



EclFresnel CT+M

EclFresnel CT+MIP

350 W IP65 Led Fresnel with 6 color source,
200mm-8" lens



USER MANUAL

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 , or can be inquired to the official PROLIGHTS distributors of your territory (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.



EclFresnel CT+M

**Visit the download area
of the product page**



EclFresnel CT+MIP



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SAFETY INFORMATION



WARNING!

- See <https://www.prolights.it/product/ECLFRCTPM#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 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.



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 0.5 meters (1.64 ft) from the lens of the projector.



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.



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 2 according to EN 62471.



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).



Les produits auxquels ce manuel fait référence sont conformes:

- UL 1573 + CSA C22.2 n° 166 - Luminaires de scène et de studio et barrettes de connexion.
- UL 1012 + CSA C22.2 N° 107.1 - Norme pour les unités de puissance autres que la classe 2.



Conformité FCC:

- Cet appareil est conforme à la partie 15 des règles de la FCC. L'exploitation est soumise aux deux conditions suivantes:
1. Cet appareil ne doit pas causer d'interférences nuisibles et
 2. Cet appareil doit accepter toute interférence reçue, y compris les interférences pouvant provoquer un fonctionnement indésirable.



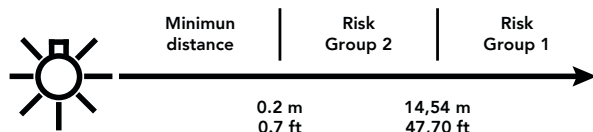
Other approvals





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 14,54 m (47,70 ft) is not expected.



ECLFRCTPM - IP20 Version



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_a45°C

Max operating ambient temperature (T_a)

- Do not operate the fixture if the ambient temperature (T_a) exceeds 45 °C (113 °F).

T_a-10°C

Minimum operating ambient temperature (T_a)

- Do not operate the fixture if the ambient temperature (T_a) is below -10 °C (14 °F).

T_c70°C

Temperature of the external surface

- The surface of the fixture can reach up to 70 °C (158 °F) during operation. Avoid contact with people and materials.

ECLFRCTPMIP - IP65 Version

IP65

Permanent Outdoor use

- This product is rated with an IP (Ingress protection) for permanent outdoor use when used and serviced according to the instruction contained in this document.
- 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_a45°C

Max operating ambient temperature (T_a)

- Do not operate the fixture if the ambient temperature (T_a) exceeds 45 °C (113 °F).

T_a-20°C

Minimum operating ambient temperature (T_a)

- Do not operate the fixture if the ambient temperature (T_a) is below -20 °C (-4 °F).

T_c80°C

Temperature of the external surface

- The surface of the fixture can reach up to 80 °C (176 °F) during operation. Avoid contact with people and materials.

1 - PACKAGING

PACKAGE CONTENT

- 1x ECLFRESNEL CT+M / CT+MIP;
- 1x ECLFRSPG: spigot for PROLIGHTS Fresnel series;
- 1x ECLFRCTPMBD: barn door with 8 directional flaps to adjust the light beam;
- 1x ECLFRCTPMFF: filter frame for ECLFRESNEL series;
- 1x 1,5 meters power cable (BARE END - NEUTRIK POWERCON TRUE1 IP65);
- 1x User manual

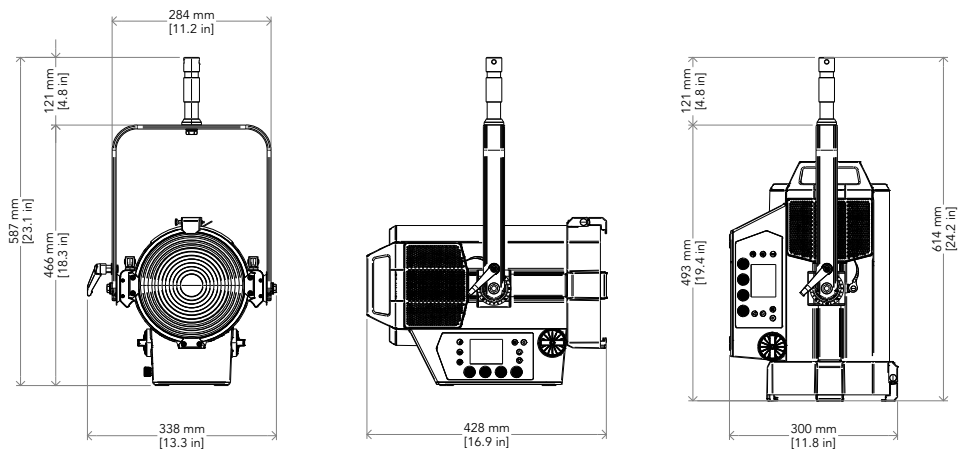
OPTIONAL ACCESSORIES

Check the updated accessories list, description and informations of the product at the following link:

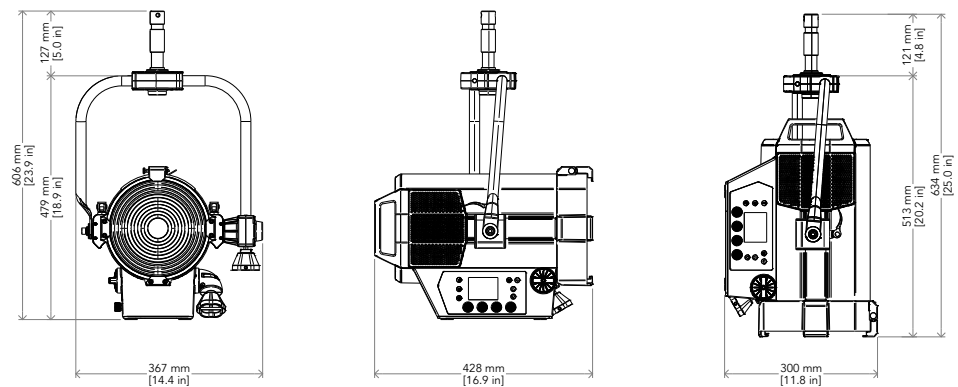
ECLFRCTPM: <https://www.prolights.it/product/ECLFRCTPM#accessories>

ECLFRCTPMIP: <https://www.prolights.it/product/ECLFRCTPMIP#accessories>

2 - TECHNICAL DRAWING

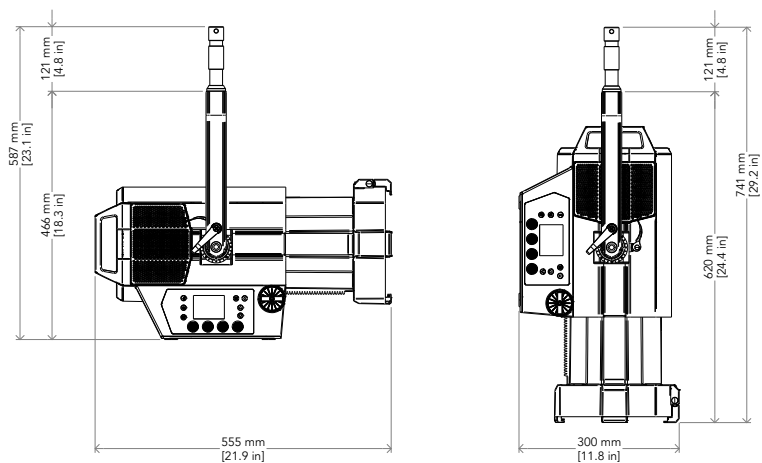


ECLFRCTPM - Weight: 9,9 kg / 21,82lbs

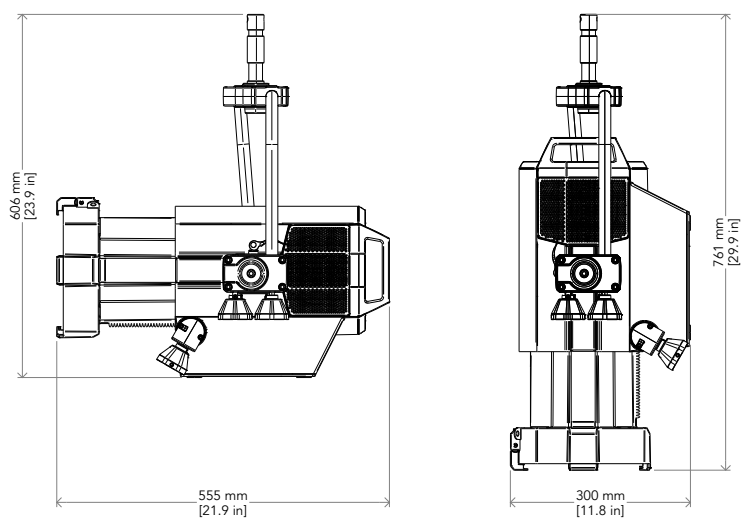


ECLFRCTPM+ECLFRCTPMKPOYO - Weight: 11,9 kg - 26,23 lbs

Fig. 01



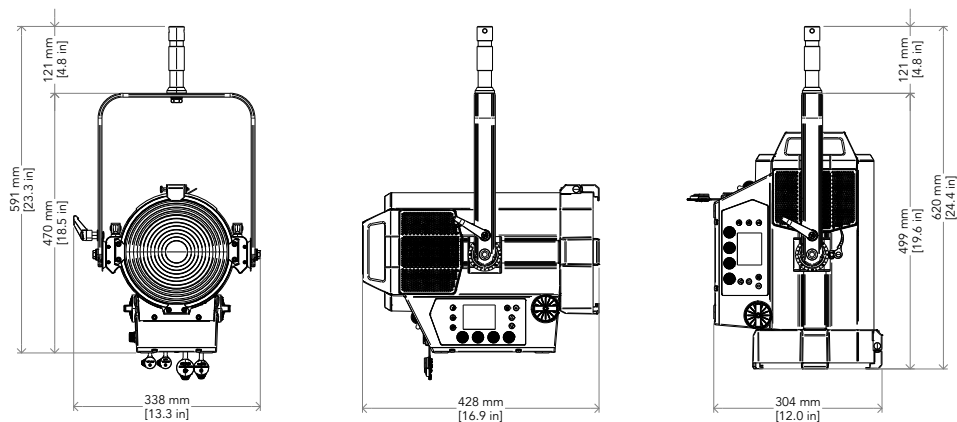
ECLFRCTPM - Weight: 9,9 kg / 21,82lbs



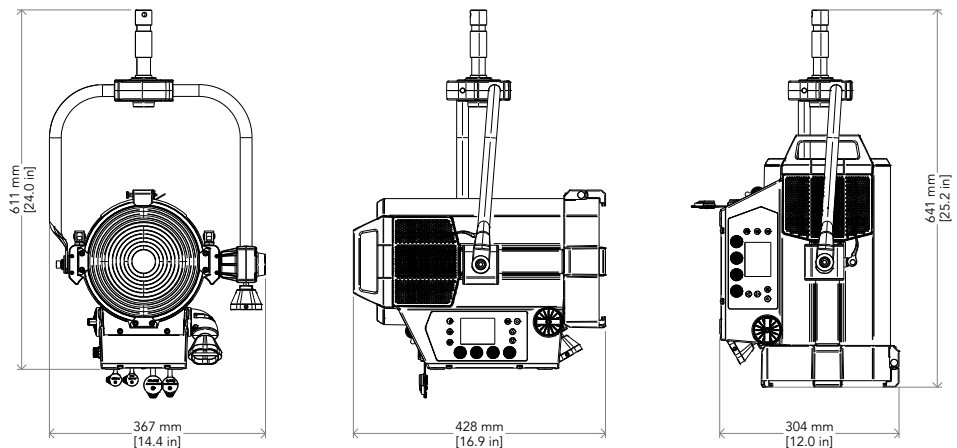
ECLFRCTPM+ECLFRCTPMKPOYO - Weight: 11,9 kg - 26,23 lbs

Fig. 02

2 - TECHNICAL DRAWING

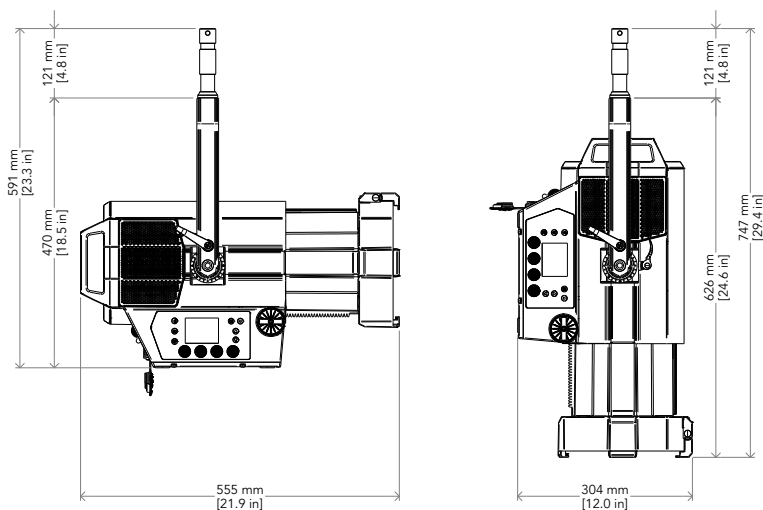


ECLFRCTPMIP - Weight: 10,9 kg / 24,03 lbs

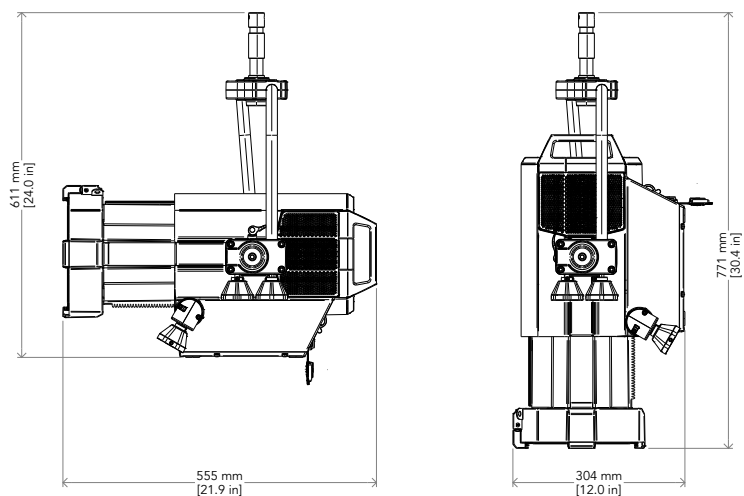


ECLFRCTPMIP+ECLFRCTPMKPOYO - Weight: 12,9 kg - 28,44 lbs

Fig. 01



ECLFRCTPMIP - Weight: 10,9 kg / 24,03 lbs



ECLFRCTPMIP+ECLFRCTPMKPOYO - Weight: 12,9 kg - 28,44 lbs

Fig. 02

3 - INSTALLATION

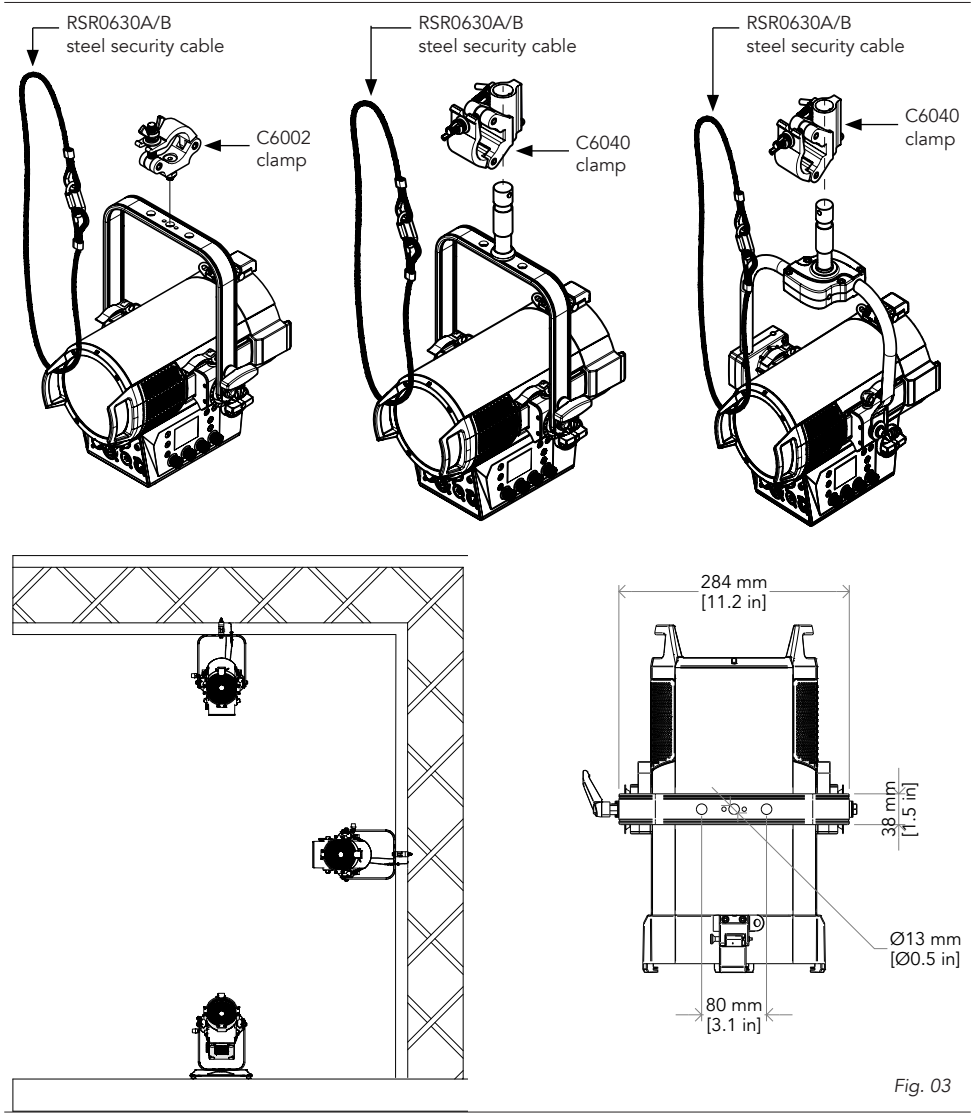
MOUNTING

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.



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 350W.

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. SLIDING BRACKET;
2. KNOB for bracket;
3. USER INTERFACE with display and ROTATORY KNOBS for access to the control panel functions;
4. ZOOM KNOB;
5. Sliding bracket lock and release mechanism;
6. POLE OPERATED BRACKET;
7. YELLOW KNOB: zoom function;
8. WHITE KNOB: tilt function;
9. BLUE KNOB: pan function;
- 10.DC POWER IN (3-pole XLR): for battery within 48 V range, 1 = V -, 2 = V+, 3 = N/C
- 11.MAIN FUSE HOLDER: (ONLY IP20) replace a burnt-out fuse by one of the same type only (T6.3A 250V);
- 12.WEIPU SA12 series 4P-F connector for remote control;
- 13.ANTENNA (Included in IP65, Optional kit LRTM2SPIBK for IP20);
- 14.POWER IN: for connection to the Mains 100-240V~/50-60Hz;
- 15.POWER OUT: power output for connection of multiple units in series.
- 16.DMX IN (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C;
- 17.DMX OUT (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C;

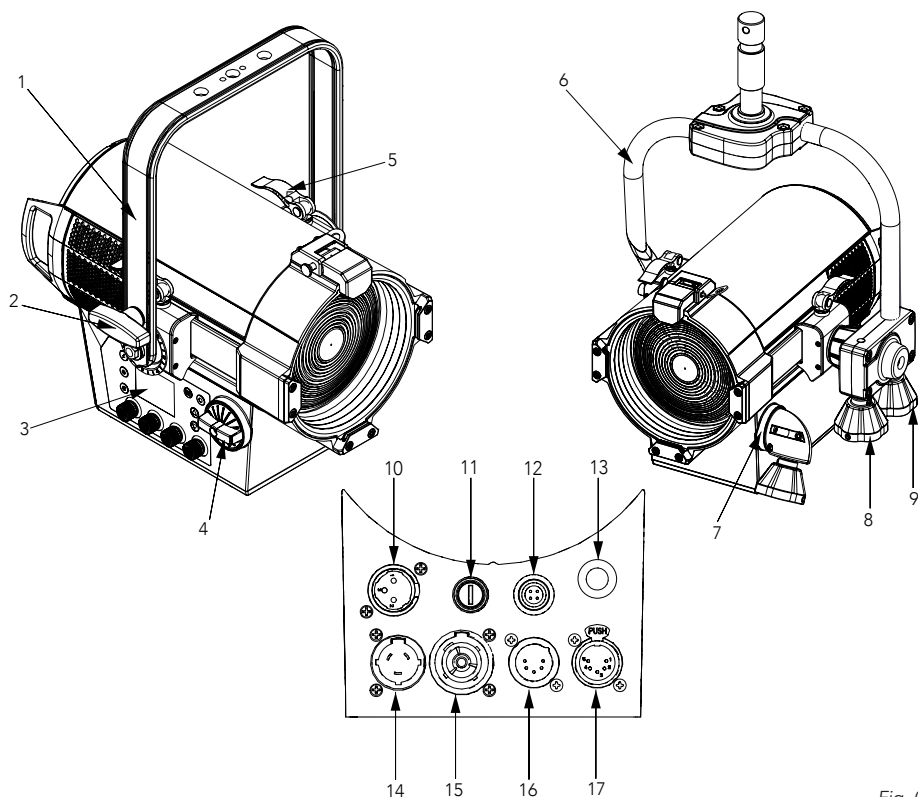


Fig. 04

7 - DMX CONNECTION

CONNECTION OF THE CONTROL SIGNAL: DMX LINE

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

DMX - INPUT
XLR plug



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

DMX - OUTPUT
XLR socket

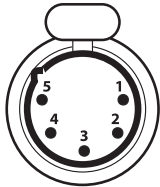


Fig. 05

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:

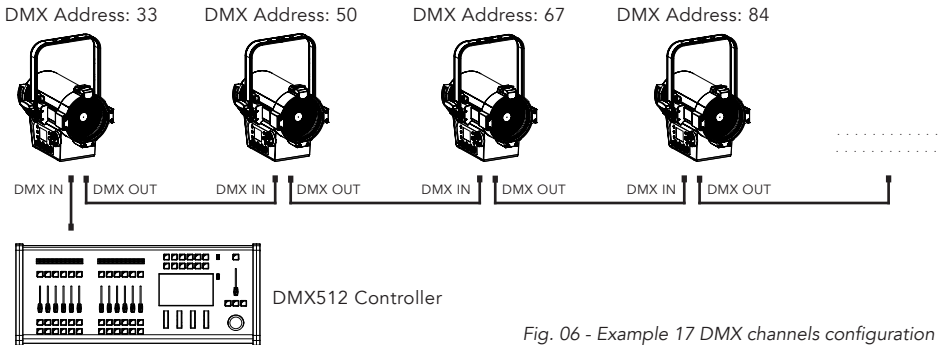


Fig. 06 - Example 17 DMX channels configuration

CONSTRUCTION OF THE DMX TERMINATION

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

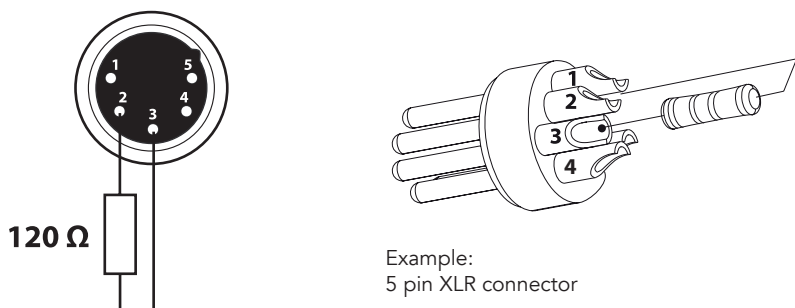


Fig. 07

WARNING:

- **DMX control circuit is not isolated.**
- **Cumulative leakage current on the DMX control circuit is less than 3.5 mA.**

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.

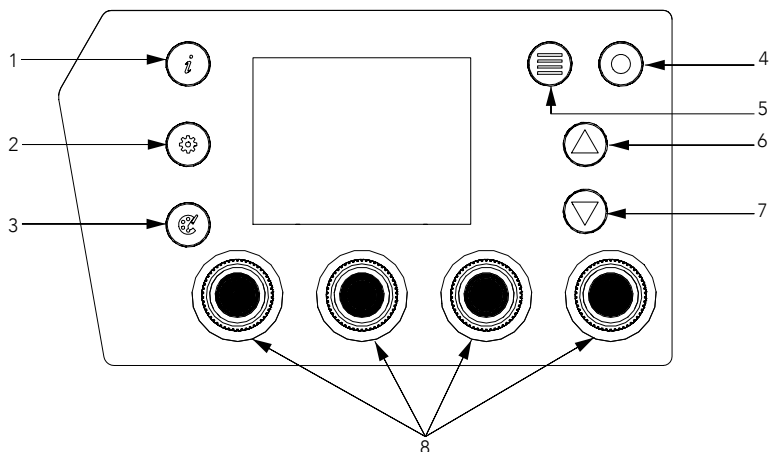


Fig. 08

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 ENCODERS: used to control stand alone modes.

9 - MENU STRUCTURE

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

N°	MENU	LEVEL 1	LEVEL 2	LEVEL 3	DESCRIPTION	
1	CONNECT	ADDRESS	001-512		Set address used for Fixture.	
		DMX MODE	MODE	UNO	USER PRESETS	Set DMX chart for Main Fixture.
					FACTORY PRESETS	"MODE+COLOR CORRECTION" is available only if COLOR CORRECTION@ON
				DUO	USER PRESETS	
					FACTORY PRESETS	
				IRGB		
				STANDARD		
				M2 - CCT 16 BIT		
				M3 - RGB 8 BIT		
				M4 - RGB 16 BIT		
				M8 - XY 16 BIT		
				M15 - CCT+RGB 8 BIT		
				M16 - CCT+RGB 16 BIT		
				M17 - CCT+RGB+GEL 8 BIT		
				M18 - CCT+RGB+GEL 16 BIT		
				M28 - CCT+XY 16 BIT		
				M30 - CCT+XY + GEL 16 BIT		
				M35 - RAW CONTROL 8 BIT		
				M36 - RAW CONTROL 16 BIT		
				M101 - PIXEL MAPPER MODE		
				BASIC 2		
				M16FX - CCT+RGB 16 BIT		
				M37 - CCT+RAW 16 BIT		
				MULTIMODE 8bit DUAL		
			MODE+COLOR CORRECTION	M2 - CC - CCT 16 BIT		
				M3 - CC - RGB 8 BIT		
				M4 - CC - RGB 16 BIT		
				M8 - CC - XY 16 BIT		
				M15 - CC - CCT + RGB 8 BIT		
		M16 - CC - CCT + RGB 16 BIT				
		M17 - CC - CCT + RGB + GEL 8 BIT				
		M18 - CC - CCT + RGB + GEL 16 BIT				
		M28 - CC - CCT + XY 16 BIT				
		M30 - CC - CCT + XY + GEL 16 BIT				

N°	MENU	LEVEL 1	LEVEL 2	LEVEL 3		DESCRIPTION		
1	CONNECT	WIRELESS (available with a TimoTwo card installed, included in the IP model and optional in the indoor model)	CRMX ON/OFF	ON		If CRMX@OFF all other CRMX settings are not available.		
				OFF				
			CRMX MODE	TX CRMX		Allows to choose whether to set the wireless on the Transmitter or Receiver.		
				TX G3				
				TX G4S				
				RX				
			TX LINK RECEIVERS	YES		TX link is available when the unit is set as a transmitter.		
				NO				
			TX UNLINK ALL RECEIVERS	YES		Disconnect the transmitter from all receivers. TX unlink is available only if CRMX mode is as transmitter.		
				NO				
			RX UNLINK RECEIVER	YES		RX unlink is available when the unit is set as a receiver.		
				NO				
			USE LINKING KEY	YES		To enable Linking key.		
				NO				
			SET LINKING KEY	XXXXXXXX	0-9	To 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	CRMX		SET LINKING MODE is available when the unit is set as a receiver.		
				CRMX2				
			SET LINKING UNIVERSE	A		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.		
				NO				
			USE BLUETOOTH KEY	YES		To enable bluetooth key.		
				NO				
			SET BLUETOOTH KEY	XXXXXX	0-9	Only available if USE BLUETOOTH KEY@YES.		
			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				
				OFF				

Nº	MENU	LEVEL 1	LEVEL 2	LEVEL 3	DESCRIPTION	
1	CONNECT	UNIVERSE NAME			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		To see CRMX status.	
		LINK STRENGTH	0 - 100%		To see signal level.	
		SOFTWARE VERSION	V xxxx		To see Software version.	
		CRMX MODULE	TimoTwo: Vxxxx		To see wireless module.	
2	SETUP	LIGHT CONTROL	DIMMER SPEED	AUTO		To set Dimmer Speed.
				SLOW		
				MEDIUM		
				FAST		
				OFF		
			DIMMER CURVE	LINEAR		To set Dimmer Curve.
				S-CURVE		
				SQUARE LAW		
				INVERSE SQUARE LAW		
				HIGH RES @ LOW		
				TUNGSTEN		
			TUNGSTEN EMULATION	OFF		To enable/disable Tungsten Emulation.
				ON		
			COLOR SPACE	NATIVE		To select Color Space
				PROPHOTO RGB		
				SRGB		
				REC. 2020		
				REC. 709		
			LED MODE	HIGH BRIGHTNESS		To select LED Mode.
				HIGH QUALITY		
			COLOR CORRECTION	ON		To enable/disable Color Correction.
				OFF		
			DIMMER MINIMUM END	STANDARD		
				LOW		
		FIXTURE CONTROL	FAN MODE	AUTO		To select Fan Mode
				TURBO		
				MANUAL	0% - 100%	
				QUIET 1 DLO		
				QUIET 2 DLO		
				OFF DLO		
				QUIET 1 CLO		
				QUIET 2 CLO		
				OFF CLO		
				QUIET 3 DLO		
				QUIET 3 DLO		

N°	MENU	LEVEL 1	LEVEL 2	LEVEL 3		DESCRIPTION	
2	SETUP	FIXTURE CONTROL	SIGNAL FAULT BEHAVIOUR	Hold		Define the behaviour of fixture in case of DMX signal lost.	
				Hold - On Encoder Touch	CCT Mode		
					RGB Mode		
					HSI Mode		
					XY Mode		
					Gel Mode		
				Standalone			
				Blackout			
				Emergency			
				STARTUP BEHAVIOUR	Hold - On Encoder Touch		CCT Mode
			RGB Mode				
			HSI Mode				
			XY Mode				
			Gel Mode				
			Standalone				
			Blackout				
			Emergency				
			LED FREQUENCY	1282Hz		To select LED PWM frequency.	
				2000Hz			
				4000Hz			
				6000Hz			
				10kHz			
				12kHz			
				15kHz			
		20kHz					
		25kHz					
		36kHz					
		40kHz					
		POWER LIMIT		200W			To select Power Limit.
				190W			
			180W				
			170W				
			160W				
			150W				
			100W				
			50W				
			UI SETTINGS	VALUES FORMAT	TEMPERATURE	°C	
		°F					
		BACKLIGHT SETTINGS		BACKLIGHT TIMEOUT	ON	Select the timing after that display/ buttons will switch automatically off when unactive.	
					10s		
					30s		
					60s		

N°	MENU	LEVEL 1	LEVEL 2	LEVEL 3		DESCRIPTION
2	SETUP	UI SETTINGS	BACKLIGHT SETTINGS	BACKLIGHT DIMMER	25%	Select backlight intensity.
					50%	
					75%	
					100%	
			BACKLIGHT ENCODER	Off	Select backlight intensity of Push Knob Encoder.	
				On		
		FLIP DISPLAY	OFF		Allows you to rotate display by 180°	
			ON			
		KEYLOCK	OFF		Password to unlock: Up-Down-Up-Down	
			ON			
CONFIG. PRESETS	PRESET 1	SAVE/ RECALL	YES/NO	Stores all settings to the preset chosen.		
	PRESET 2					
	PRESET 3					
	PRESET 4					
3	ADVANCED	MANAGEMENT TOOLS	CLEAR COLOR PRESETS			
		FACTORY RELOAD	RELOAD?			
			CANCEL			
4	STANDALONE	CCT MODE				
		RGB MODE				
		HSI MODE				
		XY MODE				
		GEL MODE				
		PRESET MODE				
5	INFORMATION	FIXTURE HOURS	<99999H>			
		SOURCE HOURS	<99999H>			
		POWER CYCLES	<99999>			
		POWER CONSUMPTION	x W			Real time informations.
		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				

FAN MODE

FAN MODE	MAX POWER	FAN SPEED
Auto	100%	Variable from 0% to 60% according to the led temperature to keep constant output.
Turbo	100%	Fixed Speed: 100%
Manual	Up to 100%	Manual Speed: Up to 100%
Quiet 1 DLO	Starts from 100% Max drop -30%	Fixed Fan Speed (S = 45% ; M = 30% ; L = 35%)
Quiet 2 DLO	Starts from 100% Max drop -40%	Fixed Fan Speed (S = 35% ; M = 25% ; L = 25%)
Quiet 3 DLO	Starts from 100% Max drop -55%	Fixed Fan Speed (S = 20% ; M = 20% ; L = 15%)
OFF DLO	Starts from 100% Max drop -65%	Fixed Speed: 0 RPM
Quiet 1 CLO	70%	Fixed Fan Speed (S = 45% ; M = 30% ; L = 35%)
Quiet 2 CLO	60%	Fixed Fan Speed (S = 35% ; M = 25% ; L = 25%)
Quiet 3 CLO	45%	Fixed Fan Speed (S = 20% ; M = 20% ; L = 15%)
OFF CLO	35%	Fixed Speed: 0 RPM

NOTE

Fan settings through the "Control Channel" are saved permanently on the device. They can be changed again via the "Control Channel" or through the menu;
The "Fan Control" channel operates as long as that value is being sent to the fixture. At a value of 0, the fixture's fans operate as set in the menu.

UNO/DUO PRESETS

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)
Source Emulation - HMI
Source Emulation - Low Pressure Sodium
Source Emulation - CFL Bright White
Source Emulation - CFL Cool White
Source Emulation - CFL Daylight
Source Emulation - Halogen
Source Emulation - Candle
Source Emulation - Sun Direct
Source Emulation - Sun Overcast
Source Emulation - Sun Blue Hour
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

10 - RDM FUNCTIONS

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
Product Information	SUPPORTED_PARAMETERS	0x0050	x	
	DEVICE_MODEL_DESCRIPTION	0x0080	x	
	MANUFACTURER_LABEL	0x0081	x	
	DEVICE_LABEL	0x0082	x	x
	FACTORY_DEFAULTS	0x0090	x	x
	BOOT_SOFTWARE_VERSION_ID	0x00C1	x	
	BOOT_SOFTWARE_VERSION_LABEL	0x00C2	x	
DMX512 Setup	DMX_PERSONALITY	0x00E0	x	x
	DMX_PERSONALITY_DESCRIPTION	0x00E1	x	
	DMX_START_ADDRESS	0x00F0	x	x
Sensors	SENSOR_DEFINITION	0x0200	x	
	SENSOR_VALUE	0x0201	x	x
	RECORD_SENSORS	0x0202	x	x
Power/Lamp Settings	DEVICE_HOURS	0x0400	x	x
	LAMP_HOURS	0x0401	x	x
	LAMP_STRIKES	0x0402	x	x
	DEVICE_POWER_CYCLES	0x0405	x	x
Control	RESET_DEVICE	0x1001		x

11 - DMX CHARTS

Model	RDM ID
ECLFRCTPS	D106
ECLFRCTPSIP	D132
ECLFRCTPM	D107
ECLFRCTPMIP	D109
ECLFRCTPL	D108
ECLFRCTPLIP	D110

RDM Personality ID List:

ID	DMX Mode	Footprint
1	UNO	1
2	DUO	2
3	BASIC	4
4	STANDARD	11
5	M2 - CCT 16 bit	11
6	M3 - RGB 8 bit	11
7	M4 - RGB 16 bit	15
8	M8 - XY 16 bit	17
9	M15 - CCT + RGB 8 bit	17
10	M16 - CCT + RGB 16 bit	21
11	M17 - CCT + RGB + GEL 8 bit	21
12	M18 - CCT + RGB + GEL 16 bit	25
13	M28 - CCT + XY 16 bit	17
14	M30 - CCT + XY + GEL 16 bit	21
15	M2 - CCT 16 bit + CC	20 *
16	M3 - RGB 8 bit + CC	20 *
17	M4 - RGB 16 bit + CC	24 *
18	M8 - XY 16 bit + CC	26 *
19	M15 - CCT + RGB 8 bit + CC	26 *
20	M16 - CCT + RGB 16 bit + CC	30 *
21	M17 - CCT + RGB + GEL 8 bit + CC	30 *
22	M18 - CCT + RGB + GEL 16 bit + CC	34 *
23	M28 - CCT + XY 16 bit + CC	26 *
24	M30 - CCT + XY + GEL 16 bit + CC	30 *
25	M35 - RAW Control 8 bit	12
26	M36 - RAW Control 16 bit	19
27	M101 - PIXEL MAPPER MODE	3
28	BASIC 2	5
29	M16 - CCT + RGB + FX 16 bit	29
30	M37 - CCT + RAW 16 BIT	25
31	MULTIMODE 8bit DUAL	25

NOTE: The dmx modes marked with an asterisk (*) are only available if the Colour Correction mode is activated from the menu

Channel	UNO	DUE	BASIC	BASIC 2	STANDARD	MULTIMODE 8bit DUAL	M2 - CCT 16 bit
1	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer
2		Dimmer Fine	Red	Dimmer Fine	Dimmer Fine	Dimmer Fine	Dimmer Fine
3			Green	CCT	CCT	Control Mode 8bit	CCT
4			Blue	CCT Fine	CCT Fine	Parameter 1	CCT Fine
5				GMP	GMP	Parameter 2	GMP
6					Crossfade from CCT to RGB	Parameter 3	CCT Range Selector
7					Red	Layer Crossfade	Strobe
8					Green	Control Mode 8bit	Control
9					Blue	Parameter 1	Preset
10					Strobe	Parameter 2	Fan Control
11					Control	Parameter 3	RESERVED
12						FX Selector Channel	
13						FX Parameter 1	
14						FX Parameter 2	
15						FX Parameter 3	
16						FX Parameter 4	
17						FX parameter 5	
18						FX Parameter 6	
19						FX Parameter 7	
20						Transition Type Selector	
21						Strobe	
22						Control	
23						Preset	
24						Fan Control	
25						Reserved	

NOTE:

CCT channel refers to 1850K - 20000K when the CCT range selector channel is not available.

Channel	M3 - RGB 8 bit	M4 - RGB 16 bit	M8 - XY 16 bit	M15 - CCT + RGB 8 bit	M16 - CCT + RGB 16 bit
1	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer
2	Red	Dimmer Fine	Dimmer Fine	CCT	Dimmer Fine
3	Green	Red	X1	CCT Fine	CCT
4	Blue	Red Fine	X1 Fine	GMP	CCT Fine
5	White Point	Green	Y1	Crossfade from CCT to RGB	GMP
6	White Point Fine	Green Fine	Y1 Fine	Red	Crossfade from CCT to RGB
7	Strobe	Blue	Crossfade XY1 to XY2	Green	Red
8	Control	Blue Fine	X2	Blue	Red Fine
9	Preset	White Point	X2 Fine	CCT Range Selector	Green
10	Fan Control	White Point Fine	Y2	White Point	Green Fine
11	RESERVED	Strobe	Y2 Fine	White Point Fine	Blue
12		Control	Transition Type	Transition Type	Blue Fine
13		Preset	Strobe	Strobe	CCT Range Selector
14		Fan Control	Control	Control	White Point
15		RESERVED	Preset	Preset	White Point Fine
16			Fan Control	Fan Control	Transition Type
17			RESERVED	RESERVED	Strobe
18					Control
19					Preset
20					Fan Control
21					RESERVED
22					
23					
24					
25					
26					
27					
28					
29					

Channel	M16 - CCT + RGB +FX 16 bit	M17 - CCT + RGB + GEL 8 bit	M18 - CCT + RGB + GEL 16 bit	M28 - CCT + XY 16 bit	M30 - CCT + XY + GEL 16 bit
1	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer
2	Dimmer Fine	CCT	Dimmer Fine	Dimmer Fine	Dimmer Fine
3	CCT	CCT Fine	CCT	CCT	CCT
4	CCT Fine	TINT	CCT Fine	CCT Fine	CCT Fine
5	GMP	Crossfade from CCT to RGB	GMP	GMP	GMP
6	Crossfade CCT to RGB	Red	Crossfade from CCT to RGB	Crossfade	Crossfade
7	Red	Green	Red	X	X
8	Red Fine	Blue	Red Fine	X Fine	X Fine
9	Green	Crossfade from RGB to GEL	Green	Y	Y
10	Green Fine	Gel Source Lamp	Green Fine	Y Fine	Y Fine
11	Blue	Gel Brand / Category	Blue	CCT Range Selector	Crossfade from RGB to GEL
12	Blue Fine	Gel Selector	Blue Fine	Transition Type	Gel Source Lamp
13	FX Selector	CCT Range Selector	Crossfade from RGB to GEL	Strobe	Gel Brand / Category
14	FX parameter 1	White Point	Gel Source Lamp	Control	Gel Selector
15	FX parameter 2	White Point Fine	Gel Brand / Category	Preset	CCT Range Selector
16	FX parameter 3	Transition Type	Gel Selector	Fan Control	Transition Type
17	FX parameter 4	Strobe	CCT Range Selector	RESERVED	Strobe
18	FX parameter 5	Control	White Point		Control
19	FX parameter 6	Preset	White Point Fine		Preset
20	FX parameter 7	Fan Control	Transition Type		Fan Control
21	CCT Range Selector	RESERVED	Strobe		RESERVED
22	White Point		Control		
23	White Point Fine		Preset		
24	Transition Type Selector		Fan Control		
25	Strobe		RESERVED		
26	Control				
27	Preset				
28	Fan Control				
29	Reserved				

Channel	M35 - RAW Control 8 bit	M36 - RAW Control 16 bit	M37 - CCT + RAW 16 BIT	M101 - Pixel Mapper Mode
1	Dimmer	Dimmer	Dimmer	Red
2	Red	Dimmer Fine	Dimmer Fine	Green
3	Green	Red	CCT	Blue
4	Blue	Red Fine	CCT Fine	
5	Cyan	Green	GMP	
6	Mint	Green Fine	Spectral Crossfade	
7	Amber	Blue	Red	
8	Strobe	Blue Fine	Red Fine	
9	Control	Cyan	Green	
10	Preset	Cyan Fine	Green Fine	
11	Fan Control	Mint	Blue	
12	Reserved	Mint Fine	Blue Fine	
13		Amber	Cyan	
14		Amber Fine	Cyan Fine	
15		Strobe	Mint	
16		Control	Mint Fine	
17		Preset	Amber	
18		Fan Control	Amber Fine	
19		RESERVED	CCT Range Selector	
20			Strobe	
21			Control	
22			Preset	
23			Fan Control	
24			Reserved	

Below is the table with DMX modes available if the color correction mode is activated in the menu (which adds channels to implement color correction):

Channel	M2 - CC - CCT 16 bit	M3 - CC - RGB 8 bit	M4 - CC - RGB 16 bit	M8 - CC - XY 16 bit	M15 - CC - CCT + RGB 8 bit
1	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer
2	Dimmer Fine	Red	Dimmer Fine	Dimmer Fine	CCT
3	CCT	Green	Red	X1	CCT Fine
4	CCT Fine	Blue	Red Fine	X1 Fine	GMP
5	GMP	White Point	Green	Y1	Crossfade from CCT to RGB
6	CCT Range Selector	White Point Fine	Green Fine	Y1 Fine	Red
7	Strobe	Strobe	Blue	Crossfade XY1 to XY2	Green
8	Control	Control	Blue Fine	X2	Blue
9	Preset	Preset	White Point	X2 Fine	CCT Range Selector
10	Fan Control	Fan Control	White Point Fine	Y2	White Point
11	RESERVED	RESERVED	Strobe	Y2 Fine	White Point Fine
12	CC Mode	CC Mode	Control	Transition Type	Transition Type
13	Cooler/Warmer	Cooler/Warmer	Preset	Strobe	Strobe
14	Saturate / Desaturate	Saturate / Desaturate	Fan Control	Control	Control
15	"CC Parameter 1 (±Red / ±Red)"	"CC Parameter 1 (±Red / ±Red)"	RESERVED	Preset	Preset
16	"CC Parameter 2 (±Green / ±Green)"	"CC Parameter 2 (±Green / ±Green)"	CC Mode	Fan Control	Fan Control
17	"CC Parameter 3 (±Blue / ±Blue)"	"CC Parameter 3 (±Blue / ±Blue)"	Cooler/Warmer	RESERVED	RESERVED
18	"CC Parameter 4 (±Cyan / ±Cyan)"	"CC Parameter 4 (±Cyan / ±Cyan)"	Saturate / Desaturate	CC Mode	CC Mode
19	"CC Parameter 5 (±Magenta / ±Mint)"	"CC Parameter 5 (±Magenta / ±Mint)"	"CC Parameter 1 (±Red / ±Red)"	Cooler/Warmer	Cooler/Warmer
20	"CC Parameter 6 (±Yellow / ±Amber)"	"CC Parameter 6 (±Yellow / ±Amber)"	"CC Parameter 2 (±Green / ±Green)"	Saturate / Desaturate	Saturate / Desaturate
21			"CC Parameter 3 (±Blue / ±Blue)"	"CC Parameter 1 (±Red / ±Red)"	"CC Parameter 1 (±Red / ±Red)"
22			"CC Parameter 4 (±Cyan / ±Cyan)"	"CC Parameter 2 (±Green / ±Green)"	"CC Parameter 2 (±Green / ±Green)"
23			"CC Parameter 5 (±Magenta / ±Mint)"	"CC Parameter 3 (±Blue / ±Blue)"	"CC Parameter 3 (±Blue / ±Blue)"
24			"CC Parameter 6 (±Yellow / ±Amber)"	"CC Parameter 4 (±Cyan / ±Cyan)"	"CC Parameter 4 (±Cyan / ±Cyan)"
25				"CC Parameter 5 (±Magenta / ±Mint)"	"CC Parameter 5 (±Magenta / ±Mint)"
26				"CC Parameter 6 (±Yellow / ±Amber)"	"CC Parameter 6 (±Yellow / ±Amber)"

Channel	M16 - CC - CCT + RGB 16 bit	M17 - CC - CCT + RGB + GEL 8 bit	M18 - CC - CCT + RGB + GEL 16 bit	M28 - CC - CCT + XY 16 bit	M30 - CC - CCT + XY + GEL 16 bit
1	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer
2	Dimmer Fine	CCT	Dimmer Fine	Dimmer Fine	Dimmer Fine
3	CCT	CCT Fine	CCT	CCT	CCT
4	CCT Fine	TINT	CCT Fine	CCT Fine	CCT Fine
5	GMP	Crossfade from CCT to RGB	GMP	GMP	GMP
6	Crossfade from CCT to RGB	Red	Crossfade from CCT to RGB	Crossfade	Crossfade
7	Red	Green	Red	X	X
8	Red Fine	Blue	Red Fine	X Fine	X Fine
9	Green	Crossfade from RGB to GEL	Green	Y	Y
10	Green Fine	Gel Source Lamp	Green Fine	Y Fine	Y Fine
11	Blue	Gel Brand / Category	Blue	CCT Range Selector	Crossfade from RGB to GEL
12	Blue Fine	Gel Selector	Blue Fine	Transition Type	Gel Source Lamp
13	CCT Range Selector	CCT Range Selector	Crossfade from RGB to GEL	Strobe	Gel Brand / Category
14	White Point	White Point	Gel Source Lamp	Control	Gel Selector
15	White Point Fine	White Point Fine	Gel Brand / Category	Preset	CCT Range Selector
16	Transition Type	Transition Type	Gel Selector	Fan Control	Transition Type
17	Strobe	Strobe	CCT Range Selector	RESERVED	Strobe
18	Control	Control	White Point	CC Mode	Control
19	Preset	Preset	White Point Fine	Cooler/Warmer	Preset
20	Fan Control	Fan Control	Transition Type	Saturate / Desaturate	Fan Control
21	RESERVED	RESERVED	Strobe	"CC Parameter 1 (±Red / ±Red)"	RESERVED
22	CC Mode	CC Mode	Control	"CC Parameter 2 (±Green / ±Green)"	CC Mode
23	Cooler/Warmer	Cooler/Warmer	Preset	"CC Parameter 3 (±Blue / ±Blue)"	Cooler/Warmer
24	Saturate / Desaturate	Saturate / Desaturate	Fan Control	"CC Parameter 4 (±Cyan / ±Cyan)"	Saturate / Desaturate
25	"CC Parameter 1 (±Red / ±Red)"	"CC Parameter 1 (±Red / ±Red)"	RESERVED	"CC Parameter 5 (±Magenta / ±Mint)"	"CC Parameter 1 (±Red / ±Red)"
26	"CC Parameter 2 (±Green / ±Green)"	"CC Parameter 2 (±Green / ±Green)"	CC Mode	"CC Parameter 6 (±Yellow / ±Amber)"	"CC Parameter 2 (±Green / ±Green)"
27	"CC Parameter 3 (±Blue / ±Blue)"	"CC Parameter 3 (±Blue / ±Blue)"	Cooler/Warmer		"CC Parameter 3 (±Blue / ±Blue)"
28	"CC Parameter 4 (±Cyan / ±Cyan)"	"CC Parameter 4 (±Cyan / ±Cyan)"	Saturate / Desaturate		"CC Parameter 4 (±Cyan / ±Cyan)"
29	"CC Parameter 5 (±Magenta / ±Mint)"	"CC Parameter 5 (±Magenta / ±Mint)"	"CC Parameter 1 (±Red / ±Red)"		"CC Parameter 5 (±Magenta / ±Mint)"
30	"CC Parameter 6 (±Yellow / ±Amber)"	"CC Parameter 6 (±Yellow / ±Amber)"	"CC Parameter 2 (±Green / ±Green)"		"CC Parameter 6 (±Yellow / ±Amber)"
31			"CC Parameter 3 (±Blue / ±Blue)"		
32			"CC Parameter 4 (±Cyan / ±Cyan)"		
33			"CC Parameter 5 (±Magenta / ±Mint)"		
34			"CC Parameter 6 (±Yellow / ±Amber)"		

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%)

Dimmer Fine					
Function	8 bit value		16 bit value		Note
	From	To	From	To	
Dimmer Fine	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			
Reserved		30	255			

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

Function		8 bit value		16 bit value	
CCT(K) From	CCT(K) 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

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

Function		8 bit value		16 bit value	
CCT(K) From	CCT(K) To	From	To	From	To
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	24373
8600	8700	95	96	24373	24734
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

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

Function		8 bit value		16 bit value	
CCT(K) From	CCT(K) To	From	To	From	To
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

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

Function		8 bit value		16 bit value	
CCT(K) From	CCT(K) To	From	To	From	To
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	58314
18000	18100	227	228	58314	58675
18100	18200	228	230	58675	59036
18200	18300	230	231	59036	59397
18300	18400	231	233	59397	59758
18400	18500	233	234	59758	60119
18500	18600	234	235	60119	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
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 (When CCT Range Selector @ 2200K - 15000K)

Function		8 bit value		16 bit value	
CCT(K) From	CCT(K) 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

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

Function		8 bit value		16 bit value	
CCT(K) From	CCT(K) To	From	To	From	To
7100	7200	98	100	25088	25600
7200	7300	100	102	25600	26112
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

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

Function		8 bit value		16 bit value	
CCT(K) From	CCT(K) To	From	To	From	To
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 (When CCT Range Selector @ 2800K - 10000K)

Function		8 bit value		16 bit value	
CCT(K) From	CCT(K) 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

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

Function		8 bit value		16 bit value	
CCT(K) From	CCT(K) To	From	To	From	To
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

Green Magenta Poin 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) Linear tint correction from -0.025 to +0.025
Full Minus Green	2	3	512	1023	
-99% to -1%	4	126	1024	32511	
Neutral / No Effect	127	128	32512	33023	
1% to 99%	129	253	33024	65023	
Full Plus Green	254	255	65024	65535	

Crossfade from CCT to RGB

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Crossfade from CCT to RGB	0	255	0	65535	Default @ 0 Linear Crossfade from CCT to RGB

Red

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

Green

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

Blue

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

Cyan

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

Mint

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

Amber

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

White Point Selector (8bit)

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	
5100	5200	83	86	21283	22186	
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	

Dynamic White Point 2800K - 10000K

Function		8 bit value		16 bit value		Note
CCT(K) From	CCT(K) To	From	To	From	To	
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	

Crossfade from RGB to GEL

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Crossfade from RGB to GEL	0	255	0	65535	Default @ 0 Linear Crossfade from RGB to GEL

Gel Source Lamp CCT

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

GEL Brand / Category Selector

Function	8 bit value	
	From	To
LEE: Color correction	0	9
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: CaIC	60	69
RC: StSelect	70	79
RC: C-Lux	80	89
Blackout	90	99
Reserved	100	255

Category | Lee: Color Correction

Function	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 for Future Use	80	255	-

Category | Lee: Color Filters

Function	8 bit value		Gel #
Gel Name	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

Category | Lee: Color Filters

Function	8 bit value		Gel #
Gel Name	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 for Future Use	180	255	-

Category | Lee: 600 Series

Function	8 bit value		Gel #
Gel Name	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	8 bit value		Gel #
Gel Name	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 for Future Use	36	255	-

Category | Lee: 700 Series

Function	8 bit value		Gel #
Gel Name	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

Category | Lee: 700 Series

Function	8 bit value		Gel #
Gel Name	From	To	
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 for Future Use	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 for Future Use	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 for Future Use	68	255	-

Category | RC: StSelect

Function	8 bit value		Gel #
Gel Name	From	To	
VS Red	0	1	2001
VS Orange	2	3	2202
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	8 bit value		Gel #
Gel Name	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

Category | RC: C-Lux

Function	8 bit value		Gel #
Gel Name	From	To	
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 for Future Use	94	255	-

X 1 - X 2

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

Y 1 - Y 2

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

Crossfade - Layer 1 to Layer 2

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Linear, Layer 1 to Layer 2	0	255	0	65535	Default @ 0

Transition Type Channel

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

Strobe

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Open	0	1	-	-	Default @ 0
Strobe from Slow to Fast	2	62	-	-	
Open	63	64	-	-	
Pulse In from slow to fast	65	125	-	-	
Closed	126	127	-	-	
Pulse Out from slow to fast	128	188	-	-	
Open	189	190	-	-	
Random from slow to fast	191	251	-	-	
Open	252	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 (S = 45% ; M = 30% ; L = 35%)
Quiet 2 DLO	110	111	-	-	Fixed Fan Speed (S = 35% ; M = 25% ; L = 25%)
Off DLO	112	113	-	-	Fixed Fan Speed: 0%
Constant Light Output					
Quiet 1 CLO	114	115	-	-	Fixed Fan Speed (S = 45% ; M = 30% ; L = 35%)
Quiet 2 CLO	116	117	-	-	Fixed Fan Speed (S = 35% ; M = 25% ; L = 25%)
Off CLO	118	119	-	-	Fixed Fan Speed: 0%
Reserved	120	129	-	-	---
Quiet 3 DLO	110	111	-	-	Fixed Fan Speed (S = 20% ; M = 20% ; L = 15%)
Quiet 3 CLO	110	111	-	-	Fixed Fan Speed (S = 20% ; M = 20% ; L = 15%)
Reserved	134	255	-	-	---

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)
Preset 11	188	189	-	-	Source Emulation - HMI
Preset 12	190	191	-	-	Source Emulation - Low Pressure Sodium
Preset 13	192	193	-	-	Source Emulation - CFL Bright White
Preset 14	194	195	-	-	Source Emulation - CFL Cool White
Preset 15	196	197	-	-	Source Emulation - CFL Daylight
Preset 16	198	199	-	-	Source Emulation - Halogen
Preset 17	200	201	-	-	Source Emulation - Candle
Preset 18	202	203	-	-	Source Emulation - Sun Direct
Preset 19	204	205	-	-	Source Emulation - Sun Overcast
Preset 20	206	207	-	-	Source Emulation - Sun Blue Hour
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	-	-	---

Control Channel					
Function		8 bit value		16 bit value	
		From	To	From	To
No Function / Safe		0	1	-	-
Dimmer Speed	Auto	2	3	-	-
	Fast	4	5	-	-
	Medium	6	7	-	-
	Slow	8	9	-	-
	Off	10	11	-	-
Reserved for future use		12	13	-	-
Dimmer Curve	Linear	14	15	-	-
	S-Curve	16	17	-	-
	Square Law	18	19	-	-
	Inv. Square Law	20	21	-	-
	High Res @ Low	22	23	-	-
Tungsten Emulation	Tungsten	24	25	-	-
	Reserved for future use	26	35	-	-
	On	36	37	-	-
Tungsten Emulation	Off	38	39	-	-
Reserved for future use		40	41	-	-
LED Mode	High CRI	42	43	-	-
	Reserved for future use	44	45	-	-
	High Brightness	46	47	-	-
Reserved for future use		48	49	-	-
Color Space	Native	50	51	-	-
	ProPhoto	52	53	-	-
	sRGB	54	55	-	-
	Rec. 2020	56	57	-	-
	Rec. 709	58	59	-	-
Reserved for future use		60	81	-	-
Fan Mode	Auto	82	83	-	-
	Turbo	84	85	-	-
	Quiet 1 Const. Out.	86	87	-	-
	Quiet 2 Const. Out.	88	89	-	-
	Off Const. Out.	90	91	-	-
	Quiet 1 Dyn. Out	92	93	-	-
	Quiet 2 Dyn. Out	94	95	-	-
	Off Dyn. Out	96	97	-	-
	Quiet 3 Dyn. Out	98	99	-	-
	Quiet 3 Const. Out	100	101	-	-
Reserved for future use		102	105	-	-
Signal Fault	Hold	106	107	-	-
	On Encoder Touch CCT mode	108	109	-	-
	On Encoder Touch RGB mode	110	111	-	-
	On Encoder Touch FX Mode	112	113	-	-
	StandAlone mode	114	115	-	-
	Blackout	116	117	-	-
	Emergency	118	119	-	-
	Reserved for future use	120	121	-	-

Default @ 0
Hold 3s to take function

Control Channel						
Function		8 bit value		16 bit value		Note
		From	To	From	To	
Startup Behaviour	On Encoder Touch CCT mode	122	123	-	-	
	On Encoder Touch RGB mode	124	125	-	-	
	On Encoder Touch FX Mode	126	127	-	-	
	StandAlone mode	128	129	-	-	
	Emergency	130	131	-	-	
Reserved for future use		132	135	-	-	
Led Freq	1282Hz	136	137	-	-	
	2kHz	138	139	-	-	
	4kHz	140	141	-	-	
	6kHz	142	143	-	-	
	10kHz	144	145	-	-	
	12kHz	146	147	-	-	
	15kHz	148	149	-	-	
	20kHz	150	151	-	-	
	25kHz	152	153	-	-	
	36kHz	154	155	-	-	
	40kHz	156	157	-	-	
Reserved for future use		158	161	-	-	
Power Limit	100%	162	163	-	-	S =200W - M =350W - L = 600W S =150W - M =250W - L =450W S =100W ; M =150W ; L =300W S =50W - M =100W - L =150W
	75%	164	165	-	-	
	50%	166	167	-	-	
	25%	168	169	-	-	
Reserved for future use		170	171	-	-	
Backlight	Timeout Always On	172	173	-	-	
	Timeout 10s	174	175	-	-	
	Timeout 30s	176	177	-	-	
	Timeout 60s	178	179	-	-	
	Dimmer 25%	180	181	-	-	
	Dimmer 50%	182	183	-	-	
	Dimmer 75%	184	185	-	-	
	Dimmer 100%	186	187	-	-	
Flip Display	On	188	189	-	-	
	Off	190	191	-	-	
Keylock	On	192	193	-	-	
	Off	194	195	-	-	
Dimmer Minimum End	Standard	196	197	-	-	
	Low	198	199	-	-	
Reserved for future use		200	249	-	-	
Reset all Control Channel values used		250	251	-	-	
Reserved for future use		252	255	-	-	

Color Correction Mode Selector

Function	8 bit value		16 bit value		Note
	From	To	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	30	255	-	-	

Cooler / Warmer

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Cooler/Warmer	0	255	-	-	Default @ 128 Linear Correction from Cooler to Warmer

Desaturate / Saturate

Function	8 bit value		16 bit value		Note
	From	To	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		16 bit value		Note
	From	To	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		16 bit value		Note
	From	To	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 red to more red by varying the emission of the Green LEDs

CC Parameter 3

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Color Correction: Standard Mode					
±Blue	0	255	-	-	Default @ 128 Linear change from less Blue to more Blue as you move through x-y coordinates
Color Correction: Subtractive Color Mode					
±Blue	0	255	-	-	Default @ 128 Linear change from less red to more red by varying the emission of the Blue LEDs

CC Parameter 4

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Color Correction: Standard Mode					
±Cyan	0	255	-	-	Default @ 128 Linear change from less Cyan to more Cyan as you move through x-y coordinates
Color Correction: Subtractive Color Mode					
±Cyan	0	255	-	-	Default @ 128 Linear change from less red to more red by varying the emission of the Cyan LEDs

CC Parameter 5

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Color Correction: Standard Mode					
±Magenta	0	255	-	-	Default @ 128 Linear change from less Magenta to more Magenta as you move through x-y coordinates
Color Correction: Subtractive Color Mode					
±Mint	0	255	-	-	Default @ 128 Linear change from less red to more red by varying the emission of the Mint LEDs

CC Parameter 6

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Color Correction: Standard Mode					
±Yellow	0	255	-	-	Default @ 128 Linear change from less Yellow to more Yellow as you move through x-y coordinates
Color Correction: Subtractive Color Mode					
±Amber	0	255	-	-	Default @ 128 Linear change from less red to more red by varying the emission of the Amber LEDs

Control Mode 8BIT

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

EFFECTS

Parameter allocation is depending on which FX is selected. FXs may have from 2 up to 7 parameters allocated. Parameter are distinguished using P followed by the number of the parameter (example: P1).

FX Selector					
Function	8 bit value		16 bit value		Note
	From	To	From	To	
No Function	0	1	-	-	Default @ 0
Party Effect	2	3	-	-	
Candle	4	5	-	-	
Clouds Passing	6	7	-	-	
Club Lights	8	9	-	-	
Color Chase	10	11	-	-	
Cop Car	12	13	-	-	
Fire	14	15	-	-	
Fireworks	16	17	-	-	
Strobe	18	19	-	-	
Lightning	20	21	-	-	
Paparazzi	22	23	-	-	
Pulsing	24	25	-	-	
Television	26	27	-	-	
Explosion	28	29	-	-	
Fluorescent Flicker	30	31	-	-	
Process Effect	32	33	-	-	
Welding	34	35	-	-	
Reserved	36	255	-	-	

Party Effect - P1: Saturation

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 2800K - 10000K	0	0	-	-	Default @ 0
Saturation 0 - 1.0	1	255	-	-	

Party Effect - P2: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Slow to fast	0	255	-	-	Default @ 0

Candle - P1: CCT Range

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 1400K - 1700K	0	84	-	-	Default @ 0
CCT 1700K - 2000K	85	170	-	-	
CCT 2000K - 2300K	171	255	-	-	

Candle - P2: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Slow to fast	0	255	-	-	Default @ 0

Clouds Passing - P1: Offset

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 to 50	0	255	-	-	Default @ 0

Clouds Passing - P2: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
2x Slower to Default speed	0	127	-	-	Default @ 0
Default speed to 2x Faster	128	255	-	-	

Clouds Passing - P3: Sync

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Reserved	0	254	-	-	Default @ 0
Reset Loop	255	255	-	-	

Club Lights - P1: Colors

Function	8 bit value		16 bit value		Note
	From	To	From	To	
3 Colors	0	31	-	-	Default @ 0
6 Colors	32	63	-	-	
9 Colors	64	95	-	-	
12 Colors	96	127	-	-	
15 Colors	128	159	-	-	
18 Colors	160	191	-	-	
21 Colors	192	223	-	-	
24 Colors	224	255	-	-	

Club Lights - P2: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Slow to fast	0	255	-	-	Default @ 0

Color Chase - P1: Offset

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 to 50	0	255	-	-	Default @ 0

Color Chase - P2: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Slow to fast	0	255	-	-	Default @ 0

Color Chase - P3: Saturation

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 2800K - 10000K	0	0	-	-	Default @ 0
Saturation 0 - 1.0	1	255	-	-	

Color Chase - P4: Sync

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Reserved	0	254	-	-	Default @ 0
Reset Loop	255	255	-	-	

Cop Car - P1: Color Combinations

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Just Blue	0	27	-	-	Default @ 0
Blue and Red	28	55	-	-	
Blue and White	56	83	-	-	
Blue, Red and White	84	111	-	-	
Blue and Amber	112	139	-	-	
Blue, Red and Amber	140	167	-	-	
Red and Amber	168	195	-	-	
Amber	196	223	-	-	
Red	224	255	-	-	

Cop Car - P2: Flash Pattern

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Single Flash	0	31	-	-	Default @ 0
Double Flash	32	63	-	-	
Quint All Flash	64	95	-	-	
Quint Flash	96	127	-	-	
Quad Flash	128	159	-	-	
Cycle All	160	191	-	-	
Reserved	192	255	-	-	

Cop Car - P3: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Slow to fast	0	255	-	-	Default @ 0

Fire - P1: CCT Range

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 1800K - 2200K	0	84	-	-	Default @ 0
CCT 2200K - 2600K	85	170	-	-	
CCT 2600K - 3000K	171	255	-	-	

Fire - P2: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Slow to fast	0	255	-	-	Default @ 0

Fireworks - P1: Color Combinations

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Colors	0	63	-	-	Default @ 0
White	64	127	-	-	
Colors and white	128	191	-	-	
Reserved	192	255	-	-	

Fireworks - P2: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Slow to fast	0	255	-	-	Default @ 0

Strobe - P1: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Slow to fast	0	255	-	-	Default @ 0

Strobe - P2: CCT

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 2800K - 10000K	0	255	-	-	Default @ 0

Strobe - P3: Green Magenta Point

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Neutral / No Effect	0	1	-	-	Default @ 128
Full Minus Green	2	3	-	-	
-99% to -1%	4	126	-	-	
Neutral / No Effect	127	128	-	-	
1% to 99%	129	251	-	-	
Full Plus Green	252	253	-	-	
Neutral / No Effect	254	255	-	-	

Strobe - P4: Crossfade from CCT to Color

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Linear crossfade	0	255	-	-	Default @ 0

Strobe - P5: Hue

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 - 360°	0	255	-	-	Default @ 0

Strobe - P6: Saturation

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Saturation 0 - 1.0	0	255	-	-	

Lightning - P1: Frequency

Function	8 bit value		16 bit value		Note
	From	To	From	To	
2 - 14 lightning strikes set	0	254	-	-	Default @ 0
Random	255	255	-	-	

Lightning - P2: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 - 10 flashes / second	0	254	-	-	Default @ 0
Random	255	255	-	-	

Lightning - P3: CCT

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 2800K - 10000K	0	255	-	-	Default @ 0

Lightning - P4: Green Magenta Point

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Neutral / No Effect	0	1	-	-	Default @ 128
Full Minus Green	2	3	-	-	
-99% to -1%	4	126	-	-	
Neutral / No Effect	127	128	-	-	
1% to 99%	129	251	-	-	
Full Plus Green	252	253	-	-	
Neutral / No Effect	254	255	-	-	

Lightning - P5: Sync

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Reserved	0	254	-	-	Default @ 0
Reset Loop	255	255	-	-	

Paparazzi - P1: Frequency

Function	8 bit value		16 bit value		Note
	From	To	From	To	
6 to 120 Flashes / min	0	255	-	-	Default @ 0

Paparazzi - P2: Flash Type

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Flash bulb	0	127	-	-	Default @ 0
Modern flash	128	255	-	-	

Paparazzi - P3: CCT

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 2800K - 10000K	0	255	-	-	Default @ 0

Paparazzi - P4: Green Magenta Point

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Neutral / No Effect	0	1	-	-	Default @ 128
Full Minus Green	2	3	-	-	
-99% to -1%	4	126	-	-	
Neutral / No Effect	127	128	-	-	
1% to 99%	129	251	-	-	
Full Plus Green	252	253	-	-	
Neutral / No Effect	254	255	-	-	

Pulsing - P1: Frequency

Function	8 bit value		16 bit value		Note
	From	To	From	To	
5 to 90 Pulses / min	0	255	-	-	Default @ 0

Pulsing - P2: Pulse Duration

Function	8 bit value		16 bit value		Note
	From	To	From	To	
4s to 0.25s	0	255	-	-	Default @ 0

Pulsing - P3: CCT

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 2800K - 10000K	0	255	-	-	Default @ 0

Pulsing - P4: Green Magenta Point

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Neutral / No Effect	0	1	-	-	Default @ 128
Full Minus Green	2	3	-	-	
-99% to -1%	4	126	-	-	
Neutral / No Effect	127	128	-	-	
1% to 99%	129	251	-	-	
Full Plus Green	252	253	-	-	
Neutral / No Effect	254	255	-	-	

Pulsing - P5: Crossfade from CCT to Color

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Linear crossfade	0	255	-	-	Default @ 0

Pulsing - P6: Hue

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 - 360°	0	255	-	-	Default @ 0

Pulsing - P7: Saturation

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Saturation 0 - 1.0	0	255	-	-	

Television - P1: CCT Range

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 2800K - 4700K	0	84	-	-	Default @ 0
CCT 4700K - 6500K	85	170	-	-	
CCT 6500K - 10000K	171	255	-	-	

Television - P2: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Slow to fast	0	255	-	-	Default @ 0

Explosion - P1: Decay

Function	8 bit value		16 bit value		Note
	From	To	From	To	
From 4s to 0.5s	0	255	-	-	Default @ 0

Explosion - P2: Trigger

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Auto	0	249	-	-	Default @ 0
Manual (bump intensity to explode)	250	255	-	-	

Explosion - P3: CCT

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 2800K - 10000K	0	255	-	-	Default @ 0

Explosion - P4: Green Magenta Point

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Neutral / No Effect	0	1	-	-	Default @ 128
Full Minus Green	2	3	-	-	
-99% to -1%	4	126	-	-	
Neutral / No Effect	127	128	-	-	
1% to 99%	129	251	-	-	
Full Plus Green	252	253	-	-	
Neutral / No Effect	254	255	-	-	

Explosion - P5: Crossfade from CCT to Color

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Linear crossfade	0	255	-	-	Default @ 0

Explosion - P6: Hue

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 - 360°	0	255	-	-	Default @ 0

Explosion - P7: Saturation

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Saturation 0 - 1.0	0	255	-	-	

Fluorescent Flicker - P1: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
2s to 6s of still	0	255	-	-	Default @ 0

Fluorescent Flicker - P2: Frequency

Function	8 bit value		16 bit value		Note
	From	To	From	To	
3 to 10 Flickers / sec	0	255	-	-	Default @ 0

Fluorescent Flicker - P3: CCT

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 2800K - 10000K	0	255	-	-	Default @ 0

Fluorescent Flicker - P4: Green Magenta Point

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Neutral / No Effect	0	1	-	-	Default @ 128
Full Minus Green	2	3	-	-	
-99% to -1%	4	126	-	-	
Neutral / No Effect	127	128	-	-	
1% to 99%	129	251	-	-	
Full Plus Green	252	253	-	-	
Neutral / No Effect	254	255	-	-	

Fluorescent Flicker - P5: Crossfade from CCT to Color

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Linear crossfade	0	255	-	-	Default @ 0

Fluorescent Flicker - P6: Hue

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 - 360°	0	255	-	-	Default @ 0

Fluorescent Flicker - P7: Saturation

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Saturation 0 - 1.0	0	255	-	-	

Process Effect - P1: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Slow to Fast	0	255	-	-	Default @ 0

Process Effect - P2: Direction

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Left to Right	0	127	-	-	Default @ 0
Right to Left	128	255	-	-	

Process Effect - P3: CCT

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 2800K - 10000K	0	255	-	-	Default @ 0

Process Effect - P4: Green Magenta Point

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Neutral / No Effect	0	1	-	-	Default @ 128
Full Minus Green	2	3	-	-	
-99% to -1%	4	126	-	-	
Neutral / No Effect	127	128	-	-	
1% to 99%	129	251	-	-	
Full Plus Green	252	253	-	-	
Neutral / No Effect	254	255	-	-	

Process Effect - P5: Crossfade from CCT to Color

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Linear crossfade	0	255	-	-	Default @ 0

Process Effect - P6: Hue

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 - 360°	0	255	-	-	Default @ 0

Process Effect - P7: Saturation

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Saturation 0 - 1.0	0	255	-	-	

Welding - P1: Speed

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Slow to Fast	0	255	-	-	Default @ 0

Welding - P2: Minimum Intensity

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0% to 75% minimum intensity level	0	255	-	-	Default @ 0

Welding - P3: CCT

Function	8 bit value		16 bit value		Note
	From	To	From	To	
CCT 2800K - 10000K	0	255	-	-	Default @ 0

Welding - P4: Green Magenta Point

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Neutral / No Effect	0	1	-	-	Default @ 128
Full Minus Green	2	3	-	-	
-99% to -1%	4	126	-	-	
Neutral / No Effect	127	128	-	-	
1% to 99%	129	251	-	-	
Full Plus Green	252	253	-	-	
Neutral / No Effect	254	255	-	-	

Welding - P5: Crossfade from CCT to Color

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Linear crossfade	0	255	-	-	Default @ 0

Welding - P6: Hue

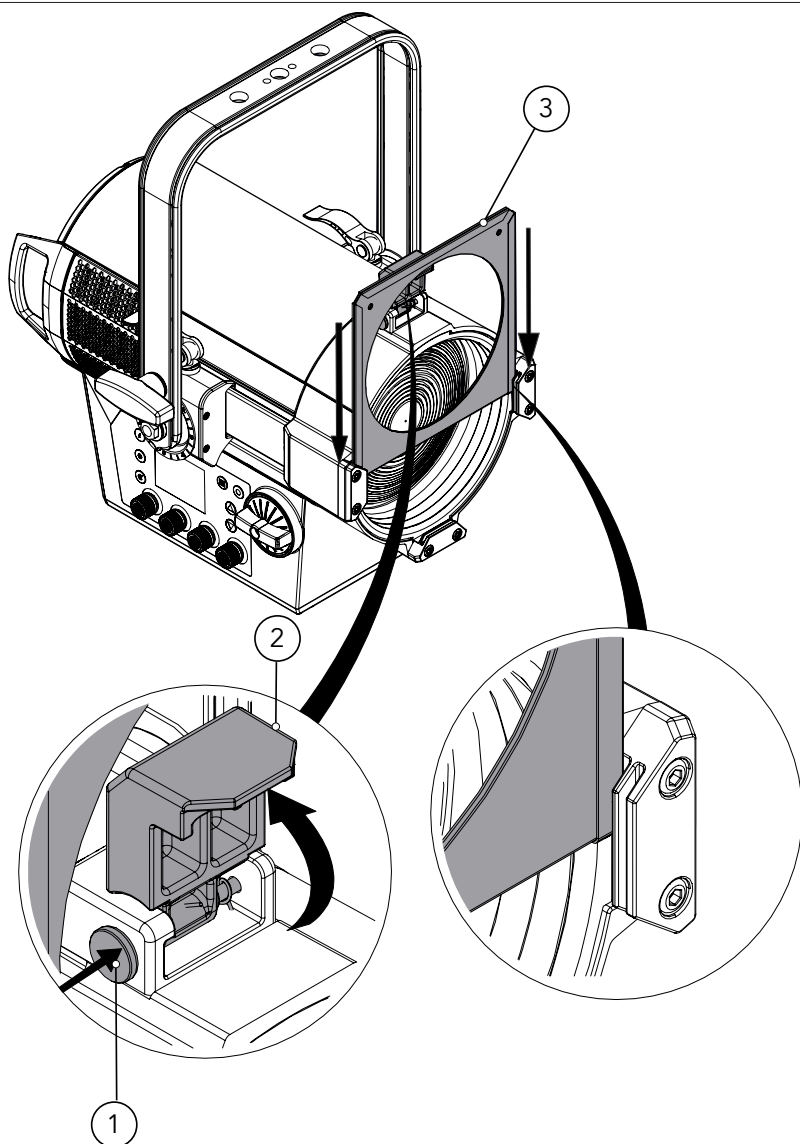
Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 - 360°	0	255	-	-	Default @ 0

Welding - P7: Saturation

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Saturation 0 - 1.0	0	255	-	-	

12 - ACCESSORIES INSTALLATION

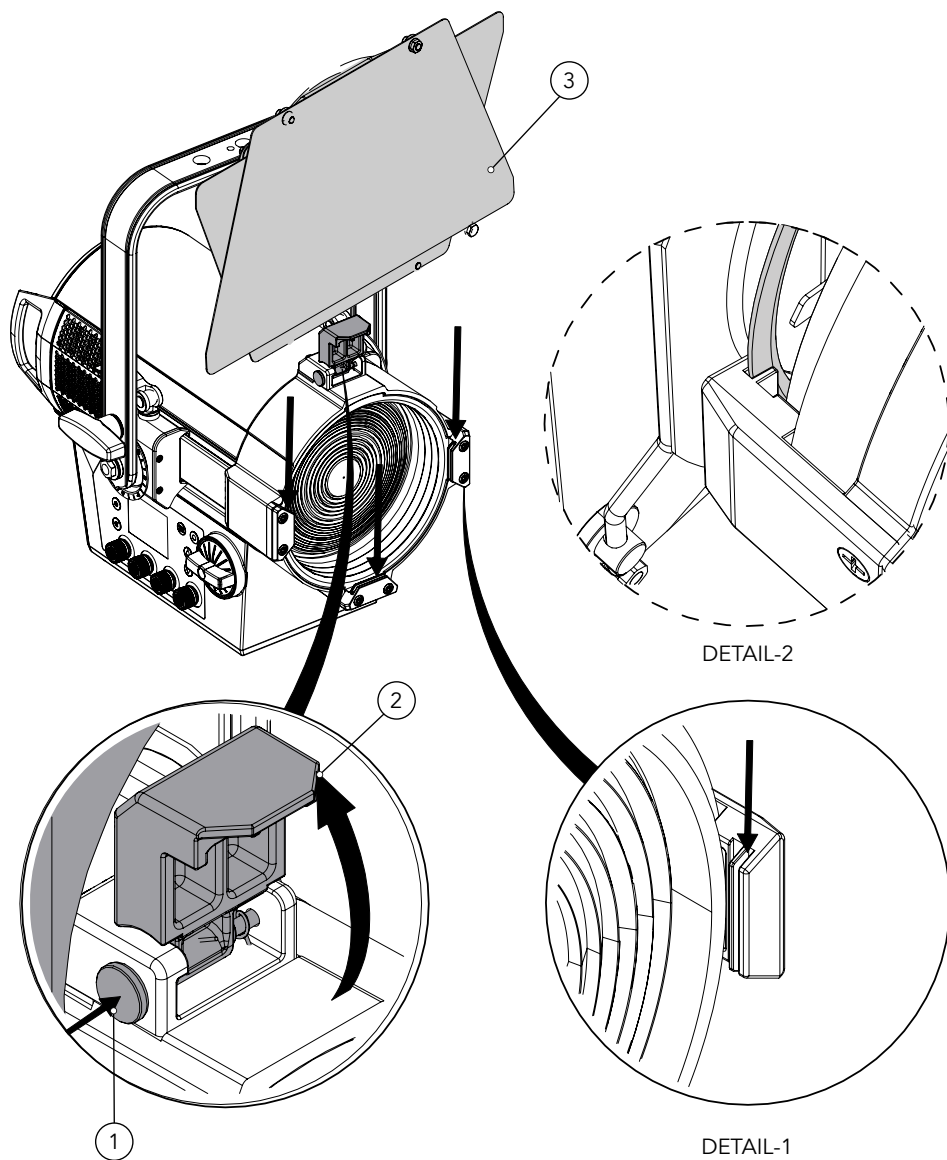
FILTER FRAME (CODE ECLFRCTPMFF)



Press the pin (1) and the snap will automatically open upwards (2). Insert the gel filter frame (3) into the gel frame lock (DETAIL) and close down the snap.

NOTE: To remove the accessory, reverse the procedure.

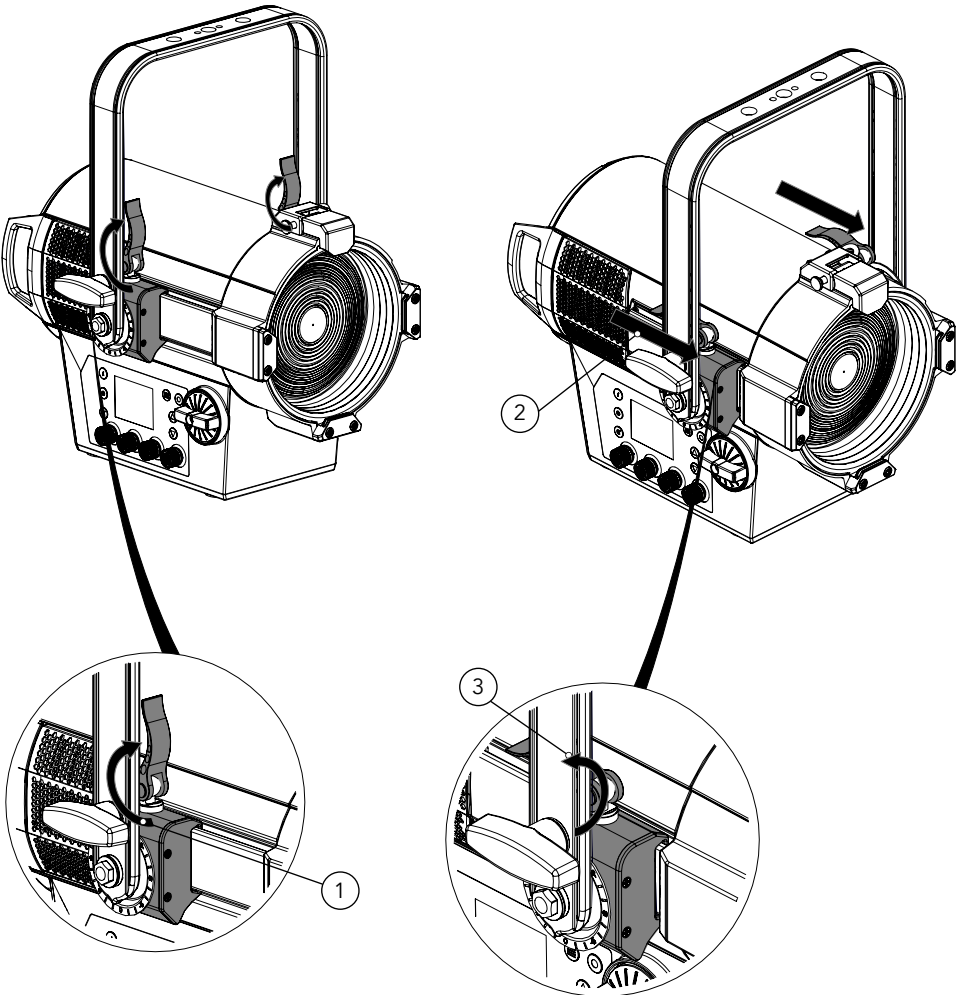
Fig. 09



Press the pin (1) and the snap will automatically open upwards (2). Insert the barn door (3) into the gel frame lock (DETAIL-1) through the holder assembly of the barn door (DETAIL-2). Then close down the snap.

NOTE: To remove the accessory, reverse the procedure.

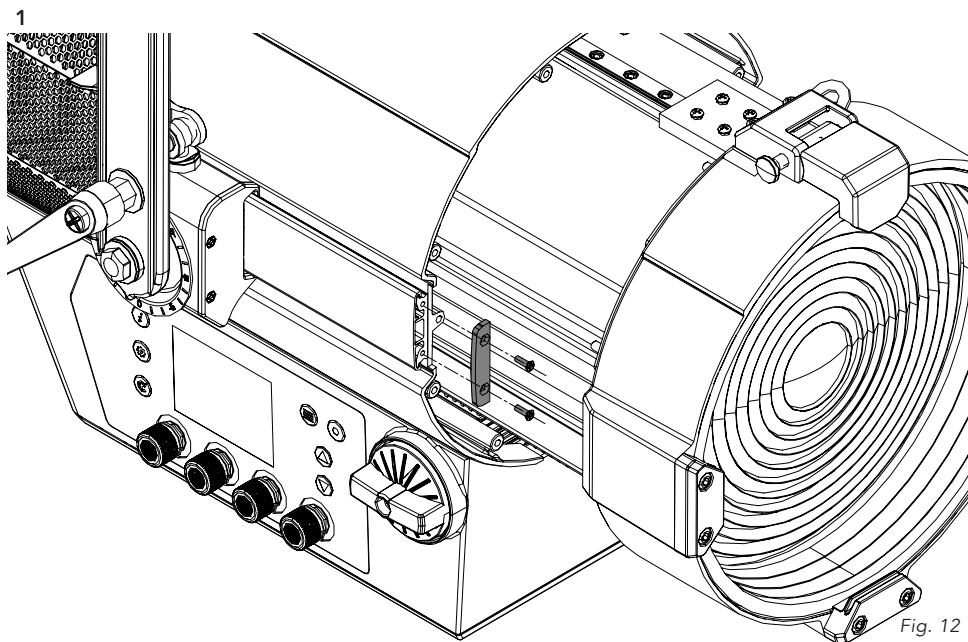
Fig.10



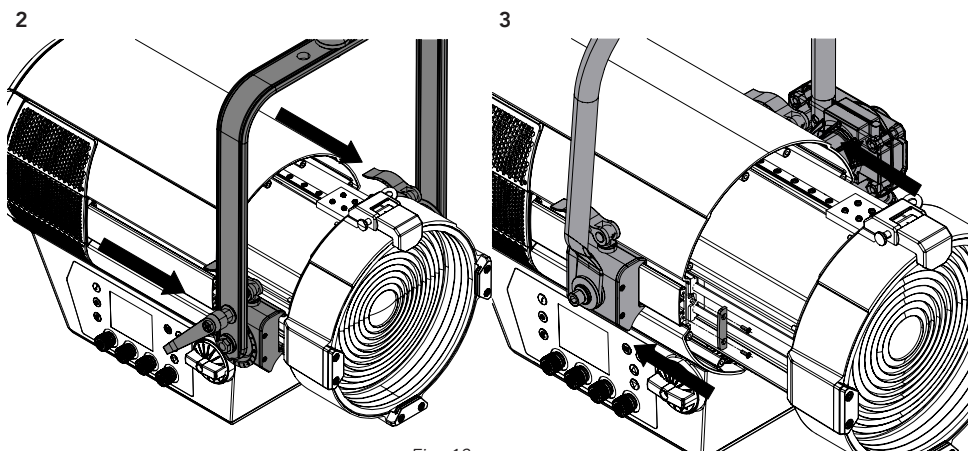
Pull the clip (1) and the bracket will be free to move (2). once the position of the bracket has been chosen, block the movement by closing the clip (3)

Fig. 11

POLE OPERATED BRACKET (CODE ECLFRCTPMKPOYO)



Remove the screws and remove the endstop of the sliding bracket.



Remove the sliding bracket (2) and insert the pole operated bracket (3), then reassemble the endstop of the sliding bracket and fix them by screws previously removed.

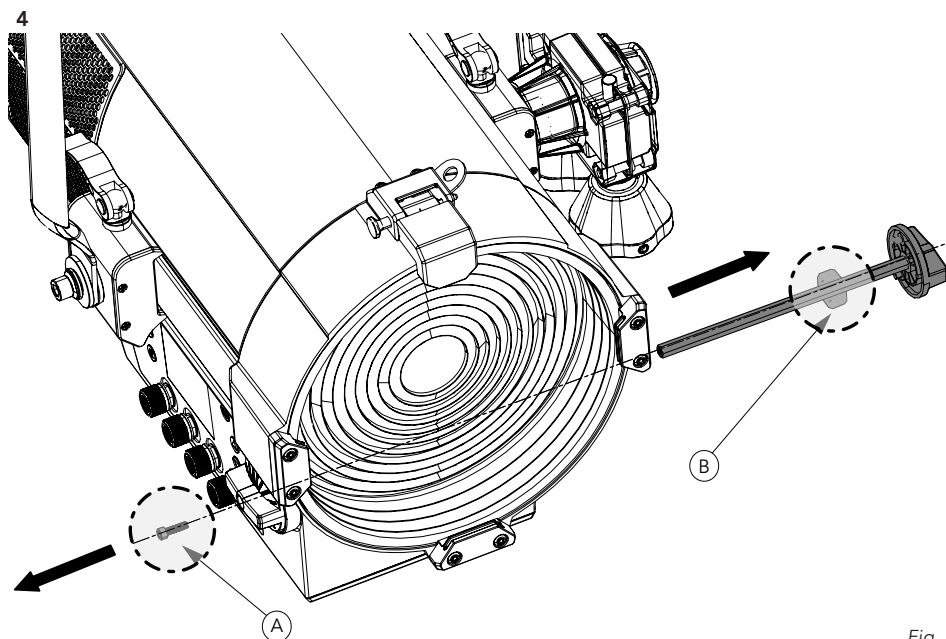
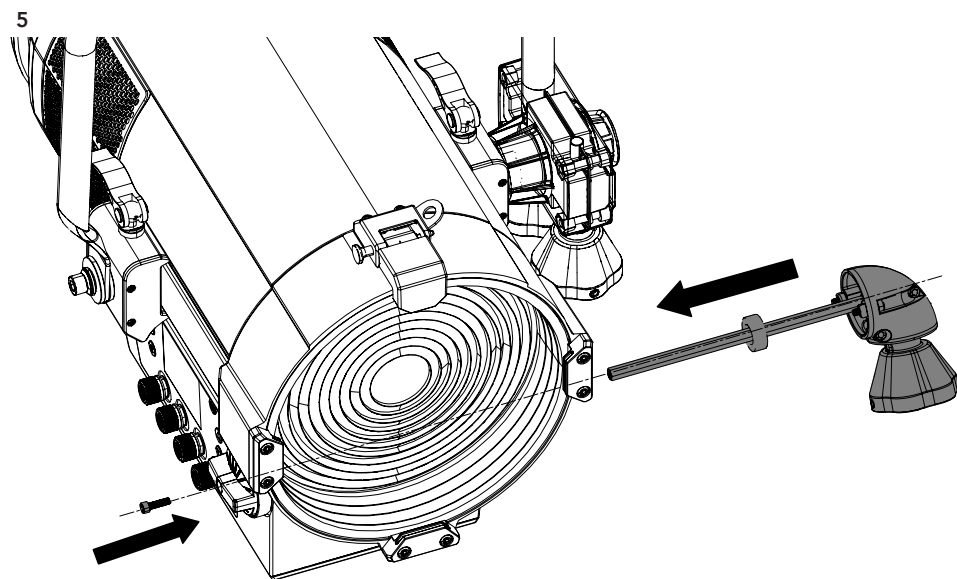


Fig. 15

Remove the screw (A) and remove the handle of the zoom movement by the opposite side.
NOTE: be sure to remove also the spacer (B)



Insert the PO zoom system, then fix it with the left handle screw previously removed.

Fig. 16

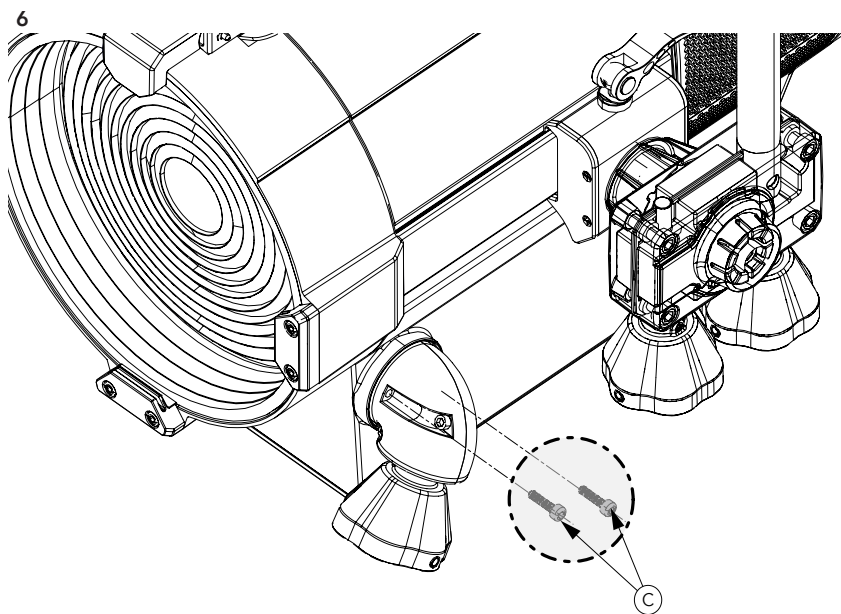


Fig. 17

Fix the zoom poyo accessory with two screws (C).

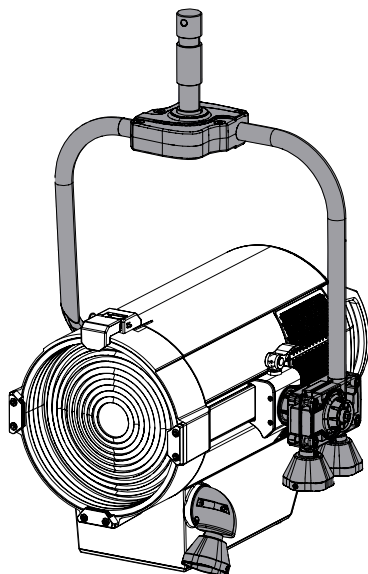


Fig. 18

1

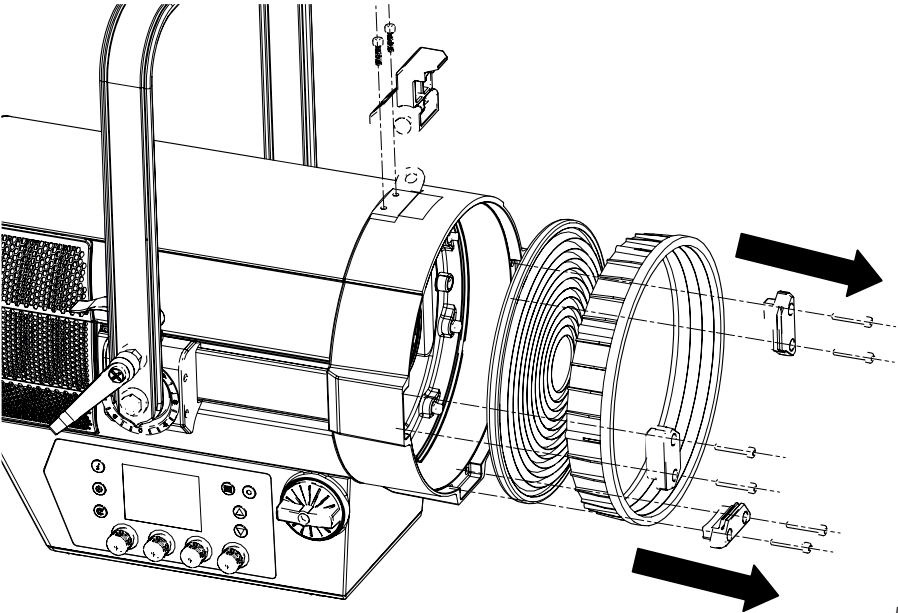


Fig. 19

Remove the fresnel lens and the top accessory holder clip as shown in the figure.

2

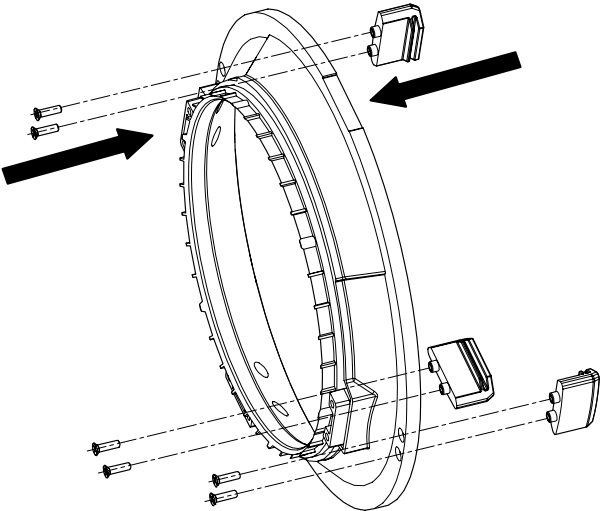


Fig. 20

Before mounting the accessory, be sure to mount the side clips on the lens holder.

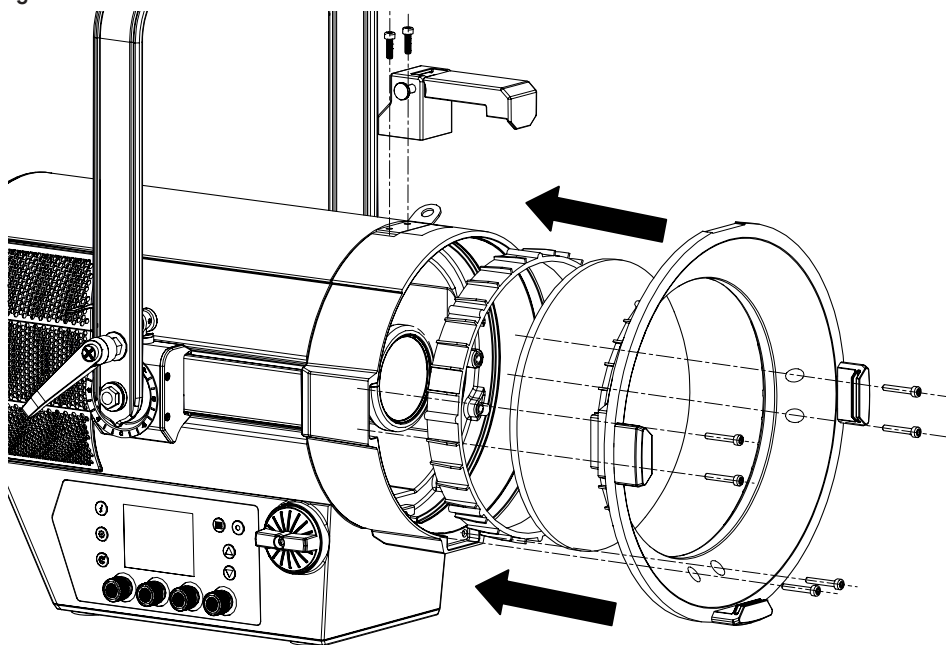


Fig. 21

Now you can assemble the PC lens kit as shown in figure, you can also mount the top accessory holder.

NOTE: using *ECLFRCTPMCLK* on the front adapter it is possible to use the accessories (barn doors and filter frames) of the *ECLFRCTPL* series (250mm-10").

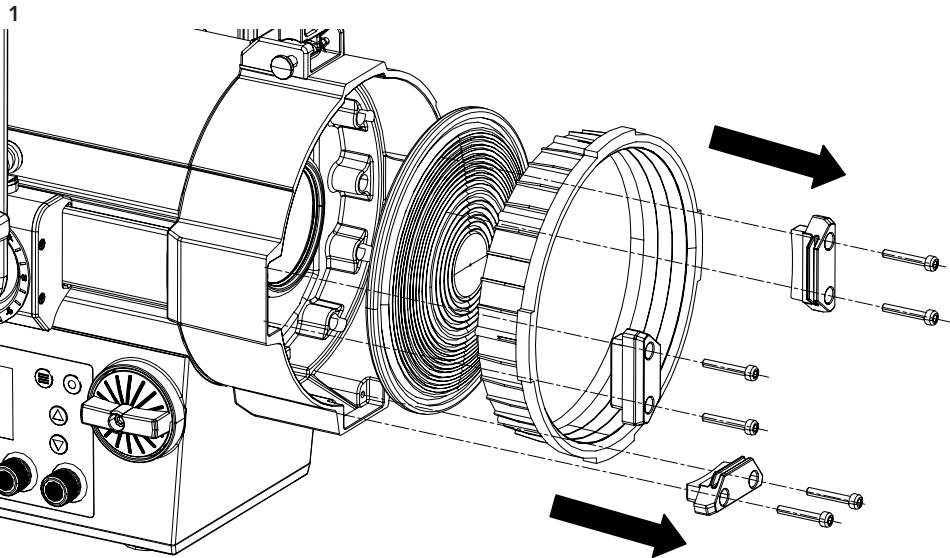
13 - ERROR MESSAGES

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).

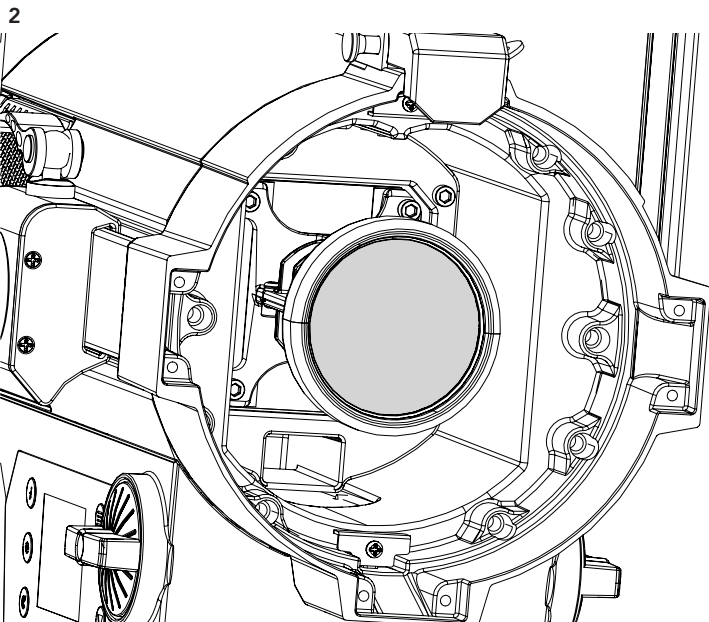
ERROR SHOWED ON SCREEN	POSSIBLE CAUSES / DESCRIPTION	CATEGORY
FAN Failure	Fan 1 broken / cable disconnected / wrong speed (> 15% deviation)	FAN
LED Temperature too high	Temperature of at least one LED board too high (> 80°C)	LED TEMPERATURE
LED Temperature sensor not detect	LED max Temperature can not be calculated (at least one LED Temperature sensor not connected)	
LED Temp. Sensor fault	Wiring or temperature sensor itself is borken	
48V PSU too low	Voltage too low (< 46 V)	VOLTAGE
48V PSU too high	Voltage too high (> 51 V)	
12V PSU too low	Voltage too low (< 10 V)	
12V PSU too high	Voltage too high (> 13 V)	
5V PSU too low	Voltage too low (< 4.5 V)	
5V PSU too high	Voltage too high (> 5.5 V)	
3.3V PSU too low	Voltage too low (< 2.8 V)	
3.3V PSU too high	Voltage too high (> 3.8 V)	
Not Calibrated	LED PCB is not calibrated.	CALIBRATION
Calibration invalid	Invalid Calibration Data	
Preset stored	Information: Preset stored successful	PRESETS
Preset restored	Information: Preset restored successful	
No preset available	Warning: No preset available in Memory (try factory reload)	
No valid preset	Warning: No valid preset (Number of selected preset not supported by projector)	
Can't override factory presets	Can't override factory presets when trying to store into Factory Presets.	
Initializing	Information: Flash initialized, all settings reset (after firm-ware update with incompatible config structure or after flash error)	UPDATES / FLASH
Factory defaults restored	Information: Factory defaults restored successful	
Screen is disabled with active DMX.	Information: Screen is disabled with active DMX, Stand Alone Mode not possible	STAND ALONE
DMX active: remove DMX data please	DMX active, transfer settings not possible	TRANSFER SETTINGS
Settings transfered	Information: Settings transfered	

14 - OPTIC CLEANING

The EclFresnel CT+ is designed in order to remove the frontal lens without compromising the IP rating



Remove open the top accessory holder clip and remove the fresnel lens as shown in the figure. The lens can be cleaned on both sides with a humig cloth.



Once the frontal lens has been removed is possible to clean the glass optic cover.

15 - MAINTENANCE

MAINTENANCE AND CLEANING THE PRODUCT

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

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 (T6.3A 250V).

VISUAL CHECK OF PRODUCT HOUSING

- 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 reset correctly but 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.
Timeout error after fixture reset.	One or more hardware components requires mechanical adjustments.	Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.
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.	Clean the fixture regularly.
	Dirty or damaged filters.	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.

Note

