



Jet Wash19

19x20W RGBW moving
wash light with 4° - 54° zoom



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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SAFETY INFORMATION



WARNING!

- 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.



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 corrosion-resistant hardware.
- For a temporary installation with clamps, ensure that the quarter-turn fastener and/or screws are turned fully, and secured with a suitable safety cable.



Minimum distance of illuminated objects

- The projector needs to be positioned so that the objects hit by the beam of light are at least 0.3 meters (0.98 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.



Light collimation optical system

- This product contains internal light collimation optical system. Avoid to expose the optical system to any intense source of light (including sunlight) from any angle.

T_c 63°C

Temperature of the external surface

- The surface of the fixture can reach up to 63 °C (145.4 °F) during operation. Avoid contact with people and materials.



Radio receiver

- This product contains a radio receiver and/or transmitter:
- Maximum output power: 17 dBm.
- Frequency band: 2.4 GHz.



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.



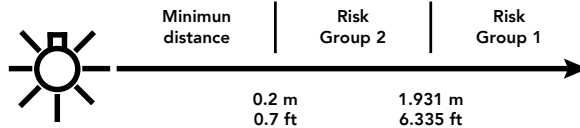
Photobiological safety

- 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 and move suddenly when connected to power.
- The device should be positioned so that prolonged staring into the luminaire at a distance closer than 1.931 m (6.335 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 product contains a lithium ion battery

- Don't throw the unit into the garbage at the end of its lifetime.
- Make sure to dispose according to your local ordinances and/or regulations, to avoid polluting the environment!
- The packaging is recyclable and can be disposed.



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

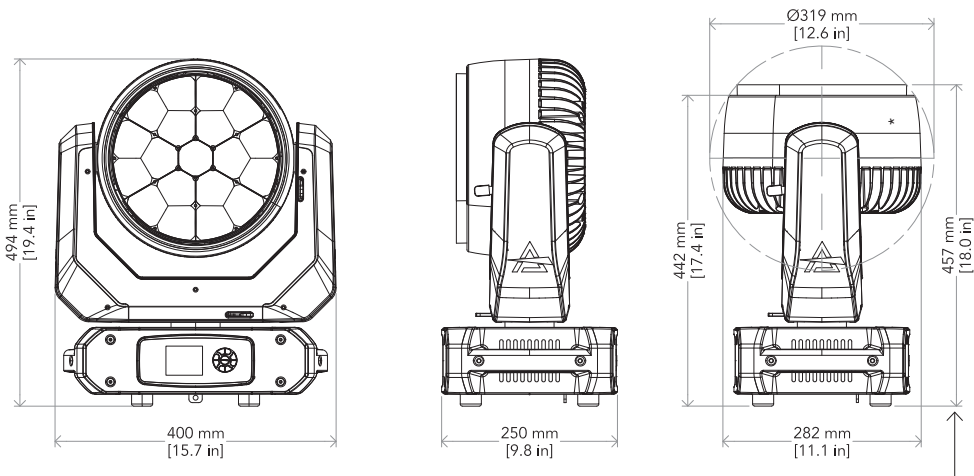
PACKAGE CONTENT

- 1x JETWASH19;
- 1x 1,5 meters power cable (BARE END - NEUTRIK POWERCON);
- 2x OS24;
- User Manual.

OPTIONAL ACCESSORIES

- WSBBR512G6: blackBox R-512 G6 receiver 512Ch, 2.45GHz,DMX&RDM,Bluetooth,G3,G4,G4S,G5,CRMX;
- WSBBR512G5: blackBox R-512 G5 receiver 512Ch, 2.45GHz & 5.8GHz, DMX/RDM optional;
- WSBBF1G6: blackBox F-1 G6 transrec, 512ch, 2.45GHz, DMX&RDM,Bluetooth,G3,G4,G4S, G5, CRMX;
- WSBBF1G5: blackBox F-1 G5 transmitter, 2,45GHz & 5.2/5,8 GHz, DMX/RDM, 512Ch;
- TOUR53415L03BK: dmx cable HC5340. CANC5MXX XLR 5p->CANC5FXX XLR (f) 5p, L.3m
- 958225L03: 3x2.5mm TH07 Cable, 16A 3p PwCon MXW, 16A 3p PwCon FXW, L. 3m;
- 9513FXWL03: ass. 3x2.5mm TH07 cable, 16A 3p 230V CEE plug, MENAC3FXW socket, L.3 m;
- 9533FXWL03: ass. 3x2.5mm TH07 cable, SHUKO plug, MENAC3FXW socket, L.3m;
- RSR0630A/B: steel security cable for hanging bodies, inox steel shackle, L=60 cm, silver/black;
- C6002: Slim aluminium clamp, 200 kg loading, 48-51 mm tubes, M10 bolt;
- FCLASTRAW19PIX: flight case for 6 pcs of ASTRAWASH19PIX / JETWASH19;
- ASTRAW19PEC: egg Crate for ASTRAWASH19PIX / JETWASH19;
- OS24: quick-lock omega bracket;
- UPBOX2: firmware uploader kit, USB IN, 3-pin XLR DMX OUT.

2 - TECHNICAL DRAWING

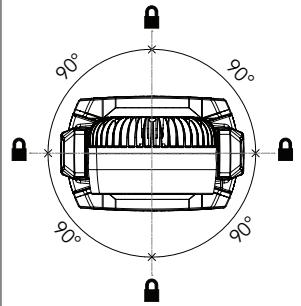
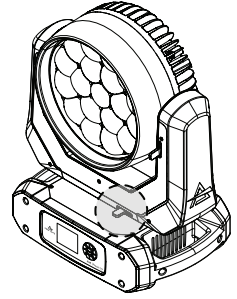
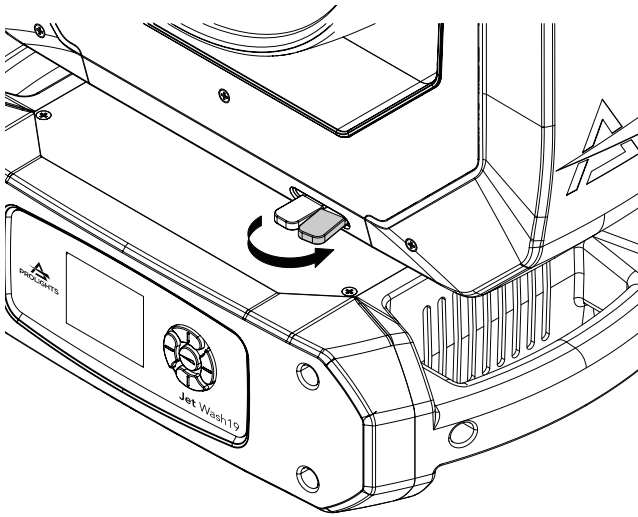


Weight: 14.7 kg - 32.40 lbs

Fig. 01

3 - PAN AND TILT LOCK

PAN Mechanism lock and release



TILT Mechanism lock and release

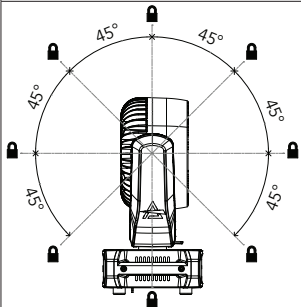
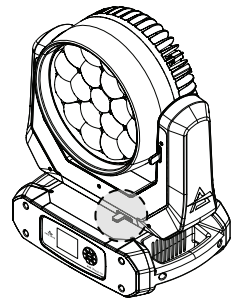
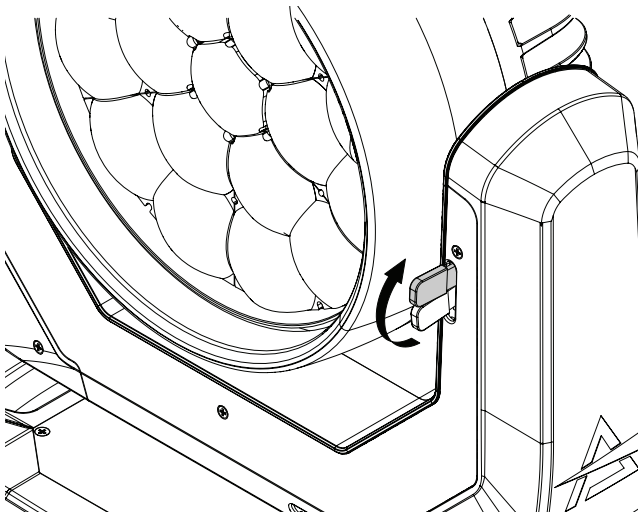


Fig. 02

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.

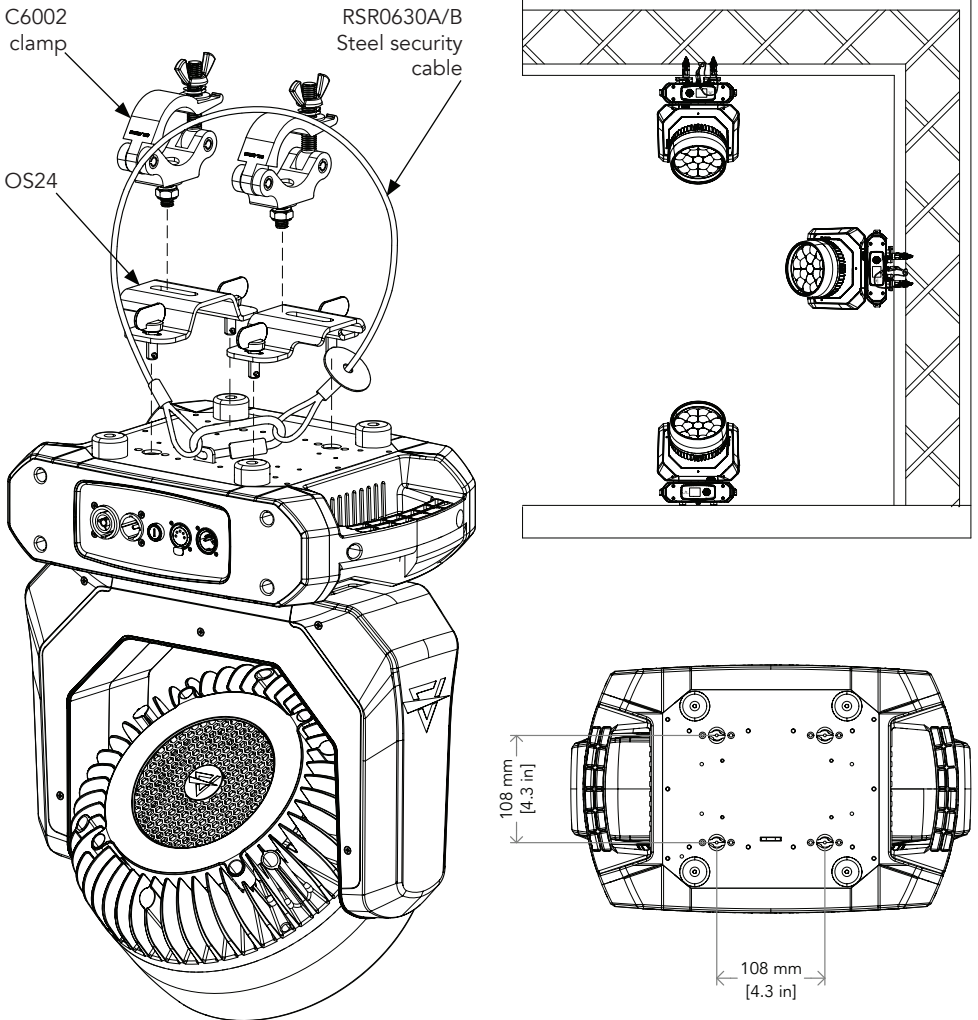


Fig.03


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.

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	

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. SAFETY EYE to attach safety cable.
2. PAN Mechanism lock and release;
3. USER INTERFACE with display and buttons for access to the control panel functions.
4. TILT Mechanism lock and release;
5. DMX IN (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C.
6. DMX OUT (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C.
7. MAIN FUSE HOLDER: replace a burnt-out fuse by one of the same type only (T3.15A 250V).
8. POWER IN: for connection to the Mains 100-240V~/50-60Hz.
9. POWER OUT: power output for connection of multiple units in series.

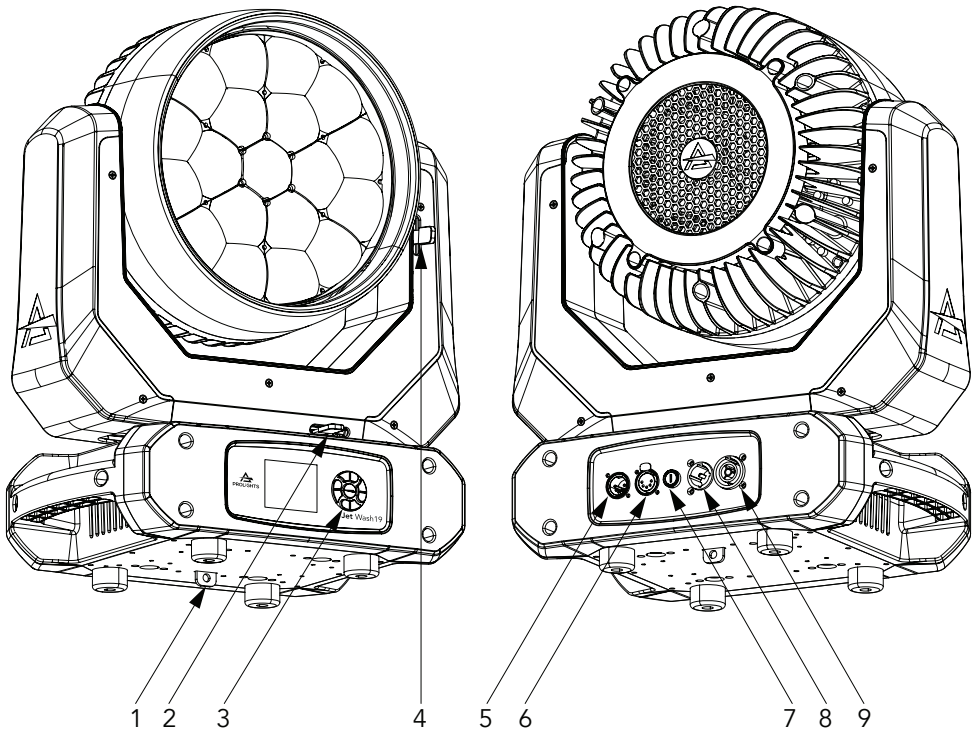


Fig. 04

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

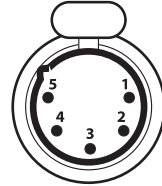


Fig. 05

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:

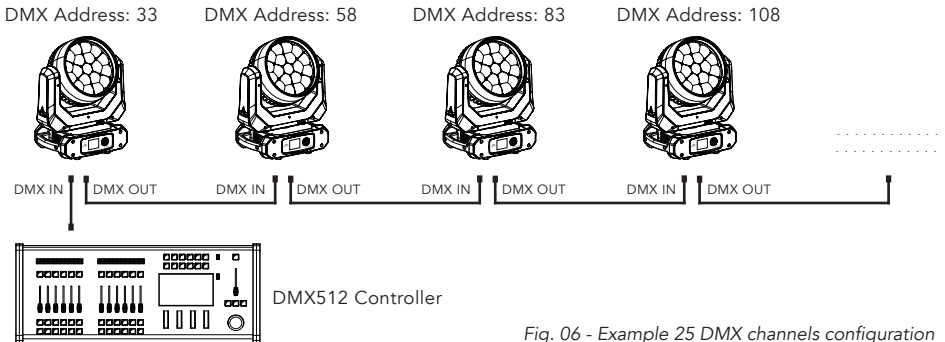


Fig. 06 - Example 25 DMX channels configuration

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.

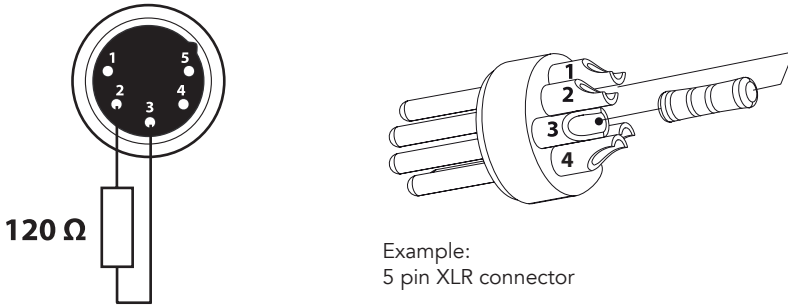


Fig. 07

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.

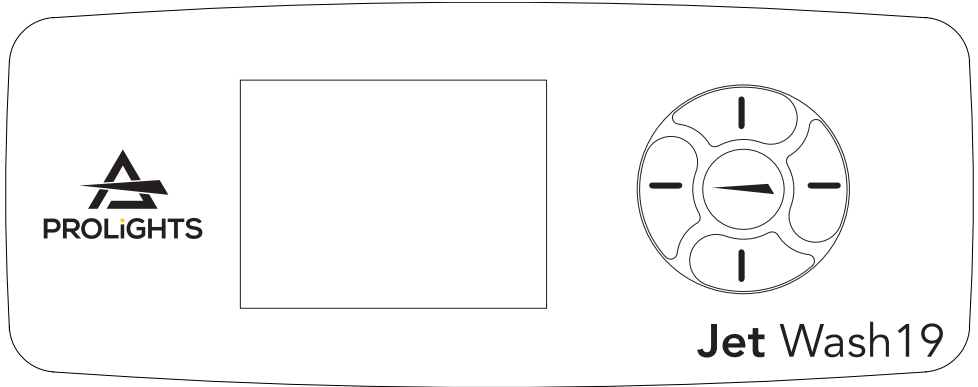


Fig. 08

DISPLAY AND BUTTONS LAYOUT

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

	1		<ul style="list-style-type: none"> Browse upwards through the menu list and increases the numeric value displayed.
	2		<ul style="list-style-type: none"> Return to the top level.
	3		<ul style="list-style-type: none"> Browse downwards through the menu list and decreases the numeric value displayed.
	4		<ul style="list-style-type: none"> Commute from units, tens, hundred in the menu.
	5		<ul style="list-style-type: none"> Used to access the menu tree or to return a previous menu window.

10 - MENU STRUCTURE

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

MENU					
1	CONNECT	ADDRESS	001-512		
		DMX MODE	STANDARD		Set DMX chart for Main Fixture.
2	SETUP	SCREEN	BACKLIGHT	ON	Allows you to select the timing after that display will switch automatically off when inactive.
				10 s	
				20 s	
				30 s	
			FLIP DISPLAY	ON	Allows you to rotate the display by 180°.
				OFF	
				AUTO	
			KEY LOCK	ON	Allows you lock the buttons on the control panel by a password. Press following combinations (password) in order to access to the user menu : UP, DOWN, UP, DOWN.
				OFF	
		MOVEMENT	PAN REVERSE	ON	Allows you to reverse Pan movement.
				OFF	
			TILT REVERSE	ON	Allows you to reverse Tilt movement.
				OFF	
			PAN/TILT FEEDBACK	ON	To activate / deactivate the reading of the feedbacks given by the encoders.
				OFF	
			PAN/TILT MODE	SLOW	To choose the horizontal/ vertical movement speed. SYNC mode will sync movement speed with the whole AS-TRAWASH family fixtures.
				MEDIUM	
				FAST	
				SYNC	
			HOME POSITION	STANDARD	To choose the home position.
				CUSTOM	
			CUSTOM P DEGREE	0°	To choose pan values in case of Custom position.
				...	
				315°	
		CUSTOM T DEGREE	0%	To choose tilt values in case of Custom position.	
			...		
			100%		
FIXTURE SETTINGS	FAN MODE	AUTO	Select Fan behaviour.		
		SILENT			
		HIGH			
	TUNGSTEN EMULATION	OFF	Activate Tungsten Emulation.		
		ON			

			WHITE CALIBRATION	OFF		Manufacturer calibration to grant performance and color consistency.
				STUDIO		
				8000K		
			DMX FAULT	HOLD		To choose the behaviour of fixture in case of dmx signal lost.
				BLACKOUT		
			ZOOM MODE	STANDARD		Select zoom mode.
				PIXELS		
			DIMMER CURVE	LINEAR		Select different curve behaviour of dimmer
				S-CURVE		
				SQUARE LAW		
				INV. SQUARE LAW		
			DIMMER SPEED	AUTO		Linear dimmer behaviour.
				FAST		Dimmer curve adding long fade.
				MEDIUM		Dimmer curve adding medium fade.
				SLOW		Dimmer curve adding little fade.
			LED FREQUENCY	600Hz		Select PWM frequency
				1200Hz		
				2000Hz		
				4000Hz		
				6000Hz		
				25KHz		
				50KHz		
			INVERT ZOOM	ON		Invert zoom values.
				OFF		
			TRANSFER CONFIGURATION	WITHOUT DMX ADDRESS		To transfer the same menu settings of one fixtures to all the other in the daisy chain, including or not the dmx address.
				WITH DMX ADDRESS		
3	ADVANCED	RESET	ALL			To reset these functions.
			PAN & TILT			
			ZOOM			
		CALIBRATION	PASSWORD			For the calibration of these functions. 050 password for user reset
			PAN			
			TILT			
			...			
		MANUAL CONTROL				For manual control of the unit.
		RELOAD DEFAULT	BASIC RELOAD	ON - OFF		
			FACTORY RELOAD	ON - OFF		050 password needed

4	INFORMATION	FIXTURE TIME	FIXTURE HOURS	TOTAL	(ONLY READ)	To check the total working hours of the unit.
				PARTIAL	(READ AND RESET)	
			CURRENT HOURS	TOTAL	(ONLY READ)	To check the current working hours of the unit.
				PARTIAL	(READ AND RESET)	
			SOURCE HOURS	TOTAL	(ONLY READ)	To see the total operating hours of the LED source.
				PARTIAL	(READ AND RESET)	
		POWER ON CYCLE	TOTAL	(ONLY READ)	To see the power cycles of the machine.	
			PARTIAL	(READ AND RESET)		
		MAINTENANCE TIME	ELAPSED TIME		To choose and reset unit maintenance warning hours.	
			ALERT PERIOD	10 - 300		
		TEMPERATURE	NEAR SOURCE TEMP, DRIVER PCB TEMP, LED PCB TEMP,...			To see the unit temperature.
		FANS SPEED	NEAR SOURCE FAN, BASE FAN,...			To see the speed of the fans.
		CHANNEL VALUE	PAN...			To see the dmx value of those channels.
		ERROR MESSAGE	PAN, TILT...			To see any error messages.
		FIXTURE MODEL	XXXXXXXXXX			View informations about fixture model.
		RDM UID	(READ AND RESET)			View ID for the RDM control.
		SOFTWARE VERSION	1U01 V1.0.00...			View informations about software version.

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.

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	PID	GET	SET
Product Information	DEVICE_INFO	0x0060	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
	SOFTWARE_VERSION_LABEL	0x00C0	x	
	BOOT_SOFTWARE_VERSION_ID	0x00C1	x	
DMX512 Setup	BOOT_SOFTWARE_VERSION_LABEL	0x00C2	x	
	DMX_PERSONALITY	0x00E0	x	x
	DMX_PERSONALITY_DESCRIPTION	0x00E1	x	
	DMX_START_ADDRESS	0x00F0	x	x
	SLOT_INFO	0x0120	x	
	SLOT_DESCRIPTION	0x0121	x	
	DEFAULT_SLOT_VALUE	0x0122	x	
	DMX_BLOCK_ADDRESS	0x0140	x	x
Dimmer Settings	DMX_FAIL_MODE	0x0141	x	x
	DMX_STARTUP_MODE	0x0142	x	x
	DIMMER_INFO	0x0340	x	
	MINIMUM_LEVEL	0x0341	x	x
	MAXIMUM_LEVEL	0x0342	x	x
	CURVE	0x0343	x	x
	CURVE_DESCRIPTION	0x0344	x	x
	OUTPUT_RESPONSE_TIME	0x0345	x	x
Sensors	OUTPUT_RESPONSE_TIME_DESCRIPTION	0x0346	x	
	MODULATION_FREQUENCY	0x0347	x	x
	MODULATION_FREQUENCY_DESCRIPTION	0x0348	x	
	SENSOR_DEFINITION	0x0200	x	
	SENSOR_VALUE	0x0201	x	x
	RECORD_SENSORS	0x0202		x
	BURN_IN	0x0440	x	x

Category	Parameter	PID	GET	SET
Power/Lamp Settings	DEVICE_HOURS	0x0400	x	x
	LAMP_HOURS	0x0401	x	x
	LAMP_STRIKES	0x0402	x	x
	LAMP_STATE	0x0403	x	x
	LAMP_ON_MODE	0x0404	x	x
	DEVICE_POWER_CYCLES	0x0405	x	x
Display Settings	DISPLAY_INVERT	0x0500	x	x
	DISPLAY_LEVEL	0x0501	x	x
Configuration	PAN_INVERT	0x0600	x	x
	TILT_INVERT	0x0601	x	x
	PAN_TILT_SWAP	0x0602	x	x
	REAL_TIME_CLOCK	0x0603	x	x
	LOCK_PIN	0x0640	x	x
	LOCK_STATE	0x0641	x	x
	LOCK_STATE_DESCRIPTION	0x0642	x	
Control	IDENTIFY_DEVICE	0x1000	x	x
	RESET_DEVICE	0x1001		x
	POWER_STATE	0x1010	x	x
	PERFORM_SELFTEST	0x1020	x	x
	SELF_TEST_DESCRIPTION	0x1021	x	
	CAPTURE_PRESET	0x1030	x	x
	PRESET_PLAYBACK	0x1031	x	x
	IDENTIFY_MODE	0x1040	x	x
	PRESET_INFO	0x1041	x	
	PRESET_STATUS	0x1042	x	x
	PRESET_MERGEMODE	0x1043	x	x
	POWER_ON_SELF_TEST	0x1044	x	x

13 - DMX CHARTS

RDM Personality ID List

ID	Mode	RDM Model ID
1	Standard	0xA016

DMX Chart Summary

Channel	Standard
1	Pan
2	Pan Fine
3	Tilt
4	Tilt Fine
5	Dimmer
6	Dimmer Fine
7	Shutter / Strobe
8	CCT
9	Tint
10	Crossfade from CCT to Color
11	Red
12	Red Fine
13	Green
14	Green Fine
15	Blue
16	Blue Fine
17	White
18	White Fine
19	Color Macro
20	CTO on colors
21	Zoom
22	Zoom Fine
23	Control

Std	Function	DMX Value	Default
1	PAN Linear from 0% to 100%	000 ÷ 255	128
2	PAN FINE	000 ÷ 255	128
3	TILT Linear from 0% to 100%	000 ÷ 255	128
4	TILT FINE	000 ÷ 255	128
5	DIMMER Linear from close to open	000 ÷ 255	000
6	DIMMER FINE	000 ÷ 255	000
7	SHUTTER Close Strobe from slow to fast Open Pulse in from slow to fast Open Pulse out from slow to fast Open Random from slow to fast Open	000 ÷ 001 002 ÷ 062 063 ÷ 064 065 ÷ 125 126 ÷ 127 128 ÷ 188 189 ÷ 190 191 ÷ 251 252 ÷ 255	255
8	CCT Linear from 2800K to 10000K	000 ÷ 255	000
9	TINT +25 % to +0 % magenta balanced +0 % to +25 % green	000 ÷ 127 128 129 ÷ 255	128
10	CROSSFADE FROM WHITE TO COLOR Linear from CCT to RGBW	000 ÷ 255	255
11	RED Linear from 0% to 100%	000 ÷ 255	255
12	RED FINE	000 ÷ 255	255
13	GREEN Linear from 0% to 100%	000 ÷ 255	255
14	GREEN FINE	000 ÷ 255	255
15	BLUE Linear from 0% to 100%	000 ÷ 255	255
16	BLUE FINE	000 ÷ 255	255
17	WHITE Linear from 0% to 100%	000 ÷ 255	255
18	WHITE FINE	000 ÷ 255	255
19	COLOR MACRO Open Red Green Blue Cyan Magenta Yellow Dirty White Alice Blue Congo Blue Dark Steel Blue Deep Lavender Lilac Ting Daylight Blue Flame Red Bastard Amber Deep Orange Pale Gold Apricot Bright Blue Primary Green Special Lavender Pale Lavender Deep Golden Amber Medium Blue Bright Pink Mauve	000 ÷ 001 002 ÷ 003 004 ÷ 005 006 ÷ 007 008 ÷ 009 010 ÷ 011 012 ÷ 013 014 ÷ 015 016 ÷ 017 018 ÷ 019 020 ÷ 021 022 ÷ 023 024 ÷ 025 026 ÷ 027 028 ÷ 029 030 ÷ 031 032 ÷ 033 034 ÷ 035 036 ÷ 037 038 ÷ 039 040 ÷ 041 042 ÷ 043 044 ÷ 045 046 ÷ 047 048 ÷ 049 050 ÷ 051 052 ÷ 053	000

Std	Function	DMX Value	Default
	COLOR MACRO		
	Dark Green	054 ÷ 055	
	Lee Green	056 ÷ 057	
	Dark Blue	058 ÷ 059	
	Light Blue	060 ÷ 061	
	Steel Blue	062 ÷ 063	
	Medium Blue÷Green	064 ÷ 065	
	Peacock Blue	066 ÷ 067	
	Magenta	068 ÷ 069	
	Dark Pink	070 ÷ 071	
	Middle Rose	072 ÷ 073	
	Light Salmon	074 ÷ 075	
	English Rose	076 ÷ 077	
	Light Rose	078 ÷ 079	
	Orange	080 ÷ 081	
	Deep Amber	082 ÷ 083	
	Straw	084 ÷ 085	
	Light Amber	086 ÷ 087	
	Spring Yellow	088 ÷ 089	
	Dark Yellow Green	090 ÷ 091	
	Just Blue	092 ÷ 093	
	Sky Blue	094 ÷ 095	
	Lavender	096 ÷ 097	
	Light Lavender	098 ÷ 099	
	Pink Carnation	100 ÷ 101	
	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	
19	Surprise Peach	116 ÷ 117	000
	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	136 ÷ 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	
20	CTO ON COLORS Linear from 0% to 100%	000 ÷ 255	000
21	ZOOM Linear from wide to narrow	000 ÷ 255	128
22	ZOOM FINE	000 ÷ 255	128

Std	Function	DMX Value	Default
	CONTROL		
	No Function/Safe	000 ÷ 001	
	Reserved	002 ÷ 003	
	Reserved	004 ÷ 005	
	PAN REVERSE ON	006 ÷ 007	
	PAN REVERSE OFF	008 ÷ 009	
	TILT REVERSE ON	010 ÷ 011	
	TILT REVERSE OFF	012 ÷ 013	
	PAN/TILT MODE FAST	014 ÷ 015	
	PAN/TILT MODE MEDIUM	016 ÷ 017	
	PAN/TILT MODE SLOW	018 ÷ 019	
	PAN/TILT MODE SYNC	020 ÷ 021	
	MOVEMENT IN BLACKOUT ON	022 ÷ 023	
	MOVEMENT IN BLACKOUT OFF	024 ÷ 025	
	HOME POSITION STANDARD	026 ÷ 027	
	HOME POSITION CUSTOM	028 ÷ 029	
	DISPLAY ON	030 ÷ 031	
	DISPLAY 10S	032 ÷ 033	
	DISPLAY 20S	034 ÷ 035	
	DISPLAY 30S	036 ÷ 037	
	FLIP DISPLAY ON	038 ÷ 039	
	FLIP DISPLAY OFF	040 ÷ 041	
	FLIP DISPLAY AUTO	042 ÷ 043	
	KEY LOCK ON	044 ÷ 045	
	KEY LOCK OFF	046 ÷ 047	
	FAN MODE AUTO	048 ÷ 049	
	FAN MODE SILENT	050 ÷ 051	
	FAN MODE HIGH	052 ÷ 053	
	WHITE CALIBRATION OFF	054 ÷ 055	
	WHITE CALIBRATION STUDIO	056 ÷ 057	
	WHITE CALIBRATION 8000K	058 ÷ 059	
	NO SIGNAL HOLD	060 ÷ 061	
23	NO SIGNAL BLACKOUT	062 ÷ 063	000
	Reserved	064 ÷ 065	
	Reserved	066 ÷ 067	
	DIMMER CURVE LINEAR	068 ÷ 069	
	DIMMER CURVE S-CURVE	070 ÷ 071	
	DIMMER CURVE SQUARE LAW	072 ÷ 073	
	DIMMER CURVE INVERSE SQUARE LAW	074 ÷ 075	
	DIMMER SPEED AUTO	076 ÷ 077	
	DIMMER SPEED FAST	078 ÷ 079	
	DIMMER SPEED MEDIUM	080 ÷ 081	
	DIMMER SPEED SLOW	082 ÷ 083	
	LED FREQUENCY 600HZ	084 ÷ 085	
	LED FREQUENCY 1200HZ	086 ÷ 087	
	LED FREQUENCY 2000HZ	088 ÷ 089	
	LED FREQUENCY 4000HZ	090 ÷ 091	
	LED FREQUENCY 6000HZ	092 ÷ 093	
	LED FREQUENCY 25KHZ	094 ÷ 095	
	LED FREQUENCY 50KHZ	096 ÷ 097	
	Reserved	098 ÷ 099	
	Reserved	100 ÷ 101	
	ZOOM MODE STANDARD	102 ÷ 103	
	ZOOM MODE PIXELS	104 ÷ 105	
	INVERT ZOOM OFF	106 ÷ 107	
	INVERT ZOOM ON	108 ÷ 109	
	TUNGSTEN EMULATION ON	110 ÷ 111	
	TUNGSTEN EMULATION OFF	112 ÷ 113	
	RESET ALL	114 ÷ 115	
	RESET PAN	116 ÷ 117	
	RESET TILT	118 ÷ 119	
	RESET PAN/TILT	120 ÷ 121	
	RESET ZOOM	122 ÷ 123	
	Reserved	124 ÷ 253	
	FACTORY DEFAULT OF CONTROL FUNCTIONS	254 ÷ 255	

14 - 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 23 you can see the location of the various pcb boards.

ERROR SHOWED ON SCREEN	POSSIBLE CAUSES	COLOUR MESSAGES	PCB
[BASE FAN ERROR]	Blower for cooling base failed.	Green	1U
[DMX ACTIVE]	If transfer configuration is used with dmx signal connected.	Green	1U
[MAINTENANCE TIME]	Need to be done standard maintenance and also reset of elapsed time.	Green	1U
[PAN/TILT PCB ERROR]	Pan tilt pcb not detected.	Blue	2U
[PAN MOTOR ERROR]	This message will appear after the reset of the product if: <ul style="list-style-type: none"> the PAN magnetic-indexing circuit detect a failure (sensor failed or magnet is missing); or the stepping motor is defective; or its driving IC on the PCB is defective; or the product is not located in the default position after the reset of the fixture. 	Blue	2U
[TILT MOTOR ERROR]	This message will appear after the reset of the product if: <ul style="list-style-type: none"> the TILT magnetic-indexing circuit detect a failure (sensor failed or magnet is missing); or the stepping motor is defective; or its driving IC on the PCB is defective; or the product is not located in the default position after the reset of the fixture. 	Blue	2U
[PAN SENSOR ERROR]	Pan sensor not detected.	Blue	2U
[TILT SENSOR ERROR]	Tilt sensor not detected.	Blue	2U
[PAN LOCKED]	Pan lock is inserted.	Blue	2U
[TILT LOCKED]	Tilt lock is inserted.	Blue	2U
[LED FAN ERROR]	One of the blowers for cooling the source failed, the source has been switched OFF.	Blue	2U
[DRIVER/LED PCB ERROR]	Led driver pcb not detected	Yellow	3U
[ZOOM ERROR]	Failure detected during the reset of the ZOOM system, if the zoom lens is not located in its default position.	Yellow	3U
[LED DRIVER TEMPERATURE ERROR]	This error message indicates that an overheating in the head has occurred and the lamp has been switched OFF by the product protection system.	Yellow	3U
[HEAD FAN ERROR]	First of the blowers for cooling the lamp failed, the lamp has been switched OFF.	Yellow	3U

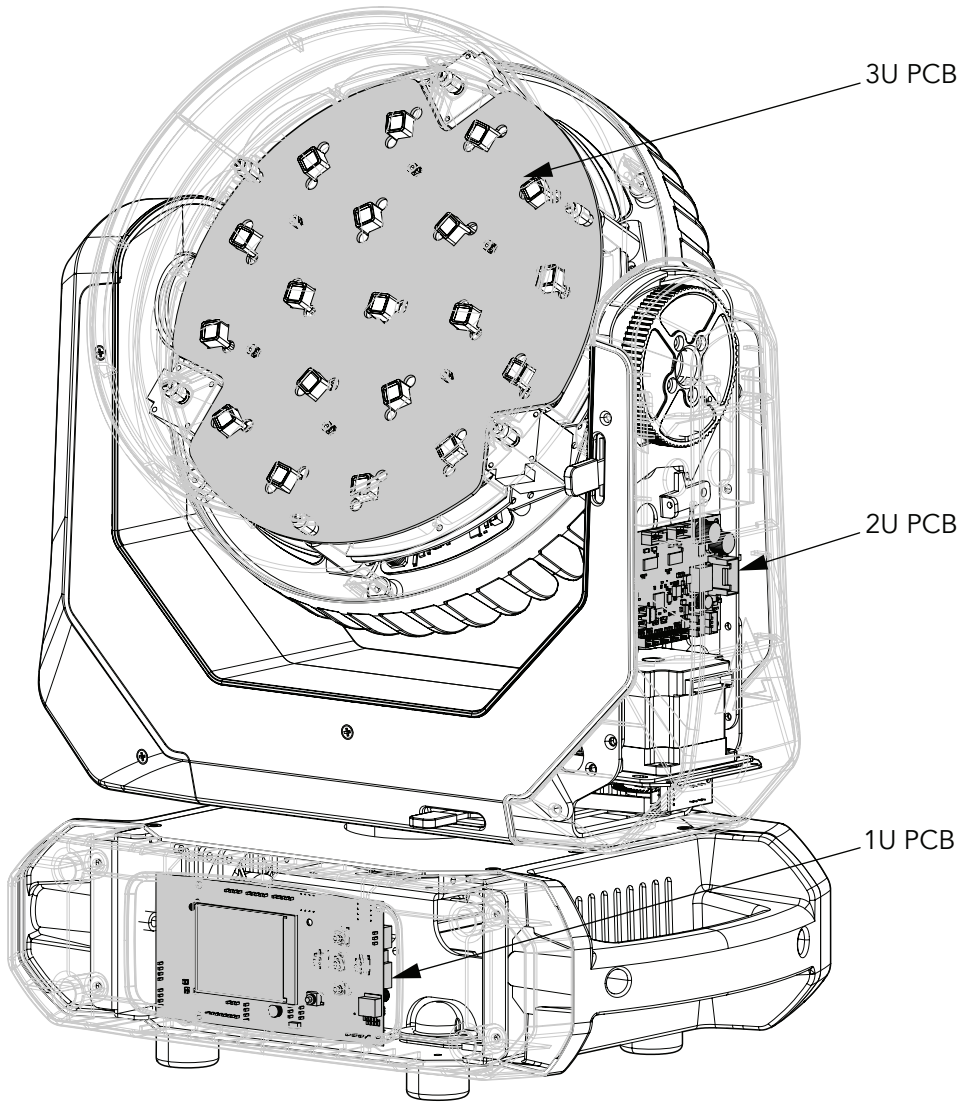
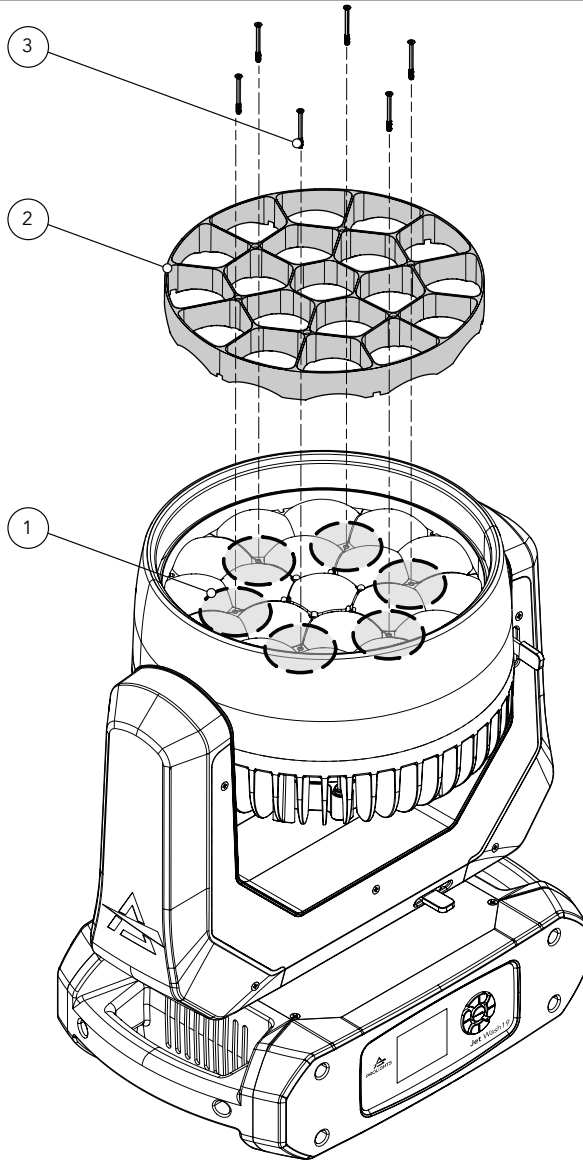


Fig. 09

15 - ACCESSORIES INSTALLATION

EGG CRATE (ASTRAW19PEC - OPTIONAL)

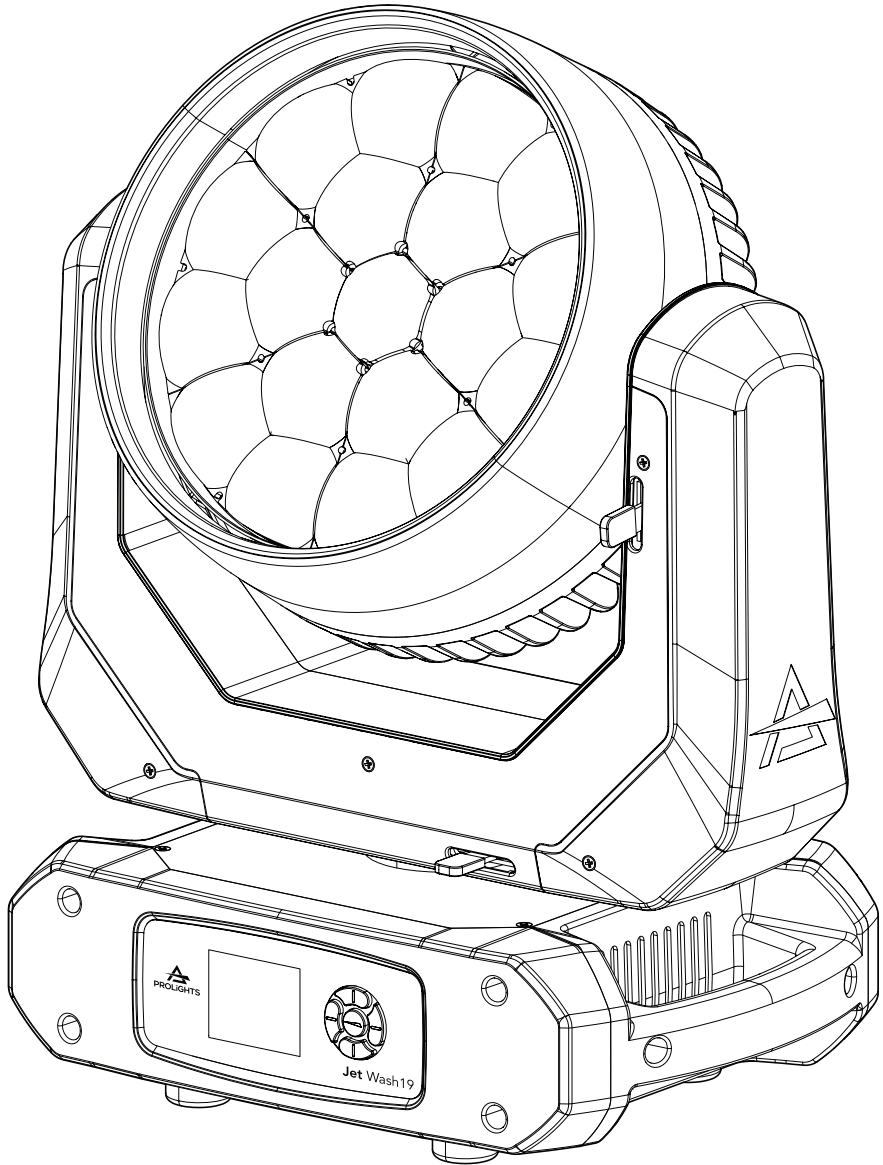


Before removing rear cover, place the head in a horizontal position and engage both the PAN and TILT locks for added stability. See the "PAN AND TILT LOCK" paragraph. Loosen and remove the marked six screws (1). Then insert the egg crate (2) and fix the six screws (3).

Fig. 10

16 - PERIODICAL CLEANING

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



Use a soft cloth dampened with any detergent liquid for cleaning to remove the dirt from the optics

Fig. 11

17 - 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 (T3.15A 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.	<ul style="list-style-type: none"> No power to the product. 	<ul style="list-style-type: none"> Check that power is switched ON and cables are plugged in.
	<ul style="list-style-type: none"> Fuse blown or internal fault. 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> Bad signal connection. 	<ul style="list-style-type: none"> Inspect connections and cables. Fix eventual bad connections. Repair or replace damaged cables.
	<ul style="list-style-type: none"> Signal connection not terminated. 	<ul style="list-style-type: none"> Insert DMX termination plug in signal output socket of the last product on the signal line.
	<ul style="list-style-type: none"> Incorrect addressing of the product. 	<ul style="list-style-type: none"> Check the product address and control settings.
	<ul style="list-style-type: none"> One of the product is defective and is corrupting the signal transmission on the signal line. 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> One or more hardware components requires mechanical adjustments. 	<ul style="list-style-type: none"> Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.
Mechanical effect loses position.	<ul style="list-style-type: none"> Mechanical hardware require cleaning, adjustment or lubrication. 	<ul style="list-style-type: none"> Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.
Light output turn OFF Intermittently.	<ul style="list-style-type: none"> Fixture is too hot. 	<ul style="list-style-type: none"> Check product stored error messages. Allow product to cool. Clean the product and airflow filters. Reduce ambient temperature.
	<ul style="list-style-type: none"> Hardware failure (temperature sensor, fans, Light source...). 	<ul style="list-style-type: none"> Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.
General low light intensity.	<ul style="list-style-type: none"> Dirty lens assembly. 	<ul style="list-style-type: none"> Clean the fixture regularly.
	<ul style="list-style-type: none"> Dirty or damaged filters. 	<ul style="list-style-type: none"> Install lens assembly properly.

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



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