



Tour Guide TG
16 T, 16 R, C2, C18

Tour Guide System

Thomann GmbH

Hans-Thomann-Straße 1

96138 Burgebrach

Germany

Telephone: +49 (0) 9546 9223-0

Internet: www.thomann.de

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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.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can 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 – dangers due to batteries.
	Warning – high-voltage.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended to be used for the wireless transmission of audio signals, particularly voice transmission during guided tours and events. 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 damage resulting from improper use.

This device may be used only by persons with sufficient physical, sensory, and intellectual abilities and the necessary 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.

**WARNING!****Incorrect handling of lithium batteries can result in injury!**

In the event of a short circuit, overheating or mechanical damage, lithium batteries can cause severe injuries. Handle lithium batteries in a correct and professional manner. Store lithium batteries in a cool and dry place in their original packaging. Keep lithium batteries away from sources of heat. Never open lithium batteries. Only charge rechargeable lithium batteries with a suitable charger. Remove the lithium batteries before disposing of the device. Cover the poles of used lithium batteries with adhesive tape to prevent short circuits. Electrolyte can escape from damaged lithium batteries. Put the damaged lithium battery in air-tight packaging. Collect the electrolyte with absorbent paper. Wear rubber gloves while doing so.

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 external power supply due to high voltages!**

The device is powered by an external power supply. The external power supply 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 external power supply matches the local power grid before plugging in the power supply. Only operate the external power supply from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). Ensure that the power cord plug is easily accessible at all times if it is the only device to safely disconnect the device from the mains supply. As a precaution, disconnect the power supply from the power grid when storms are approaching or if the device will not be used for a longer period.



NOTICE!

Damage to the device due to use of unsuitable external power supplies!

If the device is operated with an unsuitable external power supply, the device can be damaged by overvoltage or incorrect polarity. If things go badly, using an unsuitable power supply can also cause a risk of injury and fire. Only use the external power supply designated for the device or an equivalent external power supply with identical parameters. If in doubt, compare the voltage specifications on the external power supply and the polarity (+/-) with the specifications in this manual and printed on the device. Voltage and polarity must always match.



NOTICE!

Possible damage to lithium-ion batteries through incorrect storage!

Deep discharge can permanently damage lithium-ion batteries or cause them to lose some of their capacity. Charge the lithium-ion batteries before longer breaks in use and before storage. Ensure that the device is switched off for storage. Store the device at room temperature or cooler in an environment as dry as possible. Recharge the lithium-ion batteries about every three months if they are stored for a longer period of time to avoid permanent damage due to too deep self-discharge. Fully charge the lithium-ion batteries only shortly before use at room temperature.



NOTICE!

Possible damage due to leaking batteries!

Batteries can leak and cause permanent damage to the device. Take the batteries out of the device if it is not going to be used for an extended period of time.



NOTICE!

Risk of fire due to incorrect polarity!

Incorrectly inserted batteries may cause fires and destroy the device and the batteries. Observe the markings on the batteries and on the device. Ensure that proper polarity is observed when inserting batteries.



NOTICE!

Interference with neighbouring electrical receivers due to electromagnetic field!

The device emits an electromagnetic field during operation. Using the device near receiver devices (e.g. radios or TV sets) may cause interference. If neighbouring receivers are disturbed by the operation of the device, increase the distance between the device and the receivers with interference.

3 Features

The wireless tour guide system TG 16 can be used as a tour guide system for visitors in many different areas where ideal voice quality and simple handling are essential. The system offers various compilation possibilities so it can be tailored easily to many different needs. The system operates in a UHF frequency range that is free of charge and registration (863 MHz... 865MHz) on one of 16 switchable frequencies. Up to three systems can be operated in parallel. The system is designed for mono transmission.

The tour guide system consists of the following components:

- One bodypack transmitter TG 16 T (item no. 234705)
- Any number of TG 16 R bodypack receivers (item no. 234704)

The following charging stations are used to charge the receiver TG 16 R and transmitter TG 16 T:

- TG C2 with two charging slots (item no. 234706)
- TG C18 with 18 charging slots (item no. 235603)

The components are available separately and as handy combinations.

3.1 Bodypack transmitter TG 16 T

The TG 16 T bodypack transmitter is characterized by the following features:

- Displays for set channel and operating status
- Integrated rechargeable lithium battery
- Charging contacts for charging stations TG C2 and TG C18
- Built-in microphone
- 3.5-mm connection for separate microphone
- Housing colour: Black
- Matching ear clip microphone, cloth pouch for storage, band and belt clip (included)

3.2 Bodypack receiver TG 16 R

The TG 16 R bodypack receiver is characterized by the following features:

- Displays for set channel and operating status
- Integrated rechargeable lithium battery
- Charging contacts for charging stations TG C2 and TG C18
- Housing colour: Grey
- 3.5-mm connection for earphones
- Matching single earphone, band and belt clip (included)

3.3 Charging station TG C2

The TG C2 charging station is characterised by the following features:

- Two charging slots for bodypack transmitter TG 16 T and bodypack receiver TG 16 R
- Separate indicator LED for each charging slot
- Power supply via supplied power adapter

3.4 Charging station TG C18

The TG C18 charging station is characterized by the following features:

- 18 charging slots for bodypack transmitter TG 16 T and bodypack receiver TG 16 R
- Separate indicator LED for each charging slot
- Power supply via supplied power supply
- Installed in a handy and robust portable case

4 Installation and starting up

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.

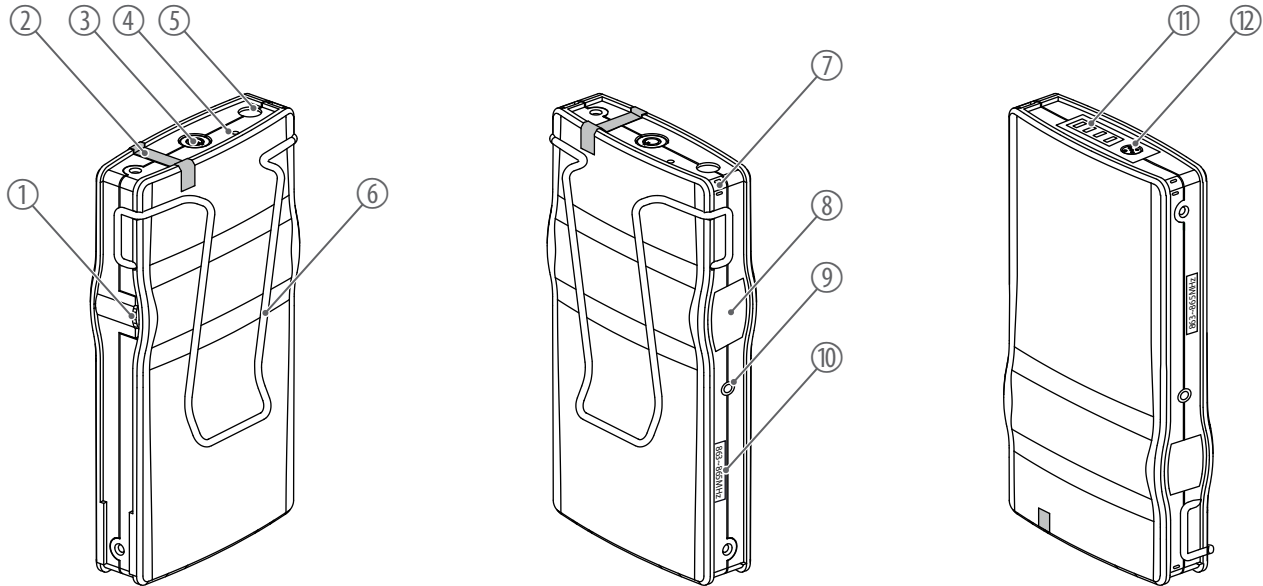
Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.

Notes on wireless transmission

- This device utilizes frequencies that are not harmonized within the European Union (EU) and therefore may only be used in certain EU member states. In all European countries, the frequencies used for the transmission of audio signals are strictly regulated. Before you start, make sure the frequencies are allowed in the respective country and check whether the operation must be reported to the appropriate authority.
For more information, please visit: <http://www.thomann.de>.
- Make sure that transmitter and receiver are both tuned to the same channel.
- Never set multiple transmitters to the same channel.
- Make sure that there are no metal objects between the transmitter and receiver.
- Avoid interference from other radio or in-ear systems.

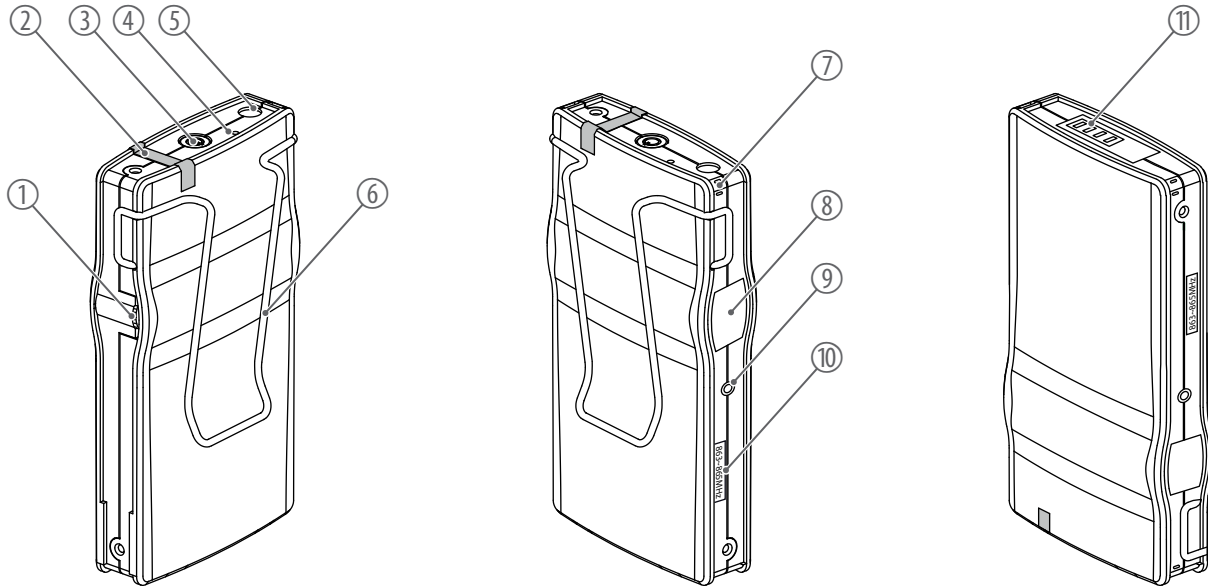
5 Connections and controls

5.1 Bodypack transmitter TG 16 T



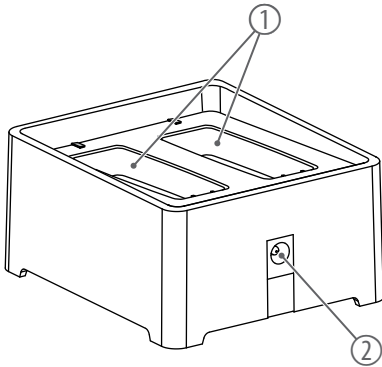
1	<i>[VOL]</i> Volume control
2	LED to indicate the operating status. The LED lights up green when the device is turned on. The LED lights up red when the charge of the built-in battery is too low.
3	<i>[POWER]</i> Main switch. Press the switch for about one second to switch the device on, and about three seconds to turn it off.
4	<i>[RESET]</i> Reset button for resetting the device to factory defaults
5	<i>[MIC INPUT]</i> 3.5-mm jack socket (mono) for connecting the supplied ear clip microphone or another microphone
6	Belt clip
7	Holes for threading the band.
8	Display
9	<i>[CHANNEL]</i> Channel selection button. The transmitter and receiver must be set to the same channel.
10	Indication of the frequency range in which the device operates. The indication must match the indication on the receiver.
11	Charging contacts
12	<i>[MIC]</i> Built-in microphone

5.2 Bodypack receiver TG 16 R



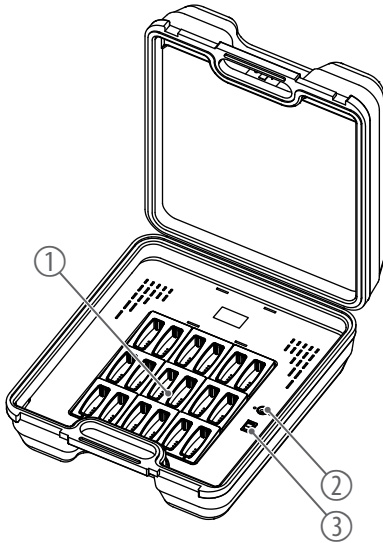
1	[VOL] Volume control
2	LED to indicate the operating status. The LED lights up green when the device is turned on. The LED lights up red when the charge of the built-in battery is too low.
3	[POWER] Main switch. Press the switch for about one second to switch the device on, and about three seconds to turn it off.
4	[RESET] Reset button for resetting the device to factory defaults
5	3.5-mm jack socket for connecting the single earphone or other earphones.
6	Belt clip
7	Holes for threading the band.
8	Display
9	[CHANNEL] Channel selection button. The transmitter and receiver must be set to the same channel.
10	Indication of the frequency range in which the device operates. The information must match the information on the transmitter.
11	Charging contacts

5.3 Charging station TG C2



- 1 Two charging slots for bodypack transmitters or bodypack receivers, with separate indicator LED. The LED flashes when the charging slot is free. The LED lights up when charging begins and then goes out after about 10 to 15 seconds.
- 2 Connection for the supplied power supply

5.4 Charging station TG C18



- 1 18 charging slots for bodypack transmitters or bodypack receivers, with separate indicator LED. The LED flashes when the charging slot is free. The LED lights up when charging begins and then goes out after about 10 to 15 seconds.
- 2 [DC INPUT] | Connection for the supplied power supply adapter
- 3 [POWER] | Main switch for turning the device on and off. The integrated LED indicates that the device is on.

6 Operating

6.1 Bodypack transmitter TG 16 T

Preparing the device

1. ▶ Thread the supplied band through the corresponding holes on the upper right corner of the housing.
2. ▶ If you do not want to use the built-in microphone, you can connect the supplied ear clip microphone or another suitable microphone to the corresponding socket.
3. ▶ Make sure that the device is fully charged before using it.

Switching on the device

- ▶ Press *[POWER]* until the indicator LED lights up green.
 - ⇒ The device is operational.

Selecting a channel

The display on the side of the device indicates the channel that is currently set.

1. ▶ To change the setting, press *[CHANNEL]* until the decimal point on the display flashes.
2. ▶ To move forward one channel number at a time, briefly press *[CHANNEL]*.
 - ⇒ The channel numbers are represented by the characters '0' ... '9', 'A' ... 'F'.
3. ▶ If you do not press *[CHANNEL]* for about six seconds, the device adopts the current settings. The transmitter and receiver must be set to the same channel.

Switching off the device

- ▶ Press *[POWER]* until the indicator LED goes out.
 - ⇒ The device is turned off.

6.2 Bodypack receiver TG 16 R

Preparing the device

1. ▶ Thread the supplied band through the corresponding holes on the upper right corner of the housing.
2. ▶ Connect the supplied single earphone or other headphones to the corresponding socket.
3. ▶ Make sure that the device is fully charged before using it.

Switching on the device

- Press *[POWER]* until the indicator LED lights up green.
 - ⇒ The device is operational.

Selecting a channel

The display on the side of the device indicates the channel that is currently set.

1. ➤ To change the setting, press *[CHANNEL]* until the decimal point on the display flashes.
2. ➤ To move forward one channel number at a time, briefly press *[CHANNEL]*.
 - ⇒ The channel numbers are represented by the characters '0' ... '9', 'A' ... 'F'.
3. ➤ If you do not press *[CHANNEL]* for about six seconds, the device adopts the current settings. The transmitter and receiver must be set to the same channel.

Switching off the device

- Press *[POWER]* until the indicator LED goes out.
 - ⇒ The device is turned off.

6.3 Charging station TG C2

Preparing the device

1. ➤ Connect the supplied power adapter to the power supply input of the device.
2. ➤ Plug the power adapter into a wall outlet.

Charging Bodypack devices

1. ➤ Turn off the Bodypack transmitter or Bodypack receiver.
2. ➤ Hold the charging contacts of the Bodypack device over the charging contacts of the charging slot.
3. ➤ Insert the bodypack device into the charging slot until it engages.
 - ⇒ The indicator LED of the charging slot goes out.
 - ⇒ When the device is fully charged, the indicator LED of the charging slot lights up.

6.4 Charging station TG C18

Preparing the device

1. ➤ Connect the supplied power adapter to the power supply input of the device.
2. ➤ Plug the power adapter into a wall outlet.
3. ➤ Turn on the device with the main switch.
 - ⇒ The integrated indicator LED lights up red.

Charging Bodypack devices

1. ➤ Turn off the Bodypack transmitter or Bodypack receiver.
2. ➤ Hold the charging contacts of the Bodypack device over the charging contacts of the charging slot.
3. ➤ Insert the bodypack device into the charging slot until it engages.
 - ⇒ The indicator LED of the charging slot goes out.
 - ⇒ When the device is fully charged, the indicator LED of the charging slot lights up.

7 Technical specifications

7.1 Bodypack transmitter TG 16 T

Functional principle	PLL synthesized control	
Number of systems that can be operated in parallel	3 systems	
Input connections	Microphone	1 × 3.5 mm jack socket
Frequency range	863 MHz...865 MHz	
Max. transmission power	10 mW	
Input impedance	2.2 kΩ	
Range in clear field of vision	50 m	
NF frequency response	40 Hz...18 kHz	
Total harmonic distortion	±0.005%	
Frequency deviation	± 48 kHz	
Spurious emissions	< -50 dBC	
Battery	Battery type	Lithium-ion
	Voltage	3.7 V

Technical specifications

	Operating time	14 h
Dimensions (W × H × D)	54 mm × 99 mm × 17 mm	
Weight	80 g	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20%...80% (non-condensing)

7.2 Bodypack receiver TG 16 R

Functional principle	PLL synthesized control	
Output connections	Earphones	1 × 3.5 mm jack socket
Frequency range	863 MHz...865 MHz	
Sensitivity	-95 dBm	
Antenna gain	2 dBi	
NF frequency response	40 Hz...18 kHz	
Battery	Battery type	Lithium-ion
	Voltage	3.7 V
	Operating time	14 h
	Charging time in the device	approx. 8 h
Dimensions (W × H × D)	54 mm × 99 mm × 17 mm	
Weight	80 g	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20%...80% (non-condensing)

7.3 Charging station TG C2

Battery	Battery type	Lithium-ion
	Voltage	3.7 V
	Charging time in the device	approx. 8 h
Charging slots	2	
Power supply	External power adapter, 100 - 240 V ~ 50/60 Hz	
Operating voltage/current	12 V $\overline{\text{---}}$ / min. 500 mA, polarity: Centre positive	
Dimensions (W × H × D)	85 mm × 41 mm × 75 mm	
Weight	115 g	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20%...80% (non-condensing)

7.4 Charging station TG C18

Battery	Battery type	Lithium-ion
	Voltage	3.7 V
	Charging time in the device	approx. 8 h
Charging slots	18	
Power supply	External power adapter, 100 - 240 V ~ 50/60 Hz	
Operating voltage/current	15 V $\overline{\text{---}}$ / min. 3.3 A, polarity: Centre positive	
Dimensions (W × H × D)	361 mm × 189 mm × 422 mm	
Weight	3.4 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20%...80% (non-condensing)

7.5 Frequency table

Channel	Display	Frequency (MHz)	Channel	Display	Frequency (MHz)
1	0	863.125	9	8	864.125
2	1	863.250	10	9	864.250
3	2	863.375	11	A	864.375
4	3	863.500	12	B	864.500
5	4	863.625	13	C	864.625
6	5	863.750	14	D	864.750
7	6	863.875	15	E	864.875
8	7	864.000	16	F	865.000

8 Plug and connection assignment

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment in such a way that a perfect sound experience is ensured.

Please note these advices, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into the socket, an incorrect connection may result in a destroyed power amp, a short circuit or 'just' in poor transmission quality!

Balanced and unbalanced transmission

Unbalanced transmission is mainly used in semi-professional environment and in hifi use. Instrument cables with two conductors (one core plus shielding) are typical representatives of the unbalanced transmission. One conductor is ground and shielding while the signal is transmitted through the core.

Unbalanced transmission is susceptible to electromagnetic interference, especially at low levels, such as microphone signals and when using long cables.

In a professional environment, therefore, the balanced transmission is preferred, because this enables an undisturbed transmission of signals over long distances. In addition to the conductors 'Ground' and 'Signal', in a balanced transmission a second core is added. This also transfers the signal, but phase-shifted by 180°.

Since the interference affects both cores equally, by subtracting the phase-shifted signals, the interfering signal is completely neutralized. The result is a pure signal without any noise interference.

Three-pole 1/8" mini phone jack (stereo, unbalanced)



1	Signal (left)
2	Signal (right)
3	Ground, shielding

9 Troubleshooting

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

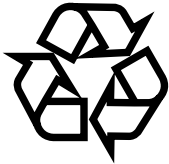
Symptom	Remedy
No sound	<ol style="list-style-type: none"> 1. Check the power supply of the transmitter and receiver. 2. Make sure that transmitter and receiver are operating in the same frequency range. The frequency range can be found on the devices. 3. Are the transmitter and receiver set to the same channel? 4. Check the connection between the transmitter and the connected microphone and between the receiver and the connected earphones. 5. See if the sound transmission works when you move the receiver closer to the transmitter. 6. Make sure that no metal objects near the transmitter or receiver are obstructing the transmission.
Transmission is interrupted	<ol style="list-style-type: none"> 1. If you are using more than one wireless system at the same time, check the used frequency groups and channels.

Symptom	Remedy
	2. Interference can also be caused by televisions, radios or mobile phones.
The sound is distorted	Change the volume setting of the transmitter and the receiver for test purposes.

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

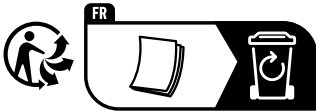
10 Protecting the environment

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.

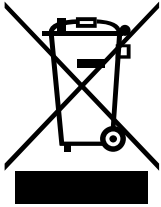
Disposing of lithium batteries and rechargeable batteries



Do not dispose of lithium batteries and rechargeable batteries with normal household waste, but in accordance with the local regulations for the disposal of hazardous waste. Use the available collection sites or contact your local waste disposal facility.

Only dispose of lithium batteries and rechargeable batteries when they are empty. Remove lithium batteries and rechargeable batteries from the device before disposal if this is possible without destroying it. Protect used lithium batteries and rechargeable batteries against short circuit, for example by taping the poles. Dispose of solid state lithium batteries and rechargeable batteries together with the device. Check for an appropriate collection facility.

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. For example, use the classified ads of Thomann GmbH.

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

