



# Ultima 5

Manual Version 1.2

**Teufel**

# Ultima 5 Loudspeaker

## **Operating manual and technical specifications**

### **Safety guidelines**

Packaging materials, particularly plastic bags and foils, should be kept out of children's 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. Please read the following safety guidelines very carefully.

### **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. 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.

### **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. Always use adequately sized wall brackets for mounting loudspeakers.

### **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.

Pay special attention to the speaker cable/terminal connections. Regularly check all 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.

### **Overloading**

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.

### **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.

### **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. Always set the volume control of your audio system to a level that is appropriate to the surroundings.

### **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 substance has entered the interior of the unit
- Unit has been directly exposed to rain or another type of liquid
- Unit is inoperational even though you have followed all the instructions
- Unit has been dropped or otherwise damaged

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.

## **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.

## **Decoupling**

The speakers ship with four floor spikes for each speaker cabinet. These are designed to decouple the Ultima 5 system from the floor. Lay the speaker cabinet on its side and screw the four spikes into the designated fittings.

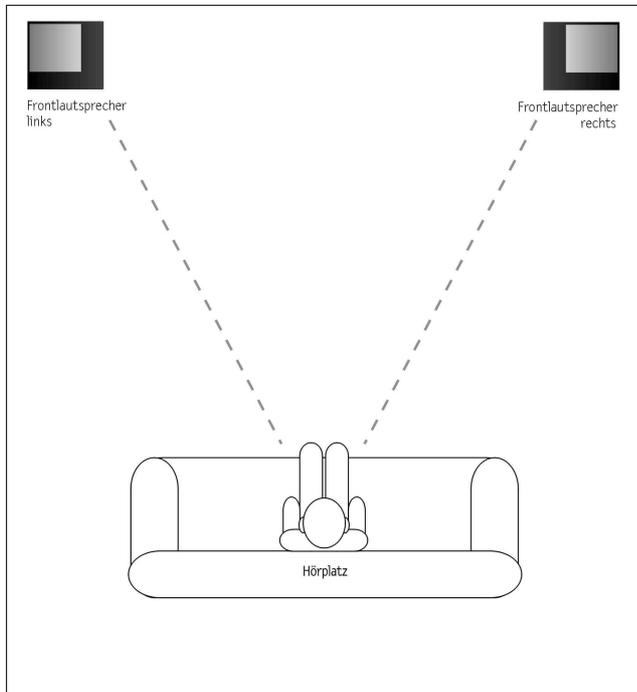
## **Stereo speaker placement**

This stereo loudspeaker system consists of two column speakers.

For an ideal stereo setup, position the Ultima 5 speakers following the shape of an equilateral triangle:

The distance between the left and right speaker cabinets should be the same as the distance between each cabinet and the listener.

This is illustrated below.



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 technical support team (ph. +49 (0) 30 300 9 300).

**Hint:** If for practical reasons the distance between the two speakers needs to be larger than the distance to the listener, you can compensate for this to some degree by angling the speakers towards the listening spot.

## **5.0 surround speaker placement**

Placement of the Ultima 5 speakers as part of a 5.0 surround system is described later in this manual.

## **Speaker connections**

The Ultima 5 loudspeakers have an impedance of 4–8 ohm. This is suitable for all standard stereo amplifiers and AV receivers. Each of the Ultima 5 cabinets has a rear connection panel for connecting to the amplifier/receiver. The speaker terminals are designed for double-core speaker cables.

**Hint:** To take full advantage of the high quality of the speakers, we recommend you only use top-grade speaker cabling – such as our own 2 x 4 mm<sup>2</sup> Teufel speaker cables:



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.

In response to customer demand, all our audio cables are now pre-wired for typical usage lengths (starting at 10 m).

## Connection panel

For a standard full-range connection with the amplifier/receiver, clamp the speaker cable into the connection panel's centre terminals.

**Attention:** The terminals at the left and right of the connection panel are for bi-amping/bi-wiring only. In standard full-range operation, these need to be bridged using the supplied binding posts.

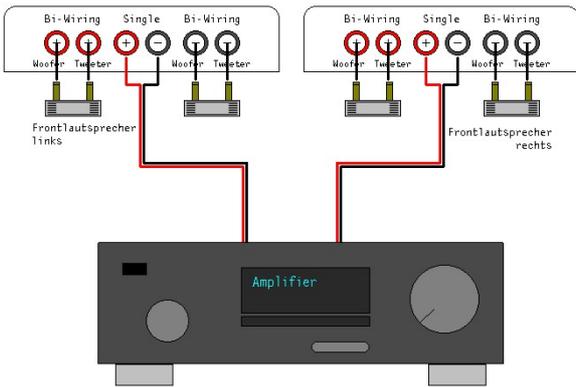
**Also see:** Additional connection options - bi-wiring/bi-amping

When connecting the loudspeakers to the amplifier, make sure the polarity is correct at both ends: plus pole to plus pole, minus pole to minus pole.

The connection panels on the Ultima 5 speaker cabinets and on the amplifier/receiver clearly indicate the [+] and [-] poles with different symbols and/or colours. If the polarity is not the same for both speakers, this leads to an inaccurate reproduction of the signal.

On speaker cables, one of the cores is usually marked with a line to help you distinguish between the two poles.

**Hint:** Always use the speaker cable core with the marking for the plus pole.



If you are using new speaker cables, crimp off the plastic sleeves at the end points (approx. 3 mm), twirl up the exposed copper ends, and clamp them into the corresponding speaker terminals. If you prefer a quicker and easier way of connecting your speakers, we recommend using our Teufel banana plugs with your cables.

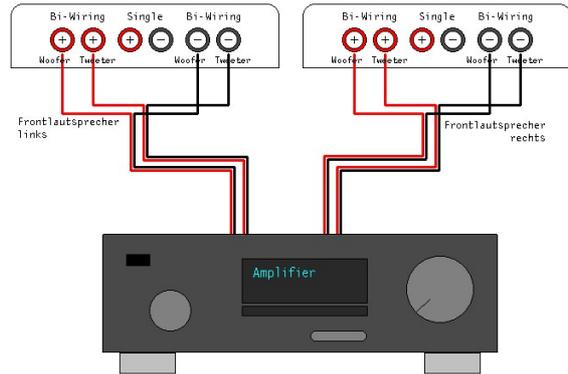


## Additional connection options – bi-wiring/bi-amping

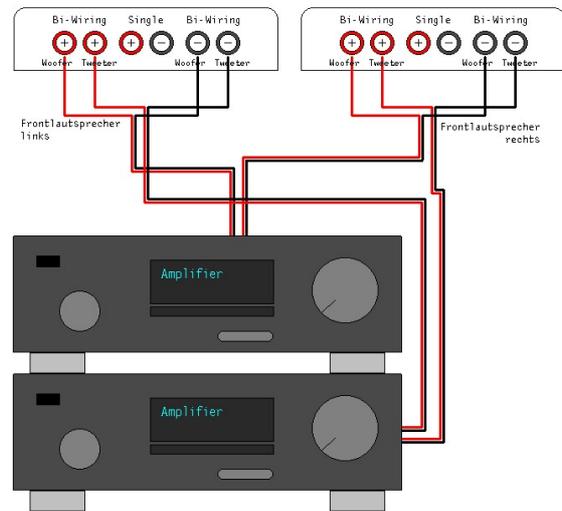
The connection panel on the Ultima 5 speakers fully supports bi-wiring as well as bi-amping.

This means that you can run the midrange driver and tweeter separately from the bass woofers, either via two separate cables (bi-wiring) or even via two different amplifiers (bi-amping). The terminal pair on the left provides the plus poles, and the terminal pair on the right the minus poles. Each pair consists of two inputs for 'Woofer' and 'Tweeter'.

### Bi-wiring



### Bi-amping



**Attention:** When you are bi-wiring or bi-amping the speakers, NEVER put a binding post on the centre terminals of the connection panel!

The centre terminal pair is designed for standard full-range operation, i.e., a single double-core speaker cable for each speaker cabinet.

## **Speaker placement in a 5.0 surround system**

With two or four Ultima 5 stereo speakers and one or three additional Ultima 5 FCR centre/rear speakers, you can set up a 5.0 surround sound system. Surround speaker placement is different to stereo speaker placement, so please read the following guidelines carefully.

Thanks to its unobtrusive aesthetics and sleek design, a Teufel Ultima 5 surround system 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 5.0 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, minor variations in placement will generally not affect the sound imaging very much. 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!

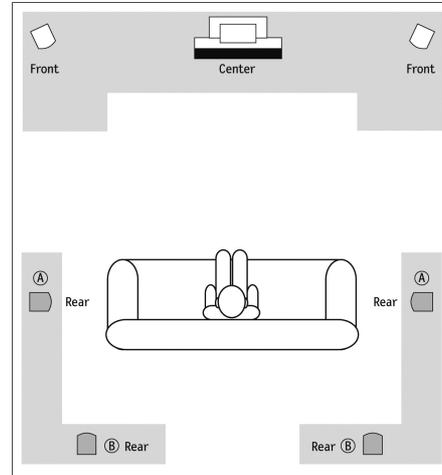
### **Centre**

For the centre channel, we recommend the Ultima 5 FCR speaker. The centre speaker reproduces virtually all spoken sound, including most dialogue. In relation to the main listening spot, place the Ultima 5 C centrally under or above the TV/screen in order to create a physical unity between sound and image.

For example, you can fasten the speaker directly to the wall using the mounting brackets on the rear (make sure to use suitable screws/wall plugs).

### **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 TV/screen should be centred between left and right front speakers. Should you need to position the column speakers further out, make sure to angle them towards the main listening spot.



### **Rear**

Depending on your budget, room dimensions and technical requirements, you can either use a second pair of Ultima 5 floorstanding speakers or a pair of Ultima 5 FCR surround speakers for the rear channels.

Position the left and right loudspeakers for the rear of the room either to the side of (A) or behind (B) the main listening spot, ideally at the same height as the front speakers. If you are using the Ultima 5 FCR speakers, you can mount these on a shelf or directly on the wall.

If necessary, the rear speakers can be placed higher than the front speakers (up to 2.10 m), but they should never be lower in the room than the front speakers.

The rear speakers should always be 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 towards the centre of the room. Alternatively, you can create the necessary distance by positioning the speakers higher than 1.20 m.

## **Included components**

2 x Ultima 5 loudspeakers, operating manual,  
4 x binding posts, 8 x floor spikes

### **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. 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.

## **Technical specifications**

All technical specifications are listed on our website at [www.teufel.eu](http://www.teufel.eu).

No responsibility can be accepted for the correctness of this information. Subject to technical changes.

If you have any questions, suggestions or criticisms, please contact our support team:  
Lautsprecher Teufel GmbH  
Bülowstrasse 66 · 10783 Berlin (Germany)  
Ph. +49(30) 300 9 300 · Fax: +49(30) 300 9 3030  
[www.teufel.eu](http://www.teufel.eu)

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](http://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.**

## **Cleaning**

When cleaning the speaker cabinets, only use dry or moist cloths.

## **About the Ultima 5**

The Ultima 5 loudspeaker is based on strict formal design considerations, which enable the speaker to deliver superb acoustic results. These are the main design concepts behind the Ultima 5:

1) In conventional speaker enclosure design, the sensitive parts of the diplexer (frequency crossover network) are exposed to the sound waves from the bass woofer. This adversely affects the diplexer's output. The Ultima 5 addresses this problem by taking the diplexer out of the actual enclosure and embedding it in the base block, where it is not directly exposed to vibration.

2) The height of the speaker cabinet in the room and the surfaces that the speakers reflect off are crucial factors in the sound that is produced by the loudspeaker. Ideally, these parameters should be controlled through the cabinet design. The so-called 'speaker stand' is not just an external device for placing the speaker cabinet according to visual and practical considerations, it also deeply impacts on the sound quality. The Teufel Ultima 5, therefore, firmly integrates the cabinet mount and the speaker height into its acoustic design.

3) All edges and protruding parts on the speaker baffle, regardless whether they are for constructive or aesthetic reasons, cause sound refractions and diffractions. As a result, the sound pressure level may fluctuate significantly across the frequency spectrum.

To avoid this, one of the constructive goals in speaker enclosure design is to have as few edges and protrusions around the baffle area as possible.

Protruding frames on the outside of the cabinet for holding speaker grilles/covers can be particularly detrimental to the SPL curve. The Ultima 5 circumvents this issue entirely by attaching all speaker covers magnetically rather than with frames.

With these structural considerations in mind, Teufel's longstanding Managing Director Peter Tschimmel designed an elegant column loudspeaker with excellent acoustic response. In 1991, Tschimmel's speaker design was acknowledged with the prestigious "Design Innovation" award by Design Zentrum Nordrhein-Westfalen in Germany.

As Teufel Lautsprecher was only just starting as a direct distributor at this point, these loudspeakers were only available for a very short period of time – long enough, however, to inspire similar speaker designs by major consumer electronics manufacturers across Germany and the UK.

The recently released Ultima 5 is a reissue of Teufel's much-lauded original column speaker. While all the exterior dimensions were retained, the new Ultima 5 contains only the latest in state-of-the-art loudspeaker and diplexer technology. The square-top speaker enclosure measures just 17 cm per side and is mounted on a wider base block. Like in the original design, the diplexer is housed in the base in order to protect it from vibrational interference. The base block also provides the connection panel, with gold-plated speaker terminals for full-range, bi-wiring and bi-amping operation.

With its individually covered speakers, the Ultima 5 column cabinet has a very distinctive appearance. At first glance, the individual speakers seem to be randomly distributed across the front panel, but in fact they are carefully placed according to acoustic, technological and aesthetic considerations. The overall proportions between the speakers are based on the golden section, an ideal geometric ratio that has been known since antiquity. The tweeter is at ear level with a seated listener, thus ensuring maximum clarity. The midrange speaker immediately below the tweeter has a separate enclosure, as do the bass woofers. The woofers are wired in parallel and have reflex ports on the rear for additional bass reinforcement. All the covers of the individual speakers are level with the front panel, which eliminates the diffractions that would otherwise be caused by protruding speaker grille frames.

The Ultima 5 loudspeaker impressively demonstrates that innovative design can not only look very appealing but also provide significant technological advantages.

# ***Teufel***

Lautsprecher Teufel GmbH • Bülowstrasse 66 • 10783 Berlin / Germany • Ph: +49(0)30 300 9 300 • Fax: +49 (0)30 300 9 3030