



System 4

5.1 Home Theatre Set with Active Subwoofer
5.1 Concert Set · 5.1 Cinema Set

Teufel

About this document

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Version 2.4
April 2009

Original packaging

We recommend that you hold on to the packaging of all your new Teufel products, as we only accept loudspeakers back within the initial eight-week return period if they are shipped in their ORIGINAL PACKAGING. We do not provide packaging boxes separately.

If you have any questions, suggestions or criticisms, please contact our support team:
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10783 Berlin (Germany)
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www.teufel.eu

Terms of warranty

Lautsprecher Teufel GmbH provides a twelve-year warranty for loudspeakers and a two-year warranty for amplifiers and electrical components, starting at the purchase date. The warranty covers all materials and time needed. The warranty does not cover devices damaged as a result of improper use or electrical/mechanical overloading. The original Teufel invoice is your proof of warranty. This warranty applies exclusively to loudspeakers, amplifiers and electronic components purchased by consumers from Teufel for private usage. The warranty does not apply to loudspeakers, amplifiers and electronic components sold to consumers through third-party dealers. For third-party products supplied together with the Teufel system, the terms of warranty of the manufacturer in question apply. When Teufel products are resold privately, the warranty may be transferred to the new owner. For this, the new owner requires the original Teufel invoice.

Returns policy

Teufel provides an eight-week right of return with a money-back guarantee.

You may only return individual components from a set if Teufel offers these components for sale separately. If you return one or more individual components from a set, this voids the discount that Teufel provides on the sale of components as a set. This means that for individually returned components from a set, you will be refunded the difference between the set price and the sum purchase price of the individual components you decide to keep, i.e., we will deduct the discount that applies to set purchases.

For further information on returns, please refer to the returns form provided with your shipment (or online at www.teufel.eu in the support section).

If you decide to return any or all of the purchased goods, please always contact us first.

Note that we can only process and accept returned goods if you have telephoned us in advance and discussed the required returns procedure.

Contents

Contents	Page	3
Safety guidelines	Page	4
Introduction	Page	5
Unpacking · Included components	Page	6
Accessories (optional)	Page	7
Speaker positions in the 5.1 configuration	Page	9
Speaker positions in the 7.1 configuration	Page	11
Connections	Page	12
Settings	Page	13
Controls (subwoofer)	Page	14
Problems and solutions · Cleaning · Technical specifications	Page	15
Glossary	Page	16

Safety guidelines

Please read the following safety guidelines very carefully.

Packaging materials, particularly plastic bags and foils, should be kept out of childrens' reach, as these can be dangerous (e.g., risk of suffocation). Never leave your children alone with electrical devices, as there is potentially always a risk of electrical shock.

In case of an emergency:

Immediately disconnect the unit's power plug from the mains socket. In the following cases, please contact one of our service technicians:

- ▶ Power plug or cable is damaged
- ▶ Liquid or other foreign substances have entered the interior of the unit
- ▶ The unit has been directly exposed to rain or another type of liquid
- ▶ The unit is inoperational even though you have followed all the operating instructions

- ▶ The unit has been dropped or otherwise damaged

Lautsprecher Teufel is not liable for any incidents resulting from disregard for the safety guidelines.

General note: Make sure to read this operating manual carefully and in its entirety. Before plugging in the units for the first time, make sure you have complied with all relevant safety and operating instructions. Keep this operating manual in a safe place so you can refer to it at a later date if necessary.

Always: If in doubt, consult the operating manual. Make sure to comply with all instructions regarding the units' setup and ongoing operation.

Cleaning: Avoid cleaning the units with domestic cleaning agents, as these may scratch the surface. Just use a dry cloth. Before cleaning a unit, always unplug the power cable.

Humidity and sunlight: Never operate the unit in humid or wet spaces, e.g., near a bath tub, shower, wash basin, drain, in a damp basement, or near a swimming pool. Never expose the loudspeaker to humidity, and avoid exposing it to direct sources of sunlight. Do not expose device to dripping or splashing water. Do not place objects filled with liquids, such as vases on the device.

Placement: Never mount the units loosely in a vehicle, on an unstable surface, on a loose stand, on unsuitable furniture, or with insufficient bracing. The loudspeakers could topple and cause personal injuries, which you will be liable for. Especially when speaker cabinets are mounted on stands or placed on top of TV sets/monitors, they may topple due to external stress (cable being pulled, tripping over cable, accidental physical contact) – even if they seem to be mounted quite securely. As a result of their weight, toppling speaker cabinets can cause considerable damage, as well as becoming badly damaged themselves. The same applies to undersized or unprofessionally installed wall-mounting brackets, particularly on light walls. Always use adequately sized wall brackets for mounting loudspeakers, and ensure that the wall can withstand the stress. Never mount the units near a heat source. This could be a heater or oven, but also any other electrical device that heats up during operation (e.g., amplifier). Similarly, never place a heat source on top of the loudspeakers, such as a fan heater or candles.

Ventilation: There are several ventilation slits and openings in the unit's housing. These are designed to ensure reliable operation and protect the unit from overheating. Never block or cover the ventilation slits; do not place the unit on a soft surface such as a bed, couch, carpet, etc., as this blocks the ventilation slits in the bottom of the housing. Do not put any newspapers, tablecloths, etc., on top of the unit. Most importantly, do not cover up the heatsink of the amplifier section or expose it to direct sunlight. Conversely, you should generally not attempt to provide additional cooling to the unit yourself. This is not necessary.

Power source: Make sure to connect the subwoofer to a power source that provides the correct voltage, i.e., the voltage indicated on the type plate. If you are unsure about the voltage provided by your domestic power connection, please contact us or your local electricity provider for advice. The unit does not require earthing. When connecting to the mains power socket, always use the supplied two-pole power cable. Under no circumstances should you modify the power cable, as it must comply with the official polarity and earthing regulations. Make sure to plug the power cable only into a double-pole socket.

Cables: Lay all the cables flush with the floor and walls. Avoid any loops in your cables that could cause people to trip up.

Cable loops can also cause electrical interference and degrade the sound quality. Make sure to lay your power cables out of reach so that they are not stood on or squashed by heavy objects. If you notice any cable damage, replace the cable. Pay special attention to all plug connectors, the mains socket, and the subwoofer's connector panel. Regularly check all powered cables to and from the loudspeakers for insulation issues and breakage. If you detect a fault, immediately power down all connected units, unplug the cables and replace the defective cable.

Disuse: During prolonged periods of disuse (holidays, etc.), always unplug the subwoofer from the mains socket.

Thunderstorms: In the event of a thunderstorm, switch off and unplug the unit as soon as you can in order to avoid damage from lightning strikes.

Overloading: Never overload your wall sockets, extension cables and multiboxes, or the integrated power sockets on your electrical devices. Power overloads can cause short circuits and fires. Also avoid turning up the volume control excessively on your amplifier, particularly if you are also boosting the bass frequencies (bass control, loudness button, bass boost button, etc.).

Liquid and foreign substances: Liquids or other foreign substances should never get inside the unit, as they may interfere with exposed live parts and cause short circuits or fires. Absolutely avoid spilling any type of liquid onto the unit. In case of a fault: Never attempt to repair the unit yourself. Always contact our support team first and discuss the fault with them. If appropriate, they may give you instructions on how to clear the fault. If this is not possible, send the unit directly to our service address.

Transport: Take utmost care when transporting the unit, and use a sack barrow if possible. Be aware that both the sack barrow and the unit can easily fall over as a result of sudden stopping or jolting (uneven ground, lurching movements, etc.).

Replacement parts: During the period of warranty, Lautsprecher Teufel will supply all required replacement parts. Your warranty will not be voided as long as you use Teufel spare parts to replace any defective components.

Unusual noises: If any unusual noises occur during operation, or if the sound gets distorted, immediately turn down the amplifier volume to a level where the sound returns to normal.

Replacing the fuse:

Unplug the power cable before replacing the fuse. Make sure that the replacement fuse has the same rating as the defective fuse.

Speaker volume: Excessive loudspeaker volume can cause irreversible hearing loss. The subwoofer may emit high sound pressure levels very unexpectedly when it is suddenly triggered into activity by a bass impulse ("Standby/Auto On" mode) – particularly if the unit is on full volume. As well as physical hearing loss, also watch out for psychological stress caused by excessive volume. Children and pets are particularly sensitive to noise. Always set the volume control of your audio system to a level that is appropriate to the surroundings. When the system is playing at high volume, do not stand too closely to the subwoofer and never put your ears directly up to any of the loudspeakers.

Introducing System 4

Dear Lautsprecher Teufel customer,

Thank you for purchasing a set of loudspeakers from Lautsprecher Teufel.

You are now the owner of a powerful and sophisticated loudspeaker system. All Teufel products are meticulously manufactured and fitted only with top-quality components. Our System 4 loudspeaker set is designed for audio playback in rooms sized up to 35 m². Before using the loudspeaker set for the first time, carefully read this operating manual. Keep the manual in a safe place for later reference.

If you have any questions, feel free to contact our technicians (ph. +49 (30) 300 9 300), or write an e-mail using the contact form on our website www.teufel.eu. Please provide your order number so that we can identify your purchase and provide the best possible support.

BEFORE you contact us with any questions, make sure to read the "Problems and Solutions" section on page 15. Further answers are provided on the "FAQ/Support" pages of our website (www.teufel.eu).

Please take careful note of the safety guidelines on page 4 of this operating manual. Do not start using the loudspeakers before you have read this page.



Please write down the set's serial number (shown on a sticker on the packaging) and the invoice number here:

My **INVOICE NUMBER** is:

.....

My **SERIAL NUMBER** is:

.....

Should you ever require any customer support from us, please tell us these numbers so we can process your request promptly.

Teufel

Unpacking · Included components

Please make sure that you have all the components of the system!

Attention:
Hold on to the cardboard boxes for at least eight weeks (duration of the right-of-return period). Lautsprecher Teufel will ONLY refund the full purchase price if the speakers are shipped back in their ORIGINAL PACKAGING!

Unpacking

Open the top flaps of the cardboard box, take out the styrofoam padding, and carefully lift the loudspeaker out of the box. If the speaker set is shipped with speaker grilles, attach these now.

We recommend holding on to all the original packaging in case you ever need to ship the speakers back to us for servicing.

System 4 ships as a complete surround loudspeaker system. Two different configurations are available:

5.1 Concert Set · 5.1 Cinema Set

Each set is a different combination of up to three different loudspeaker types:

Included components

5.1 Concert Set:

- ▶ 1 x M 4500 SW subwoofer
- ▶ 5 x M 450 FCR loudspeakers

5.1 Cinema Set:

- ▶ 1 x M 4500 SW subwoofer
- ▶ 3 x M 450 FCR loudspeakers
- ▶ 2 x M 450 D loudspeakers

Accessories

As our customers' setup requirements tend to vary considerably, the system does not ship with any audio cables, wall mounts or speaker stands. However, you can order suitable cables for the speakers and subwoofers directly from us, as well as any required mounts or stands.

All of the accessories available for the System 4 loudspeaker set are described on pages 7 and 8.



◀ M 4500 SW



◀ M 450 FCR



◀ M 450 D

Accessories (optional)

Optional accessories for the System 4 set

Teufel offers the following accessories for your System 4:

System 4 EX set



If you own a 7.1 AV receiver, you can purchase a “5.1 → 7.1” EX set to expand your System 4 loudspeaker setup into a full-blown 7.1 system. The EX set consists of two additional

M 450 FCR speakers, to be mounted centrally between the side rear speakers (see page 11).

Teufel speaker cable 2 x 2.5 mm²



Highly flexible copper core (650 strands) with a transparent sleeve and polarity markings. The 2 x 2.5 mm² cable can be used

for cable distances up to 15 metres. For longer distances, we recommend the thicker 2 x 4 mm² cable. In response to customer demand, all our audio cables are now pre-wired for typical usage lengths.

Teufel speaker cable 2 x 4 mm²



Hundreds of ultra-thin, low-oxygen copper wires (protected by a thick, flexible, transparent plastic sleeve that withstands almost any

stress) ensure that your audio signals are passed to the speakers cleanly and without being compromised by underdimensioned cabling.

Teufel NF mono RCA cable



This cable is designed for connecting active subwoofers to AV receivers/amplifiers, and is shielded against magnetic interference. A

reliable connection is guaranteed by sturdy, gold-plated connectors. This cable is available in several different lengths (2.5 to 15 metres) to perfectly match your requirements.

Y adapter



1 x socket to 2 x connector. A Y adapter lets you feed a mono sub signal to both of the subwoofer's stereo inputs; this increases the subwoofer's overall volume.

M 620 P speaker stand (black)



The M 620 P has a black base mount and was designed to aesthetically match the System 4 speakers. The stand's two sleek columns seem to make the speaker float in mid-air. Thanks to the established Teufel speaker mounting method – integrated fittings and packing

screws – the speaker is securely fastened to the stand. At a stand height of 68 cm, the FCR satellite speakers are automatically placed at the proper surround system height.

Please note that this stand is not suitable for the M 450 D satellite speakers – dipole speakers should always be wall-mounted.

Teufel banana plugs



These high-quality, multi-purpose speaker connectors from Teufel are an affordable option to ensure faultless connections between your loudspeakers and amplifier/receiver.

The rugged banana-design screw connector securely holds cables up to 4 mm

in diameter. Low-resistance plug connections are ensured by flexible spring contacts and solid gold plating. Banana plugs are sold in pairs only, marked red and black respectively. The System 4 loudspeaker set requires 10 banana plugs for a 5.1 setup, or 14 for a 7.1 setup.

If you require any optional accessories, you can easily order these directly from the Accessories section of our online store:
www.teufel.eu

Accessories (optional)

Teufel L-Lock wall bracket AC 6500 SM



A versatile wall bracket for mounting speaker cabinets – designed by Teufel. Most Teufel speakers can be mounted very easily using this wall bracket, with no holes needing to be drilled into the cabinets. This mounting bracket is perfect if you need to tilt your M 450 D rear speakers horizontally (e.g., if you are mounting them on the rear wall). The M 450 D cabinets provide a fitting for an M6 packing screw on the cabinet base, which is used for attaching them to wall mounts or speaker stands.

If you require any optional accessories, you can easily order these directly from the Accessories section of our online store: www.teufel.eu

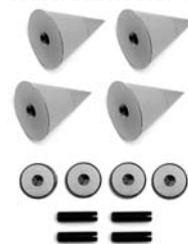
Teufel Multilock wall mount



The design of this new speaker wall mount provides superior flexibility and can carry speakers weighing up to 10 kg. The mounting bracket is fixed with a knurled screw and can be vertically swivelled so that the speaker is perfectly angled towards the listening position. We recommend using the Multilock particularly if you need to mount the M 450 FCR speakers above or below the suggested height (0.40–1.20 metres). As the Teufel speakers are mounted using a packing screw in the bottom of the speaker cabinet, they can also be angled horizontally.

** Note:
When putting together a 7.1 set, you will need four additional banana plugs as well as additional speaker cables on top of the standard Accessory Bundles.*

Teufel subwoofer spikes AC 8534 BA



These four sturdy cones ensure the subwoofer cabinet is decoupled from the floor, which prevents muddy bass resonances. The M 4500 SW already has suitable spike fittings in its base, so you do not need to drill any holes. The spikes are supplied with pad rings to protect your floor.

Teufel Vibrapods – professional resonance eliminators



Teufel Vibrapods are designed to eliminate all unwanted resonant frequencies. Made from a sophisticated high-density rubber which is also used in space travel, these professional resonance eliminators reliably decouple even the heaviest speaker cabinets and subwoofers from vibrating wooden floors and shelves, ensuring tight, unmuddied bass frequencies at all times.

Teufel rollers



Fitted with these compact black rollers, your Teufel subwoofer instantly becomes mobile. With a mobile subwoofer, the trial-and-error setup stage is made quick and easy – particularly on your back! In addition, you can simply wheel the subwoofer out of harm's way when cleaning.

Teufel Accessory Bundles

Have a look at our four Accessory Bundles – these contain a variety of speaker cables, mono RCA cables (subwoofer) and banana plugs at discounted prices. Save up to 15%!

Accessory Bundle 1

- ▶ 30-metre speaker cable, 2 x 2.5 mm²
- ▶ 1 NF mono RCA cable, 2.5 metres
- ▶ 10 banana plugs

Accessory Bundle 2

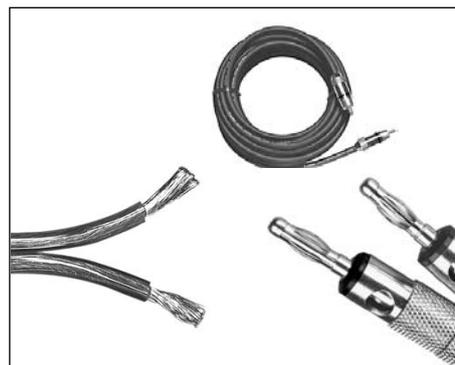
- ▶ 30-metre speaker cable, 2 x 2.5 mm²
- ▶ 1 NF mono RCA cable, 5 metres
- ▶ 10 banana plugs

Accessory Bundle 3

- ▶ 30-metre + 20-metre speaker cable, 2 x 2.5 mm²
- ▶ 1 NF mono RCA cable, 5 metres
- ▶ 10 banana plugs

Accessory Bundle 4

- ▶ 30-metre speaker cable, 2 x 4 mm²
- ▶ 1 NF mono RCA cable, 2.5 metres
- ▶ 10 banana plugs



Speaker positions in the 5.1 configuration

General notes on speaker placement

Thanks to its unobtrusive design, the Teufel System 4 loudspeaker set will easily blend into your living room. In order to get the best possible audio quality from your Teufel system, however, there are a number of speaker placement rules to consider; these apply particularly to home theatre use.

As a general guideline, any home theatre system should be concentrated around the viewing area, i.e., that part of the room that contains the TV/screen and the main seating spots. If at all possible, the TV/screen should be placed centrally in relation to the viewing/listening spots.

Our speaker placement suggestions, shown over the next pages, are designed for the best possible multi-channel sound reproduction in your home. In the reality of your living room, of course, there may be factors working against the suggested placements. While our recommendations represent the audio purist's optimum layout, modern AV receivers also offer a number of options to electronically compensate for compromises in speaker placement. Always remember: Our recommendations are not the be-all-and-end-all but a starting point. Ultimately, you will know best what works in your room, both visually and sonically. Trust your eyes – and your ears!

Centre

The centre speaker reproduces virtually all spoken sound, including most dialogue. In relation to the main listening spot, place it centrally under or above the TV/screen. If you need to position the centre speaker (M 450 FCR) lower than 40 cm or higher than 1.20 m, angle it horizontally towards the listening spot.

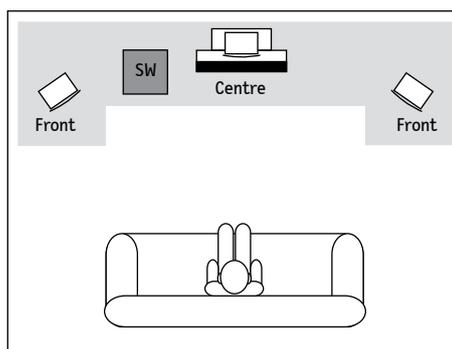
Front

The front speakers should be positioned the same way as any conventional stereo speakers – forming an equilateral triangle with the listener. In a home theatre setup, the left and right front speakers should be equidistant to the TV/screen, mounted on the wall or on speaker stands. The Teufel M 450 FCR satellite speakers can be mounted using Teufel's Multilock or L-Lock angle bracket. The speaker cabinet has an M6 packing

screw in its base to fasten the cabinet to a wall mount. This packing screw is also used to fasten the speaker to the speaker stand. The recommended speaker stand model for this set is the M 620 P. Speaker stands ensure that the satellite speakers are placed at the best possible height. If you mount the speakers on the wall or on a bookshelf, make sure the speaker height is between 40 cm and 1.20 m. If these recommended values are not practical in your listening environment and you need to position the speakers higher or lower, you should angle them towards the listening spot. Teufel's Multilock wall mounts are designed for just this purpose.

Finally, make sure that the centre speaker and the two front speakers are positioned in a straight line, or on a slight arc with the TV/screen. If the distances between you and the speakers vary significantly, this will degrade the audio signal's spatial imaging.

Make sure to align your speakers properly so they sound as good as possible.



We recommend you place the subwoofer somewhere in the grey front area.

Subwoofer

At the recommended crossover frequency of 100 Hz, the subwoofer can be positioned in the room very flexibly without affecting the output from the other loudspeakers. The ideal position is somewhere along the axis between the two front speakers, but you should feel free to experiment with placing it anywhere you like. Simply make sure that the front of the subwoofer (with the speaker grille) can radiate freely towards the centre of the room, i.e., it is not pointed directly at a wall. If this cannot be avoided, make sure the subwoofer is at least 0.50 m away from the wall.

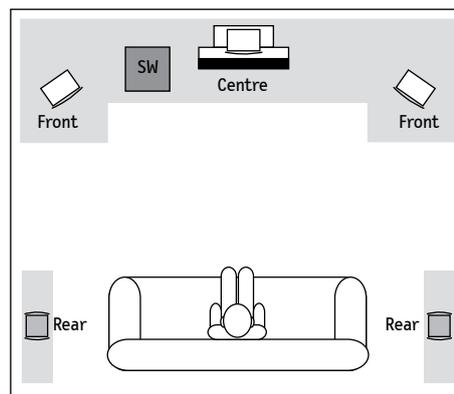
Speaker positions in the 5.1 configuration

Rear/side speaker placement option A

Cinema Set

The M 450 D dipole speakers should ideally be mounted to the sides of the listening spot, at a height of 1.40–2.10 m. The M 620 D speakers ship with a simple integrated wall mount. With this placement option, the dipole rear speakers radiate towards the TV/screen out the front (front panel with Teufel logo) and towards the rear wall out the back of the speaker cabinet. The distance between the rear-radiating side of the dipole speaker and the room's rear wall should be at least 10 cm.

We recommend you place the subwoofer somewhere in the grey front area.

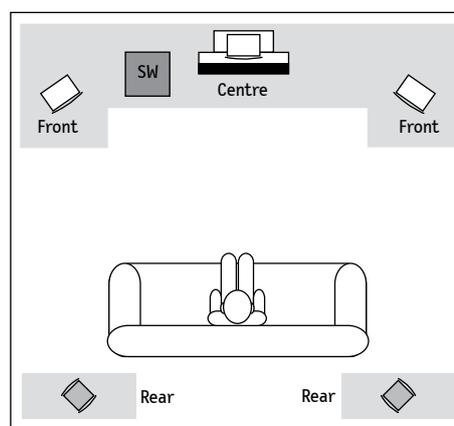


Rear speaker placement option B

Cinema Set

You can also wall-mount the dipole speakers behind the listening spot, at a height of 1.40–2.10 m. We recommend that you mount the M 450 D speaker cabinets with our L-Lock wall bracket, which permits them to be angled horizontally. The ideal angle for the dipole speakers is 45 degrees, which means they can radiate towards the side wall out the cabinet front and towards the rear wall out the back. If the rear side channels are reflected off both the side and rear walls, this will create the desired spatial diffusion. Note that the front sides of the dipole speakers should be at least 10 cm removed from the room's side walls.

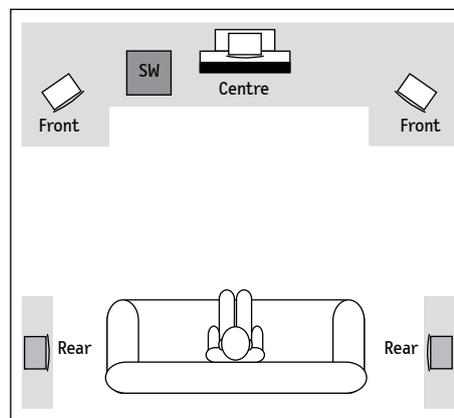
We recommend you place the rear speakers somewhere in the grey rear area.



Rear speaker placement option

C Concert Set

For a Concert Set with five direct-radiating M 450 FCR satellite speakers, position the rear speakers to the left and right of the listening spot, ideally at the same height—e.g., on the same shelf, or best of all on speaker stands. If you need to mount the speakers significantly higher or lower, experiment with angling them towards the listening spot. If the speakers are attached to the wall, we recommend using our Multilock wall mounts. The M 450 FCR rear speakers should be positioned at least 1.00 m away from the listener. If they are any closer to the listening spot, make sure that the front of the speakers is not directly pointed at the listener but into the room, angled towards the TV/screen.



Speaker positions in the 7.1 configuration

If you have augmented your System 4 set with an EX set (5.1 → 7.1 – see page 7), you can make full use of your 7.1 AV receiver and expand your surround setup into a 7.1 home theatre system.

Front • Centre • Subwoofer • Rear (Side)

The arrangement of speaker boxes follows the same pattern as a 5.1 system. Please refer to “Speaker Positions in the 5.1 Configuration” on the previous two pages.

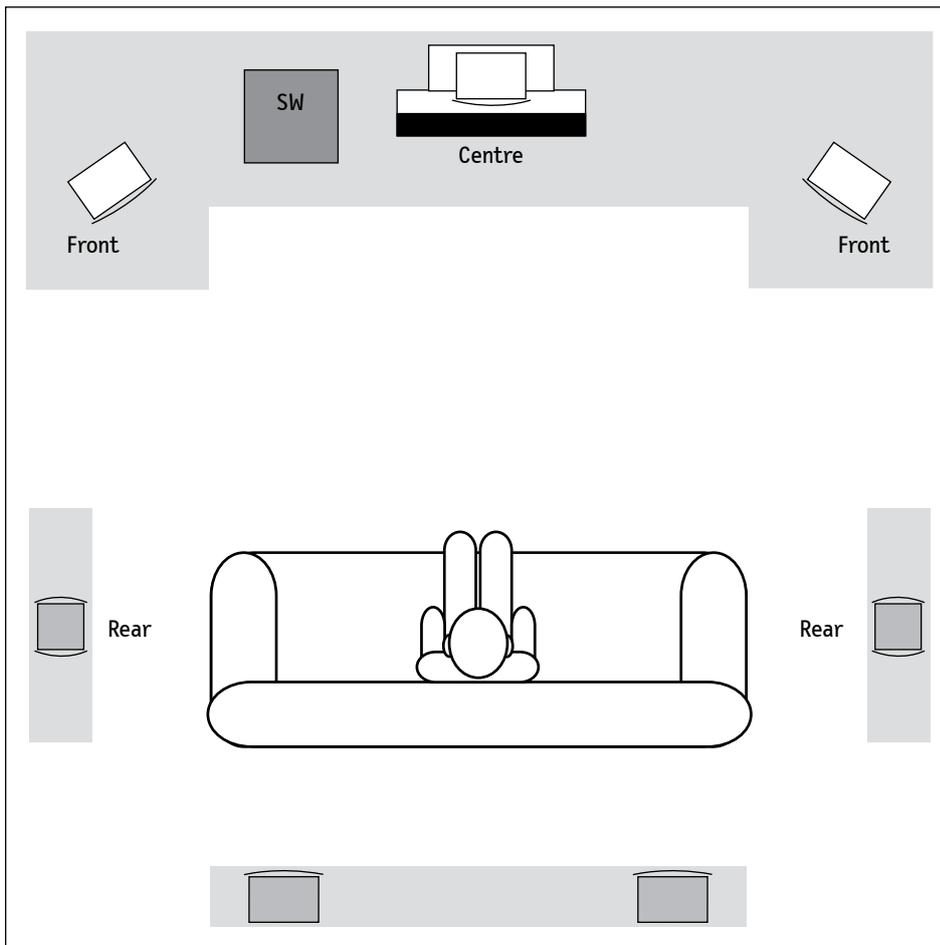
Rear centre

In an ideal 7.1 system, the rear effects speakers (rear sides) are positioned on the side walls facing the listening spot, and the rear centre speakers are positioned on the rear wall (height: 1.40–2.10 metres).

If the distance between the rear speakers and the listening spot has to be less than 1.00 m, we recommend the use of M 450 D dipole speakers

instead of the direct-radiating M 450 FCR speakers.

7.1 speaker placement: If you picture a top-view geometry of your surround setup, the four rear speakers should ideally form an isosceles trapezium. Each side of the trapezium should be at least 1.00 m long. If the sides have differing lengths, or if the four rear speakers are mounted at different heights, you can compensate for such asymmetries by entering the distances of the individual speakers in the AV receiver/amplifier's “Speaker Setup” utility.

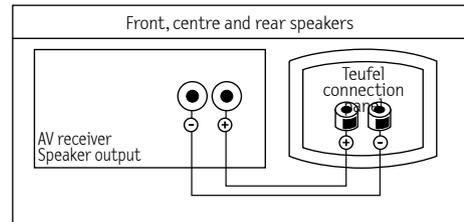


We recommend you place the subwoofer somewhere in the grey front area.

We recommend you place the rear speakers somewhere in the grey rear area.

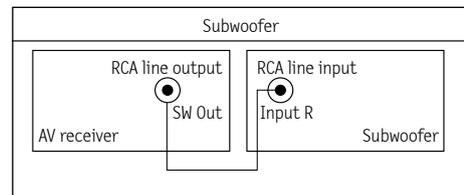
Connections

You can connect your System 4 loudspeaker set to any modern Dolby Digital/DTS 5.1/6.1/7.1 AV receiver/amplifier for a 5.1 setup with an active subwoofer. If your AV receiver is 6.1/7.1, simply ignore the Rear Centre Out(s). To make full use of a 7.1 AV receiver, you will additionally need to install the "5.1 → 7.1 EX" set (see page 7), which consists of two add-on M 450 D speakers for the left and right rear centre channels.

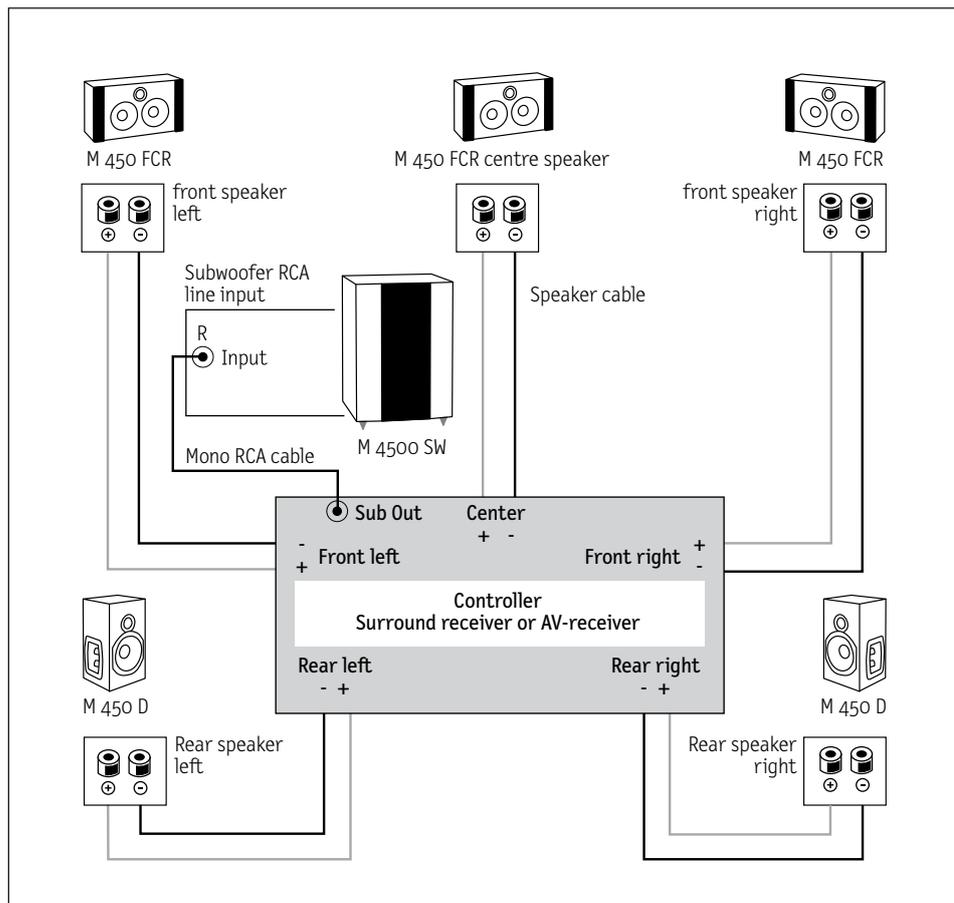


If you are using a 5.1 AV receiver, connect the front, centre and rear speakers as shown in the diagram.

Connect the subwoofer output (Sub Out) of your Dolby Digital/DTS AV receiver/amplifier to the right Line Input (R) of the subwoofer using a mono RCA cable. In this setup, the left input (Line Input L) is not connected. If you want to feed the Sub Out signal to both of the subwoofer's inputs for an additional bass boost, use a Y adapter (see Accessories, p. 7).



Connecting the speakers to an AV surround receiver (example: 5.1 Cinema Set)



Note:
With the expanded 7.1 set, connect the additional L/R rear centre speakers to the 7.1 AV receiver's L/R Rear Centre Outs.

Setting up the AV receiver

To take full advantage of a home theatre system with an active subwoofer, set the “Speaker Setup” section of your AV receiver to “small” or “normal” (not “large”) for the five satellite speakers. This ensures that the speakers receive the right amount of signal, and that the subwoofer and front speakers have matching volumes.

Also in the “Speaker Setup” section (Bass Management and/or Speaker Management), make sure the subwoofer is set to “On”.

The correct crossover frequency for the System 4 set is 100 Hz.

Setting up the subwoofer

Set the subwoofer itself to “Full Range”. This means that the phase and crossover frequency are controlled by the AV receiver. Make sure that the subwoofer’s frequency control is set to maximum.

The subwoofer’s output volume may vary depending on usage, e.g., home theatre sound system or music playback. Whereas an action-packed DVD typically contains very defined sub bass signals, many music-only sources do not. This is especially noticeable if your system is calibrated for optimum DVD playback. To find the best compromise between differing sound sources, use your own subjective judgement. Our recommendation is to determine the best subwoofer volume gradually over time.

Avoid configuring the subwoofer volume automatically via your AV receiver’s integrated room analysis computer (advanced receivers only). Instead, set the subwoofer level in the bass management/speaker management section (“Speaker Setup”) to a high value, and to medium-low on the subwoofer itself. This will guarantee that the subwoofer activates itself at the right times when in “Auto On/Standby” mode, and you can freely experiment with different bass levels that are suited to your various listening scenarios.

Subwoofer controls

What the icons mean



The lightning/arrow symbol inside an equilateral triangle informs the user about the possibility of a dangerous, non-isolated electrical current inside the device housing, indicating the risk of electrical shock.



The exclamation mark within the equilateral triangle, which can be seen on the back of the unit, indicates that there is important operating and service information for the user to read.



This product complies with the following European Union guidelines: 2004/108/EC and 2006/95/EC.

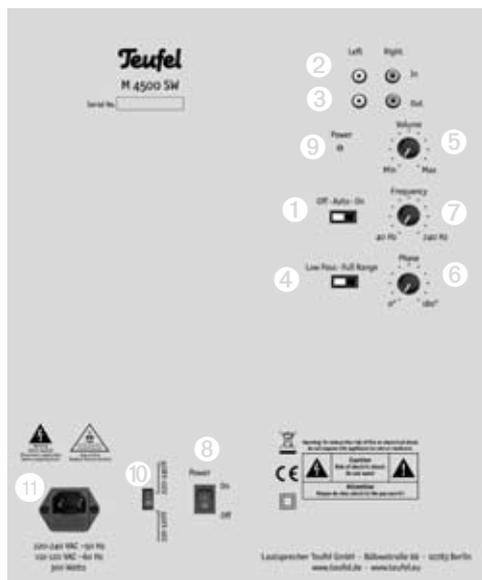


The "wastebasket" symbol printed on the type plates and amplifier labels of our products signifies that Lautsprecher Teufel ensures the proper disposal of its sold loudspeakers and subwoofers according to Germany's Electrical and Electronic Equipment Act.



This product complies with DIN EN 61140 (VDE 0140-1) and IEC 60417 of protection class II. It only requires a two-pin round plug (included) and not an earthed plug. The plug has a reinforced or double-shielded casing to prevent electrical shock.

Attention: The separating equipment of this equipment is the mains plug, this separating equipment must be usable without difficulties.



1 Power function

OFF means that the subwoofer is switched off; ON means that it is switched on. AUTO means that the subwoofer is operational but is only activated once it receives an audio signal. In "AUTO" mode, the subwoofer automatically switches to standby after 20 minutes of inactivity.

2 Line Input

Connect the AV receiver's "Sub Out" to the subwoofer's "Line Input" using a mono RCA cable (optionally with an additional Y adapter).

3 Line Output

Here, you can connect a second subwoofer for added bass or to compensate for resonant frequencies in the room.

4 Low Pass – Full Range

With the switch on "LOW PASS"; the built-in controls for "Phase" and "Frequency" are activated. With the switch on "FULL RANGE" (recommended setting), these parameters are controlled by the AV receiver.

5 Level

Use the "LEVEL" control to adjust the subwoofer's volume. In the receiver's bass management section, set the bass level to a high value, i.e., between 6 and 12 dB. Next, set the subwoofer's

level control to 10 o'clock. While the AV receiver is outputting its white noise setup signal, slowly turn up the subwoofer level to the desired volume.

6 Phase

This switch determines the phase relationship between the subwoofer and the front/centre speakers. If the subwoofer is positioned in the speaker setup as indicated on p. 9 (grey area of drawing), set the phase to 0°. With other setups, the 180° setting may produce better results.

7 Frequency

Use this control to set the crossover frequency between the subwoofer's bass signal and the bass frequencies of the other speakers. If you are using an AV receiver, set the receiver's crossover frequency to 100 Hz and turn the subwoofer's frequency control to maximum (hard right).

8 Power

OFF means that the subwoofer is switched off; ON means that it is switched on.

9 Power LED

When the subwoofer's mains power switch 8 is off, the power LED is off. When the subwoofer's mains power switch 8 is on, the power LED lights up red or green, depending on the position of the Power Function switch 1.

When the subwoofer is permanently active (= Power Function 1 ON), the power LED is green. When the subwoofer is in standby mode (Power Function 1 AUTO), the power LED is red. After the subwoofer is triggered into activity, the LED changes to green. After the subwoofer switches itself off after 20 minutes of inactivity, the LED is red again. When the Power Function switch 1 is on OFF, the LED is red.

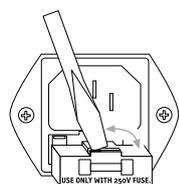
10 Voltage selector

This switch adapts the internal amplifier to the local mains voltage. NEVER set this to any other value than the standard local voltage value. In Germany, the correct position is "220 – 240V".

11 Fuse

This is where the mains power fuse is located.

The subwoofer is not working



If the Power LED on the rear panel does not light up, replace the fuse (see page 14, point 11).

If the Power LED lights up, set the subwoofer volume level to “Min”, unplug the subwoofer RCA cable from the amplifier, turn up the volume slightly and touch the tip of the RCA connector with your finger. If this produces a hum or crackle, the fault is with the amplifier or the amplifier settings. If the subwoofer remains completely silent, please contact our support team.

The subwoofer is making a humming noise

Hum may be caused by any connected audio device as well as by problems with the mains power. In most cases, excessive hum is caused by one of the following:

1. The subwoofer is connected to a different electrical circuit than the other components. Make sure that all the connected devices (including any computers) are powered from the same electrical circuit, i.e., the same mains socket.
2. The antenna connected to the audio system or TV has a different ground potential to the antenna socket. To test this, simply discon-

nect all the antenna cables from the wall socket. If this makes the hum disappear, you will need a ground breaker (available from most electronics stores). Simply insert the ground breaker between the antenna socket and the TV/receiver.

3. A line filter (to be purchased separately) can also be useful for hum removal. Note that you will need to connect all your electrical devices to the line filter. Make sure you can return the line filter for a refund if it does not produce the desired results.
4. Some types of power multiboxes are also known to produce hum. Try eliminating your multibox and plug the subwoofer's power cable directly into the mains socket.
5. If possible: Unplug the mains cable, rotate the connector plug by 180°, and plug it back into the mains socket.
6. If you have trouble locating the source of the hum, check whether the subwoofer is less noisy when you plug it into the mains connection in another room (e.g., using an extension cable). Also, try disconnecting the subwoofer's RCA cable from the receiver to see whether the hum is caused by one of the other connected audio devices.

Cleaning

Please take note of the following guidelines to protect the components and maintain the finish of your Teufel loudspeakers:

Avoid placing the speaker cabinets in direct sunlight. Avoid extreme temperature fluctuations and protect your loudspeakers against humidity. When cleaning the speaker cabinets, only use dry or moist cloths. Never use abrasive or alcohol-based cleaning products. If you need to clean a speaker membrane, do so very carefully using a dry cloth.

Technical specifications

All technical specifications are listed in our catalogue as well as on our website: www.teufel.eu

Active subwoofer

Loudspeaker with integrated amplifier for the reproduction of bass frequencies. Very low frequencies can only be reproduced by large-size speakers. To permit a speaker system with compact front speakers, the bass frequencies are handled separately by a dedicated subwoofer unit. As bass frequencies travel largely non-directionally, the subwoofer can be placed out of sight, e.g., behind the couch or under a coffee table. The crossover frequency between the front speakers and the subwoofer varies from system to system, but is usually somewhere between 50 and 120 Hertz.

Auto On/Off function

The Auto On/Off function activates the subwoofer when an audio signal is detected at the input, and switches it off again after a set time of inactivity (approx. 20 minutes).

Centre

The central loudspeaker of the home theatre system. Surround sound for TV/film places most of the dialogue in the centre speaker. Because of this, excellent reproduction of speech is a vital quality of the centre speaker.

Cinema set

"Cinema sets" are all Teufel speaker systems that consist of three direct-radiating front speakers and dipole effects speakers. "Concert sets", in contrast, consist of five direct-radiating speakers.

Concert set

"Concert sets" are all Teufel speaker systems consisting of five direct-radiating speakers. "Cinema sets", in contrast, consist of three direct-radiating front speakers and dipole rear speakers.

Dipole

Dipole loudspeakers are designed to emulate the authentic surround sound experience of a cinema. A cinema's surround speaker setup features numerous tiny speakers for the side and rear channels, which diffuse the directionality of the sound. In contrast to direct-radiating speakers, dipole speakers have a non-directional design, which creates a similarly diffused surround sound field.

Direct-radiating speaker

All conventional loudspeaker cabinets that directly radiate the sound at the listener are described as "direct-radiating speakers". In home theatre systems, direct-radiating speakers are primarily used for the sound channels of the three front speakers. In Teufel's Concert sets, they are also used for the rear channels.

Dolby Digital/DTS decoder

An electronic circuit to split digital multi-channel audio signals from DVDs into up to seven separate analog signals. "Dolby Digital" and "DTS" are different audio formats, so they require different decoders. Most AV receivers, DVD players and surround sound cards are equipped with both decoders.

Frequency/crossover frequency

The "crossover frequency" determines at which point in the frequency range the bass frequencies are separated off to the subwoofer. For example, a crossover frequency of 120 Hz means that all frequencies above 120 Hz are sent to the satellite speakers, and all frequencies below 120 Hz are sent to the subwoofer.

Level

The "Level" control on the subwoofer determines the subwoofer's volume. In a perfect speaker setup, all the speaker channels (including the subwoofer) are balanced in relation to the listening spot, i.e., all the speakers appear to have an equal volume.

Phase

The "Phase" control lets you adjust the subwoofer to the satellite speaker so that the membranes of all the speakers vibrate in the same direction ("phase") when reproducing signals around the crossover frequency. If the phase is set incorrectly, this may cause a reduced bass response or even bass cancellations. If the subwoofer is positioned between the front speakers, we recommend a phase setting of 0°; if the subwoofer is positioned closer to the listening spot, a phase of 180° may be more appropriate. Similarly, the 180° setting may help to eliminate bass cancellations if you position the subwoofer in other areas of the room. Always set the phase control to the position where the bass response is best.

Rear speaker

The rear speakers (→ dipole or → direct-radiating) mostly reproduce effects and atmospheric sounds. This creates a much more spatial sound field when playing back film sound and music.

Sub Out

Output on the receiver or amplifier to connect an active subwoofer using a mono RCA cable.

5.1/7.1 Pre Out

Preamp outputs on the receiver, or DVD player outputs. An analog audio signal (RCA connection) is provided for each speaker channel.

6.1/7.1 surround sound format

This surround sound format features one or two rear centre speakers between the rear side speakers. The signal for the rear centre speaker(s), which doesn't exist in a 5.1 matrix, is generated from the stereo signals of the rear effects channels (e.g., THX® Surround EX, Dolby Digital EX), or it is provided as a discrete channel (DTS Discrete). Even though there is only one additional channel, this can be used to drive one (6.1) or two (7.1) rear centre speakers. While the sound format itself is "6.1" in both cases, the speaker setup can be "6.1" or "7.1".

Teufel

If you have any questions, suggestions or criticisms, please contact our support team:

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