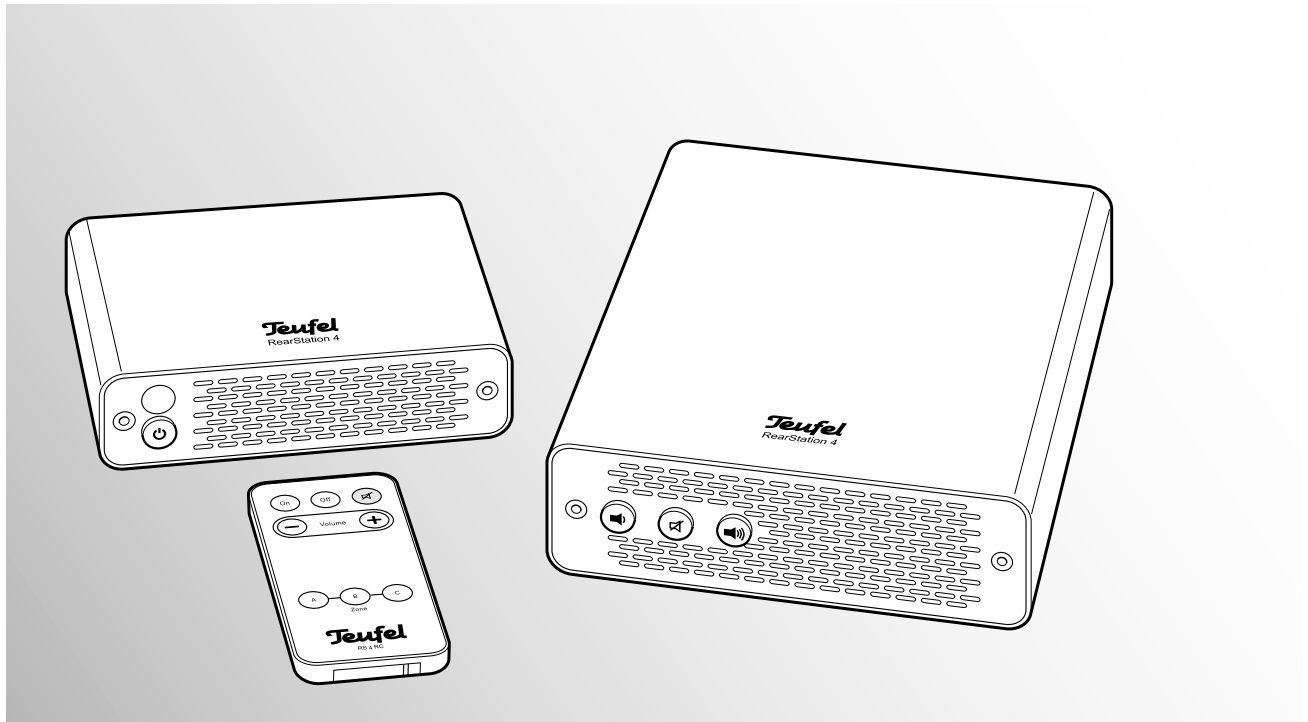


Technical description and operating instructions



RearStation 4

Radio Transmission System
for Speakers

Teufel

Contents

General notes and information	3
Safety notes	4
Overview	5
Control elements and connections	6
Setup and connection	7
Setup location	7
Connecting the speakers.	7
Audio inputs	7
Connecting to a power supply	8
Remote control	8
Changing the batteries	8
Functionality	8
Basic functions.	9
Activating and deactivating	9
Adjusting the volume	9
Settings	9
Troubleshooting	11
Care and cleaning.	11
Protecting the environment	12
Technical data.	12

General notes and information

Notice

The information in this document may be changed without prior notice and in no way constitutes any liability on the part of Lautsprecher Teufel GmbH.

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Version 1.0, August 2010

Original packaging

If you wish to exercise your eight-week right of return, we ask that you be absolutely sure to hold onto the packaging. We can only accept the return of the device WITH THE ORIGINAL PACKAGING.

Empty boxes are not available!

Complaints

In case of complaint we will need the following information to process your enquiry:

1. Invoice Number

Can be found on the sales slip (enclosed with the product) or on the order confirmation received as a PDF document, e.g. 4322543.

2. Serial / batch number

Located on the back of the device,
e.g. Serial #: RS00400340122A-123

Many thanks for your support!

Contact

For questions, suggestions or any other issues please contact our customer service department:

Lautsprecher Teufel GmbH

Gewerbehof Buelowbogen · Buelowstrasse 66
10783 Berlin (Germany)

Tel.: 00800 - 200 300 40 (free of charge)

Fax: +49 (0)30 - 300 930 930

www.teufelaudio.com

Proper use

Only use the unit as described in these instructions. Any other use will be deemed as not in accordance with the instructions and may lead to damage to property or even persons. The manufacturer accepts no liability for damage caused by use not in accordance with the instructions.

The unit is intended for private use.



Before operating the unit for the first time please read the safety notes and operating instructions carefully. This is the only way to use all functions safely and reliably.

Keep the operating instructions safe and pass them on to anyone who may own the unit after you.

Safety notes

Caution icons

You will find the following caution icons used in these instructions:

Danger High risk!

Failure to observe the warning may result in severe personal injury or death.

Attention Moderate risk!

Failure to observe the warning may result in property damage.

**Minor risk!**

Points which should be observed when handling the unit.

Safety notes

Danger Risk of electric shock!

Faulty installation of electrical equipment or mains voltage which is too high can cause

electric shocks.

- The mains adapters are only suitable for a mains voltage of 100 V–240 V ~ / 50Hz/60Hz.
 - If the unit's case or mains cable is defective or shows other signs of visible damage, disconnect the mains adapter immediately from the socket and do not operate the device.
 - If the device produces smoke, a burning odour or emits unusual sounds, immediately disconnect it from the mains and discontinue use.
 - The standby button does not disconnect the device from the power supply. For this reason, connect it to an easily accessible socket so that you can quickly disconnect it from the power supply in the event of faults.
 - Never open the unit case.
Repairs may only be carried out by an authorised specialist workshop. Only use parts which conform with the original unit specifications. There are electrical and mechanical parts in this unit which are essential in order to avoid exposure to sources of danger.
 - Do not insert any object through the vent slots in the case.
 - Only use the unit in indoor areas.
 - Do not operate the unit in moist areas and protect it from drops of water or splash water.
Also take care not to stand vases or other containers of liquid on or near the unit in order to avoid liquid getting into the case. If water or other foreign bodies should enter the case, disconnect it immediately from the mains power supply and remove any batteries. Send the unit to our service address.
 - Never touch the mains adapter with wet hands.
 - Check the unit regularly for damage.
-

Danger Danger to children!

Children often do not recognise dangers and require special supervision for this reason.

- Do not allow children to play with the unit or the packing film. Danger of suffocation.
 - Ensure that children do not remove small parts from the unit (e.g. buttons or plug adapters). They could swallow the parts and choke.
 - Never allow children to operate electrical devices unsupervised.
 - Store the button cell out of the reach of children. If a child accidentally ingests the button cell, immediately contact a physician.
-

Danger Danger to hearing!

Loud noise may lead to hearing loss.

The system may emit very high sound pressure levels unexpectedly when it is suddenly triggered into activity by a bass impulse (especially in mode »Standby/Auto On«) and if it has been set to full volume. In addition to physical injury, psychological stress may also be caused as a result. Children and pets are particularly sensitive to noise.

- Set your signal source unit volume control to a low setting.
 - When the volume is set high, always keep a certain distance from the unit and never place your ear directly on the speaker.
 - To avoid damage to health, avoid extended listening at high volume.
-

Danger Danger of chemical burns!

Leaking battery acid may lead to chemical burns.

- Do not allow battery acid to come into contact with skin, eyes or mucus membranes. In case of contact with acid rinse the affected location immediately with plenty of plain water and if necessary see a doctor.
-

Danger Danger of injury/damage!

Incorrect location may result in damage.

- Do not use the device unmounted in vehicles without having it secured, in unstable locations, on wobbly tripods or furniture, on underdimensioned brackets etc. The device could tip or fall down and cause injury to persons or be damaged itself.
 - Arrange the speakers so that they cannot be knocked over accidentally and make sure that the cables do not pose a trip hazard.
 - Ensure that any wall mounting is performed in a professional manner.
 - Only use suitable wall brackets for mounting. Check the carrying capacity of the walls.
 - Only set up the device and the speakers on stable, level surfaces.
-

- Do not place the unit near sources of heat (e.g. heaters, ovens, other heat generating equipment such as amplifiers etc.)

Danger Danger of explosion!



Batteries and rechargeable batteries may explode if overheated.

- Do not store the button cell together with other metallic objects.
 - Do not recharge or open the button cell and do not expose it to heat or dispose of it in fire.
 - Do not take hold of the button cell with tweezers.
 - Do not expose batteries or rechargeable batteries to heat and never throw them in open fire.
-

Attention Fire hazard!



Improper use may lead to damage or fire.

- Do not place open flames such as burning candles or similar on the unit.

- Ensure sufficient ventilation.
 - Do not place the unit in direct sunlight.
 - Do not cover the ventilation slots with curtains, cloths, newspapers or similar. Heat build-up inside the unit can shorten the lifetime of the unit.
-

Attention Risk of damage!



Power overload due to lightning strike may damage or destroy the unit.

- If the unit is to be left unsupervised for a long period (e.g. during a holiday), or if a thunderstorm is forecast, disconnect it from the mains power supply.
 - If the device is subjected to warm temperatures after being cold (e.g. after transport), condensation may occur inside of it. Wait at least 2 hours before you connect and activate it.
 - Old, used batteries may leak. Remove the batteries from the remote control if you do not use them for a prolonged period of time.
-

Overview

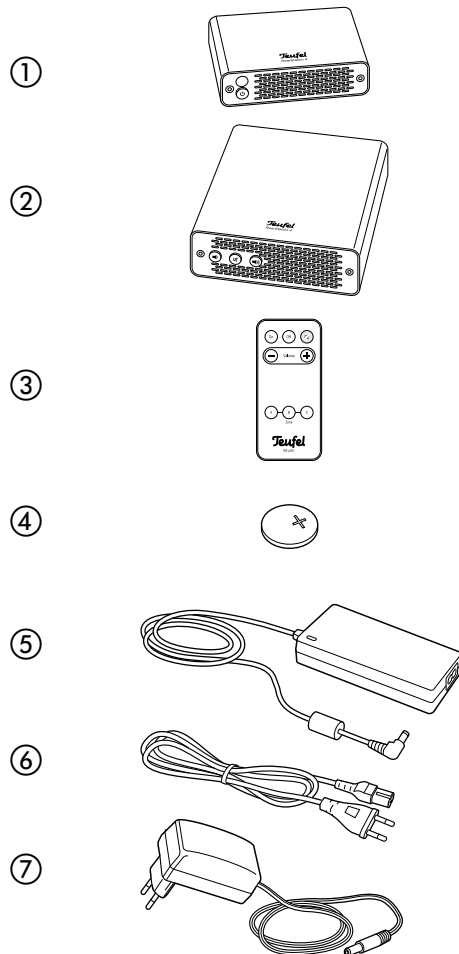
Product contents

- ① 1 x transmitter (RS 4 WLT)
- ② 1 x receiver (RS 4 WLR)
- ③ 1 x remote control (RS 4 RC)
- ④ 1 x button cell for the remote control ③
- ⑤ 1 x mains adapter for the receiver ②
- ⑥ 1 x mains cable for ⑤
- ⑦ 1 x mains adapter for the transmitter ①

The items ① and ⑦ do not apply if you have only purchased a separate receiver as an extension kit.

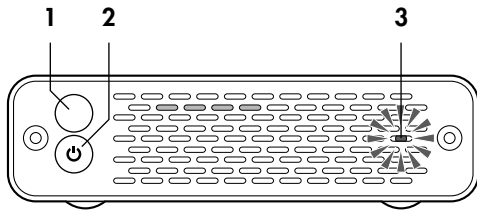
Check to be sure

- Check that all items have been delivered and that nothing is damaged.
- If the delivery is incomplete or you find damage sustained in transit, do not operate the unit but contact our service department (see page 3).



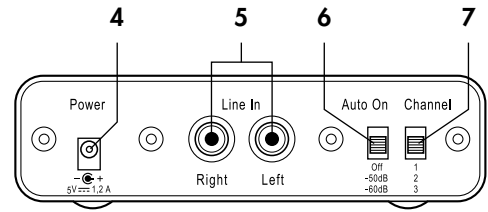
Control elements and connections

Transmitter RS 4 WLT Front side



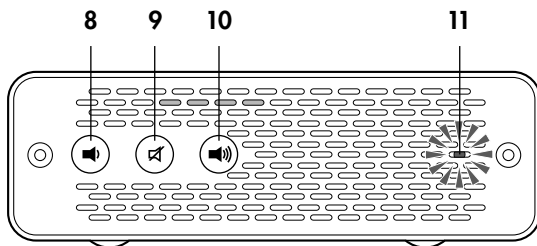
Pos	Name	Description
1	-	Infrared receiver
2	⏻	Switch the device on or to stand-by
3	-	Power LED

Back side



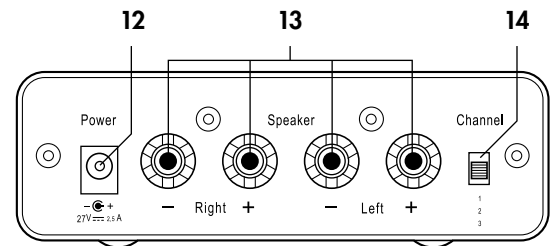
Pos	Name	Description
4	Power	Connection for mains adapter ⑦
5	Line In	Audio input jacks
6	Auto On	Switch for automatic activation/deactivation
7	Channel	Select the RF channel

Receiver RS 4 WLR Front side



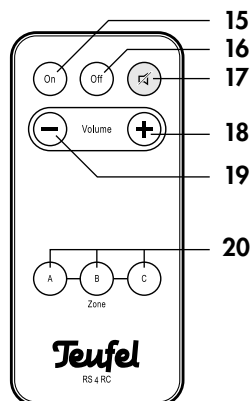
Pos	Name	Description
8	⏮	Reduce the volume
9	🔇	Mute the speakers
10	⏭	Increase the volume
11	-	Power LED

Back side



Pos	Name	Description
12	Power	Connection for mains adapter ⑤
13	Speaker	Connections for speakers
14	Channel	Select the RF channel

Remote control



Pos	Name	Description
15	On	Activate the devices
16	Off	Switch the devices to standby
17	🔇	Mute the speakers
18	+	Increase the volume
19	-	Reduce the volume
20	A B C	Zone buttons

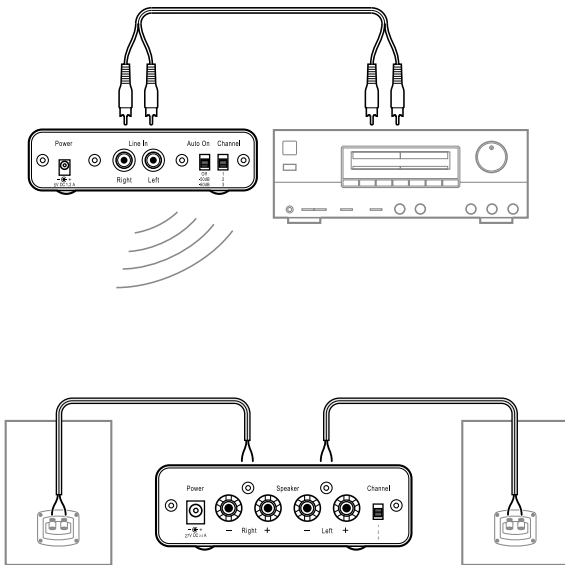
Setup and connection

Setup location

- Select a stable, level base.
- Make sure that the environment is clean and free from dust.
- Avoid placing the unit close to sources of heat or in direct sunlight.
- Arrange the connector cables so that they do not pose a trip hazard.
- Do not place any heavy objects on top of the cables or the unit.

With the transmitter/receiver combination RearStation 4, you can send stereo audio signals to two speakers via wireless link; this eliminates the need for installing speaker cables. The system can cover a distance of 20 metres, but that may be reduced by objects (furniture) and walls.

The RearStation 4 is therefore ideal for driving the back speakers of a 5.1/7.1 home cinema system if the AV receiver outputs the rear channels on RCA jacks (line level). With some receiver models it may be necessary to activate these line outputs in the settings.



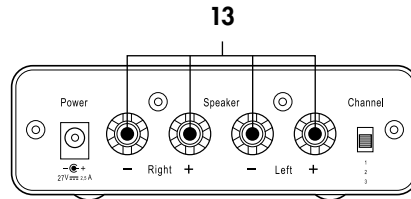
It is also possible to transmit sound to multiple rooms as long as the walls are not made of reinforced concrete or the like. You can supply multiple receivers with sound from one transmitter and still separately control the functions (activation/deactivation, volume) with the zone buttons **20** "A B C" in three groups.

All transmitters and receivers have infrared receivers and transmit any commands received to the other devices by RF link. Thus you can control the entire system or specific speakers with the remote control from each device.

Connecting the speakers

To connect the speakers, use high-quality two-strand speaker wires with a copper area of at least 0.75 mm². You can find corresponding cables and pin plugs in our webshop (www.teufelaudio.com) in the "Accessories" area.

The terminals **13** "Speakers" for the left ("Left") and right ("Right") speakers are located on the back of the receiver.



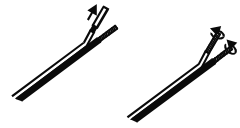
The individual terminals are marked red (+) and black (-). Here you can connect the speaker cables directly or with pin plugs. We only describe the direct connection in these instructions.



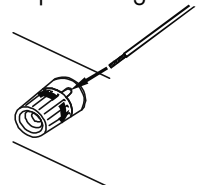
Make sure the polarity is correct!

Connect the like-coloured terminals with one another. Otherwise, the sound quality will suffer. The strands of the speaker wire are marked with different colours or shapes.

Split the speaker cables down to approx. 30 mm on both ends and strip off approx. 10 mm of insulation on each of them. Twist the single wire together so that no strands are protruding.



Turn the connector terminal **13** counter-clockwise until loose. Run the stripped cable end into the hole that is now visible. Turn the terminal clockwise. The cable has now been clamped in place.



The operating instructions for the speakers should describe how to connect the cables to the speakers.

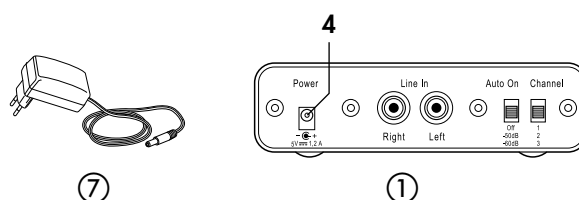
Audio inputs

Connect the source device with analogue sound to the jacks **5** "Line In". For this, you will need a dual RCA cable (L and R).

Connecting to a power supply

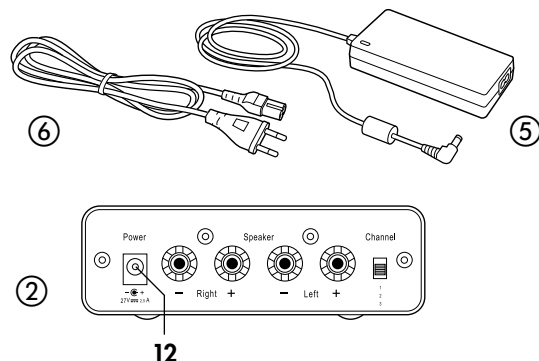
Transmitter

- Connect the small plug of the mains adapter (7) with the jack 4 "Power" of the transmitter (1).
- Insert the mains adapter (7) in a mains socket.



Receiver

- Insert the small plug of the mains cable (6) in the mains adapter jack (5).
- Insert the small plug of the mains adapter (5) in the jack 12 of the receiver (2).
- Insert the mains plug of the mains cable (6) in a mains socket.

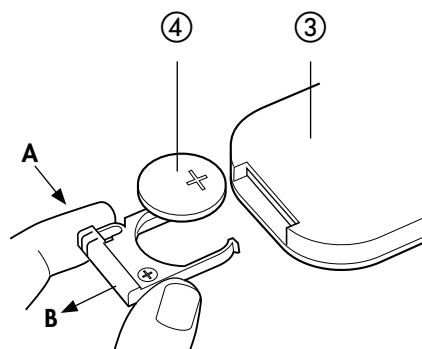


Remote control

Changing the batteries

A 3-Volt button cell, type CR2025 is provided for the operation of the remote control (included in the product contents).

- Hold the remote control (3) with the bottom up.
- Push the bar on the battery compartment to the middle (A) and pull out the compartment (B).
- If applicable, remove the old batteries (please observe the notes on page 12).
- Place the new battery (4) in the bracket. In the process, the "+" signs must be visible on the battery and on the bracket.
- Put the bracket back into the unit and push the compartment until it locks into place.



Functionality

The remote control transmits infrared control signals. For this, it is necessary that you point the remote control towards the front of the device. Ensure that no objects are in the way of the infrared signal.

Fluorescent lamps and energy/saving lamps installed close nearby may affect the functions of the remote control or even prevent it from working.

Basic functions

Activating and deactivating

After you connected the mains adapters, the devices are in standby mode.

Activation

- Push the button **15** "On" on the remote control.
- Push the button **2** "⏻" on the transmitter.
- Push the volume button **8** "🔊" or **10** "🔊" on the receiver.

Switching to standby

- Push the button **16** "Off" on the remote control.
- Push the button **2** "⏻" on the transmitter.
- Push and hold the button **9** "🔇" on the receiver for approx. four seconds.

Power LED

The power LEDs **3** and **11** are blue during normal operation. If there is no radio connection with the other device, the power LEDs are red.

Adjusting the volume

- Increasing the volume: Push the button **18** "Volume +" or button **10** "🔊" respectively.
- Reducing the volume: Push the button **19** "Volume -" or button **8** "🔊" respectively.

Mute

- Turning off the sound: Push the button **17** or **9** "🔇" respectively.
- Turning the sound back on: Push the button **17** or **9** "🔇" respectively again or adjust the volume.

Settings

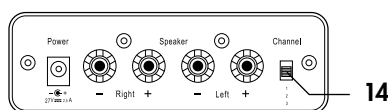
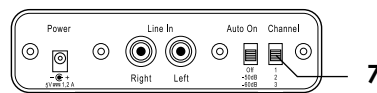
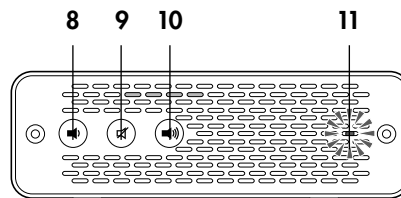
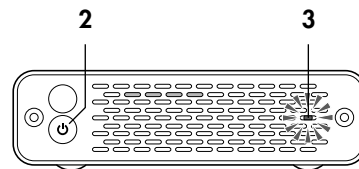
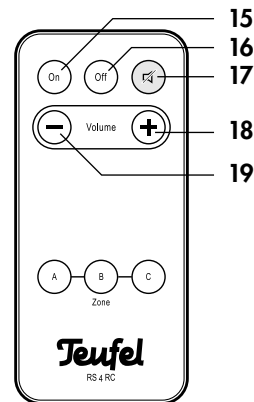
Impedance

By factory default, the amplifier of the receiver is set to match a speaker impedance of 4 ohm. If your speakers have another Impedance, you can adjust the amplifier as follows:

- Hold the remote control in front of the receiver.
- Push and hold the button **17** "🔇" for more than three seconds.
The Power LED **11** alternately flashes blue and red now.
- Within four seconds push one of the zone buttons **20** "A B C":
A – Impedance 4 ohm
B – Impedance 6 ohm
C – Impedance 8 ohm

RF channel

With the switches **7** and **14** "Channel", select the RF channel 1, 2 or 3 that you wish to use. The transmitter and receiver must be set to the same RF channel.



Zone

You can assign one of three zones A, B or C to each receiver. This is useful when operating multiple receivers on one transmitter – e.g. when transmitting sound to several rooms.

The functions for activation/deactivation, muting and volume control normally apply to all devices that are using the same RF channel.

If one of the zone buttons **20** "A B C" is pushed on the remote control, the function is only performed by the devices, which are assigned to this zone. This makes it possible, for example to reduce the volume in a specific room only.

If a receiver is assigned to a zone, then the functions of its volume buttons **8** "🔊" and **10** "🔊" and the mute button **9** "🔇" are only valid for devices in the same zone. It is therefore possible to stop the sound transmission to a receiver in one room while music continues to play in other rooms.

By factory default, all devices are assigned to zone "A".

Setting the zone

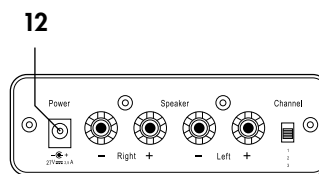
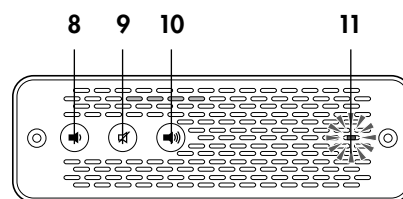
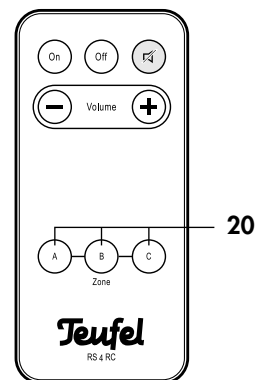
It is only possible to assign a receiver to a zone with the remote control and within eight seconds after the mains voltage has been activated.

- Pull the plug of the mains adapter out of the jack **12** "Power" and wait approx. 5 seconds.
- Insert the mains adapter plug back in the jack **12** "Power".
- Hold the remote control in front of the receiver and push the button **20** "A B C" with the desired zone. The power LED **11** briefly flashes between red and blue. Thus the receiver is assigned to the zone.

Sound delay

The digital transmission system of the RearStation 4 delays the sound signal by 20 milliseconds. If a surround sound system is used, you should compensate this delay as follows:

- If the distances of the speakers can be changed in the receiver settings, enter a distance increased by seven metres for the RF channels. This additional distance corresponds to a delay of 20 ms. Example: You are using the RearStation 4 for the two rear speakers, which are set up three metres behind the listening position. Then enter a speaker distance of 10 metres (3 m + 7 m) for the corresponding receiver setting.
- If the delay must be set directly in milliseconds in the receiver settings, reduce either the delay of the channels by 20 ms or increase the delay time of all wired channels by 20 ms.



Troubleshooting

The following instructions should help you to solve problems. If this doesn't work, please contact our hotline (see page 3). Mind the warranty instructions.

Problem	Possible cause	Solution
Device is not working, the power LED is dark.	No power supply.	Check that the power plug is properly inserted.
		Check the function of the power outlet with another device.
No playback.	Audio connection to the source device interrupted.	Check the connector cable between transmitter and source.
	Muted speakers ("MUTE").	Push the button 9 or 17 "⏸" in order to deactivate mute.
No sound or only one speaker audible.	Speaker incorrectly wired.	Check and correct wiring.
No or distorted playback, power LED is on or flickering red.	Transmitter and receiver are set to different RF channels.	Set the transmitter and receiver to the same RF channel (1, 2 or 3 – see page 9).
	Radio range exceeded or radio wave distorted by obstacles.	Place the unit closer together or higher up (people are also obstacles for radio waves!).
Remote control doesn't work.	No line of sight between the remote control and the device.	Remove any obstacles.
	Remote control not pointed properly.	Point the remote control towards the device.
	Receiver is assigned to another zone.	Set the zone again (see page 10).
	Batteries in the remote control are empty.	Insert new batteries.

Care and cleaning

Clean the devices regularly with a soft, damp microfibre cloth. In the process, be absolutely sure to observe the following notes:

Danger Risk of electric shock!



In contact with live parts, water can lead to electric shock or short circuit.

- Ensure that no liquid penetrates the unit.
- Disconnect the mains plug before cleaning.

Attention Risk of damage!



Using the wrong cleaning materials may damage the delicate surface of the case.

- If possible use only plain water with no cleaning products. In case of stubborn marks, a mild soap solution may be used.
- Under no circumstances should caustic cleaning products, white spirit, thinners, petrol or similar be used for cleaning.

Protecting the environment

Batteries and rechargeable batteries



Batteries and rechargeable batteries must not be disposed of with household waste!

Every consumer is required by law to bring all batteries and rechargeable batteries, whether they contain harmful substances*) or not, to a collection point run by the communal authority or borough or run commercially, so that they can be disposed of in an environmentally friendly manner.

Please only hand in fully discharged batteries!

*) labelled: Cd = cadmium, Hg = mercury, Pb = lead

Disposing of the unit



Used units must not be disposed of with household waste


If the unit is no longer operational, every consumer is required by law to dispose of used devices separate from household waste, e. g. at a collection point run by the communal authority borough. In this way, used devices can be recycled and waste materials disposed of in an environmentally friendly manner.

For this reason, electrical equipment is labelled with the displayed symbol

Technical data

Operating voltage of the mains adapters:	100–240 V~, 50/60 Hz
Power consumption, max:	5 W (transmitter) 80 W (receiver)
Output:	2 x 30 W nominal (4 Ohm)
Dimensions (W x H x D):	110 x 32 x 86 mm (transmitter) 125 x 42 x 180 mm (receiver)

Technical changes reserved!

 This product conforms with Council of the European Union guidelines 2004/108/EC and 2006/95/EC

Teufel

For questions, suggestions or other issues please contact our customer service department:

Lautsprecher Teufel GmbH
Gewerbehof Buelowbogen - Ausgang D1
10783 Berlin (Germany), Buelowstr. 66

Tel.: 00800 200 300 40 (toll-free)
Fax: +49 (0)30-300 930 930
www.teufelaudio.com

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