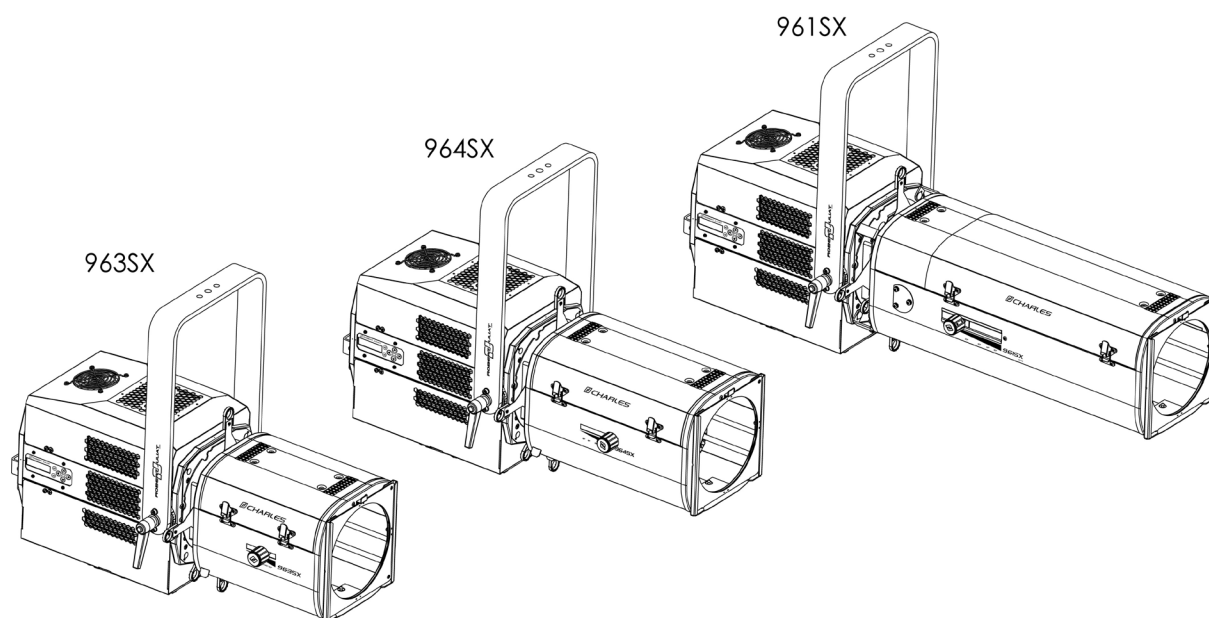


CHARLES

600W LED PROFILES

Manual



Model	Standard	North American
8 – 16°	961SX (v3)	961CSX (v3)
29 – 50°	963SX (v3)	963CSX (v3)
15 – 40°	964SX (v3)	964CSX (v3)

Product
Updates:



V3

- FIRMWARE: **V5.0x**
- RJ-LED2 FIRMWARE PLATFORM (Node Mode) full manual is
available for download at www.robertjuliat.com/LED/PDF_PAGE

DN41159401-B (EN)

Released: 07/09/26

Robert Juliat S.A.S. 32, rue de Beaumont, F 60530 Fresnoy-en-Thelle - phone : +33 (0)3 44 26 51 89 - info@robertjuliat.fr

www.robertjuliat.com



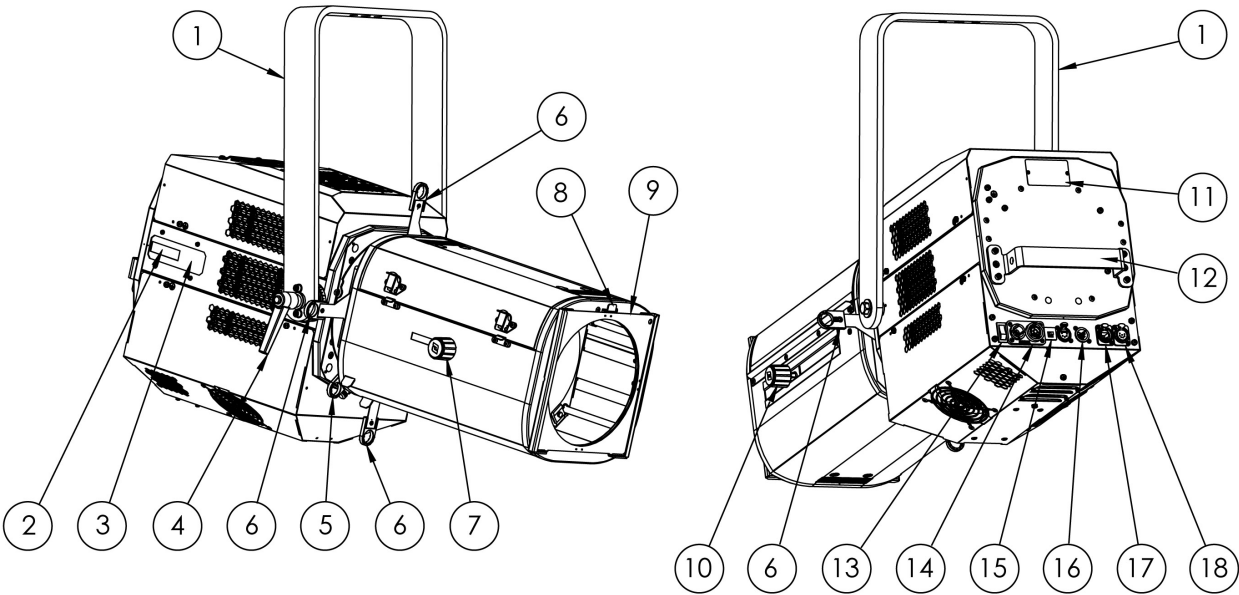
ROBERT JULIAT

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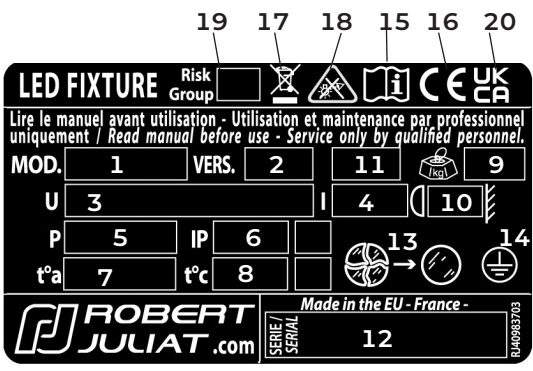
EN

2.1 Functions



Description	
1. Hanging yoke 2. Local display 3. Control board 4. Tilt locking handle 5. Shutter locking system 6. Shutters 7. Focus adjustment 8. Front slot locking system 9. Front slot for accessories and gel frame 10. Zoom adjustment 11. Identification plate 12. Rear handle	13. Power switch 14. Power connectors (IN and OUT) 15. Thermal breaker 16. Data connectors (IN and OUT) 17. Ethernet connector (RJ45) 18. Auxiliary (XLR 7)

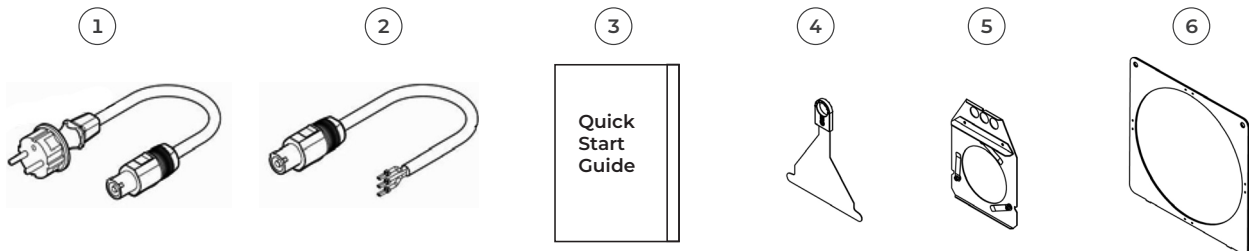
2.2 Identification label

Description	
 LED FIXTURE Risk Group Lire le manuel avant utilisation - Utilisation et maintenance par professionnel uniquement / Read manual before use - Service only by qualified personnel. MOD. 1 VERS. 2 11 9 U 3 I 4 10 P 5 IP 6 t^a 7 t^c 8 13 14 ROBERT JULIAT.com Made in the EU - France - 12	- MOD. : Model - VERS. : Version - U : Nominal voltage input (V) - I : Nominal intensity (A) - P : Maximum power input (W) - IP : International Protection Rating - t^a : Maximum ambient temperature (°C) - t^c : Maximum external temperature of the unit (°C) - Net weight (kg) - Minimum distance between a flammable material and the lighting unit (m) - Colour temperature version - Serial number - Replace broken glass - Class 1 product label - Read manual first label - European conformity label - WEEE directive label - CEI-TR-62778 - Do not stare at light source - EN62471 - Risk group - UKCA (UK Conformity Assessed) label

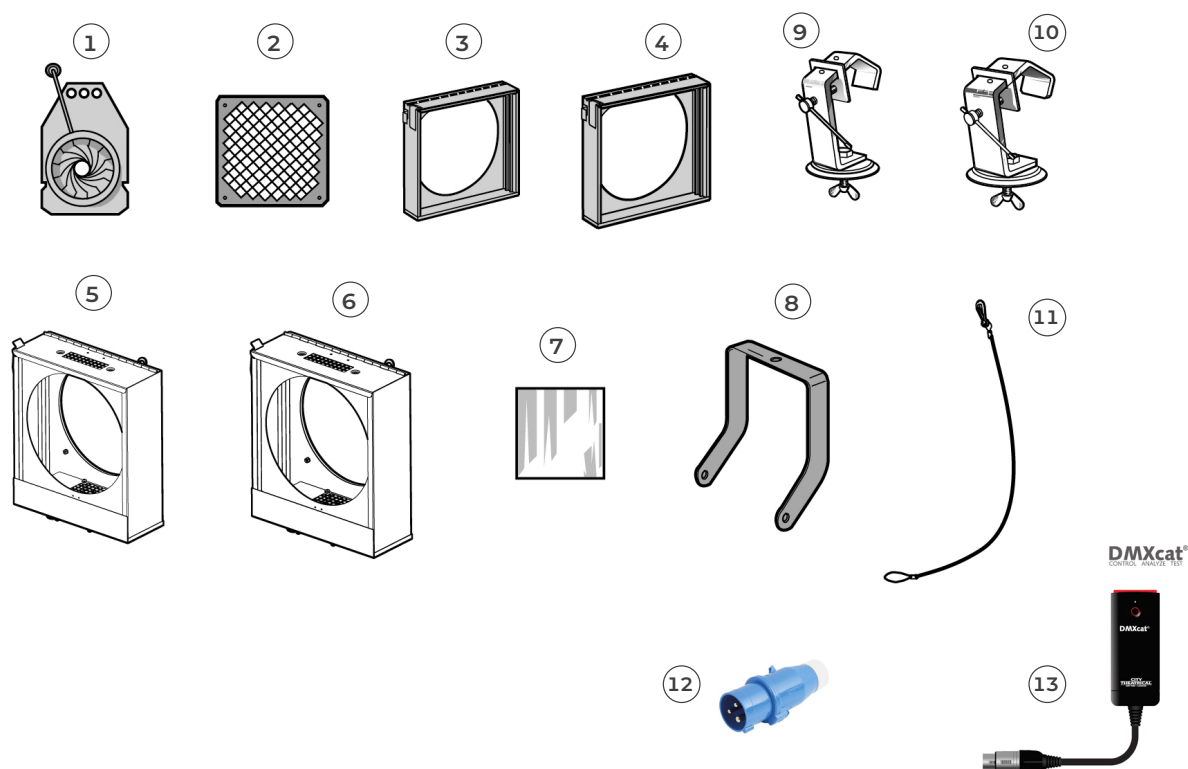
Units:

- Weight = kilogram (kg).
- Intensity = Ampere (A).
- Voltage = Volt (V).
- Frequency = Hertz (Hz).
- Temperature = degree Celsius (°C).

2.3 Accessories included



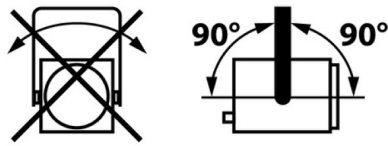
	Reference	Description
1	CAL03	3 meter power cable (3G1,5 HO7RNF) with Neutrik PowerCon® True1 and CEE 7/7 (2P+T NF/ SCHUKO) connectors (standard version)
2	CAL04	1,50m power cable UL/CSA with Neutrik® powerCON TRUE1 connector (North American version)
3	DN41158200	Quick Start manual
4	D8	Shutter (x4)
5	SGUX	Universal "A" size gobo-holder (metal, glass, frosted glass)
6	PF1000M2	215 x 215mm metal filter holder (Standard version only)



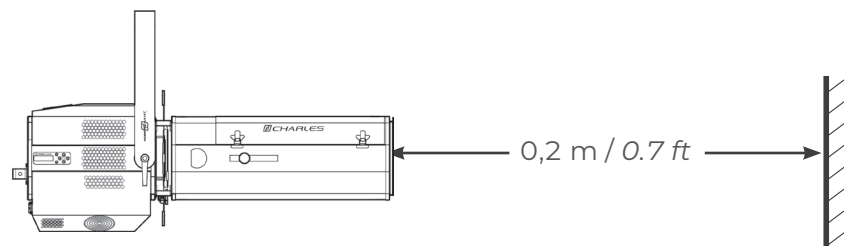
	Reference	Description
1	IWSX755	Drop-in iris (monoplane) with holder
2	G1000	215x215mm safety grid
3	CAV700A	Double slot front cassette for 215x215mm accessories
4	CAV700AJ	Double slot front cassette for 245x245mm accessories
5	RPF960	Front extension cassette for 215x215mm accessories with XLR7 fan (recommended for dark colours on 960SX)
6	RPF960E	Front extension cassette for 245x245mm accessories with XLR7 fan (recommended for dark colours on 960SX)
7	VD120	120x120mm frosted glass
8	FCD700	Angled yoke
9	876	Hook clamp 40x10mm with 28mm M10 screw for Ø35 to 50mm pipes - SWL: 50Kg
10	880	Hook clamp 40x10mm with 28mm M10 screw for Ø50 to 63mm pipes - SWL: 50Kg
11	CS2	Safety cable Ø3mm L= 600mm - SWL: 75 Kg
12	PCP1716A	16A blue 2P+E 6h IEC60309 power connector
13	DMXcat	Bluetooth DMX/RDM Multifunction test tool - City Theatrical DMXcat®

3.1 Mechanics

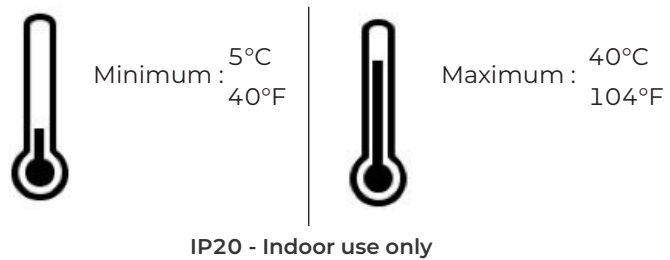
3.1.1 Operating positions



3.1.2 Minimum distance between a flammable material and the lighting unit

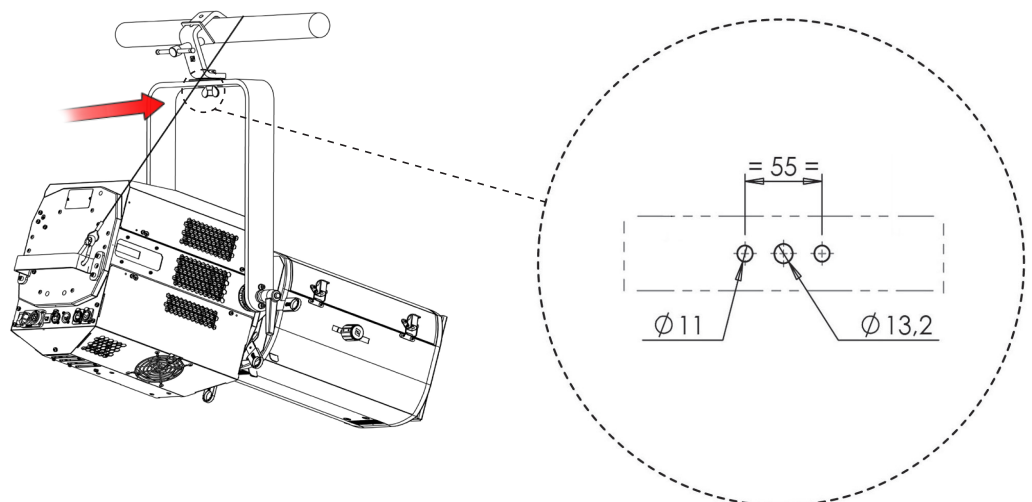


3.1.3 Instructions for use



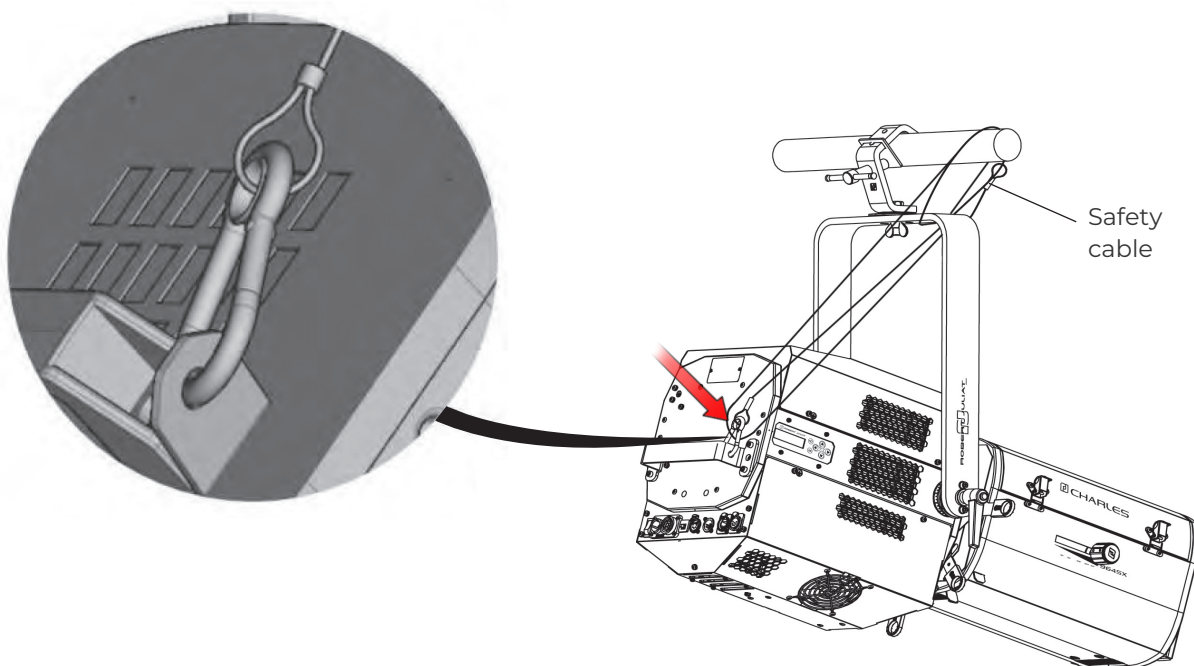
3.1.4 Handling

- Ensure fixture is correctly mounted on the appropriate support.
- Net weight for
963SX: 34 Kg (74.96 lbs)
964SX: 36 Kg (79.36 lbs)
961SX: 38.7 Kg (83.77 lbs)



3.1.5 Safety cable

- When hung or flown the fixture must be secured by an additional hanging accessory (such as a safety bond or cable) of suitable length.
- The combined weight of both the fixture and the accessories must be considered when choosing the load-bearing capability of safety cable or bond.
- Safety cables or bonds 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.



3.2 Electrical information

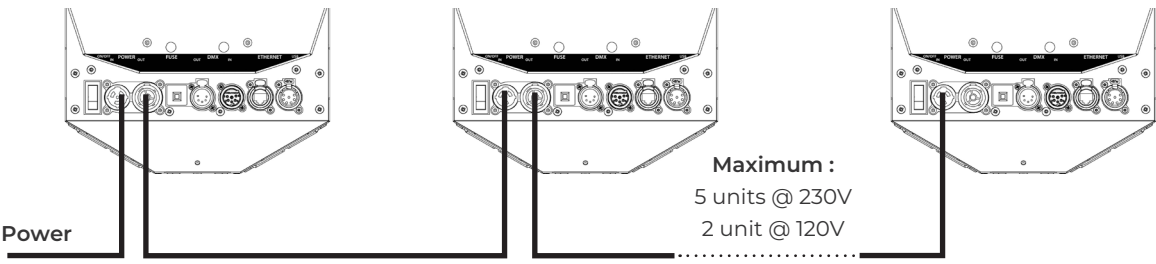
3.2.1 LED source

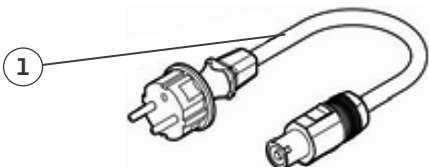
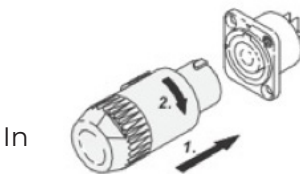
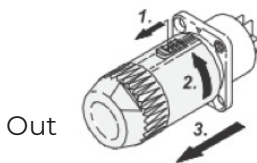


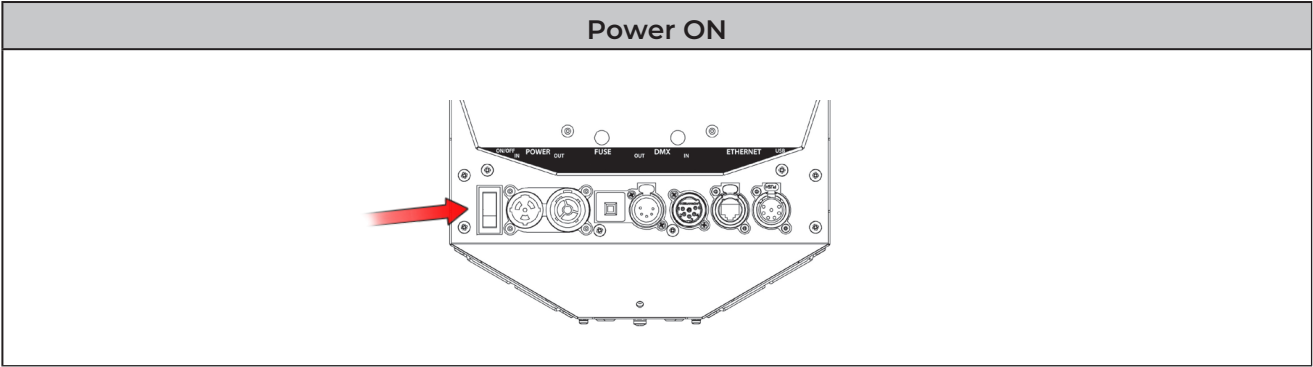
Never touch or scratch the LED surface.

See 6.1.4 LED cleaning procedure if cleaning is necessary.

3.2.2 Power supply

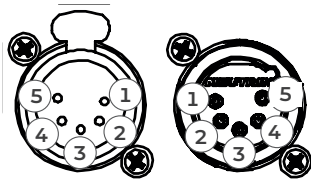
Power supply			
Voltage	Frequency	Input power	Connectors
90 → 264 V	50-60 Hz	3 A / 660 W @ 230V 5.8 A / 680 W @ 120V 7.1 A / 690 W @ 100V Max: 8 A Standby mode: 8.5 W	Neutrik powerCON TRUE1 TOP Input : ref. NAC3FPX-TOP
 - Class 1 product. This luminaire must be earthed. - Must be connected directly to AC power. Do not connect to dimmer power. - Automatic mains voltage detection.			
Daisy chain:  Maximum : 5 units @ 230V 2 unit @ 120V			

Power cable						
 						
Power cable		Connector	Mains plug	Cable type	Cable length	Wiring
1	Standard version	Neutrik® powerCON TRUE1 TOP NAC3FX-W-TOP	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	Live: Black Neutral: White Ground: Green
 						

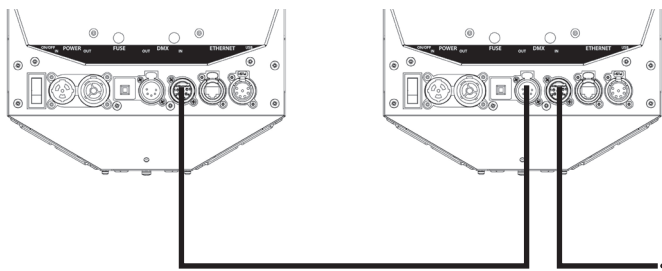


3.3 DATA

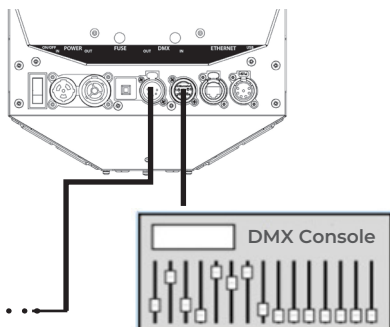
3.3.1 DMX 512-A / RDM

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 (-)	1 st conductor of 1 st twisted pair	
3	DMX (+)	2 nd conductor of 1 st twisted pair	
4	Not used	1 st conductor of 2 nd twisted pair	
5	Not used	2 nd conductor of 2 nd twisted pair	

Daisy chain:

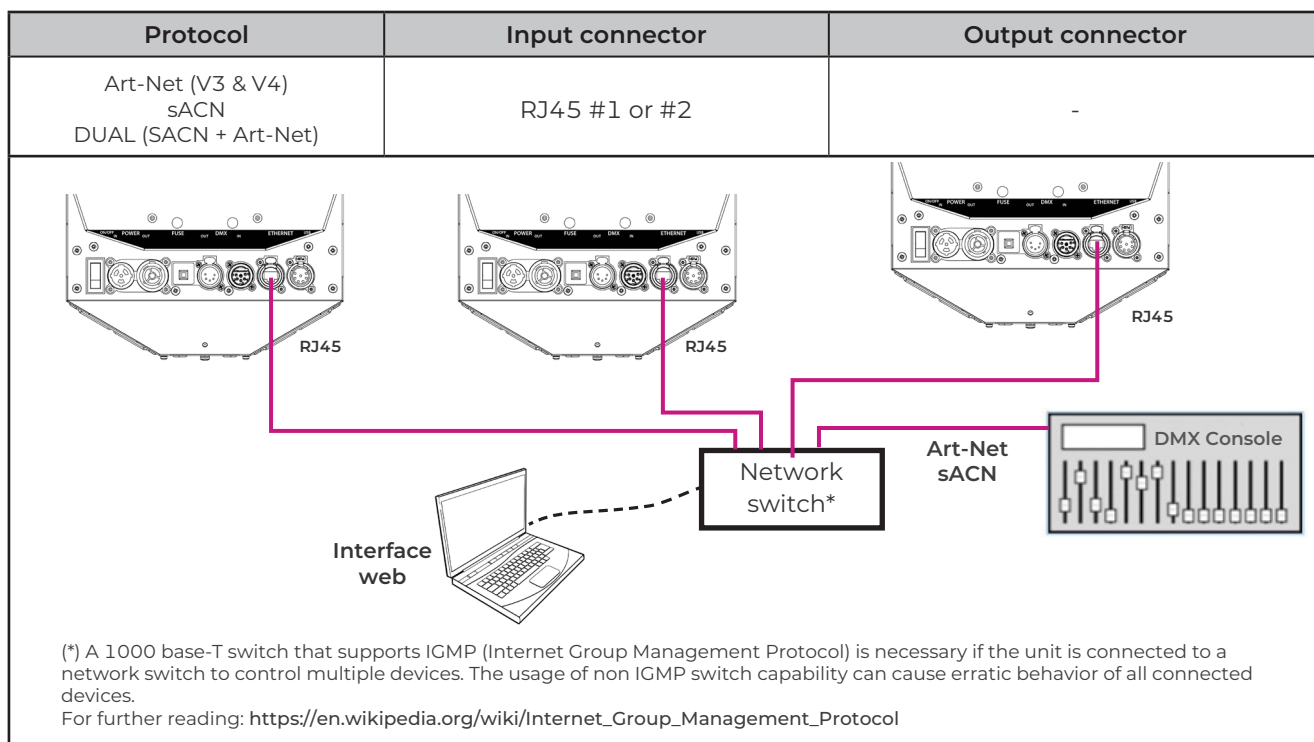


Maximum :
31 units total



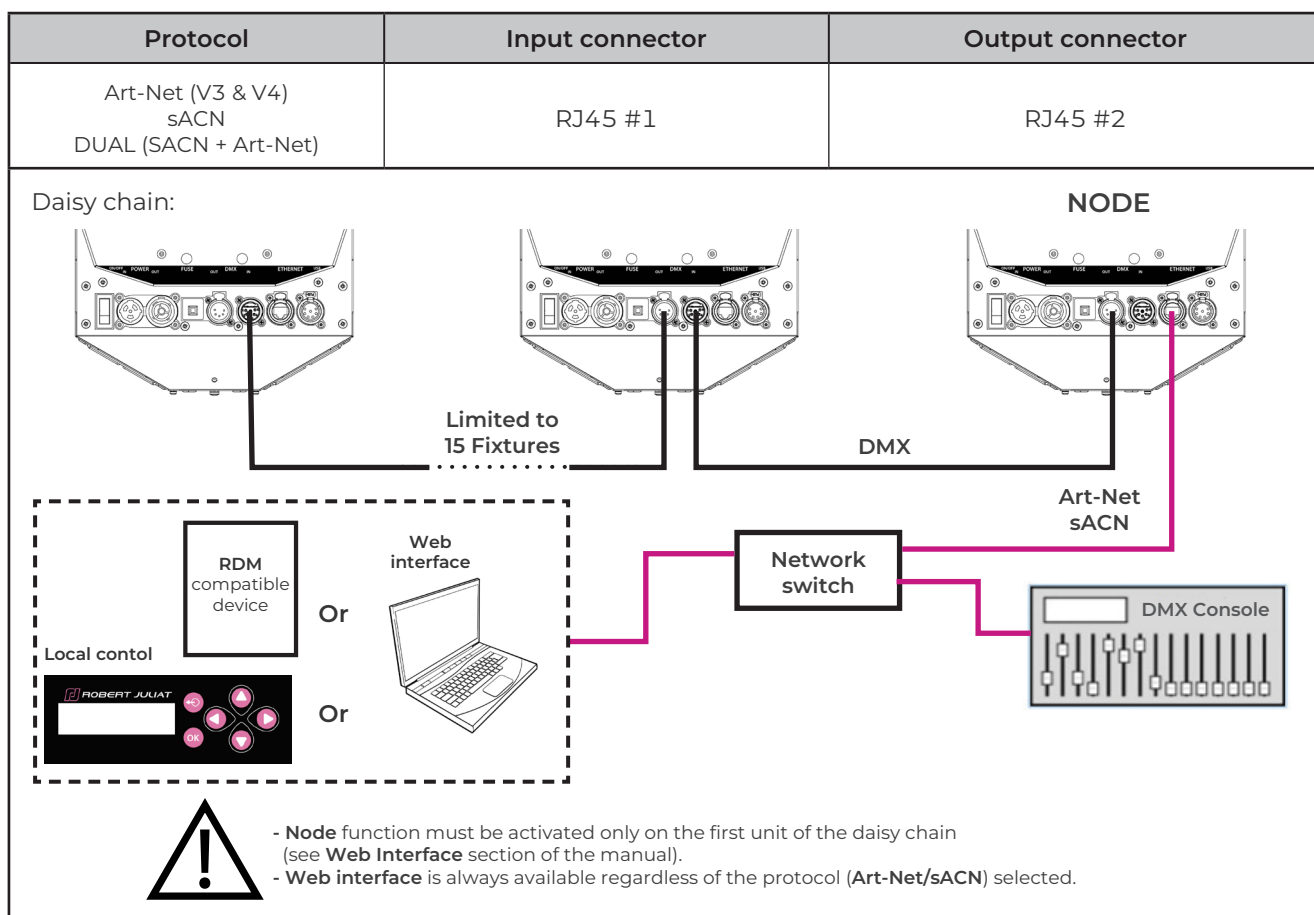
3.3.2 Art-Net / sACN / DUAL

- With external switch



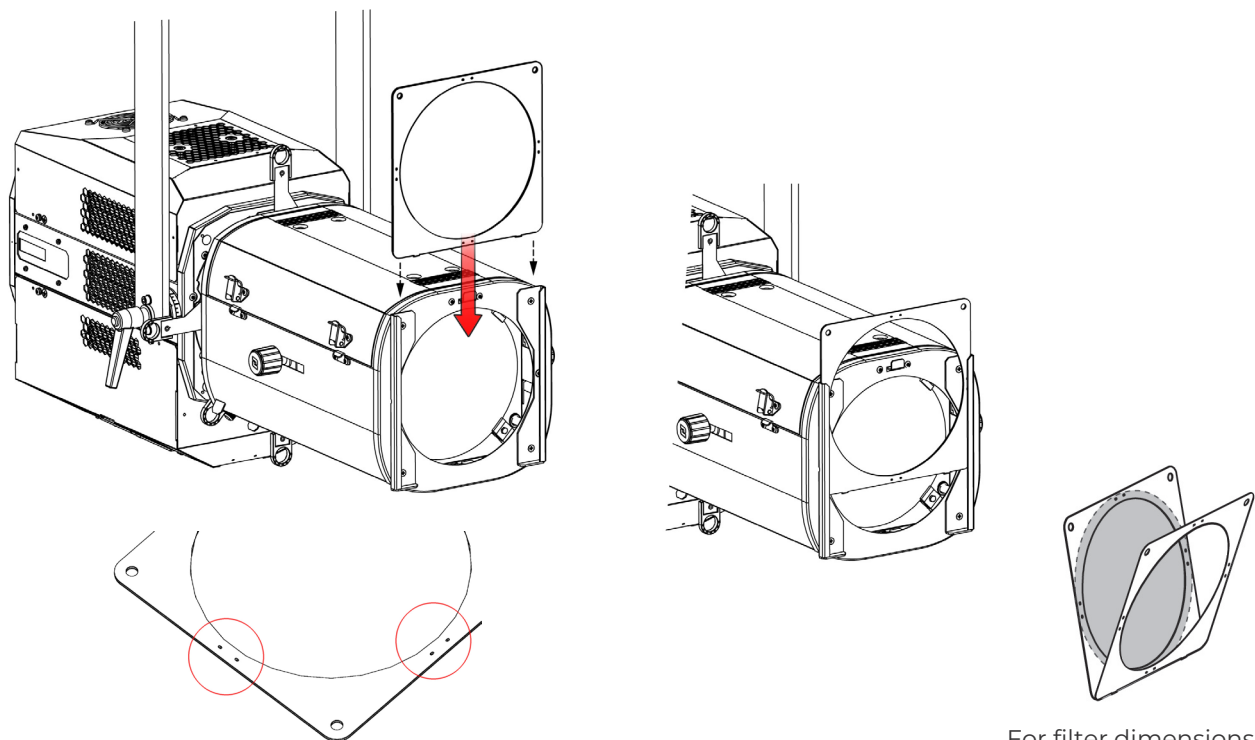
3.3.3 Ethernet / DMX node / DUAL

- With integrated switch



3.4 Accessories

3.4.1 Front filter holder

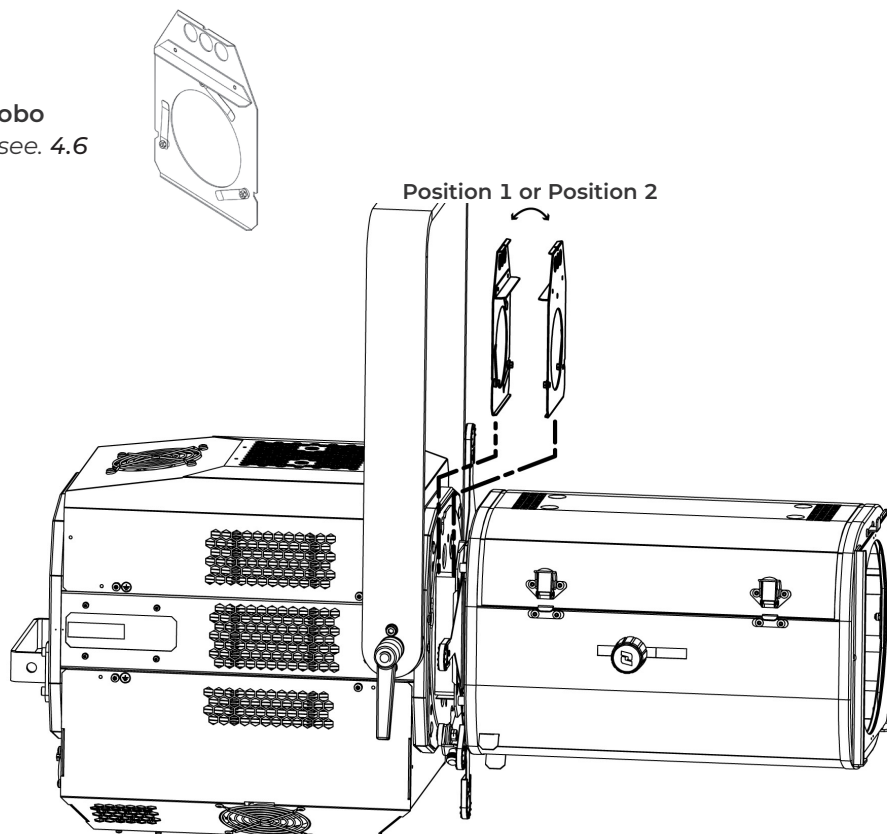


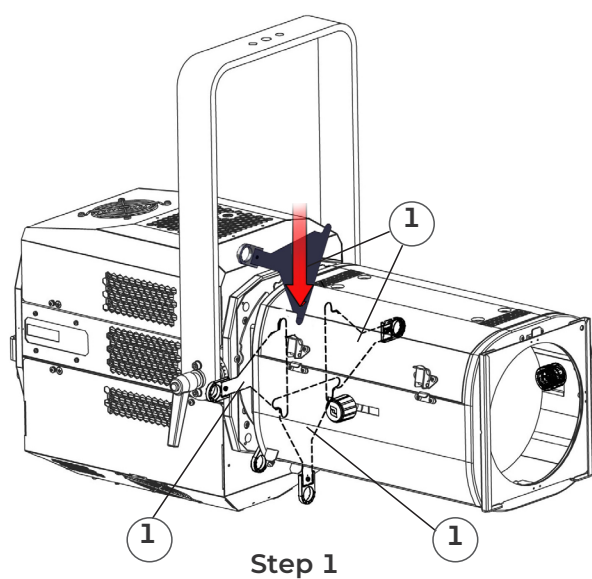
The filter holder includes perforations designed for stapling to keep the gel in position.

For filter dimensions, see section 4.8

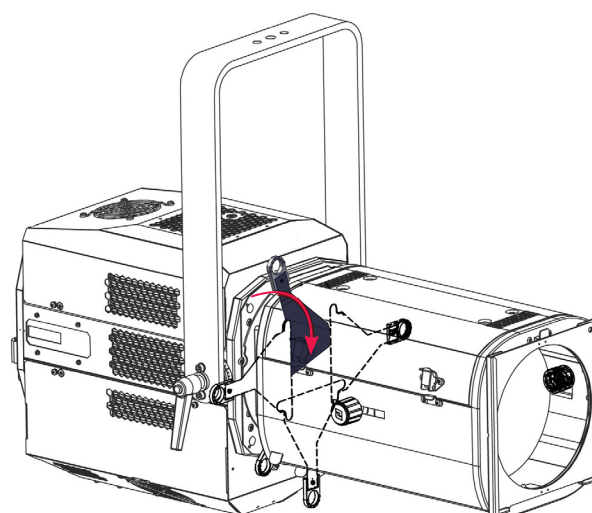
3.4.2 Gobo holder

'A' size gobo
Dimensions see. 4.6

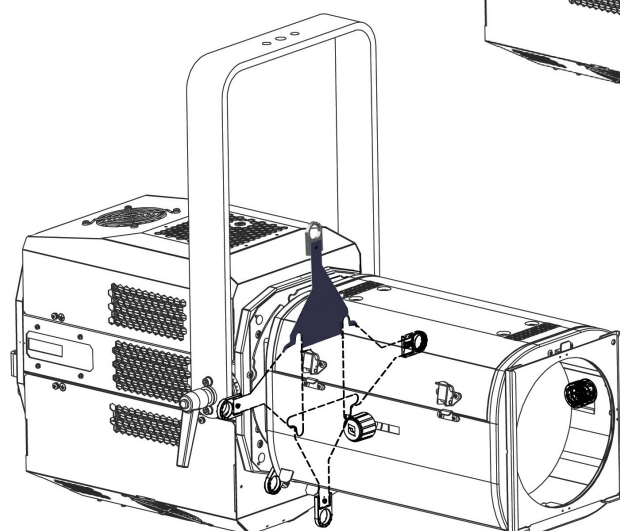




Step 1



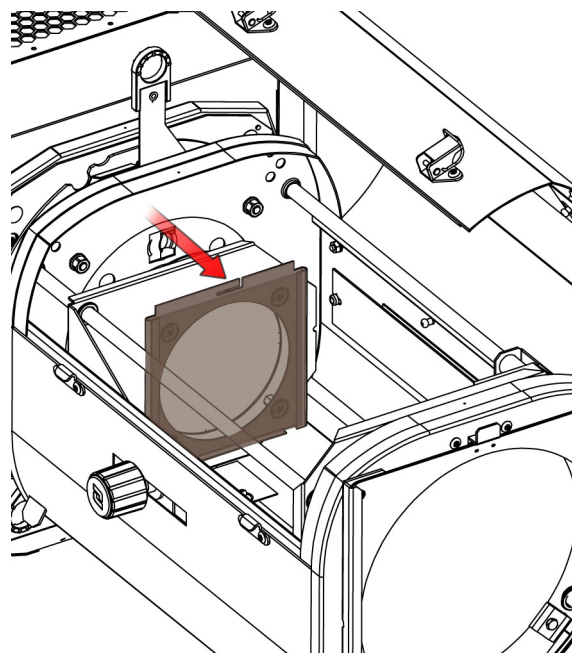
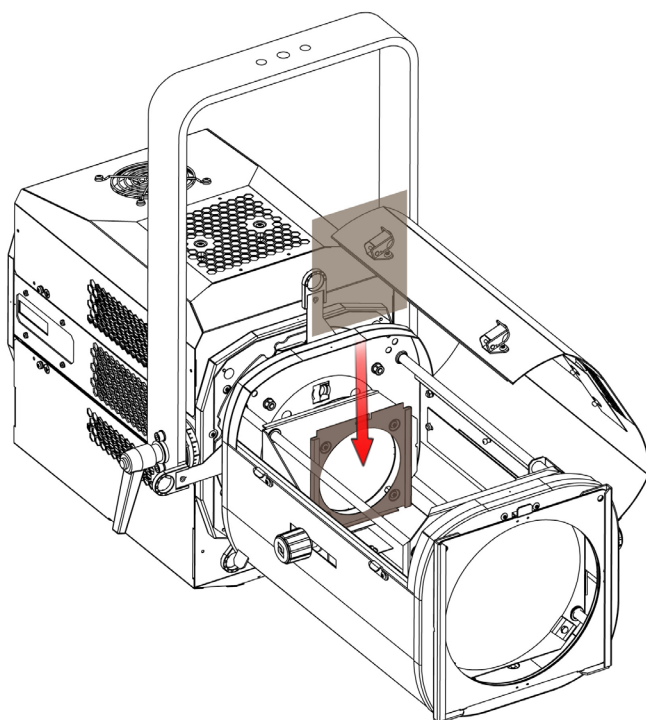
Step 2



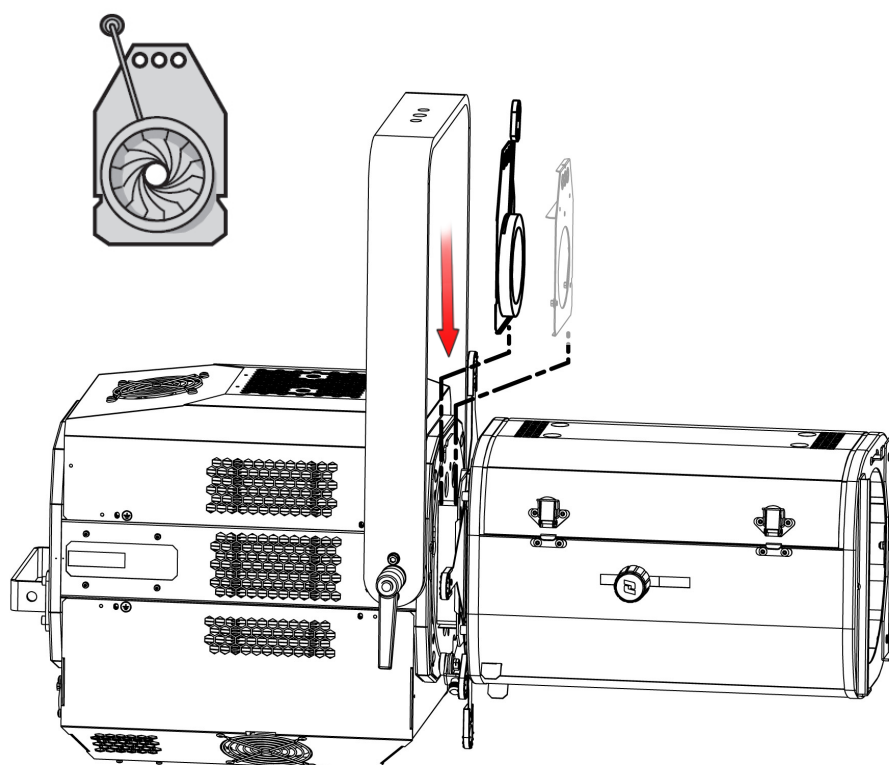
Step 3

3.4.4 Internal filter holder

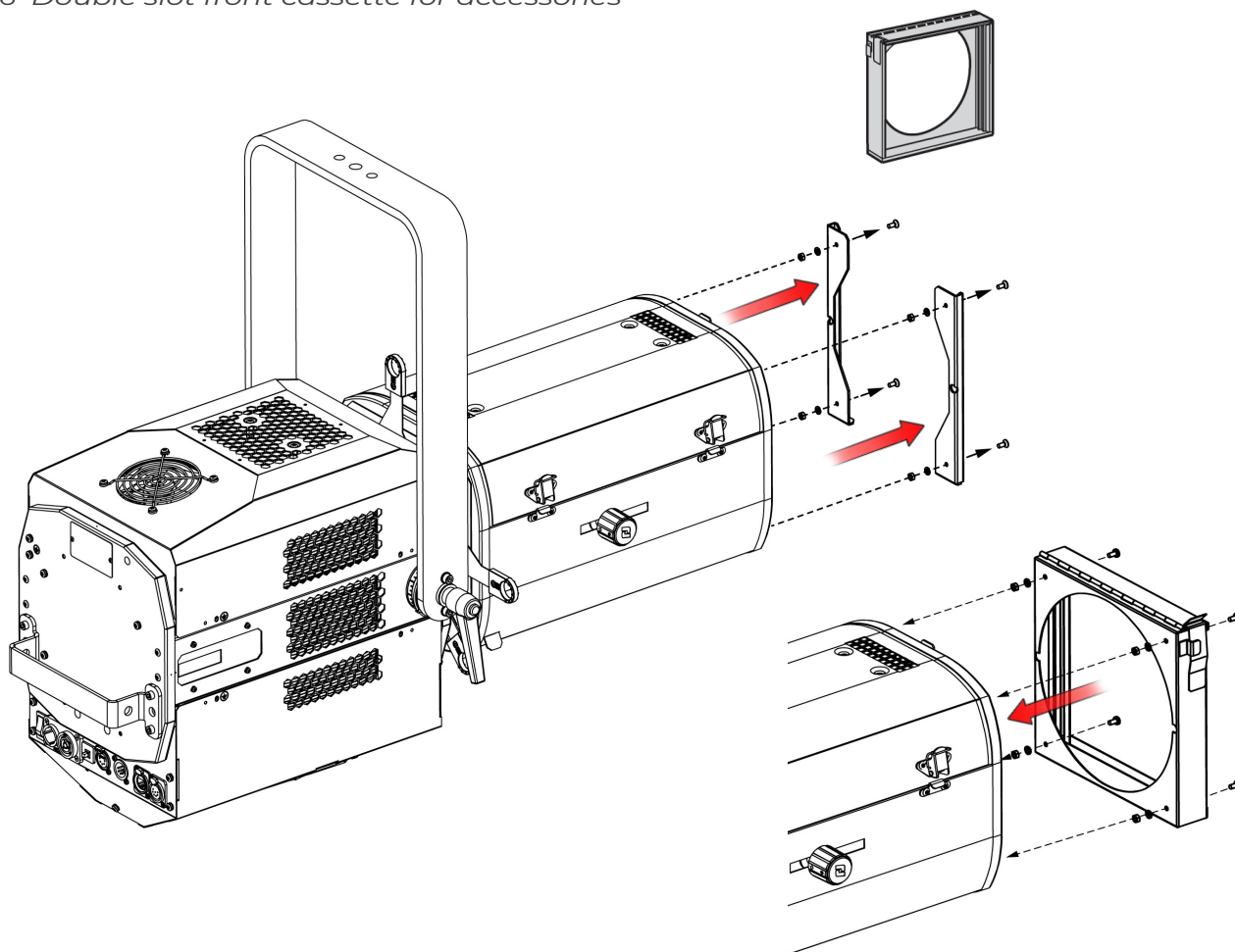
For filter dimensions,
see section 4.8



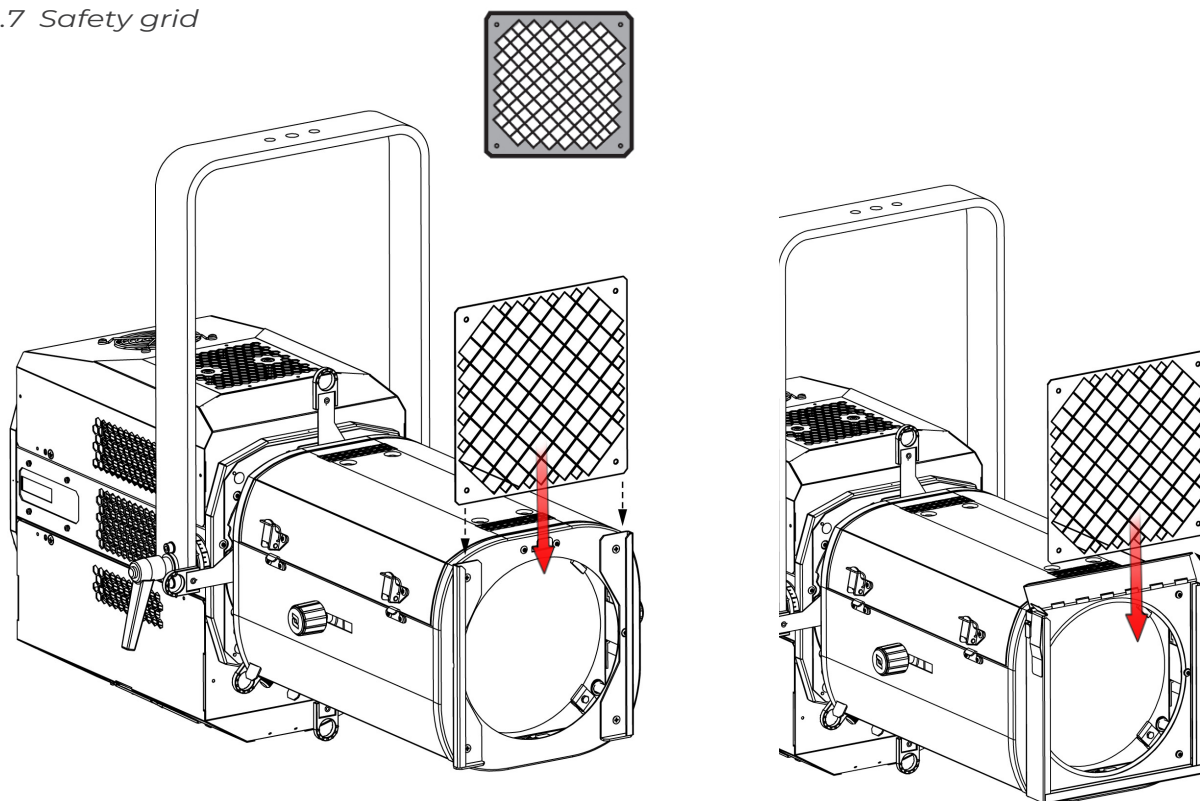
3.4.5 Drop-in iris



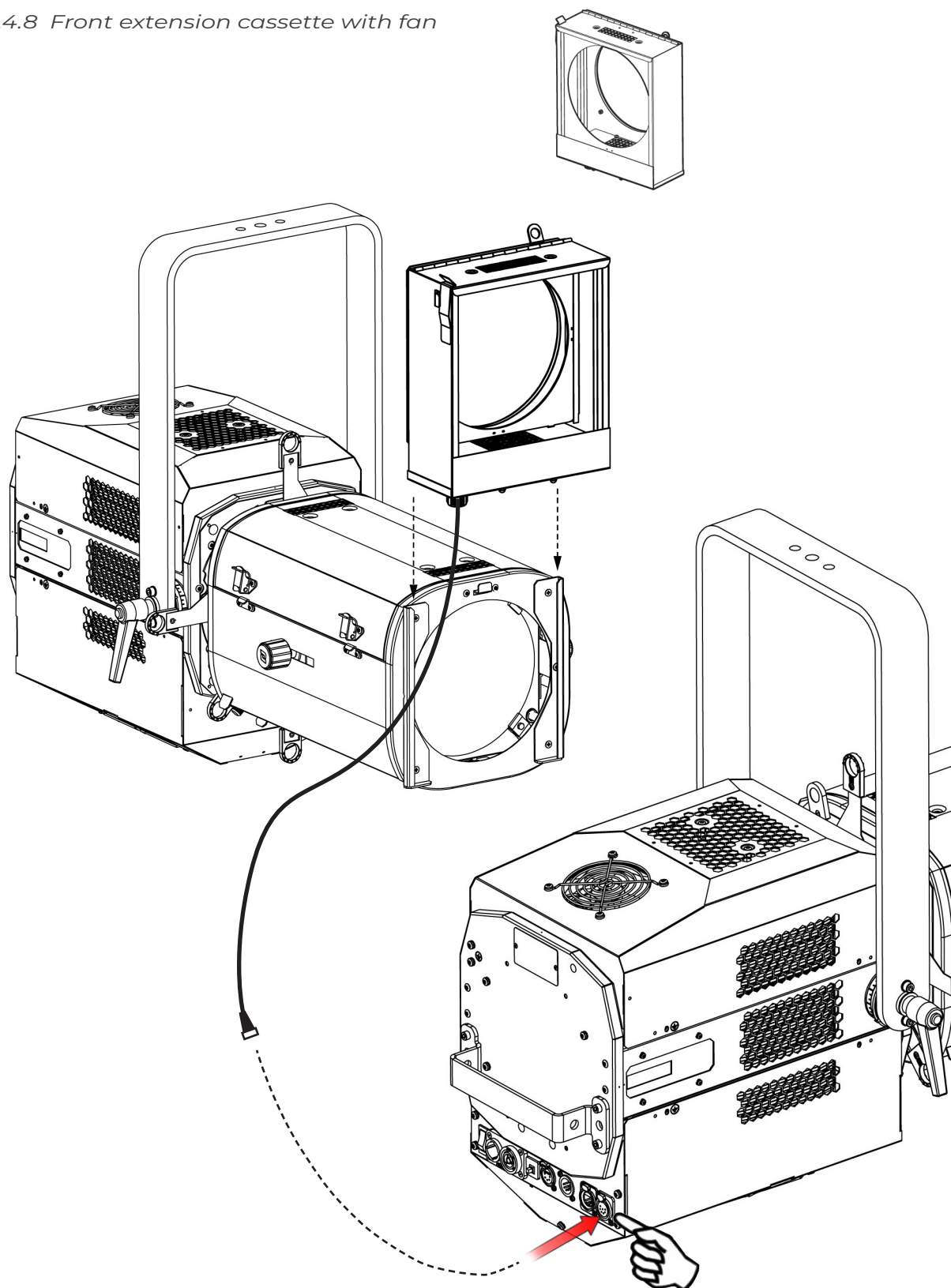
3.4.6 Double slot front cassette for accessories



3.4.7 Safety grid



3.4.8 Front extension cassette with fan

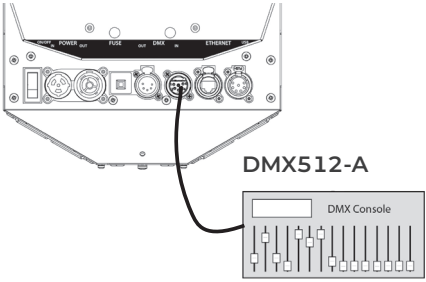


4.1 Light intensity

4.1.1 Range



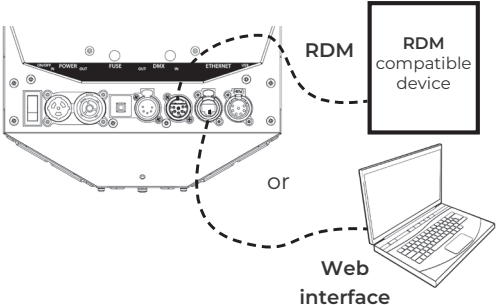
4.1.2 Control



DMX512-A

DMX Console

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



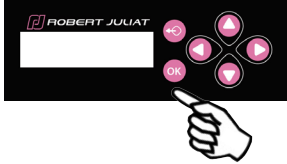
RDM

RDM compatible device

or

Web interface

→ Set through standalone mode and the RDM protocol or web interface
See 5.3 Home Values



→ Locally via Standalone mode
See 5.3 Home Values

Focus mode: when standby screen displayed,
Push Exit or the upper arrow button for 3 secs → Light output = 100% for 1 minute
2x times Exit or the upper arrow button → Light output = 0%

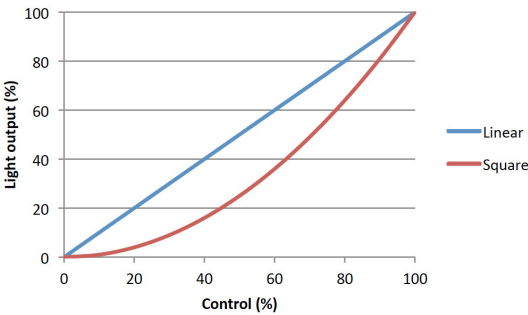
4.1.3 Parameters

4.1.3.1 Dimming resolution - DMX only

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

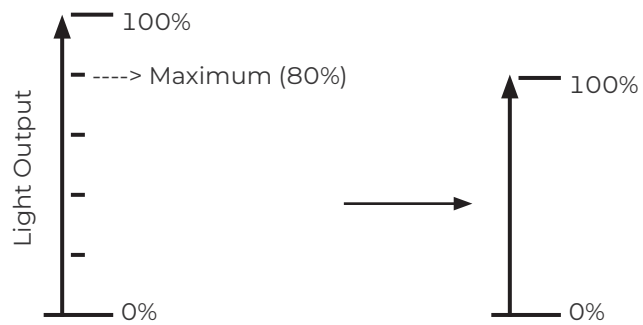
4.1.3.2 Dimming curve

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



4.1.3.3 Set maximum position

➔ Selection in SETUP / DIMMER / MAX menu



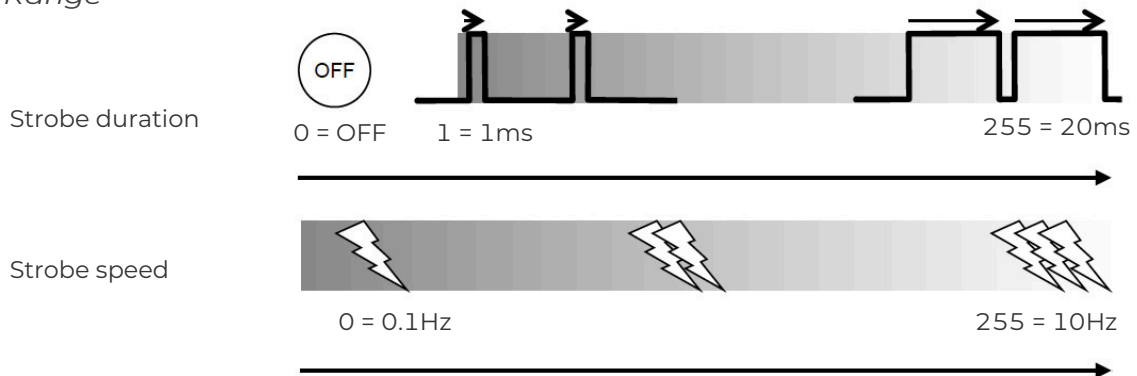
4.1.3.4 Dimming mode

➔ Selection in SETUP / DIMMER / DIMMING MODE menu

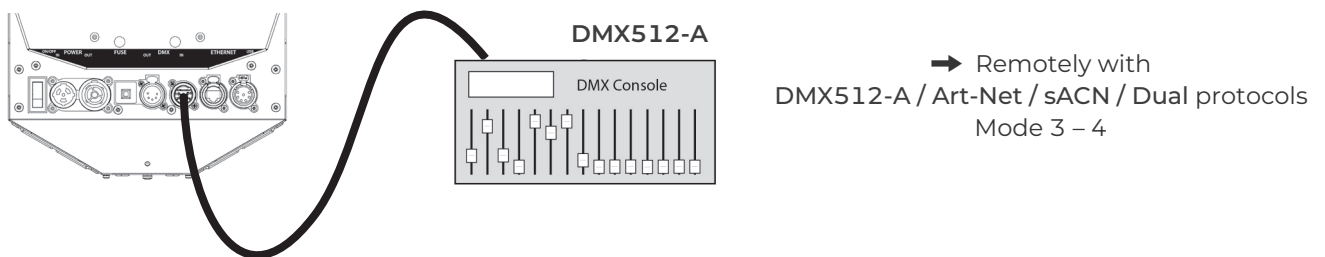
Mode	Result
Without PWM	Flicker-Free, perfect for filming
PWM 20 KHz	Good dimming quality (Default Value)
PWM 3,2 KHz	Very good dimming

4.2 Strobe

4.2.1 Range

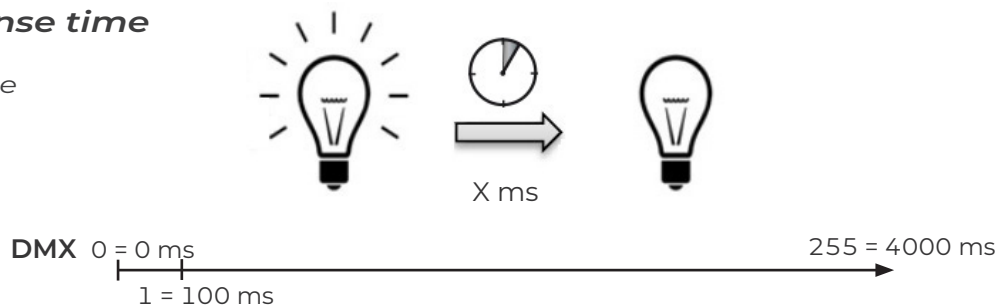


4.2.2 Control



4.3 Response time

4.3.1 Range



4.3.2 Control

DMX512-A

DMX Console

Remotely, with
DMX512-A / Art-Net / sACN / Dual protocols
Mode 3 – 4 only

RDM

RDM compatible device

or

Web interface

→ Set through RDM protocol or web interface

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

see 5.3 Home Values

Locally

→ selection in SETUP/DIMMER/
RESPONSE TIME

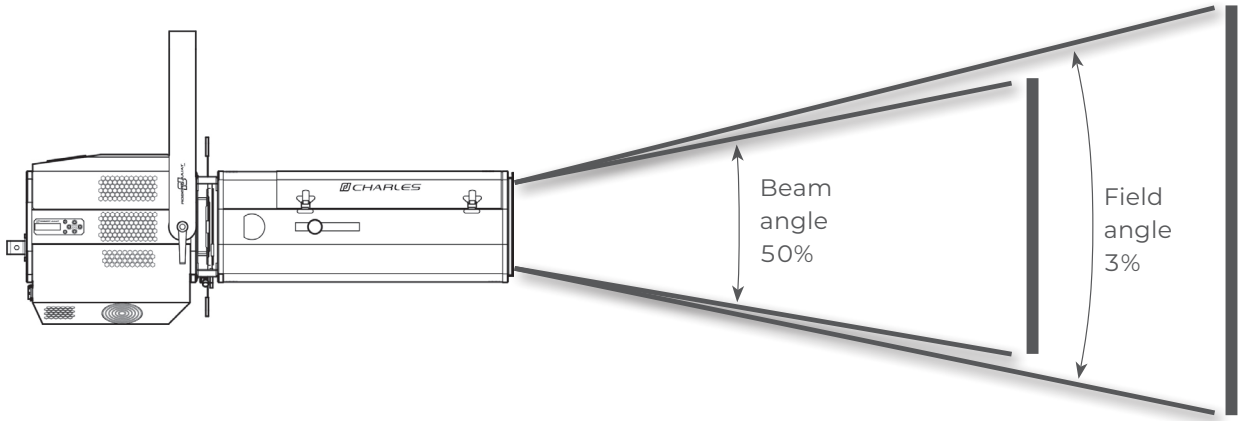
Mode	Speed
RAW	OFF
SLOW	700 ms
MEDIUM	470 ms
FAST	350 ms
CUSTOM	0 - 4000 ms

see 5.3 Home Values

4.4 Beam size adjustment



4.4.1 Range

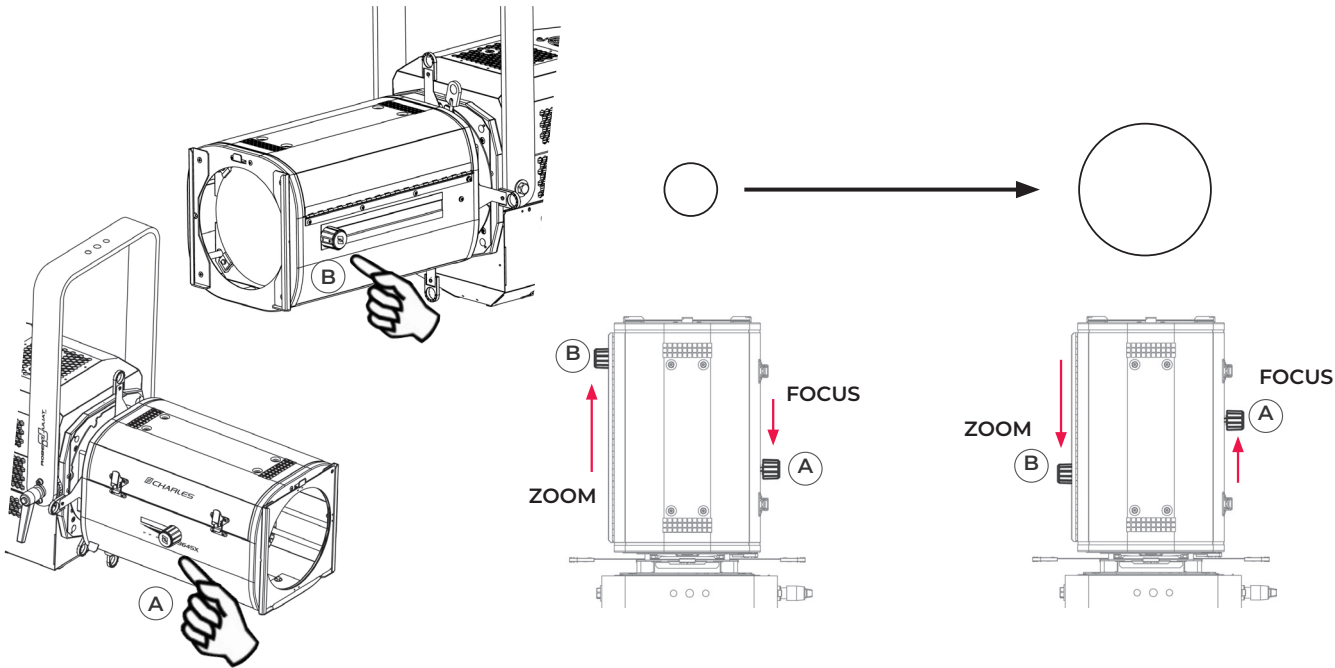


Model	Angles	Minimum angle @ 29°	Maximum angle @ 50°
963SX	Beam angle	30°	48°
	Field angle	31°	52°

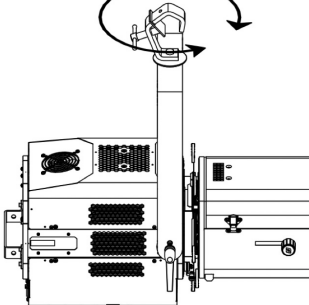
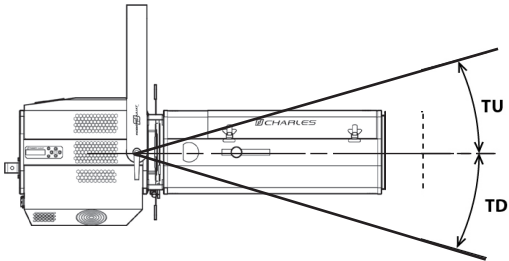
Model	Angles	Minimum angle @ 15°	Maximum angle @ 40°
964SX	Beam angle	13°	37°
	Field angle	14°	40°

Model	Angles	Minimum angle @ 8°	Maximum angle @ 16°
961SX	Beam angle	8°	15°
	Field angle	8°	16°

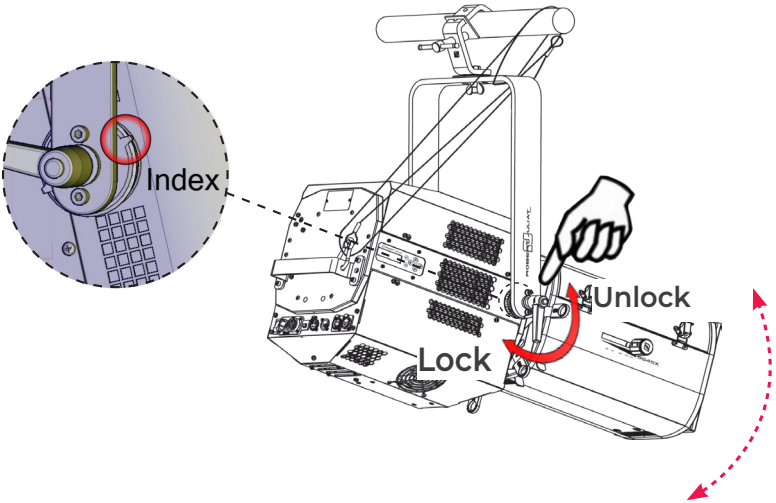
4.4.2 Control



4.5.1 Range

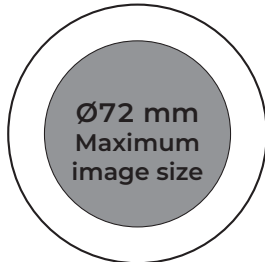
Function	Range
PAN 	0 → 360°
TILT 	TU = 0 → 68° TD = 0 → 90°

4.5.2 Control

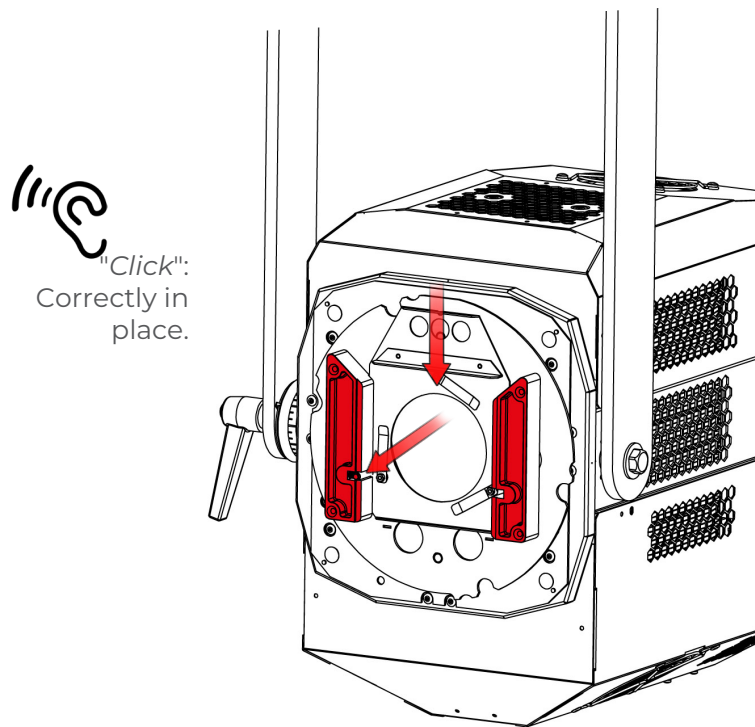


4.6 Gobo

4.6.1 Range

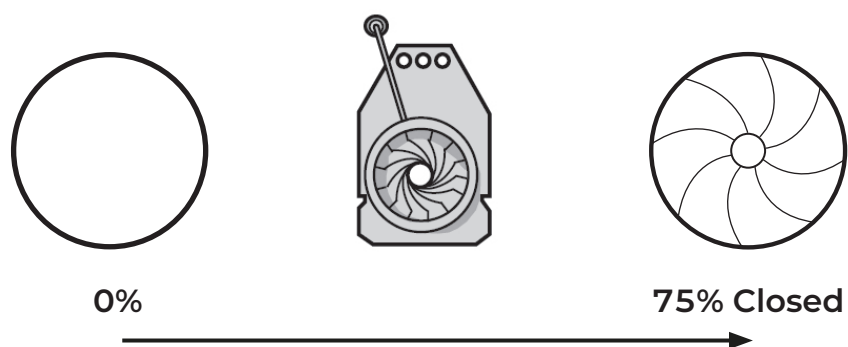
Type	Standard gobo - A size
Dimensions	Ø100 mm  • Metal • Glass Ø72 mm Maximum image size
Installation	See section: 3.4.2

4.6.2 Control

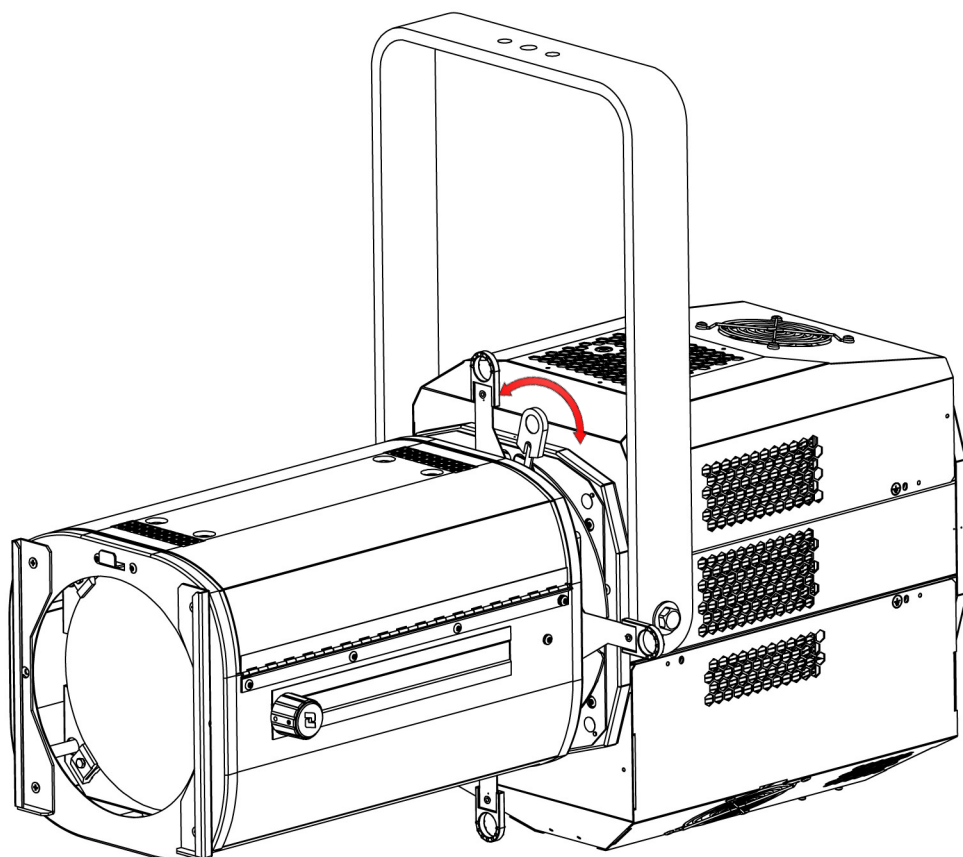


4.7 Iris

4.7.1 Range



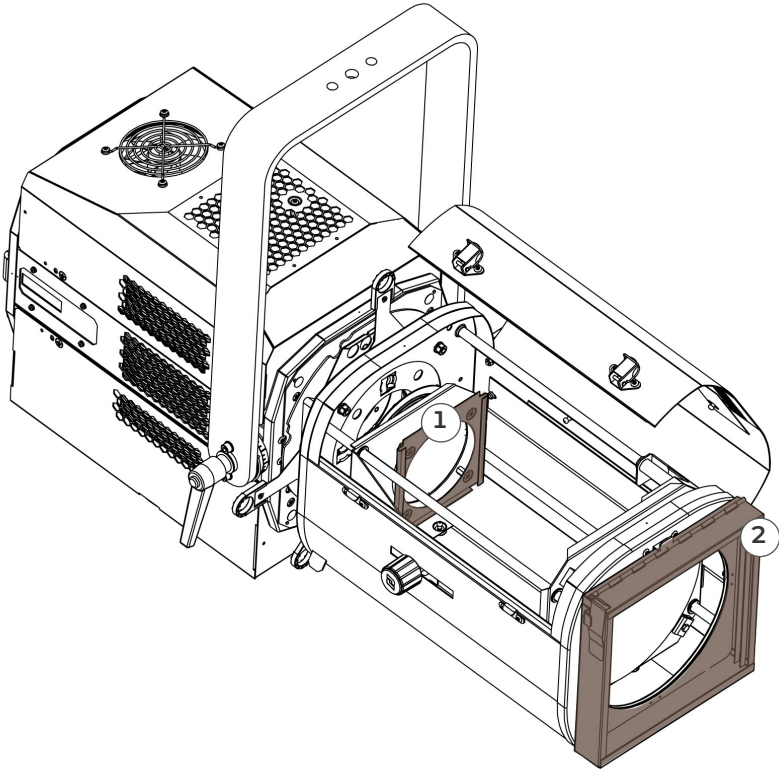
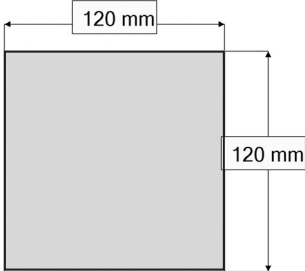
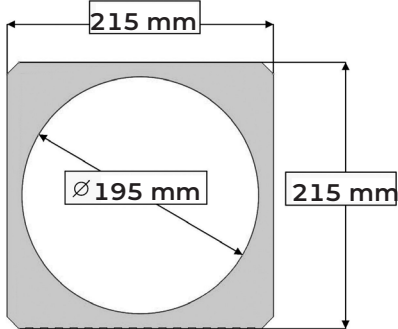
4.7.2 Control



4.8 Colour

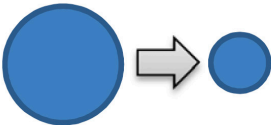


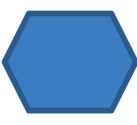
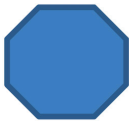
4.8.1 Range

Location		
	1. Internal filter holder	2. Front filter cassette (option)
Type	Frosted or dichroic glass	Coloured gel filter (option)
Dimensions		
Installation	See section: 3.4.4	See section: 3.4.4

4.9 Beam shaping

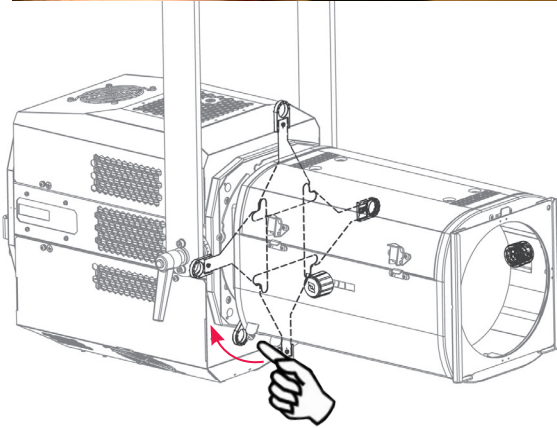
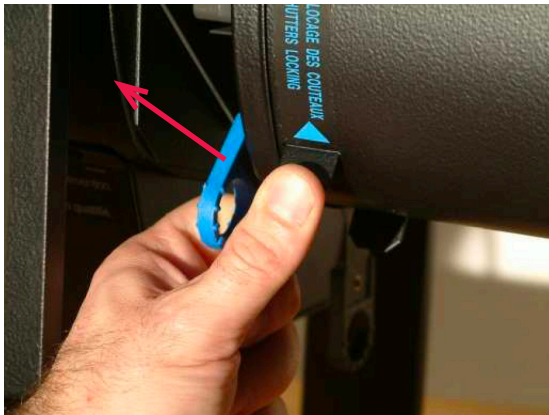
4.9.1 Range

	
Open	Iris

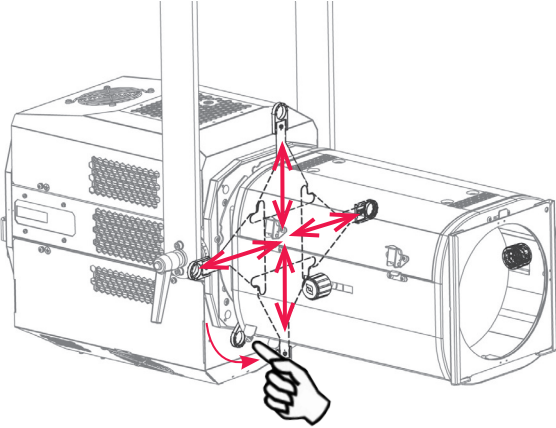
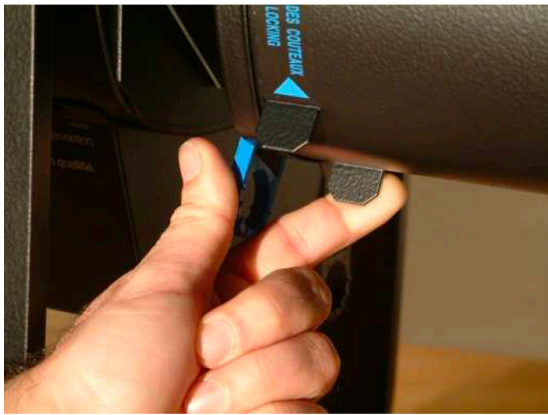
			
1 shutter	2 shutters	3 shutters	4 shutters
			
5 shutters	6 shutters	7 shutters	8 shutters

4.9.2 Control

Locking shutter system

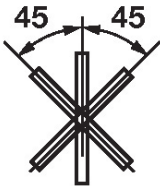


Locked

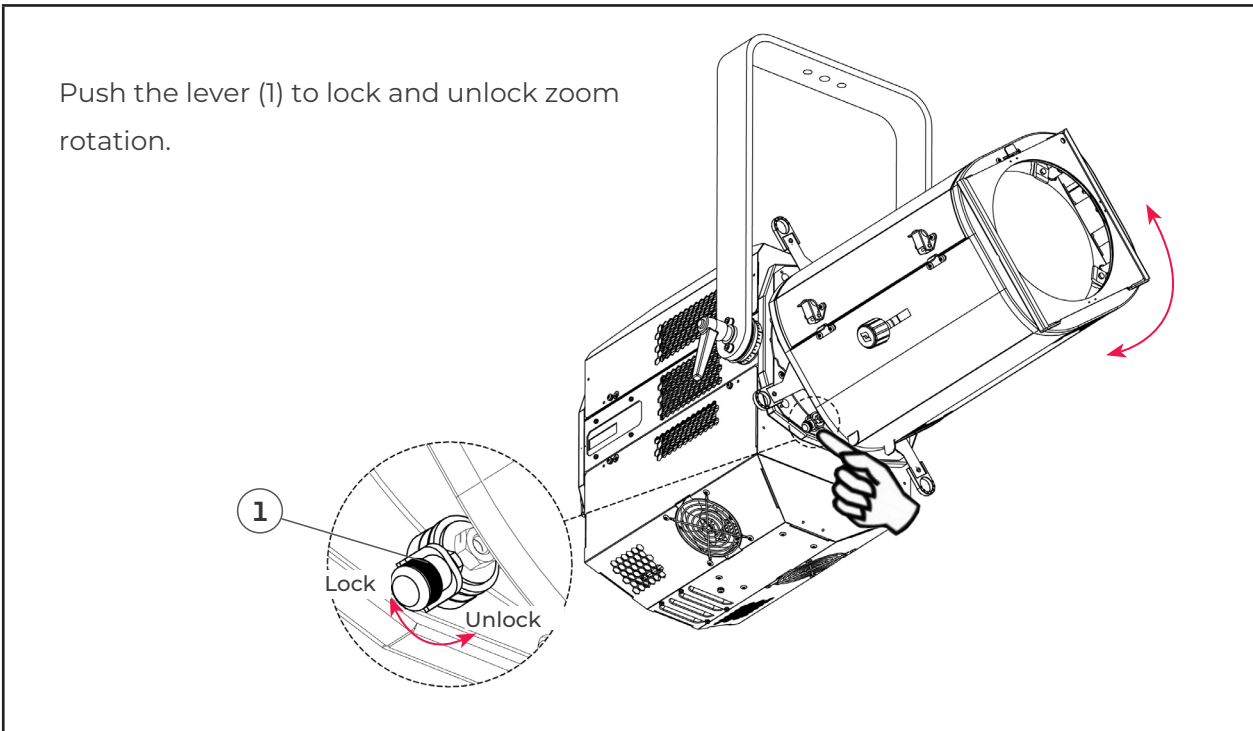


Unlocked

4.10.1 Range

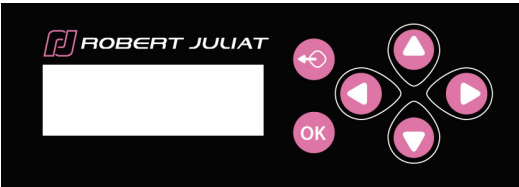
Function		Range
		
Gobo	Shutters	

4.10.2 Control



5.1 Local display and controls

5.1.1 Display

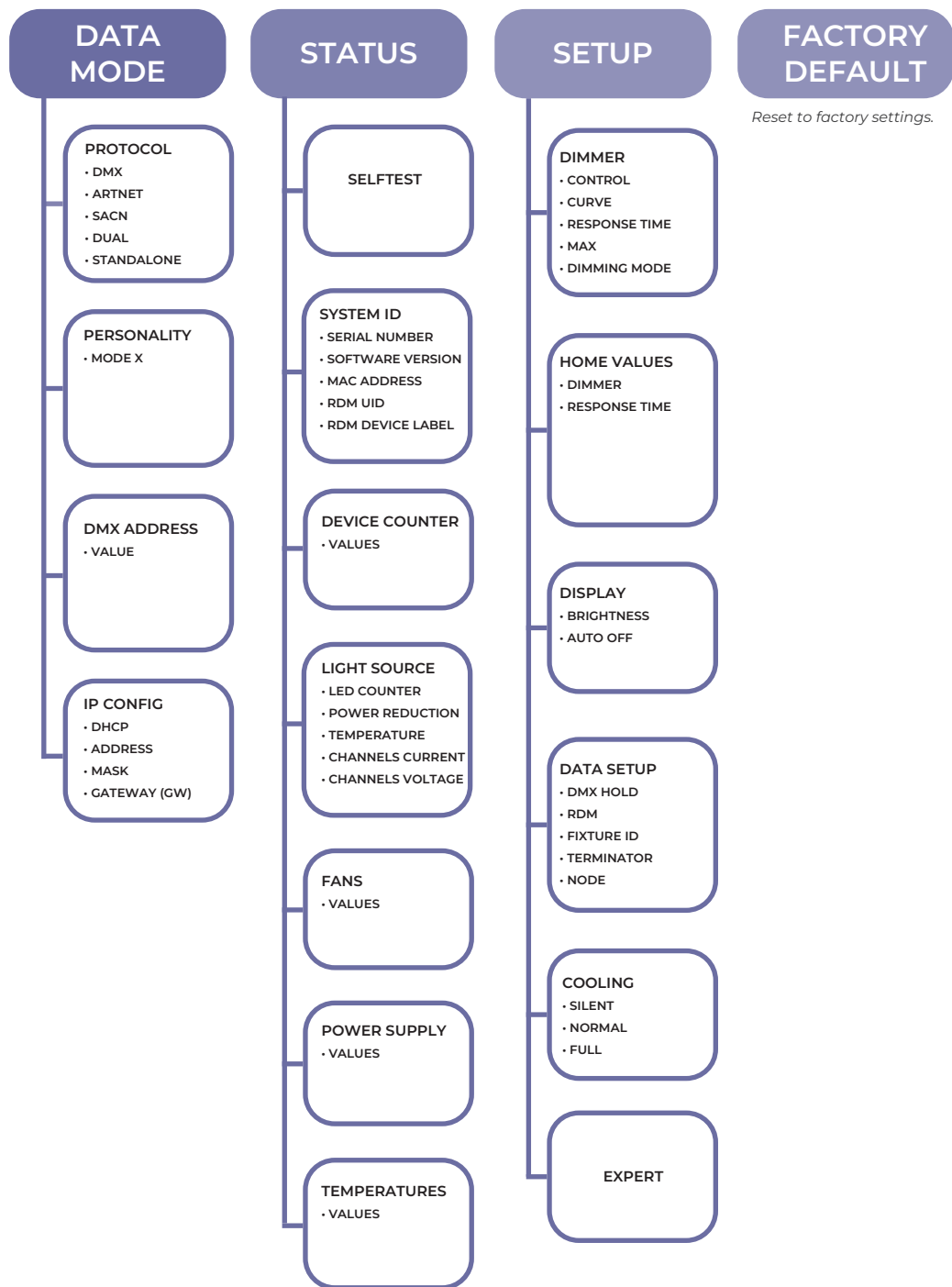


Function	
	Exit the current menu option and/or go back
	Enter the current menu option and/or valid
	Scroll through menus and/or Increase data value
	Scroll through menus and/or Decrease data value
	Scroll through menus and/or Increase data value
	Scroll through menus and/or Decrease data value

5.1.2 Home screen

Display	Mode	Description
DUAL : NO HOLD LAST NO DMX DIMMER: 00-CCT: 3000K	Home	Main display (home screen)
Diagnostic Nothing to report	 x1 push	Diagnostics
Link status : NOK DHCP : OFF IP 192.168.000.013 MASK 255.255.255.000 GW 192.168.000.001	 x1 push	Network information
FOCUS MODE Remaining... 59s	 Press 3 secs.	FOCUS mode

5.1.3 Menu



➔ Selection in menu: SETUP / DISPLAY

Display	Function	Description
SETUP DISPLAY BRIGHTNESS Brightness: 40% Brightness Auto-Off	Brightness	Adjust the intensity of the screen To change value, press buttons:   press OK to validate
SETUP DISPLAY AUTO OFF Always on Timer without warning	Auto-OFF	To keep the main display (home screen) always ON, select : Always ON AUTO OFF AUTO OFF ONLY WARNINGS   press OK to validate Main display turns OFF after 20 seconds

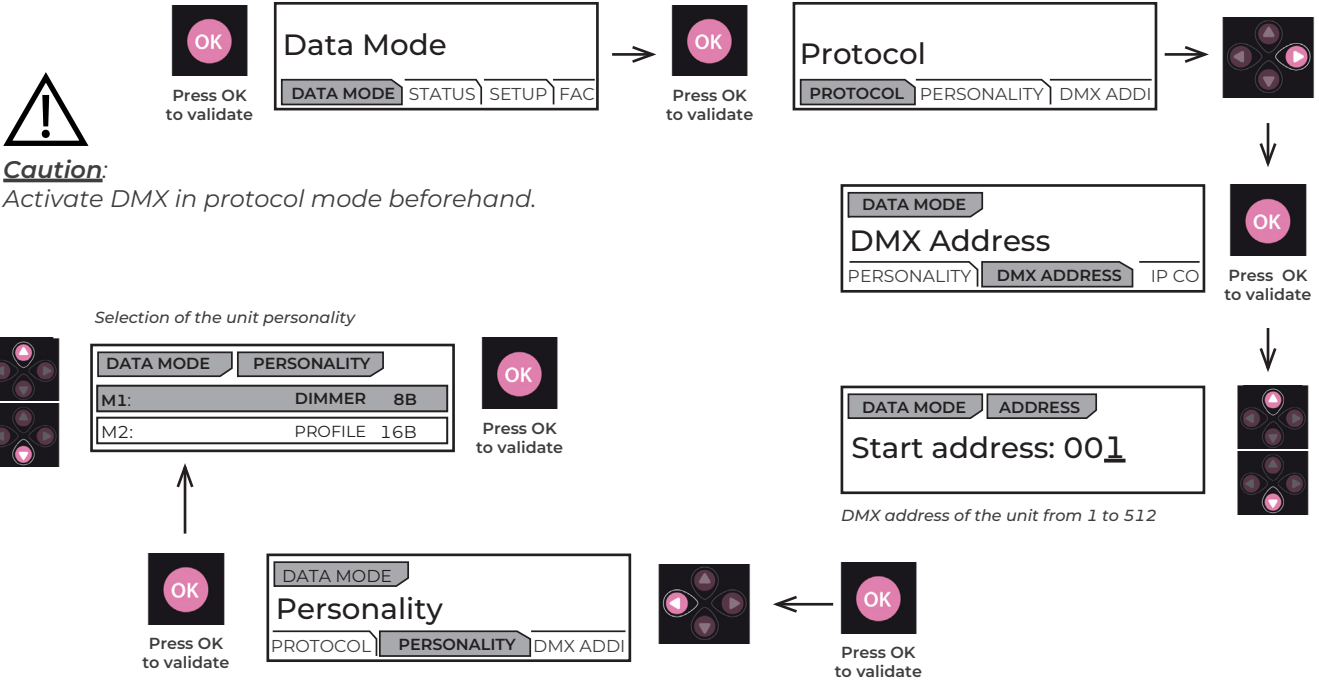
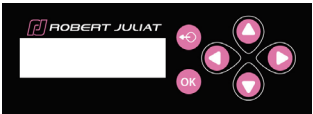
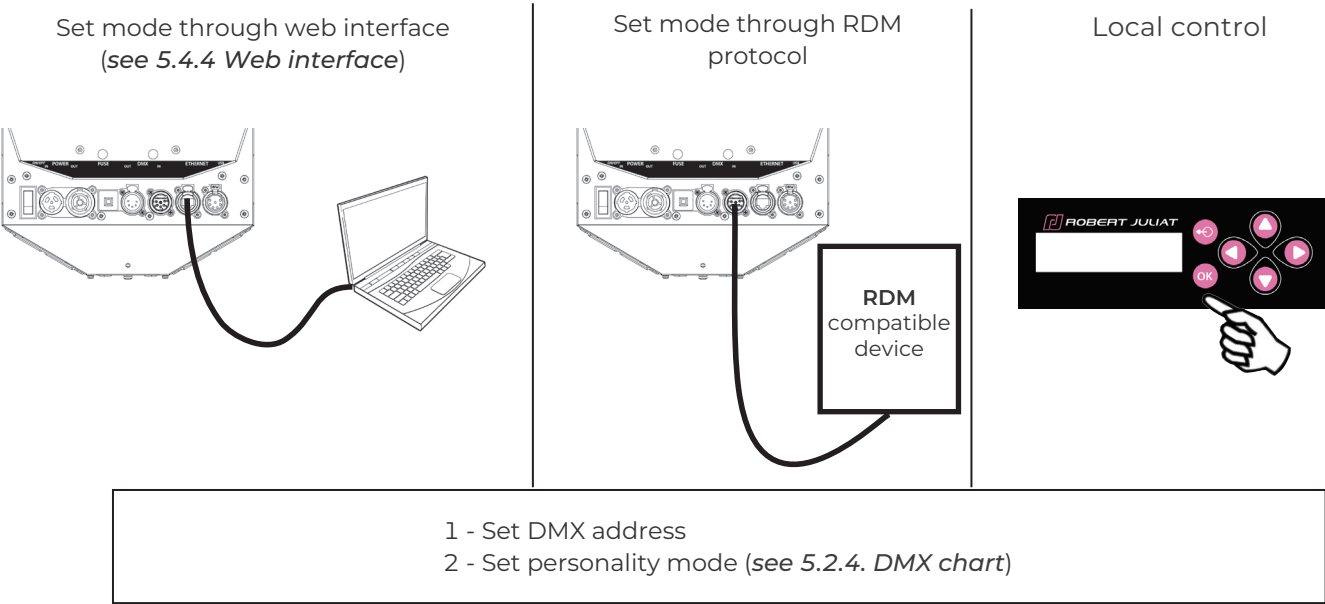
5.2 DMX512 - A remote control



5.2.1 Protocol

E1.11 – 2008, USITT DMX512-A

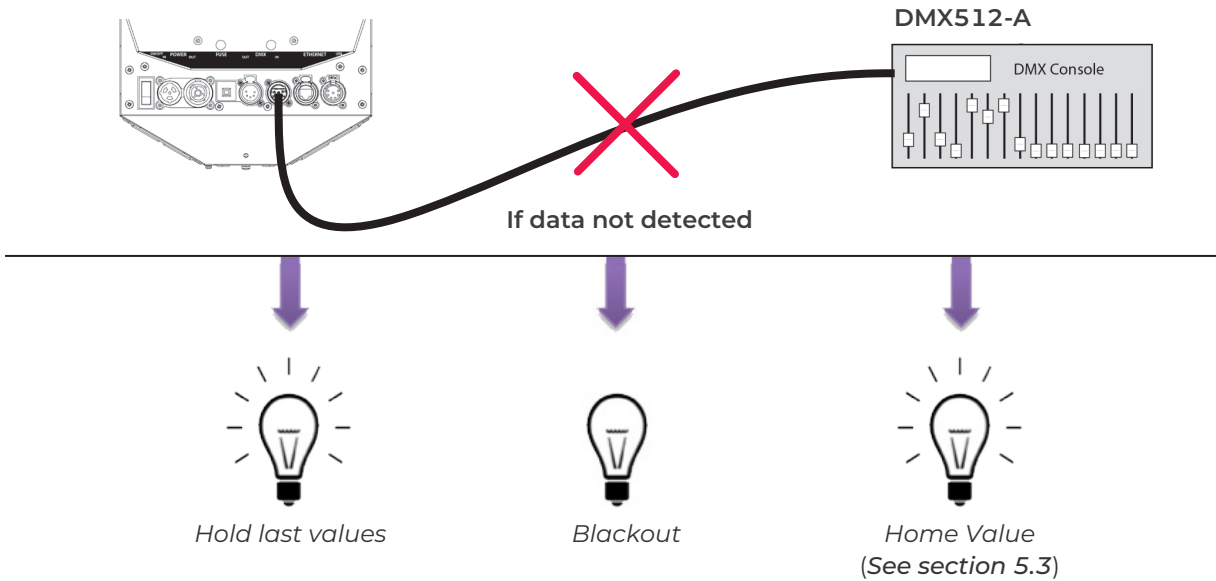
5.2.2 Configuration



5.2.3 Parameters

5.2.3.1 DMX Hold

➔ Selection in SETUP / Data Setup / DMX HOLD menu

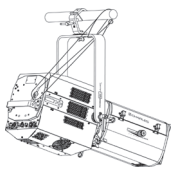
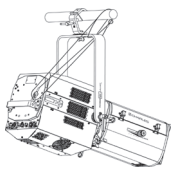
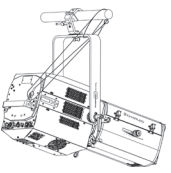
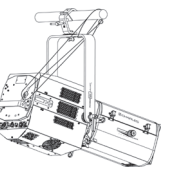
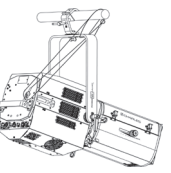
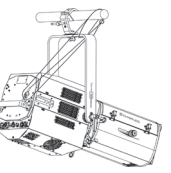


5.2.3.2 Fixture ID

➔ 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.

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

5.2.5 DMX ranges

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

Range min	Range max	Function
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
131	140	Gel fan: Disable
141	150	Gel fan: Enable
151	255	Not used

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

5.2.6.1 Protocol

ANSI E1.20 – 2010 / ANSI E1.37 - 1 / ANSI E1.37 - 2

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
Network Management							
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	✓	✓			✓
Status Collection							
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	✓	✓			
RDM Information							
00 50	SUPPORTED_PARAMETERS	E1.20	✓				✓
00 51	PARAMETER_DESCRIPTION	E1.20	✓				✓
Product Information							
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	✓				✓
DMX512 Setup							
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	✓				✓
Sensors							
02 00	SENSOR_DEFINITION	E1.20	✓				✓
02 01	SENSOR_VALUE	E1.20	✓				✓
Dimmer Settings							
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	✓				✓
Power / Lamp Settings							
04 00	DEVICE_HOURS	E1.20	✓				✓
04 01	LAMP_HOURS	E1.20	✓	✓			✓
Display Settings							
05 01	DISPLAY_LEVEL	E1.20	✓	✓	✓	✓	✓

PID	Description	Standard	Get	Set	Queued_Message	Ack_Timer	SULLY 5.00
Control							
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				✓
RDMnet Management							
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	✓	✓	✓	✓
PID Manufacturer							
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	✓	✓	✓	✓

5.3 Home values

“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:

Functions *	Dimmer8B Mode 1	Dimmer16B Mode 2	Profile8B Mode 3	Profile16B Mode 4	Standalone **
Dimmer	DMX	DMX	DMX	DMX	HOME VALUE
Response time	HOME VALUE	DMX	DMX	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

(*) Functions are displayed according to the selected mode (Mode 1-2-3-4).

- In the case of using one or more functions in Mode 1 / 2 / 3 / 4
Data mode ➔ personality ➔ Mode 1 / Mode 2 / Mode 3 / Mode 4

() 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-configuration **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.

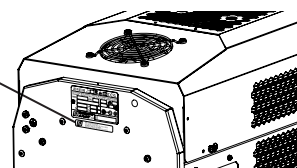
Default IP Address:

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

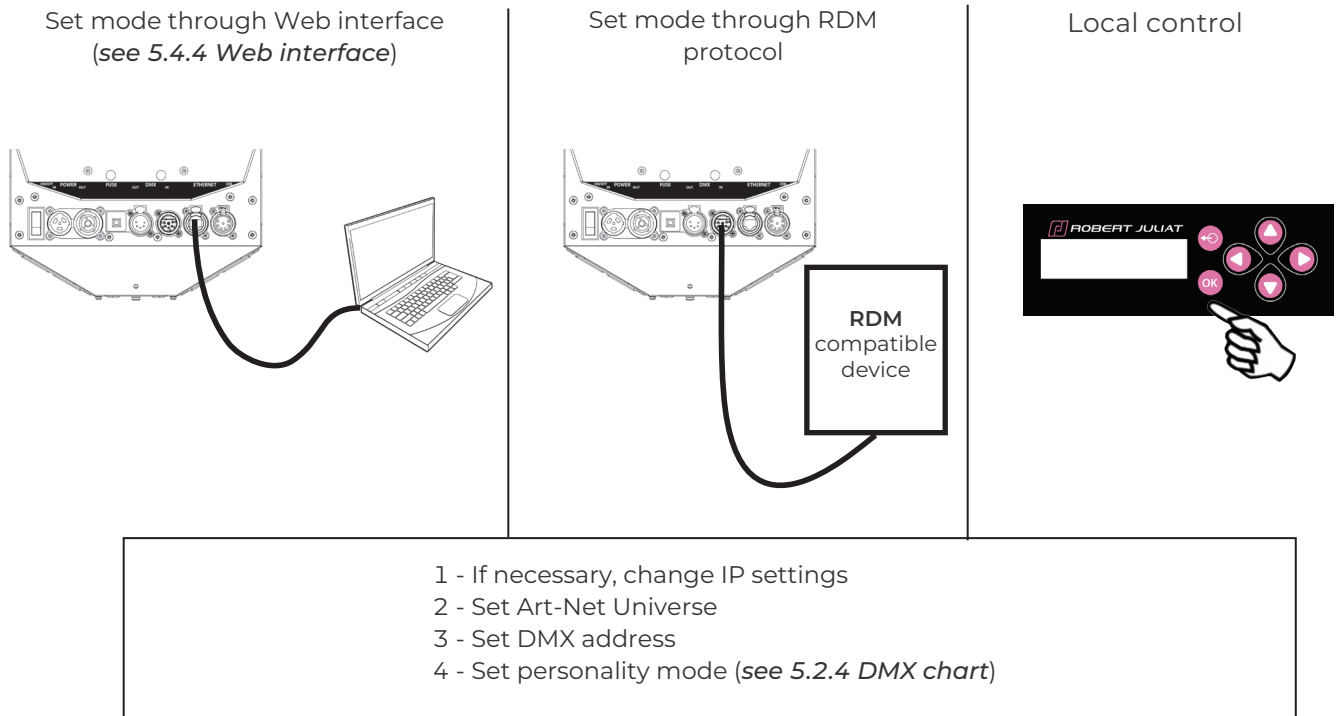
- 1 - Computer IP address: 2.2.2.2
- 2 - Computer subnet mask: 255.0.0.0

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

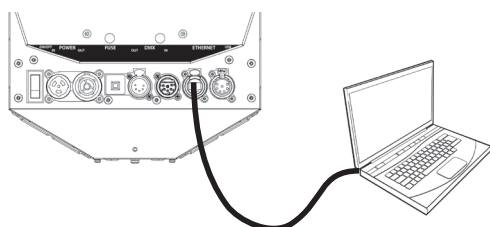


5.4.2.1 Protocol

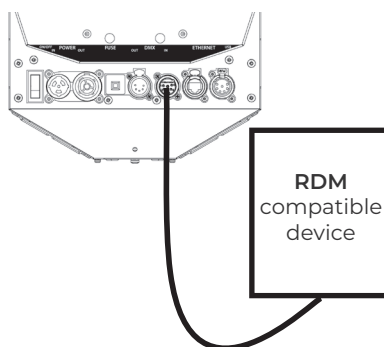
ANSI E1.31 – 2009 sACN (Streaming-ACN)

5.4.2.2 Configuration

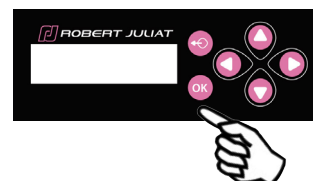
Set mode through Web interface
(see 5.4.4 Web interface)



Set mode through RDM
protocol



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)



5.4.3.1 Protocol

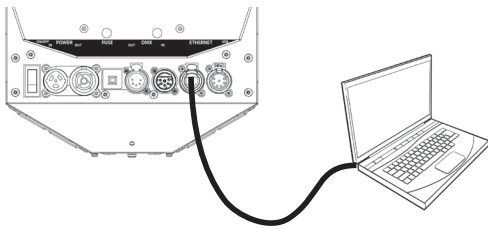
Dual Mode: Available only on an Ethernet network

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.

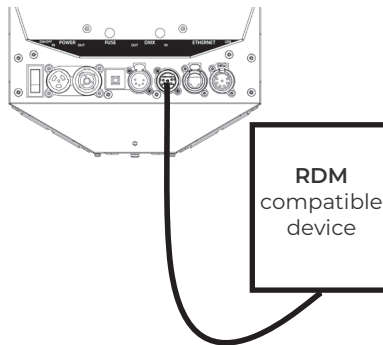
This mode can be set by Web interface or the local control screen.

5.4.3.2 Configuration

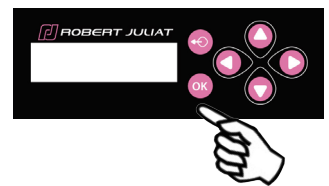
Set mode through Web interface
(see 5.4.4 Web interface)



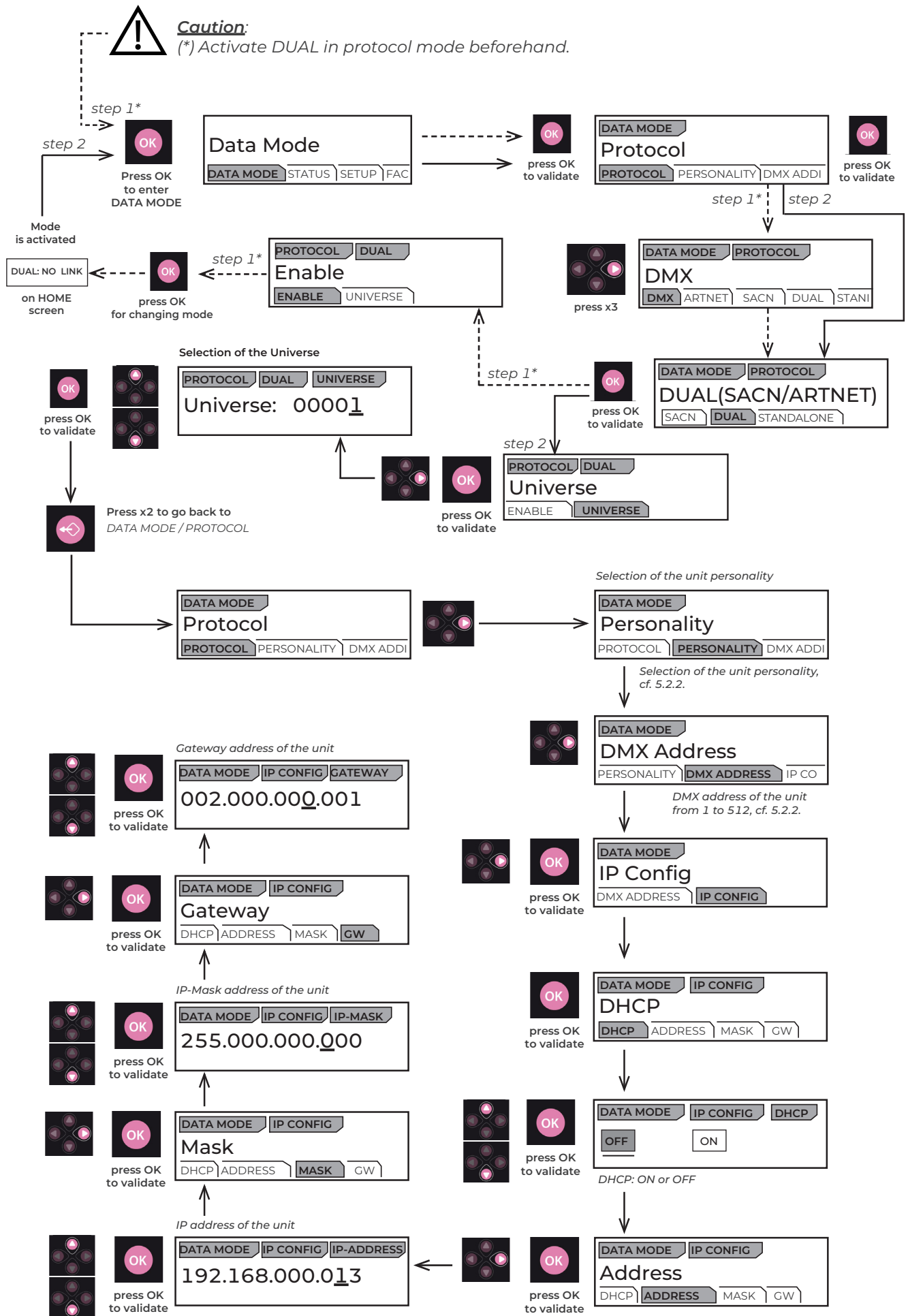
Set mode through RDM
protocol



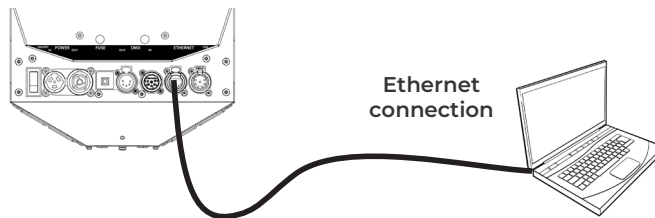
Local control



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



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*

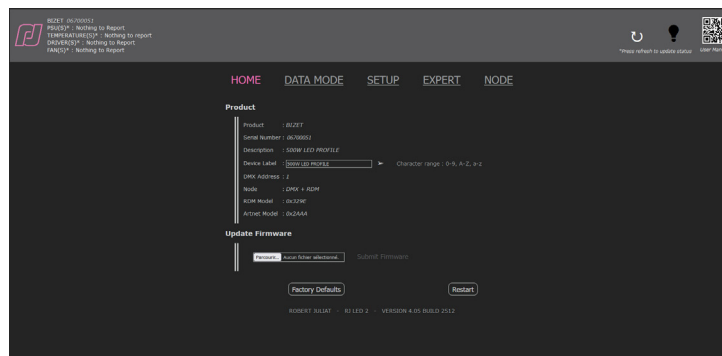
5.4.4.2 Connection to the Web interface

- 1 - Open a web browser (Microsoft Edge, Firefox, Apple Safari...)
- 2 - Enter the fixture's IP address in the browser's address bar

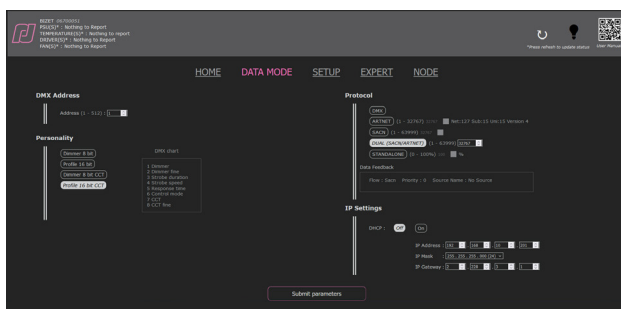


- "00X" is read as "X".
- Never type a zero (0) before the numbers XX or X (*see 5.4.4*)

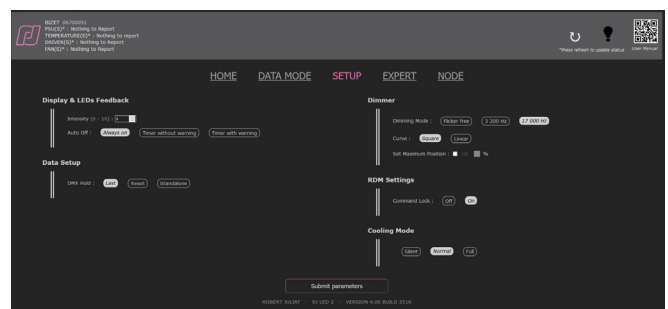
- 3 - The HOME page will appear, and all settings can now be viewed and modified.



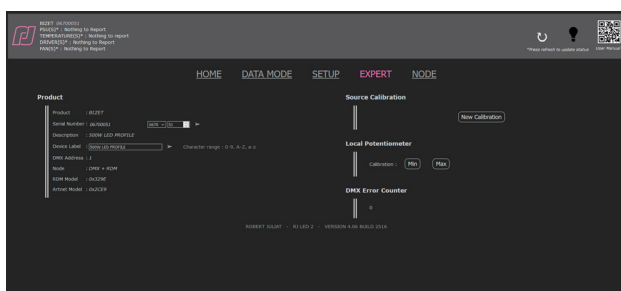
HOME Page



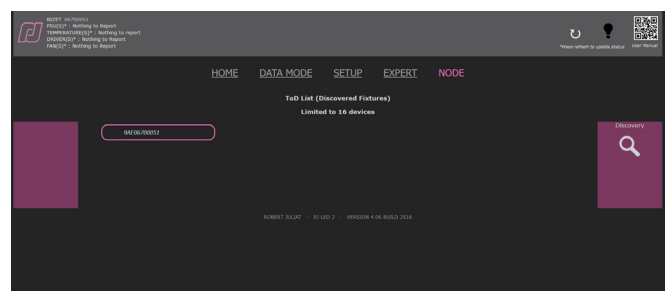
DATA MODE Page



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.

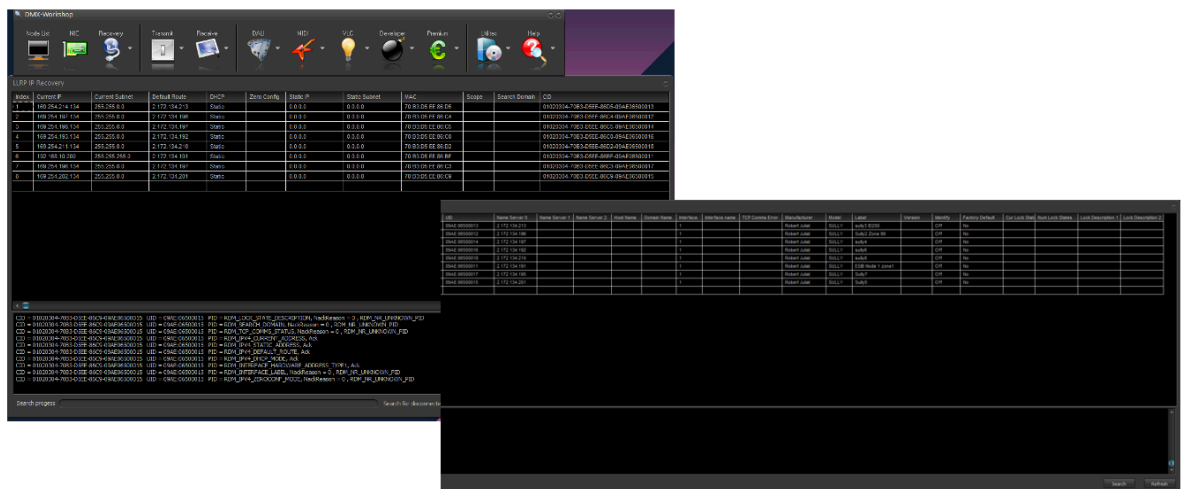
Since multicast addresses are unaffected by a misconfigured subnet mask, LLRP provides an efficient and reliable solution to recover from network misconfiguration.

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>

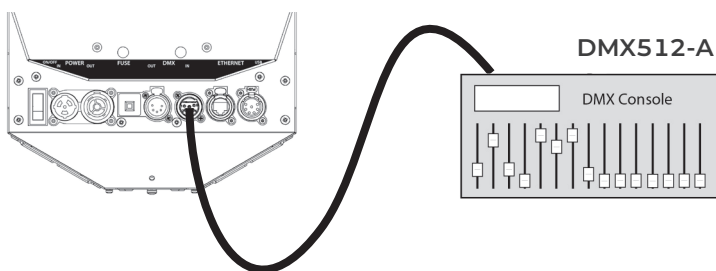
CLU									
NETRON									
	Device Type	Device Name	IP Address	Subnet	Firmware	Web	Manufacturer	Identify	
●	SULLY	sully3 ID200	169.254.214.134	255.255.0.0	--	--	Robert Juliat	○	
●	SULLY	sully8	169.254.211.134	255.255.0.0	--	--	Robert Juliat	○	
●	SULLY	Sully2 Zone	169.254.197.134	255.255.0.0	--	--	Robert Juliat	○	
●	SULLY	ESIB Node 1	192.168.10.200	255.255.255.0	--	--	Robert Juliat	○	
●	SULLY	sully6	169.254.193.134	255.255.0.0	--	--	Robert Juliat	○	
●	SULLY	sully4	169.254.198.134	255.255.0.0	--	--	Robert Juliat	○	
●	SULLY	Sully5	169.254.202.134	255.255.0.0	--	--	Robert Juliat	○	
●	SULLY	Sully7	169.254.196.134	255.255.0.0	--	--	Robert Juliat	○	

5.5 Fan cooling modes

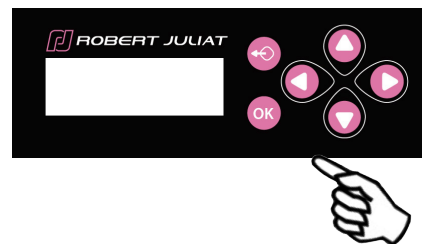
5.5.1 Range

Modes	Silent	Normal	Full
 Cooling Ambiant temperature: 30°C	 < 35 dB(A)	 < 37 dB(A)	 < 39 dB(A)
 Brightness	90%	98%	100%

5.5.2 Control



Remotely by DMX512-A
Mode 1 – 2 – 3 – 4



Locally → selection in
SETUP / COOLING

5.6 GEL FAN mode for the gels (colour changer option)

GEL FAN mode* :

- **Enable**: activates / deactivates the fan of the colour changer.

(*) see 5.2.5.4 Control mode

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.

Front glasses can be cleaned with solutions containing alcohol.

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

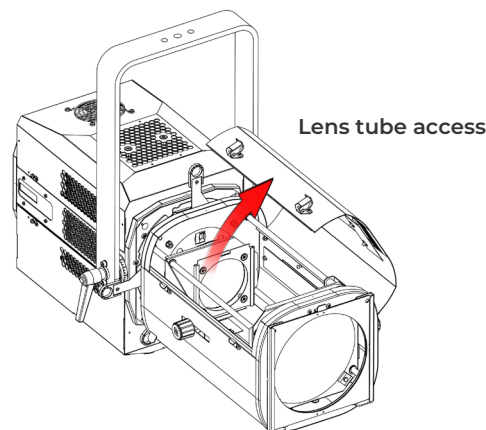


- Do not touch the surface of the LED source (no contact with your hands or any tools).
- Do not put compressed air directly on the source.
- Contact a certified RJ distributor in case of residuals or other objects located on the surface of the LED source.

6.1.5 Optics

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

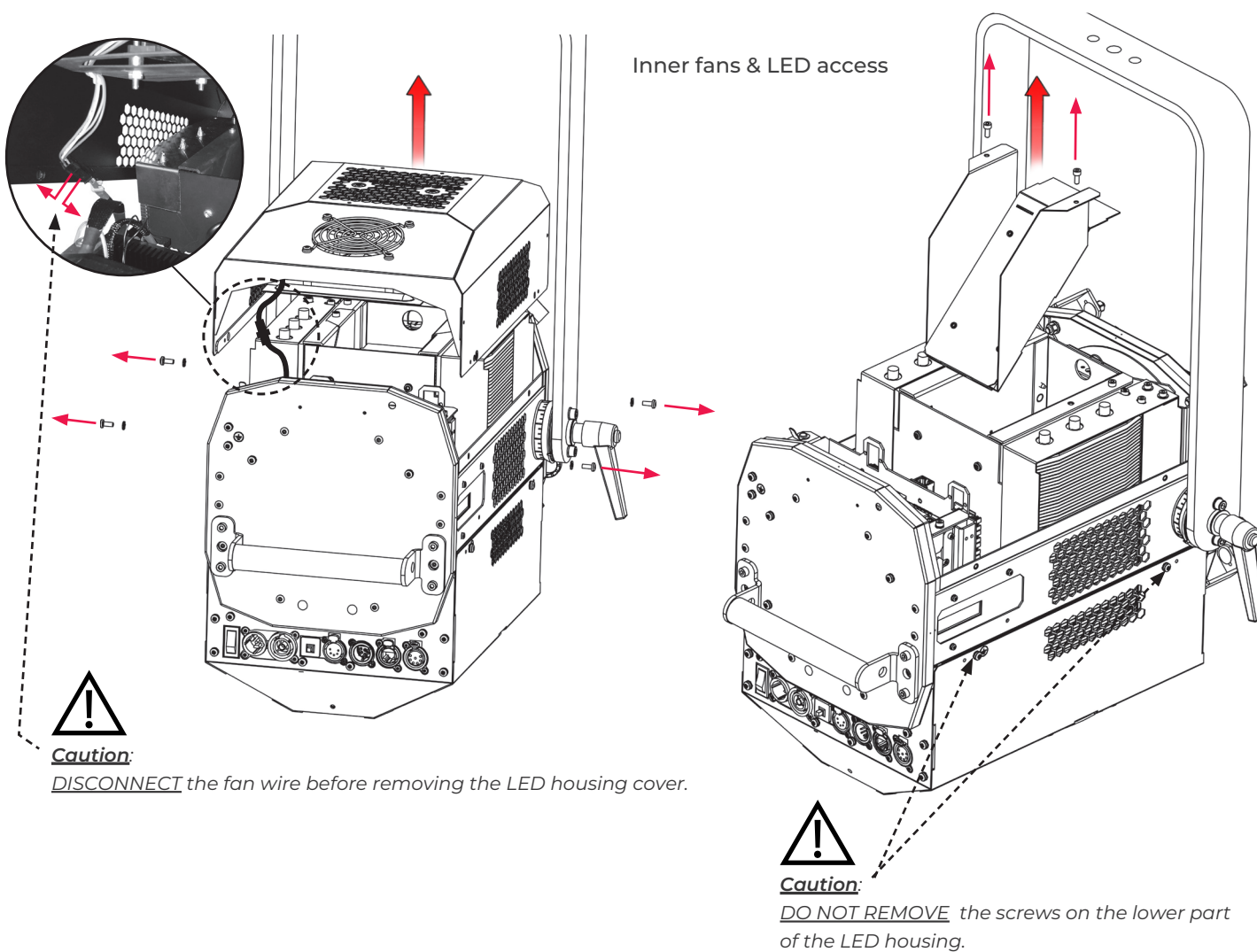
- To clean the optical parts, use a soft cloth in combination with distilled water or isopropyl alcohol recommended for coated optics. Do not use any cleaning product that contains solvents or abrasives, as these can cause surface damage.
- Dry with a soft lint-free cloth.



6.1.6 Inner fans & LED glass protection cleaning

Inner parts & lens holder access.

- 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.



6.2 Analysis

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 section 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.

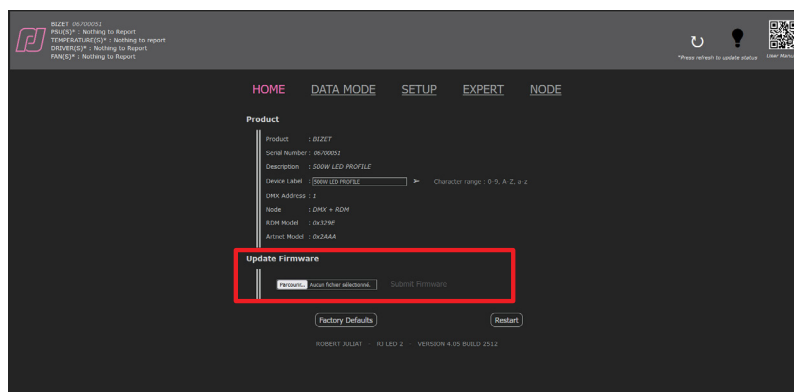
"Power reduction X%" will be shown on the display with the reducing percentage.

6.4 Firmware update

- Download the firmware from the following link :
 - www.robertjuliat.com/LED/PDF_PAGE or scan the QR code:
- Unzip the file. There are 4 files:
 - Firmware (.upd2 format)
 - Firmware history
 - Update procedure
 - User manual from firmware version V5.0x onwards
- Switch on the lighting fixture.
- Connect the fixture to the network using an RJ45 Ethernet cable from your computer.

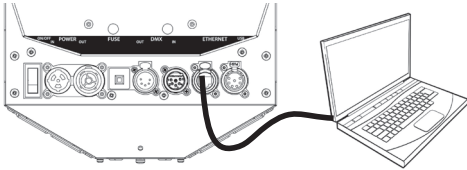
You can either connect it to your lighting network (RJ45) or directly to your computer (RJ45).
- Open a Web browser (Microsoft Edge, Firefox, Apple Safari, etc.).
- Enter the fixture's IP address in the browser's address bar
 - "00X" is read as "X".
- ⚠ Never type a zero (0) before the numbers XX or X (see section 5.4).
- Upload your firmware file (.upd2).

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

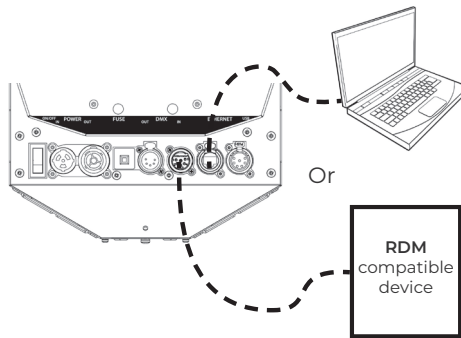


6.5 Factory defaults

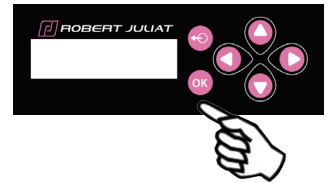
Set to factory defaults /
reset through web interface
(Home page)



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)