Operating Instructions

X4 atom free connect

Version: 1.2 (2018-10-12) - en-us

Content

1 Format conventions

This manual contains recurring descriptive elements that reflect the function of certain information:

⚠️	**Warning** Indicates a hazard with a medium level of risk, that may result in severe injury or death if it is not avoided.

!	**Attention** Risk of equipment damage.

i	**Advice** Indicates a helpful note in the current context.

One or more **bolded** words indicate a term that can be found exactly the same on the product.

One or more *italicized* words indicates an index entry or an important technical term.

1. Instructions are numbered.

    ✓ As are results or outcomes of these actions.

2 Safety

2.1 General safety information

Important information

- Read documentation carefully

- Observe the safety information in this chapter

- Follow instructions and warnings

- Only use equipment as instructed in this document

- Observe notes and symbols on the product

- Keep documentation on hand for later reference

- Pass documentation on to the next user

- Keep available near the system at all times

- Observe documentation for additional components used as well

Danger through electrical voltage

- Only connect equipment to a grounded safety socket

- Do not let the equipment come into contact with liquids or moisture

- Completely cut the power to the equipment before installation, cleaning, maintenance, or repairs

- Do not clean equipment under running water or by immersing in liquid

Proper handling

- Do not make any modifications to the equipment

- Do not drop equipment or expose it to severe mechanical pressure. The equipment can sustain heavy damage from the impact.

- Keep equipment safe from moisture, splashing water, and heat exposure.

- Maintain an adequate distance from surfaces sensitive to hear (min. 20 cm).

- Regularly check equipment for damage. If damaged, turn the equipment off and fully disconnect from the power supply. Contact customer service or retailer.

Maintenance and repair

- Do not repair equipment yourself. Contact customer service or retailer.

2.2 Intended use

This device is developed for commercial use. Private use is not permitted.

It may only be operated indoors or outdoors.

Protect against moisture and spray water.

The device serves as a power source and DMX signal receiver and transmitter for X4 atom headlights at events. It may not be used for any other purpose.

This device is not intended to be used by people with limited physical, sensory or mental capabilities or lack of experience and/or lack of knowledge unless supervised or instructed by a person responsible for their safety the device.

The manufacturer is not liable for damage caused by improper use of the device.

3 Transport and storage

> **!** **Attention**
>
> Do not drop equipment or expose it to severe mechanical pressure. The product can sustain damage from the impact.
>
> Only store equipment in dry areas.

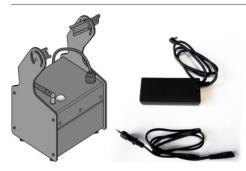Use the supplied or appropriate packaging material for storage and transport.

To lift the device, grasp the casing with both hands.

4 Scope of delivery

> **i** **Advice**
>
> Check the scope of delivery for completeness after unpacking.
>
> Check device for visible damage.

Number/component	Description
1 x X4 atom free connect	
1 x Power cable	To charge the battery
1 x Operating instructions	

> **i** **Advice**
>
> Order optional accessories directly from your specialist retailer. List to be found
> online at www.germanlightproducts.com.
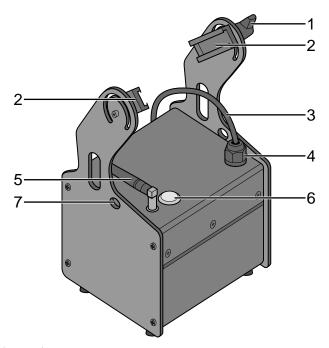
5 Description of devices

Overall view

Image 1: Description - X4 atom free connect

1 Thumb screw   **5** Antenna

2 Fixing rails   **6** On/off latching switch

3 XLR cable   **7** 2 x safety eyelet

4 XLR connection

Underside

Image 2: Description - underside

1 Mains connection   **3** 4 x rubber feet

2 Firmware Update Cover   **4** 3 x M10 threaded connections

6 Assembly and connection

6.1 X4 atom

> **!** **Attention**
> The X4 atom free connect is only compatible with the X4 atom headlight.
>
> ■ Use only an X4 atom head light.

> **i** **Advice**
> Observe the X4 atom's operating instructions.

Assemble the X4 atom

1. If the X4 atom yokes are attached, then remove the yokes.
2. Push the X4 atom with the side brackets into the fixing rails of the X4 atom free connect until the release buttons click into place.
3. Plug the XLR cable into the XLR socket on the back of the X4 atom.
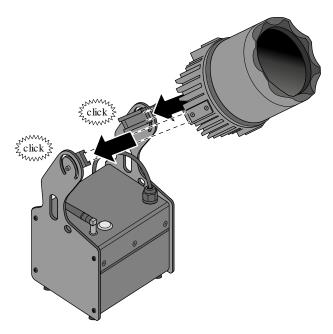   ✓ The X4 atom is assembled on the X4 atom free connect.

Image 3: Assembly X4 atom

Swivel the X4 atom

1. Loosen the side thumb screw with just 1 to 2 turns until the fixation is released.
2. Swing the X4 atom into the desired position. The swing radius is 240°.
3. Tighten the side thumb screw.
   ✓ The X4 atom is in the desired position.

Remove the X4 atom

1. Keep both release buttons pressed on the fixing rails.
2. Slide out the X4 atom at the same time.
   ✓ The X4 atom is removed.

6.2 Set up device

Safety information

■ Only qualified personnel may install the device.

■ Observe VDE 0711-217 requirements.

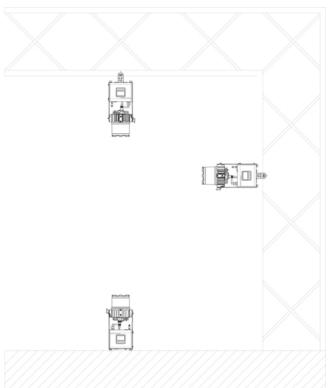The device can be operated standing on the ground, sideways and hanging.

Image 4: Setup possibilities

Set the device on the ground

Conditions

■ Firm, level ground

▸ Place the device on the ground with 4 rubber feet.

    ✓ The device is now ready for use.

Fix the device sideways

Conditions

■ Half coupler

■ M10 threaded screws, max. 11 mm long

1. Screw a half coupler with M10 threaded screws on the underside of the X4 atom free connect in one of the M10 threaded connections.

2. Attach the half coupler to a suitable scaffold with the X4 atom free connect.

3. Secure the X4 atom free connect using the safety eyelets.

    ✓ The device is now ready for use.

Attach the device hanging

Conditions

■ Half coupler

■ M10 threaded screws, max. 11 mm long

1. Screw a half coupler with M10 threaded screws on the underside of the X4 atom free connect into the center M10 threaded connection.

2. Attach the half coupler to a suitable scaffold with the X4 atom free connect.

3. Secure the X4 atom free connect using the safety eyelets.

   ✓ The device is now ready for use.

7 Operation

7.1 Recharge battery

Fully charged, the battery lasts approximately 8 hours depending on usage conditions.

1. Open the cover from the power input on the bottom of the X4 atom free connect.
2. Plug the power cable into the bottom of the X4 atom free connect.
3. Plug in the plug of the power cable into a power socket.
   - ✓ When the battery is charging, the signal light on the power supply is red.
   - ✓ When the battery has fully charged, the signal light on the power supply is green.

7.2 Switch on the device

Conditions
- The battery is charged

▸ Press the on/off switch so that it clicks into place.
   - ✓ After a few seconds, the device is ready for use.

7.3 Establish wireless connection

Conditions
- DMX Transmitter LumenRadio CRMS or compatible systems
- The X4 atom free connect is switched on
- At this time there is no connection to the X4 atom free connect

▸ Press the left button on the DMX transmitter.
   - ✓ The transmitter automatically connects to all receiving devices that are within range.

Disconnect wireless connection

On the X4 atom free connect
1. Open the menu **Special**.
2. Choose **Unlink wireless** and confirm with **OK**.
   - ✓ In **Wireless PDA**-Menu appears on 00.
   - ✓ The wireless connection is disconnected.

At the DMX transmitter
▸ Choose "unlink all".
   - ✓ The wireless connection is disconnected.

7.4 Control device

Control panel
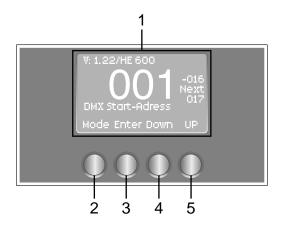

Image 5: Control panel

1 Display

2 **MODE**: Opens the main menu

3 **ENTER**: Open menu item or confirm setting

4 **DOWN**: Navigate up/increase value

5 **UP**: Navigate down/decrease value

Use DMX control

> **Conditions**
> ■ There is a radio connection between X4 atom free connect and the DMX transmitter

▸ Control the X4 atom free connect with a DMX control.

7.5 Menu structure

The menu structure consists of up to 5 menu levels.

7.5.1 DMX start address

Level 2	Level 3	Level 4	Level 5
1 - 511			

7.5.2 DMX LED start address

Level 2	Level 3	Level 4	Level 5
1-504			

7.5.3 DMX channel layout

GLP X4 "Atom" RGBW Free Connect - 12 Way

Channel	Function	Description	%-Range	DMX	Comments
1	Master Intensity	Master fixture intensity	0 - 100%	0...255	Primary Intensity Channel over all fixtures connected
2	Special / Control (All fixtures)	No Function	0 - 19.5%	0...50	
		Activate Silent Mode (hold value for more than 1 second)	20 - 25%	51...64	Activate silent mode on all fixtures

Channel	Function	Description	%-Range	DMX	Comments
		No Function	25.5 - 38.5%	65...99	
		Change PWM Frequency (hold value for more than 1 second)	39 - 78.5%	100...200	Variabally adjust PWM frequency from 582 to 618 Hz
		All control (hold value for more than 0.5 seconds)	79 - 97%	201...247	Copy 1 channel to all channel
		Reset all fixtures (hold value for more than 0.5 seconds)	97.5 - 100%	248...255	
3	Fixture 1 Dimmer	Intensity control for set 1 pixels	0 - 100%	0...255	Intensity for fixture 1 only
4	Fixture 1 Shutter	Shutter Closed	0 - 5.5%	0...15	
		Random strobe - Slow to Fast	6 - 18.5%	16...47	
		Fade on, Snap off, Random - Slow to Fast	19 - 31%	48...79	
		Snap on, Fade off, Random - Slow to Fast	32 - 43%	80...111	
		Fade on, Fade off, Random - Slow to Fast	44 - 56%	112...143	
		Strobe with b/o pause	63 - 77%	144...199	
		Strobe - Slow to Fast	78 - 94%	200...239	
		Shutter Open	95 - 100%	239...255	
5	Fixture 1 Color	No effect	0 - 2.5%	0...7	Colors determined via RGBW channels
		Red	3 - 5.5%	8...15	
		Amber	6 - 8.5%	16...23	
		Warm Yellow	9 - 12.5%	24...31	
		Yellow	13 - 15.5%	32...39	
		Green	16 - 18.5%	40...47	
		Turquoise	19 - 21.5%	48...55	
		Cyan	22 - 24.5%	56...63	
		Blue	25 - 27.5%	64...71	
		Lavender	28 - 30.5%	72...79	
		Mauve	31 - 34.5%	80...87	
		Magenta	35 - 37.5%	88...95	

Channel	Function	Description	%-Range	DMX	Comments
		Pink	38 - 40.5%	96...103	
		CTC 3200K	41 - 43.5%	104...111	
		CTC 5600K	44 - 46.5%	112...119	
		CTC 7200K	47 - 49.5%	120...127	
		Rainbow Effect - Stop	50%	128	
		Rainbow Effect - Slow to Fast	51 - 88%	129...223	
		Random Colors - Slow to Fast	89 - 100%	224...255	
6	Fixture 1 Red	Red Intensity	0 - 100%	0...255	
7	Fixture 1 Green	Green Intemsity	0 - 100%	0...255	
8	Fixture 1 Blue	Blue Intensity	0 - 100%	0...255	
9	Fixture 1 White	White Intensity	0 - 100%	0...255	
10	Fixture 1 Zoom	Variable, wide to narrow (50 to 7 degrees)	0 - 100%	0...255	
11	Fixture 1 CTO	No Function	0 - 3%	0...7	Colors determined via RGBW channels
		Variable CTO (10000K-2700K)	3 - 100%	8...255	

GLP X4 "Atom" White Free Connect - 12 Way

Channel	Function	Description	%-Range	DMX	Comments
1	Master Intensity	Master fixture intensity	0 - 100%	0...255	Primary Intensity Channel over all fixtures connected
2	Special / Control (All fixtures)	No Function	0 - 19.5%	0...50	
		Activate Silent Mode (hold value for more than 1 second)	20 - 25%	51...64	Activate silent mode on all fixtures
		No Function	25.5 - 38.5%	65...99	
		Change PWM Frequency (hold value for more than 1 second)	39 - 78.5%	100...200	Variabally adjust PWM frequency from 582 to 618 Hz
		All control (hold value for more than 0.5 seconds)	79 - 97%	201...247	Copy 1 channel to all channel

Channel	Function	Description	%-Range	DMX	Comments
		Reset all fixtures (hold value for more than 0.5 seconds)	97.5 - 100%	248...255	
3	Fixture 1 Dimmer	Intensity control for set 1 pixels	0 - 100%	0...255	Intensity for fixture 1 only
4	Fixture 1 Shutter	Shutter Closed	0 - 5.5%	0...15	
		Random strobe - Slow to Fast	6 - 18.5%	16...47	
		Fade on, Snap off, Random - Slow to Fast	19 - 31%	48...79	
		Snap on, Fade off, Random - Slow to Fast	32 - 43%	80...111	
		Fade on, Fade off, Random - Slow to Fast	44 - 56%	112...143	
		Strobe with b/o pause	63 - 77%	144...199	
		Strobe - Slow to Fast	78 - 94%	200...239	
		Shutter Open	95 - 100%	239...255	
5	Fixture 1 Color white	Color white Intensity	0 - 100%	0...255	
6	Fixture 1 warm white	warm white Intensity	0 - 100%	0...255	
7	Fixture 1 Zoom	Variable, wide to narrow (50 to 7 degrees)	0 - 100%	0...255	
8	Fixture 1 CTO	No Function	0 - 3%	0...7	
		Variable CTO (10000K-2700K)	3 - 100%	8...255	
9	Fixture 2 Dimmer	Intensity control for set 1 pixels	0 - 100%	0..255	Intensity for fixture 2 only
10	Fixture 2 Shutter	Shutter Closed	0 - 5.5%	0...15	
		Random strobe - Slow to Fast	6 - 18.5%	16...47	
		Fade on, Snap off, Random - Slow to Fast	19 - 31%	48...79	
		Snap on, Fade off, Random - Slow to Fast	32 - 43%	80...111	
		Fade on, Fade off, Random - Slow to Fast	44 - 56%	112...143	

Channel	Function	Description	%-Range	DMX	Comments
		Strobe with b/o pause	63 - 77%	144...199	
		Strobe - Slow to Fast	78 - 94%	200...239	
		Shutter Open	95 - 100%	239...255	

GLP X4 "Atom" RGBW Free Connect – Compressed mode

Channel	Function	Description	%-Range	DMX	Comments
1	Master Intensity	Master fixture intensity	0 - 100%	0...255	Primary Intensity Channel over all fixtures connected
2	Special / Control (All fixtures)	No Function	0 - 19.5%	0...50	
		No Function	20 - 25%	51...64	
		No Function	25.5 - 38.5%	65...99	
		Change PWM Frequency (hold value for more than 1 second)	39 - 78.5%	100...200	Variabally adjust PWM frequency from 582 to 618 Hz
		All control (hold value for more than 0.5 seconds)	79 - 97%	201...247	Copy 1 channel to all channel
		Reset all fixtures (hold value for more than 0.5 seconds)	97.5 - 100%	248...255	
3	Fixture 1 Shutter	Shutter Closed	0 - 5.5%	0...15	
		Random strobe - Slow to Fast	6 - 18.5%	16...47	
		Fade on, Snap off, Random - Slow to Fast	19 - 31%	48...79	
		Snap on, Fade off, Random - Slow to Fast	32 - 43%	80...111	
		Fade on, Fade off, Random - Slow to Fast	44 - 56%	112...143	
		Strobe with b/o pause	63 - 77%	144...199	
		Strobe - Slow to Fast	78 - 94%	200...239	
		Shutter Open	95 - 100%	239...255	
4	Red	Red Intensity	0 - 100%	0...255	
5	Green	Green Intemsity	0 - 100%	0...255	

Channel	Function	Description	%-Range	DMX	Comments
6	Blue	Blue Intensity	0 - 100%	0...255	
7	White	White Intensity	0 - 100%	0...255	
8	Zoom	Variable, wide to narrow (50 to 7 degrees)	0 - 100%	0...255	

7.5.4 Special

Level 2	Level 3	Level 4	Level 5
Manual DMX	Master intensity	0-255	
	Fixture	1-12	
	Zoom	0-255	
	Special	0-255	
	White temperature	0-255	
	Dimmer	0-255	
	Shutter	0-255	
	White	0-255	
	Blue	0-255	
	Green	0-255	
	Red	0-255	
	Color wheel	0-255	
Adjust	Key code	0-255	
	Display contrast	(-8)-8	
	PWM-frequency adjust	582-618	
	Max zoom adjust	(-99)-99	
	Self inspection		
	LED adjust	White adjust red	(-99)-99
		White adjust green	(-99)-99
		White adjust blue	(-99)-99
		White adjust white	(-99)-99
		Offset adjust red	(-99)-99
		Offset adjust green	(-99)-99
		Offset adjust blue	(-99)-99
		Offset adjust white	(-99)-99

Level 2	Level 3	Level 4	Level 5
		Fixture	1-12
Battery cycle count	0-512		
Wireless PDR	0-100		
Unlink wireless			
Default full feature			
Display black out	ON/OFF		
DMX hold	ON/OFF		
Set DMX image	Set image if DMX off	ON/OFF	
	Save image in memory		
Set dimming mode	Linear dimming		
	Extr.soft dimming		
	Soft dimming		
DMX input monitor	Master intensity	0-255	
	Fixture	1-12	
	Zoom	0-255	
	Special	0-255	
	White temperature	0-255	
	Dimmer	0-255	
	Shutter	0-255	
	White	0-255	
	Blue	0-255	
	Green	0-255	
	Red	0-255	
	Color wheel	0-255	

7.5.5 Self test program

Level 2	Level 3	Level 4	Level 5
ON/OFF			

7.5.6 Live time

Level 2	Level 3	Level 4	Level 5
0 - 99999			

7.5.7 Set DMX mode

Level 2	Level 3	Level 4	Level 5
DMX RGBW mode			
DMX white mode			
DMX compressed mode			

7.5.8 Reset

Level 2	Level 3	Level 4	Level 5
ON/OFF			

7.6 Switch off device

▸ Disconnect the device from the power supply.

    ✓ The device is switched off.

8 Cleaning and maintenance

The X4 atom free connect is a low-maintenance device. Depending on the operating environment, surfaces must nevertheless be cleaned at regular intervals.

Warning

Danger of electrical shock. Electric cables can cause serious injury if they come into contact with cleaning agents.

- Disconnect the mains plug before cleaning.
- Observe local health and safety regulations.
- Wait until the device has cooled down after previous operation.
- Do not repair the device yourself. Contact the customer service or retailer. (see chapter 11)

1. Clean the surface with a dry, soft and clean cloth.

! **Attention**

Do not use aggressive detergents, alcohol or other chemical agents.

2. Suck or sweep away dust from the openings.
   ✓ The cleaning is complete.

9 Technical data

Version	X4 atom free connect
Voltage output	24 V ± 0,5 V
Output current	2,5 A ± 0,5 A
Effective range	120 M 130 yd
IP-protection class	IP65
Safety certificate	UN38.3
Device dimensions	259 x 150 x 140 mm 10.2 x 5.91 x 5.51 inch
Weight (net)	4.1 kg 9.04 lbs
Compatible systems	LumenRadio CRMX and compatible systems
	Battery
Capacity	7.650 mAh
Input	42.5 VAC, 3 A
Output	42 VDC, 15 A
	Power supply
Power input	100 – 240 VAC~50/60 Hz 1.2 A 120 VA
Output power	42.5 VAC, 2 A
	Antenna
S.W.R.	<= 2.5 @ 2400 – 2500 MHz
Frequency range	2400 – 2500 MHz
Impedance	50 Ohm
Profit (max.)	2.8 dBi @ 2400 – 2500 MHz
Polarization	Vertical
	Operating conditions
Operating temperature	0 – 45°C 32 – 113°F
Storage temperature	-20 – 45°C -4 – 113°F
Humidity	Maximum 90%, non-condensing

10 Recycling/disposal/environmental protection

Recycling

Dispose of packaging material in an environmentally friendly manner in accordance with local waste disposal regulations.

Dispose of residues of operating materials in accordance with locally or operationally applicable disposal regulations.

After decommissioning and disassembly of the system or individual components, these must be disposed of in agreement with the manufacturer according to local regulations.

Do not dispose of batteries and rechargeable batteries in household waste. Dispose of batteries and rechargeable batteries at designated collection points.

This device is marked in accordance with the European Directive 2012/19/EU on waste electrical and electronic equipment.

Electrical and electronic devices must not be disposed of with household waste. Their components must be supplied separately for reuse and disposal.

At the end of its service life, return the device free-of-charge to the manufacturer, point of sale or a public collection point set up for this purpose.

11 Contact

Manufacturer

GLP German Light Products, Inc.

1145 Arroyo Ave., Unit A

San Fernando, CA 91340

Support

Online	www.germanlightproducts.com
	To use the online support, it is required to go through a one-time registration process. Then log into the online support using your registered user account.
E-mail	support@germanlightproducts.com
Phone	+1 818 767 8899