



Muse Profile70CT+

1000W 6-Colours Moving LED Profile



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.



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



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INDEX

SAFETY INFORMATION	02
1 - PACKAGING	05
PACKAGE CONTENT	05
OPTIONAL ACCESSORIES	05
2 - TECHNICAL DRAWING	05
3 - PAN AND TILT LOCK	06
4 - INSTALLATION	07
MOUNTING	07
5 - CONNECTION TO THE MAINS SUPPLY	08
6 - START UP	08
CONNECT AND DISCONNECT POWER FROM THE PRODUCT	08
7 - PRODUCT OVERVIEW	09
8 - DMX CONNECTION	10
CONNECTION OF THE CONTROL SIGNAL: DMX LINE	10
INSTRUCTIONS FOR A RELIABLE DMX CONNECTION	10
CONNECTION DAISY CHAIN	10
CONNECTION OF THE DMX LINE	10
CONSTRUCTION OF THE DMX TERMINATION	11
DMX ADDRESSING	11
9 - CONTROL PANEL	12
DISPLAY AND BUTTONS LAYOUT	12
10 - MENU STRUCTURE	13
DIMMER CURVES	19
DIMMER SPEEDS	20
PAN/TILT RESET & PAN/TILT LIMITATION	20
SPEKTRA CALIBRATION & LED MODE	21
11 - SHORTCUT	21
12 - RDM FUNCTIONS	22
13 - DMX CHARTS	24
RDM Personality ID List	24
RDM Model ID	24
BLADES BEHAVIOUR	25
GEL FILTERS	40
14 - ROTATING GOBOS WHEEL	47
15 - COLOR WHEEL	49
16 - ANIMATION WHEEL	50
17 - ERROR MESSAGES	51
18 - PERIODICAL CLEANING	53
19 - GOBOS REPLACEMENT	54
20 - MODULE REMOVAL (ANIMATION, COLOR, GOBOS WHEEL)	55
21 - USB UPDATE MODE	56
22 - MAINTENANCE	58
MAINTENANCE AND CLEANING THE PRODUCT	58
VISUAL CHECK OF PRODUCT HOUSING	58
RESETTING THE MAINTENANCE TIME MESSAGE	59

SAFETY INFORMATION



WARNING!

- See <https://www.prolights.it/product/MUSEP70CTP#download> for installation instructions.
- Please read carefully the instruction reported in this section before installing, powering, operating or servicing the product and observe the indications also for its future handling.



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



Connection to mains supply

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



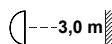
Protection and Warning against electrical shock

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



Installation

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



Minimum distance of illuminated objects

- The projector needs to be positioned so that the objects hit by the beam of light are at least 3.0 m (9.84 ft) from the lens of the projector.

T_a 45 °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).



Protection from burns and fire

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



Indoor use

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

T_c 80 °C

Temperature of the external surface

- The surface of the fixture can reach up to 80.0 °C (176.0 °F) during operation. Avoid contact with people and materials.



Maintenance

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



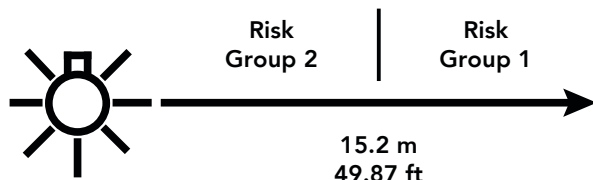
Photobiological safety

- This device emits potentially dangerous optical radiation and is identified in the category of Risk Group 2 according to EN 62471.



Do not stare at the operating light source

- Do not look directly at the LED source during operation. It can be harmful to the eyes and skin.
- During Installation, operation and maintenance, be prepared for the fixture to light or move suddenly when connected to power.
- The device should be positioned so that prolonged staring into the luminaire at a distance closer than 15.20 m (49,87 ft) is not expected.



Disposal

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



The products to which this manual refers comply with:

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



The products to which this manual refers comply with:

- UL 1573 + CSA C22.2 No. 166 - Stage and Studio Luminaires and Connector Strips.
- UL 1012 + CSA C22.2 No. 107.1 - Standard for power units other than class 2.



FCC Compliance:

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



Other approvals

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

1 - PACKAGING

PACKAGE CONTENT

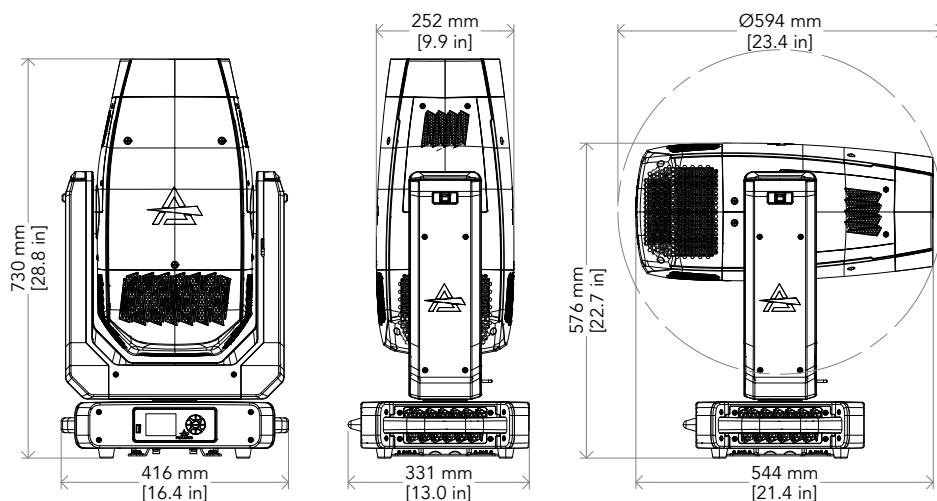
- 1x MUSEP70CTP;
- 1x 1,5 meters power cable (BARE END - NEUTRIK POWERCON TRUE1 IP65);
- 2x OS25PLUS, Quick-lock omega bracket;
- User Manual.

OPTIONAL ACCESSORIES

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

<https://www.prolights.it/product/MUSEP70CTP#accessories>

2 - TECHNICAL DRAWING

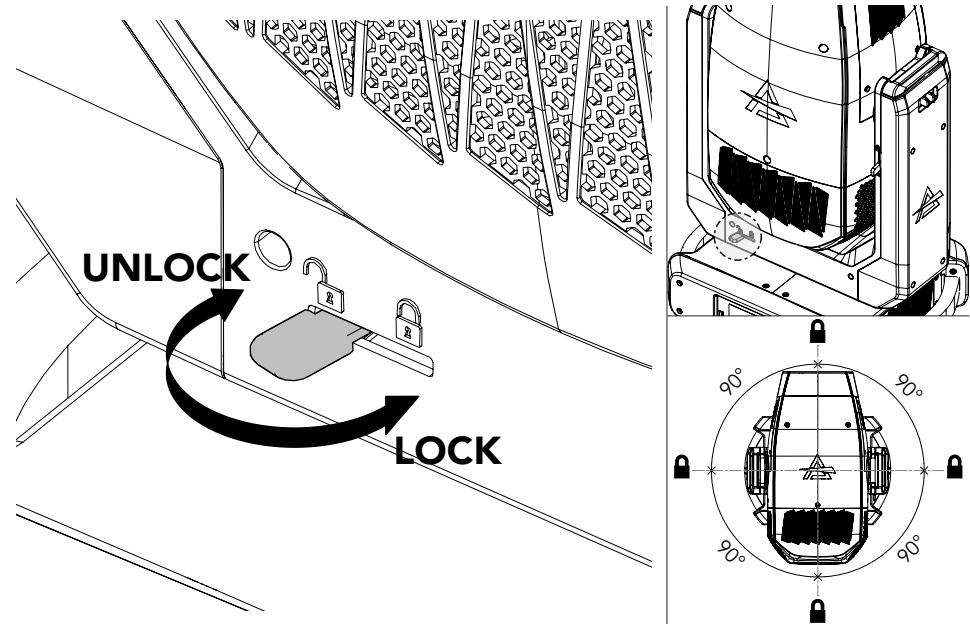


Weight: 34,0 kg - 74,96 lbs

Fig. 01

3 - PAN AND TILT LOCK

PAN Mechanism lock and release



TILT Mechanism lock and release

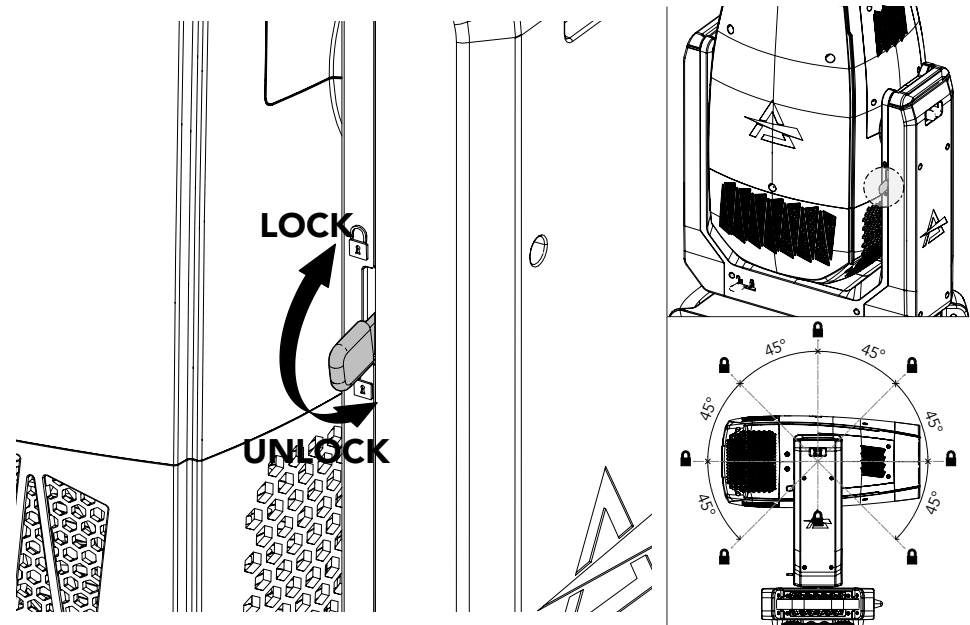


Fig. 02

4 - INSTALLATION

MOUNTING

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

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

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

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

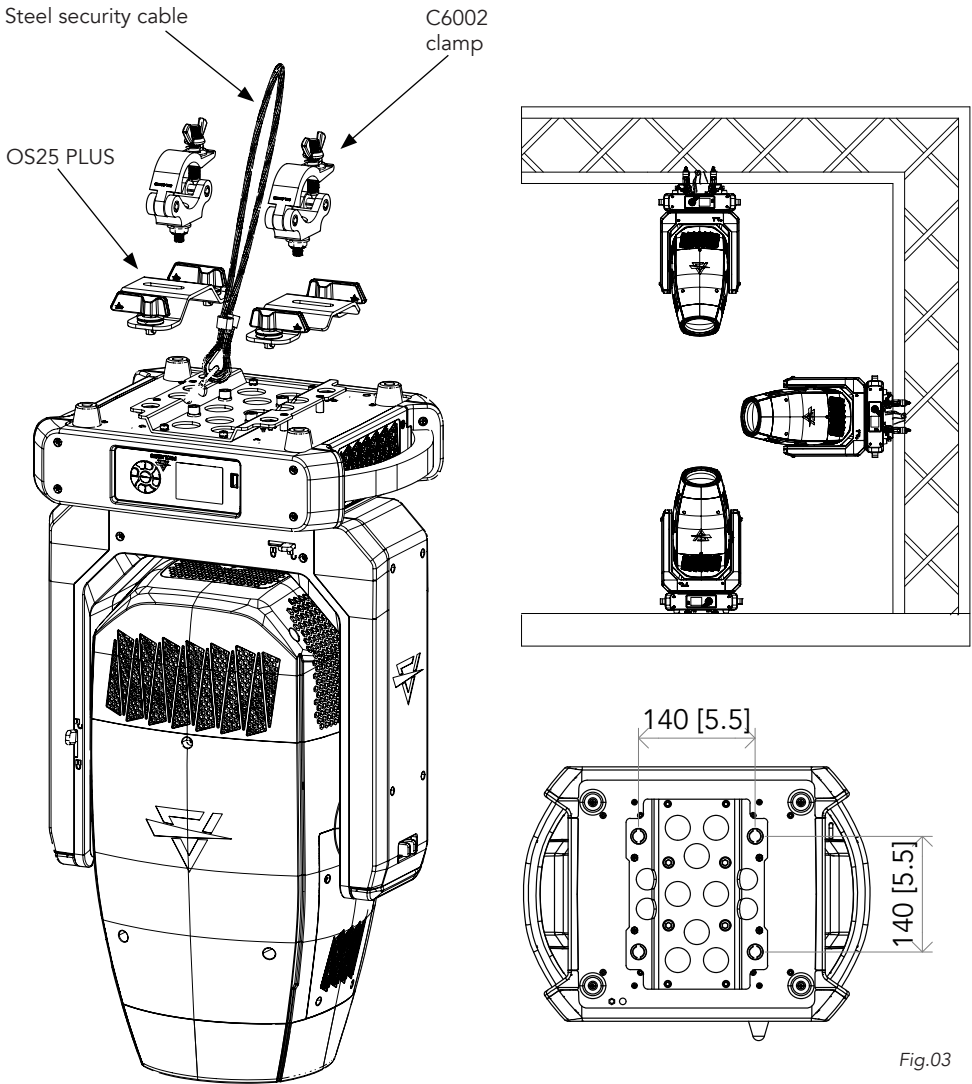


Fig.03

5 - 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 (max absolutes range : 90- 264V).
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 1400W.

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

6 - 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.

7 - PRODUCT OVERVIEW

1. USB PORT for quick firmware upgrade;
 2. USER INTERFACE with display and buttons for access to the control panel functions;
 3. ANTENNA for wireless operations;
 4. POWER IN/OUT: for connection to the Mains 100-240V~/50-60Hz;
 5. DMX IN/OUT (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C;
 6. ETHERCON CONNECTORS IN / OUT signal.
 7. SAFETY EYES: to attach safety cable;
 8. RELEASE MECHANISM for retractable handles.
-

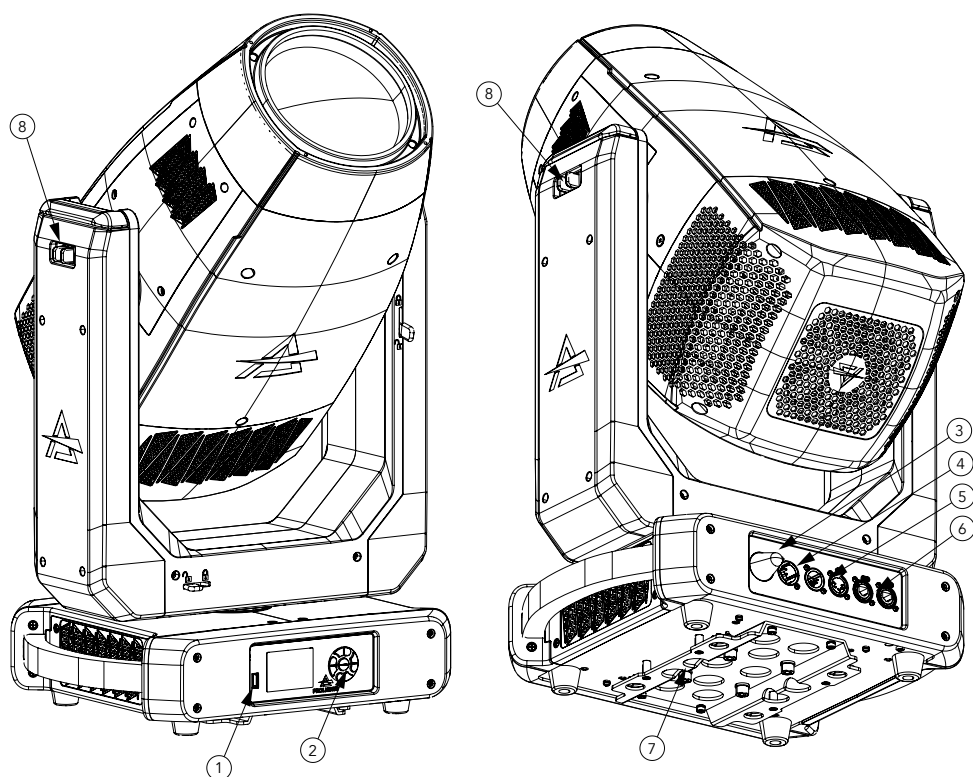


Fig 04

8 - 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

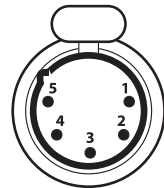


Fig. 05

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:

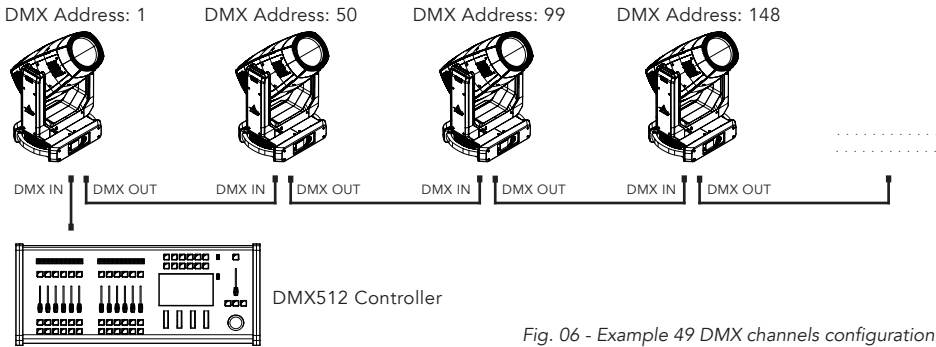


Fig. 06 - Example 49 DMX channels configuration

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.

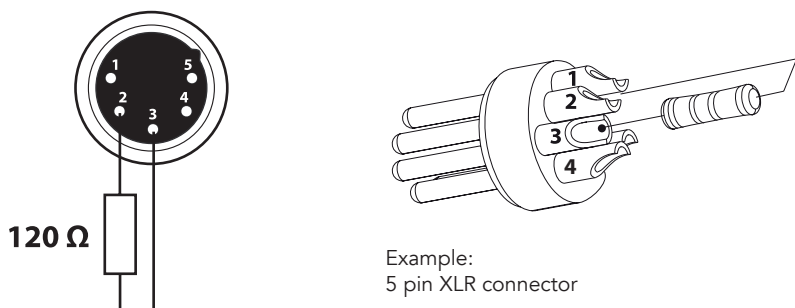


Fig. 07

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 ENTER 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.

9 - CONTROL PANEL

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

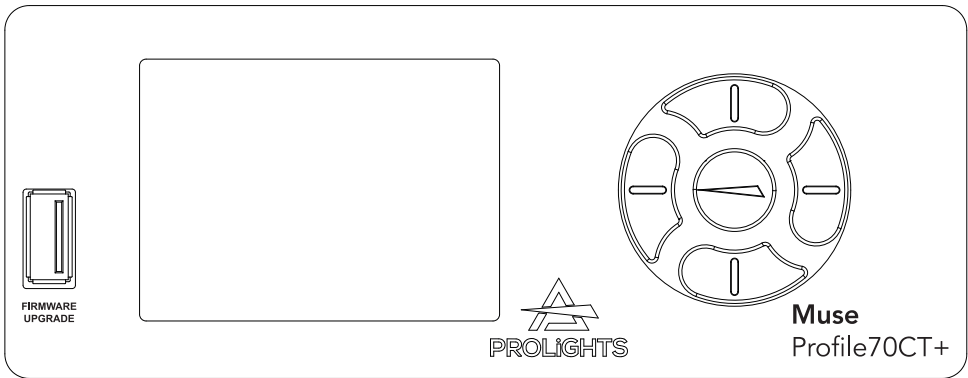
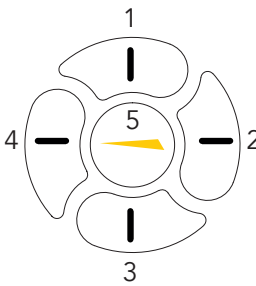


Fig. 08

DISPLAY AND BUTTONS LAYOUT

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

	1		Browse upwards through the menu list and increases the numeric value displayed.
	2		Scroll from left to right when entering numerical values, switching between hundreds, tens and units
	3		Browse downwards through the menu list and decreases the numeric value displayed.
	4		Return to the top level, or scroll from right to left when entering numerical values, switching between units, tens and hundreds
	5		Used to confirm the displayed value, or activate the displayed function or to access the menu tree or to return a previous menu window.
	USB port for Firmware Upgrade.		

10 - MENU STRUCTURE

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

MENU: CONNECT					
LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
DMX ADDRESS	DMX / CRMX	1-512			Set DMX Address for Main fixture
	SACN				
	ARTNET				
DMX MODE	BASIC CTC				
	STANDARD	RGB			
		CMY			
	ADVANCED				
	RAW				
WIRELESS	CRMX ON/OFF	ON			Enable the wireless card.
		OFF			
	CRMX MODE	TX CRMX			Allows configuration of the wireless card as either a Transmitter or Receiver. G4s and G3 are supported protocols for connection with Wireless Solution products.
		TX G4S			
		TX G3			
		RX			
	TX LINK	ON			Enables the transmission link when the unit is set as a Transmitter.
		OFF			
	TX UNLINK	ON			Disconnects the transmitter from all connected receivers. TX Unlink can only be used when the unit is in Transmitter mode in CRMX settings.
		OFF			
	RX RESET	ON			Disconnects the CRMX card, set as a Receiver, from any connected transmitters.
		OFF			
	IN TO CRMX (TX)	ON			Enable/Disable the transmission of the DMX from the transmitter to the receiver via CRMX
		OFF			
	CRMX TO DMX (RX)	ON			Enable/Disable the retransmission of the DMX from the receiver to the other units connected by cable to the receiver itself
		OFF			
	LINKING KEY	ON		SET LINKING KEY	"Insert 8 digit code RX Mode: Possible to choose mode and universe"
LINKING MODE				CRMX	
				CRMX2	
LINKING UNIVERSE				A	
				B (Only CRMX2)	
				C	
				D (Only CRMX2)	

MENU: CONNECT

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
WIRELESS	LINKING KEY	ON	LINKING UNIVERSE	E	
				F (Only CRMX2)	
				G	
				H (Only CRMX2)	
		OFF			
	UNIVERSE METADATA	NAME	xxx		
		COLOR	Red		
			Green		
			Blue		
			Cyan		
			Magenta		
			Yellow		
			White		
	LINK STRENGTH	** %			Insert 8 digit code RX Mode: Possible to choose mode and universe
	CRMX CARD VERSION	TimoFX: Vx.x.xx			
ETHERNET SETTING	IP ADDRESS	xxx.xxx.xxx.xxx			
	SUBNET MASK	xxx.xxx.xxx.xxx			
	ARTNET SETTINGS	NET	0-127		A group of 16 consecutive Sub-Nets or 256 consecutive Universes is referred to as a net. There are 128 Nets in total.
		SUBNET	0-15		A group of 16 consecutive universes is referred to as a sub-net. (Not to be confused with the subnet mask).
		UNIVERSE	0-15		A single DMX512 frame of 512 channels is referred to as a Universe.
		PORT-ADDRESS	0		one of the 32,768 possible addresses to which a DMX frame can be directed. The Port-Address is a 15 bit number composed of Net+Sub- Net+Universe.
	sACN SETTINGS	UNIVERSE	1-63999		
		MERGE MODE	OFF		
			HTP		
			LTP		
ETHERNET TO CRMX	ON				
	OFF				
ETHERNET TO DMX	ON				
	OFF				

MENU: SETUP

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
SCREEN	BACKLIGHT	ALWAYS ON			Sets the time after which the display will automatically turn off when inactive.
		10S			
		20S			
		30S			
	FLIP DISPLAY	AUTO			Enables the display to be rotated by 180°.
		ON			
		OFF			
	KEY LOCK	ON			Lock the buttons on the control panel with a password. To access the user menu, enter the following button sequence (password): UP, DOWN, UP, DOWN, ENTER.
		OFF			
MOVEMENT	PAN REVERSE	YES			Allows you to reverse Pan movement.
		NO			
	TILT REVERSE	YES			Allows you to reverse Tilt movement.
		NO			
	PAN/TILT MODE	FAST			To choose the horizontal/ vertical movement speed.
		MEDIUM			
		SLOW			
	PAN LIMITATION	STARTING POINT		0 - 254	Check "PAN/TILT LIMITATION" on page 20
		END POINT		1 - 255	
	TILT LIMITATION	STARTING POINT		0 - 254	
		END POINT		1 - 255	
	DIMMER	DIMMER CURVE	LINEAR		
S-CURVE					
SQUARE LAW					
INVERSE SQUARE LAW					
HIGH RES@LOW					
DIMMER SPEED		AUTO			Check "DIMMER SPEEDS" on page 20
		FAST			
		MEDIUM			
		SLOW			
		OFF			
DIMMER END		FADE OFF@END			
		SNAP OFF@END			
TUNGSTEN EMULATION		ON			If Tungsten Emulation@ON--> It works at CCT up to 3200K => It does not work at CCT>3200K.
		OFF			

MENU: SETUP

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
FIXTURE	FAN MODE	AUTO			Check "FAN MODES" on page 21
		HIGH			
		SILENT 1			
		SILENT 2			
		OFF			
FIXTURE	DMX FAULT	HOLD			Defines fixture behavior on DMX signal loss: HOLD (keep last state), BLACKOUT (turn off).
		BLACKOUT			
	INVERT ZOOM	ON			To invert the zoom behaviour.
		OFF			
	INVERT BLADES	ON			To invert the blades behaviour.
		OFF			
USER SETTINGS	PRESET 1		SAVE (when empty memory) RECALL (when already saved) DELETE (when already saved)		USER SETTINGS PRESET will store all settings (like a configuration file), User will be able to save up to 5 presets. Factories default won't erase User Settings preset. "DELETE" will be used to delete a selected preset.
	PRESET 2				
	PRESET 3				
	PRESET 4				
	PRESET 5				
TRANSFER SETTINGS	WITHOUT DMX ADDRESS				Transfer settings from the current fixture to another fixture of the same model using the DMX protocol. If a signal from another source is present, the Transfer Configuration function will not be available.
	WITH DMX ADDRESS				

MENU: ADVANCED

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
SPEKTRA CALIBRATION	ON				
	PURE COLORS				
	OFF				
WHITE POINT	3200K				
	4000K				
	5600K				
	6000K				
	6500K				
	8000K				
LED FREQUENCY	600 Hz				
	1200 Hz				
	2000 Hz				
	4000 Hz				
	6000 Hz				
	25 kHz				
	40 kHz				

MENU: ADVANCED

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
RESET	ALL				
	PAN & TILT				
	ZOOM / FOCUS				
	COLORS				
	GOBOS / ANIMATION				
	EFFECTS				
	ALL BLADES				
CALIBRATION					PASSWORD "050"
MANUAL CONTROL	PAN				Manual Control of each functionality via display. If this function is accessed with a valid DMX signal present, values are taken from last DMX frame received. Signal is ignored while fixture stays in this menu. Timeout for screen is inhibited. No Auto-leave function. Default values are taken only if no DMX signal is present when opening this function.
	PAN FINE				
	TILT				
	TILT FINE				
	DIMMER				
	DIMMER FINE				
	SHUTTER				
	RED				
	GREEN				
	BLUE				
	...				
	BLADE 4 POSITON				
	BLADE 4 ROT				
	FRAME ROT				
	CONTROL				
RELOAD DEFAULT	BASIC RELOAD	YES	Default of all parameters excepted Calibration and user settings		BASIC RELOAD and FACTORY RELOAD never affect following parameters: Fixture Hours, Source Hours, Power On Cycle, Maintenance Time Alert Period and Elapsed time
		NO			
	FACTORY RELOAD	YES	Default of all parameters included calibration to the factory values		
		NO			
UPLOAD FIRMWARE	Only this fixture				
	Multiple Fixture				
	Other Fixture Type				
	Fixture to Fixture				

MENU: INFORMATIONS

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
FIXTURE TIME	FIXTURE HOURS	TOTAL	(READ AND RESET)		View informations about product operating lifetime. Fixture Hours is countered based on general operation time. Hours are countered since Power is plugged in. Source Hours is countered based on LED Activity time.
		PARTIAL	(READ AND RESET)		
	CURRENT HOURS	TOTAL	(READ AND RESET)		
		PARTIAL	(READ AND RESET)		
	SOURCE HOURS	TOTAL	(READ AND RESET)		
		PARTIAL	(READ AND RESET)		
	POWER ON CYCLE	TOTAL	(READ AND RESET)		
		PARTIAL	(READ AND RESET)		
	MAINTENANCE TIME	ELAPSED TIME	(READ AND RESET)		
		ALERT PERIOD	10 – 750		
POWER LED	...				Show power driven to LED by firmware.
TEMPERATURE	NEAR SOURCE TEMP, DRIVER PCB TEMP, LED PCB TEMP,...				Show all NTC temperatures.
FAN SPEED	NEAR SOURCE FAN, BASE FAN,...				Show all FAN speeds.
CHANNEL VALUE	PAN...				Show all Channel values as a list, value shown depends on DMX Mode
ERROR MESSAGE	PAN, TILT...				Show error message
DEVICE LABEL	MUSEP70CTP				Show RDM Label.
FIXTURE MODEL	MUSEP70CTP				Show RDM fixture model
RDM UID	(READ, RESET AND EDIT)				
SOFTWARE VERSION	1U01 V1.0.00...				Show firmware version of the fixture

DIMMER CURVES

Five dimming modes are available:

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

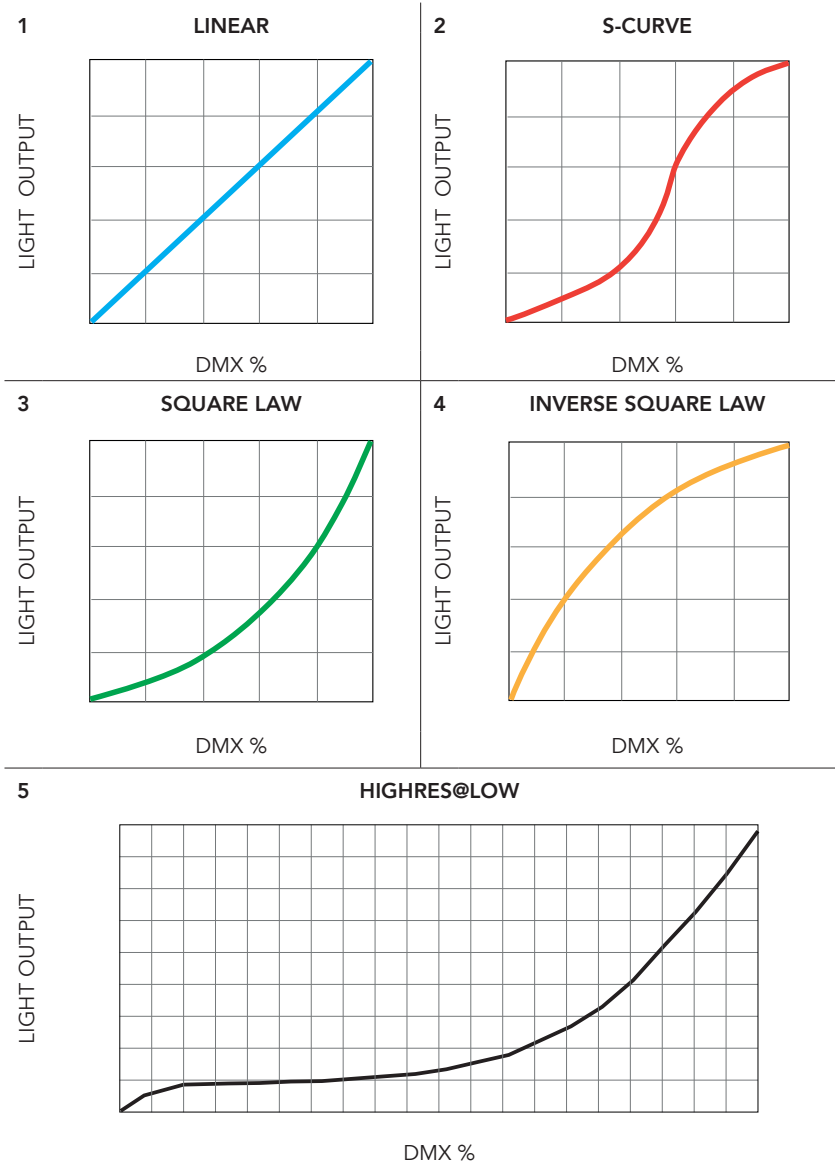


Fig. 09

DIMMER SPEEDS

Five dimming speeds are available:

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

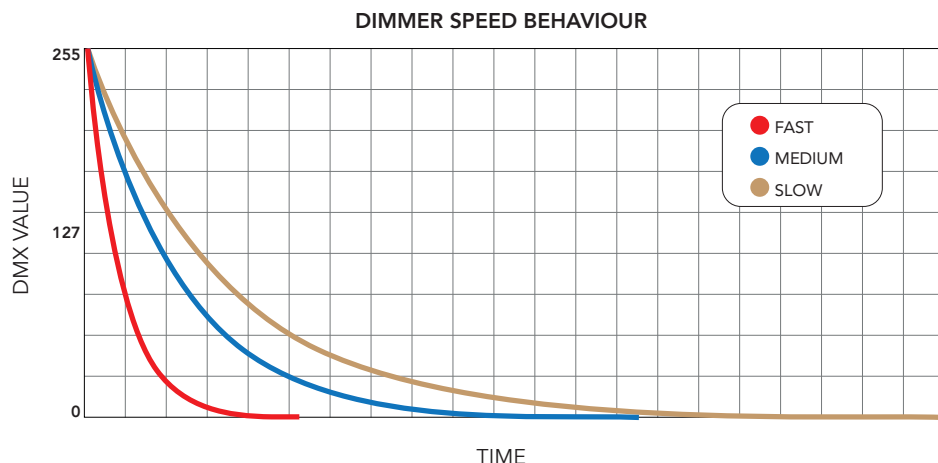


Fig.10

PAN/TILT RESET & PAN/TILT LIMITATION

These functions work together to define how the fixture manages Pan/Tilt resetting and travel limits during operation.

PAN/TILT RESET

Since the MUSEP70CTP is equipped with absolute encoders, no mechanical movement is required to detect the Pan and Tilt positions upon startup; however, to ensure a precise reset of all the internal functions, the following routine is performed after powering on the fixture:

- **PAN** - Remains stationary.
- **TILT** - Automatically positions itself at the midpoint of the configured Tilt Limitation parameters (Default: 128) to allow a precise reset of the internal functions.

Once this routine is completed, the MUSEP70CTP will only move if a valid DMX signal is present.

PAN/TILT LIMITATION

This function allows the user to restrict the Pan and Tilt travel range by defining a "STARTING POINT" and an "END POINT" for both axes. The MUSEP70CTP will operate strictly within the selected range (Default: 0-255); the fixture also respects these defined boundaries during its initial reset procedure.

SPEKTRA CALIBRATION

Manages how CCT (Correlated Color Temperature) and colors are calibrated across fixtures, using a shared color space.

- **ON** - Full calibration of whites and colors. Ensures maximum consistency between units. Slightly reduces color saturation for uniform results.
- **PURE COLORS** - Whites remain calibrated, but colors are shown in their native space for maximum saturation. Ideal for creative use.
- **OFF** - No calibration applied (RAW mode). Maximizes output and vividness, but consistency and CRI may vary.

FAN MODES

MODE	MAX LED POWER	FAN SPEED
Auto	95%	Variable from 0% to 85% according to the led temperature.
High	100%	Fixed Speed: 100%
Silent 1	85%	Variable from 0% to 70% according to the led temperature.
Silent 2	75%	Variable from 0% to 50% according to the led temperature.
Off	60%	Fixed Speed: 0%

11 - SHORTCUT

Keys	Mode	Description
UP + DOWN after power on	Flip Display	Directly flip display without enter inside menu
DOWN then power on	Reset without pan/tilt movements	Fixture will be powered on without reset on pan/tilt movements
ENTER + UP then power on	Bootloader	Force firmware upgrade
CONTROL CHANNEL set to 220 + PAN FINE CHANNEL SET TO 255, within 3s PAN FINE need to be set to 0	Basic Reload	This Reload also reset DMX address and mode. This combination need to be performed while fixture is resetting

12 - 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	
	PARAMETER_DESCRIPTION	0x0051	x	
	PRODUCT_DETAIL_ID_LIST	0x0070	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
	DEFAULT_SLOT_VALUE	0x0122	x	
Sensors	SENSOR_DEFINITION	0x0200	x	
	SENSOR_VALUE	0x0201	x	x
Dimmer Settings	CURVE	0x0343	x	x
	CURVE_DESCRIPTION	0x0344	x	x
	OUTPUT_RESPONSE_TIME	0x0345	x	x
	OUTPUT_RESPONSE_TIME_DESCRIPTION	0x0346	x	
	MODULATION_FREQUENCY	0x0347	x	x
	MODULATION_FREQUENCY_DESCRIPTION	0x0348	x	
Power/Lamp Settings	DEVICE_HOURS	0x0400	x	x
	LAMP_HOURS	0x0401	x	x
Display Settings	DISPLAY_INVERT	0x0500	x	x
Configuration	PAN_INVERT	0x0600	x	x
	TILT_INVERT	0x0601	x	x
	PAN_TILT_SWAP	0x0602	x	x
Control	RESET_DEVICE	0x1001		x

Manufacturer Specific PIDs

Parameter	PID	GET	SET	Value	Description
CURRENT_HOURS	0x82C5	x		0-65535	
TUNGSTEN_EMULATION	0x82BC	x	x	0-1	0: Off 1: On
DMX_FAULT	0x82DD	x	x	0-1	0: Hold 1: Blackout
ERROR_MESSAGE	0x82EA	x		-	
MAINTENANCE_T_ALERT_PERIOD	0x82DF	x	x	-	* h
MAINTENANCE_T_ELAPSED_TIME	0x82E0	x	x	-	* h
POWER_CONSUMPTION	0x82EF	x		-	* W
SPEKTRA_CALIBRATION	0x822F	x	x	0-2	0: On 1: Pure Colors 2: Off
WIRELESS_QUALITY	0x82F4	x		-	**%
PAN LIMITATION - STARTING POINT	0x8399	x	x	0 - 254	DEFAULT: 0
PAN LIMITATION - END POINT	0x839A	x	x	1 - 255	DEFAULT: 255
TILT LIMITATION - STARTING POINT	0x839B	x	x	0 - 254	DEFAULT: 0
TILT LIMITATION - END POINT	0x839C	x	x	1 - 255	DEFAULT: 255

13 - DMX CHARTS

RDM Personality ID List			RDM Model ID
ID	DMX Mode	Footprint	0xD169
1	BASIC CTC	43	
2	STANDARD	49	
3	ADVANCED	48	
4	RAW	54	

PAN/TILT POSITION RELATED TO DMX VALUES

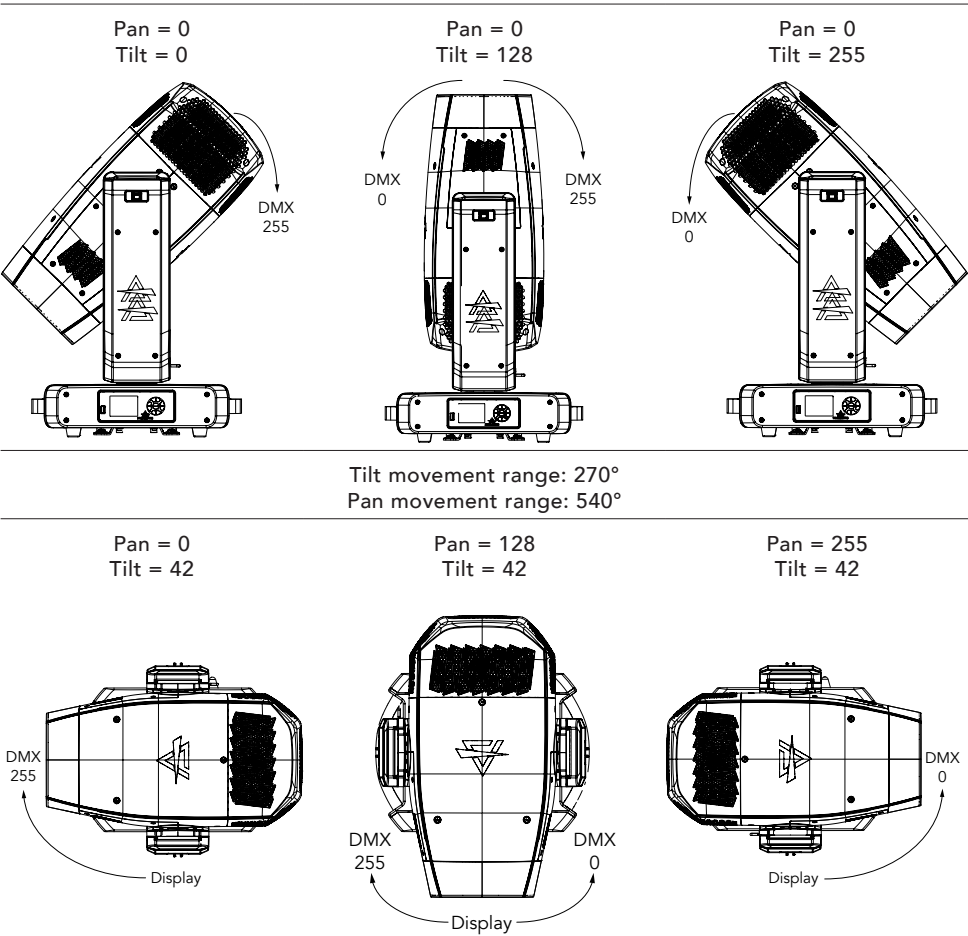
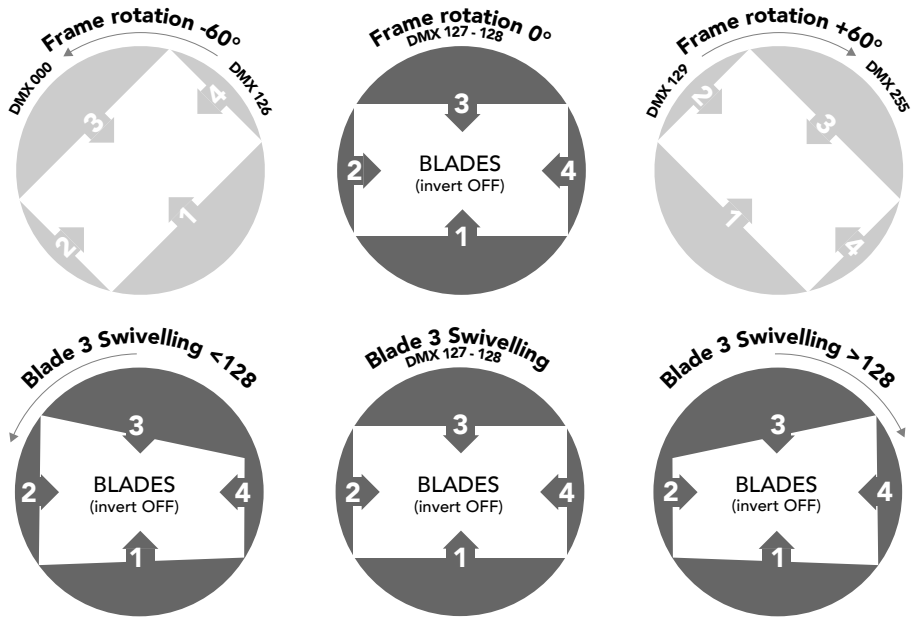


Fig.11

BLADES BEHAVIOUR

Check Below image for all the informations about the profile module



PROJECTION ON THE WALL

Fixture with
PAN/TILT channels @
PAN @50% - DMX128
TILT @ 84% - DMX 214

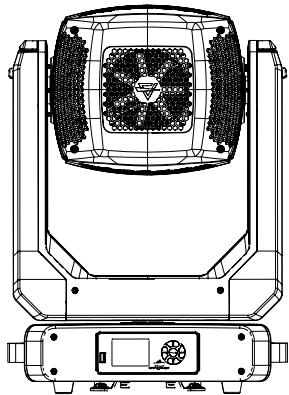


Fig.12

DMX Chart Summary

Function	DMX MODE				
	BASIC CTC	STANDARD RGB	STANDARD CMY	ADVANCED	RAW
	43	49	49	48	54
Pan	1	1	1	1	1
Pan fine	2	2	2	2	2
Tilt	3	3	3	3	3
Tilt fine	4	4	4	4	4
Dimmer	5	5	5	5	5
Dimmer Fine	6	6	6	6	6
Shutter	7	7	7	7	7
Cyan	-	-	8	-	-
Cyan fine	-	-	9	-	-
Magenta	-	-	10	-	-
Magenta fine	-	-	11	-	-
Yellow	-	-	12	-	-
Yellow fine	-	-	13	-	-
Red	-	8	-	-	8
Red fine	-	9	-	-	9
Green	-	10	-	-	10
Green fine	-	11	-	-	11
Blue	-	12	-	-	12
Blue fine	-	13	-	-	13
Cyan	-	-	-	-	14
Cyan fine	-	-	-	-	15
Lime	-	-	-	-	16
Lime fine	-	-	-	-	17
Amber	-	-	-	-	18
Amber fine	-	-	-	-	19
X	-	-	-	8	-
X fine	-	-	-	9	-
Y	-	-	-	10	-
Y fine	-	-	-	11	-
XFade CTC>COLOR	-	14	14	12	20
CCT 16 bit	8	15	15	13	21
	9	16	16	14	22
GMP	10	17	17	15	23
CRI	11	18	18	16	24

DMX Chart Summary

Function	DMX MODE				
	BASIC CTC	STANDARD RGB	STANDARD CMY	ADVANCED	RAW
	43	49	49	48	54
Virtual Colors	-	19	19	-	-
GEL category	12	-	-	17	-
GEL filter	13	-	-	18	-
Color Wheel	14	20	20	19	25
Rot Gobo Wheel 1	15	21	21	20	26
Gobo Rot 1	16	22	22	21	27
Gobo Rot Fine 1	17	23	23	22	28
Rot Gobo Wheel 2	18	24	24	23	29
Gobo Rot 2	19	25	25	24	30
Gobo Rot Fine 2	20	26	26	25	31
Prism 1	21	27	27	26	32
Prism 1 Index/Rotation	22	28	28	27	33
Frost	23	29	29	28	34
Iris	24	30	30	29	35
Iris Fine	25	31	31	30	36
Zoom	26	32	32	31	37
Zoom Fine	27	33	33	32	38
Focus	28	34	34	33	39
Focus Fine	29	35	35	34	40
Animation Insertion	30	36	36	35	41
Animation Rotation	31	37	37	36	42
Blade 1 position	32	38	38	37	43
Blade 1 swivelling	33	39	39	38	44
Blade 2 position	34	40	40	39	45
Blade 2 swivelling	35	41	41	40	46
Blade 3 position	36	42	42	41	47
Blade 3 swivelling	37	43	43	42	48
Blade 4 position	38	44	44	43	49
Blade 4 swivelling	39	45	45	44	50
Frame rotation	40	46	46	45	51
Frame macros	41	47	47	46	52
Frame macros speed	42	48	48	47	53
Control (hold 3 seconds)	43	49	49	48	54

DMX MODE					Name	Function	DMX		Default
BASIC CTC	STANDARD		ADV	RAW			FROM	TO	
	RGB	CMY							
	43	49							
1	1	1	1	1	Pan	Pan movement	0	255	128
2	2	2	2	2	Pan fine	Fine pan movement	0	255	0
3	3	3	3	3	Tilt	Tilt movement	0	255	128
4	4	4	4	4	Tilt fine	Fine tilt movement	0	255	0
5	5	5	5	5	Dimmer	Dimmer intensity 0 – 100%	0	255	0
6	6	6	6	6	Dimmer Fine	Fine dimming	0	255	0
7	7	7	7	7	Shutter	Open	0	1	0
						Strobe from slow to fast	2	62	
						Open	63	64	
						Pulse in from slow to fast	65	125	
						Close	126	127	
						Pulse out from slow to fast	128	188	
						Open	189	190	
						Randon from slow to fast	191	251	
Open	252	255							
-	-	8	-	-	Cyan	Linear saturation 0 – 100%	0	255	0
-	-	9	-	-	Cyan fine	Cyan fine tuning	0	255	0
-	-	10	-	-	Magenta	Linear saturation 0 – 100%	0	255	0
-	-	11	-	-	Magenta fine	Magenta fine tuning	0	255	0
-	-	12	-	-	Yellow	Linear saturation 0 – 100%	0	255	0
-	-	13	-	-	Yellow fine	Yellow fine tuning	0	255	0
-	8	-	-	8	Red	Linear saturation 0 – 100%	0	255	0
-	9	-	-	9	Red fine	Red fine tuning	0	255	0
-	10	-	-	10	Green	Linear saturation 0 – 100%	0	255	0
-	11	-	-	11	Green fine	Green fine tuning	0	255	0
-	12	-	-	12	Blue	Linear saturation 0 – 100%	0	255	0
-	13	-	-	13	Blue fine	Blue fine tuning	0	255	0
-	-	-	-	14	Cyan	Linear saturation 0 – 100%	0	255	0
-	-	-	-	15	Cyan fine	Cyan fine tuning	0	255	0
-	-	-	-	16	Lime	Linear saturation 0 – 100%	0	255	0
-	-	-	-	17	Lime fine	Amber fine tuning	0	255	0
-	-	-	-	18	Amber	Linear saturation 0 – 100%	0	255	0
-	-	-	-	19	Amber fine	Lime fine tuning	0	255	0
-	-	-	8	-	X	Linear 0.000 to 0.735	0	255	0
-	-	-	9	-	X fine	X fine tuning	0	255	0
-	-	-	10	-	Y	Linear 0.000 to 0.835	0	255	0
-	-	-	11	-	Y fine	Y fine tuning	0	255	0
-	14	14	12	20	XFade CTC>COLOR	Linear Crossfade	0	255	255
8	15	15	13	21	CCT 16 bit	(Check "CCT FROM 2200K TO 15000K" on page 35)			0
						2.200k	0	0	
9	16	16	14	22			Linear from 2.200K to 15.000K	1	
						15.000k	255	255	

DMX MODE					Name	Function	DMX		Default
BASIC	STANDARD		ADV	RAW			FROM	TO	
CTC	RGB	CMY							
43	49	49	48	54					
10	17	17	15	23	GMP	Neutral / No Effect	0	1	0
						Full Minus Green	2	3	
						-99% to -1%	4	126	
						Neutral / No Effect	127	128	
						1% to 99%	129	253	
						Full Plus Green	254	255	
11	18	18	16	24	CRI	LED mode setting from menu	0	1	0
						High Output - Lower CRI	2	3	
						Linearly increase CRI	4	253	
						Lower Output - High CRI	254	255	
-	19	19	-	-	Virtual Colors (Check "Virtual colors" on page 38)	No Function	0	1	0
						Colors	2	135	
						Reserved	136	209	
						Whites	210	253	
						Full On	254	255	
12	-	-	17	-	GEL category	No function	0	9	0
						LEE: Color correction	10	19	
						LEE: Color Filters	20	29	
						LEE: 600 Series	30	39	
						LEE: Cosmetic Filters	40	49	
						LEE: 700 Series	50	59	
						RC: Color correction	60	69	
						RC: CalC	70	79	
						RC: StSelection	80	89	
						RC: C-Lux	90	99	
						Blackout	100	109	
						Reserved	110	255	
13	-	-	18	-	GEL filter	(Check "GEL FILTERS" on page 40)	0	255	
14	20	20	19	25	Color Wheel	Color Positioning			0
						Open	0		
						Open + Dark Red	1	25	
						Dark Red	26		
						Dark Red + Dark Green	27	51	
						Dark Green	52		
						Dark Green + Dark Blue	53	77	
						Dark Blue	78		
						Dark Blue + Dark Magenta	79	103	
						Dark Magenta	104		
						Dark Magenta + Congo Blue	105	129	
						Congo Blue	130		
						Congo Blue + Open	131	155	
						Open	156	159	

DMX MODE					Name	Function	DMX		Default
BASIC	STANDARD		ADV	RAW			FROM	TO	
CTC	RGB	CMY							
43	49	49	48	54					
14	20	20	19	25	Color Wheel	Color Slot			0
						Open	160	165	
						Dark Red	166	171	
						Dark Green	172	177	
						Dark Blue	178	183	
						Dark Magenta	184	189	
						Congo Blue	190	199	
						Color Wheel Rotation			
						Forward rainbow - Fast to slow	200	224	
						No rotation	225	230	
15	21	21	20	26	Rot Gobo Wheel 1	Backwards rainbow - Slow to fast	231	255	0
						Open	0	13	
						Gobo Indexing (set next ch)			
						Gobo 1	14	18	
						Gobo 2	19	23	
						Gobo 3	24	28	
						Gobo 4	29	33	
						Gobo 5	34	38	
						Gobo 6	39	43	
						Gobo Rotation (set next ch)			
						Gobo 1	44	48	
						Gobo 2	49	53	
						Gobo 3	54	58	
						Gobo 4	59	63	
						Gobo 5	64	68	
						Gobo 6	69	73	
						Gobo shaking - Slow to fast			
						Gobo Shake 1	74	93	
						Gobo Shake 2	94	113	
						Gobo Shake 3	114	133	
						Gobo Shake 4	134	153	
						Gobo Shake 5	154	173	
						Gobo Shake 6	174	193	
						Gobo Wheel Rotation			
						Forward wheel rotation - Fast to slow	194	223	
						No rotation	224	225	
						Backwards wheel rotation - Slow to fast	226	255	

DMX MODE					Name	Function	DMX		Default	
BASIC	STANDARD		ADV	RAW			FROM	TO		
CTC	RGB	CMY								
43	49	49	48	54						
16	22	22	21	27	Gobo Rot 1	Gobo Indexing			128	
						Gobo index 0° - 360°		0	255	
						Gobo Rotation			0	
						No rotation		0		0
						Forward gobo rotation - Fast to slow		1		127
						No rotation		128		128
Backwards gobo rotation - Slow to fast		129	255							
17	23	23	22	28	Gobo Rot Fine 1	Fine indexing/rotation	0	255	0	
18	24	24	23	29	Rot Gobo Wheel 2	Open	0	13	0	
						Gobo Indexing				
						Gobo 1		14		18
						Gobo 2		19		23
						Gobo 3		24		28
						Gobo 4		29		33
						Gobo 5		34		38
						Gobo 6		39		43
						Gobo Rotation (set next ch)				
						Gobo 1		44		48
						Gobo 2		49		53
						Gobo 3		54		58
						Gobo 4		59		63
						Gobo 5		64		68
						Gobo 6		69		73
						Gobo Rotation (set next ch)				
						Gobo Shake 1		74		93
						Gobo Shake 2		94		113
						Gobo Shake 3		114		133
						Gobo Shake 4		134		153
						Gobo Shake 5		154		173
						Gobo Shake 6		174		193
						Gobo Rotation (set next ch)				
						Forward wheel rotation - Fast to slow		194		223
						No rotation		224		225
						Backwards wheel rotation - Slow to fast		226		255
19	25	25	24	30	Gobo Rot 2	Gobo Indexing			128	
						Gobo index 0° - 360°		0	255	
						Gobo Rotation			0	
						No rotation		0		0
						Forward gobo rotation - Fast to slow		1		127
						No rotation		128		128
Backwards gobo rotation - Slow to fast		129	255							

DMX MODE					Name	Function	DMX		Default
BASIC	STANDARD		ADV	RAW			FROM	TO	
CTC	RGB	CMY							
43	49	49	48	54					
20	26	26	25	31	Gobo Rot Fine 2	Fine indexing/rotation	0	255	0
21	27	27	26	32	Prism 1	Open	0	29	0
						Prism Indexing (set next ch)	30	59	
						Prism Rotation (set next ch)	60	89	
						Reserved	90	255	
22	28	28	27	33	Prism 1 Index/ Rotation	Prism Indexing			0
						Prism Indexing	0	255	
						Prism Rotation			
						Prism No Rotation	0	0	
						Prism forward rotation fast to slow	1	127	
						Prism No Rotation	128	128	
						Prism backwards rotation slow to fast	129	255	
23	29	29	28	34	Frost	Linear insertion 0 – 100%	0	255	0
24	30	30	29	35	Iris	Open	0	0	0
						Max to min diameter	1	127	
						Closed	128	129	
						Pulse close slow to fast	130	154	
						Pulse open slow to fast	155	179	
						Random pulse closing slow to fast	180	204	
						Random pulse opening slow to fast	205	229	
25	31	31	30	36	Iris Fine	Iris fine movement	0	255	0
26	32	32	31	37	Zoom	Zoom from min to max beam angle	0	255	128
27	33	33	32	38	Zoom Fine	Fine zooming	0	255	0
28	34	34	33	39	Focus	Focus adjustment	0	255	128
29	35	35	34	40	Focus Fine	Fine focusing	0	255	0
30	36	36	35	41	Animation Insertion	Linear insertion from 0% to 100%	0	255	0
31	37	37	36	42	Animation Rotation	Indexing	0	127	0
						Forward rotation - Fast to slow	128	190	0
						Stop	191	192	0
						Backwards rotation - Slow to fast	193	255	0
32	38	38	37	43	Blade 1 position	Movement from outward to inward	0	255	0
33	39	39	38	44	Blade 1 swivelling	Swivelling from -25° towards 0°	0	127	128
						0 degrees	128	128	
						Swivelling from 0° towards +25°	129	255	
34	40	40	39	45	Blade 2 position	Movement from outward to inward	0	255	0
35	41	41	40	46	Blade 2 swivelling	Swivelling from -25° towards 0°	0	127	128
						0 degrees	128	128	
						Swivelling from 0° towards +25°	129	255	

DMX MODE					Name	Function	DMX		Default
BASIC CTC	STANDARD		ADV	RAW			FROM	TO	
	RGB	CMY							
	43	49							
36	42	42	41	47	Blade 3 position	Movement from outward to inward	0	255	0
37	43	43	42	48	Blade 3 swivelling	Swivelling from -25° towards 0°	0	127	128
						0 degrees	128	128	
						Swivelling from 0° towards +25°	129	255	
38	44	44	43	49	Blade 4 position	Movement from outward to inward	0	255	0
39	45	45	44	50	Blade 4 swivelling	Swivelling from -25° towards 0°	0	127	128
						0 degrees	128	128	
						Swivelling from 0° towards +25°	129	255	
40	46	46	45	51	Frame rotation	-60 degrees to 0 degrees	0	126	128
						0 degrees	127	128	
						0 degrees to +60 degrees	129	255	
41	47	47	46	52	Frame macros	No Function	0	3	0
						Macro 1	4	10	
						Macro 2	11	17	
						Macro 3	18	24	
						Macro 4	25	31	
						Macro 5	32	38	
						Macro 6	39	45	
						Macro 7	46	52	
						Macro 8	53	59	
						Macro 9	60	66	
						Macro 10	67	73	
						Macro 11	74	80	
						Macro 12	81	87	
						Macro 13	88	94	
						Macro 14	95	101	
						Macro 15	102	108	
						Macro 16	109	115	
						Macro 17	116	122	
						Macro 18	123	129	
						Macro 19	130	136	
						Macro 20	137	143	
						Macro 21	144	150	
						Macro 22	151	157	
						Macro 23	158	164	
						Macro 24	165	171	
						Macro 25	172	178	
						Macro 26	179	185	
						Macro 27	186	192	
						Macro 28	193	199	

DMX MODE					Name	Function	DMX		Default
BASIC CTC	STANDARD		ADV	RAW			FROM	TO	
	RGB	CMY							
43	49	49	48	54					
41	47	47	46	52	Frame macros	Macro 29	200	206	0
						Macro 30	207	213	
						Macro 31	214	220	
						Macro 32	221	227	
						Macro 33	228	234	
						Macro 34	235	241	
						Macro 35	242	248	
						Macro 36	249	255	
42	48	48	47	53	Frame macros speed	Lineary from 0 to 100%	0	255	0
43	49	49	48	54	Control	No Function/Safe	0	1	0
						(See full list Check "Control Channel" on page 45)	2	251	
						Factory default of control functions	252	253	
						Reserved	254	255	

CCT FROM 2200K TO 15000K

CCT from	CCT to	8 bit value		16 bit value		Note
		From	To	From	To	
2200	2300	0	2	0	767	Default @ 0
2300	2400	2	4	512	1279	
2400	2500	4	6	1024	1791	
2500	2600	6	8	1536	2303	
2600	2700	8	10	2048	2815	
2700	2800	10	12	2560	3327	
2800	2900	12	14	3072	3839	
2900	3000	14	16	3584	4351	
3000	3100	16	18	4096	4863	
3100	3200	18	20	4608	5375	
3200	3300	20	22	5120	5887	
3300	3400	22	24	5632	6399	
3400	3500	24	26	6144	6911	
3500	3600	26	28	6656	7423	
3600	3700	28	30	7168	7935	
3700	3800	30	32	7680	8447	
3800	3900	32	34	8192	8959	
3900	4000	34	36	8704	9471	
4000	4100	36	38	9216	9983	
4100	4200	38	40	9728	10495	
4200	4300	40	42	10240	11007	
4300	4400	42	44	10752	11519	
4400	4500	44	46	11264	12031	
4500	4600	46	48	11776	12543	
4600	4700	48	50	12288	13055	
4700	4800	50	52	12800	13567	
4800	4900	52	54	13312	14079	
4900	5000	54	56	13824	14591	
5000	5100	56	58	14336	15103	
5100	5200	58	60	14848	15615	
5200	5300	60	62	15360	16127	
5300	5400	62	64	15872	16639	
5400	5500	64	66	16384	17151	
5500	5600	66	68	16896	17663	
5600	5700	68	70	17408	18175	
5700	5800	70	72	17920	18687	
5800	5900	72	74	18432	19199	
5900	6000	74	76	18944	19711	
6000	6100	76	78	19456	20223	
6100	6200	78	80	19968	20735	
6200	6300	80	82	20480	21247	
6300	6400	82	84	20992	21759	
6400	6500	84	86	21504	22271	
6500	6600	86	88	22016	22783	
6600	6700	88	90	22528	23295	
6700	6800	90	92	23040	23807	
6800	6900	92	94	23552	24319	
6900	7000	94	96	24064	24831	
7000	7100	96	98	24576	25343	
7100	7200	98	100	25088	25855	

CCT FROM 2200K TO 15000K

CCT from	CCT to	8 bit value		16 bit value		Note
		From	To	From	To	
7200	7300	100	102	25600	26367	Default @ 0
7300	7400	102	104	26112	26879	
7400	7500	104	106	26624	27391	
7500	7600	106	108	27136	27903	
7600	7700	108	110	27648	28415	
7700	7800	110	112	28160	28927	
7800	7900	112	114	28672	29439	
7900	8000	114	116	29184	29951	
8000	8100	116	118	29696	30463	
8100	8200	118	120	30208	30975	
8200	8300	120	122	30720	31487	
8300	8400	122	124	31232	31999	
8400	8500	124	126	31744	32511	
8500	8600	126	128	32256	33023	
8600	8700	128	129	32768	33279	
8700	8800	129	131	33024	33791	
8800	8900	131	133	33536	34303	
8900	9000	133	135	34048	34815	
9000	9100	135	137	34560	35327	
9100	9200	137	139	35072	35839	
9200	9300	139	141	35584	36351	
9300	9400	141	143	36096	36863	
9400	9500	143	145	36608	37375	
9500	9600	145	147	37120	37887	
9600	9700	147	149	37632	38399	
9700	9800	149	151	38144	38911	
9800	9900	151	153	38656	39423	
9900	10000	153	155	39168	39935	
10000	10100	155	157	39680	40447	
10100	10200	157	159	40192	40959	
10200	10300	159	161	40704	41471	
10300	10400	161	163	41216	41983	
10400	10500	163	165	41728	42495	
10500	10600	165	167	42240	43007	
10600	10700	167	169	42752	43519	
10700	10800	169	171	43264	44031	
10800	10900	171	173	43776	44543	
10900	11000	173	175	44288	45055	
11000	11100	175	177	44800	45567	
11100	11200	177	179	45312	46079	
11200	11300	179	181	45824	46591	
11300	11400	181	183	46336	47103	
11400	11500	183	185	46848	47615	
11500	11600	185	187	47360	48127	
11600	11700	187	189	47872	48639	
11700	11800	189	191	48384	49151	
11800	11900	191	193	48896	49663	
11900	12000	193	195	49408	50175	
12000	12100	195	197	49920	50687	
12100	12200	197	199	50432	51199	

CCT FROM 2200K TO 15000K

CCT from	CCT to	8 bit value		16 bit value		Note
		From	To	From	To	
12200	12300	199	201	50944	51711	Default @ 0
12300	12400	201	203	51456	52223	
12400	12500	203	205	51968	52735	
12500	12600	205	207	52480	53247	
12600	12700	207	209	52992	53759	
12700	12800	209	211	53504	54271	
12800	12900	211	213	54016	54783	
12900	13000	213	215	54528	55295	
13000	13100	215	217	55040	55807	
13100	13200	217	219	55552	56319	
13200	13300	219	221	56064	56831	
13300	13400	221	223	56576	57343	
13400	13500	223	225	57088	57855	
13500	13600	225	227	57600	58367	
13600	13700	227	229	58112	58879	
13700	13800	229	231	58624	59391	
13800	13900	231	233	59136	59903	
13900	14000	233	235	59648	60415	
14000	14100	235	237	60160	60927	
14100	14200	237	239	60672	61439	
14200	14300	239	241	61184	61951	
14300	14400	241	243	61696	62463	
14400	14500	243	245	62208	62975	
14500	14600	245	247	62720	63487	
14600	14700	247	249	63232	63999	
14700	14800	249	251	63744	64511	
14800	14900	251	253	64256	65023	
14900	15000	253	255	64768	65535	

Virtual colors

Function	8 bit value		16 bit value		Note
	From	To	From	To	
No Function	0	1	-	-	Default @ 0
Red	2	3	-	-	
Green	4	5	-	-	
Blue	6	7	-	-	
Cyan	8	9	-	-	
Magenta	10	11	-	-	
Yellow	12	13	-	-	
Dirty White	14	15	-	-	
Alice Bllue	16	17	-	-	
Congo Blue	18	19	-	-	
Dark Steel Blue	20	21	-	-	
Deep Lavender	22	23	-	-	
Lilac Ting	24	25	-	-	
Daylight Blue	26	27	-	-	
Flame Red	28	29	-	-	
Bastard Amber	30	31	-	-	
Deep Orange	32	33	-	-	
Pale Gold	34	35	-	-	
Apricot	36	37	-	-	
Bright Blue	38	39	-	-	
Primary Green	40	41	-	-	
Special Lavender	42	43	-	-	
Pale Lavender	44	45	-	-	
Deep Golden Amber	46	47	-	-	
Medium Blue	48	49	-	-	
Bright Pink	50	51	-	-	
Mauve	52	53	-	-	
Dark Green	54	55	-	-	
Lee Green	56	57	-	-	
Dark Blue	58	59	-	-	
Light Blue	60	61	-	-	
Steel Blue	62	63	-	-	
Medium Blue-Green	64	65	-	-	
Peacock Blue	66	67	-	-	
Magenta	68	69	-	-	
Dark Pink	70	71	-	-	
Middle Rose	72	73	-	-	
Light Salmon	74	75	-	-	
English Rose	76	77	-	-	
Light Rose	78	79	-	-	
Orange	80	81	-	-	
Deep Amber	82	83	-	-	
Straw	84	85	-	-	
Light Amber	86	87	-	-	
Spring Yellow	88	89	-	-	
Dark Yellow Green	90	91	-	-	
Just Blue	92	93	-	-	
Sky Blue	94	95	-	-	
Lavender	96	97	-	-	
Light Lavender	98	99	-	-	

Virtual colors

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Pink Carnation	100	101	-	-	Default @ 0
Medium Pink	102	103	-	-	
Light Pink	104	105	-	-	
Sunset Red	106	107	-	-	
Dark Amber	108	109	-	-	
Gold Amber	110	111	-	-	
Medium Amber	112	113	-	-	
Fire	114	115	-	-	
Surprise Peach	116	117	-	-	
Straw Tint	118	119	-	-	
Medium Yellow	120	121	-	-	
Lee Minus Green	122	123	-	-	
Pale Gold	124	125	-	-	
Orange	126	127	-	-	
Deep Straw	128	129	-	-	
Rose Purple	130	131	-	-	
Deep Purple	132	133	-	-	
Soft Green	134	135	-	-	
Reserved For Future Use	136	209	-	-	
2700K	210	211	-	-	
2800K	212	213	-	-	
3000K	214	215	-	-	
3200K	216	217	-	-	
3400K	218	219	-	-	
3600K	220	221	-	-	
3800K	222	223	-	-	
4000K	224	225	-	-	
4200K	226	227	-	-	
4400K	228	229	-	-	
4600K	230	231	-	-	
4800K	232	233	-	-	
5000K	234	235	-	-	
5200K	236	237	-	-	
5400K	238	239	-	-	
5600K	240	241	-	-	
6000K	242	243	-	-	
6500K	244	245	-	-	
7000K	246	247	-	-	
8000K	248	249	-	-	
9000K	250	251	-	-	
10000K	252	253	-	-	
Full On	254	255	-	-	

Category | Lee: Color Correction

Function	8 bit value		Gel #
	From	To	
Gel Name			
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
Reserved for Future Use	78	255	-

Category | Lee: Color Filters

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

Category | Lee: Color Filters

Function Gel Name	8 bit value		Gel #
	From	To	
Steel Blue	90	91	117
Light Blue	92	93	118
Deep Blue	94	95	120
LEE Green	96	97	121
Fern Green	98	99	122
Dark Green	100	101	124
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
Reserved for Future Use	178	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
Reserved	18	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
Durham Frost	22	23	750
Soft Amber Key 1	24	25	774
Soft Amber Key 2	26	27	775
Moroccan Frost	28	29	791
Blue Diffusion	30	31	217
Blue Frost	32	33	221
Daylight Blue Frost	34	35	224
Reserved for Future Use	36	255	-

Category | Lee: 700 Series

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

Category | Rc: CalC

Function	8 bit value		Gel #
Gel Name	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
Reserved for Future Use	66	255	-

Category | Rc: StSelection

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
Reserved	20	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
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
Reserved for Future Use	92	255	-

Control Channel

Function		8 bit value		Note
		From	To	
No Function / Safe		0	1	Default @ 0 Hold 3s To Take Function
Pan	Reverse On	2	3	
	Reverse Off	4	5	
Tilt	Reverse On	6	7	
	Reverse Off	8	9	
Pan/Tilt Mode	Mode Fast	10	11	
	Mode Medium	12	13	
	Mode Slow	14	15	
Reserved		16	35	
Display Backlight	Always On	36	37	
	10s	38	39	
	20s	40	41	
	30s	42	43	
Flip Display	On	44	45	
	Off	46	47	
	Auto	48	49	
Key Lock	On	50	51	
	Off	52	53	
Reserved		54	59	
No Signal	Hold	60	61	
	Blackout	62	63	
Reserved		64	67	
Dimmer Curve	Linear	68	69	
	S-Curve	70	71	
	Square Law	72	73	
	Inverse Square Law	74	75	
	High Res@Low	76	77	
Dimmer Speed	Auto	78	79	
	Fast	80	81	
	Medium	82	83	
	Slow	84	85	
	Off	86	87	
Dimmer	Fade Off End	88	89	
	Snap Off End	90	91	
Spektra	On	92	93	
	Pure Colors	94	95	
	Off	96	97	
Reserved		98	101	
White Point	3200k	102	103	
	4000k	104	105	
	5600k	106	107	
	6000k	108	109	
	6500k	110	111	
	8000k	112	113	

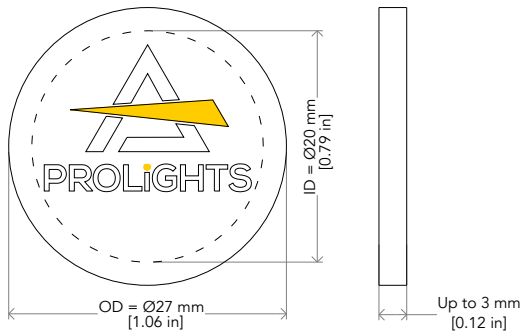
Control Channel

Function		8 bit value		Note
		From	To	
Led Frequency	600hz	114	115	Default @ 0 Hold 3s To Take Function
	1200hz	116	117	
	2000hz	118	119	
	4000hz	120	121	
	6000hz	122	123	
	25khz	124	125	
	50khz	126	127	
Tungsten Emulation	On	128	129	
	Off	130	131	
Color Mixing (Only on STANDARD mode)	RGB	132	133	
	CMY	134	135	
Invert Zoom	Off	136	137	
	On	138	139	
Invert Blades	Off	140	141	
	On	142	143	
Fan Mode	Auto	144	145	
	High	146	147	
	Silent 1	148	149	
	Silent 2	150	151	
	Off	152	153	
Reserved		154	199	
Reset	Reset All	200	201	
	Pan & Tilt	202	203	
	Zoom/Focus	204	205	
	Colors	206	207	
	Gobos/Animation	208	209	
	Effects	210	211	
	All Blades	212	213	
Reserved		214	251	
Factory Default Of Control Functions		252	253	
Reserved		254	255	

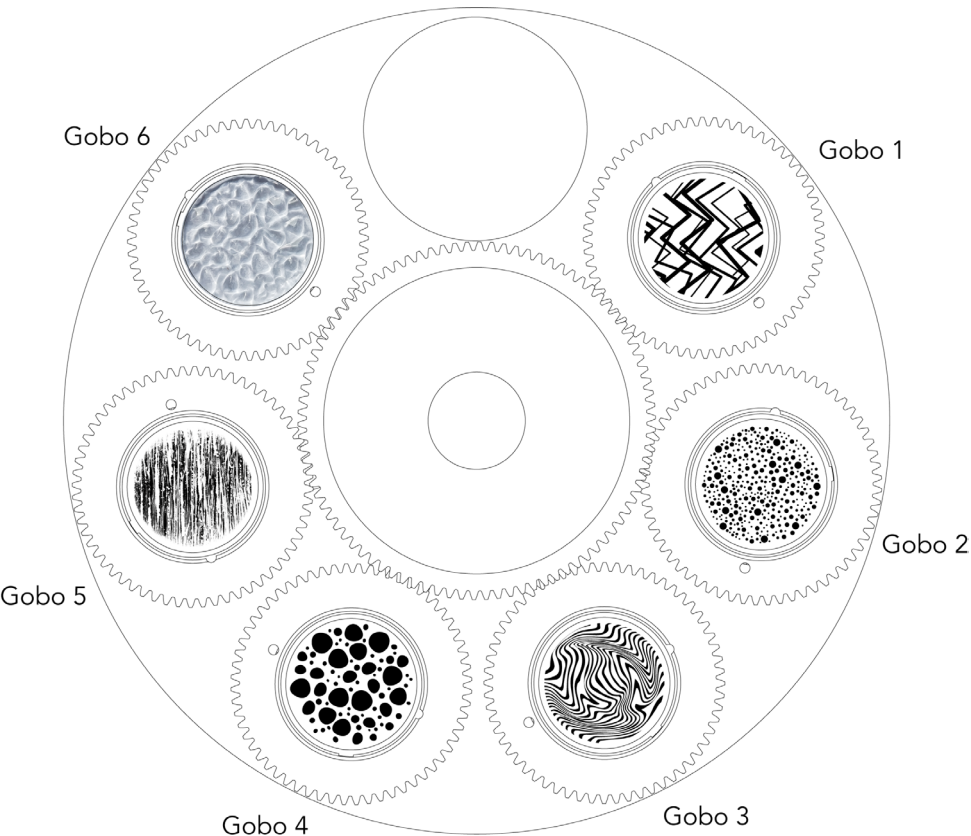
14 - ROTATING GOBOS WHEEL

Gobo dimensions:

- Ø external (OD)= 27,0 mm
- Ø of image (ID)= 20,0 mm
- Thinckness= up to 3 mm



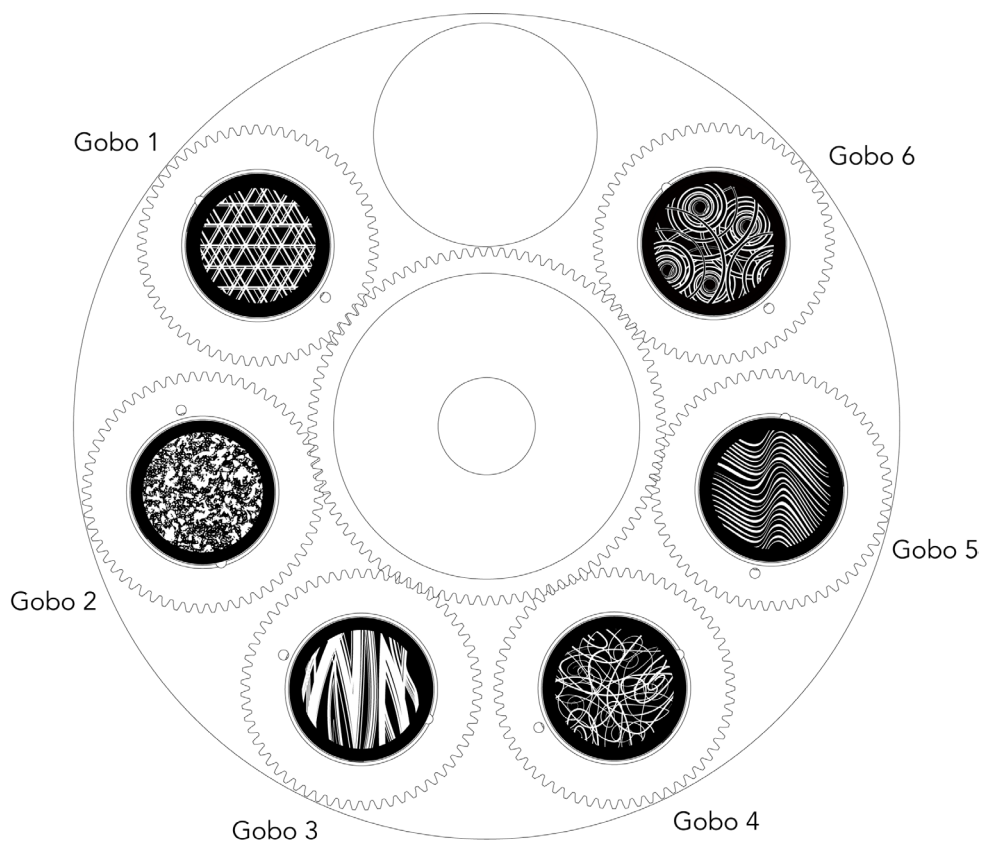
Gobo wheel 1 - Bottom (near the animation wheel)



**ATTENTION! Load with white surface toward the light source.
Use the gobo holder with chromed surface**

Fig. 13

Gobo wheel 2 - Top (near the framing system)



ATTENTION! Load with white surface toward the light source.

Fig. 14

15 - COLOR WHEEL

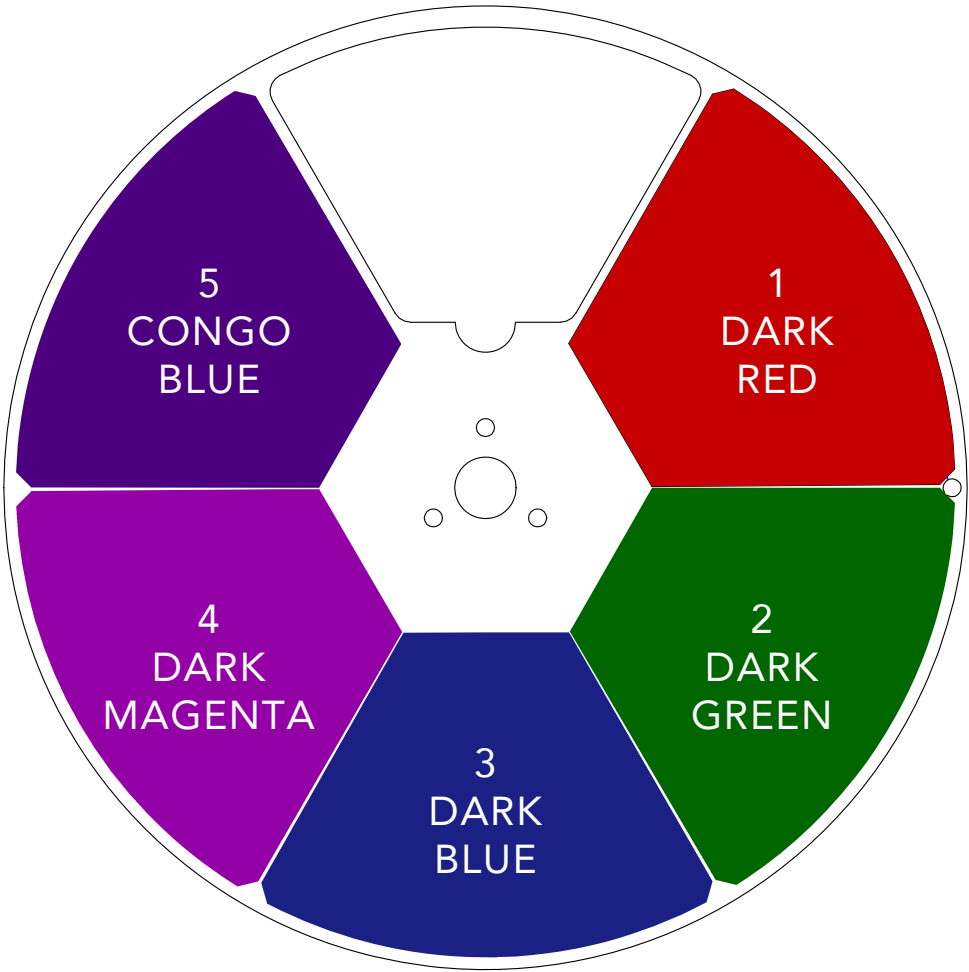


Fig. 15

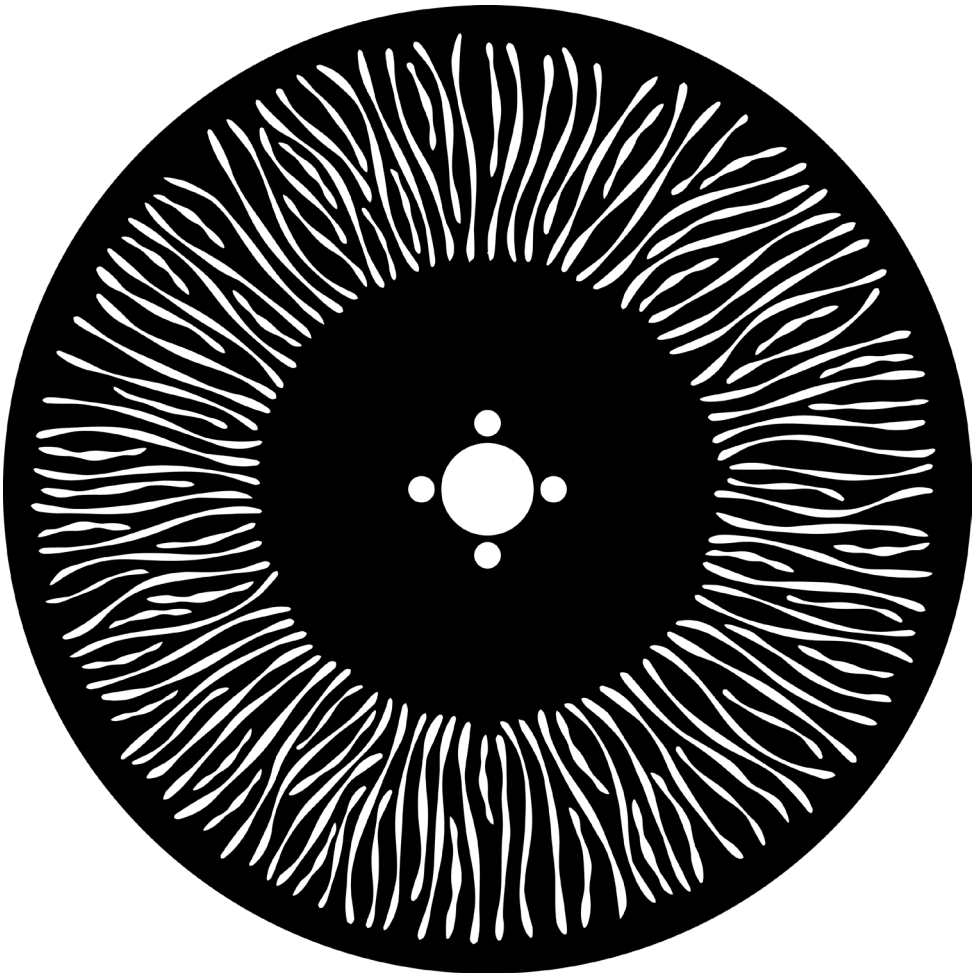


Fig. 16

17 - 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). The color of the error messages (listed in the "COLOR MESSAGES" column) is different for each board it refers to ("PCB" column).
On page 52 you can see the location of the various pcb boards with their respective error colors.

ERROR SHOWED ON SCREEN	POSSIBLE CAUSES	POSSIBLE PCB WITH ANOMALY
Pan Encode Error	Pan encoder not detecteld	PAN/TILT PCB
Tilt Encode Error	Tilt encoder not detecteld	PAN/TILT PCB
Pan Sensor Error	Pan sensor not detecteld	PAN/TILT PCB
Tilt Sensor Error	Tilt sensor not detecteld	PAN/TILT PCB
CTR1-XY Error	Pan tilt pcb not detected	PAN/TILT PCB
Head Temperature Err	This error message indicates that an overheating on the lamp has occurred and the lamp has been switched OFF by the product protection system.	LED DRIVER PCB
CTR5-LED Error	Motor pcb 6U not detected	LED DRIVER PCB
CTR2-GOBO Error	Motor pcb 3U not detected	GOBO PCB
Gobo1 Reset Fail	Failure detected during the reset of the gobo wheel, if this wheel is not located in the default position	GOBO PCB
RGobo1 Reset Fail	Failure detected during the reset of the rotation of the rotating gobos, if the rotating gobos are not located in the default positions	GOBO PCB
Effect Reset Fail	Failure detected during the reset of the animation wheel, if this wheel is not located in the default position	GOBO PCB
Color Reset Fail	Failure detected during the reset of the color wheel, if this wheel is not located in the default position	GOBO PCB
CTR3-SHUT Error	Motor pcb 4U not detected	SHUTTER PCB
Iris Reset Fail	Failure detected during the reset of the IRIS, if the focus lens is not located in its default position.	SHUTTER PCB
RShutter Reset Fail	Failure detected during the reset of the BLADE ROTATION, if the focus lens is not located in its default position.	SHUTTER PCB
CTR4-ZOOM Error	Motor pcb 5U not detected	ZOOM PCB
Focus Reset Fail	Failure detected during the reset of the FOCUS, if the focus lens is not located in its default position.	ZOOM PCB
Prism Reset Fail	Failure detected during the reset of the 4F effect prism, if this effect is not located in the default position.	ZOOM PCB
RPrism Reset Fail	Failure detected during the reset of the 4F effect prism rota-tion, if this effect is not located in the default position.	ZOOM PCB
Zoom Reset Fail	Failure detected during the reset of the ZOOM system, if the focus lens is not located in its default position.	ZOOM PCB

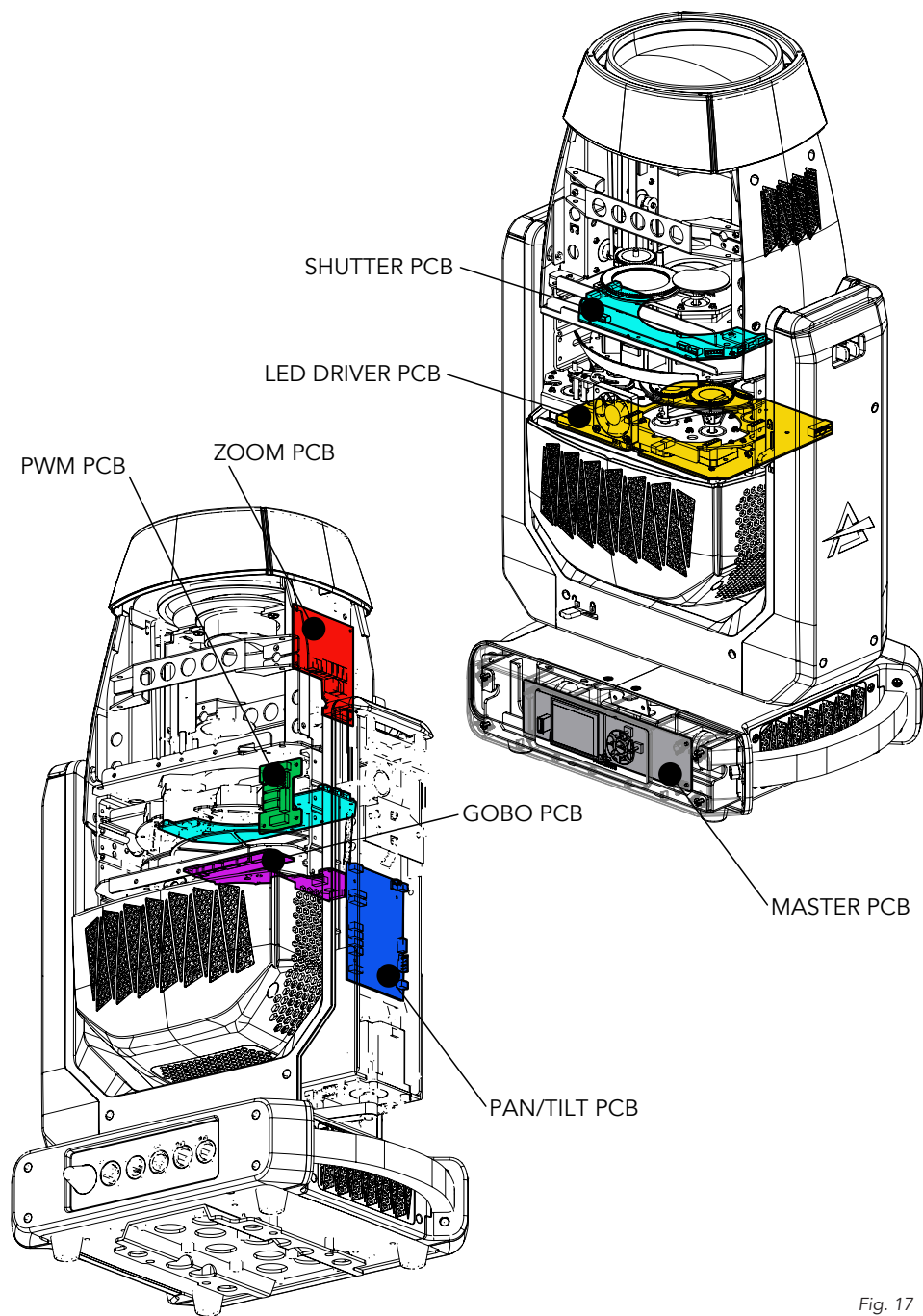
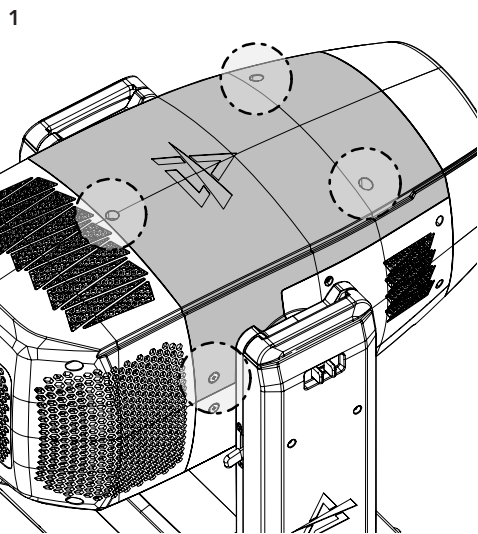


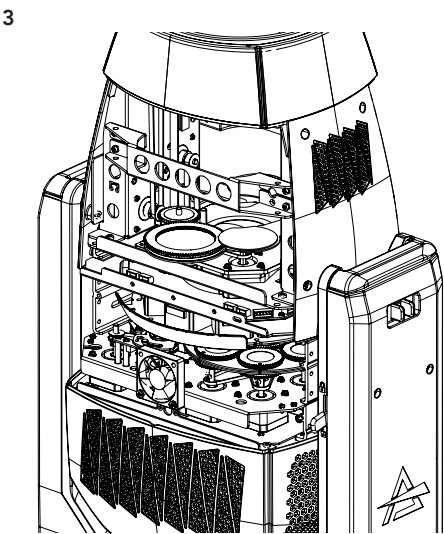
Fig. 17

18 - PERIODICAL CLEANING

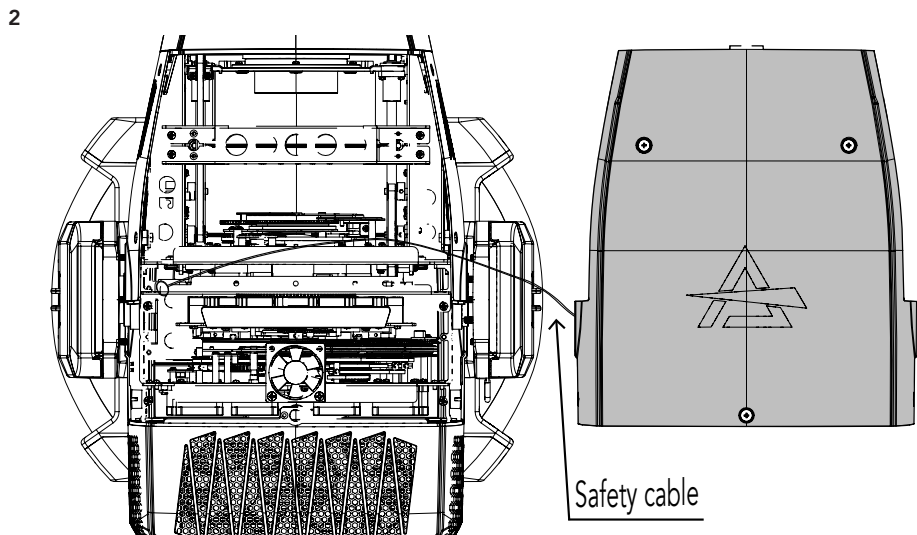
WARNING! Turn OFF power and allow approximately 20 minutes for the fixture to cool down.



Before removing rear cover, place the head in a horizontal position and engage both the PAN and TILT locks for added stability. See the "PAN AND TILT LOCK" paragraph (pag. 6). Loosen and remove the marked screws and opening the head covers (1) from both sides.



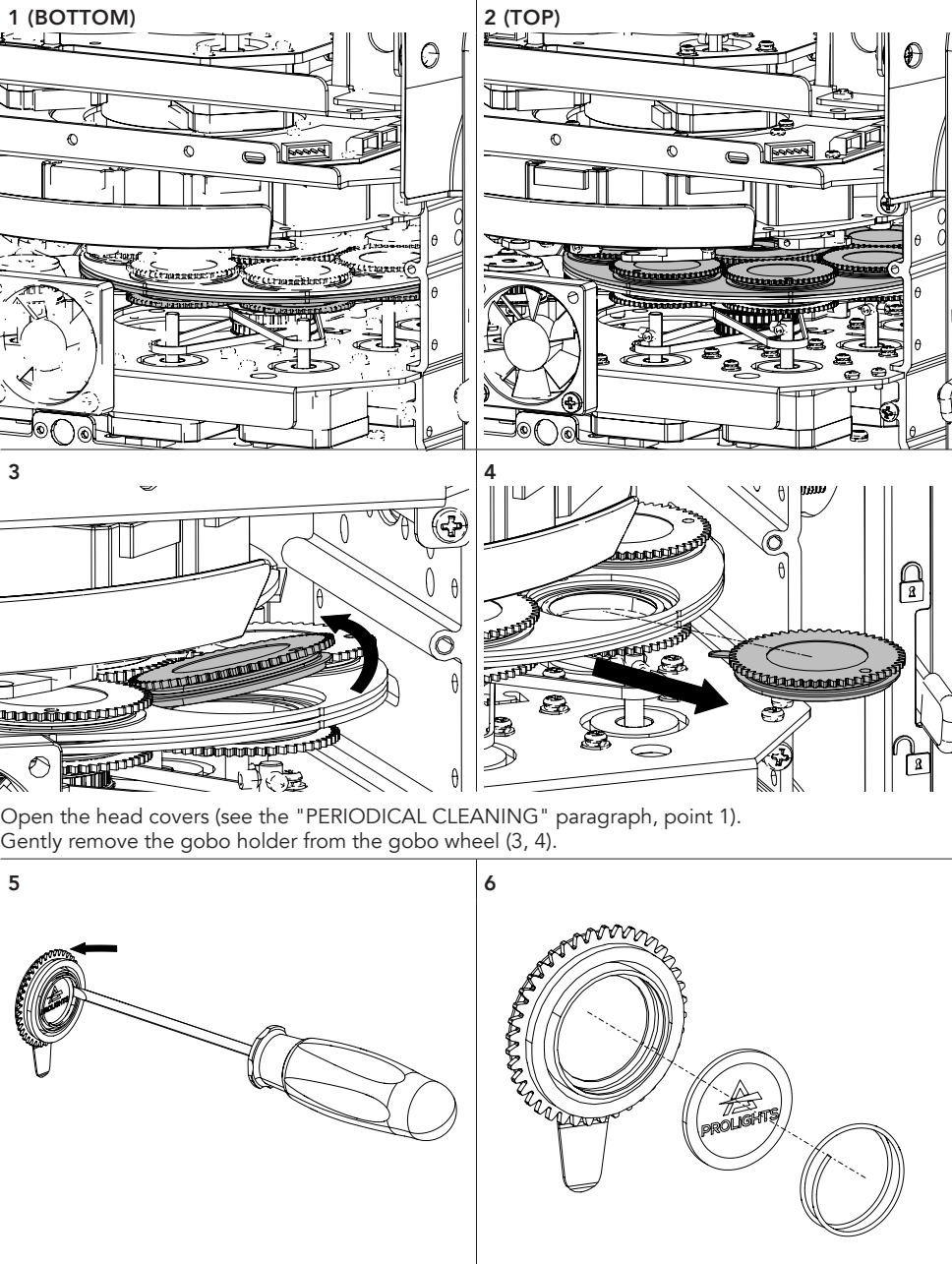
Use a soft cloth dampened with any detergent liquid for cleaning glass to remove the dirt from the reflectors, from the lenses and filters.



Unclip the safety cable on both sides (2).

Fig. 18

19 - GOBOS REPLACEMENT



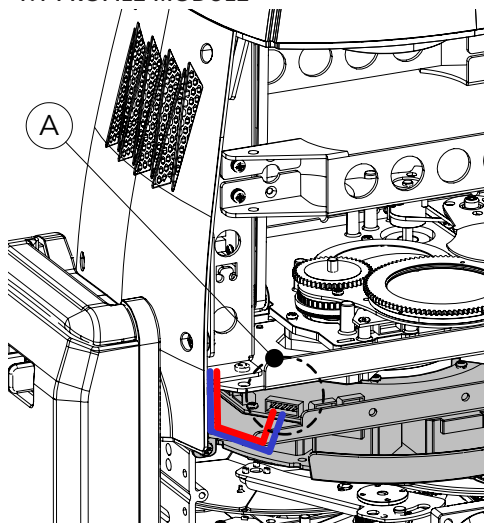
Open the head covers (see the "PERIODICAL CLEANING" paragraph, point 1). Gently remove the gobo holder from the gobo wheel (3, 4).

Remove the spring and the gobo (5, 6).
NOTE: the mirrored part of the gobo must be placed in the direction of the LED Source

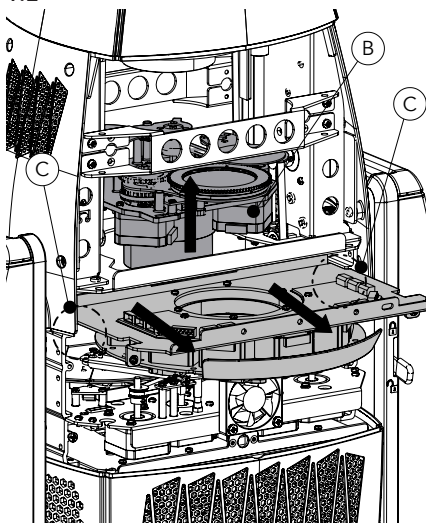
Fig. 19

20 - MODULE REMOVAL (ANIMATION, COLOR, GOBOS WHEEL)

1.1 PROFILE MODULE



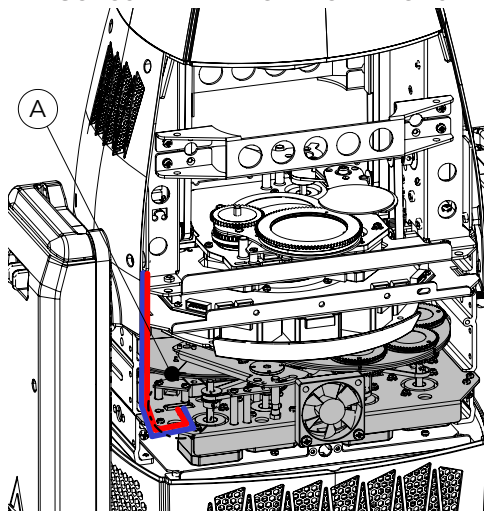
1.2



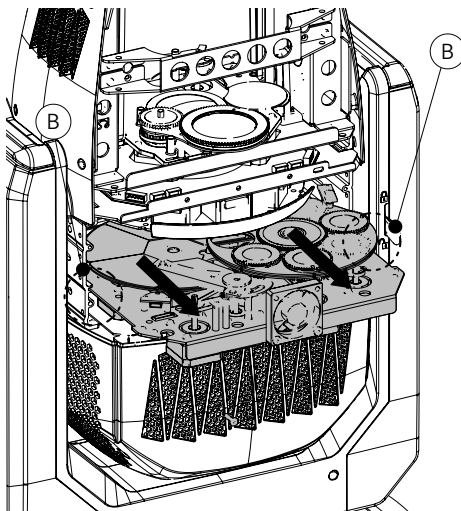
To remove the Profile module, open the head covers (see section "PERIODIC CLEANING") and proceed as follows:

- Disconnect the two connectors, power and serial bus plugs (marked A in drawing 1.1);
- Raise the zoom and focus plates (marked B in drawing B.1);
- Unscrew the two screws marked in the front view (marked C in drawing 1.2);
- Pull out the plate with Profile module (drawing 1.2);

2.1 GOBOS + ANIMATION + CMY MODULE



2.2



To remove the Gobos + Animation wheel module (The profile module must be already removed):

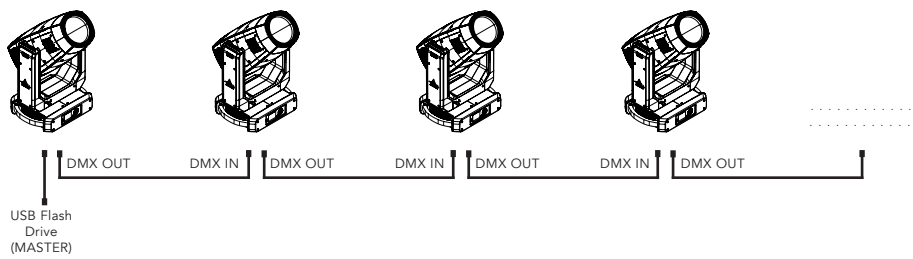
- Disconnect the connector (marked A in drawing 2.1);
- Unscrew the two screws marked in the front view (marked B in drawing 2.2);
- Pull out the plate with gobo wheels raising (drawing 2.2).

Fig. 20

21 - USB UPDATE MODE

NOTE: It is necessary to prepare a FAT32-formatted flash drive for the update and copy the prl files onto it. It is advisable to use a flash drive that is empty and free of other files to facilitate the update.

Several machines can be upgraded simultaneously on the same DMX line. Necessarily there must be a master machine to which you connect the drive and all other machines must be connected to its output DMX line.



To update the device, proceed as follows:

1

UPGRADE FIRMWARE

Only This Fixture
Multiple Fixture
Other Fixture Type
Fixture To Fixture

2

UPGRADE FILE

MUSEP70CTP-Vx.x.xx.xxxx.prl

- With the machine turned on, insert the USB drive;
- The update firmware menu will appear, so use the UP and DOWN buttons to select which fixtures must be updated and press ENTER (figure 1).
- Select the file to be updated. To select the desired files, move with the UP and DOWN buttons and select the file by pressing ENTER (Figure 2);
- To confirm the update press ENTER and the update will start.

22 - 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.

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.

RESETTING THE MAINTENANCE TIME MESSAGE

When the machine shows the message "MAINTENANCE TIME" it means that the fixture needs an overall check. once you have checked and cleaned the whole machine to reset the message follow the steps below:

- enter the menu, go to INFORMATIONS and press Enter
- go to FIXTURE TIME and press Enter
- finally go to MAINTENANCE TIME and press Enter
- Press enter again and enter the password 050 to reset the message.

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.

[illegible]

This image shows a full page of blank handwriting practice paper. It features 20 evenly spaced horizontal blue lines across the entire page, providing a guide for letter height and placement. The lines are consistent in color and thickness throughout.

Note

