

Product Information Loudspeakers 961 Mk3



Since introducing the first model in 1994 our speakers have earned an excellent reputation worldwide. The 949 (949 signifies September of `94) was the first genuine Burmester loudspeaker. It was the beginning of a family of speakers which now includes the 961 MK3 and the 995.

The 961 MK3 as the big sister of the 995 does not have to strain to fill even large rooms with full sound. Burmester customers all over the world have combined these speakers successfully with components of our model lines RONDO, CLASSIC or TOP. Of course, the 961 MK3 work just as well with audio electronics of other manufacturers.

As is customary for Burmester, older models of the 961 may be factory-upgraded to the 961 MK 3 version with the new Kevlar speaker cone.

We recommend coordinating dates for the upgrade work with the factory in advance to ensure a speedy turn-around.

The new 961 MK 3 differs mainly in two aspects from its predecessor model:

The new mid-range driver decisively advances the strengths of its predecessor. The whole vibration system (cone/rubber surround) has been improved to achieve a more precise and detailed reproduction of the midrange. In combination with the necessary re-design of the crossover network it results in even greater linearity in the critical midrange area (300 to 1000 Hz) than with the older 961. In comparison with the original 961 music reproduced through the new MK 3 has more power and substance. The new mid-range driver of the MK 3 version is distinguished by its cone made of a coated Kevlar mesh.

The crossover of the MK 3 version has been re-designed for the new driver.

The former tweeter has been replaced by a new generation AMT (Air Motion Transformer) tweeter with an even larger frequency range exceeding 45000 Hz.

However, the proven strengths of the older models - the woofer and the housing design - have been left unchanged.

WHAT IS SO SPECIAL ABOUT BURMESTER LOUDSPEAKERS?

Music - completely detached from the speaker

In combination with highest-quality electronics and top-notch interconnect and speaker cables our loudspeakers are capable of transporting music live and three-dimensionally directly to the listener.

Speakers applauded enthusiastically by musicians

Musicians are critical listeners because they compare the sound of a stereo system with the original sound of instruments. In their judgment our speakers seem to virtually explode with music when fed the sound of big orchestras playing dramatic pieces, yet still let individual instruments shine with substance and authority.

Loudspeakers which reproduce all octaves

Despite their modest size our speakers are able to reproduce all octaves of music down to the deepest bass foundation. The reproduction of bass notes is particularly important in projecting the power and emotional impact of great music.

Loudspeakers for quiet listening

More often than not one likes to listen to music late at night to pleasantly conclude the day. At that time, most people will now longer be able to turn their music system up to live music levels.

We have designed our speakers in such a way that even at low listening levels the music will not lose its natural detail and correct tonal balance.

Speakers for listening at full volume

As a musician, Dieter Burmester finds listening to music at performance-level volumes a special treat. Our loudspeakers let you listen to music at full volume without loss of tonal precision and without strain.

We build speakers with attention to detail

A superior concept requires corresponding care of execution. All of our drivers which have been custom-made to our specifications are burnt-in by us before being measured and computer-matched in pairs with extremely low variances. This procedure guarantees mating tolerances between pairs of speakers that are as low as to be previously regarded as unachievable. Since we archive the technical measurements of each individual driver we are able to supply an identical replacement at any time.

Loudspeakers which are easy on the eyes

A speaker should be built in such a way that it practically enhances any ambient décor. This requires top-quality materials and craftsmanship as well as a perfect design. Our loudspeakers are available in rowan berry and makassar veneer as well as custom lacquers and an unusual silver metallic laminate.

The placement of our speakers is mostly uncritical and due to their modest size they can be easily integrated into any living space. The floor-standing 961 MK3 is a three-way speaker with side-firing bass driver in a rear-vented bass reflex design.

Burmester's design goal has been to create a small yet full-range speaker able to reproduce music from the highest to the lowest octave. Furthermore, it should be dynamically exciting and convey the full power and substance of all voices and instruments. (A good example is a cut by Hans Theessink on Burmester's reference CD3)

TECHNICAL SPECIFICATIONS

Dimensions:	(WxHxD) 225 x 1070 x 340 mm
Weight:	app. 65-70 kg/pair (depending on style)
Power rating:	120 watts
Sensitivity (2,83V):	89 dB
Impedance:	4 ohms
Frequency range (-3dB):	35Hz-25kHz
Frequency range (-8dB):	28Hz-28kHz
Crossover frequencies:	180 Hz, 4kHz
Acoustic filter characteristics:	
Bass/midrange	12dB/ octave with Linkwitz characteristic
Midrange/tweeter	24dB/ octave with Linkwitz characteristic

ELECTRICAL FILTER ARRAY

Woofers: Impedance rectification of the upper bass reflex maximum and of the inductance of the voice coil to keep the crossover from interacting with the impedance of the woofer.
Mid-range driver: Impedance rectification of the resonant frequency and the inductance of the voice coil to keep the crossover from interacting with the impedance of the mid-range driver. The frequency crossover of the 961 MK3 has now been adapted to the new mid-range driver.

Tweeter: Lock-out circuit for frequency linearization around 14 kHz
Galvanic isolation of woofer and mid-range/tweeter section for bi-wiring.

DRIVERS

Woofers

220 mm die-cast light alloy frame, very rigid, magnetically isolated and, therefore, no magnetic loss.

Pole core hole to ventilate the space behind the dust cap

Extremely stiff fiberglass diaphragm with a completely resonance-free frequency response up to 2000 Hertz and beyond

35 mm Kapton voice coil frame, extremely heat-resistant and completely free of eddy current loss

20 mm high-wound magnetic voice coil provides linear cone excursion of +/-7 mm which is larger than in most woofers of this size by approximately a factor of two

Mid-range driver

130 mm die-cast light alloy frame, very rigid, magnetically isolated and, therefore, no magnetic loss

Pole core hole to ventilate the space behind the dust cap

Well-attenuated coated Kevlar cone with resonance-free frequency response up to 4000 Hertz and beyond

25 mm slotted aluminum magnetic coil frame, extremely heat-resistant and totally free of eddy current loss

11 mm high-wound voice coil provides linear cone excursion of +/- 3 mm which is very large for a mid-range driver

Tweeter

AMT tweeter operates according to the Air Motion Transformer principle developed by Oskar Heil. It is a custom version manufactured to our specifications

Folded foil diaphragm with aluminum conductor rails accelerates speed transformation by a factor of five (air molecules move five times faster than the diaphragm)

Neodymium magnets with very high energy density

Computer matching

All drivers undergo a 14-day burn-in (woofer and mid-range drivers with constant 10 Hz, tweeters with pink noise). After that, all drivers are measured by computer at six points of their response curve (not only at the crossover points) and matched in pairs to within less than 0.5 dB deviation over their full frequency range. After an ideal pair of tweeters has been found the computer searches for a matching ideal pair of mid-range drivers and, finally, woofers. This procedure ensures practically identical pairs of speakers and the extraordinary effort is rewarded with incredible three-dimensionality. The careful pairing of drivers enables the 961 to project rock-solid images of voices and instruments. The music detaches from the speakers and seems to float like a cloud. We believe this amount of care is unequalled not only at this price level. Burmester loudspeakers are the state of the art.

CABINET CONSTRUCTION

Rear-vented bass-reflex enclosure with side-firing woofers

Critical bottom frequency around 35 Hz

Streamlined design of the bass reflex channel to reduce flow-generated noise.

Three internal dividers stiffen the cabinet

Sealed mid-range enclosure

Available finishes: - Macassar Ebony

- Silver high gloss

- Black high gloss

- Elsberry veneer

- Aluminum laminate, silver metallic

SPECIAL FEATURES

The bass drivers of the 961 MK3 fire from the sides of the two speaker cabinets towards each other. The advantage of this design is that the high-frequency portion of the woofer output does not radiate directly towards the listener. Furthermore, facing the bass diaphragms towards each other achieves additional bass compression without cancellation effects.

Ideally, the speakers should be positioned app. 2.5 m apart.

Enclosure volumes

Mid-range enclosure: 3 l

Vented bass enclosure: 45 l

DAMPING

The two bass chambers are only sparsely dampened to preserve as much bass energy as possible. Felt is used for damping as opposed to stuffing the speaker with wool. The result is a well-contoured bass reproduction.

The mid-range chamber has been dampened with felt and a carefully chosen amount of fibre fleece to absorb the rearwards radiating sound of the mid-range driver.

ADDITIONAL DESIGN ELEMENTS

Large diameter of the bass reflex channel reduces air turbulences, air-flow noise and flow loss.

Internal wiring using 10mm² high-purity copper cable for woofer and mid-range driver and 4 mm² copper cable for the tweeter

The ultra-stable bi-wiring speaker terminals which allow the use of even the fattest speaker wires have been screwed directly into the crossover board

Spikes are standard