

MANGER

PRECISION IN SOUND

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IT'S ABOUT TIME.

Music is much more than a collection of notes, tones and beats. You realise this if you ever had goose bumps listening to music. Music can trigger emotions and touch the heart. It is our mission to let you experience these emotions.

To achieve this goal we turned the technology of traditional loudspeakers upside down and developed a system that reproduces music in a transparent, authentic, and pure fashion: the Manger® Sound Transducer.

This brochure will tell you more about our unique technology and its relationship to nature itself.

For more than 50 years Manger Audio has been delivering ever increasing innovation in the pursuit for perfect audio reproduction

that has been admired and awarded prizes by the trade press and editors worldwide. It took masters in technology, workmanship, and design to achieve the incomparably pristine music reproduction of Manger Audio. I hope you will enjoy reading this brochure and look forward to welcoming you into our community of connoisseurs and customers.

Daniela Manger
CEO Manger Audio

P.S. Experience Manger at your home. Test our models for 10 days without obligation.





»In my view a sound transducer should be capable of reproducing all types of acoustic sensations equally well, irrespective of whether this is a concert or a discussion. It is just as important to be able to reproduce natural sounds such as a birdsong and the wind in the trees where the only human contribution is the sound of a distant church bell. The loudspeaker itself should not be perceptible in this listening experience. No natural resonance or changes in the sound field should betray its presence.«

Josef W. Manger (1929 – 2016)

Acoustics researcher and inventor of the Manger Sound Transducer

ACOUSTICAL REALITY

The ear is the widest-ranging perceptory organ that nature has given us. The eye reacts to wavelengths between 400 and 700 nanometers, within the spectrum of visible light. Anything below this (x-rays or gamma rays for example) cannot be registered by the naked eye. And the same is true for higher wavelengths. Expressed in frequencies this means that the eye can register a range of around one octave; the ear, on the other hand, can register ten octaves. So, if our eyes were as good as our ears then we would be able to look through everything with x-ray vision, and could turn night into day with infrared vision.

This phenomenal performance by our hearing system, with its tiny hair cells that react to fluctuations in the air pressure with movements of around 100 billionth of a millimeter, make our ears the most uncompromising instrument that register everything without fail and they ruthlessly uncover every single change. And this has wide-ranging consequences. Even before we perceive tones, our ears register sounds that last no longer than 0.01 milliseconds (1000-times faster than the first perception of sound occurs).



INSPIRED BY NATURE



For human ears the sound reproduction of traditional loudspeakers is far from being convincingly realistic. In addition to incorrect spatial imaging, conventional loudspeakers constantly remind the listener of their position and presence due to transient noises. These are crucial factors that mask the delicate nuances of the reproduced music to diminish the listening experience.

When you listen to a Manger Sound Transducer for the first time, you will immediately notice its realistic spatial representation and authenticity. The secret lies in its bending wave design that nature itself used to develop the basilar membrane of our hearing organ.

A high-speed photograph of a single water droplet falling into a pool of water. The droplet is captured mid-fall, just above the point of impact. Below it, a crown-shaped splash is forming, with a central column of water rising. Concentric ripples are spreading outwards from the center. The water is a clear, light blue color, and the background is a soft, out-of-focus white.

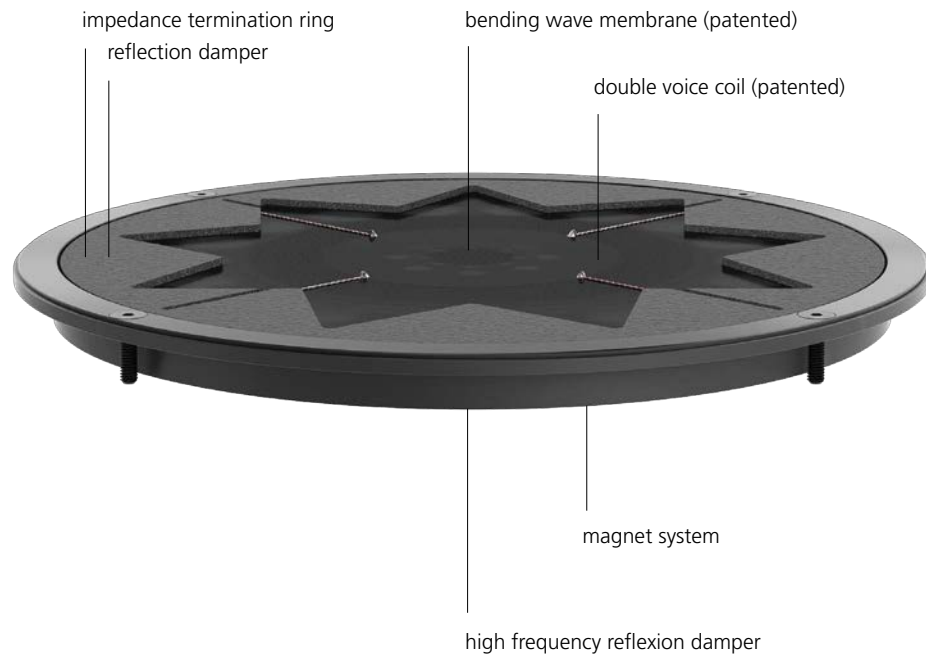
SOURCE OF NATURAL SOUND

Josef W. Manger spent years systematically researching, testing and rejecting until the vision of the natural resonance-free radiation principle became an acoustic reality.

This has resulted not only in one of the most elegant concepts on the loudspeaker market, but also in a masterpiece of precision mechanics. The decisive factor in the Manger Sound Transducer was the logical rejection of the 100-year-old transducer principle used in conventional loudspeakers, thereby eliminating away with the piston-like movements with their faulty overshoots. Instead, Josef W. Manger relied on the principle of bending waves, which starting from the

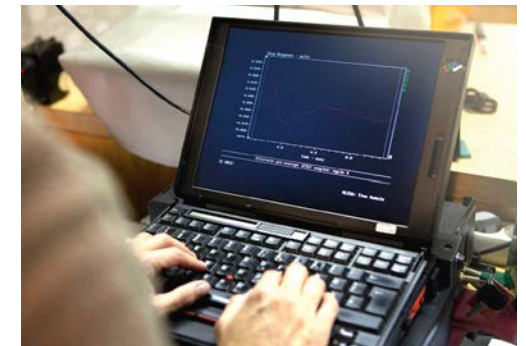
center of a plate-like diaphragm, travel to the outside like waves after a stone is thrown into water. This led to the first fundamental patent in 1974. High frequencies quickly attenuate in the inner area of the membrane, whereas long waves (low frequencies) reach right to the edge of the star-shaped damper. There they are absorbed so that no reflections can come from the outer perimeter.

That the Manger Sound Transducer, in spite of its large frequency range of between 80 Hz and 40 kHz and its sensitivity of 91 dB 1W/1m, can achieve the tremendously fast rise time of 12 μ s is attributable to many design finesses.



Side view of the Manger® Sound Transducer

FORM FOLLOWS FUNCTION

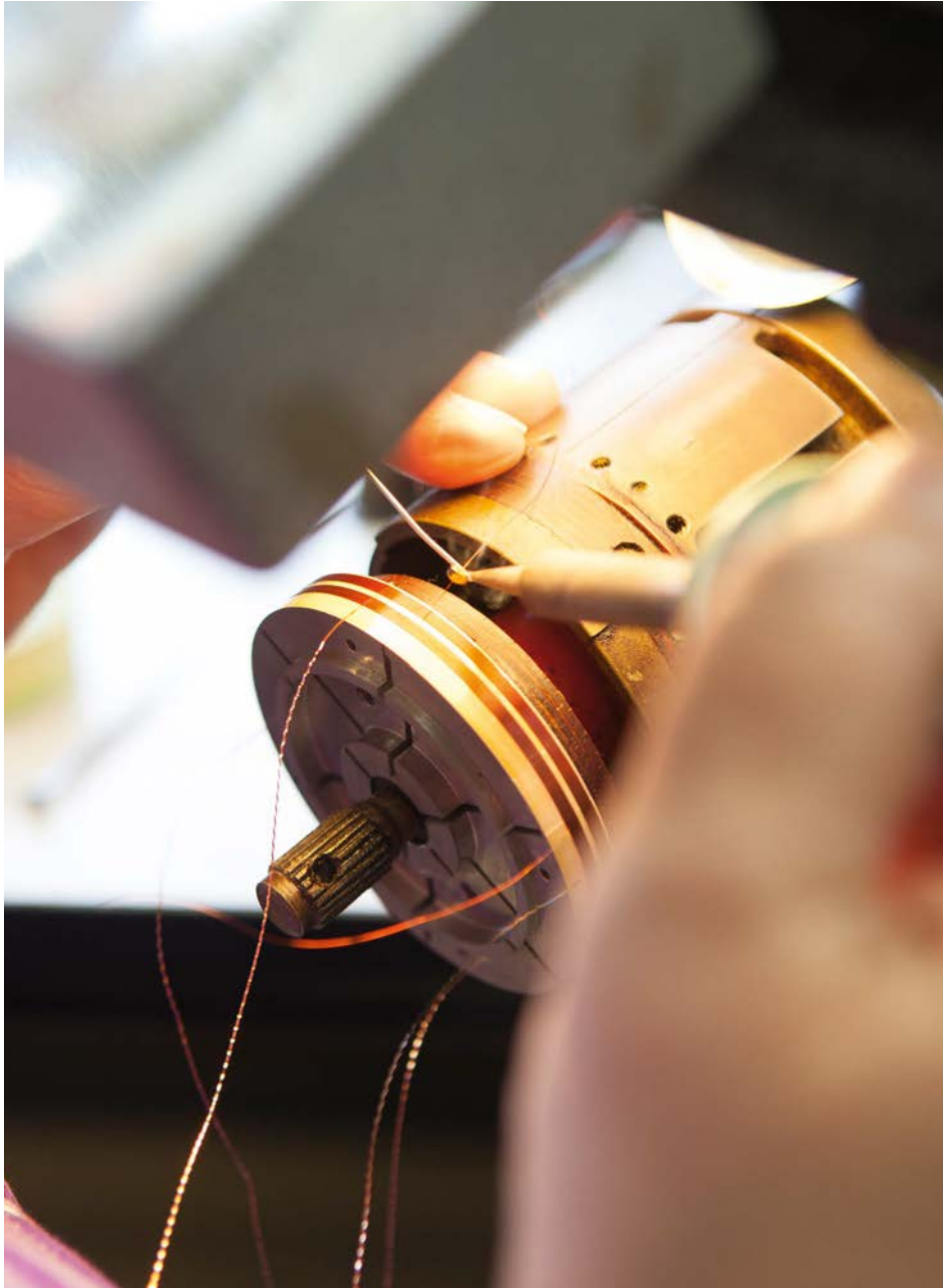


The double voice-coil - the solution is both simple and clever, but nevertheless producible only under the most difficult conditions.

Two voice coils, mounted mechanically in series and switched electrically in parallel, using aluminum wire on an aluminum backing and copper strip leads, produce the solution of an overall long, but nevertheless extremely light driving coil. This is unique for a wide-band transducer; maximum displacement of ± 3.5 mm and a total weight of only 0.4 grams.

No less than 15 neodymium magnets concentrating their extremely strong magnetic field of 1.48 Tesla on an air gap of only 0.95 mm width, in which the lightweight 70 mm diameter coil moves, supply the drive for the diaphragm.

The membrane - the centerpiece - is not stiff like in conventional reciprocating loudspeakers, but flexible. So it does not store any energy that would produce disturbing transient noises.



EVERY DRIVER IS A UNIQUE PRODUCT



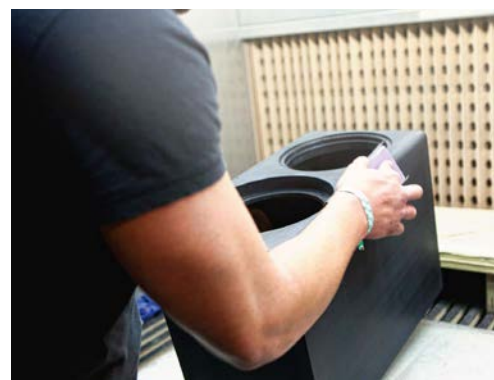
Custom manufacturing has another advantage: the basket of every single Manger Sound Transducer is numbered after all checks have been successfully carried out. This means that every customer is registered in the manufacturing documentation and benefits not only from the five-year guarantee, but also from Manger Audio's repair and upgrade service to the customer, even after years.



Founder and namesake Josef W. Manger was the owner of more than 40 patents worldwide and was honored with the Diesel Medal in 1982, one of the highest awards for outstanding engineering achievements in Germany.



MADE IN GERMANY



The demands on the construction of a Manger Sound Transducer are so complex that its quality standards cannot be met solely by a single measure. Based on our credo "quality is indivisible" the Manger Sound Transducer is manufactured with extreme attention to craftsmanship and rarely seen use of premium-quality materials.

● ● ● **Made in Germany**





ULTIMATE CHOREOGRAPHY

s1

Music is much more than a collection of notes, tones and beats. It merges creativity, art and passion in a temporal context. Perfect timing is the core of music – this applies to the original and the reproduction. The s1 active loudspeakers follow this choreography more consistently than any other transducer and are able to reproduce music in a uniquely transparent and holistic fashion.



DESIGN AND TECHNOLOGY IN HARMONY

The tasteful appearance of the s1 cunningly hides all the efforts and rigors that went into the smallest detail of each component. Ultra-solid bracings prevent detrimental resonances of the baffles and standing waves within the cabinet. The two chassis have been meticulously inserted into a 1.5"

front panel and are housed in separate sealed compartments. Lavishly rounded cabinet edges reduce sound diffractions, optimize radiation and emphasize the timeless elegance of these exceptional loudspeakers.





ELABORATED IN EVERY DETAIL

No element of the s1 has been left to chance. As Manger puts it: Even the smallest component is of critical importance as part of a chain that is only as strong as its weakest link. Not only the chassis are attached to the cabinet with durable threaded screws, but the amplifier and control electronics as well. The electronics

housing consists of diligently crafted, almost resonance-free aluminum and butts up seamlessly to the loudspeaker enclosure. The cables are fed in through a generous recess at the bottom to avoid bending. The solid socket construction of the s1 models stands on adjustable steel spikes and makes perfect contact with the floor.

General

Type	Active 2-Way Floorstanding System – pure analogue technology
Frequency Range	30 Hz – 40 kHz
Crossover frequency	330 Hz
Maximum SPL	110 dB
Dimensions (H × B × T)	44.8 × 10.6 × 8.4" (1139 × 270 × 214 mm)
Weight	105.7 lbs (48 kg)

Amplifiers

Max. Power Output LF	250 W @ 8 Ohm Class AB
Max. Power Output HF	180 W @ 8 Ohm Class AB
Power Bandwidth HF	250 kHz (–3 dB)
Input Sensitivity	6 dBu (1.55 V) or 0 dBu
Input Impedance	10 kOhm
Input	XLR-3 (balanced)





MAGIC MOMENTS

p1

Challenge a conventional loudspeaker to distinguish the vivid and fresh performance of a Stradivari from the smooth full tone of a violin made by Guarneri and it will fail. The Manger p1, however, offer music lovers this subtle distinction. With their breathtakingly natural sound quality and their authentic reproduction the p1 reward you with magic moments.



INTELLIGENT ENTITY

The rounded edges of the p1 cabinet improve sound radiation and contribute to the distinct yet unobtrusive appearance of the loudspeakers. Inside the cabinet, bracings ensure optimum working conditions and nip resonances in the

bud. Both Manger Sound Transducer and high performance woofer are housed in a sealed compartment of their own. Thanks to this intelligent construction detrimental sonic interactions via enclosed air are completely avoided.





CRÈME DE LA CRÈME

Quality down to the finest detail – the credo is a common thread in the p1 and all Manger loudspeakers. Highest fidelity is ensured by premium crossover components. Large-diameter cables handle lossless signal transfer. Binding posts, made by WBT nextgen™ Plasma Protect™, are

of premium quality and readily accessible. Banana plugs or spade terminals of the speaker cables never lose contact. Last but not least the chassis and terminal strips are precisely anchored into the cabinet with durable treaded screws. Uncompromising quality that you can see, feel and hear.

General

Type	Passive 2-Way Floorstanding Speaker (sealed)
Impedance	4 Ohms
Frequency range	40 Hz – 40 kHz
Crossover frequency	360 Hz
Sensitivity	89 dB 1 W/1 m
Maximum SPL	106 dB
Dimensions (H × B × T)	44.8 × 10.6 × 8.4 (1139 × 270 × 214 mm)
Weight	68.3 lbs (31 kg)





THE NEXT STEP

p2

To come as close as possible to the original has always been the ambition of Manger Audio. Along this path Josef W. Manger has accomplished a technological masterpiece: the Manger Sound Transducer. The flagship model p2 consistently acts on this maxim and takes another important step in approaching the ideal of time correct and faithful audio reproduction. The p2 open up a new horizon.



SPEED IS THE KEY

A precondition on the path to authentic reproduction is time correct and integral rendition. Due to its design the Manger Sound Transducer provides an impulse fidelity, in other words the ability to rapidly track short signals, that is far superior to conventional drivers. The newly

developed bass system of the p2 also achieves an extraordinarily high signal fidelity and perfectly complements the Manger Sound Transducer. The two innovations merge into a uniquely authentic reproduction system.

DEEPLY IMPRESSIVE

The p2 woofer is groundbreaking. The patented drivers, developed and manufactured in Germany, features a modern sandwich-type membrane. Two carbon fiber reinforced cellulose layers flank a layer of high-tech foam. The sophisticated material mix combines high inner damping with low weight and extreme rigidity.

Partial vibrations and fractured radiation to higher frequencies are thus effectively eliminated. The powerful drive coil ensures linear excursion and minimum harmonic distortion. In combination with two meticulously tuned passive membranes, the woofer provides matchlessly precise reproduction down to the lowest registers.





ROCK IN THE SURF

In operation, considerable forces are sometimes applied to the loudspeaker housing. If it is stimulated to vibrate, this leads to audible sonic coloration. The housing of the p2 is a manifestation of solidity. Internal struts and stiffeners at defined points effectively prevent natural vibrations.

The chassis reside in a 1.5 inches (!) strong front and the elegantly rounded edges optimize the radiation behavior. A solid base construction made of aluminum guarantees rock-solid stand on any surface.

BOUNDLESS DIVERSITY

A speaker literally becomes part of a living space. That's why Manger Audio, as a manufacturer, offers you an almost unlimited choice of finishes.

Whether color (all RAL and NCS colors) or elegant veneer, whether glossy or matt - let your imagination and your desires run wild.

General

Type	Passive 2-Way Floorstanding Speaker (with passive radiators)
Impedance	8 Ohms
Frequency range	30 Hz – 40 kHz
Crossover frequency	340 Hz
Sensitivity	89 dB 1 W/1 m
Maximum SPL	112 dB
Dimensions (H × B × T)	44.8 × 10.6 × 8.4 (1139 × 270 × 214 mm)
Weight	70.6 lbs (32 kg)





THE ACOUSTIC LENS

c1

Music has no limits. The soft tones of a Gregorian chant, the powerful dynamics of a symphony, the cutting guitar riffs of a metal band – the c1 active compact monitors handle everything expertly. These loudspeakers serve the music so neutrally that renowned recording studios consider the c1 as indispensable.



WINNING TEAM

In high-performance sport the efficiency of a well coordinated team paves the way to the winner's podium. In the audio world the flawless interaction of all elements makes the c1 world champions of sound. The c1 boast premium components which have been determined during

intensive listening tests. The robust enclosure provides optimum conditions for the drivers and sophisticated electronics. Cabinet resonances leading to sonic colorations are effectively eliminated.





UNCOMPROMISINGLY ACTIVE

The c1 offers all the advantages of modern active technology. The woofer and Manger sound transducer are each driven by their own amplifiers. This division of tasks makes it possible to coordinate the drivers and amplifier. Intelligent filters in bass, mid and high frequencies allow the c1 to be adapted to the individual requirements of the setup and room acoustics without compromise. And thanks to generous power reserves, the c1 masters every challenge with ease.

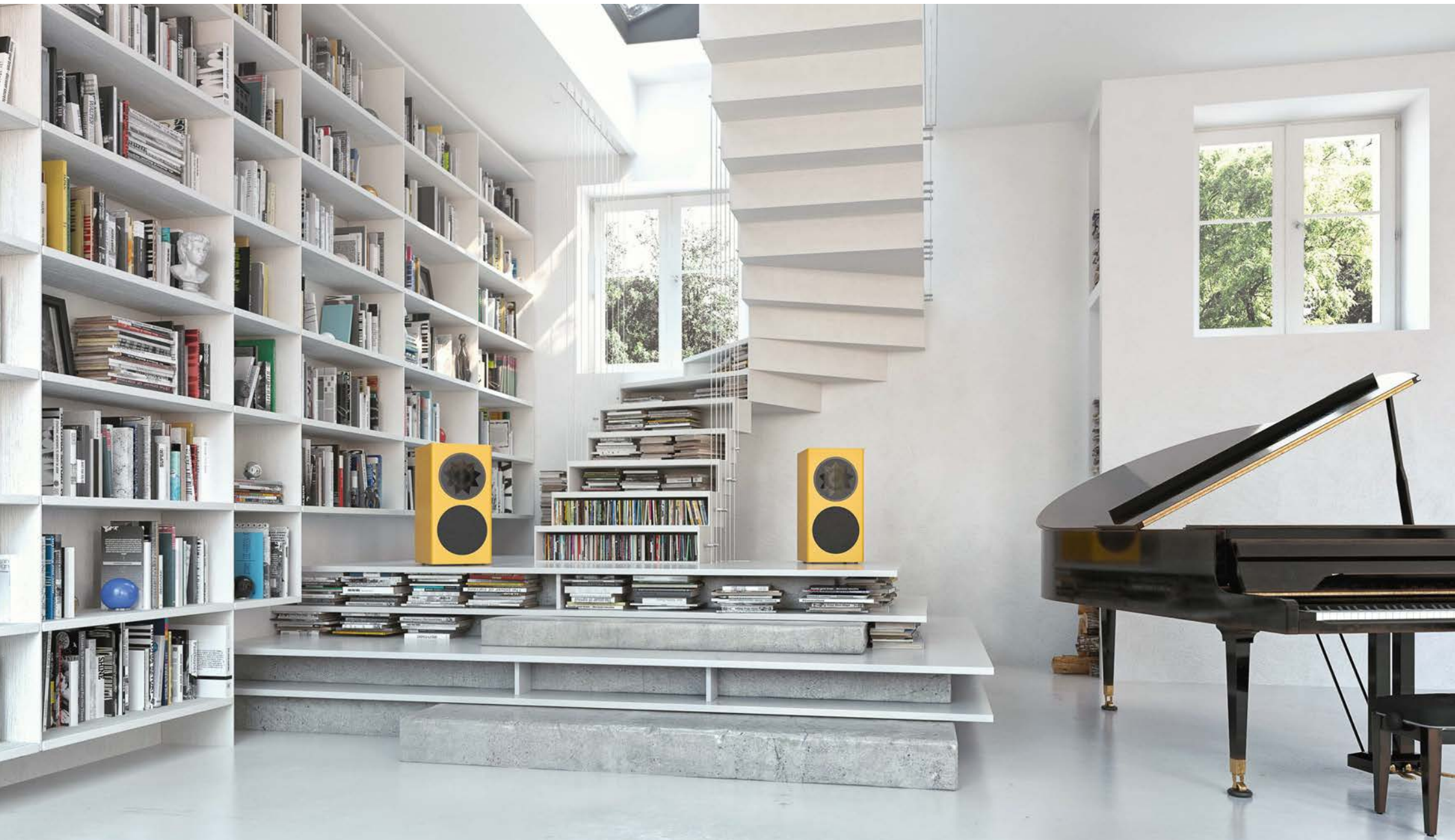
Lifestyle and living environment can change, demands grow - the c1 flexibly accompanies you on your way. Because these speakers set standards not only in the acoustic near field, i.e. with relatively short listening distances. If you need to fill larger rooms with sound, supplement the speakers with the c1 LF modules. The compact bass units are simply placed on the speakers. The result is a seamless unit - visually and acoustically, which is in no way inferior to the best floor-standing speakers.

General

Type	Active 2-Way System (with pure analogue technology)
Frequency range	30 Hz – 40 kHz
Crossover frequency	330 Hz
Maximum SPL	110 dB/116dB with LF-Module
Dimensions (H x W x D)	19.5 x 10.6 x 16.7" (495 x 270 x 424 mm)
Weight	72.8 lbs (33 kg) (125.7 lbs (57kg) incl. stand); 24.3 lbs (11kg) LF-Module

Amplifiers

Max. Power Output LF	250 W @ 8 Ohms Class AB
Max. Power Output HF	180 W @ 8 Ohms Class AB
Power Bandwidth HF	250 kHz (-3 dB)
Input Sensitivity	6 dBu (1.55 V) or 0 dBu
Input Impedance	10 kOhms
Input	XLR-3 (balanced)





COMPACT POWERHOUSE

z1

A great concert, your favorite artist unplugged – these are experiences that get under your skin. The unfiltered interaction between musician and audience stimulate your senses. The z1 trigger authentic, emotional, vivid and captivating moments in an understated design. Musical culture at its finest.



THOROUGH CONSTRUCTION

The uncompromisingly solid enclosure of the z1 is the ideal prerequisite for authentic sound reproduction. Rounded edges improve radiation, inner braces and the massive profile of the front panel reduce cabinet vibrations to a minimum.

The easily accessible loudspeaker connections are equipped with WBT nextgen™ Plasma Protect™ binding posts – simply the best connectors available on the market.





HIGH-TECH AND CRAFTSMANSHIP

The z1 – like all Manger loudspeakers – combines traditional and modern values. Great craftsmanship ensures a manufacturing quality comparable to the finest luxury furniture. Innovative

technologies such as the Manger Sound Transducer are based on decades of experience as well as intensive research and development. The z1 fuses cutting-edge technology and top design.

General

Type	Passive 2-Way Compact Speaker (sealed)
Impedance	4 Ohms
Frequency Range	40 Hz – 40 kHz
Crossover frequency	360 Hz
Sensitivity	89 dB 1 W/1 m
Maximum SPL	106 dB
Dimensions (H x W x D)	21.0 x 10.6 x 14.3" (534 x 270 x 364 mm)
Weight	46.3 lbs (21 kg)





WALL-MOUNTED WONDER



We live in modern times. Flat-screen TVs, tablet PCs and audio systems grow constantly and leave no room for big loudspeakers. The w1 are the perfect response to these new demands – they are compact and can be wall-mounted whilst retaining uncompromising technology and craftsmanship.

w1



VERSATILE SETUP

The easily wall-mountable and compact w1 complement stereo systems and modern flat-screen TVs. As a center, the w1 also takes over the direction of a high-quality surround system without compromise.

Wherever mature, room-filling sound is required and space is limited, the w1 is the first choice and can be integrated unobtrusively into any environment.

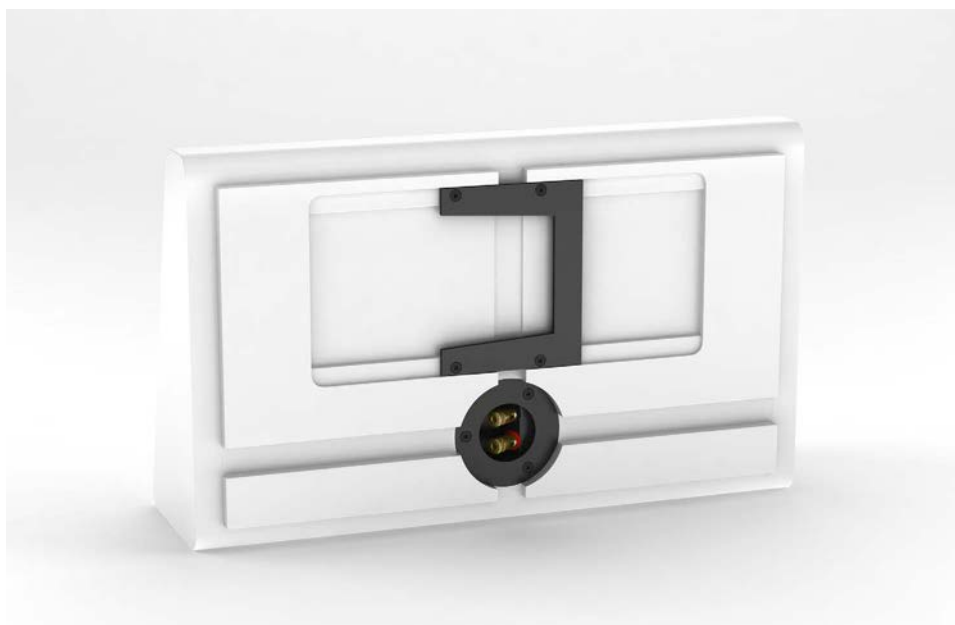




WELL CONNECTED

The w1 can be flush-mounted on a wall. The back panel of the loudspeaker provides recesses on the sides and bottom for easily connection of

large-diameter, high-quality cables. Solid binding posts ensure permanently clean signal transmission.



General

Type	Passive 1-Way On-Wall Speaker
Impedance	8 Ohms
Frequency range	150 Hz – 40 kHz
Crossover frequency	150 Hz
Sensitivity	89 dB 1 W/1 m
Maximum SPL	106 dB
Dimensions (H × W × D)	10.4 × 17.2 × 2.8/5.4" (264 × 436 × 71/136 mm)
Weight	17.6 lbs (8 kg)



COLORS AND FINISHES

Manger Audio sees loudspeakers as holistic objects and components of everyday life. Manger Audio therefore offers a wide range of colors (all RAL and NCS colors) in glossy or matt as well as a diverse selection of the finest veneers, which,

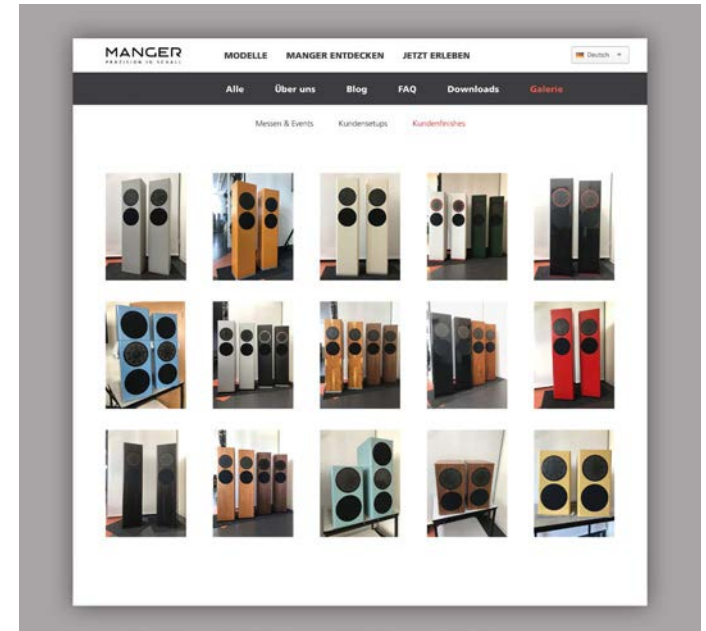
combined with the anodized colors natural, red, black and gold for our sound transducer and bases, enable perfect integration into the personal ambience.





Colors and Finishes





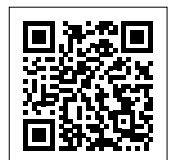
Devialet SAM® Processing

All passive speaker models are stored in the Devialet database. In conjunction with Devialet, this allows our passive speakers to reach completely new depths.



Linn Exakt

Linn's Exakt technology turns our passive speakers into intelligent and software-controlled active artists.



Visit our gallery on our homepage, where you will find countless customer finishes:



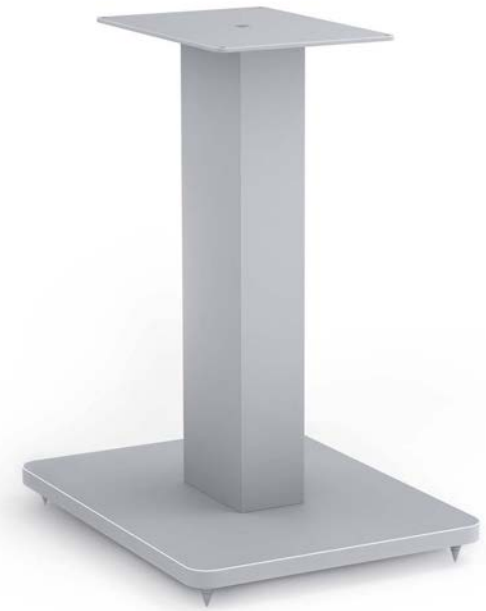
Manger® Holoprofile

This sound guide was developed by Josef W. Manger. Perfectionists in particular will appreciate the qualities of the Holoprofile and notice how the contouring of the sound sources becomes even more accurate and the stability of the imaging out of the sweet spot.



Stand c1

Solid, internally dampened stands made of anodized aluminum bring the c1 to the ideal height and put it in the right light. Thanks to the sophisticated mechanical construction of the cone feet cf1, the speakers can fully develop their sound performance. Standard height: 24" (61 cm)



Stand z1

Matching stand with optimal height for the z1, which rests on a solid top plate. The base plate is equipped with the cf1 cone feet as standard. The glass bead blasted aluminum surface is naturally anodized. Standard height: 20.5" (52 cm)



Cone feet cf1

The Manger cone feet cf1 made of POM simplify positioning and ensure that the speaker get an optimum stand on carpets and smooth floors. Only a stable, wobble-free setup enables precise signal reproduction. The cf1 are included with all floor-standing speaker models and stands. Dimensions: H 0.55" x Ø 0.7" (H 14 mm x Ø18 mm), M8 thread



Manger reference CD / Manger reference double LP (180 grams)

"Music from another world." – A sampler with 15 tracks that not only include different styles and recording techniques, but also wonderful artistic interpretations.

We can assure you that our recordings, selected with heart and soul, will cast a spell over you.

Available as CD and double LP (180 grams). You can find the track list on our homepage.

MANGER
PRECISION IN SOUND

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