



W-DMX Box G5

Transceiver

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Table of contents

1	General information.....	5
1.1	Symbols and signal words.....	5
2	Safety instructions.....	7
3	Features.....	10
4	Installation.....	11
5	Starting up.....	12
6	Connections and controls.....	15
7	Operating.....	19
8	Technical specifications.....	21
9	Plug and connection assignment.....	23
10	Troubleshooting.....	24
11	Protecting the environment.....	27



1 General information



This document contains important instructions for the safe operation of the product. Read and follow the safety instructions and all other instructions. Keep the document for future reference. Make sure that it is available to all those using the product. If you sell the product to another user, be sure that they also receive this document.

Our products and documentation are subject to a process of continuous development. They are therefore subject to change. Please refer to the latest version of the documentation, which is ready for download under www.thomann.de.

1.1 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this document.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.

Warning signs	Type of danger
	Warning – high-voltage.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended for the wireless transmission of DMX signals in lighting systems. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety



DANGER!

Risk of injury and choking hazard for children!

Children can suffocate on packaging material and small parts. Children can injure themselves when handling the device. Never allow children to play with the packaging material and the device. Always store packaging material out of the reach of babies and small children. Always dispose of packaging material properly when it is not in use. Never allow children to use the device without supervision. Keep small parts away from children and make sure that the device does not shed any small parts (such knobs) that children could play with.



DANGER!

Danger to life due to electric current!

Within the device there are areas where high voltages may be present. Never remove any covers. There are no user-serviceable parts inside. Do not use the device when covers, safety equipment or optical components are missing or damaged.



DANGER!

Risk of death from electrical current!

A short circuit can cause fires and loss of life. Always use properly insulated, tripe-core mains cable. Do not modify the mains cable. If the insulation is damaged, immediately switch off the power supply and have it repaired. If in doubt, contact a qualified electrician.



NOTICE!

Risk of fire due to covered vents and neighbouring heat sources!

If the vents of the device are covered or the device is operated in the immediate vicinity of other heat sources, the device can over-heat and burst into flames. Never cover the device or the vents. Do not install the device in the immediate vicinity of other heat sources. Never operate the device in the immediate vicinity of naked flames.



NOTICE!

Damage to the device if operated in unsuitable ambient conditions!

The device can be damaged if it is operated in unsuitable ambient conditions. Only operate the device indoors within the ambient conditions specified in the “Technical specifications” chapter of this user manual. Avoid operating it in environments with direct sunlight, heavy dirt and strong vibrations. Avoid operating it in environments with strong temperature fluctuations. If temperature fluctuations cannot be avoided (for example after transport in low outside temperatures), do not switch on the device immediately. Never subject the device to liquids or moisture. Never move the device to another location while it is in operation. In environments with increased dirt levels (for example due to dust, smoke, nicotine or mist): Have the device cleaned by qualified specialists at regular intervals to prevent damage due to overheating and other malfunctions.



NOTICE!

Damage to the device due to high voltages!

The device can be damaged if it is operated with the incorrect voltage or if high voltage peaks occur. In the worst case, excess voltages can also cause a risk of injury and fires. Make sure that the voltage specification on the device matches the local power grid before plugging in the device. Only operate the device from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). As a precaution, disconnect the device from the power grid when storms are approaching or if the device will not be used for a longer period.

**NOTICE!****Radio interference due to electromagnetic fields!**

The unit emits electromagnetic radio signals. Overlapping radio waves may cause interference with the device and other devices. Do not use the device in locations where the use of wireless devices is prohibited.

**NOTICE!****Possible staining due to plasticiser in rubber feet!**

The plasticiser contained in the rubber feet of this product may react with the coating of the floor and cause permanent dark stains after some time. If necessary, use a suitable mat or felt slide to prevent direct contact between the device's rubber feet and the floor.

3 Features

Special features of the device:

- Wireless Solution G5 radio unit
- Switchable operating mode: Transmitter or receiver
- Control via switch and a button on the device
- Supports RDM
- LED displays for operating status and signal strength
- Power Twist TR1 connector for power supply (power cord included)
- 2 unscrewable antennas (2 dB and 5 dB)
- Detachable Omega bracket with M10 thread
- DMX adapter XLR 3-pin to 5-pin and 5-pin to 3-pin included

4 Installation

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.



NOTICE!

Data transfer errors due to improper wiring!

If the DMX connections are wired incorrectly, this can cause errors during the data transfer.

Do not connect the DMX input and output to audio devices, e.g. mixers or amplifiers.

Use special DMX cables for the wiring instead of normal microphone cables.

5 Starting up

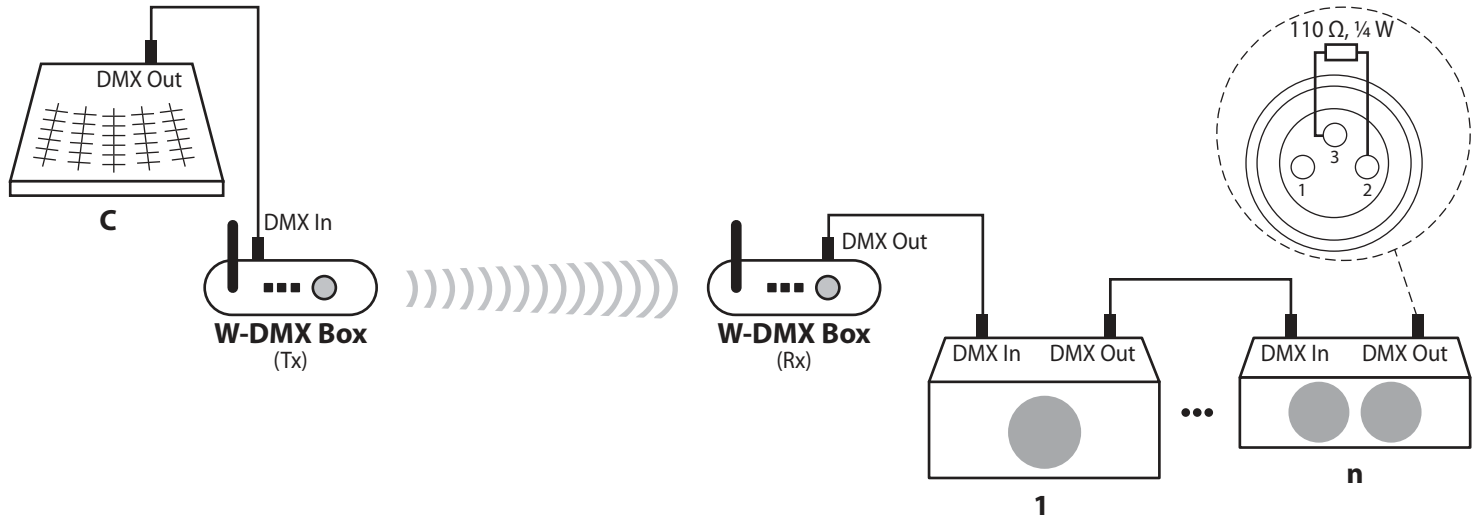
Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.

Notes on radio transmission

- This equipment uses a frequency range that is free of charge and registration within the European Union.
For more information, please visit: <http://www.thomann.de>.
- When operating, make sure that transmitter and receiver are set to the same channel.
- Never set more than one transmitter to the same channel.
- Make sure that no metal objects are located between transmitter and receiver.
- Avoid interference by other radio and in-ear systems.

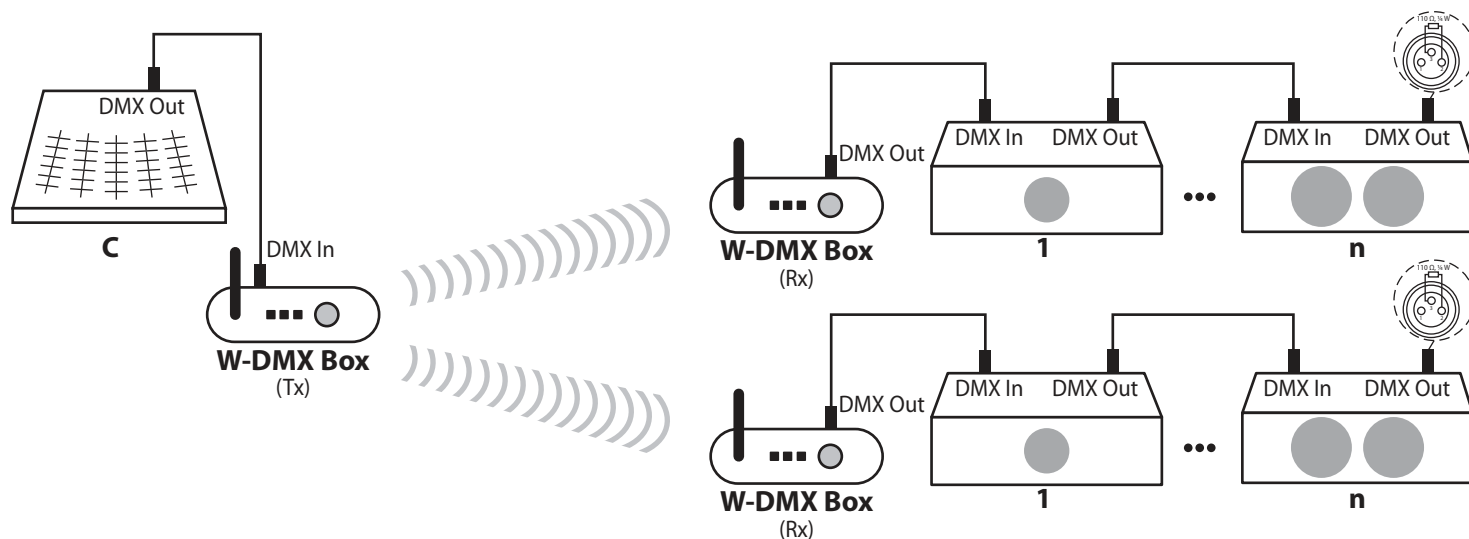
Point-to-point connection

Connect a device configured as transmitter to the DMX output of your DMX controller and a device configured as receiver to the DMX input of the first DMX device in the DMX chain that is to be controlled. In this point-to-point configuration the DMX signal from one transmitter is sent to one receiver.



Point-to-multipoint connection

Connect a device configured as transmitter to the DMX output of your DMX controller and a device configured as receiver to the DMX input of the first respective DMX device in the DMX chains that are to be controlled. In this point-to-multipoint configuration the DMX signal from one transmitter is sent to several receivers.

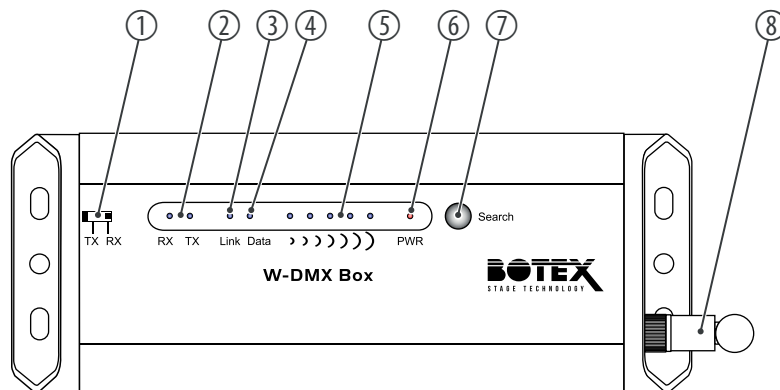


DMX chain

Connect the output of the first DMX device to the input of the second one and so on, to form a series connection. Make sure that the output of the last DMX device in the chain is terminated by a resistor (110 Ω , 1/4 W).

6 Connections and controls

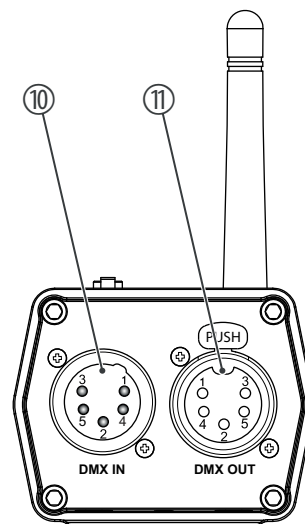
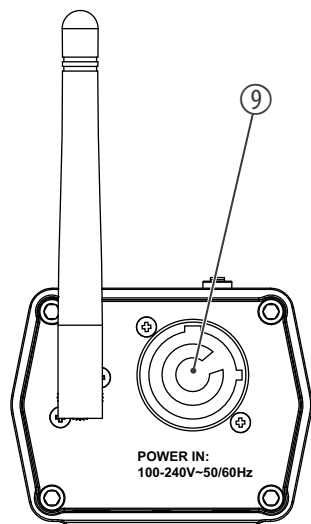
Front panel



1	Button for toggling Transmitter [TX] and Receiver [RX].
2	<p>Indicator LEDs</p> <p>The [TX] LED lights up: The device operates as a transmitter.</p> <p>The [RX] LED lights up: The device operates as receiver.</p>
3	<p>[Link] indicator LED</p> <p>Meaning if the device is operating as the transmitter:</p> <ul style="list-style-type: none">■ Flashing: The device tries to set up a transmission path to a receiver.■ Constant light: Transmission path active to a receiver.■ Off: Transmission path inactive to a receiver. <p>Meaning if the device is operating as a receiver:</p> <ul style="list-style-type: none">■ Flashing: The device tries to set up a transmission path to a transmitter.■ Constant light: Transmission path active to a transmitter.■ Off: Transmission path inactive to a transmitter.

4	<p><i>[Data]</i> indicator LED</p> <p>Meaning if the device is operating as the transmitter:</p> <ul style="list-style-type: none">■ Constant light: DMX signal is or was present.■ Off: No DMX signal present. <p>Meaning if the device is operating as a receiver:</p> <ul style="list-style-type: none">■ Constant light: DMX signal is being received.■ Off: No DMX signal is being received.
5	Indication of the radio signal strength.
6	<i>[PWR]</i> indicator LED Lights up when the device is connected to the power supply.
7	<i>[Search]</i> Button to establish a connection when the device is working as a transmitter .
8	Antenna

Rear panel



9 Lockable input socket (Power Twist TR1) for mains power connection.

10 *[DMX IN]* | DMX input, designed as XLR panel plug, 5-pin

11 *[DMX OUT]* | DMX output, designed as XLR panel socket, 5-pin

7 Operating

Switching operating mode of transmitter / receiver

- ➔ Press *[TX]/[RX]* to toggle the operating mode of the device between transmitter and receiver.
 - ⇒ The *[TX]* LED lights up: The device is configured as a transmitter.
 - The *[RX]* LED lights up: The device is configured as a receiver.

Establishing connection if the device operates as a transmitter

1. ➔ Make sure that the receivers to be connected to do not have an active connection to another transmitter.
2. ➔ Briefly press the *[Search]* button on the transmitter. The *[Link]* LEDs on transmitter and receiver flash fast, the connection is being established.
3. ➔ If the *[Data]* LED lights up, a DMX signal is present at the transmitter.

Cancelling active connection

If the device operates as receiver:

- ➔ Press and hold *[Search]* for about four seconds.
- ⇒ The connection to the transmitter is being interrupted. The *[Link]* LED turns off.

If the device operates as transmitter:

- ➔ Press and hold *[Search]* for about four seconds.
- ⇒ The connection to the receiver is being interrupted. The *[Link]* LED on the receiver turns off.



The device is delivered with a 2 dB antenna and a 5 dB antenna. The 5 dB antenna may only be used in receiver mode.

8 Technical specifications

Input connections	Power supply	1 × lockable input socket (Power Twist TR1)
	DMX control	1 × XLR panel plug, 5-pin
Output connections	DMX control	1 × XLR panel socket, 5-pin
Frequency band	2.4 GHz	
W-DMX	Frequency range	2403 MHz...2479 MHz
	Max. transmission power	20 dBm
	Range (outdoors)	max. 500 m, without obstacles
Power consumption	5 W	
Supply voltage	100 - 240 V ~ 50/60 Hz	
International Protection Rating	IP20	
Installation properties	Omega bracket with M10 thread	
Dimensions with bracket, without antenna (W × H × D)	190 mm × 50 mm × 65 mm	
Weight	0.8 kg	

Technical specifications

Ambient conditions	Temperature range	–10 °C...50 °C
	Relative humidity	20%...80% (non-condensing)

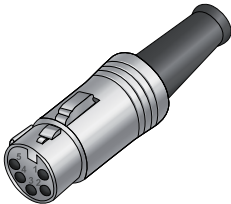
9 Plug and connection assignment

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment so that a perfect light experience is guaranteed.

Please take our tips, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into a socket, the result of an incorrect connection may be a destroyed DMX controller, a short circuit or 'just' a not working light show!

DMX connections



A five-pin XLR socket serves as DMX output, a five-pin XLR plug serves as DMX input. The drawing below and the table show the pin assignment of a matching coupling.

Pin	Assignment
1	Ground (shielding)
2	Signal inverted (DMX-, 'cold')
3	Signal (DMX+, 'hot')
4	unused / second connection (DMX-)
5	unused / second connection (DMX+)

10 Troubleshooting



NOTICE!

Data transfer errors due to improper wiring!

If the DMX connections are wired incorrectly, this can cause errors during the data transfer.

Do not connect the DMX input and output to audio devices, e.g. mixers or amplifiers.

Use special DMX cables for the wiring instead of normal microphone cables.

In the following we list a few common problems that may occur during operation. We give you some suggestions for easy troubleshooting:

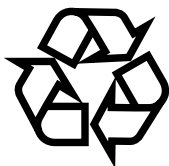
Symptom	Remedy
No response to the DMX controller	1. Check the power supply of the transmitter and receiver.
	2. Make sure that transmitter and receiver are operating in the same frequency range.
	3. Check the DMX connections and cables for proper connection.
	4. Check the address settings and the DMX polarity.
	5. Try using another DMX controller.
	6. Check whether the DMX cables run near or parallel to high-voltage cables that may cause damage or interference to a DMX interface circuit.
Transmission is interrupted	1. Try to improve the audio transmission by moving the transmitter closer to the receiver.
	2. Make sure that no metal objects near the transmitter or receiver are obstructing the transmission.
	3. Modify the orientation of the antennas.

Symptom	Remedy
	4. If you are using more than one wireless system at the same time, check the used frequencies and channels
	5. Interference can also be caused by other radio or in-ear systems.

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at www.thomann.de.

11 Protecting the environment

Disposal of the packing material



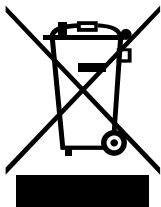
Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

Do not dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the instructions and markings on the packaging.



Observe the disposal note regarding documentation in France.

Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) as amended.

Do not dispose of your old device with your normal household waste; instead, deliver it for controlled disposal by an approved waste disposal firm or through your local waste facility. If in doubt, consult your local waste management facility. You can also return the device to a retailer if they offer to take the device back for free or if they are legally obliged to do so. When disposing of the device, comply with the rules and regulations that apply in your country. You can also return your old device to Thomann GmbH at no charge. Check the current conditions on www.thomann.de.

Proper disposal protects the environment as well as the health of your fellow human beings. This is because the proper handling of old devices negates the potential negative effects of hazardous substances, and because it conserves resources by recycling them.

Also note that waste avoidance is a valuable contribution to environmental protection. Repairing a device or passing it on to another user is an ecologically valuable alternative to disposal.

If your old device contains personal data, delete those data before disposing of it.

