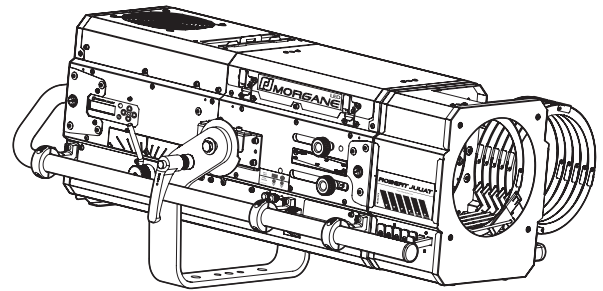
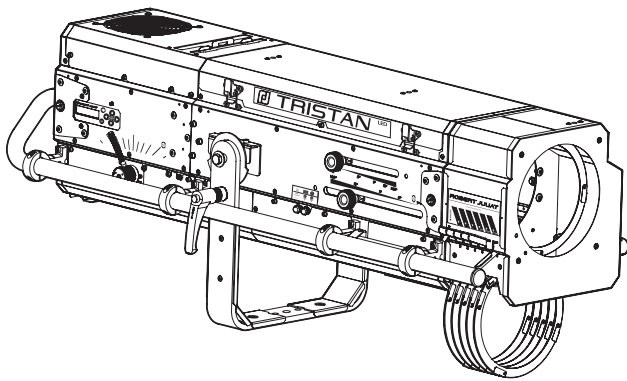


# TRISTAN 1189

# MORGANE 1489

## LED FOLLOWSPOTS



Source	Angles	Model	
		Standard / CE	North American
Cool White	7 - 14,5°	1189 CW	1189C CW
Variable White	7 - 14,5°	1189 VW	1189C VW

Source	Angles	Model	
		Standard / CE	North American
Cool White	13 - 24°	1489 CW	1489C CW
Variable White	13 - 24°	1489 VW	1489C VW

Product Updates:



V1

- FIRMWARE: **V5.x**
- RJ-LED2 FIRMWARE PLATFORM (Node Mode) full manual is available for download at [www.robertjuliat.com/LED/PDF\\_PAGE](http://www.robertjuliat.com/LED/PDF_PAGE)

**DN41241900-C (EN)**

Released: 01/06/26

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[www.robertjuliat.com](http://www.robertjuliat.com)



**ROBERT JULIAT**

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# 1 User's instructions

## GENERAL INSTRUCTIONS

1. Not for residential use.
2. These fixtures must only be serviced by a qualified technician.
3. In addition to the instructions indicated on this page, relevant health and safety requirements of the appropriate EU Directives must be adhered to at all times.
4. This fixture is in compliance with section 17 - Lighting appliance for theatre stages, television, cinema and photograph studios.  
Standards NF EN 60598-1, NF EN 60598-2-17, Low Voltage Directive 2014/35/UE & EMC Directive 2014/30/UE.
5. This fixture is rated as IP20, and is for indoor use only.

## FIXTURE

6. Ensure fixture is correctly mounted on an appropriate support.
7. Protection screens and lenses must be replaced in the event of any damage, such as cracks or deep scratches, since these might reduce performance.
8. When hung or flown the fixture must be secured by an additional hanging accessory (such as a safety cable or bond) of suitable length.
9. Safety bonds or cables must be securely attached to the back of the fixture and be as short as possible, or rolled up as necessary, to minimise travel distance should the fixture be dislodged.
10. Movable accessories (scroller, etc.) must also be secured with a suitable safety cable or bond at the front of the fixture.
11. The combined weight of both the fixture and the accessories must be considered when choosing the load-bearing capability of safety cable or bond.
12. Do not open lighting fixture when the source is on.
13. WARNING: LED source becomes hot during use. Allow fixture to cool before servicing.
14. Do not tamper with design of fixture nor any of its safety features.
15. Tighten electrical mains cable connections regularly and replace with one of identical specification if damaged.
16. Use only with correct power supply.

## VENTILATION

17. Keep well away from flammable material.
18. Not for outdoor use. Do not cover. Do not permit fixture to get wet.
19. To avoid overheating, do not obstruct air vents.
20. Ensure any cooling fans are in correct working order. If fans are not working, turn fixture off immediately and service as necessary.

## CLEANING

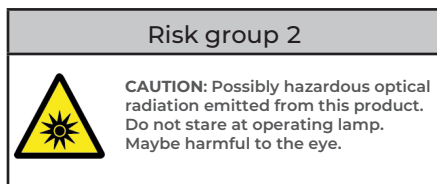
21. Do not touch the LED source with your fingers.
22. To clean the optical parts, use a soft cloth in combination with distilled water or isopropyl alcohol recommended for coated optics. Do not use any cleaning product that contains solvents or abrasives, as these can cause surface damage.  
Dry with a soft lint-free cloth.
23. Regularly remove dust with a soft lint-free cloth.
24. If the fixture has filters, they must be cleaned frequently.

## POWER SUPPLY

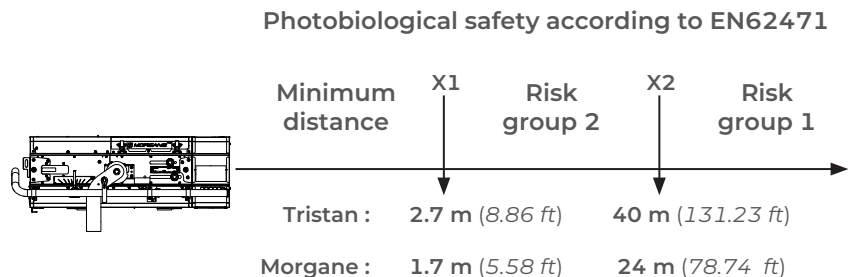
25. Disconnect from the mains before servicing.
26. Mains connection only. Do not connect to "electronic output" such as dimmer.
27. Ensure power supply circuit breakers, always remain accessible.

## PLEASE NOTE

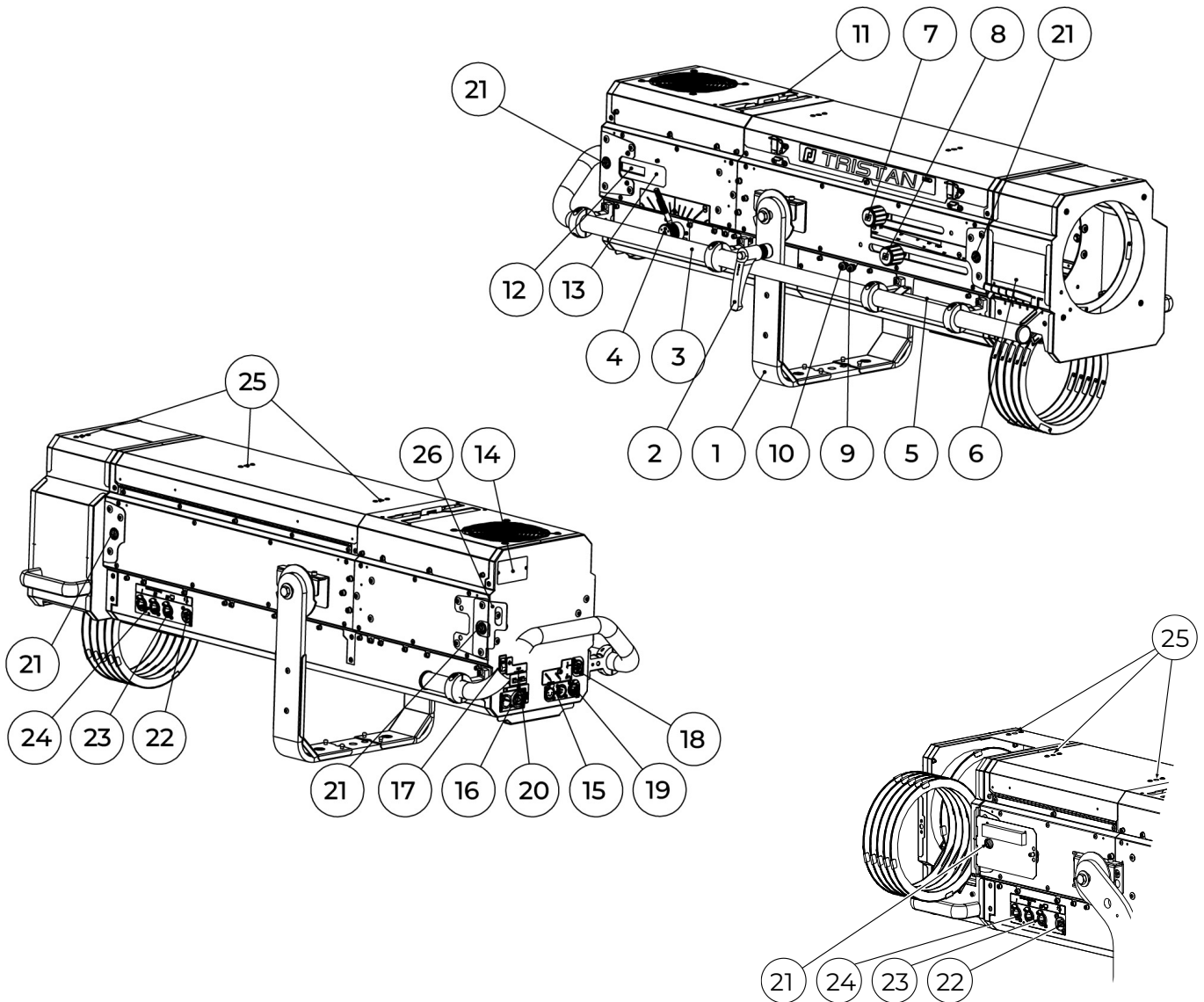
This product has been built to conform to European standards relating to professional lighting equipment. Any modification made to our products will void the manufacturers' warranty.



Risk group 2. Luminaires should be positioned so that prolonged staring into luminaire at a distance closer than 40 m (Tristan) & 24 m (Morgane) et is not expected.



2.1 Functions

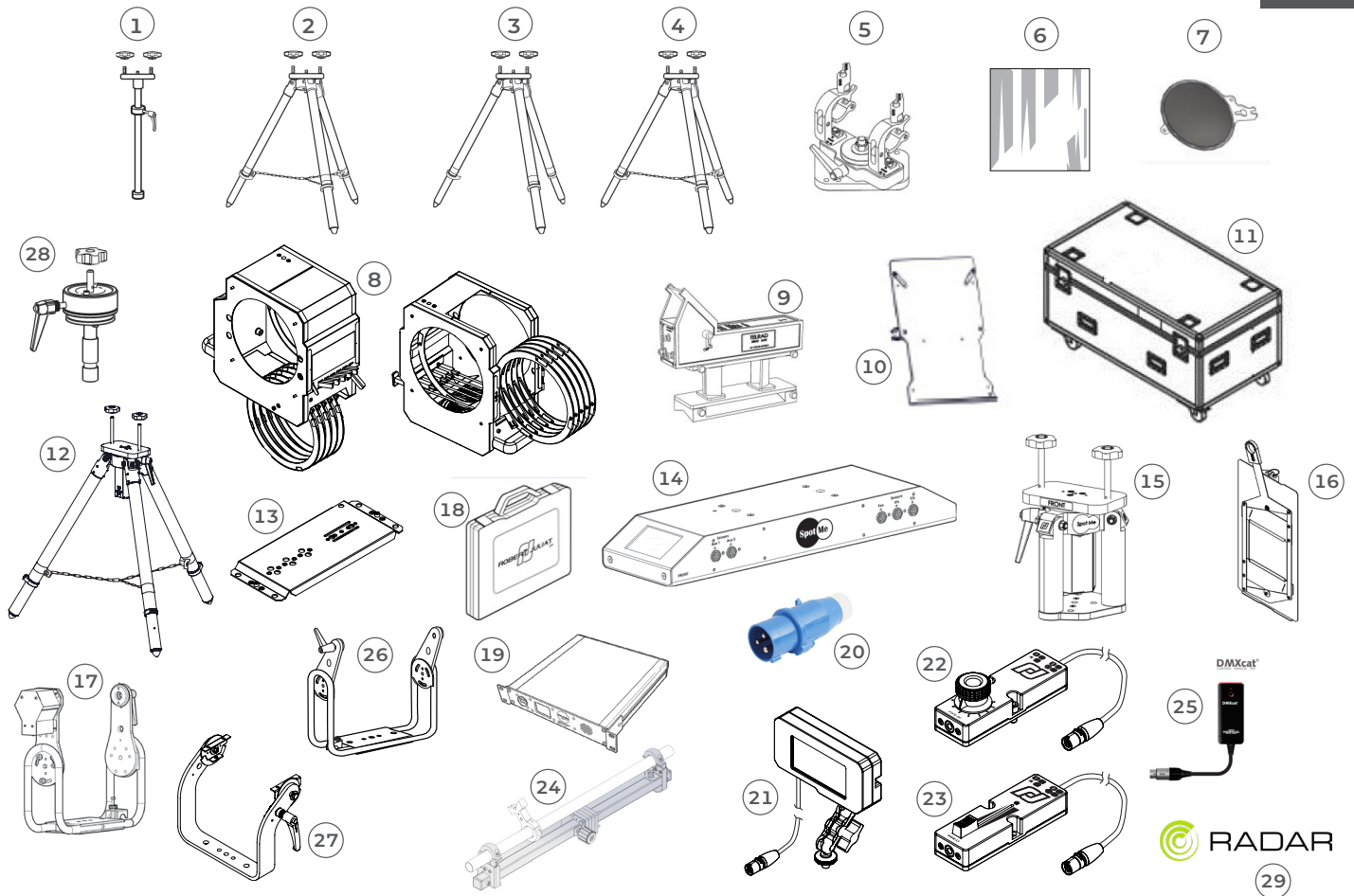


Description	
1. Yoke	15. Data connectors (IN and OUT)
2. Tilt locking handle	16. Power connectors (IN and OUT)
3. Side operating handle	17. Power switch
4. Iris control	18. USB connector (5W)
5. Dimming control	19. RJ45 connector
6. Colour changer	20. Fuses
7. Zoom adjustment	21. Lifting ring insert (M8)
8. Focus adjustment	22. USB connector (10W)
9. Frost glass	23. Remote display connector
10. Spare filter	24. Accessory connectors (x2)
11. Gobo slot	25. 1/4" Accessory mounting
12. Local display	26. Safety cable attachment point
13. Keypad	
14. Identification plate	



## 2.4 Accessories

EN



Reference	Description
1	JPP Monopod stand for overhead followspot
2	GT4000 Tripod stand with safety chain - SWL: 130 Kg - max. height: 1030 mm
3	GT4000S Tripod stand without safety chain - SWL: 130 Kg - max. height: 1030 mm
4	GT4000R Tripod stand with ball head rotation with security chain - SWL: 130 Kg - max. height: 1030 mm
5	T4000 Followspot mount for Ø50 mm pipe (suspension or overhead) - SWL= 100 Kg
6	VD120 120 x 120 mm frosted glass
7	FCM100R Ø120 mm 1/2 CTO correction filter (Rosco #3408) with holder
8	M270/2T 6-way "push/pull" colour changer with fan M270/2B 6-way "boomerang" colour changer (Only for Tristan 1189)
9	KIT TELRAD Telrad followspot sight with raiser and universal mounting kit
10	SDUP Followspot cue sheet holder with universal mounting kit
11	FC1189-2/S Flight-case for Compact LED range / GT stand / accessories - Weight: 57.4 Kg
12	GT4000RSM Tripod stand with ball head rotation with security chain and SpotMe PAN sensor - SWL: 130 Kg - max. height: 1030 mm
13	PSA1 Support plate for 2x P1FE and 1/4" accessories
14	SMS SpotMe server + 2 sensor cables + flight case
15	T4000RSM Followspot mount with ball head rotation and SpotMe PAN sensor SWL = 100 Kg - Weight: 8,83 Kg
16	G80/3 Horizontal chopper
17	FRO/SMGPD Heavy duty adjustable yoke equipped with TILT SpotMe sensor (G type)
18	TCSM SpotMe calibration tool kit
19	MAESTRO Maestro server for SpotMe - rackable unit: 1U - half 19"
20	PCP1716A 16A blue 2P+E 6h IEC60309 power connector (option)
21	R-DISPE1 Remote display - Ethernet connector
22	P1FE-R1 One-function remote controller (with rotary potentiometer) - Ethernet connector
23	P1FE-L1 One-function remote controller (with linear potentiometer) - Ethernet connector
24	BK1 Followspot balancing kit (including 1 Kg counterweights) - Weight: 2.05 Kg
25	DMXcat Bluetooth DMX/RDM Multifunction test tool - City Theatrical DMXcat®
26	FRO/CLPD Heavy duty yoke
27	FCD/CLPD Angled yoke
28	T1000 TV spigot with followspot's swivel head - Weight: 1.82 Kg

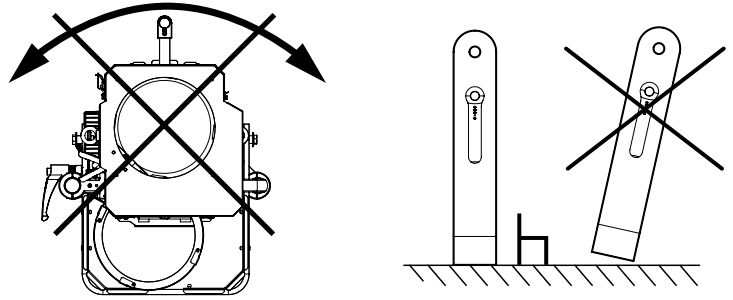
29	Fusion/S	Madrix Radar (RDM monitoring): Fusion Small licence - up to 64 non-RJ RDM fixtures - USB dongle included
	Fusion/M	Madrix Radar (RDM monitoring): Fusion Medium licence - up to 512 non-RJ RDM fixtures - USB dongle included
	Fusion/L	Madrix Radar (RDM monitoring): Fusion Large licence - up to 4096 non-RJ RDM fixtures - USB dongle included

MADRIX RADAR - more information: [www.robertjuliat.com/RDM-Tools/Madrix-Radar](http://www.robertjuliat.com/RDM-Tools/Madrix-Radar)

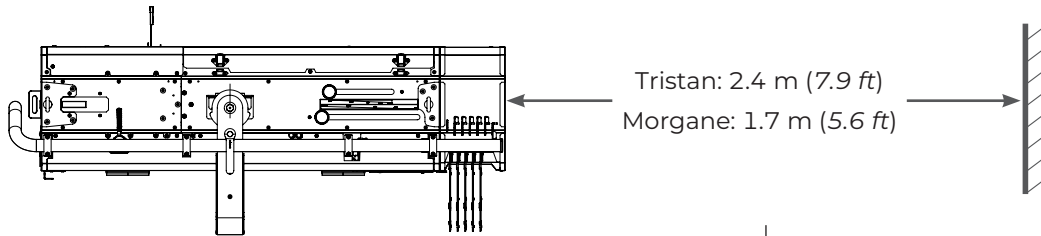
### 3 Set-up

#### 3.1 Mechanics

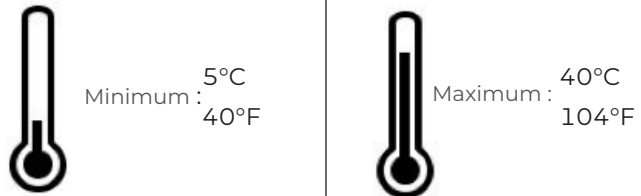
##### 3.1.1 Operating positions



##### 3.1.2 Minimum distance between a flammable material and the lighting unit



##### 3.1.3 Instructions for use



IP20 - Indoor use only

##### 3.1.4 Lifting

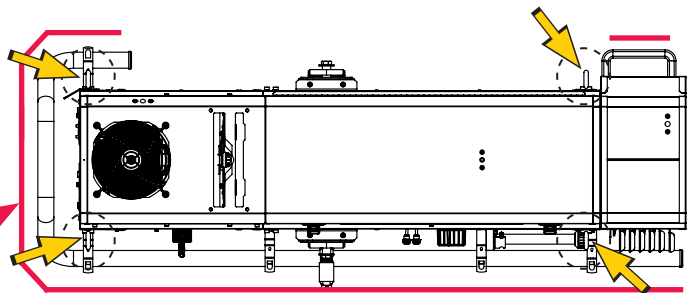


· Net weight:  
Tristan: 39 Kg (86 lbs)  
Morgane: 36 Kg (79,9 lbs)



Lifting ring DIN 580 M8  
(x4 Not supplied)

Use lifting rings



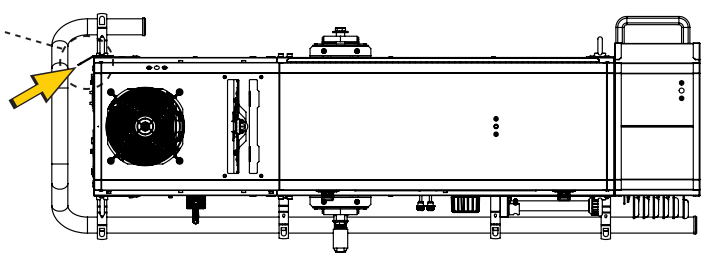
Overhead view

##### 3.1.5 Safety cable

· Safety cable attachment point



Safety cable not supplied.

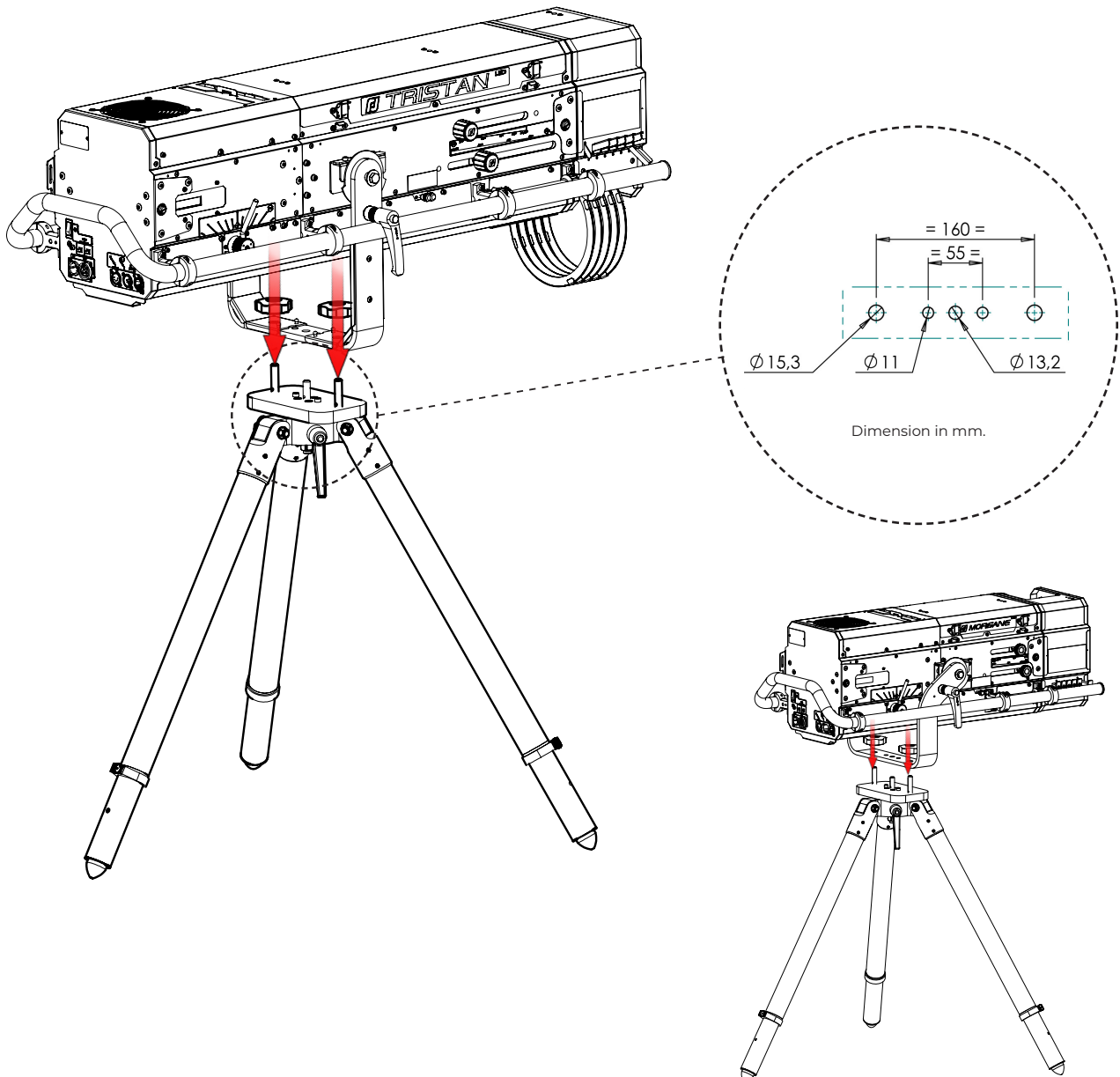


**The unit must be installed only on a Robert Juliat compatible stand / head :**

JPP	Monopod stand for overhead followspot
GT4000	Tripod stand with safety chain - SWL: 130 Kg - max. height: 1030 mm
GT4000S	Tripod stand without safety chain - SWL: 130 Kg - max. height: 1030 mm
GT4000R	Tripod stand with ball head rotation with security chain - SWL: 130 Kg - max. height: 1030 mm
T4000	Followspot mount for Ø50mm pipe (suspension or overhead) - SWL= 100 Kg
GT4000RSM	Tripod stand with ball head rotation with safety chain and SpotMe PAN sensor - SWL: 130 Kg - max. height: 1030 mm
T4000RSM	Followspot mount with ball head rotation and SpotMe PAN sensor - SWL= 100 Kg

• GT4000 / GT4000S / GT4000R

*Please refer to the relevant stand technical files for further details.*




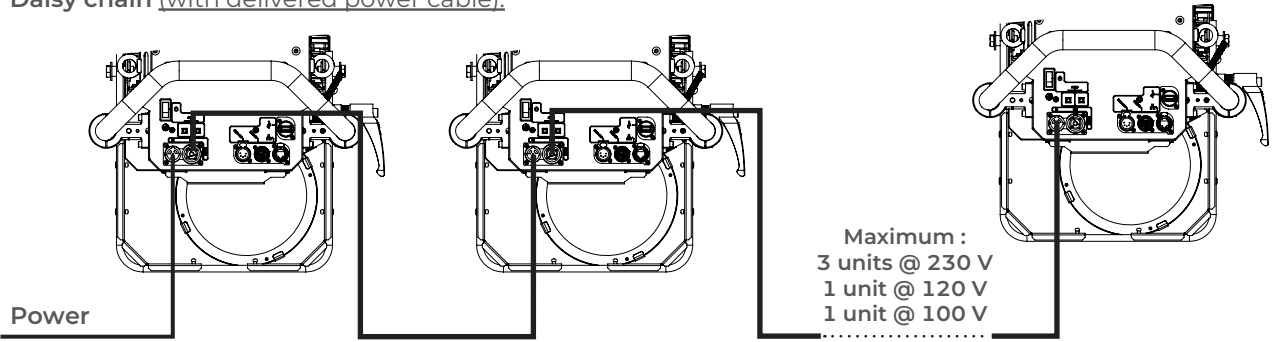
## 3.2 Electrical information


### 3.2.1 LED source

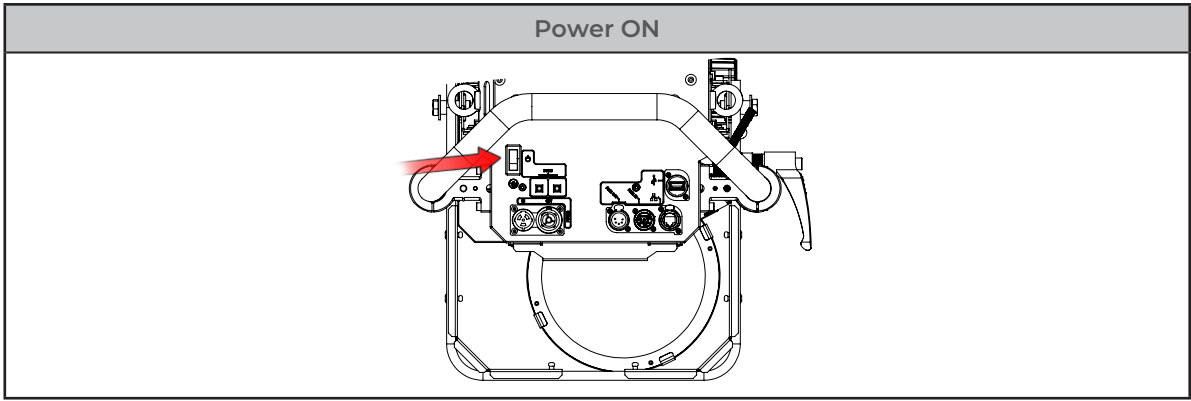


Never touch or scratch the LED surface.  
See 6.1.4 LED source.

### 3.2.2 Power supply

Power supply			
Voltage	Frequency	Input power	Connectors
90 → 277 V	47-63 Hz	4,39 A / 958 W @ 230 V 9,27 A / 990 W @ 120 V 10,31 A / 1000 W @ 100 V Max. = 12 A Standby < 11 W	Neutrik powerCON TRUE1 TOP Input : ref. NAC3FPX-TOP
 <ul style="list-style-type: none"> <li>• Class 1 product. <b>This luminaire must be earthed.</b></li> <li>• Must be connected directly to AC power. <b>Do not connect to dimmer power.</b></li> <li>• Automatic mains voltage detection.</li> </ul>			
<p>Daisy chain (with delivered power cable):</p>  <p>Maximum : 3 units @ 230 V 1 unit @ 120 V 1 unit @ 100 V</p>			

Power cable					
Power cable	Connector	Mains plug	Cable type	Cable length	Wiring
1	Standard version	CEE7/7	3G1.5 H07RNF	3 m 9.8 ft	Live: Brown Neutral: Blue Ground: Yellow/Green
2	North American version		-	14AWG SJ TYPE (UL/CSA)	1.5 m 4.9 ft
					



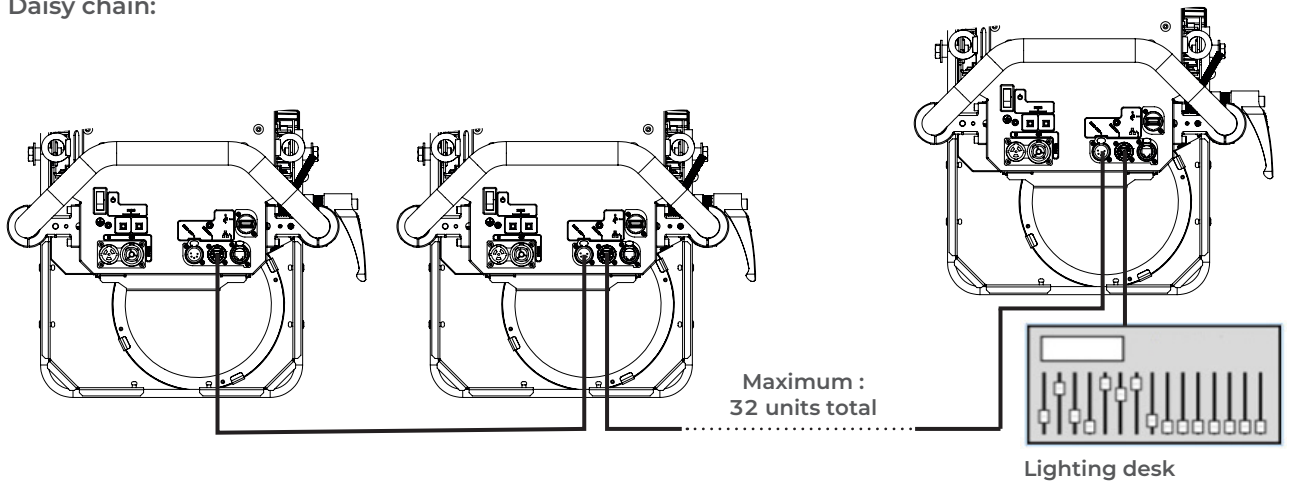
### 3.3 DATA

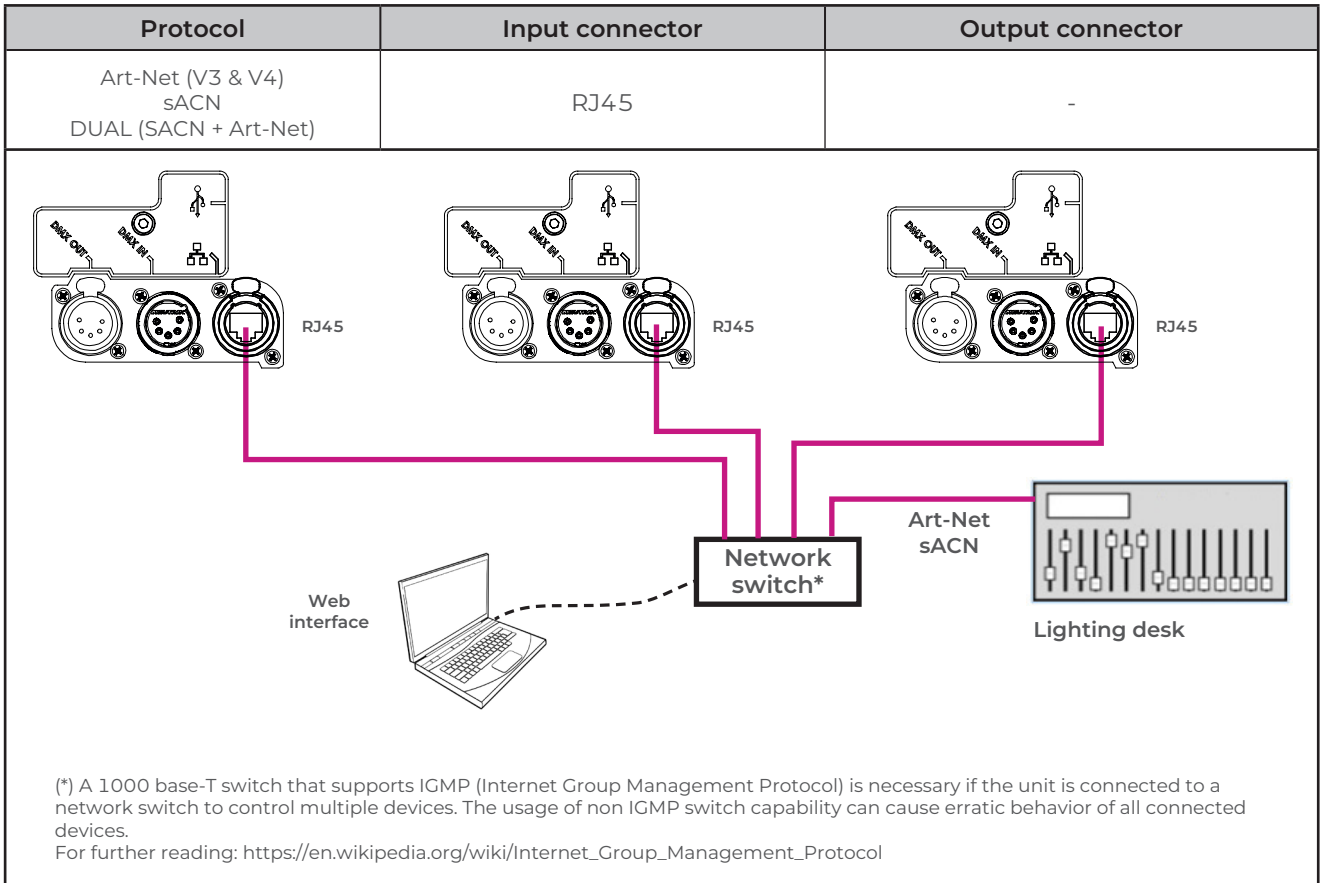
#### 3.3.1 DMX 512-A / RDM

Protocol	Input connector	Output connector
USITT DMX 512-A RDM	XLR 5-pin	XLR 5-pin

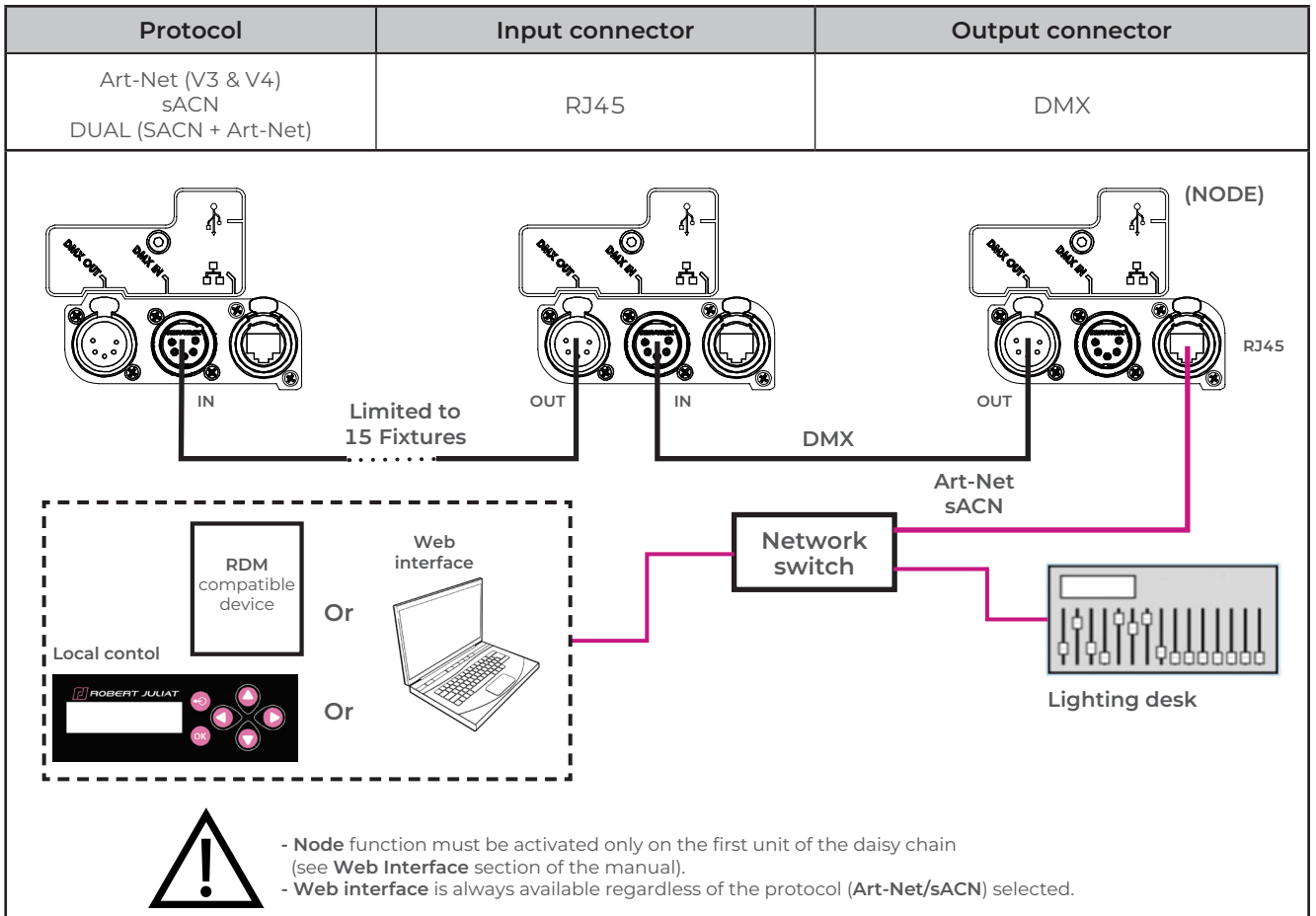
DATA connectors			
PIN #	DMX	Description	
1	Shielding	Foil & Braided Shield	
2	DMX (-)	1st conductor of 1st twisted pair	
3	DMX (+)	2nd conductor of 1st twisted pair	
4	Not used	1st conductor of 2nd twisted pair	
5	Not used	2nd conductor of 2nd twisted pair	

Daisy chain:



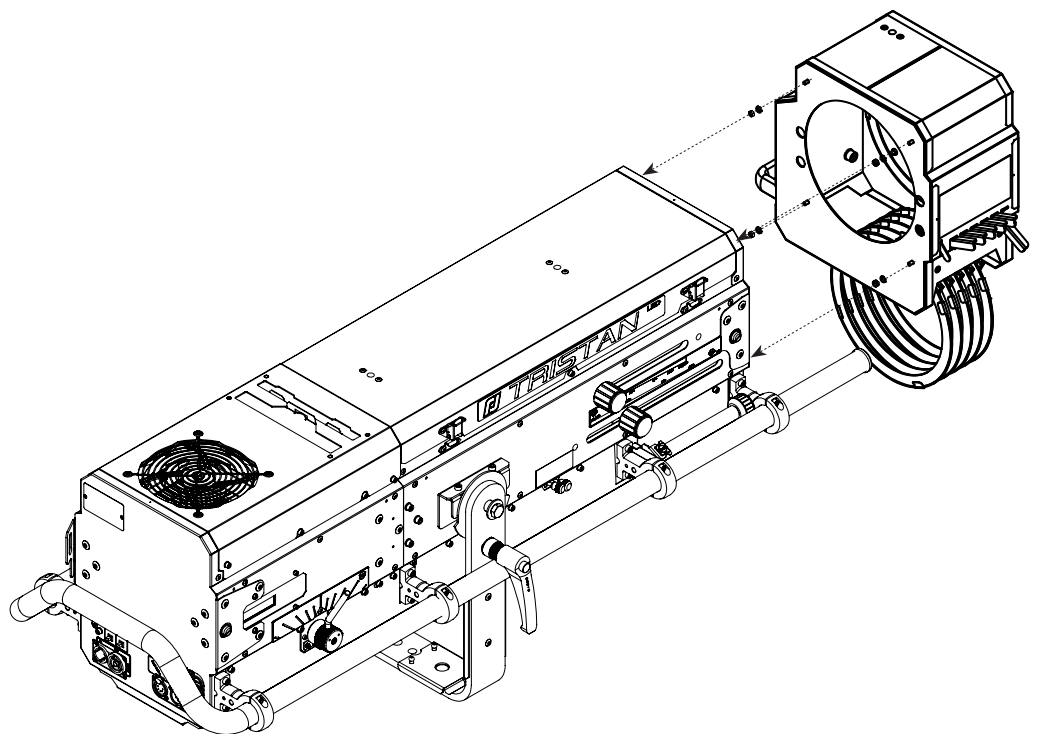
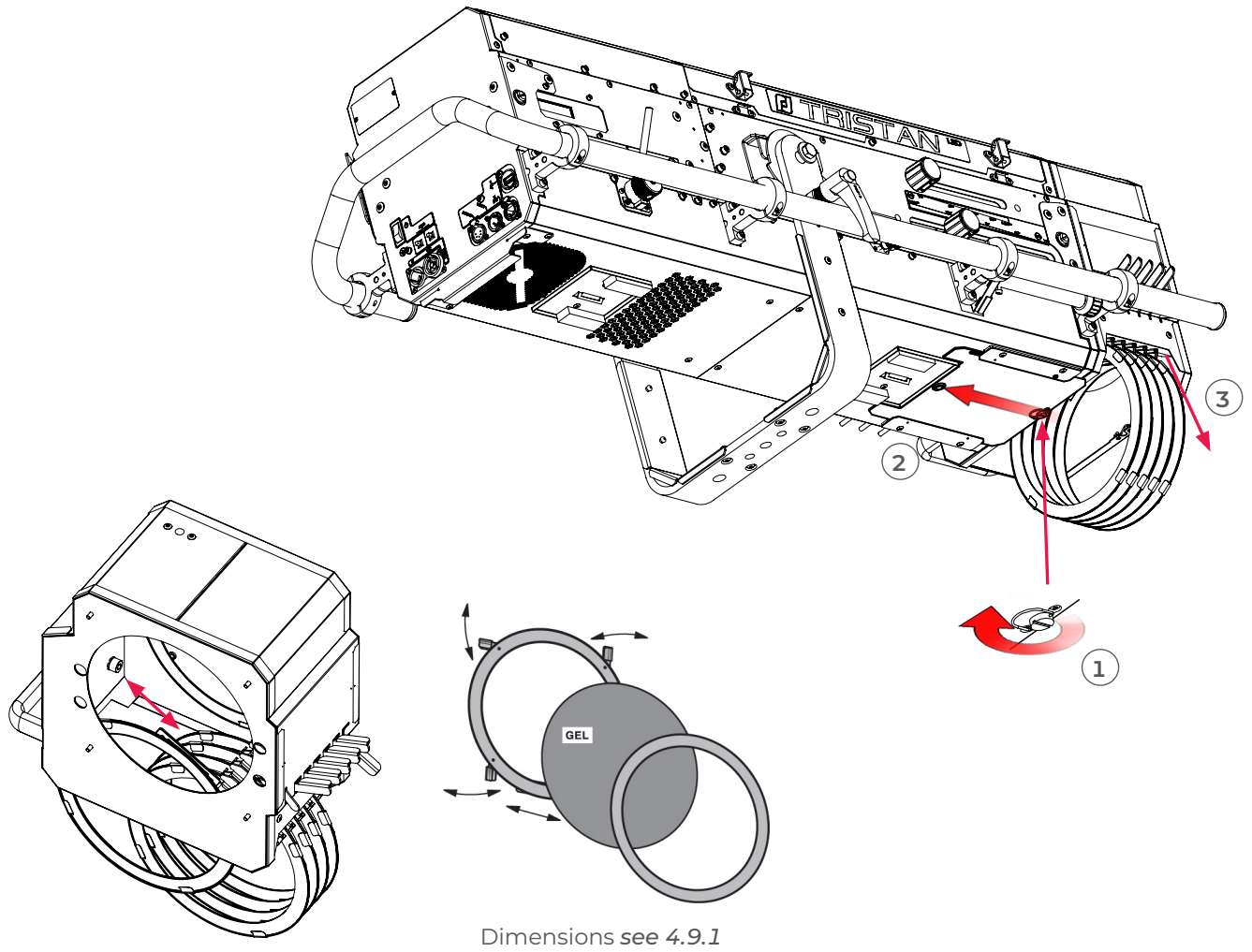


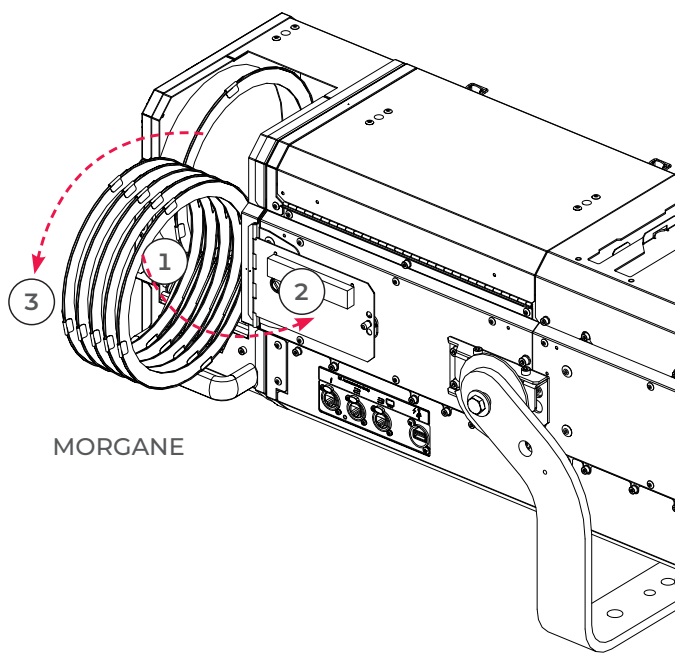
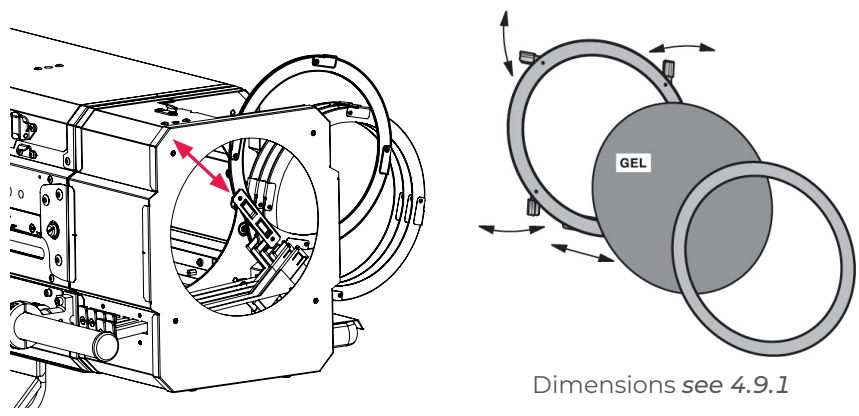
3.3.3 Ethernet / DMX node / DUAL



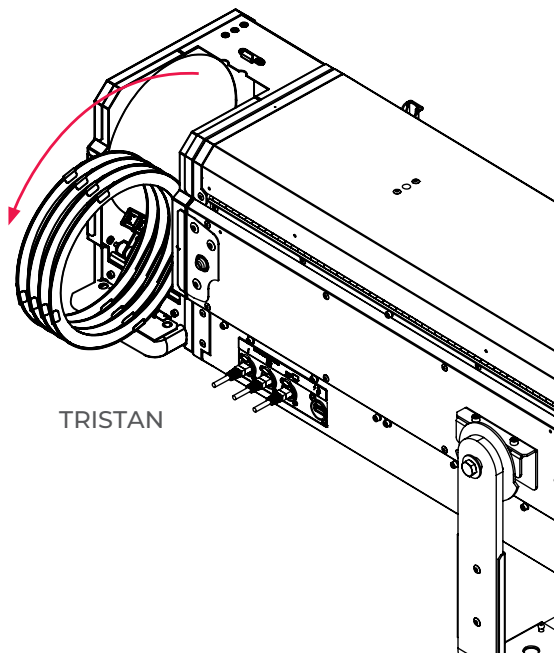
RJ-LED2 FIRMWARE PLATFORM (Node Mode) full manual is available for download at [www.robertjuliat.com/LED/PDF\\_PAGE](http://www.robertjuliat.com/LED/PDF_PAGE)

3.4.1 Colour changer unit - boomerang (Only available on Tristan)

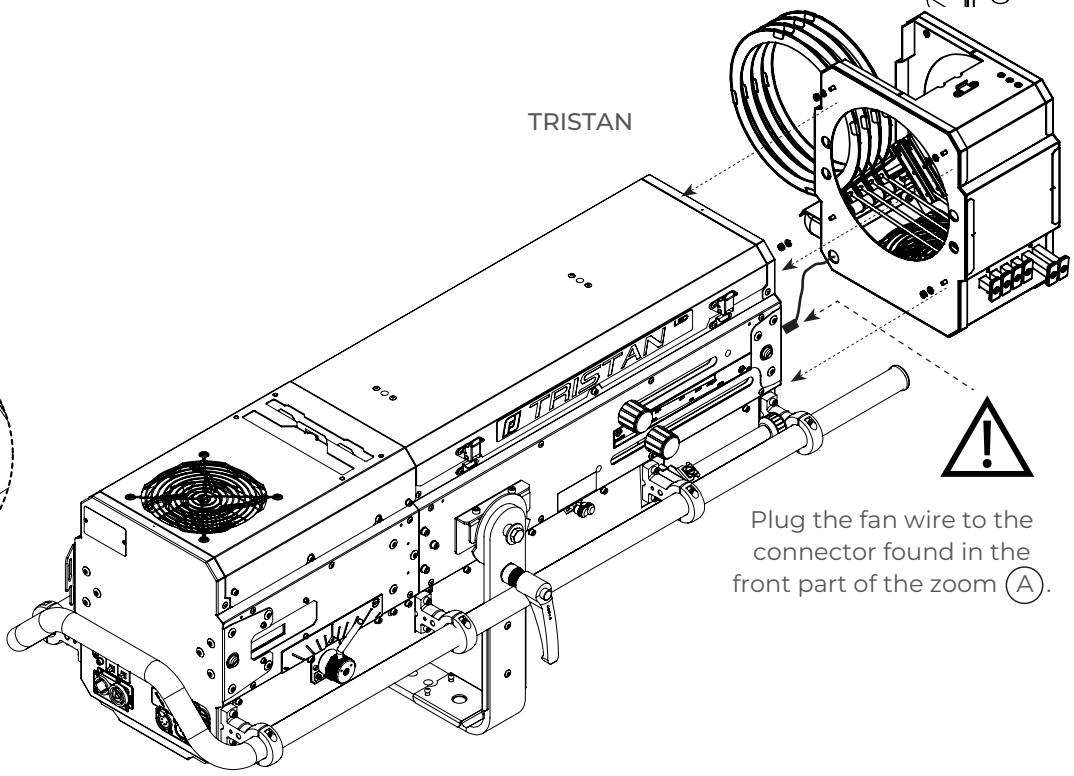
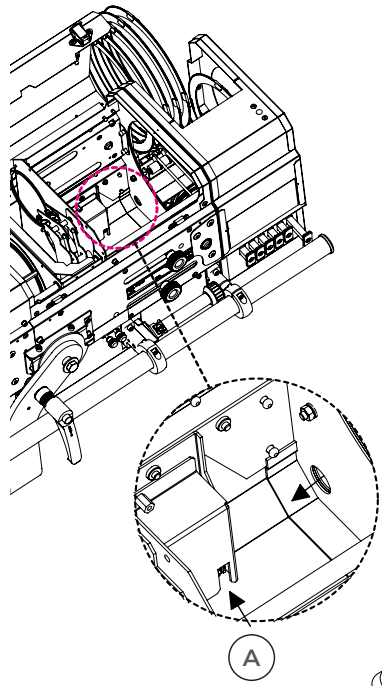




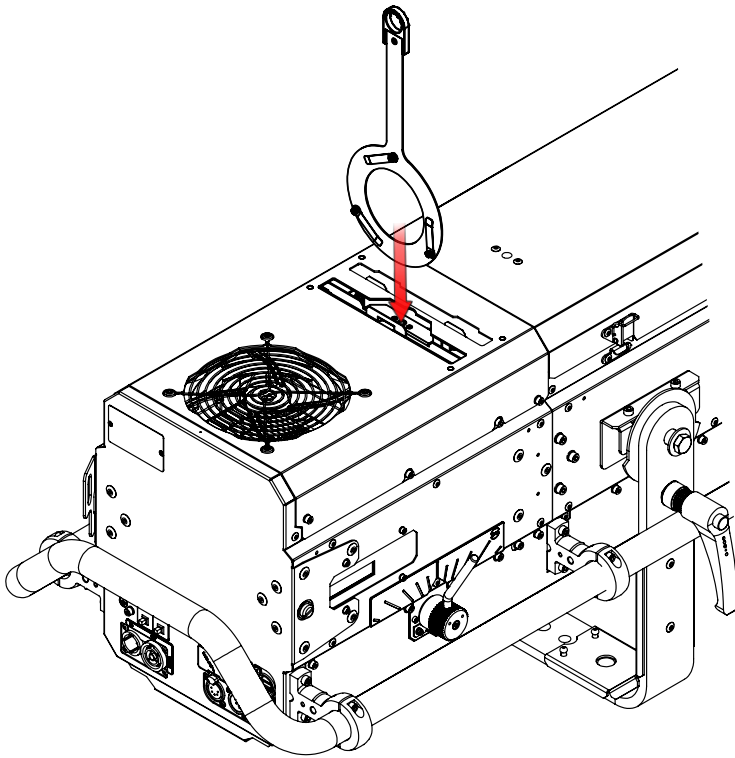
MORGANE



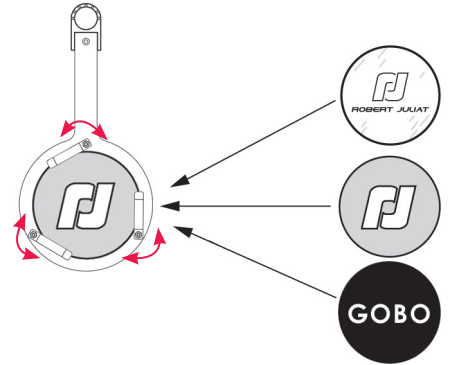
TRISTAN



Plug the fan wire to the connector found in the front part of the zoom (A).



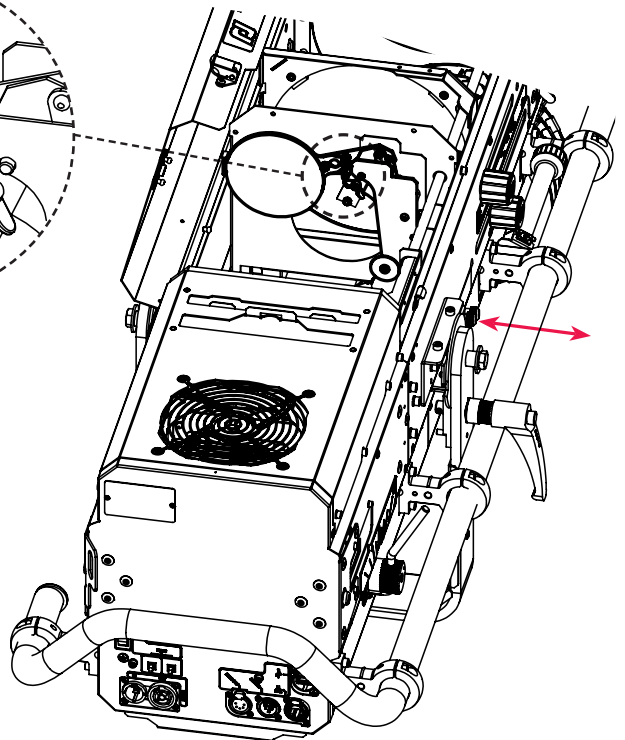
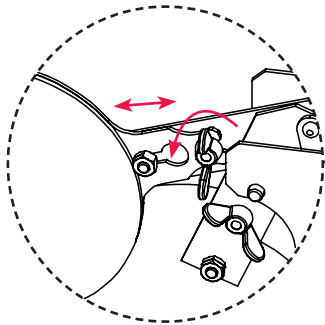
'A' size gobo  
Dimensions see 4.8.1

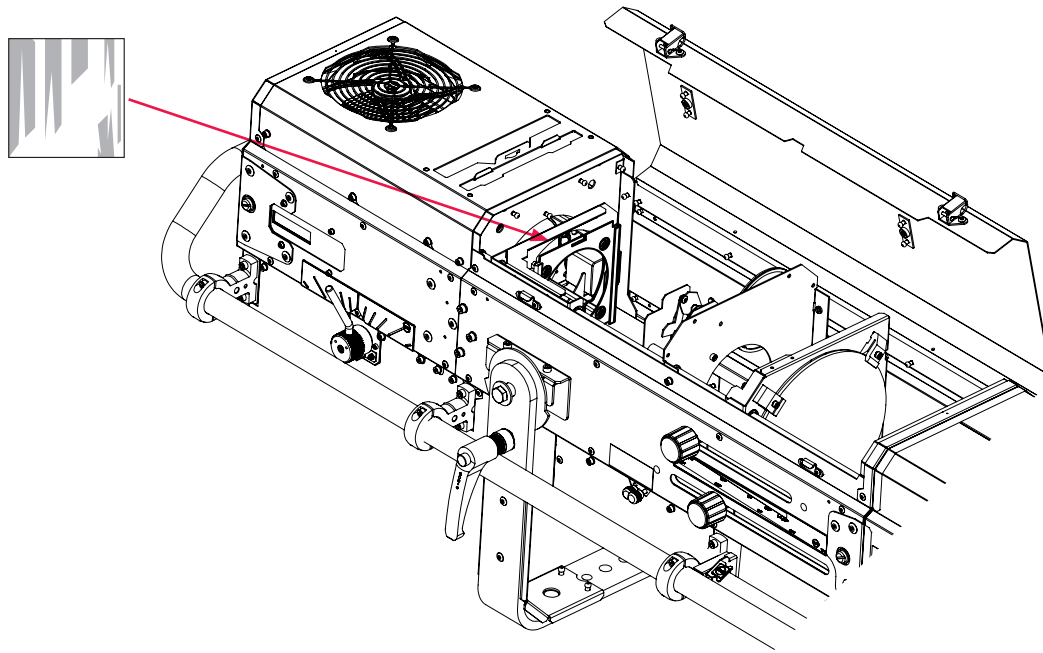


3.4.4 Frost / Correction filter

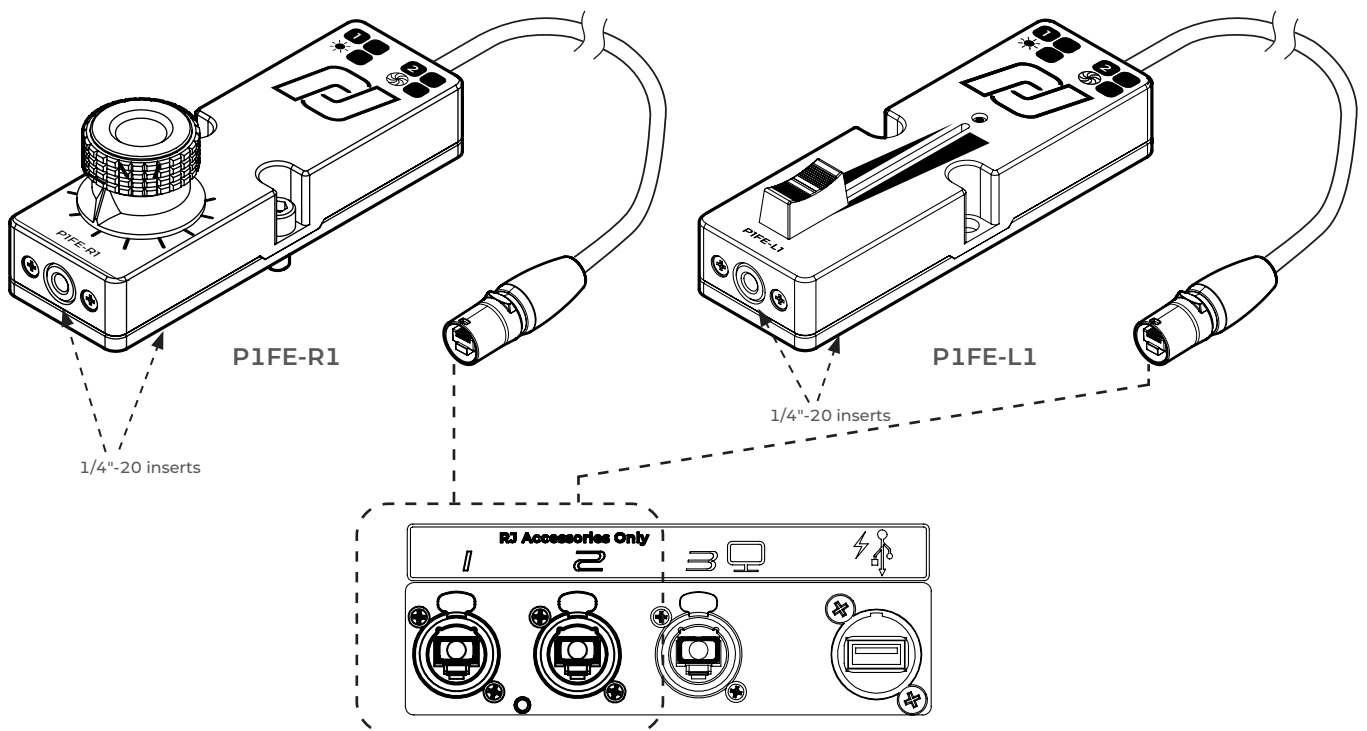


Dimensions see 4.10.1

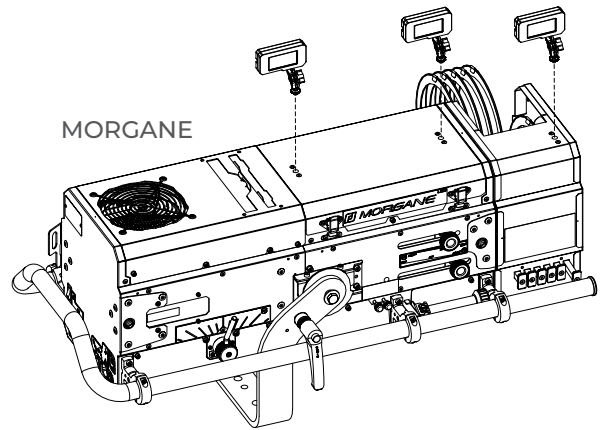
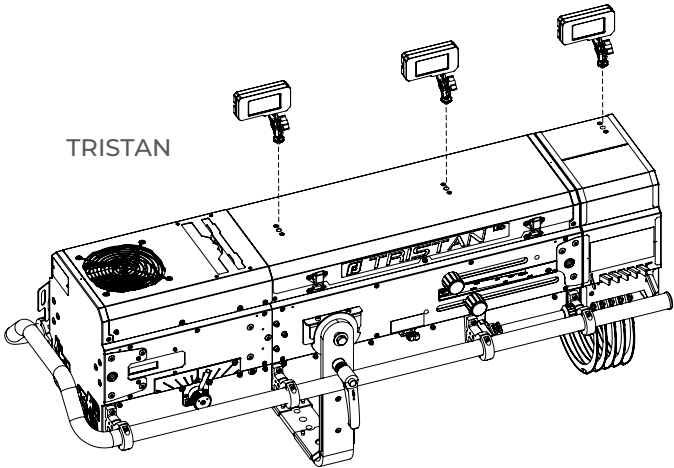
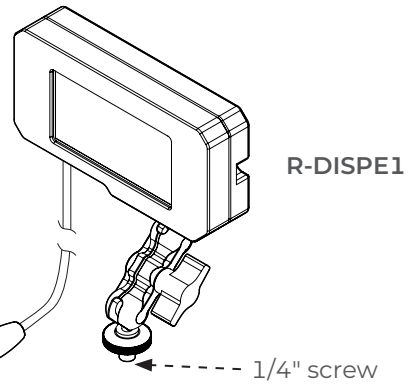
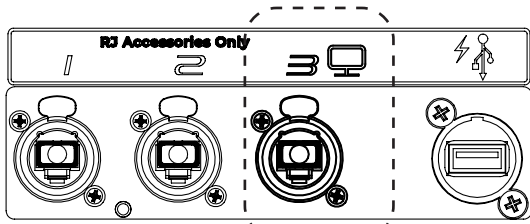




3.4.6 Remote controls



### 3.4.7 Remote display

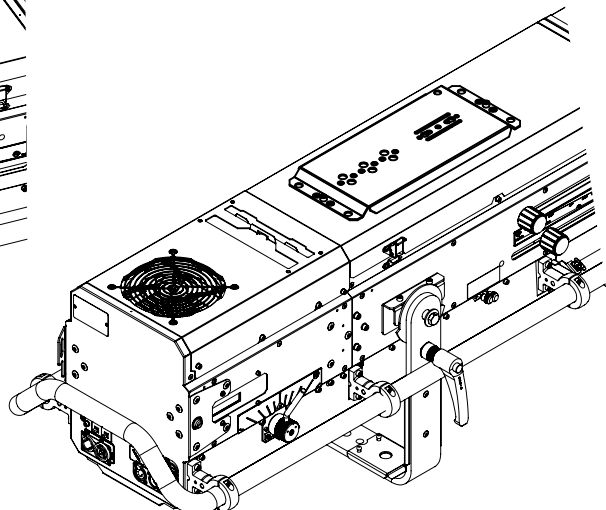
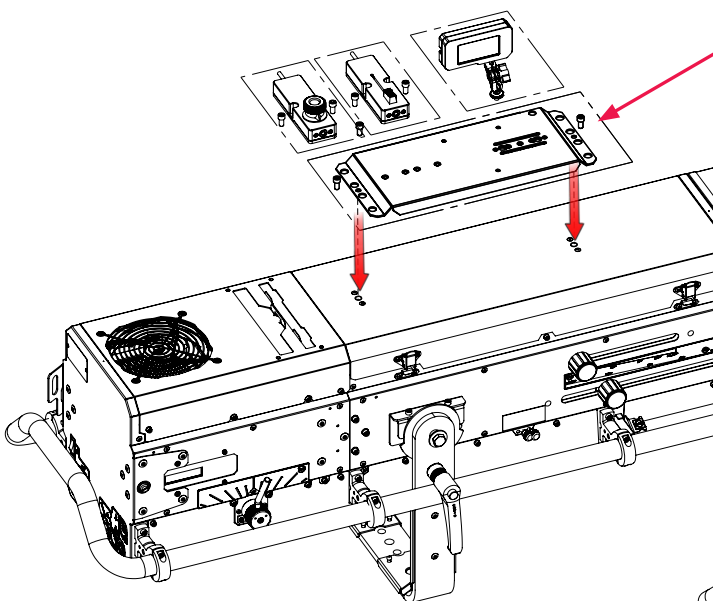
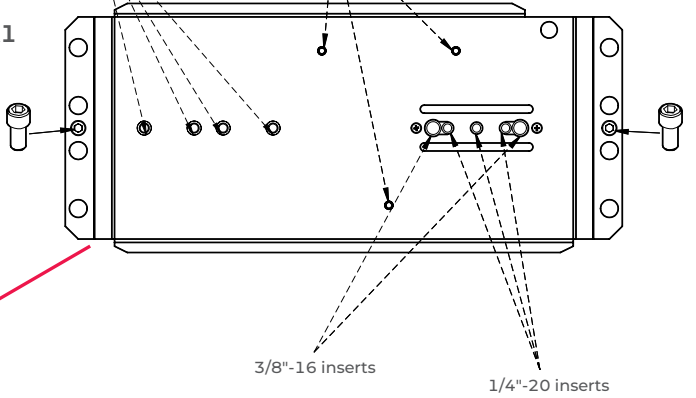


### 3.4.8 Top accessory plate

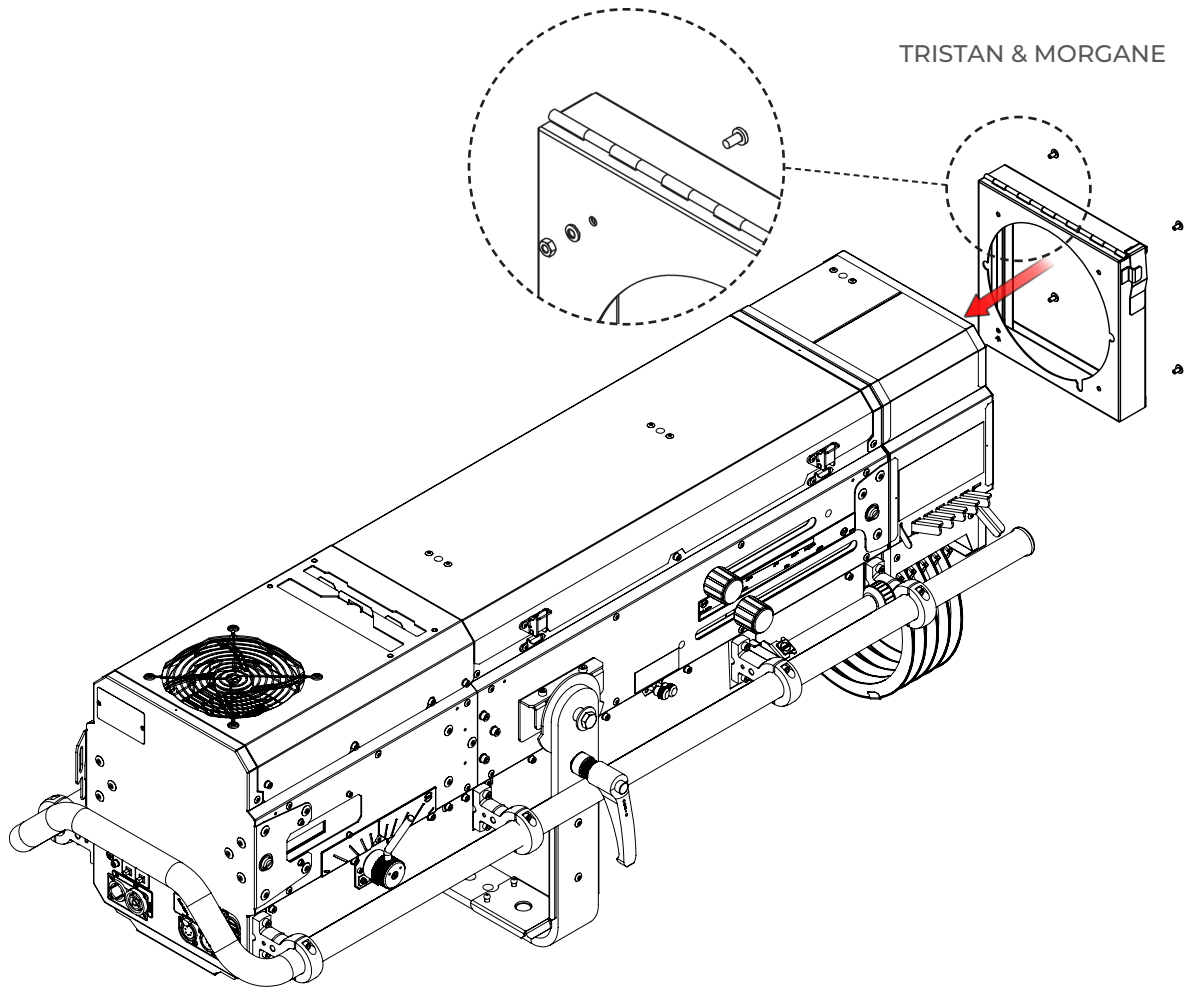
1/4"-20 inserts      M4 inserts for Clear-Com® BP-MOUNT

PSA1

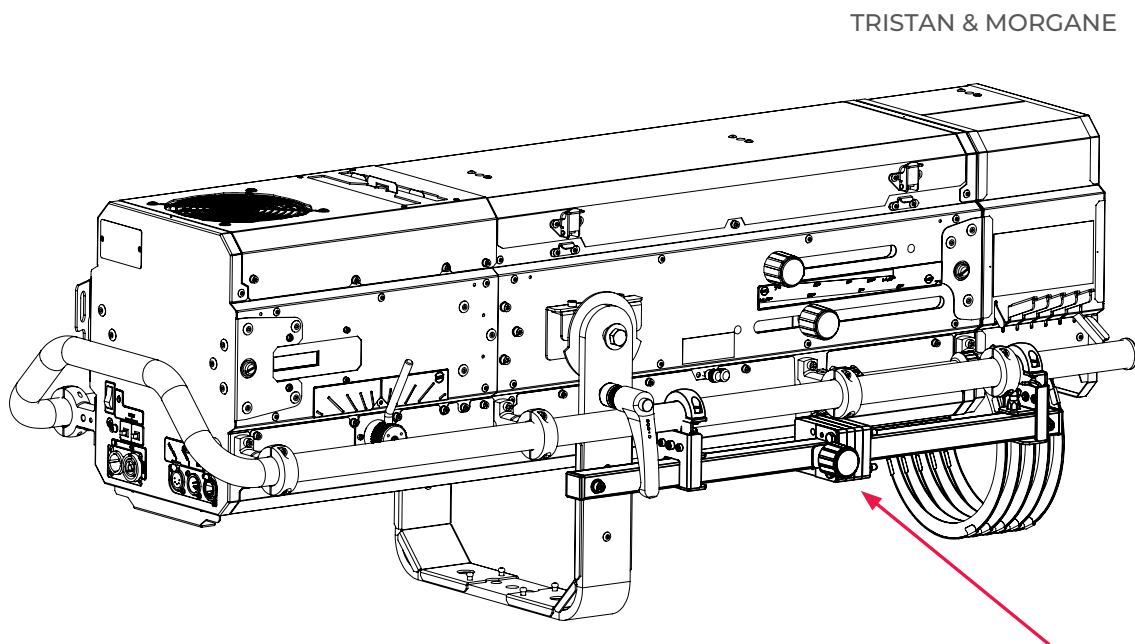
1/4" screws (x2 included)

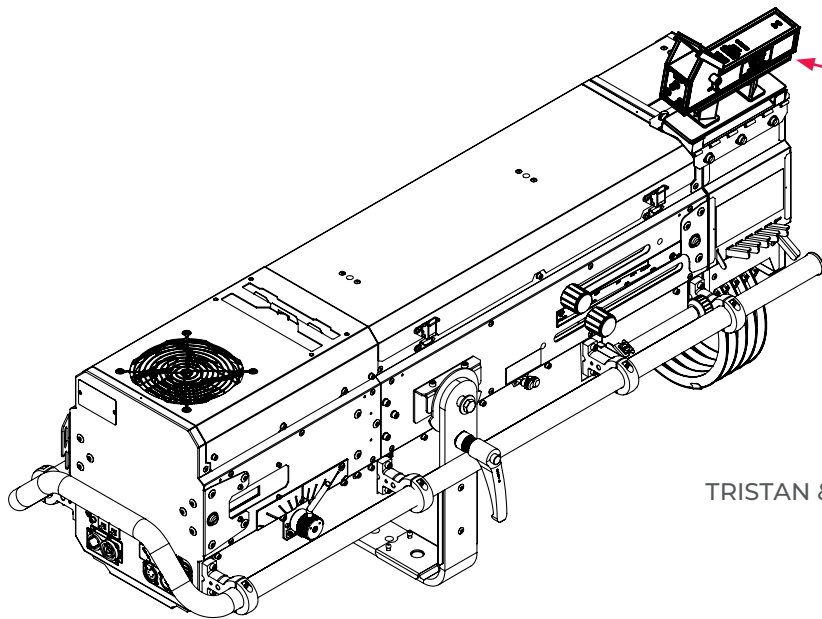


3.4.9 Double slot front cassette for accessories



3.4.10 Counterweight



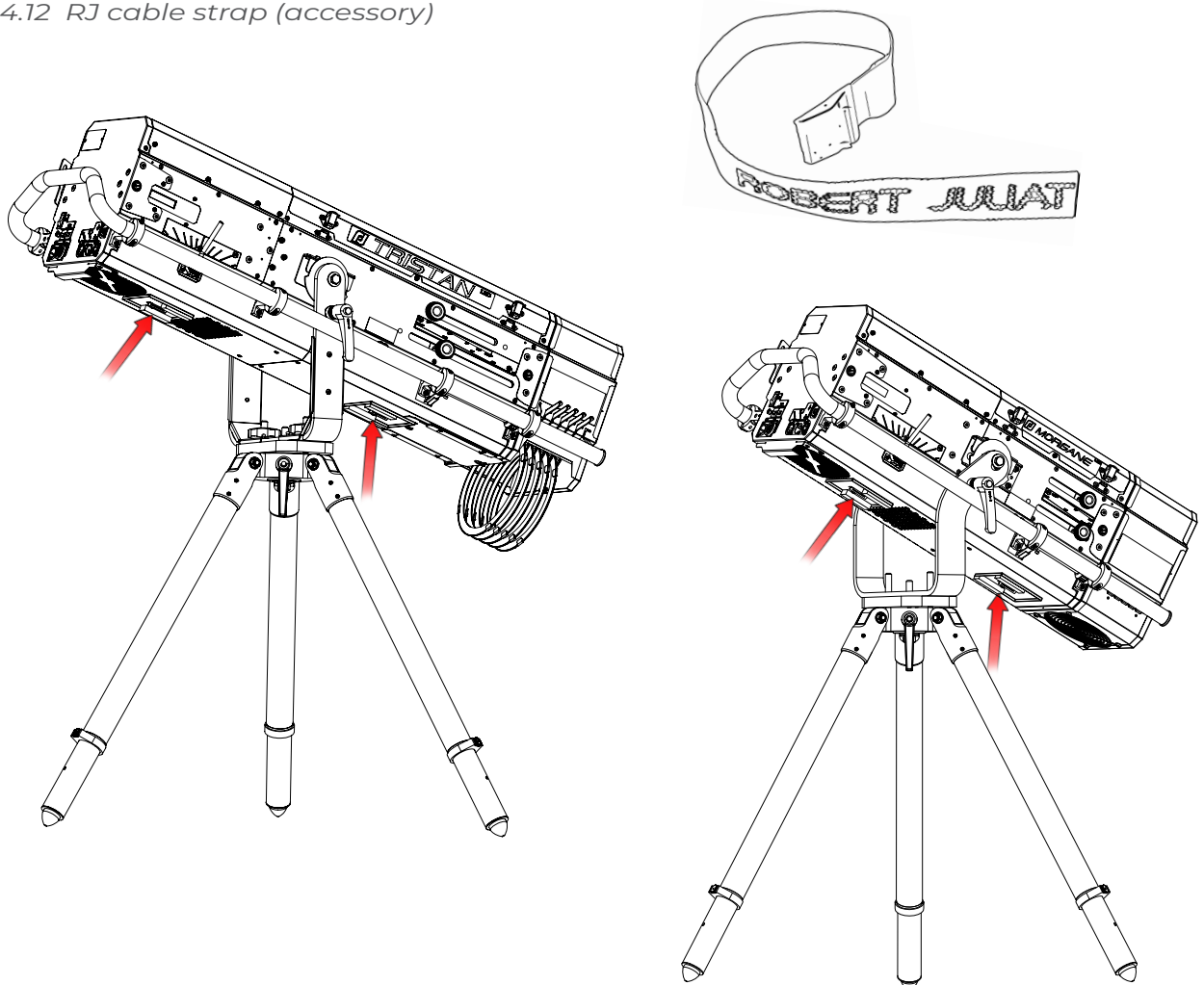


Followspot sight  
guide available @  
[www.robertjuliart.com/  
followspots/Accessories](http://www.robertjuliart.com/followspots/Accessories)

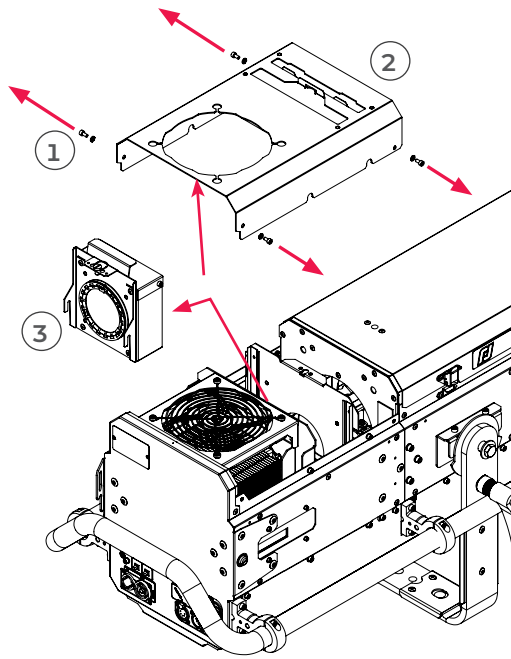
TRISTAN & MORGANE

**Caution:** - Do not install the followspot sight on the lamp house to avoid blocking the ventilation vents.  
- Secure the sight with a suitable safety cable.

3.4.12 RJ cable strap (accessory)



### 3.4.13 Ø80mm Horizontal chopper



#### Installation:

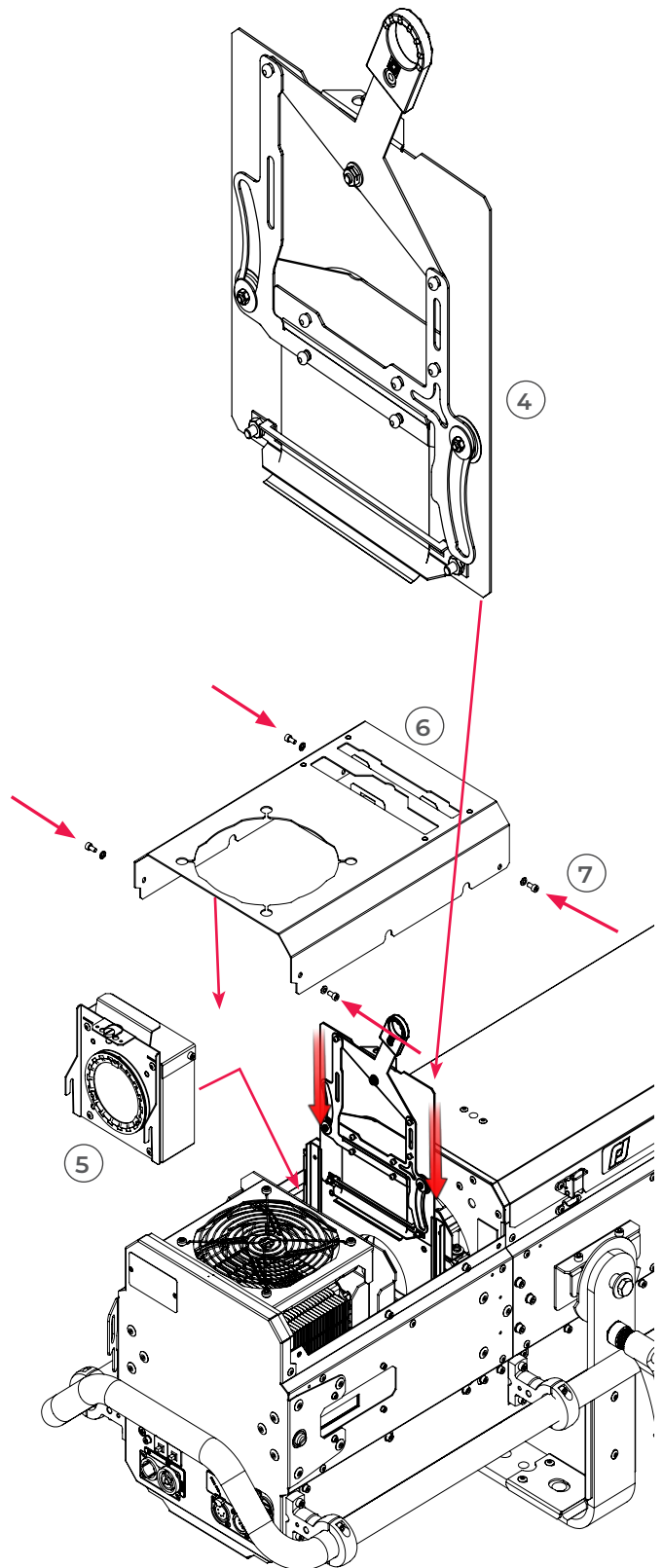
Remove the LED housing cover by unscrewing the 4 screws: 1 → 2

Remove the lens holder: 3

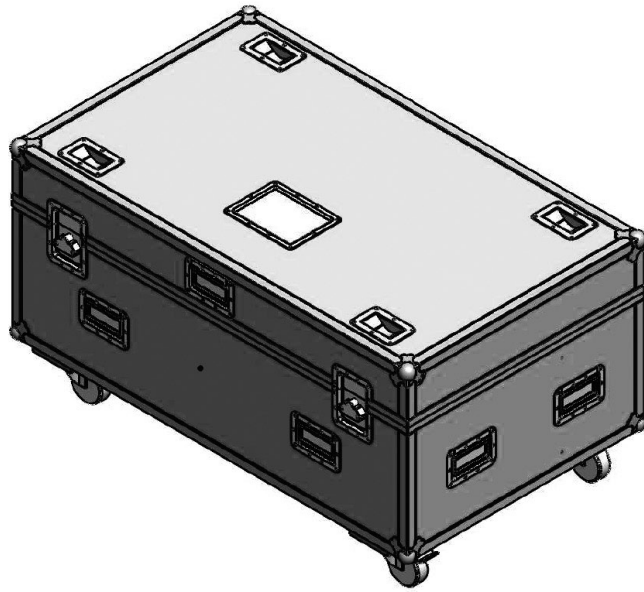
Place the chopper into place: 4

Place the lens holder back into position: 5

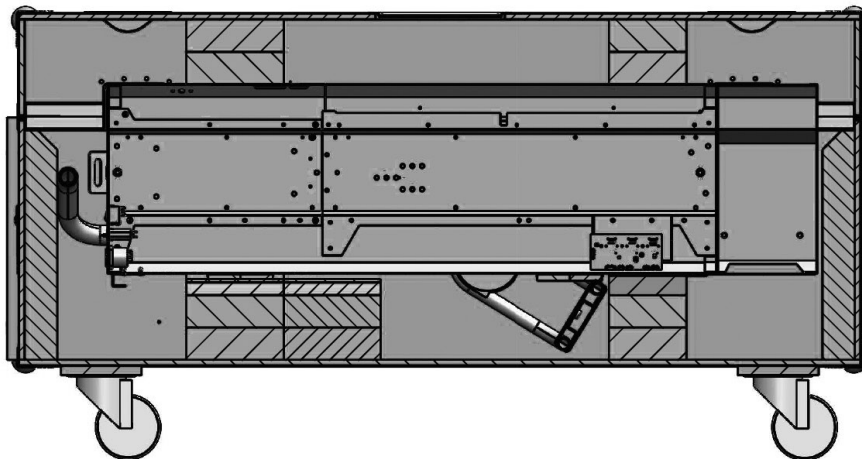
Remount the LED housing cover and tighten the screws: 6 → 7



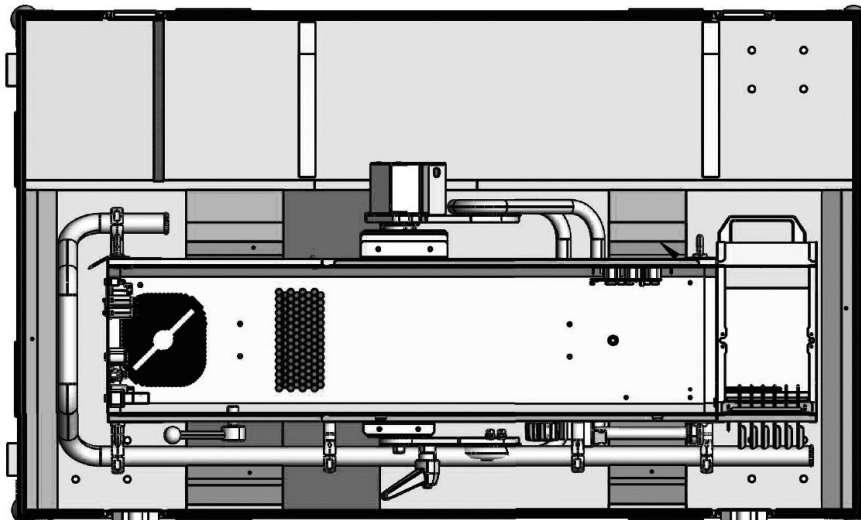
3.4.14 Flight-case



Inner side view



Inner overhead view

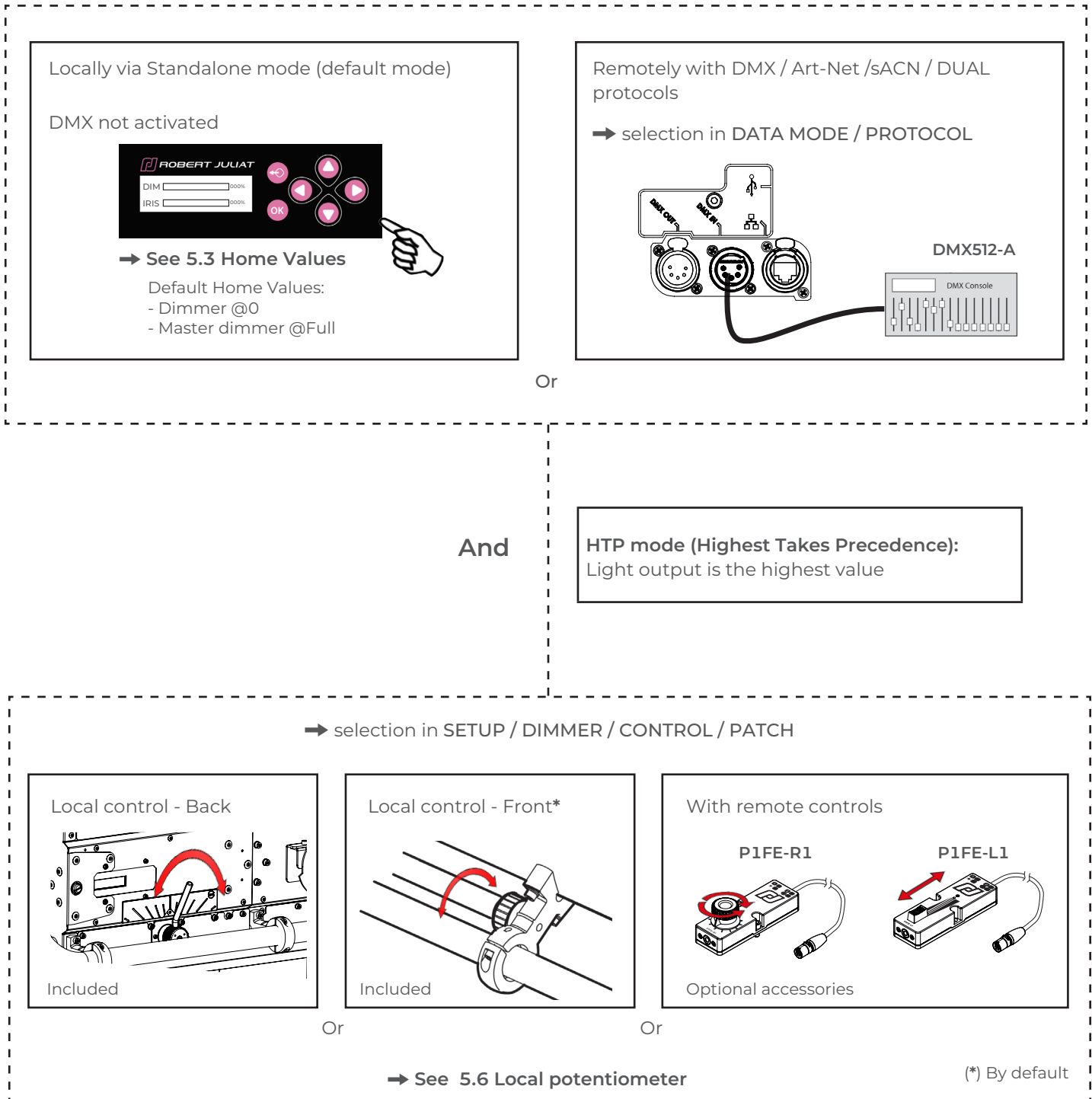


4.1 Light intensity

4.1.1 Range



4.1.2 Control

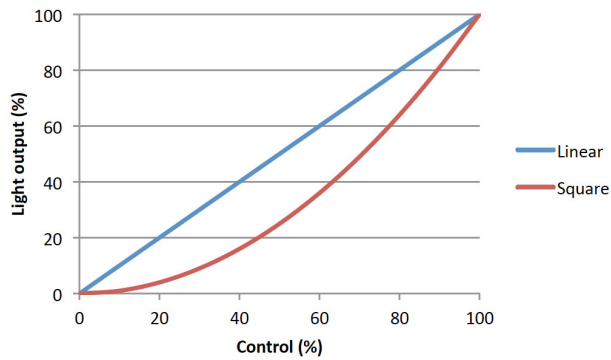


4.1.3.1 Dimming resolution - DMX only

Resolution	DMX mode
8 bits – 255 steps	1
16 bits – 65 535 steps	2, 3, 4

4.1.3.2 Dimming curve

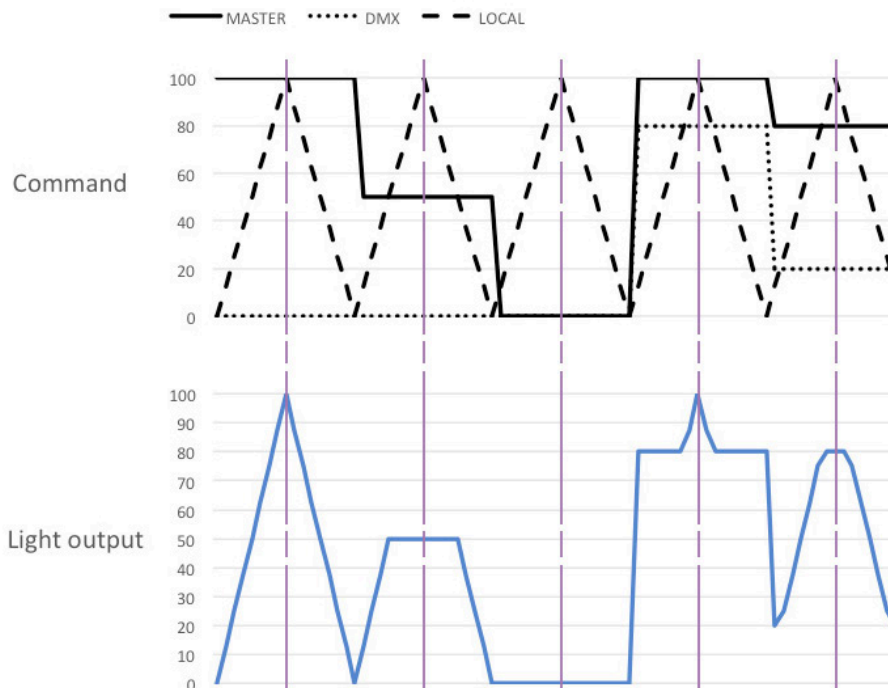
➔ selection in SETUP / DIMMER / CURVE menu: LINEAR or SQUARE



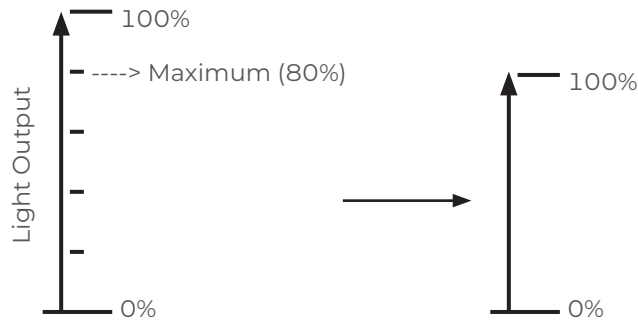
4.1.3.3 Master control

➔ DMX Mode 3 & 4

In order to supervise the operator from the console, master control DMX channel can be used. This channel limits the maximum value of the dimmer shutter. By using this function, it is possible to obtain synchronised fades with several spots or to give intensity limits (minimum and maximum) to the operator. Master is only active when DMX is detected.



→ Selection in SETUP / DIMMER / MAX menu



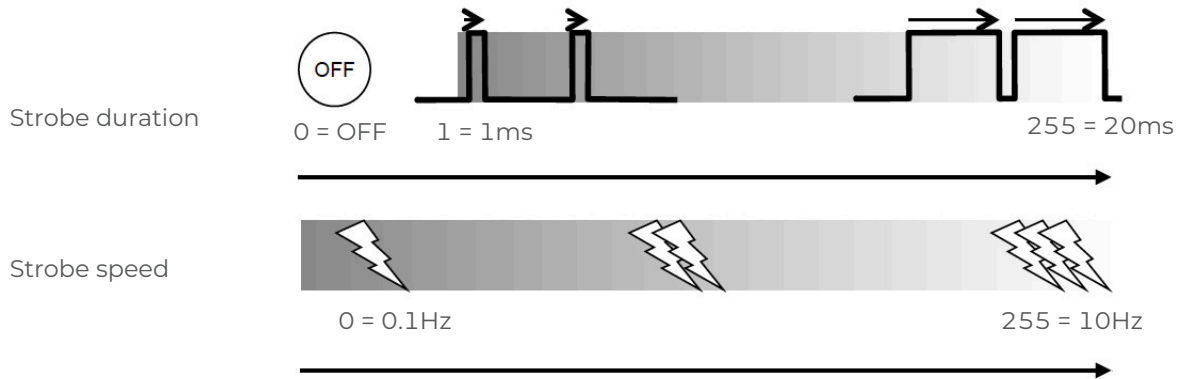
4.1.3.5 Dimming mode

→ Selection in SETUP / DIMMER / DIMMING MODE menu

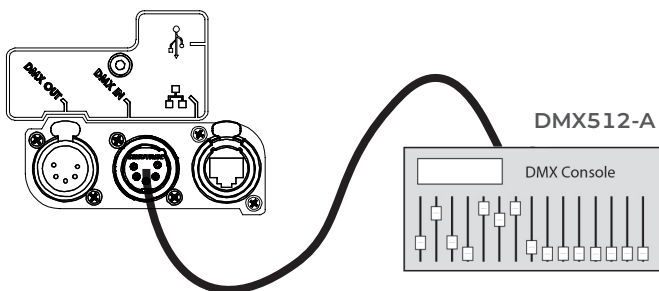
Mode	Result
Without PWM	Flicker-Free, perfect for filming
PWM 17 KHz	Good dimming quality (Default Value)
PWM 3.2 KHz	Very good dimming

4.2 Strobe

4.2.1 Range



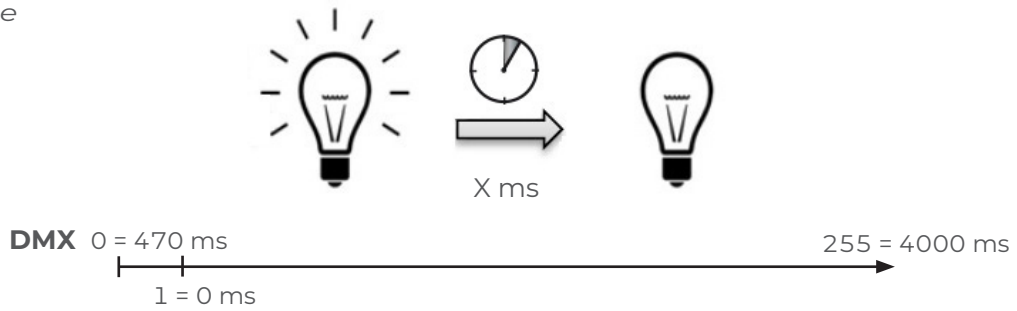
4.2.2 Control



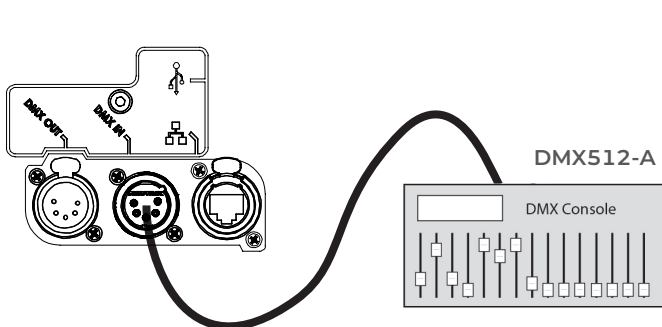
→ Remotely with DMX512-A / Art-Net / sACN / Dual protocols Mode 2, 3 & 4

### 4.3 Response time

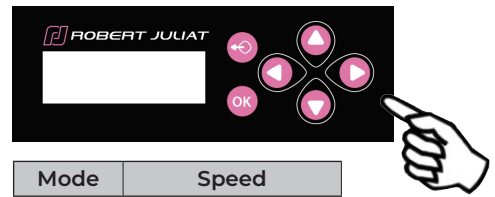
#### 4.3.1 Range



#### 4.3.2 Control



→ Remotely, with DMX512-A / Art-Net / sACN / Dual protocols Mode 2, 3 & 4

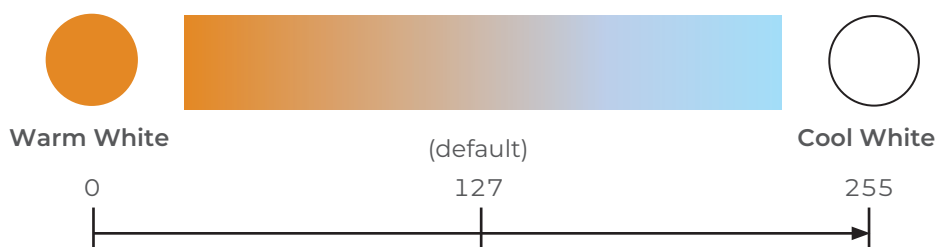


Mode	Speed
RAW	OFF
SLOW	700 ms
MEDIUM	470 ms
FAST	350 ms
CUSTOM	0 - 4000 ms

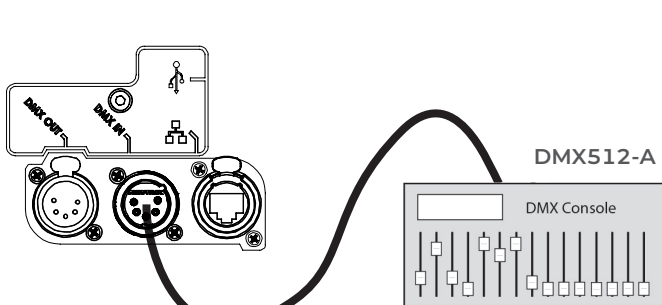
→ STANDALONE or DMX512-A / Art-Net / sACN / Dual protocols Mode 1  
→ selection in SETUP / DIMMER / RESPONSE TIME (or HOME VALUE)

### 4.4 CCT adjustment (only for variable white versions)

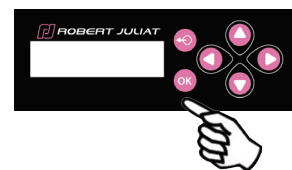
#### 4.4.1 Range



#### 4.4.2 Control



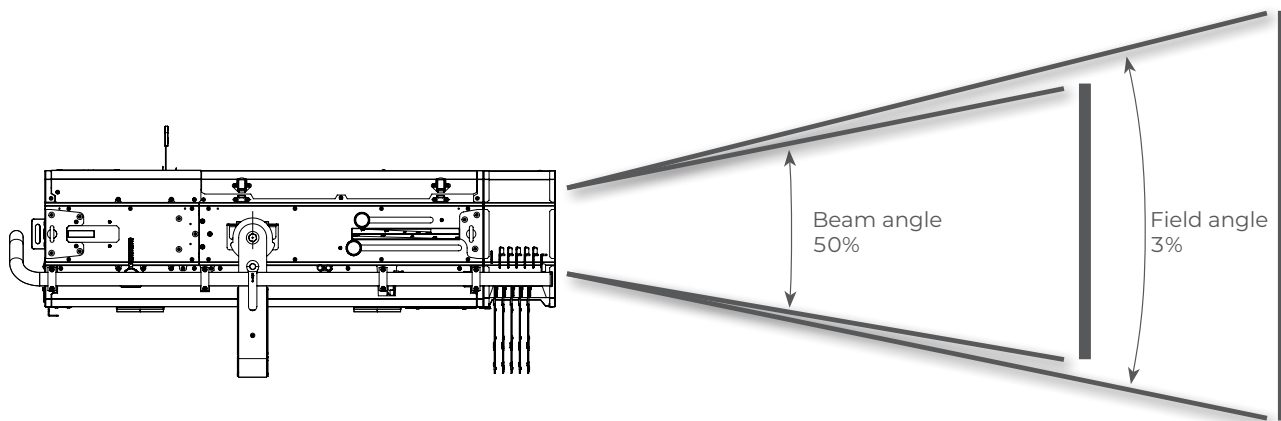
→ Remotely, with DMX512-A / Art-Net / sACN / Dual protocols Mode 4



→ Locally via Standalone mode See 5.3 Home Values

## 4.5 Beam size adjustment

### 4.5.1 Range



Model	Angles	Minimum angle	Maximum angle
TRISTAN 1189 & 1189C	Beam angle	7,1°	13,6°
	Field angle	7,3°	14,7°
MORGANE 1489 & 1489C	Beam angle	13,2°	20,7°
	Field angle	13,6°	22,2°

### 4.5.2 Control

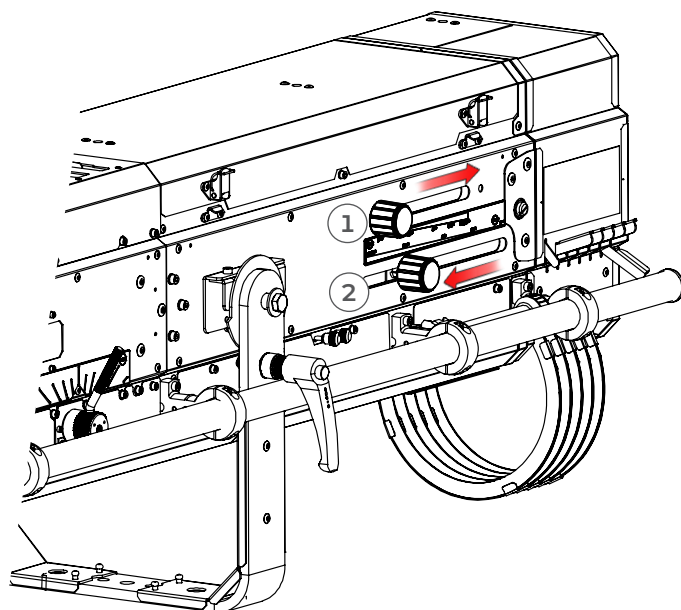
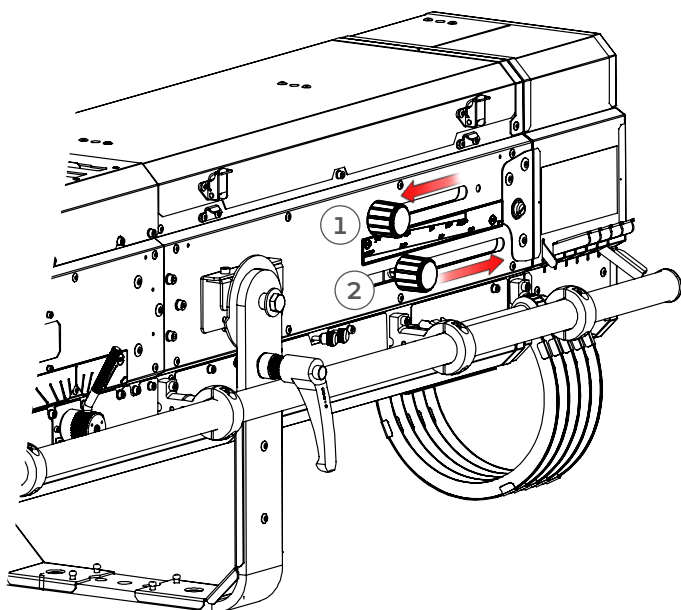
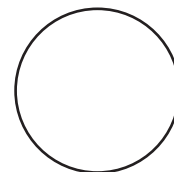
①  
←  
ZOOM

②  
→  
FOCUS

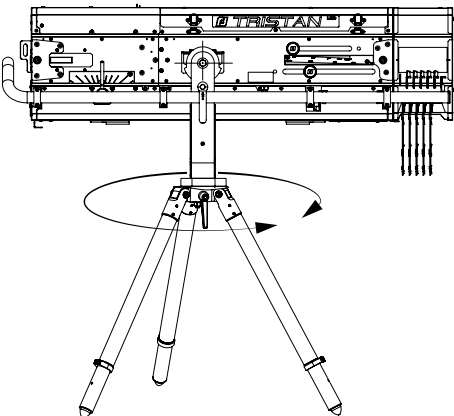


①  
→  
ZOOM

②  
←  
FOCUS



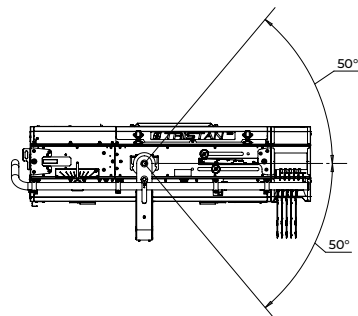
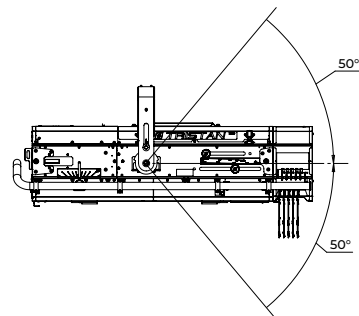
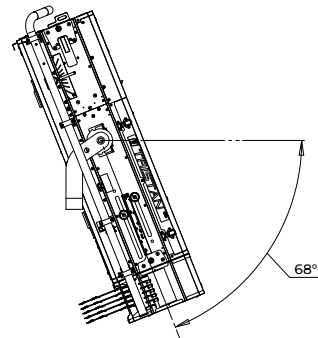
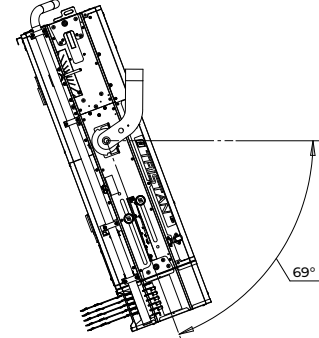
4.6.1 Range

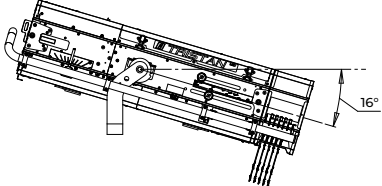
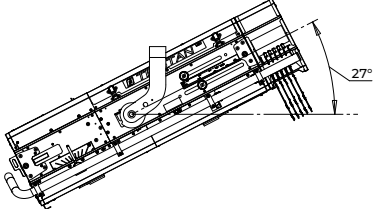
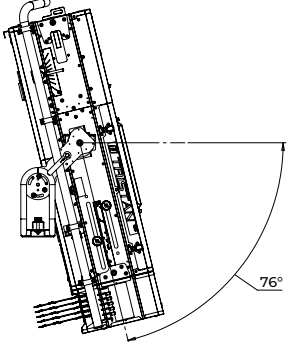
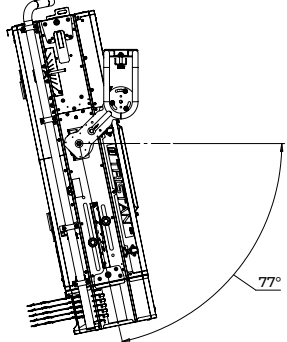
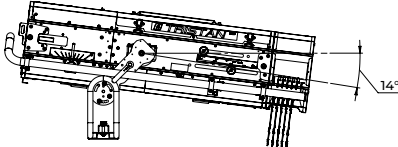
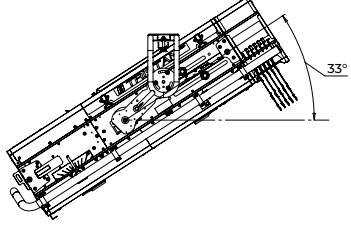
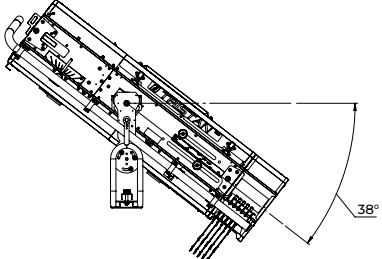
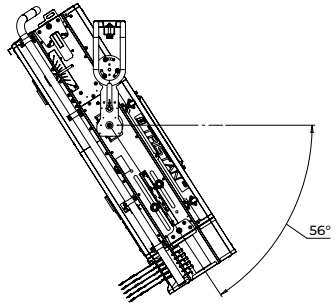
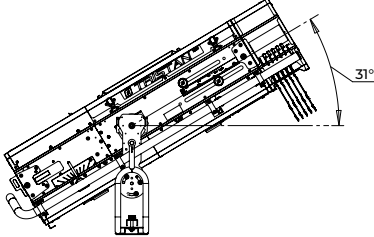
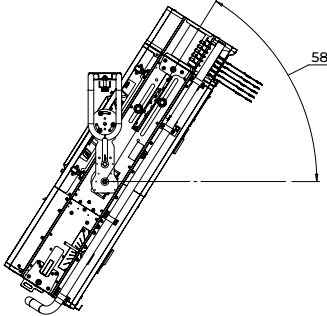
Function	Range
<b>PAN</b> 	0 → 360°

Yoke type	TILT		TD Tilt Down	TU Tilt Up	Range
	Tristan Berlioz	Morgane			
Straight yoke - standard position	●	◎	50°	50°	100°
Straight yoke - on top	●	◎	50°	50°	100°
Angled yoke - standard position	◎	●	68°	-16°	52°
Angled yoke - on top	◎	●	69°	27°	96°
Heavy duty adjustable yoke - standard - position 1	◎	◎	76°	-14°	62°
Heavy duty adjustable yoke - on top - position 1	◎	◎	77°	33°	110°
Heavy duty adjustable yoke - standard - position 5	◎	◎	38°	31°	69°
Heavy duty adjustable yoke - on top - position 5	◎	◎	56°	58°	114°

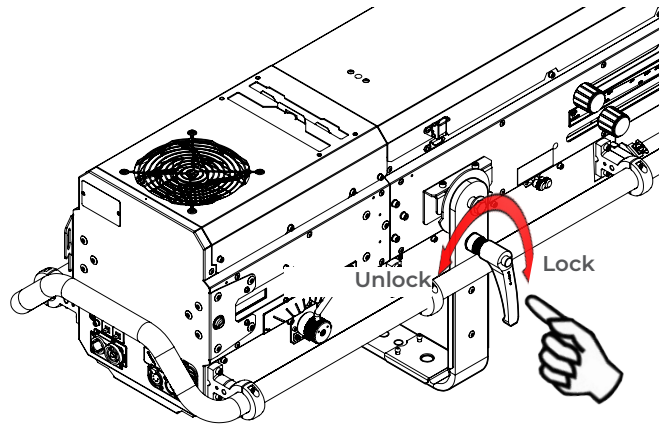
*Yoke options*

● : included - ◎ : option

	Yoke position = bottom (standard)	Yoke position = top
Straight yoke		
Angled yoke Tilt Down		

<p>Angled yoke Tilt Up</p>		
<p>Heavy duty adjustable yoke Position 1 Tilt down</p>		
<p>Heavy duty adjustable yoke Position 1 Tilt up</p>		
<p>Heavy duty adjustable yoke Position 5 Tilt Down</p>		
<p>Heavy duty adjustable yoke Position 5 Tilt Up</p>		

## 4.6.2 Control



## 4.7 Iris

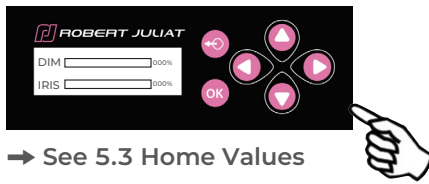
### 4.7.1 Range



### 4.7.2 Control

Locally via Standalone mode (default mode)

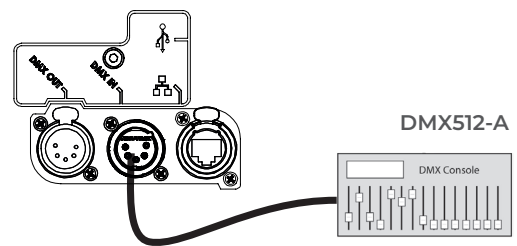
DMX not activated



Default Home Values:  
 - Dimmer @0  
 - Master dimmer @Full

Remotely with DMX / Art-Net / sACN / DUAL protocols

→ selection in DATA MODE / PROTOCOL



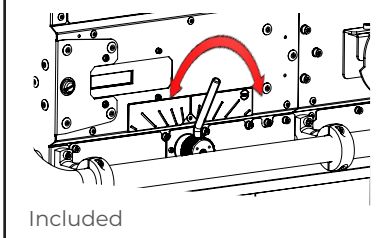
Or

And

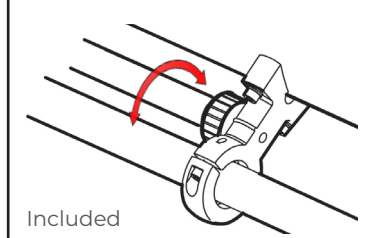
**HTP mode (Highest Takes Precedence):**  
 Iris position is the highest value

→ selection in SETUP / IRIS / CONTROL / PATCH

Local control - Back\*



Local control - Front

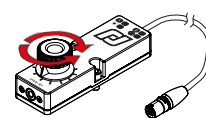


Or

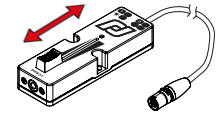
Or

With remote controls

P1FE-R1



P1FE-L1

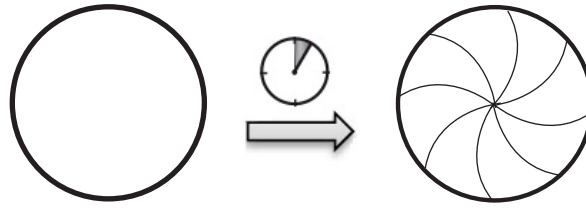


Optional accessories

(\*) By default

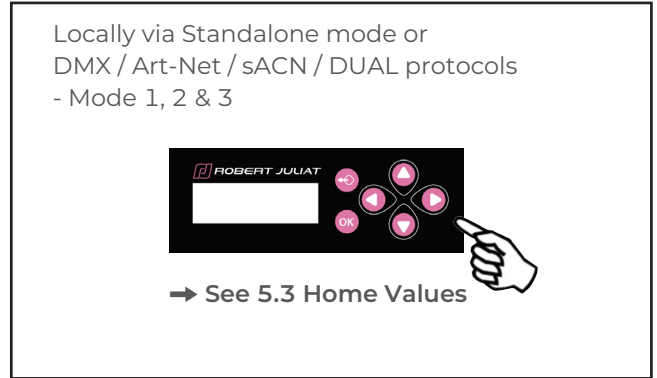
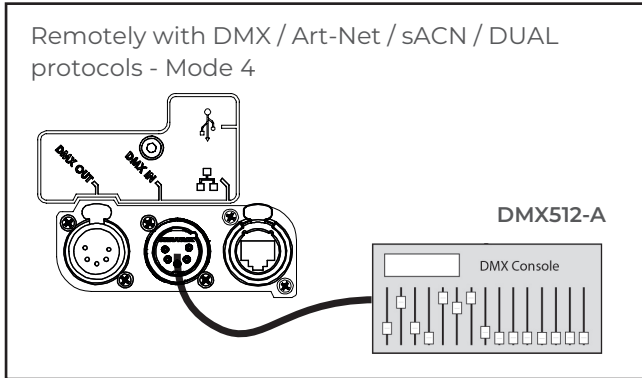
→ See 5.6 Local potentiometer

4.7.3.1 Iris mode



4 modes: Slow / Medium / Fast / Raw

Control:



Or

4.7.3.2 Iris max

→ selection in SETUP / IRIS / IRIS MAX

Iris maximum opening value: 100% → 10%



4.7.3.3 Disable local

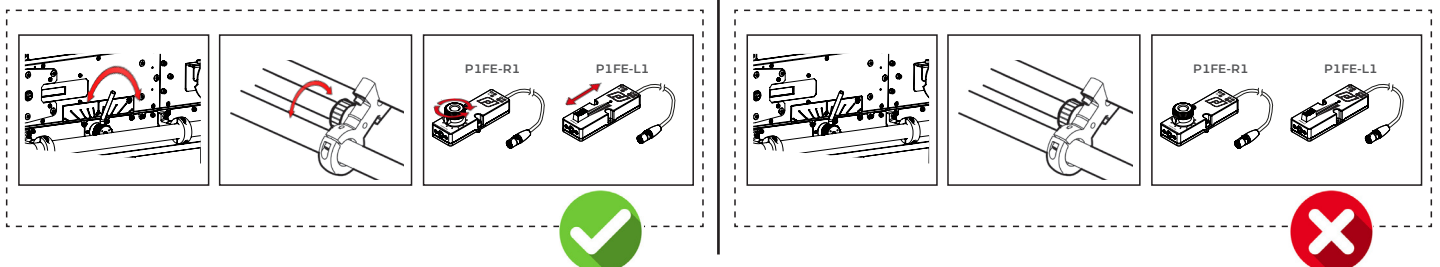
→ selection through SETUP / IRIS / RESET / DISABLE IRIS

Or

"Control Mode" channel

IRIS LOCAL ON

IRIS LOCAL OFF



→ selection through DMX / Art-Net / sACN / DUAL protocols - Mode 2, 3 & 4

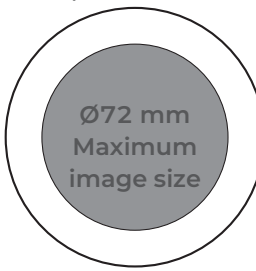
"Control Mode" channel

Or

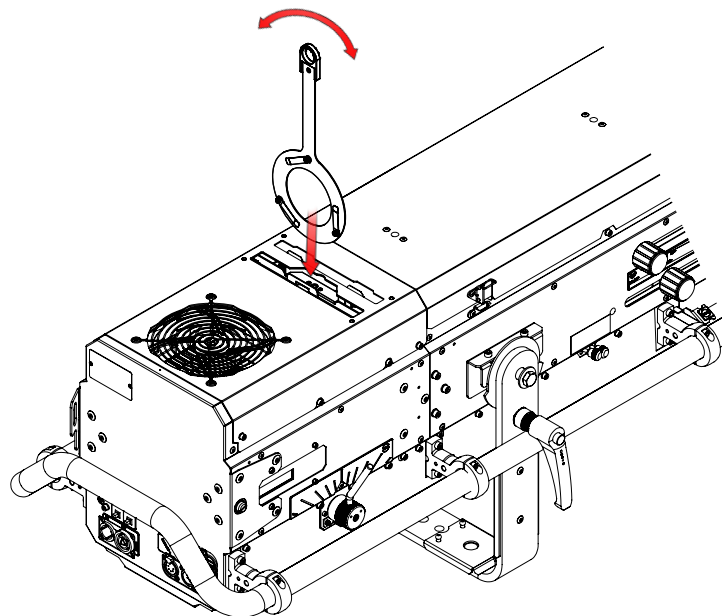
selection in SETUP / IRIS / RESET / RESET IRIS

## 4.8 Gobo

### 4.8.1 Range

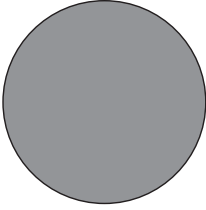
Type	Standard gobo - A size
Dimensions	<p>Ø100 mm</p>  <p>• Metal • Glass</p>
Installation	See section: 3.4.3

### 4.8.2 Control

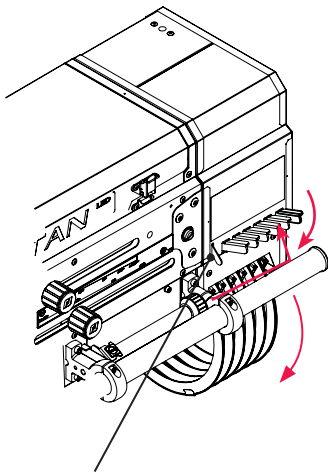


## 4.9 Colour

### 4.9.1 Range

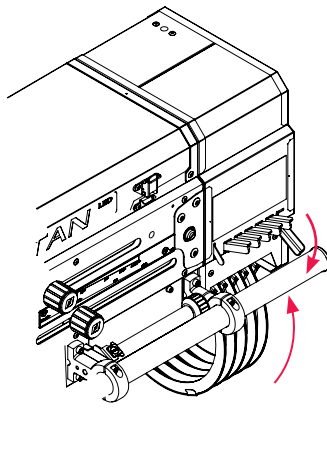
Type	Coloured gel filter
Dimension	<p>Ø210 mm</p> 
Installation	<p>See section: 3.4.1 &amp; section 3.4.2 Place dark colours towards the front end.</p>

### 4.9.2 Control

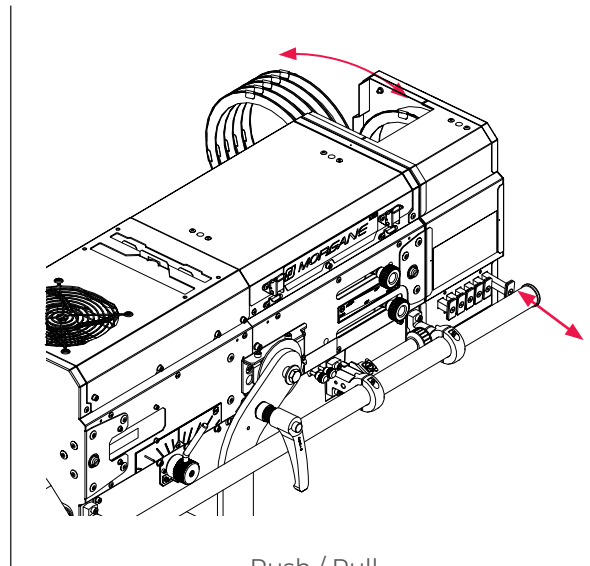


Unlock = release colours

TRISTAN



Colour engaged

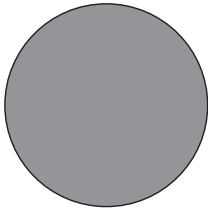


Push / Pull

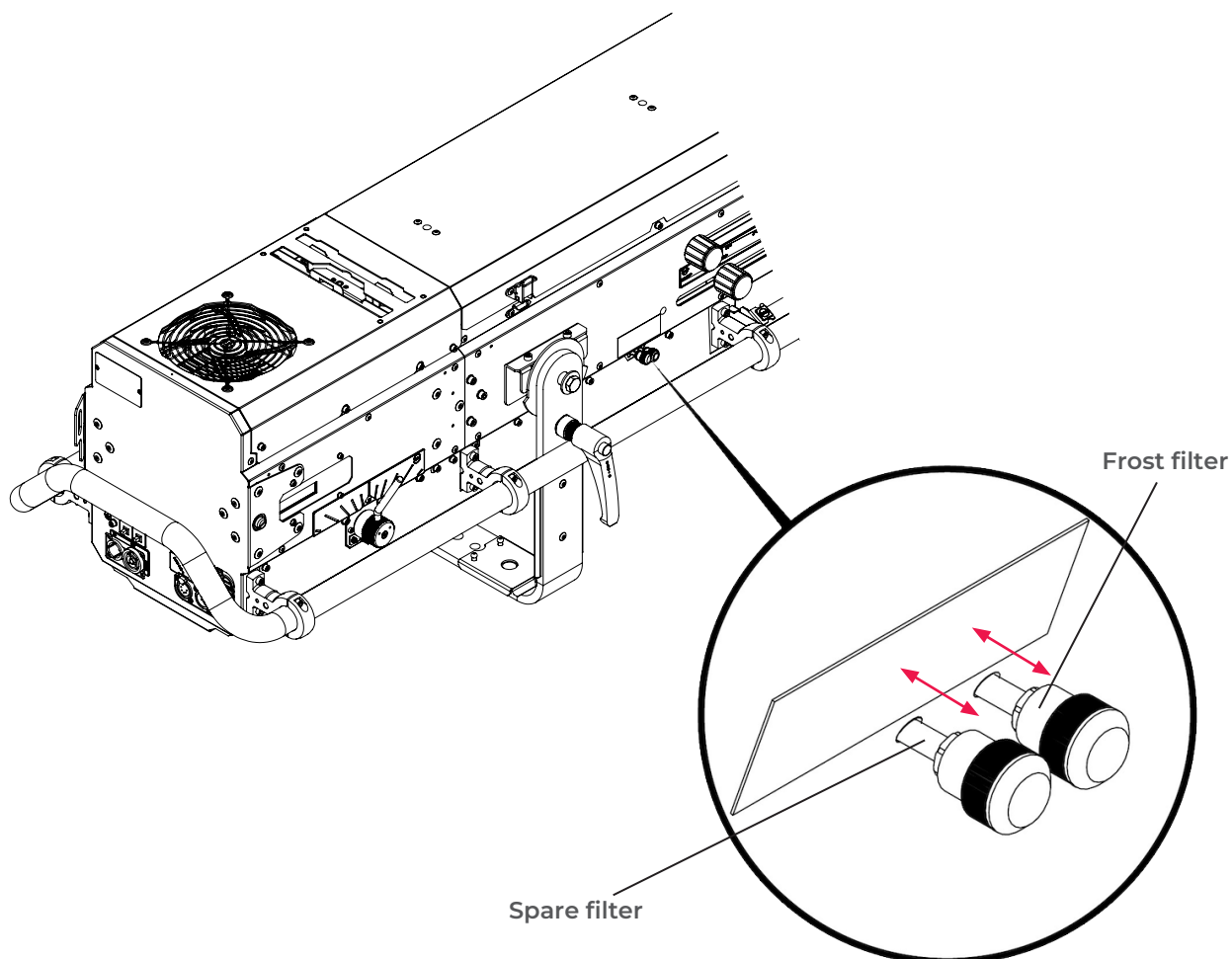
MORGANE

## 4.10 Frost and correction filters

### 4.10.1 Range

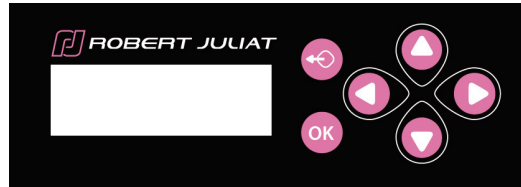
Type	Frost or Correction filter
Dimension	<p>Ø97 mm</p> 
Installation	See section: 3.4.4

### 4.10.2 Control



## 5.1 Local display and controls

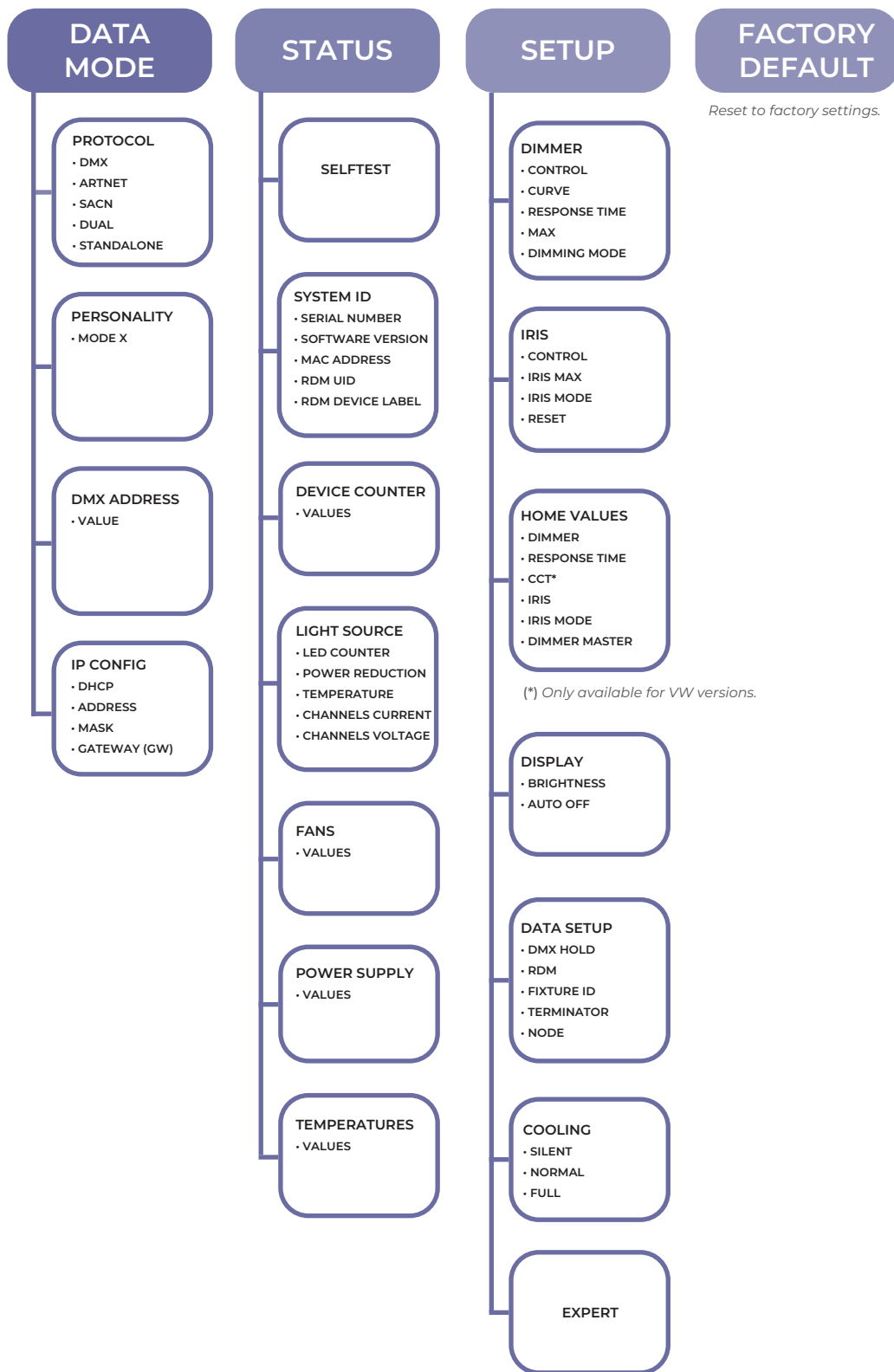
### 5.1.1 Display



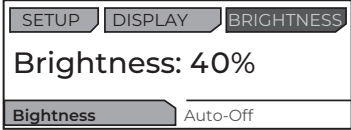
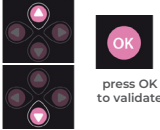
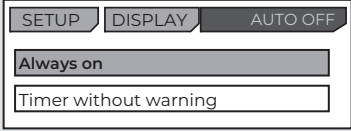
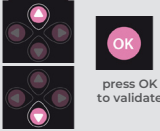
Function	
	Exit the current menu option and/or go back
	Enter the current menu option and/or valid
	Scroll through menus and/or Increase data value
	Scroll through menus and/or Decrease data value
	Scroll through menus and/or Increase data value
	Scroll through menus and/or Decrease data value

### 5.1.2 Home screen

Display	Mode	Description
	Home	Main display
	 x1 push	DMX display (when in DMX mode) Or R-DISPE1 connected
	 x1 push	Diagnostics
	 x1 push	Network information



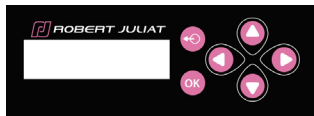
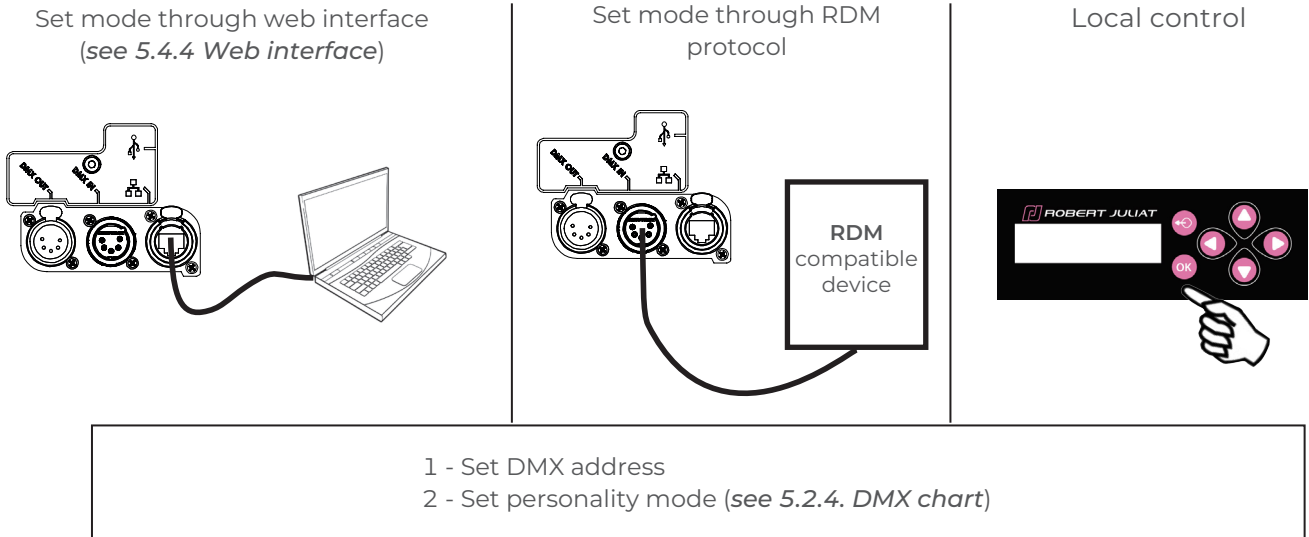
→ Selection in menu: SETUP / DISPLAY

Display	Function	Description
	<p>Brightness</p>	<p>Adjust the intensity of the screen</p> <p>To change value, press buttons:</p> 
	<p>Auto-OFF</p>	<p>To keep the main display (home screen) always ON, select :</p> <p><b>Always ON</b>                  AUTO OFF                  AUTO OFF                  ONLY WARNINGS</p>  <p>Main display turns OFF after 20 seconds</p>

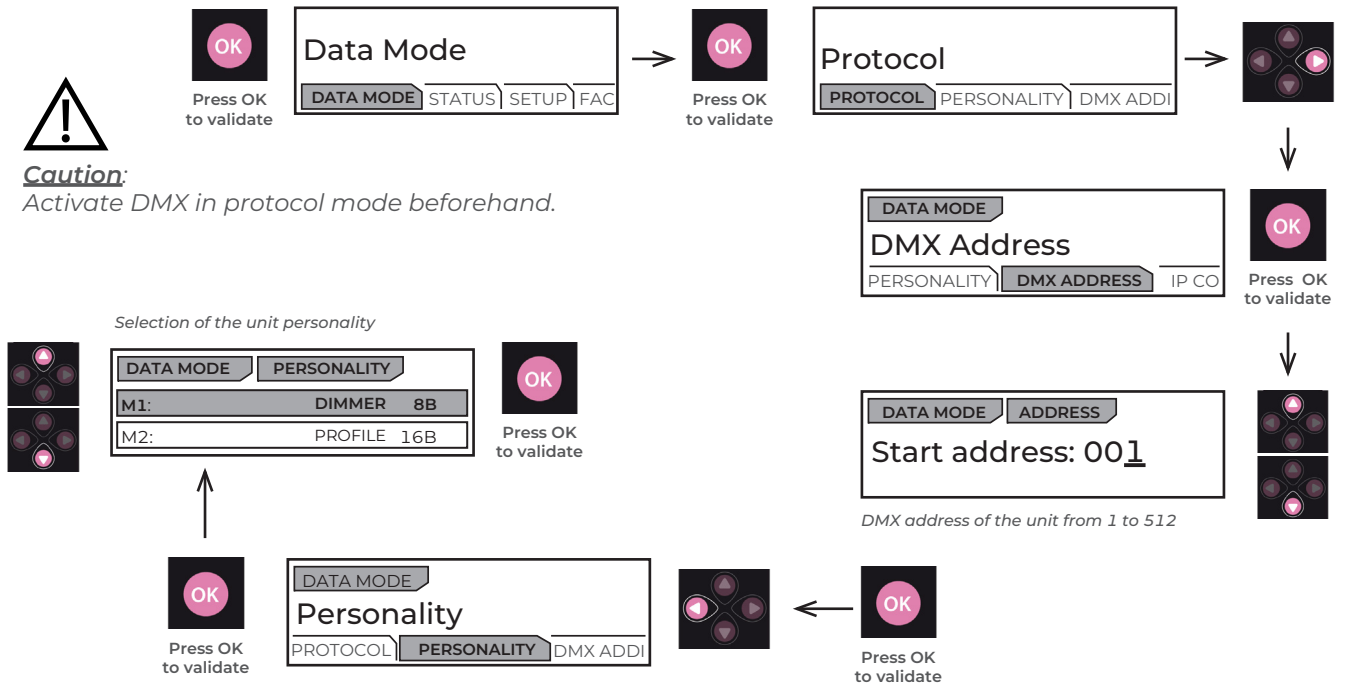
## 5.2.1 Protocol

E1.11 – 2008, USITT DMX512-A

## 5.2.2 Configuration



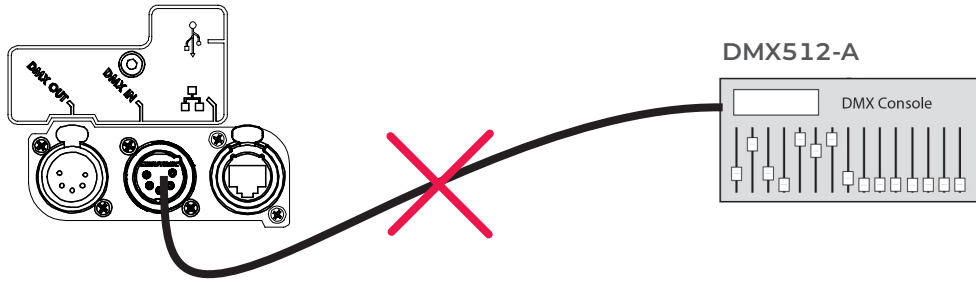
**Caution:**  
Activate DMX in protocol mode beforehand.



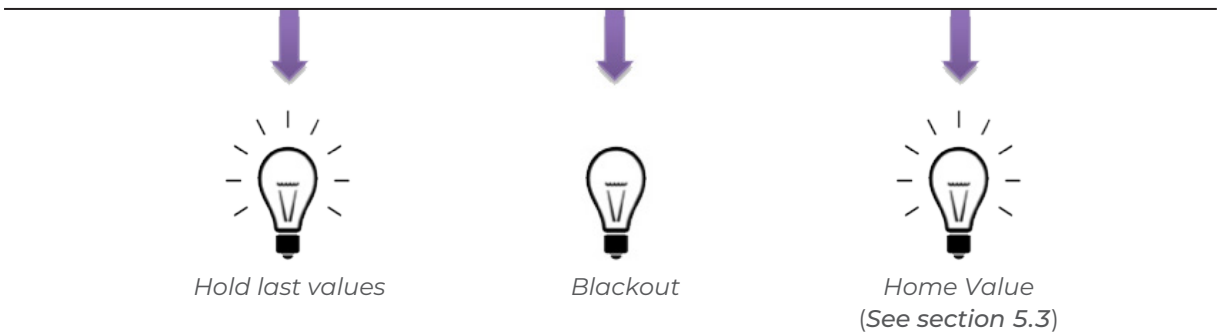
5.2.3 Parameters

5.2.3.1 DMX Hold

→ Selection in SETUP / Data Setup / DMX HOLD menu



If data not detected



5.2.3.2 Fixture ID

→ Selection in SETUP / DATA SETUP / FIXTURE ID menu

Fixture ID can be set through web interface or RDM protocol or local control

Each unit can be identified by a Fixture ID number  
 – Once defined, the Fixture ID is displayed on the Home screen.

Example: Installation with 6 units						
Home screen information	ID1 @ 101	ID2 @ 123	ID3 @ 145	ID4 @ 167	ID5 @ 189	ID6 @ 211
Fixture ID	1	2	3	4	5	6
DMX address	101	123	145	167	189	211

### 5.2.3.3 Terminator

#### Mode: Auto

A resistor of 120R is automatically connected to terminate the DMX line as the RS485 standard specifies.

### 5.2.3.4 Node

On sACN/ArtNet/Dual mode we have the possibility to transmit a DMX/RDM signal protocol on the DMX port (Output). The selection can be done through the menu/Webpage/RDM.

On Dual mode (sACN/ArtRdm) the node feature is automatically selected.

## 5.2.4 DMX charts

### 5.2.4.1 Cool White version (CW)

DMX Channel	Dimmer 8B Mode 1	Profile 16B Mode 2	Followspot 16B Mode 3	Followspot 16B Iris Mode 4
1	Dimmer	Dimmer	Dimmer	Dimmer
2		Dimmer fine	Dimmer fine	Dimmer fine
3		Strobe duration	Master	Master
4		Strobe speed	Master fine	Master fine
5		Response time	Strobe duration	Strobe duration
6		Control mode	Strobe speed	Strobe speed
7			Response time	Response time
8			Control mode	Control mode
9				Iris
10				Iris mode

### 5.2.4.2 Variable White version (VW)

DMX Channel	Dimmer 8B Mode 1	Profile 16B Mode 2	Followspot 16B Mode 3	Followspot 16B CCT Iris Mode 4
1	Dimmer	Dimmer	Dimmer	Dimmer
2		Dimmer fine	Dimmer fine	Dimmer fine
3		Strobe duration	Master	Master
4		Strobe speed	Master fine	Master fine
5		Response time	Strobe duration	Strobe duration
6		Control mode	Strobe speed	Strobe speed
7			Response time	Response time
8			Control mode	Control mode
9				Iris
10				Iris mode
11				CCT
12				CCT fine

## 5.2.5.1 Strobe duration

Range min	Range max	Function
0	0	Strobe OFF
1	255	Strobe ON - 1 ms → 20 ms

## 5.2.5.2 Strobe speed

Range min	Range max	Function
0	255	Frequency: 0,1 Hz → 10 Hz

## 5.2.5.3 Response time

Range min	Range max	Function
0	0	470 ms (medium)
1	255	Response time: 0 s → 4 s

## 5.2.5.4 Control mode\*

Gamme min	Gamme max	Fonction
0	0	-
1	10	RDM OFF
11	20	RDM ON
21	30	Fixture Reset
31	40	Dimmer Curve Linear
41	50	Dimmer Curve Square
51	60	Not used
61	70	Not used
71	80	Not used
81	90	Not used
91	100	Not used
101	110	Cooling mode: Silent
111	120	Cooling mode: Normal
121	130	Cooling mode: Full power
161	170	Iris local off
171	180	Iris local on
181	190	Motor reset
131	255	Not used

(\*) Function activated after 5 seconds - needs to go back to zero to activate second function.

## 5.2.5.5 Iris

Range min	Range max	Function
0	0	Iris open
0	255	Open → Closed
255	255	Iris closed

## 5.2.5.6 Iris mode

Range min	Range max	Function
0	9	Fast
10	19	Medium
20	29	Slow
30	39	Raw
40	255	Not used (= Fast)

## 5.2.5.7 CCT

Range min	Range max	Function
0	0	Warm white
0	255	Warm White <---> Cool White
127	127	Max output
255	255	Cool white

## 5.2.6.1 Protocol

## ANSI E1.20 – 2010 / ANSI E1.37 - 1

For more information about RDM protocol: <http://www.rdmprotocol.org/>

## 5.2.6.2 Functions

PID	Description	Standard	Get	Set	Queued_Message	Ack_Timer	VERSION 5.00
<b>Network Management</b>							
00 01	DISCOVERY_UNIQUE_BRANCH	E1.20					✓
00 02	DISCOVERY_MUTE	E1.20		✓			✓
00 03	DISCOVERY_UNMUTE	E1.20		✓			✓
00 15	COMMUNICATION_STATUS	E1.20	✓	✓			✓
<b>Status Collection</b>							
00 20	QUEUED_MESSAGE	E1.20	✓				✓
00 30	STATUS_MESSAGES	E1.20	✓				✓
00 31	STATUS_ID_DESCRIPTION	E1.20	✓				✓
00 32	CLEAR_STATUS_ID	E1.20		✓			✓
00 33	QUEUED_MESSAGE_SENSOR_SUBSCRIBE	E1.20-2023	✓	✓			
<b>RDM Information</b>							
00 50	SUPPORTED_PARAMETERS	E1.20	✓				✓
00 51	PARAMETER_DESCRIPTION	E1.20	✓				✓
<b>Product Information</b>							
00 60	DEVICE_INFO	E1.20	✓			✓	✓
00 70	PRODUCT_DETAIL_ID_LIST	E1.20	✓				✓
00 80	DEVICE_MODEL_DESCRIPTION	E1.20	✓				✓
00 81	MANUFACTURER_LABEL	E1.20	✓				✓
00 82	DEVICE_LABEL	E1.20	✓	✓	✓	✓	✓
00 90	FACTORY_DEFAULTS	E1.20	✓	✓		✓	✓
00 C0	SOFTWARE_VERSION_LABEL	E1.20	✓			✓	✓
00 C2	BOOT_SOFTWARE_VERSION_LABEL	E1.20	✓				✓
<b>DMX512 Setup</b>							
00 E0	DMX512_PERSONALITY	E1.20	✓	✓	✓	✓	✓
00 E1	DMX512_PERSONALITY_DESCRIPTION	E1.20	✓				✓
00 F0	DMX512_STARTING_ADDRESS	E1.20	✓	✓	✓	✓	✓
01 20	SLOT_INFO	E1.20	✓				✓
01 21	SLOT_DESCRIPTION	E1.20	✓				✓
<b>Sensors</b>							
02 00	SENSOR_DEFINITION	E1.20	✓				✓
02 01	SENSOR_VALUE	E1.20	✓				✓
<b>Dimmer Settings</b>							
03 40	DIMMER_INFO	E1.37-1	✓				✓
03 42	MAXIMUM_LEVEL	E1.37-1	✓	✓	✓	✓	✓
03 43	CURVE	E1.37-1	✓	✓	✓	✓	✓
03 44	CURVE_DESCRIPTION	E1.37-1	✓				✓
03 45	OUTPUT_RESPONSE_TIME	E1.37-1	✓	✓	✓	✓	✓
03 46	OUTPUT_RESPONSE_TIME_DESCRIPTION	E1.37-1	✓				✓
03 47	MODULATION_FREQUENCY	E1.37-1	✓	✓	✓	✓	✓
03 48	MODULATION_FREQUENCY_DESCRIPTION	E1.37-1	✓				✓
<b>Power / Lamp Settings</b>							
04 00	DEVICE_HOURS	E1.20	✓				✓
04 01	LAMP_HOURS	E1.20	✓	✓			✓
<b>Display Settings</b>							
05 01	DISPLAY_LEVEL	E1.20	✓	✓	✓	✓	✓

PID	Description	Standard	Get	Set	Queued_Message	Ack_Timer	SULLY
<b>Control</b>							
10	00	IDENTIFY_DEVICE	E1.20	✓	✓	✓	✓
10	01	RESET_DEVICE	E1.20		✓	✓	✓
10	20	PERFORM_SELFTEST	E1.20	✓	✓	✓	✓
10	21	SELF_TEST_DESCRIPTION	E1.20				✓
<b>RDMnet Management</b>							
07	00	LIST_INTERFACES	E1.37-2	✓			✓
07	01	INTERFACE_LABEL	E1.37-2	✓			✓
07	02	INTERFACE_HARDWARE_ADRESS_TYPE1	E1.37-2	✓			✓
07	03	IPV4_DHCP_MODE	E1.37-2	✓	✓	✓	✓
07	05	IPV4_CURRENT_ADDRESS	E1.37-2	✓		✓	✓
07	06	IPV4_STATIC_ADDRESS	E1.37-2	✓	✓		✓
07	09	INTERFACE_APPLY_CONFIGURATION	E1.37-2		✓		✓
07	0A	IPV4_DEFAULT_ROUTE	E1.37-2	✓	✓	✓	✓
07	0B	DNS_IPV4_NAME_SERVER	E1.37-2	✓	✓	✓	✓
<b>PID Manufacturer</b>							
85	58	SELFTEST_RESULT	E1.20	✓			✓
85	59	CURRENT_IP_ADDRESS	E1.20	✓		✓	✓
85	5A	CURRENT_NETMASK	E1.20	✓		✓	✓
85	5B	CURRENT_DRIVER_STATUS	E1.20	✓		✓	✓
85	5C	CUSTOM_RESPONSE_TIME_DESCRIPTION	E1.20	✓			✓
85	5D	CUSTOM_RESPONSE_TIME_VALUE	E1.20	✓	✓	✓	✓
85	60	DATA_MODE_DESCRIPTION	E1.20	✓			✓
85	61	DATA_MODE_VALUE	E1.20	✓	✓	✓	✓
85	62	STANDALONE_VALUE_DESCRIPTION	E1.20	✓			✓
85	63	STANDALONE_VALUE	E1.20	✓	✓	✓	✓
85	64	SACN_UNIVERSE_VALUE_DESCRIPTION	E1.20	✓			✓
85	65	SACN_UNIVERSE_VALUE	E1.20	✓	✓	✓	✓
85	66	ARTNET_UNIVERSE_VALUE_DESCRIPTION	E1.20	✓			✓
85	67	ARTNET_UNIVERSE_VALUE	E1.20	✓	✓	✓	✓
85	68	SERIAL_DESCRIPTION	E1.20	✓			✓
85	69	SERIAL	E1.20	✓	✓	✓	✓
85	6A	DMX_HOLD_DESCRIPTION	E1.20	✓			✓
85	6B	DMX_HOLD	E1.20	✓	✓	✓	✓
85	6C	COMMAND_LOCK_DESCRIPTION	E1.20	✓			✓
85	6D	COMMAND_LOCK_VALUE	E1.20	✓	✓	✓	✓
85	6E	DRIVER_CALIBRATE_DESCRIPTION	E1.20	✓			✓
85	6F	DRIVER_CALIBRATE_VALUE	E1.20	✓	✓	✓	✓
85	70	NODE_DESCRIPTION	E1.20	✓			✓
85	71	NODE_VALUE	E1.20	✓	✓	✓	✓
85	72	TERMINATOR_DESCRIPTION	E1.20	✓			✓
85	73	TERMINATOR	E1.20	✓	✓	✓	✓
85	74	DMX_ERROR_COUNTER_DESCRIPTION	E1.20	✓			✓
85	75	DMX_ERROR_COUNTER	E1.20	✓	✓	✓	✓

“Home values” represent a selection of values manually entered into the device via the keypad to produce a defined state.

These Home values can be set in the following modes:

### Cool White version (CW)

Parameters / control modes	DMX - Dimmer mode Mode 1	DMX - Profile mode Mode 2	Followspot 16B Mode 3	Followspot 16B Iris Mode 4	Standalone*
Dimmer	DMX	DMX	DMX	DMX	HOME VALUE
Response time	HOME VALUE	DMX	DMX	DMX	HOME VALUE
Iris	HOME VALUE	HOME VALUE	HOME VALUE	DMX	HOME VALUE
Iris Mode	HOME VALUE	HOME VALUE	HOME VALUE	DMX	HOME VALUE
Dimmer Master	HOME VALUE	HOME VALUE	DMX	DMX	HOME VALUE

### Variable White version (VW)

Parameters / control modes	DMX - Dimmer mode Mode 1	DMX - Profile mode Mode 2	Followspot 16B Mode 3	Followspot 16B CCT Iris Mode 4	Standalone*
Dimmer	DMX	DMX	DMX	DMX	HOME VALUE
Response time	HOME VALUE	DMX	DMX	DMX	HOME VALUE
CCT	HOME VALUE	HOME VALUE	HOME VALUE	DMX	HOME VALUE
Iris	HOME VALUE	HOME VALUE	HOME VALUE	DMX	HOME VALUE
Iris Mode	HOME VALUE	HOME VALUE	HOME VALUE	DMX	HOME VALUE
Dimmer Master	HOME VALUE	HOME VALUE	DMX	DMX	HOME VALUE

**If the function is not controlled by DMX, the Home value is automatically activated.**



**HTP mode between DMX, local and HOME VALUES**

(\*) Defines a standalone operating mode in the following cases:

- As default values when used without data      Data mode → Protocol → Standalone
- As reference values following a data signal loss.      Set up → Data set up → DMX hold → Standalone

## 5.4 Network

Our network stack can handle several flows of protocol at the same time.

Protocol always available:

- Web page to set up parameters - *See section 5.4.4*
- LLRP (Low Level Recovery Protocol) for IP network configuration - *See section 5.4.5*

A selection of Protocols dedicated to lighting:

- Art-Net V4 - *See section 5.4.1*
- sACN - *See section 5.4.2*
- Dual: Sacn + Art-RDM (DMX512 data signal + RDM) - *See section 5.4.3*

From July 2024 the Robert Juliat equipment based on RJ LED2 platform is configured as follows:

- DHCP (**D**ynamic **H**ost **C**onfiguration **P**rotocol - **RFC1531**) ON  
→ <https://www.rfc-editor.org/rfc/rfc1531>
- Zeroconf (**Z**ero-**C**onfiguration **N**etworking – **IPv4LL/APIPA – RFC3927**) ON  
→ <https://www.rfc-editor.org/rfc/rfc3927>

IP Addressing of Parameters - *See section 5.1.2*

Default:

- At startup, the device’s IP address is set to 000.000.000.000 with a subnet mask of 000.000.000.000
- After connecting to the network, the device awaits the assignment of an IP address and subnet mask by the DHCP server.
- If there is no DHCP server, a unique IP address and subnet mask are automatically assigned.  
IP : 169.254.XXX.XXX Mask : 255.255.0.0

Most personal computers are configured with DHCP and Zeroconf enabled, so the IP address defaults to 169.254.X.X with a subnet mask of 255.255.0.0.

When connected to a Robert Juliat device, since the IP address/mask range are in the same class, network communication works seamlessly.

This configuration was chosen to make it easier for non-IT technicians.

#### Static IP:

It's possible to configure a static IP address, but be sure to select a unique IP address with the correct subnet mask.

Configuration can be done via the Web Page, RDM, LLRP, Art-Net, or locally.

#### Default IP Address:

When DHCP mode is OFF and no static IP address has been selected, the device will default to a Class A IP address of 2.XXX.XXX.XXX with a subnet mask of 255.0.0.0.

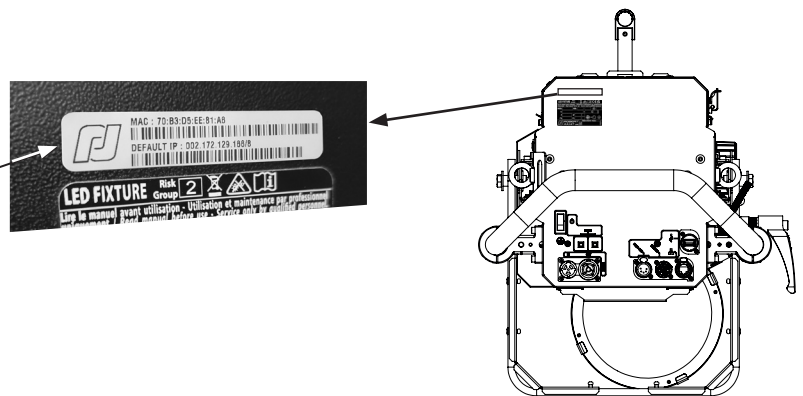
This address can be found on a label near the ID plate or by pressing the right arrow on the local control.

#### Default Settings:

DHCP = OFF

Address = 2.XXX.XXX.XXX

Mask = 255.0.0.0



#### Changing the Controlling Computer's IP Address:

- The IP address and subnet mask of both the fixture and the computer must be on the same network class.
- The computer's IP address must be different.
- Refer to your operating system's support to modify IPv4 settings:

Change your IP address on Windows

➔ <https://support.microsoft.com/en-us/windows/change-tcp-ip-settings-bd0a07af-15f5-cd6a-363f-ca2b6f391ace>

Change your IP address on Mac

➔ <https://support.apple.com/en-ae/guide/mac-help/mh14129/mac>

#### Example: Using the fixture's default IP address

1 - Computer IP address: 2.2.2.2

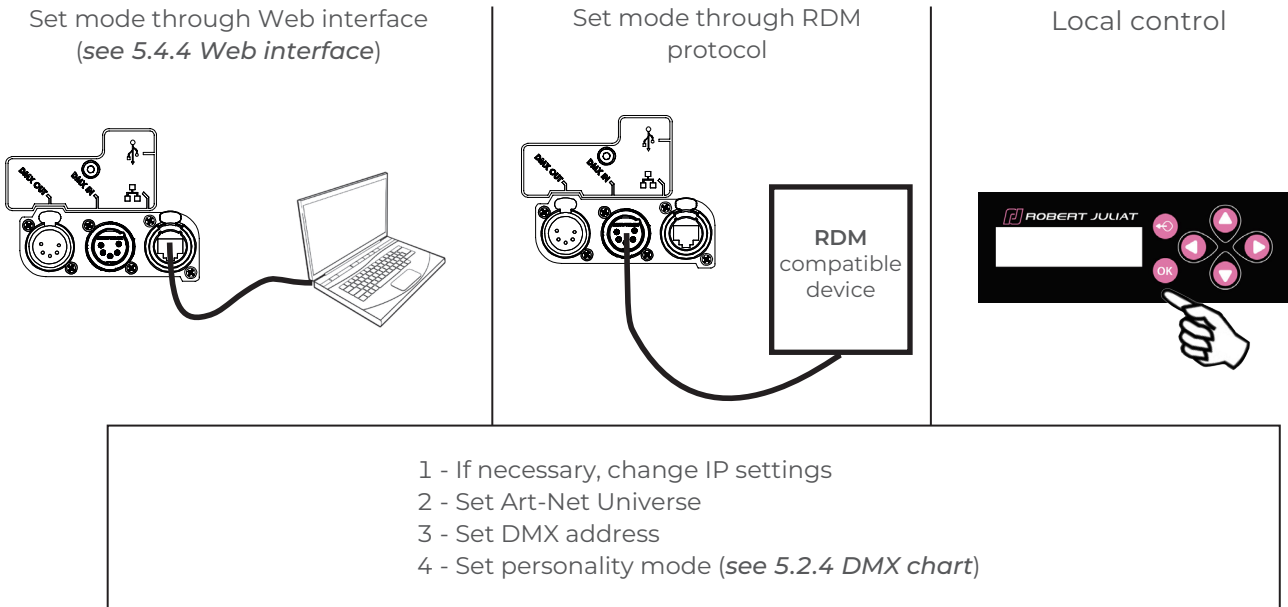
2 - Computer subnet mask: 255.0.0.0

5.4.1.1 Protocol

**Artistic Licence Art-Net v4.**

For more information about Art-Net protocol: <http://art-net.org.uk/>

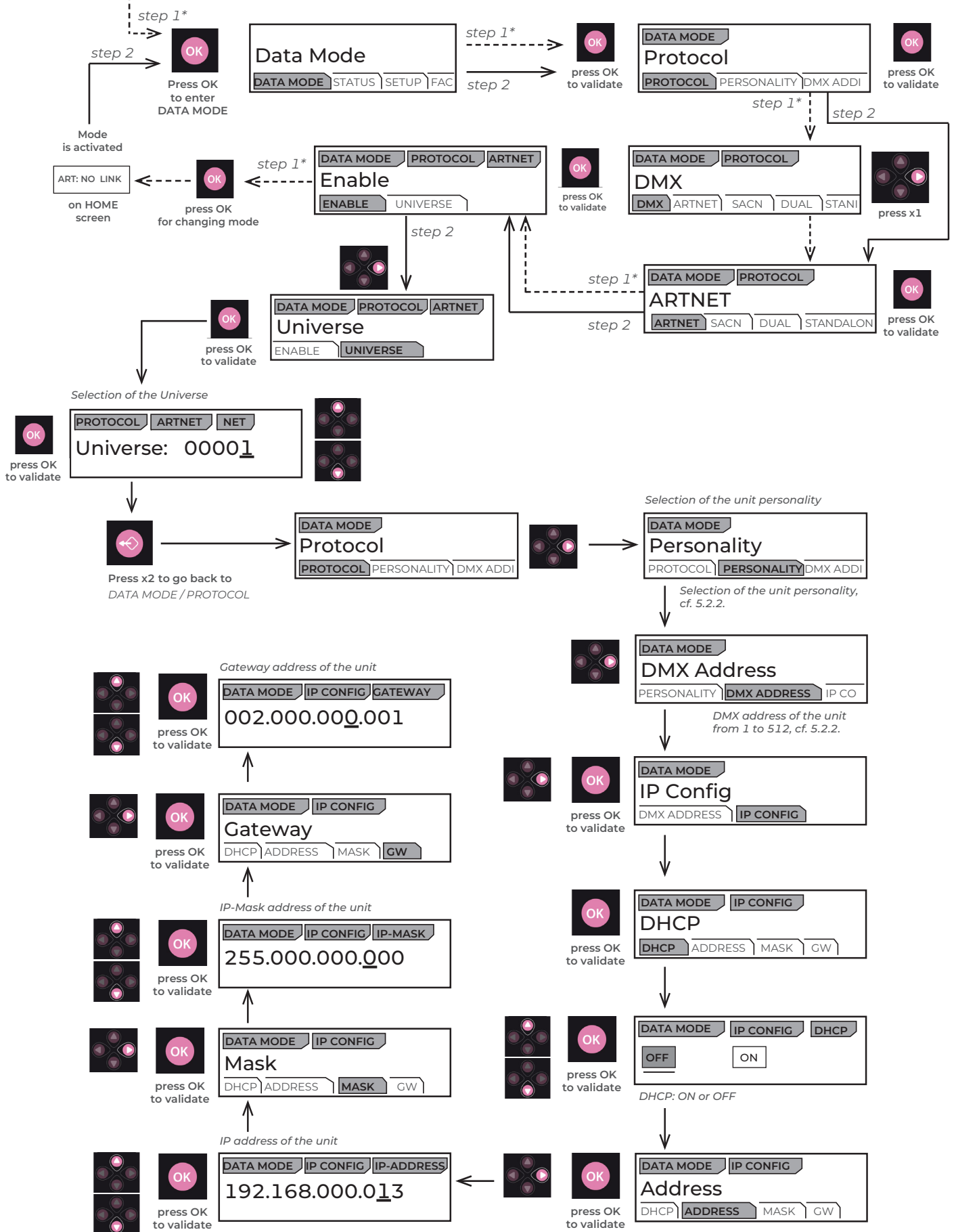
5.4.1.2 Configuration





**Caution:**

(\* ) Activate Art-Net in protocol mode beforehand.

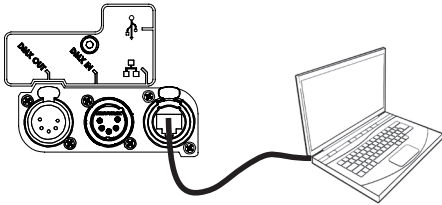


5.4.2.1 Protocol

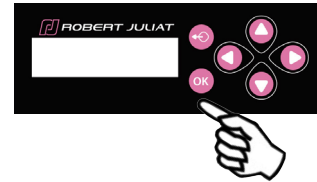
ANSI E1.31 – 2009 sACN (Streaming-ACN)

5.4.2.2 Configuration

Set mode through Web interface  
(see 5.4.4 Web interface)



Set through local control

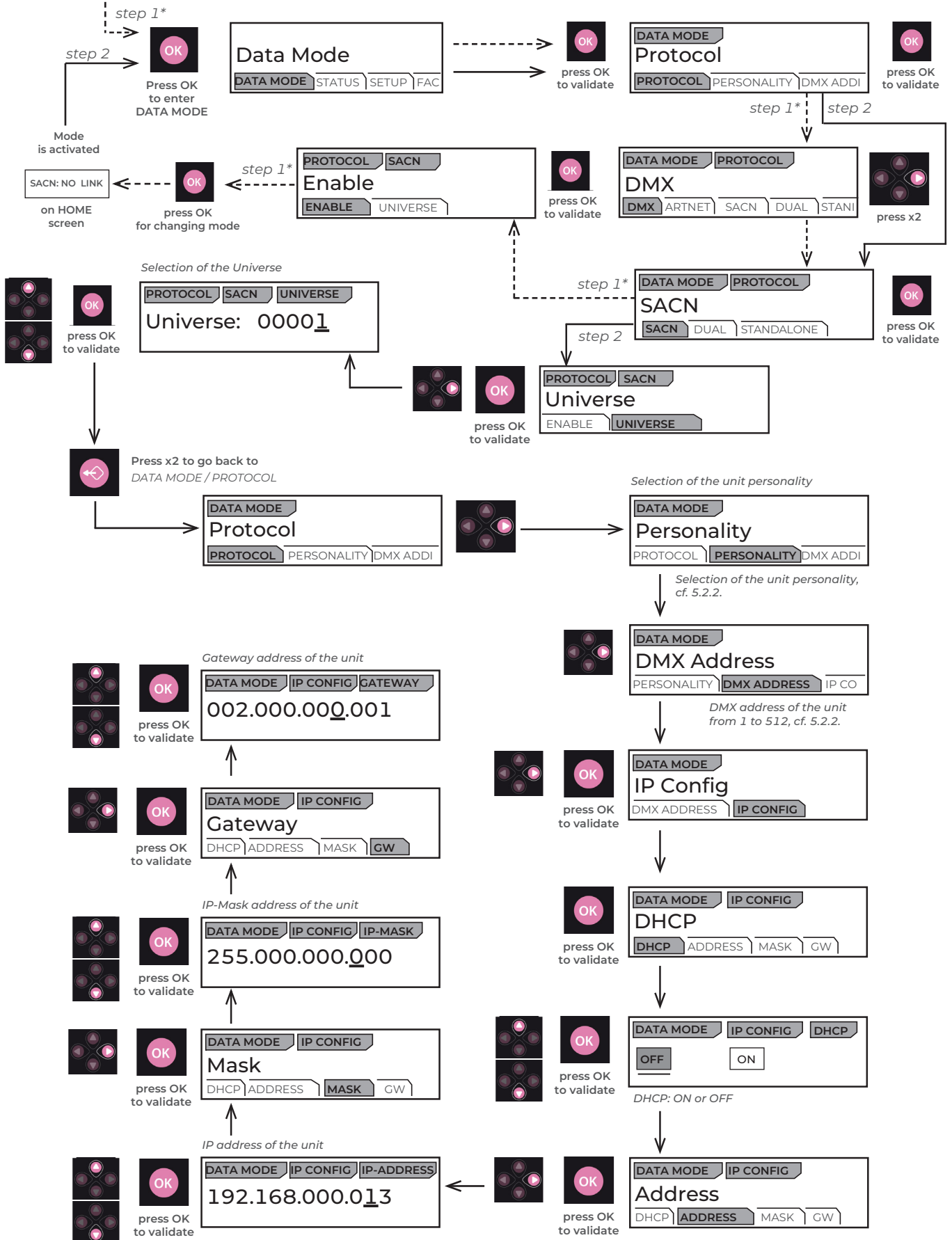


- 1 - If necessary, change IP settings
- 2 - Set sACN universe
- 3 - Set DMX address
- 4 - Set personality mode (see 5.2.4 DMX chart)



**Caution:**

(\*) Activate sACN in protocol mode beforehand.



## 5.4.3.1 Protocol

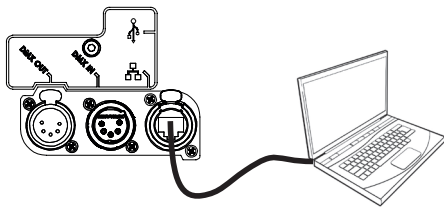
**Dual Mode: Available only on an Ethernet network**

It allows to send a DMX 512 signal through a sACN data stream and at the same time to use an Artnet/ArtRdm data stream to control, set and monitor the equipment via RDM.

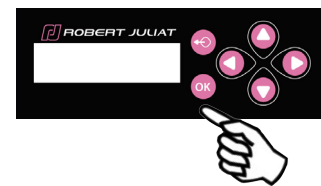
This mode can be set by Web interface or the local control screen.

## 5.4.3.2 Configuration

Set mode through Web interface  
(see 5.4.4 Web interface)



Set through local control

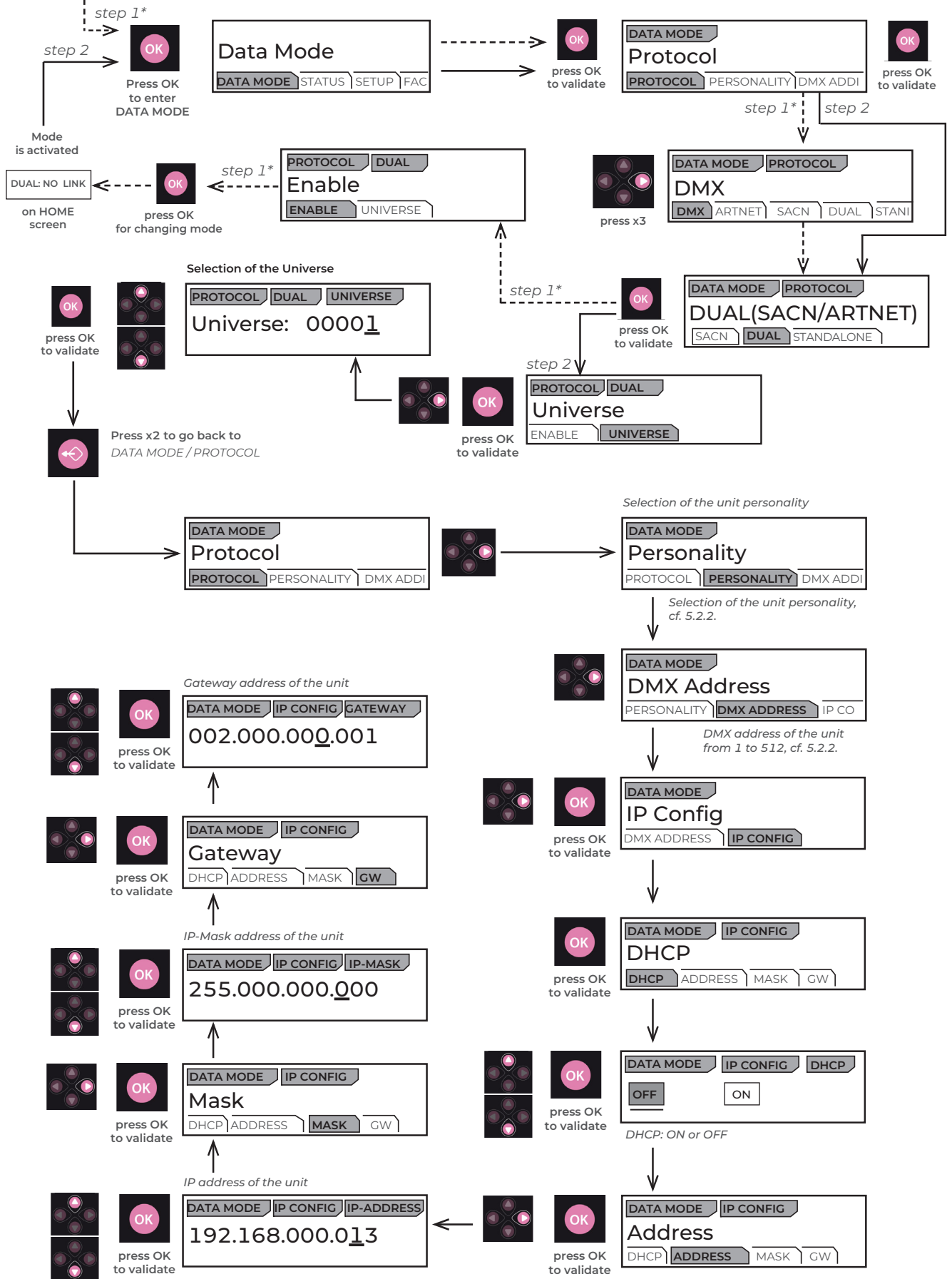


- 1 - If necessary, change IP settings
- 2 - Set DUAL universe
- 3 - Set DMX address
- 4 - Set personality mode (see 5.2.4 DMX chart)

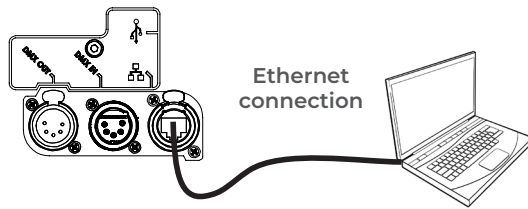


**Caution:**

(\*) Activate DUAL in protocol mode beforehand.



5.4.4.1 Control

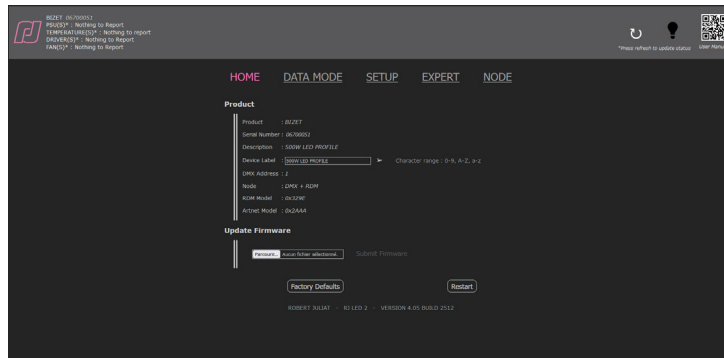


The fixture must be connected to a compatible network or directly linked to a computer with an RJ45 Ethernet cable.

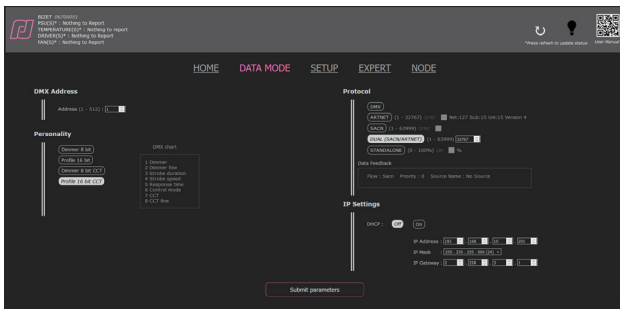
The fixture's IP address: see section 5.4. Network

5.4.4.2 Connection to the Web interface

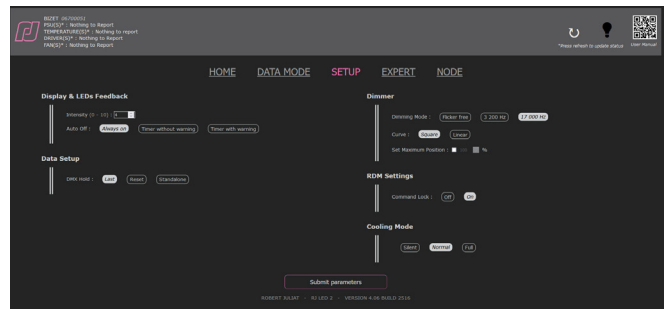
- 1 - Open a web browser (Microsoft Edge, Firefox, Apple Safari...)
- 2 - Enter the fixture's IP address in the browser's address bar
  - "00X" is read as "X".
  - Never type a zero (0) before the numbers XX or X (see 5.4)
- 3 - The HOME page will appear, and all settings can now be viewed and modified.



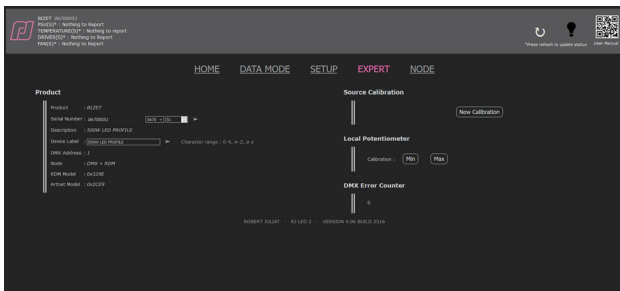
HOME Page



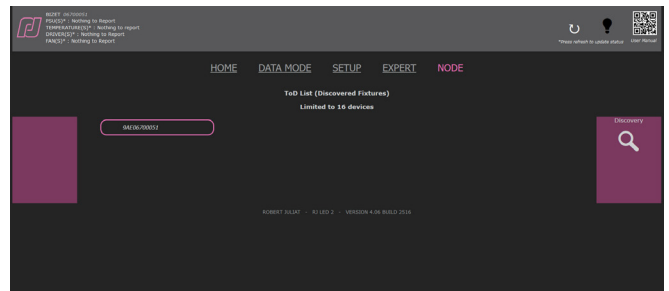
DATA MODE Page



SETUP Page



EXPERT Page, password-protected (1280).



NODE Page

UID\* list of devices detected by RDM on the DMX OUT link; the first UID is the fixture.

(\*) UID : RDM Unique Identifier

### 5.4.5 LLRP (Low-Level Reader Protocol)

LLRP is a multicast protocol that facilitates basic IP configuration. It is part of the ESTA E1.33 RDMnet standard.

LLRP can be used for the initial configuration of networked equipment. It provides a low-level mechanism for discovering and configuring the network parameters of devices, including IP settings and basic RDMnet configuration settings.

LLRP Targets expose these parameters for configuration and respond to discovery requests from LLRP Managers. Once an LLRP Manager discovers one or more LLRP Targets, it can use LLRP to send RDM commands to retrieve or modify these parameters.

### A SOLUTION FOR INCORRECT OR UNKNOWN IP CONFIGURATION

Network connectivity issues are often caused by misconfigured network addresses, with improperly configured subnet masks being the most common problem.

LLRP uses two multicast IP addresses, enabling communication even when all other network communication has failed.

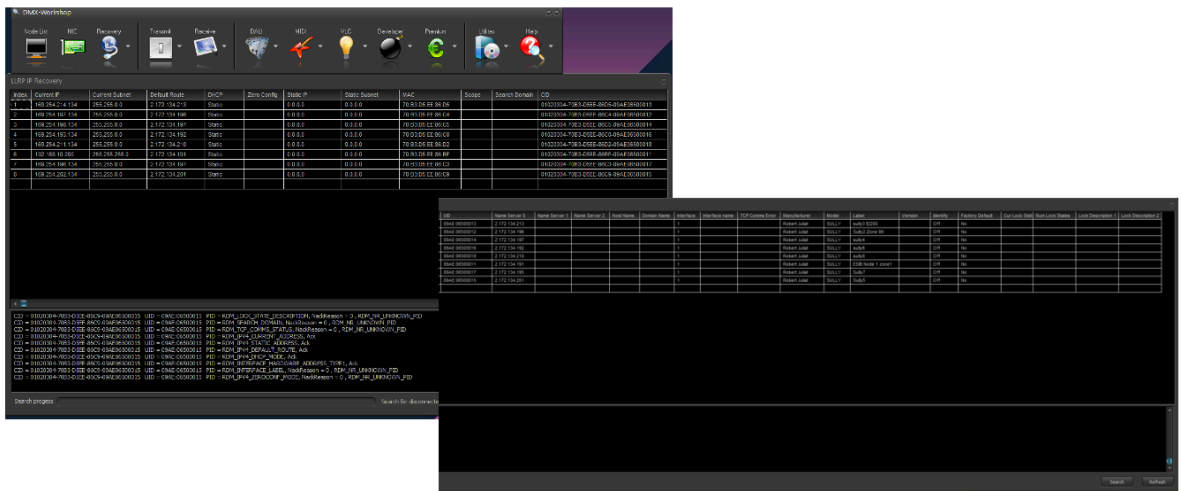
Since multicast addresses are unaffected by a misconfigured subnet mask, LLRP provides an efficient and reliable solution to recover from network misconfiguration.

In summary, LLRP simplifies the process of identifying and configuring the IP addressing of LLRP-compatible devices on your network.

All Robert Juliat equipment based on the RJ LED2 platform includes LLRP functionality.

Two LLRP Manager software tools are available for free:

- DMXworkshop by Wayne Howell from Singularity (UK): <https://singularity-uk.com/product/dmx-workshop/>



- CLU/Netron from Obsidian : <https://obsidiancontrol.com/netron-clu>

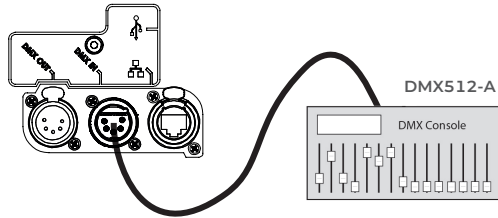


## 5.5 Fan cooling modes

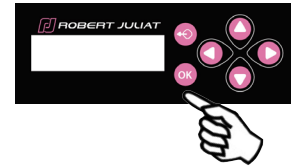
### 5.5.1 Range

Mode	Fan Speed
SILENT	Minimum – constant speed
NORMAL	Regulated – depending on ambient temperature
FULL	Maximum – constant speed

### 5.5.2 Control



Remotely by DMX512-A  
Mode 2, 3 & 4





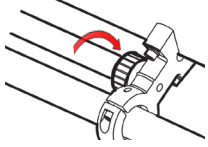
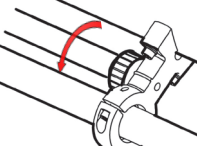



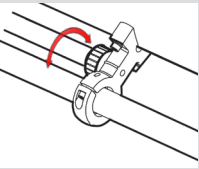

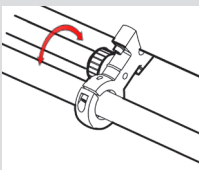



Locally → selection in  
SETUP / COOLING

## 5.6 Local potentiometer

→ selection in SETUP / DIMMER / CONTROL  
or  
SETUP / IRIS / CONTROL

Function	Parameters	Description																									
<p><b>Patch</b></p> <p> <input type="button" value="SETUP"/> <input type="button" value="DIMMER"/> <input type="button" value="CONTROL"/> </p> <p>Patch</p> <p> <input type="button" value="PATCH"/> <input type="button" value="ROTATION"/> <input type="button" value="CALIBRATION"/> </p> <p><input type="button" value="OK"/></p> <p>Press OK to validate</p> <p>or</p> <p> <input type="button" value="SETUP"/> <input type="button" value="IRIS"/> <input type="button" value="CONTROL"/> </p> <p>Patch</p> <p> <input type="button" value="PATCH"/> <input type="button" value="ROTATION"/> <input type="button" value="CALIBRATION"/> </p> <p><input type="button" value="OK"/></p> <p>Press OK to validate</p>	<p> <input type="button" value="DIMMER"/> <input type="button" value="CONTROL"/> <input type="button" value="PATCH"/> </p> <p>front</p> <p> <input type="button" value="BACK"/> <input type="button" value="FRONT"/> <input type="button" value="ACC. PORT1"/> <input type="button" value="ACC."/> </p> <p>or</p> <p> <input type="button" value="IRIS"/> <input type="button" value="CONTROL"/> <input type="button" value="PATCH"/> </p> <p>back</p> <p> <input type="button" value="BACK"/> <input type="button" value="FRONT"/> <input type="button" value="ACC. PORT1"/> <input type="button" value="ACC."/> </p>	<p>BACK FRONT</p> <div style="border: 1px dashed black; padding: 5px;"> <p>P1FE-R1 P1FE-L1</p> <p>Optional accessories</p> </div> <div style="border: 1px dashed black; padding: 5px; margin-top: 10px;"> <p>RJ Accessories Only</p> <p>ACC1 &amp; ACC2</p> </div>																									
<table border="1"> <thead> <tr> <th>PATCH</th> <th>Back</th> <th>Front</th> <th>Acc 1</th> <th>Acc 2</th> </tr> </thead> <tbody> <tr> <th>Back</th> <td style="text-align: center;">⊘</td> <td>DIMMER IRIS</td> <td>DIMMER IRIS</td> <td style="text-align: center;">⊘</td> </tr> <tr> <th>Front</th> <td>DIMMER IRIS</td> <td style="text-align: center;">⊘</td> <td style="text-align: center;">⊘</td> <td>DIMMER IRIS</td> </tr> <tr> <th>Acc 1</th> <td>DIMMER IRIS</td> <td style="text-align: center;">⊘</td> <td style="text-align: center;">⊘</td> <td>DIMMER IRIS</td> </tr> <tr> <th>Acc 2</th> <td style="text-align: center;">⊘</td> <td>DIMMER IRIS</td> <td>DIMMER IRIS</td> <td style="text-align: center;">⊘</td> </tr> </tbody> </table>	PATCH	Back	Front	Acc 1	Acc 2	Back	⊘	DIMMER IRIS	DIMMER IRIS	⊘	Front	DIMMER IRIS	⊘	⊘	DIMMER IRIS	Acc 1	DIMMER IRIS	⊘	⊘	DIMMER IRIS	Acc 2	⊘	DIMMER IRIS	DIMMER IRIS	⊘		
PATCH	Back	Front	Acc 1	Acc 2																							
Back	⊘	DIMMER IRIS	DIMMER IRIS	⊘																							
Front	DIMMER IRIS	⊘	⊘	DIMMER IRIS																							
Acc 1	DIMMER IRIS	⊘	⊘	DIMMER IRIS																							
Acc 2	⊘	DIMMER IRIS	DIMMER IRIS	⊘																							

Function	Parameters	Description
<p style="text-align: center;"><b>Rotation</b></p> <p style="text-align: center;">(DIMMER / IRIS)</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <span>SETUP</span> <span>DIMMER</span> <span>CONTROL</span> </div> <p><b>Rotation</b></p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <span>PATCH</span> <span>ROTATION</span> <span>CALIBRATION</span> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Press x1</p> </div> <div style="text-align: center;">  <p>Press OK to validate</p> </div> </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <span>DIMMER</span> <span>ROTATION</span> <span>DIMMER</span> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;">Normal(CW)</div> <div style="border: 1px solid black; padding: 5px;">Invert (CCW)</div> </div>	<p>Normal (CW): Clockwise</p> <div style="display: flex; align-items: center; margin-bottom: 20px;">  <div style="margin-left: 10px;">  <p>Press OK to validate</p> </div> </div>  <p>Invert (CCW): Counterclockwise</p> 
<p style="text-align: center;"><b>Calibration</b></p> <p style="text-align: center;">(DIMMER / IRIS)</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <span>SETUP</span> <span>DIMMER</span> <span>CONTROL</span> </div> <p><b>Calibration</b></p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <span>PATCH</span> <span>ROTATION</span> <span>CALIBRATION</span> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Press x2</p> </div> <div style="text-align: center;">  <p>Press OK to validate</p> </div> </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 20px;"> <span>DIMMER</span> <span>CALIB</span> <span>DIMMER</span> </div> <p>SET POTENTIOMETER TO MIN Then press OK</p> <div style="text-align: center; margin: 20px 0;">  </div> <div style="border: 1px solid black; padding: 5px;"> <span>DIMMER</span> <span>CALIB</span> <span>DIMMER</span> </div> <p>SET POTENTIOMETER TO MAX Then press OK</p>	<p>Adjust to the minimum position</p> <div style="display: flex; align-items: center; margin-bottom: 20px;">  <div style="margin-left: 10px;">  <p>Press OK to validate</p> </div> </div> <p>Adjust to the maximum position</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;">  <p>Press OK to validate</p> </div> </div>

## 6.1 Preventive maintenance

### 6.1.1 Frequency

General maintenance should be performed at least once a year or more frequently if the equipment is operated in adverse conditions (smoke, heat, humidity, touring, etc.).

### 6.1.2 General cleaning

Remove dust from the unit.

### 6.1.3 General visual check



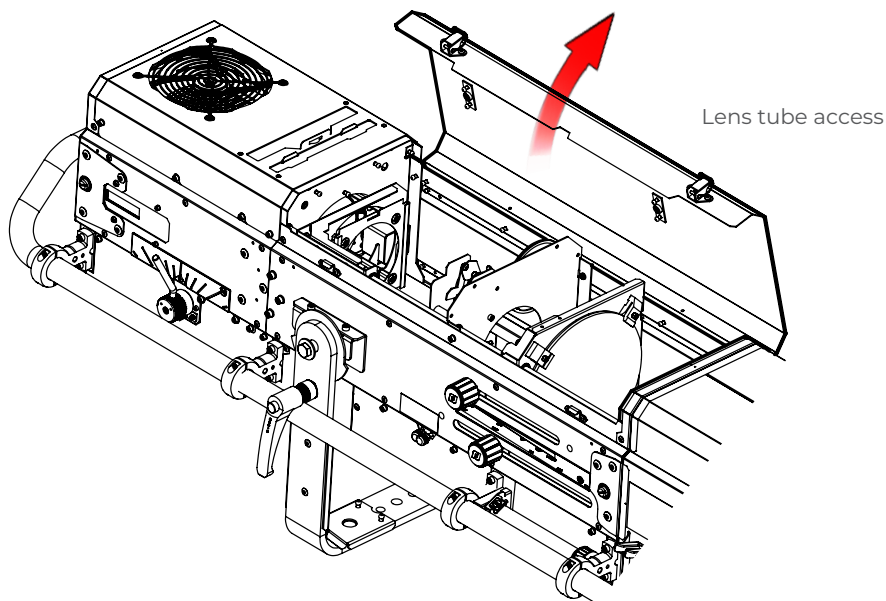
- No trace of heat.
- No loose contacts.
- No missing parts.
- Tighten mechanical assemblies (screws, bolts and nuts, etc.).

### 6.1.4 LED source

- Do not touch the surface of the LED source (no contact with your hands or any tools).
- Do not put compressed air directly on the source.
- Contact a certified RJ distributor in case of residuals or other objects located on the surface of the LED source.

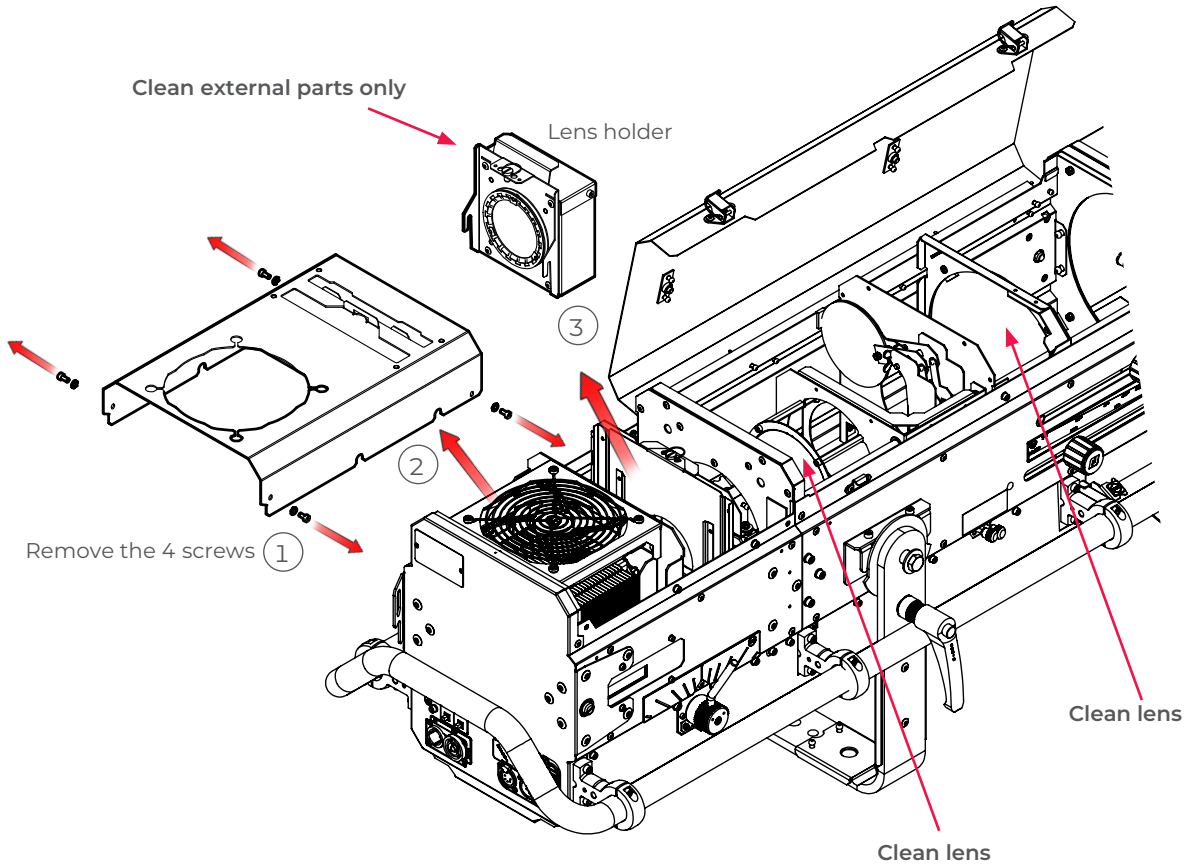
### 6.1.5 Optics

Only use solutions containing alcohol to clean optical parts (lenses).



- To clean the optical parts, use a soft cloth in combination with distilled water or isopropyl alcohol recommended for coated optics. Do not use any cleaning product that contains solvents or abrasives, as these can cause surface damage.
- Dry with a soft lint-free cloth.

Removing the LED housing cover: 1 → 2



In case of problem, contact RJ distributor with the following information:

- Model, version and serial number of the product.
- From the menu status:
  - Software version
  - LED board IDs
  - Device hours
  - Picture of the Selftest Report (see 6.6 Selftest)
- Description of the problem.



## 6.3 Electronic thermal management system

In case of overheating, light intensity will be reduced by the system.  
 “Power reduction X%” will be shown on the display with the reducing percentage.

## 6.4 Firmware update

1. Download the firmware from one of the following links :

- [www.robertjuliat.com/LED/PDF\\_PAGE](http://www.robertjuliat.com/LED/PDF_PAGE) or scan the QR code:
- [www.robertjuliat.com/followspots/Tristan](http://www.robertjuliat.com/followspots/Tristan)
- [www.robertjuliat.com/followspots/Morgane](http://www.robertjuliat.com/followspots/Morgane)



2. Unzip the file. There are 4 files:

- Firmware (.upd2 format)
- Firmware history
- Update procedure
- User manual from firmware version V5.0x onwards

3. Switch on the lighting fixture.

4. Connect the fixture to the network using an RJ45 Ethernet cable from your computer.

You can either connect it to your lighting network (RJ45) or directly to your computer (RJ45).

5. Open a Web browser (Microsoft Edge, Firefox, Apple Safari, etc.).

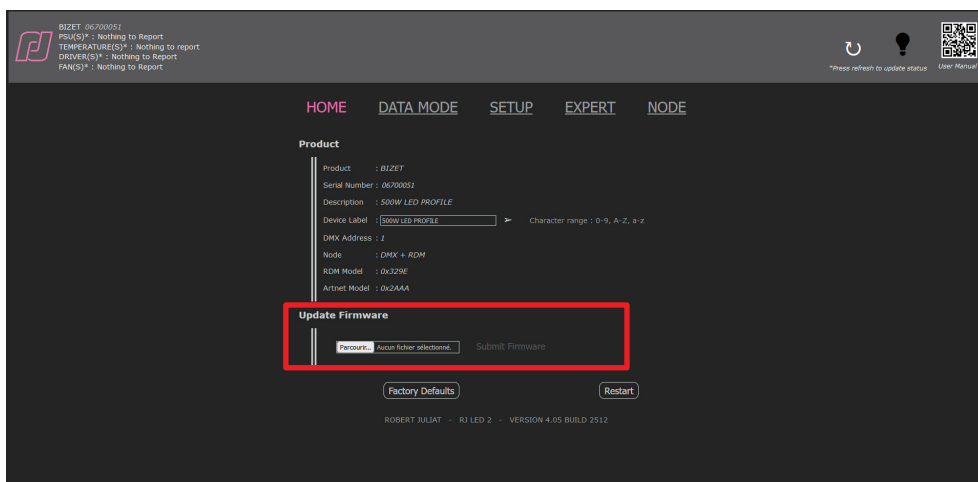
6. Enter the fixture’s IP address in the browser’s address bar

· “00X” is read as “X”.

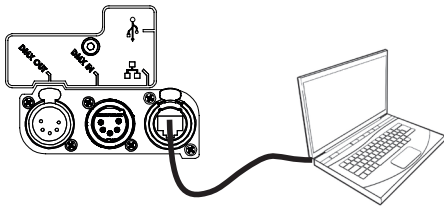
· Never type a zero (0) before the numbers XX or X (see section 5.4).

7. Upload your firmware file (.upd2).

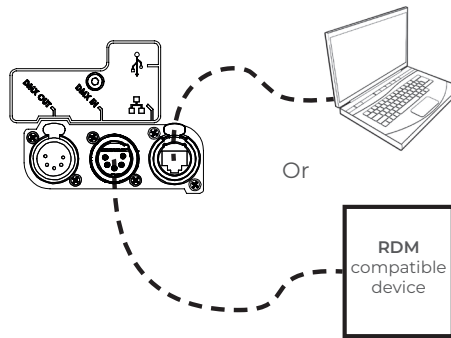
In the “Update firmware” window, select the update file and then click on “Submit firmware”.



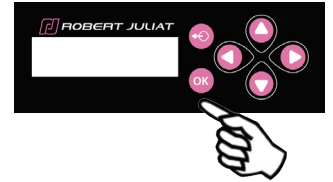
Set to factory defaults /  
reset through web interface  
(Home page)



Set to factory defaults /  
reset through RDM protocol



Set to factory defaults /  
reset through local control



Select **FACTORY DEFAULT**  
in the main menu to reset  
all values and parameters

6.6 Selftest

Select **SELFTEST** in the STATUS menu :



Press OK  
to start  
SELFTEST



At the end of each test, a **PASS/FAIL** message will be displayed.

If the DMX and network functions need to be tested, the system will prompt you to perform certain operations.

test report: Fail		P=Pass F=Fail	
fans P	pow P	temp P	dmxi P
dmxo F	net F	drv P	

**Test Report**

An “F” (FAIL) or “P” (PASS) will be displayed at the end of the self-test (SELFTEST).

If the problem persists, please take a photo of the test result and send it either to your Robert Juliat dealer or to the Robert Juliat After-Sales Service, if requested (email: [service@robertjuliat.fr](mailto:service@robertjuliat.fr))