

## User Manual

# Home Cinema Speaker b502

3-way Loudspeaker with Hybrid Control



**Table of contents**

**INTRODUCTION ..... 3**

**INSTRUCTIONS FOR SAFE USE..... 3**

**APPLICATIONS..... 4**

**INSTALLATION OPTIONS..... 5**

**CONNECTION ..... 5**

**TECHNICAL DATA B502..... 6**

**TECHNICAL DATA B502 WITH B1002 ..... 6**

## Introduction

Thank you for choosing our loudspeaker. We hope you enjoy using our product.

Please read this manual carefully before using the loudspeaker for the first time and do not use it until you have understood these instructions.

## Instructions for safe use

The loudspeaker complies with all relevant EU directives and therefore bears the CE mark.

Use the loudspeaker only indoors and protect it from dripping or splashing water, high humidity and heat.

Damage caused by improper use is not covered by the warranty.

Do not stand in the immediate vicinity of the loudspeaker during operation. Otherwise, hearing damage may occur, even at low volumes.

Do not place audio media, credit cards or similar in the immediate vicinity of the loudspeaker, as it emits a static magnetic field even when it is not connected.

Due to the size and weight of the loudspeaker, special care must be taken when moving and installing. Only place the loudspeaker on a solid surface and ensure it cannot fall down. This could cause injury.

If you want to mount the loudspeaker on a wall or ceiling, use suitable fixing materials. Alternatively Internet contact one of our trading partners who will install the speaker.

Do not operate the loudspeaker and immediately unplug the DSP amplifier

- if there is visible damage to the loudspeaker or the loudspeaker cable,
- if there is any suspicion of a defect following a fall or similar,
- if a malfunctions occurs.

In any case, take the loudspeaker to a specialist workshop.

Only use a dry, soft cloth for cleaning, never water or chemicals. The membrane of the woofer and midrange speakers can be carefully cleaned with a soft brush.

If the loudspeaker is used for purposes other than those intended, or if it is not connected correctly, operated incorrectly or not repaired professionally, no liability can be accepted for any resulting damage to property or personal injury and the warranty will be invalidated.



Do not attempt to modify the loudspeaker yourself.



If the loudspeaker is to be taken out of service permanently, hand it over to a local recycling facility for environmentally friendly disposal.

For instructions on the safe use of the associated DSP amplifier, please refer to the DSP amplifier manual.

## Applications

This loudspeaker is designed for use in a high-quality home cinema environment and does not require any special technical knowledge to operate correctly, although this is a great advantage, especially iff the room acoustics are taken into account. If a wide frequency range is required, a suitable subwoofer system is essential. Alternatively, you can add a corresponding becker sounds subwoofer to make it a full-range loudspeaker. Please refer to the technical specifications at the end of this manual.

The loudspeaker has our hybrid technology, which combines the advantages of passive and active control technology. For this we use a state-of-the-art DSP amplifier and, thanks to cloud technology, are able to immediately detect errors in the signal processing and can intervene remotely. Of course, only if you want to! You can feed the DSP amplifier with either an analogue signal or via Dante/AES67.

Another advantage of our hybrid technology is the option of making manual room corrections. The DSP part of the amplifier is freely accessible for this purpose.

## Installation options

The frequency response of this loudspeaker is equalized under free field conditions and drops off quite early in the lower frequency range. This has been deliberately designed to work well with a connected subwoofer system. Alternatively, you can add a suitable subwoofer to the loudspeaker to make it a full-range loudspeaker. Please refer to the technical data at the end of this manual.

It is strongly recommend that the loudspeaker and subwoofer system are calibrated in the listening room based on acoustic measurements. A high-quality room calibration system is used in the surround preamplifier for this purpose. Alternatively, the DSP part of the amplifier mentioned above can be used for manual room calibration. If your technical skills are not sufficient to do this, please contact a specialist or our sales partner "Die Zwei - Heimkino GmbH" to help you achieve a good result. They will also be able to advise you in advance on planning the correct setup.

## Connection

Before connecting or changing connections, switch off the associated DSP amplifier. When switching it back on, set the volume of the input signal to a very low level. Otherwise, the volume may be too high and the speaker may be damaged.

Use the supplied speaker cable (please specify the length when ordering). Alternatively, you can make the speaker cable yourself. Please let us know when you place the order. You will then receive assembly instructions.

The becker sounds b502 is a 3-way home cinema front speaker including an associated cloud-capable DSP amplifier. It features our new hybrid technology, which combines the advantages of passive and actively controlled speakers. The state-of-the-art DSP amplifier also allows the use of a parametric equalizer for manual room measurement.

As the b502 is a bass-limited speaker, you will need a suitable subwoofer system. Alternatively, you can expand the b502 with the b1002 subwoofer to create a full-range speaker.

## Technical Data b502

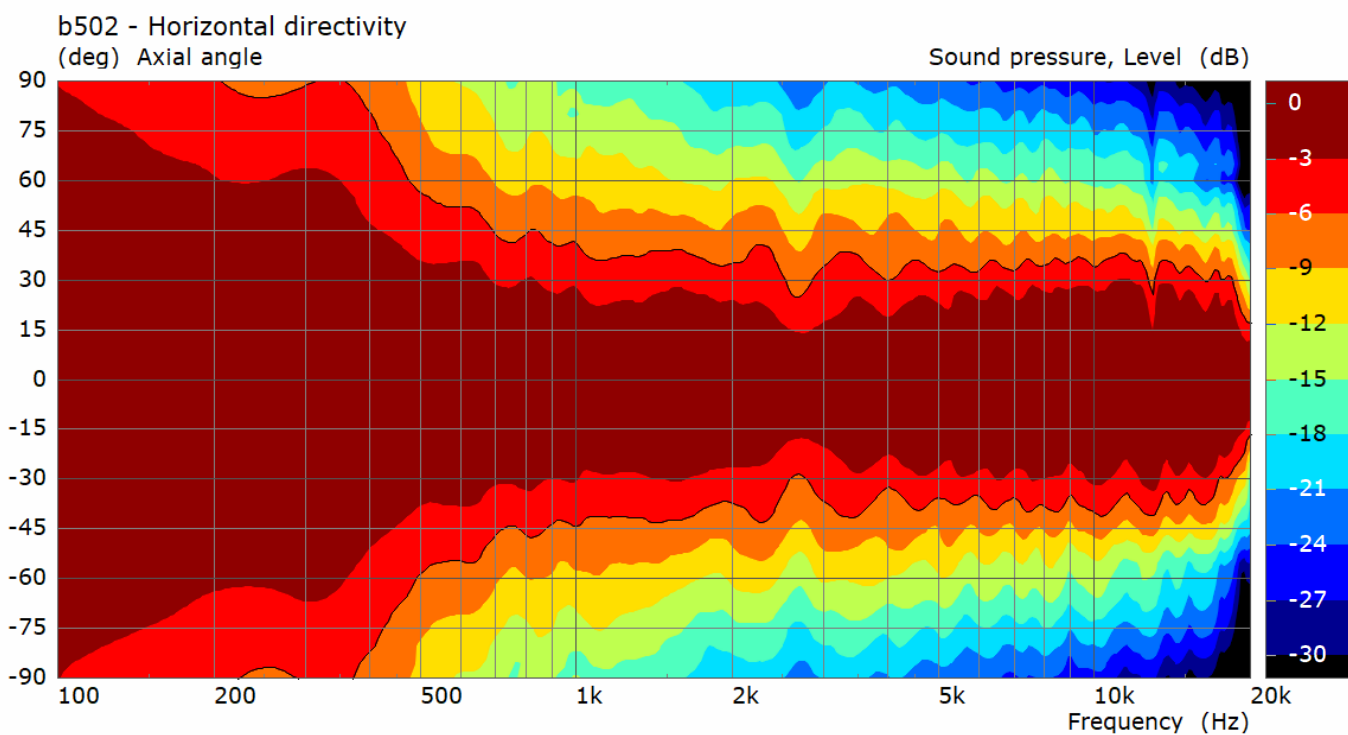
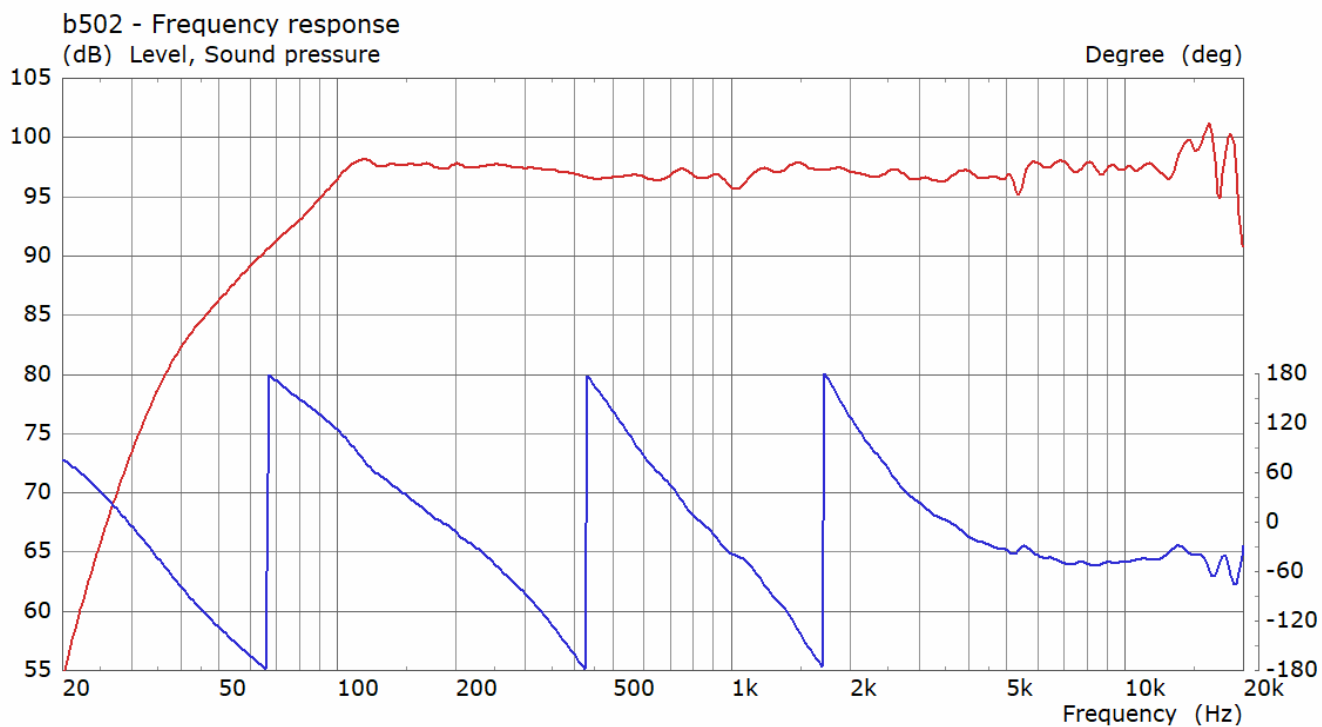
Frequency Response (+/-3dB)	80 Hz – 20 kHz
Maximum SPL free field at a distance of 1 meter	129 dB
Horizontal directivity	+/- 25°
Vertical directivity	+/- 15°
Tweeter	1"
Midrange driver	6"
Bass driver	15"
Connection options	Analog und Dante/AES67
Subwoofer as full-range extension	b1002
Dimensions (W x H x D)	45 cm x 92 cm x 28 cm
Acoustic center from the lower edge	61 cm
Weight	37 Kg

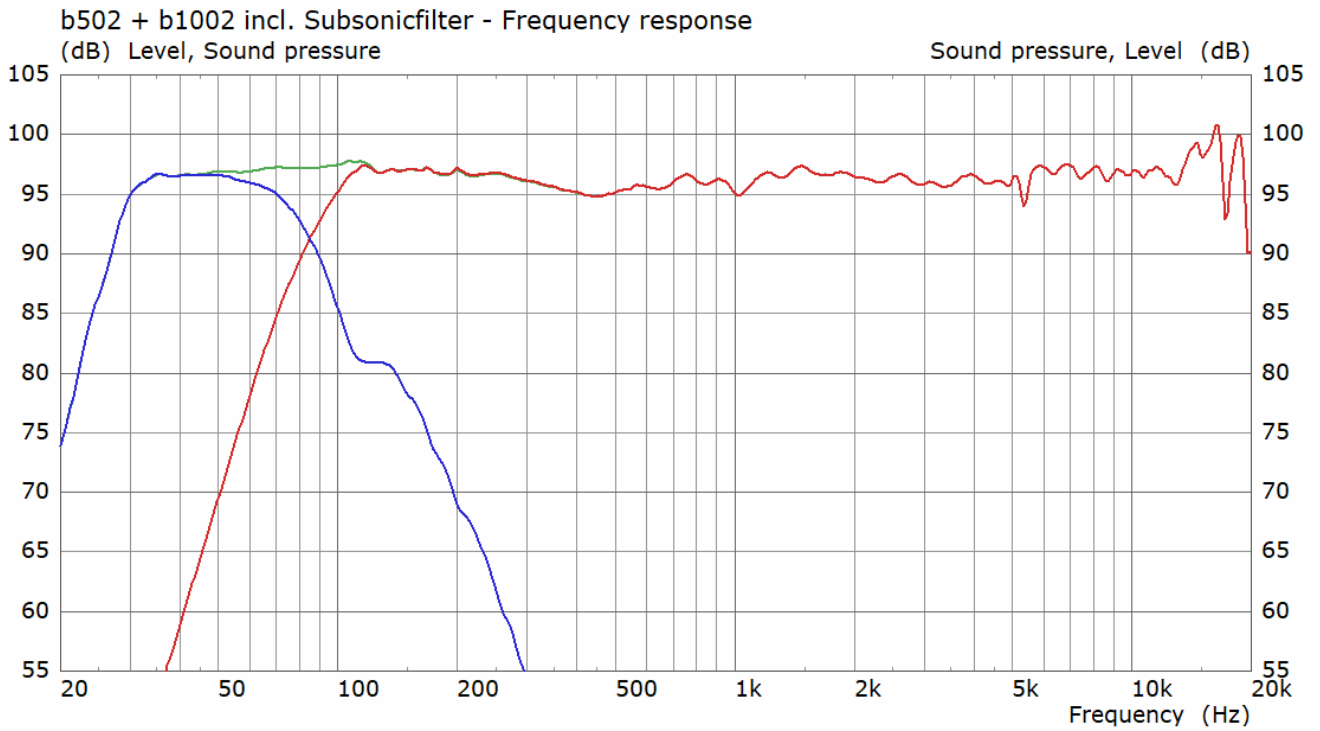


## Technical Data b502 with b1002

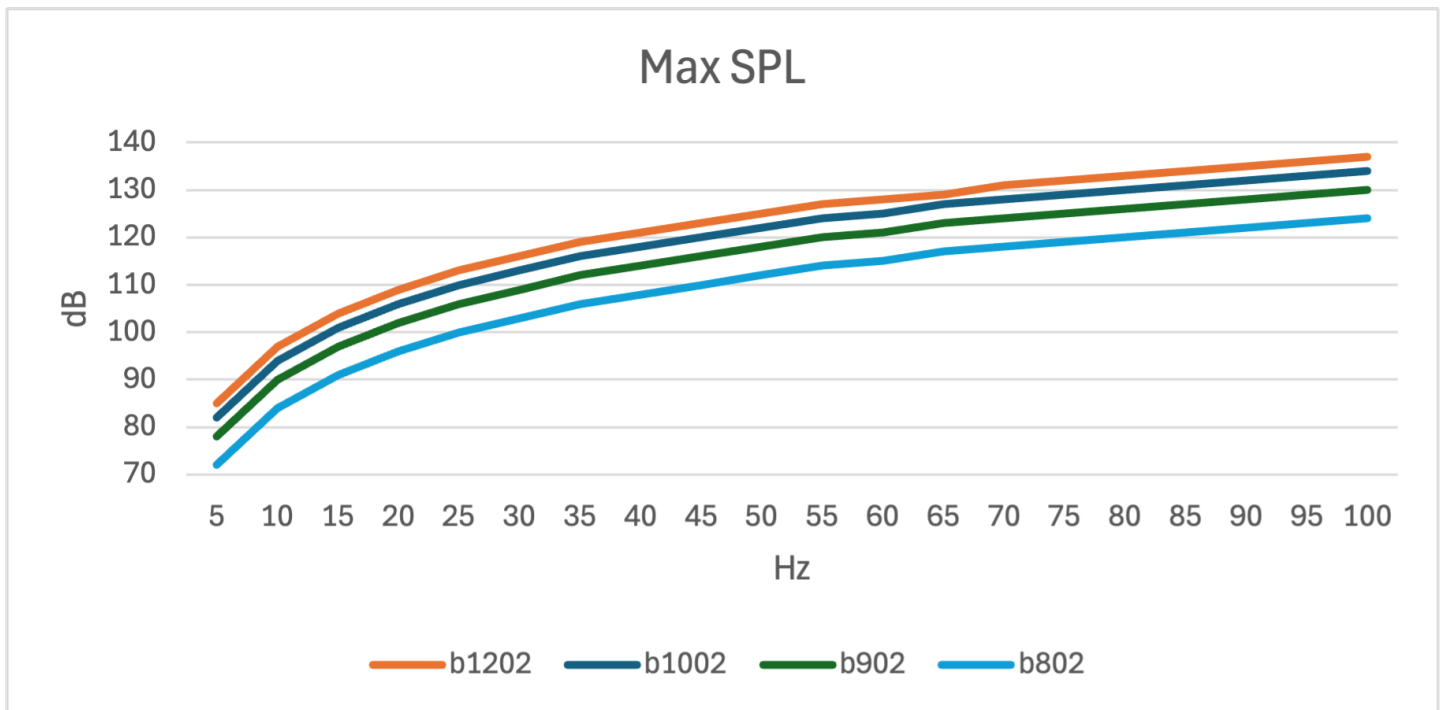
Frequency Response (+/-3dB) incl. protection filter *	28 Hz – 20 kHz
Maximum SPL free field at a distance of 1 meter	116 dB
Horizontal directivity	+/- 25°
Vertical directivity	+/- 15°
Tweeter	1"
Midrange driver	6"
Bass driver	15"
Subwoofer driver	18"
Connection options	Analog und Dante/AES67
Dimensions (W x H x D)	50 cm x 167 cm x 35 cm
Acoustic center from the lower edge	136 cm
Weight	71 Kg







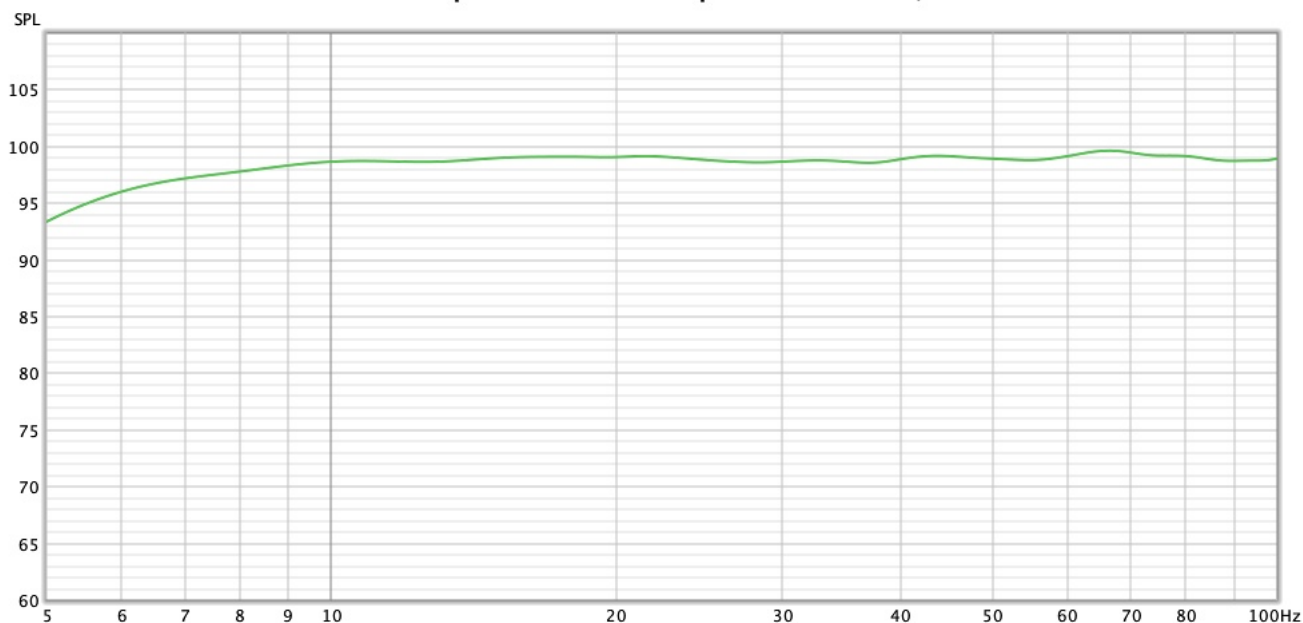
\* Incl. protection filter means that the frequency response has been deliberately cut towards the low frequencies for protection and to increase the maximum level. This is freely configurable. The resulting maximum level is shown in the following graphic.





Below is an example of how the frequency response can be adjusted to the low frequencies. This measurement was made at the listening position.

example in-room response with EQ



beckersounds GmbH  
 Jeverlandstr. 4  
 26215 Wiefelstede  
 Germany  
[www.beckersounds.de](http://www.beckersounds.de)  
 Steuernummer 69/103/09514  
 USt-IDNr. DE318103591  
 HRB 214681 Amtsgericht Oldenburg  
 Managing Director Stefan Becker

Status of this manual: 09.08.2024