24542
8866	8961	179	180	24542	24892
8961	9058	180	181	24892	25249
9058	9155	181	182	25249	25607
9155	9254	182	183	25607	25971
9254	9353	183	184	25971	26335
9353	9454	184	185	26335	26707
9454	9556	185	186	26707	27083
9556	9659	186	187	27083	27462
9659	9763	187	188	27462	27845
9763	9868	188	189	27845	28232
9868	9974	189	190	28232	28622
9974	10081	190	191	28622	29016
10081	10190	191	192	29016	29417
10190	10299	192	193	29417	29818
10299	10410	193	194	29818	30227
10410	10522	194	195	30227	30639
10522	10635	195	196	30639	31055
10635	10750	196	197	31055	31479
10750	10866	197	198	31479	31906
10866	10982	198	199	31906	32333
10982	11101	199	200	32333	32771
11101	11220	200	201	32771	33209
11220	11341	201	202	33209	33655
11341	11463	202	203	33655	34104
11463	11586	203	204	34104	34557
11586	11711	204	205	34557	35017
11711	11837	205	206	35017	35481
11837	11964	206	207	35481	35949
11964	12093	207	208	35949	36423
12093	12223	208	209	36423	36902
12223	12355	209	210	36902	37388

**CCT Range Selector @ 2200K - 20000K)**

CCT (K)		8 bit value		16 bit value	
From	To	From	To	From	To
12355	12488	210	211	37388	37878
12488	12622	211	212	37878	38371
12622	12758	212	213	38371	38872
12758	12895	213	214	38872	39376
12895	13034	214	215	39376	39888
13034	13174	215	216	39888	40403
13174	13316	216	217	40403	40926
13316	13459	217	218	40926	41453
13459	13604	218	219	41453	41987
13604	13751	219	220	41987	42528
13751	13899	220	221	42528	43073
13899	14048	221	222	43073	43621
14048	14199	222	223	43621	44177
14199	14352	223	224	44177	44741
14352	14507	224	225	44741	45311
14507	14663	225	226	45311	45886
14663	14821	226	227	45886	46467
14821	14980	227	228	46467	47053
14980	15141	228	229	47053	47645
15141	15304	229	230	47645	48246
15304	15469	230	231	48246	48853
15469	15635	231	232	48853	49464
15635	15804	232	233	49464	50086
15804	15974	233	234	50086	50712
15974	16146	234	235	50712	51346
16146	16319	235	236	51346	51983
16319	16495	236	237	51983	52630
16495	16673	237	238	52630	53286
16673	16852	238	239	53286	53945
16852	17033	239	240	53945	54611
17033	17217	240	241	54611	55289
17217	17402	241	242	55289	55970
17402	17589	242	243	55970	56658
17589	17778	243	244	56658	57354
17778	17970	244	245	57354	58061
17970	18163	245	246	58061	58772
18163	18359	246	247	58772	59493
18359	18556	247	248	59493	60219
18556	18756	248	249	60219	60955
18756	18958	249	250	60955	61699
18958	19162	250	251	61699	62450
19162	19368	251	252	62450	63208
19368	19576	252	253	63208	63974
19576	19787	253	254	63974	64751
19787	20000	254	255	64751	65535

### Crossfade from Layer A to Layer B

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Crossfade from LAYER A to LAYER B	0	255	0	65535	Default @ 0 Linear Crossfade from A to B Available crossfade: CCT to RGB RGB to GEL CCT to XY CCT to RAW CCT to GEL GEL to RAW

### Gel Source Lamp CCT

Function	8 bit value		16 bit value		Note
	From	To	From	To	
2700K	0	9	-	-	Default @ 0
2800K	10	19	-	-	
3000K	20	29	-	-	
3200K	30	39	-	-	
4000K	40	49	-	-	
5000K	50	59	-	-	
5600K	60	69	-	-	
6500K	70	79	-	-	
Blackout	80	89	-	-	
Reserved	90	255	-	-	

### GEL Brand / Category Selector

Function	8 bit value		16 bit value		Note
	From	To	From	To	
LEE: Color correction	0	9	-	-	Default @ 0
LEE: Color Filters	10	19	-	-	
LEE: 600 Series	20	29	-	-	
LEE: Cosmetic Filters	30	39	-	-	
LEE: 700 Series	40	49	-	-	
RC: Color correction	50	59	-	-	
RC: CalC	60	69	-	-	
RC: StSelection	70	79	-	-	
RC: C-Lux	80	89	-	-	
Blackout	90	99	-	-	
Reserved	100	255	-	-	

**Category | Lee: Color Correction**

Function Gel Name	8 bit value		Gel #
	From	To	
Double CTB	0	1	200
Full CTB	2	3	201
3/4 CTB	4	5	281
1/2 CTB	6	7	202
1/4 CTB	8	9	203
1/8 CTB	10	11	218
Double CTO	12	13	287
Full CTO	14	15	204
3/4 CTO	16	17	285
1/2 CTO	18	19	205
1/4 CTO	20	21	206
1/8 CTO	22	23	223
1 1/2 CTB	24	25	283
1 1/2 CTO	26	27	286
Full CTS	28	29	441
1/2 CTS	30	31	442
1/4 CTS	32	33	443
1/8 CTS	34	35	444
Full CTO + .3 ND	36	37	207
Full CTO + .6 ND	38	39	208
L.C.T. Yellow (Y1)	40	41	212
White Flame Green	42	43	213
LEE Fluorescent Green	44	45	219
Super Correction L.C.T. Yellow	46	47	230
Super Correction W.F. Green	48	49	232
H.M.I. (to Tungsten)	50	51	236
C.I.D. (to Tungsten)	52	53	237
C.S.I. (to Tungsten)	54	55	238
LEE Fluorescent 5700 Kelvin	56	57	241
LEE Fluorescent 4300 Kelvin	58	59	242
LEE Fluorescent 3600 Kelvin	60	61	243
LEE Plus Green	62	63	244
1/2 Plus Green	64	65	245
1/4 Plus Green	66	67	246
1/8 Plus Green	68	69	278
Lee Minus Green	70	71	247
1/2 Minus Green	72	73	248
1/4 Minus Green	74	75	249
1/8 Minus Green	76	77	279
Blackout	78	79	-
Reserved	80	255	-

**Category | Lee: Color Filters**

Function Gel Name	8 bit value		Gel #
	From	To	
Rose Pink	0	1	2
Lavender Tint	2	3	3
Medium Bastard Amber	4	5	4
Pale Yellow	6	7	7
Dark Salmon	8	9	8
Pale Amber Gold	10	11	9
Medium Yellow	12	13	10
Straw Tint	14	15	13
Surprise Peach	16	17	17
Fire	18	19	19
Medium Amber	20	21	20
Gold Amber	22	23	21
Dark Amber	24	25	22
Scarlet	26	27	24
Sunset Red	28	29	25
Bright Red	30	31	26
Light Pink	32	33	35
Medium Pink	34	35	36
Dark Magenta	36	37	46
Rose Purple	38	39	48
Light Lavender	40	41	52
Paler Lavender	42	43	53
Lavender	44	45	58
Mist Blue	46	47	61
Pale Blue	48	49	63
Sky Blue	50	51	68
Evening Blue	52	53	75
Just Blue	54	55	79
Deeper Blue	56	57	85
Lime Green	58	59	88
Moss Green	60	61	89
Dark Yellow Green	62	63	90
Spring Yellow	64	65	100
Yellow	66	67	101
Light Amber	68	69	102
Straw	70	71	103
Deep Amber	72	73	104
Primary Red	74	75	106
Light Rose	76	77	107
English Rose	78	79	108
Light Salmon	80	81	109
Middle Rose	82	83	110
Dark Pink	84	85	111
Magenta	86	87	113
Peacock Blue	88	89	115
Steel Blue	90	91	117
Light Blue	92	93	118
Deep Blue	94	95	120
LEE Green	96	97	121
Fern Green	98	99	122
Dark Green	100	101	124

**Category | Lee: Color Filters**

Function Gel Name	8 bit value		Gel #
	From	To	
Smokey Pink	102	103	127
Bright Pink	104	105	128
Marine Blue	106	107	131
Golden Amber	108	109	134
Deep Golden Amber	110	111	135
Pale Lavender	112	113	136
Special Lavender	114	115	137
Pale Green	116	117	138
Summer Blue	118	119	140
Pale Violet	120	121	142
Pale Navy Blue	122	123	143
No Color Blue	124	125	144
Apricot	126	127	147
Bright Rose	128	129	148
Gold Tint	130	131	151
Pale Gold	132	133	152
Pale Salmon	134	135	153
Pale Rose	136	137	154
Chocolate	138	139	156
Pink	140	141	157
No Color Straw	142	143	159
Slate Blue	144	145	161
Bastard Amber	146	147	162
Flame Red	148	149	164
Daylight Blue	150	151	165
Lilac Tint	152	153	169
Deep Lavender	154	155	170
Dark Steel Blue	156	157	174
Loving Amber	158	159	176
Dark Lavender	160	161	180
Light Red	162	163	182
Flesh Pink	164	165	192
Surprise Pink	166	167	194
Zenith Blue	168	169	195
True Blue	170	171	196
Alice Blue	172	173	197
Palace Blue	174	175	198
Regal Blue	176	177	199
Blackout	178	179	-
Reserved	180	255	-

**Category | Lee: 600 Series**

Function Gel Name	8 bit value		Gel #
	From	To	
Arctic White	0	1	600
Silver	2	3	601
Platinum	4	5	602
Moonlight White	6	7	603
Full CT 85	8	9	604
Industry Sodium	10	11	650
HI Sodium	12	13	651
Urban Sodium	14	15	652
LO Sodium	16	17	653
Blackout	18	19	-
Reserved	20	255	-

**Category | Lee: Cosmetic Filters**

Function Gel Name	8 bit value		Gel #
	From	To	
Cosmetic Peach	0	1	184
Cosmetic Silver Rose	2	3	186
Cosmetic Rouge	4	5	187
Cosmetic Highlight	6	7	188
Cosmetic Silver Moss	8	9	189
Cosmetic Aqua Blue	10	11	191
Lily Frost	12	13	705
Shanklin Frost	14	15	717
Half Shanklin Frost	16	17	718
Durham Daylight Frost	18	19	720
Hampshire Rose	20	21	749
Soft Amber Key 1	22	23	774
Soft Amber Key 2	24	25	775
Moroccan Frost	26	27	791
Blue Diffusion	28	29	217
Blue Frost	30	31	221
Daylight Blue Frost	32	33	224
Blackout	34	35	-
Reserved	36	255	-

**Category | Lee: 700 Series**

Function Gel Name	8 bit value		Gel #
	From	To	
Perfect Lavender	0	1	700
Provence	2	3	701
Special Pale Lavender	4	5	702
Cold Lavender	6	7	703
Lily	8	9	704
King Fals Lavender	10	11	706
Cool Lavender	12	13	708
Electric Lilac	14	15	709
Spir Special Blue	16	17	710
Cold Blue	18	19	711
Bedford Blue	20	21	712
Elysian Blue	22	23	714
Cabana Blue	24	25	715
Mikkel Blue	26	27	716
Colour Wash Blue	28	29	719
Berry Blue	30	31	721
Virgin Blue	32	33	723
Ocean Blue	34	35	724
Old Steel Blue	36	37	725
Steel Green	38	39	728
Liberty Green	40	41	730
Dirty Ice	42	43	731
Damp Squib	44	45	733
JAS Green	46	47	738
Bram Brown	48	49	742
Dirty White	50	51	744
Brown	52	53	746
Easy White	54	55	747
Seedy Pink	56	57	748
Wheat	58	59	763
Sun Colour Straw	60	61	764
LEE Yellow	62	63	765
Cardbox Amber	64	65	773
Nectarine	66	67	776
Millenium Gold	68	69	778
Bastard Pink	70	71	779
Terry Red	72	73	781
Blood Red	74	75	789
Moroccan Pink	76	77	790
Pretty n'Pink	78	79	794
Magical Magenta	80	81	795
Blackout	82	83	-
Reserved	84	255	-

**Category | Rc: Color Correction**

Function Gel Name	8 bit value		Gel #
	From	To	
Full CTB	0	1	3202
3/4 CTB	2	3	3203
1/2 CTB	4	5	3204
1/3 CTB	6	7	3206
1/4 CTB	8	9	3208
1/8 CTB	10	11	3216
Double CTB	12	13	3220
Full CTO	14	15	3407
3/4 CTO	16	17	3411
1/2 CTO	18	19	3408
1/4 CTO	20	21	3409
1/8 CTO	22	23	3410
Double CTO	24	25	3420
Full CTS	26	27	3441
1/2 CTS	28	29	3442
1/4 CTS	30	31	3443
1/8 CTS	32	33	3444
Full Plusgreen	34	35	3304
1/2 Plusgreen	36	37	3315
1/4 Plusgreen	38	39	3316
1/8 Plusgreen	40	41	3317
Full Minusgreen	42	43	3308
3/4 Minusgreen	44	45	3309
1/2 Minusgreen	46	47	3313
1/4 Minusgreen	48	49	3314
1/8 Minusgreen	50	51	3318
Fluorofilter	52	53	3310
Industrial Vapor	54	55	3150
Urban Vapor	56	57	3152
Tough Y-1	58	59	3107
Tough MT 54	60	61	3134
Tough MTY	62	63	3106
Tough MT2	64	65	3102
Blackout	66	67	-
Reserved	68	255	-

**Category | Rc: CalC**

Function Gel Name	8 bit value		Gel #
	From	To	
15 Blue	0	1	4215
30 Blue	2	3	4230
60 Blue	4	5	4260
90 Blue	6	7	4290
7 Cyan	8	9	4307
15 Cyan	10	11	4315
30 Cyan	12	13	4330
60 Cyan	14	15	4360
90 Cyan	16	17	4390
15 Green	18	19	4415
30 Green	20	21	4430
60 Green	22	23	4460
90 Green	24	25	4490
15 Yellow	26	27	4515
30 Yellow	28	29	4530
60 Yellow	30	31	4560
90 Yellow	32	33	4590
15 Red	34	35	4615
30 Red	36	37	4630
60 Red	38	39	4660
90 Red	40	41	4690
15 Magenta	42	43	4715
30 Magenta	44	45	4730
60 Magenta	46	47	4760
90 Magenta	48	49	4790
15 Pink	50	51	4815
30 Pink	52	53	4830
60 Pink	54	55	4860
90 Pink	56	57	4890
15 Lavender	58	59	4915
30 Lavender	60	61	4930
60 Lavender	62	63	4960
90 Lavender	64	65	4990
Blackout	66	67	-
Reserved	68	255	-

**Category | Rc: StSelection**

Function Gel Name	8 bit value		Gel #
	From	To	
VS Red	0	1	2001
VS Orange	2	3	2002
VS Yellow	4	5	2003
VS Green	6	7	2004
VS Cyan	8	9	2005
VS Azure	10	11	2006
VS Blue	12	13	2007
VS Indigo	14	15	2008
VS Violet	16	17	2009
VS Magenta	18	19	2010
Blackout	20	21	-
Reserved	22	255	-

**Category | Rc: C-Lux**

Function Gel Name	8 bit value		Gel #
	From	To	
Bastard Amber	0	1	2
Pale Bastard Amber	2	3	302
No Color Straw	4	5	6
Pale Gold	6	7	8
Daffodil	8	9	310
Straw	10	11	12
Light Amber	12	13	16
Gallo Gold	14	15	316
Light Flame	16	17	17
Flame	18	19	18
Mayan Sun	20	21	318
Golden Amber	22	23	21
Soft Golden Amber	24	25	321
Orange	26	27	23
Henny Sky	28	29	325
Light Red	30	31	26
No Color Pink	32	33	33
Blush Pink	34	35	333
Flesh Pink	36	37	34
Pale Rose Pink	38	39	37
Salmon	40	41	41
Deep Salmon	42	43	42
Middle Rose	44	45	44
Light Rose Purple	46	47	47
Surprise Pink	48	49	51
No Color Blue	50	51	60
Clearwater	52	53	360
Booster Blue	54	55	62
Tipton Blue	56	57	362
Blue Bell	58	59	364
Daylight Blue	60	61	65
Tharon Delft Blue	62	63	365
Cerulean Blue	64	65	375
Bermuda Blue	66	67	376
Green Blue	68	69	77
Alice Blue	70	71	378
Primary Blue	72	73	80
Baldassari Blue	74	75	381
Medium Blue	76	77	83
Pale Yellow Green	78	79	87
Light Green	80	81	88
Moss Green	82	83	89
Primary Green	84	85	91
Turquoise	86	87	92
Blue Green	88	89	93
Chocolate	90	91	99
Blackout	92	93	-
Reserved	94	255	-

**Red / Green / Blue / PC Amber / Lime / RoyalBlue**

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Red	0	255	0	65535	Default @ 255 (8bit) / 65535 (16bit)

**X - Y**

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Linear 0.0000 - 0.8500	0	255	0	65535	Default @ 0

**White Point Selector**

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Default	0	1	0	511	Default @ 0, From Color Space Definition on the device
Dynamic	2	255	512	65535	2800K - 10000K

**Dynamic White Point 2800K - 10000K**

Function		8 bit value		16 bit value		Note
CCT(K) From	CCT(K) To	From	To	From	To	
2800	2900	2	6	512	1415	Default @ 0
2900	3000	6	9	1415	2318	
3000	3100	9	13	2318	3221	
3100	3200	13	16	3221	4124	
3200	3300	16	20	4124	5027	
3300	3400	20	23	5027	5931	
3400	3500	23	27	5931	6834	
3500	3600	27	30	6834	7737	
3600	3700	30	34	7737	8640	
3700	3800	34	37	8640	9543	
3800	3900	37	41	9543	10446	
3900	4000	41	44	10446	11349	
4000	4100	44	48	11349	12252	
4100	4200	48	51	12252	13155	
4200	4300	51	55	13155	14058	
4300	4400	55	58	14058	14962	
4400	4500	58	62	14962	15865	
4500	4600	62	65	15865	16768	
4600	4700	65	69	16768	17671	
4700	4800	69	72	17671	18574	
4800	4900	72	76	18574	19477	
4900	5000	76	79	19477	20380	
5000	5100	79	83	20380	21283	

### Dynamic White Point 2800K - 10000K

Function		8 bit value		16 bit value		Note
CCT(K) From	CCT(K) To	From	To	From	To	
5100	5200	83	86	21283	22186	Default @ 0
5200	5300	86	90	22186	23089	
5300	5400	90	93	23089	23993	
5400	5500	93	97	23993	24896	
5500	5600	97	100	24896	25799	
5600	5700	100	104	25799	26702	
5700	5800	104	107	26702	27605	
5800	5900	107	111	27605	28508	
5900	6000	111	114	28508	29411	
6000	6100	114	118	29411	30314	
6100	6200	118	121	30314	31217	
6200	6300	121	125	31217	32120	
6300	6400	125	129	32120	33024	
6400	6500	129	132	33024	33927	
6500	6600	132	136	33927	34830	
6600	6700	136	139	34830	35733	
6700	6800	139	143	35733	36636	
6800	6900	143	146	36636	37539	
6900	7000	146	150	37539	38442	
7000	7100	150	153	38442	39345	
7100	7200	153	157	39345	40248	
7200	7300	157	160	40248	41151	
7300	7400	160	164	41151	42054	
7400	7500	164	167	42054	42958	
7500	7600	167	171	42958	43861	
7600	7700	171	174	43861	44764	
7700	7800	174	178	44764	45667	
7800	7900	178	181	45667	46570	
7900	8000	181	185	46570	47473	
8000	8100	185	188	47473	48376	
8100	8200	188	192	48376	49279	
8200	8300	192	195	49279	50182	
8300	8400	195	199	50182	51085	
8400	8500	199	202	51085	51989	
8500	8600	202	206	51989	52892	
8600	8700	206	209	52892	53795	
8700	8800	209	213	53795	54698	
8800	8900	213	216	54698	55601	
8900	9000	216	220	55601	56504	
9000	9100	220	223	56504	57407	
9100	9200	223	227	57407	58310	
9200	9300	227	230	58310	59213	
9300	9400	230	234	59213	60116	
9400	9500	234	237	60116	61020	
9500	9600	237	241	61020	61923	
9600	9700	241	244	61923	62826	
9700	9800	244	248	62826	63729	
9800	9900	248	251	63729	64632	
9900	10000	251	255	64632	65535	

### Transition Type Channel

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Direct XY (Constant Brightness)	0	9	-	-	Direct fades linear on the shortest distance
<b>Standard Direct XY (w/o Constant Brightness)</b>	<b>10</b>	<b>19</b>	-	-	<b>Direct fades linear on the shortest distance</b>
Through Black	20	29	-	-	"Through Black" fades from color 1 to black to color 2.
Through White 3200K (w/o Constant Brightness)	30	39	-	-	"Through White" fades from color 1 to white to color 2.
Through White 3200K (Constant Brightness)	40	49	-	-	"Through White" fades from color 1 to white to color 2.
Through White 5600K (w/o Constant Brightness)	50	59	-	-	"Through White" fades from color 1 to white to color 2.
Through White 5600K (Constant Brightness)	60	69	-	-	"Through White" fades from color 1 to white to color 2.
Through White 6500K (w/o Constant Brightness)	70	79	-	-	"Through White" fades from color 1 to white to color 2.
Through White 6500K (Constant Brightness)	80	89	-	-	"Through White" fades from color 1 to white to color 2.
Reserved	90	255	-	-	-

### Strobe

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Open	0	1	0	257	Default @ 0
0,9 Hz to 20 Hz Strobing Duty Cycle Open Time: 100 ms to 25 ms Duty Cycle Closed Time: 1000 ms to 25 ms	2	62	514	15934	
Open	63	64	15935	16704	
0,8 Hz to 6,6 Hz Pulse-In Strobing Duty Cycle Puls-In Time: 250 ms to 50 ms Duty Cycle Closed Time: 1000 ms to 100 ms	65	125	16705	32125	
Open	126	127	32126	32895	
0,8 Hz to 6,6 Hz Pulse-Out Strobing Duty Cycle Puls-Out Time: 250 ms to 50 ms Duty Cycle Closed Time: 1000 ms to 100 ms	128	188	32896	48316	
Open	189	190	48317	49086	
0,9 Hz to 20 Hz Random Strobing Duty Cycle Open Time: 100 ms to 25 ms Duty Cycle Closed Time: 1000 ±500 ms to 25 ±12 ms	191	251	49087	64507	
Open	252	255	64508	65535	

### Control Mode 8 bit

Function	8 bit value		Parameters		
	From	To	1	2	3
Mode - CCT	0	9	CCT	GMP	CCT Range Selector
Mode - RGB	10	19	Red	Green	Blue
Mode - HSI	20	29	Hue	Saturation	Intensity
Mode - XY	30	39	X	Y	No Function
Mode - GEL	40	49	Source Lamp	Brand/Category	Gel Selector
Reserved	50	255	No Function	No Function	No Function

### Control Mode 16 bit

Function	8 bit value		Parameters					
	From	To	1	2	3	4	5	6
Mode - CCT	0	9	CCT 16 bit	GMP 16 bit	CCT Range Selector	GMP fine	CCT Range Selector	No Function
Mode - RGB	10	19	Red 16 bit	Green 16 bit	Blue 16 bit	Green Fine	Blue	Blue Fine
Mode - HSI	20	29	Hue 16 bit	Saturation 16 bit	Intensity 16 bit	Saturation fine	Intensity	Intensity fine
Mode - XY	30	39	X 16 bit	Y 16 bit	No Function	Y Fine	No Function	No Function
Mode - GEL	40	49	Source Lamp	Brand/Cat-egory	Gel Selector	Ignored	Gel Selector	Ignored
Reserved	50	255	No Function	No Function	No Function	No Function	No Function	No Function

### Green Magenta Point Channel (GMP)

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Neutral / No Effect	0	1	0	511	Default @ 128 (8bit) / 32768 (16bit)
Full Minus Green	2	3	512	1023	
-99% to -1%	4	126	1024	32511	- 0,025
Neutral / No Effect	127	128	32512	33023	+ 0,025
1% to 99%	129	253	33024	65023	
Full Plus Green	254	255	65024	65535	

### Green Magenta Point Channel (GMP) - LEGACY

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Full Minus Green	0	1	0	511	Default @ 128 (8bit) / 32768 (16bit)
-99% to -1%	2	127	512	32767	
Neutral / No Effect	128	128	32768	33023	+ 0,025
1% to 99%	129	253	33024	65023	
Full Plus Green	254	255	65024	65535	

### Preset Channel

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Safe					
No Function	0	1	-	-	Default @ 0
User Defined Presets					
Preset 01	2	3	-	-	Preset saved by user
Preset 02	4	5	-	-	
Preset 03	6	7	-	-	
Preset 04	8	9	-	-	
Preset 05	10	11	-	-	
Preset 06	12	13	-	-	
Preset 07	14	15	-	-	
Preset 08	16	17	-	-	
Preset 09	18	19	-	-	
Preset 10	20	21	-	-	
Preset 11	22	23	-	-	
Preset 12	24	25	-	-	
Preset 13	26	27	-	-	
Preset 14	28	29	-	-	
Preset 15	30	31	-	-	
Preset 16	32	33	-	-	
Preset 17	34	35	-	-	
Preset 18	36	37	-	-	
Preset 19	38	39	-	-	
Preset 20	40	41	-	-	
Reserved	42	167	-	-	
Factory Presets					
Preset 01	168	169	-	-	CCT - 2000K (+/- 0 GN)
Preset 02	170	171	-	-	CCT - 2500K (+/- 0 GN)
Preset 03	172	173	-	-	CCT - 2900K (+/- 0 GN)
Preset 04	174	175	-	-	CCT - 3200K (+/- 0 GN)
Preset 05	176	177	-	-	CCT - 4000K (+/- 0 GN)
Preset 06	178	179	-	-	CCT - 5000K (+/- 0 GN)
Preset 07	180	181	-	-	CCT - 5600K (+/- 0 GN)
Preset 08	182	183	-	-	CCT - 6500K (+/- 0 GN)
Preset 09	184	185	-	-	CCT - 8000K (+/- 0 GN)
Preset 10	186	187	-	-	CCT - 10000K (+/- 0 GN)
Reserved	188	207	-	-	-
Preset 21	208	209	-	-	HSI - 120° Hue, 100% Saturation
Preset 22	210	211	-	-	HSI - 240° Hue, 100% Saturation
Preset 23	212	213	-	-	GEL - RC 3408, Base CCT 5600K
Preset 24	214	215	-	-	GEL - Lee 187, Base CCT 3200K
Preset 25	216	217	-	-	GEL - RC 3152, Base CCT 3200K
Preset 26	218	219	-	-	GEL - Lee 162, Base CCT 3200K
Reserved	220	255	-	-	-

### Fan Control Channel

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Safe					
No Function	0	1	-	-	Use Fan Mode Setting of Fixture Menu
Auto	2	3	-	-	Automatically regulates fan speed - Drops light only if passing the thermal protection treshold.
Turbo	4	5	-	-	Fixed - 100%
Fan Speed	6	107	-	-	Manual Fan Speed: 0% at 6 dmx value - 20% to 100% from 7 to 107 dmx value in linear progression
Dynamic Light Output					
Quiet 1 DLO	108	109	-	-	Fixed Fan Speed (50%) - Power drop -25%
Quiet 2 DLO	110	111	-	-	Fixed Fan Speed (35%) - Power drop -35%
Off DLO	112	113	-	-	Fixed Fan Speed (0%) - Power drop -65%
Constant Light Output					
Quiet 1 CLO	114	115	-	-	Fixed Fan Speed (50%) - Power limit 75%
Quiet 2 CLO	116	117	-	-	Fixed Fan Speed (35%) - Power limit 65%
Off CLO	118	119	-	-	Fixed Fan Speed (0%) - Power limit 35%
Reserved	120	255	-	-	---

### Control Channel

Function		8 bit value		Note
		From	To	
No Function / Safe		0	1	Default @ 0
Dimmer Speed	<b>Auto</b>	2	3	Hold 3s to take function
	Fast	4	5	
	Medium	6	7	
	Slow	8	9	
	Off	10	11	
Dimmer Curve	Linear	12	13	
	S-Curve	14	15	
	<b>Square Law</b>	16	17	
	Inv. Square Law	18	19	
	High Res @ Low	20	21	
	Tungsten	22	23	
Tungsten Emulation	On	24	25	
	<b>Off</b>	26	27	
Dimmer End	<b>Fade Off</b>	28	29	
	Snap Off	30	31	
Color Space	<b>Native</b>	32	33	
	ProPhoto	34	35	
	sRGB	36	37	
	Rec. 2020	38	39	
	Rec. 709	40	41	
Led Mode	<b>High Brightness</b>	42	43	
	High Quality	44	45	

### Control Channel

Function		8 bit value		Note	
		From	To		
Fan Mode	<b>Auto</b>	46	47	Default @ 0 Hold 3s to take function	
	Turbo	48	49		
	Manual	50	51		
	Quiet 1 DLO	52	53		
	Quiet 2 DLO	54	55		
	Off DLO	56	57		
	Quiet 1 CLO	58	59		
	Quiet 2 CLO	60	61		
Signal Fault	Off CLO	62	63		
	Hold	64	65		
	<b>Hold On Encoder Touch</b>	<b>CCT mode</b>	66	67	
		RGB mode	68	69	
		HSI mode	70	71	
		XY mode	72	73	
		GEL mode	74	75	
		Reserved	76	77	
		Standalone	78	79	
		Blackout	80	81	
	Emergency	82	83		
Startup Behaviour On Encoder Touch	<b>On Encoder Touch</b>	<b>CCT mode</b>	84	85	
		RGB mode	86	87	
		HSI mode	88	89	
		XY mode	90	91	
		GEL mode	92	93	
		Reserved	94	95	
		Standalone	96	97	
		Blackout	98	99	
Led Frequency	Emergency	100	101		
	<b>1282Hz</b>	102	103		
	2000Hz	104	105		
	4000Hz	106	107		
	6000Hz	108	109		
	10kHz	110	111		
	12kHz	112	113		
	15kHz	114	115		
20kHz	116	117			
Reserved			118	119	
			120	121	
			122	123	
Power Limit	<b>100%</b>	124	125		
	75%	126	127		
	50%	128	129		
	25%	130	131		
Reserved			132	135	
Backlight Timeout	Always On	136	137		
	10s	138	139		
	<b>30s</b>	140	141		
	60s	142	143		

### Control Channel

Function		8 bit value		Note
		From	To	
Backlight Display	25%	144	145	Default @ 0 Hold 3s to take function
	50%	146	147	
	75%	148	149	
	<b>100%</b>	150	151	
Backlight settings	Off	152	153	
	<b>On</b>	154	155	
Flip display	On	156	157	
	<b>Off</b>	158	159	
Keylock	On	160	161	
	<b>Off</b>	162	163	
Stand Alone Mode	Master DMX	164	165	
	Master NO DMX	166	167	
	<b>Slave</b>	168	169	
Stand Alone	<b>CCT Mode</b>	170	171	
	RGB Mode	172	173	
	HSI Mode	174	175	
	XY Mode	176	177	
	Gel Mode	178	179	
Reserved		180	181	
Stand Alone Preset	Mode 1	182	183	
	Mode 2	184	185	
	Mode 3	186	187	
	Mode 4	188	189	
	Mode 5	190	191	
	Mode 6	192	193	
	Mode 7	194	195	
	Mode 8	196	197	
	Mode 9	198	199	
	Mode 10	200	201	
	Mode 11	202	203	
	Mode 12	204	205	
	Mode 13	206	207	
	Mode 14	208	209	
	Mode 15	210	211	
	Mode 16	212	213	
	Mode 17	214	215	
	Mode 18	216	217	
	Mode 19	218	219	
	Mode 20	220	221	
Configuration Presets	Preset 1	222	223	
	Preset 2	224	225	
	Preset 3	226	227	
	Preset 4	228	229	
Reserved		230	251	
Factory Default of control functions		252	253	
Reserved		254	255	

## COLOR CORRECTION MODES

Ch	M4 - RGB 16 bit + CC	M8 - XY 16 bit + CC	M16 - CC - CCT + RGB 16 bit	M18 - CC - CCT + RGB 16 bit + GEL 16 bit	M28 - CC - CCT + XY 16 bit	M30 - CC - CCT + XY + GEL 16 bit
1	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer
2	Dimmer Fine	Dimmer Fine	Dimmer Fine	Dimmer Fine	Dimmer Fine	Dimmer Fine
3	Red	X1	CCT	CCT	CCT	CCT
4	Red Fine	X1 fine	CCT Fine	CCT Fine	CCT Fine	CCT Fine
5	Green	Y1	GMP	GMP	GMP	GMP
6	Green Fine	Y1 fine	Crossfade from CCT to RGB	Crossfade from CCT to RGB	Crossfade from CCT to XY	Crossfade from CCT to XY
7	Blue	Crossfade XY1 to XY2	Red	Red	X	X
8	Blue Fine	X2	Red Fine	Red Fine	X Fine	X Fine
9	White Point	X2 fine	Green	Green	Y	Y
10	White Point Fine	Y2	Green Fine	Green Fine	Y Fine	Y Fine
11	Strobe	Y2 fine	Blue	Blue	CCT Range Selector	Crossfade from XY to GEL
12	Control	Transition Type	Blue Fine	Blue Fine	Transition Type	GEL Source Selector
13	Preset	Strobe	CCT Range Selector	Crossfade from RGB to GEL	Strobe	GEL Brand / Category
14	Fan Control	Control	White Point	GEL Source Selector	Control	GEL Selector
15	Reserved	Preset	White Point Fine	GEL Brand / Category	Preset	CCT Range Selector
16	CC Mode	Fan Control	Transition Type	GEL Selector	Fan Control	Transition Type
17	Warmer/Cooler	Reserved	Strobe	CCT Range Selector	Reserved	Strobe
18	Saturation	CC Mode	Control	White Point	CC Mode	Control
19	CC Parameter 1	Warmer/Cooler	Preset	White Point Fine	Warmer/Cooler	Preset
20	CC Parameter 2	Saturation	Fan Control	Transition Type	Saturation	Fan Control
21	CC Parameter 3	CC Parameter 1	Reserved	Strobe	CC Parameter 1	Reserved
22	CC Parameter 4	CC Parameter 2	CC Mode	Control	CC Parameter 2	CC Mode
23	CC Parameter 5	CC Parameter 3	Warmer/Cooler	Preset	CC Parameter 3	Warmer/Cooler
24	CC Parameter 6	CC Parameter 4	Saturation	Fan Control	CC Parameter 4	Saturation
25		CC Parameter 5	CC Parameter 1	Reserved	CC Parameter 5	CC Parameter 1
26		CC Parameter 6	CC Parameter 2	CC Mode	CC Parameter 6	CC Parameter 2
27			CC Parameter 3	Warmer/Cooler		CC Parameter 3
28			CC Parameter 4	Saturation		CC Parameter 4
29			CC Parameter 5	CC Parameter 1		CC Parameter 5
30			CC Parameter 6	CC Parameter 2		CC Parameter 6
31				CC Parameter 3		
32				CC Parameter 4		
33				CC Parameter 5		
34				CC Parameter 6		

## COLOR CORRECTION CHANNELS DEFINITION

### Color Correction Mode Selector

Function	8 bit value		Note
	From	To	
Standard	0	9	Default @ 0 Color correction occurs with a purely mathematical shift of the xy coordinates
Subtractive Color	10	19	Color correction occurs by acting on the emitter (i.e. the LED source)
Reserved	20	255	

### Cooler / Warmer

Function	8 bit value		Note
	From	To	
Cooler/Warmer	0	255	Default @ 128 Linear Correction from Cooler to Warmer

### Desaturate / Saturate

Function	8 bit value		Note
	From	To	
Desaturate/Saturate	0	255	Default @ 128 Linear change from a less saturated light to a more saturated light

### CC Parameter 1

Function	8 bit value		Note
	From	To	

#### Color Correction: Standard Mode

±Red	0	255	Default @ 128 Linear change from less Red to more Red as you move through x-y coordinates
------	---	-----	----------------------------------------------------------------------------------------------

#### Color Correction: Subtractive Color Mode

±Red	0	255	Default @ 128 Linear change from less Red to more Red by varying the emission of the Red LEDs
------	---	-----	--------------------------------------------------------------------------------------------------

### CC Parameter 2

Function	8 bit value		Note
	From	To	

#### Color Correction: Standard Mode

±Green	0	255	Default @ 128 Linear change from less Green to more Green as you move through x-y coordinates
--------	---	-----	--------------------------------------------------------------------------------------------------

#### Color Correction: Subtractive Color Mode

±Green	0	255	Default @ 128 Linear change from less Green to more Green by varying the emission of the Green LEDs
--------	---	-----	--------------------------------------------------------------------------------------------------------

### CC Parameter 3

Function	8 bit value		Note
	From	To	
<b>Color Correction: Standard Mode</b>			
±Blue	0	255	Default @ 128 Linear change from less Blue to more Blue as you move through x-y coordinates
<b>Color Correction: Subtractive Color Mode</b>			
±Blue	0	255	Default @ 128 Linear change from less Blue to more Blue by varying the emission of the Blue LEDs

### CC Parameter 4

Function	8 bit value		Note
	From	To	
<b>Color Correction: Standard Mode</b>			
±Cyan	0	255	Default @ 128 Linear change from less Cyan to more Cyan as you move through x-y coordinates
<b>Color Correction: Subtractive Color Mode</b>			
±PC Amber	0	255	Default @ 128 Linear change from less PC Amber to more PC Amber by varying the emission of the PC Amber LEDs

### CC Parameter 5

Function	8 bit value		Note
	From	To	
<b>Color Correction: Standard Mode</b>			
±Magenta	0	255	Default @ 128 Linear change from less Magenta to more Magenta as you move through x-y coordinates
<b>Color Correction: Subtractive Color Mode</b>			
±Lime	0	255	Default @ 128 Linear change from less Lime to more Lime by varying the emission of the Lime LEDs

### CC Parameter 6

Function	8 bit value		Note
	From	To	
<b>Color Correction: Standard Mode</b>			
±Yellow	0	255	Default @ 128 Linear change from less Yellow to more Yellow as you move through x-y coordinates
<b>Color Correction: Subtractive Color Mode</b>			
±Cyan	0	255	Default @ 128 Linear change from less Cyan to more Cyan by varying the emission of the Cyan LEDs

## 12 - ERROR MESSAGES

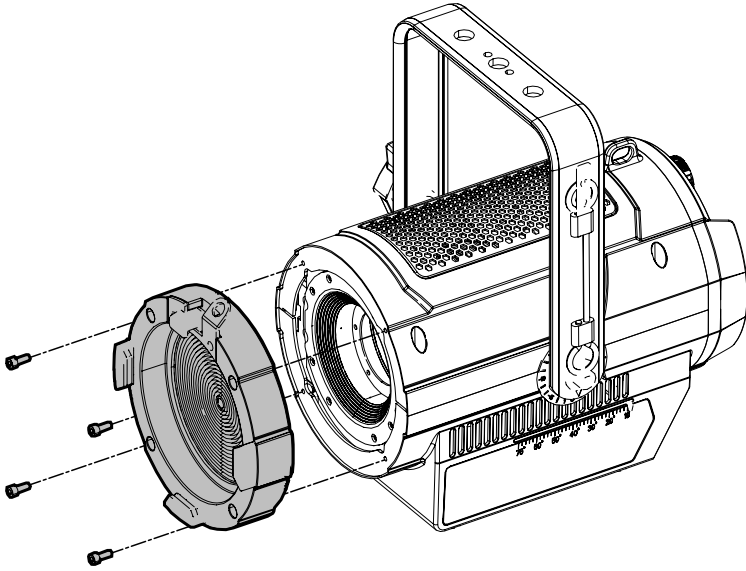
The error is shown on the unit display. In the table below, the "ERROR SHOWED ON SCREEN" column lists the possible errors, accompanied by a possible cause ("POSSIBLE CAUSES "column).

ERROR SHOWED ON SCREEN	POSSIBLE CAUSES	CATEGORY
<b>Factory Reload Failed</b>	The fixture was unable to reload Factory Defaults. Internal error during read or apply of factory data.	FACTORY DEFAULTS
<b>Factory Reload Timeout</b>	Factory reload operation did not complete in the expected time. Possible communication issue with internal memory.	FACTORY DEFAULTS
<b>Factory Reload Done</b>	Information: Factory defaults restored successful	FACTORY DEFAULTS
<b>Preset N Save Failed</b>	Error while saving the selected preset. Memory write failed or internal communication error.	PRESETS
<b>Preset N Save Timeout</b>	Saving the preset took too long and timed out. Possible memory access issue.	PRESETS
<b>Preset N Saved</b>	Information: Preset stored successful	PRESETS
<b>Preset N Recalled</b>	Information: Preset recalled successful	PRESETS
<b>Preset N Not Available</b>	Preset not available in Memory	PRESETS
<b>Screen is disabled with active DMX!</b>	Information: Screen is disabled with active DMX, Stand Alone Mode not possible	STAND ALONE

# 13 - ACCESSORIES INSTALLATION

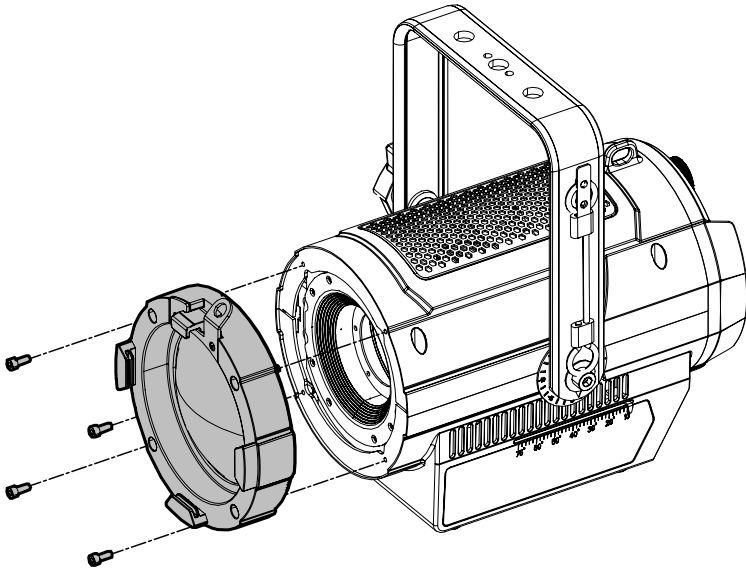
PC LENS KIT (CODE ECLFRCTPXSPCLK)

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1. Remove the fresnel lens kit as shown in figure.

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2. Replace it with the PC lens kit as shown in figure.

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Fig. 10

# 14 - MAINTENANCE

## MAINTENANCE AND CLEANING THE PRODUCT

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**WARNING:** Disconnect from the mains before starting any maintenance work

It is recommended to clean the front at regular intervals, from impurities caused by dust, smoke, or other particles to ensure that the light is radiated at maximum brightness.

- For cleaning, disconnect the main plug from the socket. Use a soft, clean cloth moistened with a mild detergent. Then carefully wipe the part dry. For cleaning other housing parts use only a soft, clean cloth. Never use a liquid, it might penetrate the unit and cause damage to it.
- The user must clean the product periodically to maintain optimum performance and cooling. The user may also upload firmware (product software) to the fixture via the DMX signal input port or USB port using firmware and instructions from PROLIGHTS.
- The frequency of such maintenance operations is to be performed according to various factors, such as the amount of the use and the condition of the installation environment (air humidity, presence of dust, salinity, etc.). It is recommended that the product is subject to annual service by a qualified technician for special maintenance involving at least the following procedures:
- General cleaning of internal parts.
- For all the parts subject to friction, using lubricants specifically supplied by PROLIGHTS.
- General visual check of the internal components, cabling, mechanical parts, etc.
- Electrical, photometric and functional checks; eventual repairs.
- Cleaning the lenses. Only use neutral soap and water to clean the lenses, then dry it carefully with a soft, non-abrasive cloth.

**WARNING:** the use of alcohol or any other detergent could damage the lenses.

- All other service operations on the product must be carried out by PROLIGHTS, its approved service agents or trained and qualified personnel.
- It is PROLIGHTS policy to apply the strictest possible calibration procedures and use the best quality materials available to ensure optimum performance and the longest possible component lifetimes. However, optical components are subject to wear and tear over the life of the product, resulting in gradual changes in colours over many thousands of hours of use. The extent of wear and tear depends heavily on operating conditions and environment, so it is impossible to specify precisely whether and to what extent performance will be affected. However, you may eventually need to replace optical components if their characteristics are affected by wear and tear after an extended period of use and if you require fixtures to perform within very precise optical and colour parameters.
- Do not apply filters, lenses or other materials on lenses or other optical components. Use only accessories approved by PROLIGHTS.

## REPLACING THE FUSE

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**WARNING:** Before replacing the fuse, unplug the product from the mains.

- Remove the old fuse from the housing with a suitable screwdriver (anticlockwise) and replace it with one of the same type and of the same classification (T2A, 250 V).

## VISUAL CHECK OF PRODUCT HOUSING

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- The parts of the product cover/housing should be checked for eventual damages and breaking start at least every two months. In addition, especially the parts of the front lens holder have to be checked mechanically (by means of movement by the part) if it is firmly fastened to the fixture. If hint of a crack is found on some plastic part, do not use the product until the damaged part will be replaced.

- Cracks or another damages of the cover/housing parts can be caused by the product transportation or manipulation and also ageing process may influence materials.
- This checking is necessary for both fixed installations and preparing product for renting. Any free moving parts inside of the product, cracked cover/housing or any part of front lens not sitting properly in place need to be immediately replaced.

## TROUBLESHOOTING

Problems	Possible causes	Checks and remedies
Product doesn't power ON	• No power to the product.	• Check that power is switched ON and cables are plugged in.
	• Fuse blown or internal fault.	• Check if the Fuse is intact and eventually replace it if necessary. • Contact the PROLIGHTS Service or authorized service partner. Do not remove parts and/or covers, or carry out any repairs or service that are not described in this Safety and User Manual unless you have both authorization from PROLIGHTS and the service documentation.
Product does not respond correctly to the controller.	• Bad signal connection.	• Inspect connections and cables. Fix eventual bad connections. Repair or replace damaged cables.
	• Signal connection not terminated.	• Insert DMX termination plug in signal output socket of the last product on the signal line.
	• Incorrect addressing of the product.	• Check the product address and control settings.
	• One of the product is defective and is corrupting the signal transmission on the signal line.	• Unplug the XLR in and out connectors and connect them directly together to bypass one product at a time until normal operation is regained. Once found the error, have that fixture serviced by a qualified technician.
Mechanical effect loses position	• Mechanical hardware require cleaning, adjustment or lubrication.	• Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.
Light output turn OFF Intermittently	• Fixture is too hot.	• Check product stored error messages. • Allow product to cool. • Clean the product and airflow filters. • Reduce ambient temperature.
	• Hardware failure (temperature sensor, fans, Light source...).	• Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.
General low light intensity	• Dirty lens assembly. • Dirty or damaged filters.	• Clean the fixture regularly. • Install lens assembly properly.

Contact an authorized service center in case of technical problems or not reported in the table can not be resolved by the procedure given in the table.









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**MUSIC & LIGHTS S.r.l.**  
**musiclights.it**

Via A.Olivetti snc  
04026 - Minturno (LT) ITALY  
Tel: +39 0771 72190

**prolights.it**  
support@prolights.it