

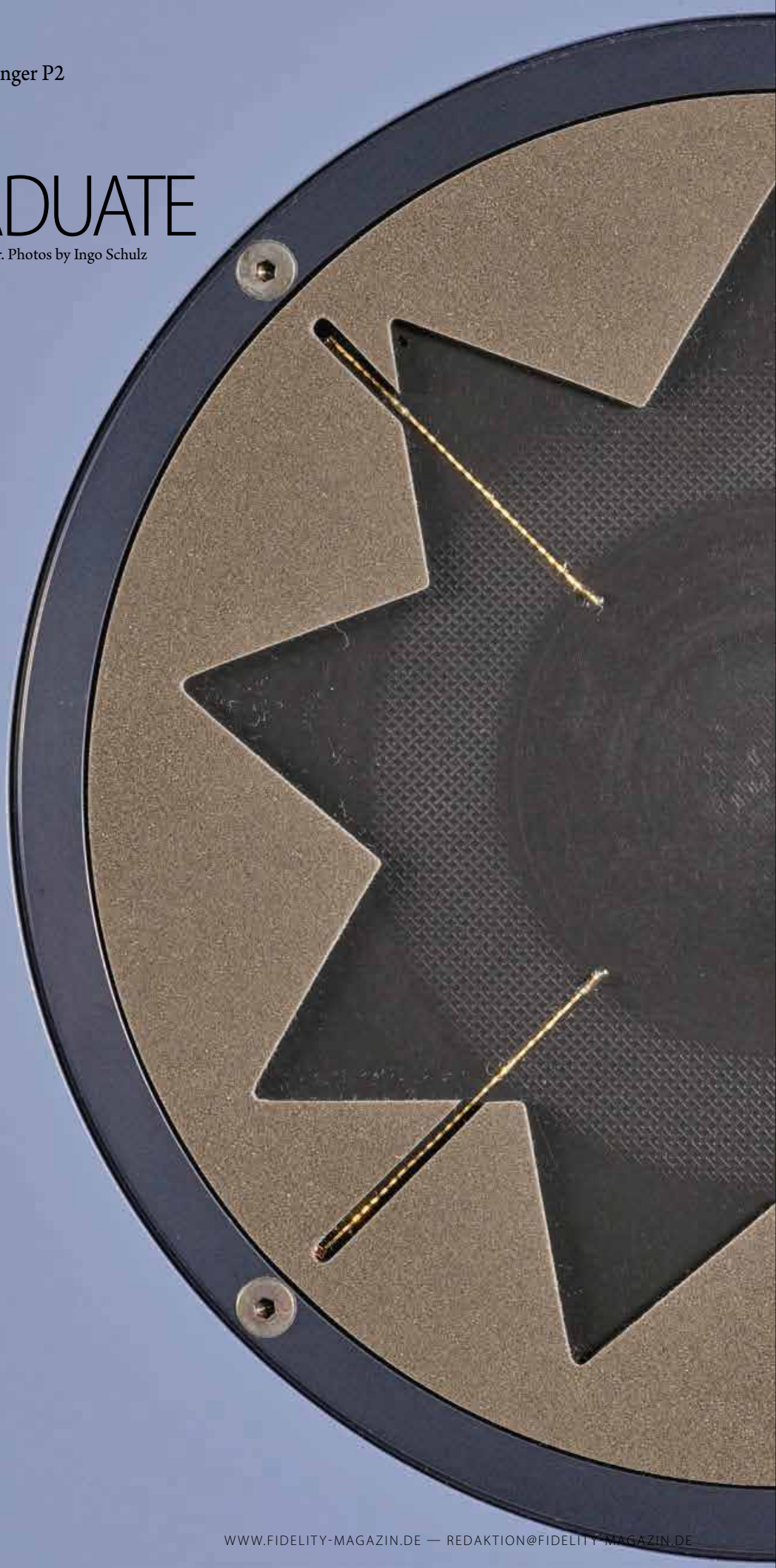


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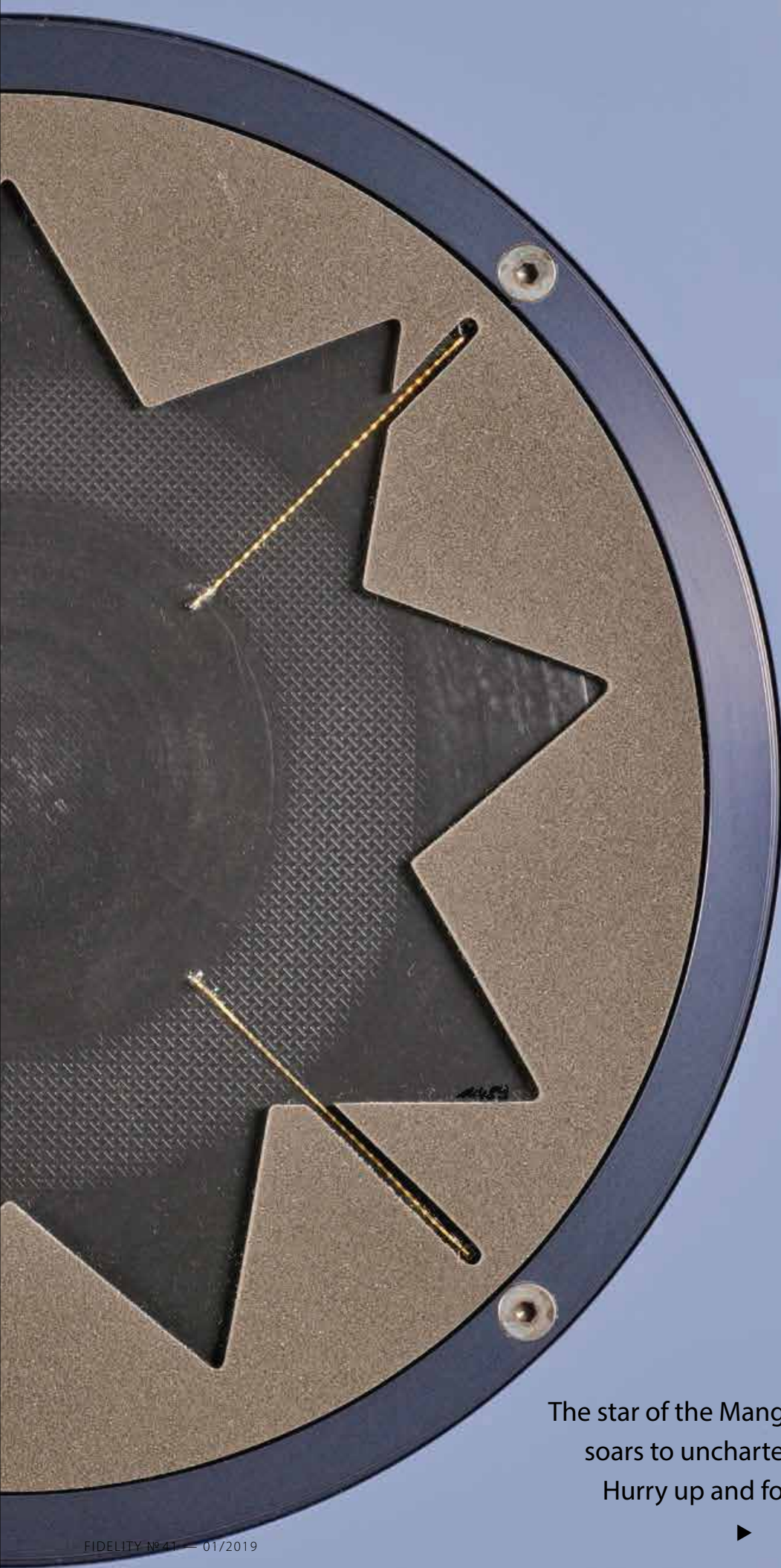
Manger P2

# THE GRADUATE

By Thomas Richter. Photos by Ingo Schulz







The star of the Manger Transducer  
soars to uncharted galaxies.  
Hurry up and follow suit!





Simple elegance: instead of a bass reflex port, Manger's P2 uses two passive radiators on the rear side.



As was to be expected, the loudspeaker crossover is of very high quality and neatly assembled.

— The world is full of top performances. There are technically outstanding products whose manufacturers lead the global markets as so-called “hidden champions.” And that’s where small and medium-sized German enterprises and their inventiveness are unbeatable, even if Twitter Donald is pretty annoyed about it. There are also top performers in the marketing sector who manage to sell run-of-the-mill products very well. Is the hi-fi scene prone to that? At least a question worth pondering. And there are the small but excellent manufactories which over decades refine their ideas off the beaten track of the marketing machinery and constantly lift their products to the next higher level. Which brings us to our topic: the Manger Audio company.

The loudspeakers of this manufactory situated in placid Mellrichstadt north of Würzburg are well known among audiophiles. By means of groundbreaking experimental series, founder Josef Manger developed over decades a bionic transducer which was named after him. For several years now, Daniela Manger (a skilled electro-acoustic engineer in her own right) is running the company, taking advantage of the Manger Sound Transducer as a unique selling point. In the past, the manufactory had also worked as an OEM supplier for several loud-

speaker manufacturers, but these days are over. Today, this exceptional transducer can only be found exclusively in products by Manger Audio. That’s the right way to protect your brand essence. It was four years ago on the HIGH END Fair in Munich that Manger appeared on my personal hi-fi radar when I heard the active S1 for the first time. The completely non-artificial sound of the Manger loudspeakers convinced me right away, as I like to listen over long periods of time. The P2 presented here has been developed with the hi-fi customers in mind, who still like to run passive audio chains - either because they have reservations towards active technologies or because they prefer personal fine tuning via power amplifiers and cables. According to Daniela Manger several clients also asked for more low frequency energy, similar to the active S1. On the basis of these target coordinates the Manger team got to work.

Let’s take a look at the design first. Over the entire product line Manger developed a consistent design language which reminds me of the typical simplification of the German Bauhaus tradition. A functional form without ornamentation. It fits into every environment and always is a calm anchor for the eye. The P2’s dimensions are exactly identical to those

of the P1 and the S1. For logical reasons the almost resonance-free basic cabinet is being used for the P2 as well, which reduces costs and keeps the final price in an affordable range. The distinctive feature of every Manger loudspeaker is its star-shaped upper driver, the so-called Manger Transducer. This star arouses almost every visitor’s interest, even if he isn’t a hi-fi aficionado.

But this Manger transducer not only looks spectacular, the unique mid-high range driver is a real stroke of genius. As my academic studies did not focus on electrical engineering or electroacoustics in particular, I will not even try to comprehensively explain the technology of this transducer. However, there are two things which will convince engineers from different areas of expertise right away. Firstly: in contrast to conventional dynamic drivers the Manger transducer doesn’t work with cone excursions. The word “work” always suggests effort and fault tolerance - don’t you agree? Secondly: the entire frequency range above 350 Hertz is reproduced by a single transducer. It’s not interrupted in the critical hearing range between 1400 und 2200 Hertz in order to hand it over to the next driver - as with most 2-way or 3-way concepts.







Passive membranes are in vogue,  
but difficult to finetune.

These are great starting positions for extraordinary good impulse behavior and time response. The Manger transducer belongs to the bending wave transducer category and this is serious mechanical engineering. It weighs respectable 2.6 lbs. This weight class is usually reserved for exotic mid-high range drivers. The air is set into vibration by impulses of the surface membrane, which run in waves from the center of the membrane to its edge. According to Daniela Manger, nature provided the prototype in that the basilar membrane of the human inner ear uses the same wave principle as the Manger transducer. For her, this is the only option to realize ideal time and frequency response over a relatively large frequency range using a relatively small membrane diameter. Therefore, the star shape of the Manger transducer is not a design gimmick, but it dampens and suppresses partial vibrations on the membrane edge. There, the impulse waves must effectively be converted into heat, so that they won't return to the center and interfere with arriving waves. This fact is important regarding impulse stability, efficiency and handling of high levels. Requirements, which Manger by now meets with flying colors after decades of research and development: 112 decibel maximum sound pressure are unmistakable proof of it. The development of the Manger Sound Transducer is presumed to be completed, so that ground-

breaking improvements are not expected any more. Which manufacturer can predicate this regarding one of its core products? The Manger transducer could go as low as 150 Hertz, but with the P2 the low frequency cutoff is set at 340 Hertz. In the course of development this value turned out to be the ideal transition point. The crossover contains only high-quality components by Mundorf and other manufacturers. The woofer and the passive radiators on the rear are made in Germany. In the past Scan-Speak woofers from Scandinavia have been used for other Manger loudspeaker models. Daniela Manger didn't reveal the name of her new supplier, but she is really enthusiastic about her discovery of the driver, because it is an excellent match for the P2. She is especially excited about the woofer's impulse behavior, which can keep pace with the phenomenal speed of the Manger transducer. Manger promises a break-in period of 24 hours maximum, before the P2 reaches its full potential. That's great, other manufacturers sometimes estimate hundreds of hours for that. Above all, I have a certain fondness for sealed enclosures. The bass range is not as strong as with reflex-loaded systems, but it's easier to control. In this regard - without giving too much away - the P2 can cope with the best of its class.

As soon as a loudspeaker invites me to browse through a certain genre or artist discography,

I'm on my way towards a positive review. During this test report I immersed myself deeply into Brian Enos' oeuvre, after I had incidentally heard of his 70th birthday on the radio. On my music shelf several Eno albums have been collecting dust over the years. Unjustifiedly - I realized during my current studies of this innovative genius. Admittedly, Eno had always been an important planet in my musical universe, but closer examination amazed me tremendously. Simply have a look at the incredible discography and project work of this exceptional musician: Cluster, Roxy Music, David Bowie, Talking Heads, Peter Gabriel, U2, and Coldplay are only a few of the headliners. He has led many artists out of musical dead end streets, when they somehow wanted to reinvent themselves or simply had to. Something, no-one but Eno could achieve. He is one of the gurus of the music scene.

Far more interesting, however, is the remarkable perseverance with which he pursues his own visionary albums - or should we say: art objects and installations. With *Ambient 1: Music For Airports* he not only invented Ambient Music in 1978, but sometimes created bulky works which left listeners dumbfounded. With its fine resolution and perfectly coherent soundstage the Manger P2 lets me gain insight into this musical universe. During this loudspeaker stress test absolutely nothing stresses my ears. ►

On the contrary I'm magically attracted by the topic. Eno once said, that he composes music to relax himself. Music should help you to imagine places where you'd like to be. The P2 is conveying this notion extraordinarily well. I conclude the Eno matter with one of my private hymns, "Once In A Lifetime" by the Talking Heads, and take a closer look at

the general genre suitability of the P2. Regarding classical music, one of my favorites is Schostakowitsch's Fifth Symphony, preferably the vinyl version by the Minneapolis Symphony Orchestra (Mercury Living Presence Records SR90060). The P2 follows the dynamics of the music with striking serenity and breathtaking speed. Still, no inherent sound is

noticeable. That doesn't change when I move on to heavier material: (post-)metal by Isis or progrock by Porcupine Tree – the P2 takes it as it comes. Even current dada-pop on *Teatime Dub Encounters*, a collaboration of Underworld and the great Iggy Pop, is real fun to listen to. The advantages of these conceptual minimum systems such as detachment of the sound from





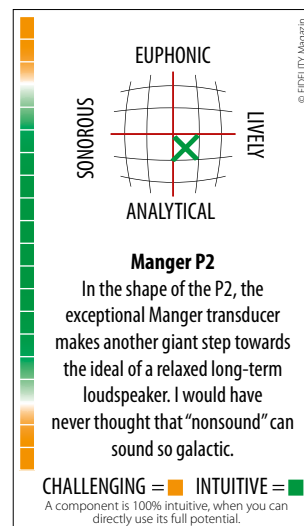
the loudspeaker and point-source localization or time correct radiation are almost palpable. Although the P2 doesn't suppress environmental influences, it can also cope with difficult rooms. In my sparsely furnished living room, where diffused sound caused by room reflections is a latent problem, the P2 doesn't produce any disturbing interferences even at

higher volume levels. In contrast to my Thiel CS 3.7 or many other loudspeakers. I usually place loudspeakers at a large base width and angle them directly at the listening position. This configuration worked perfectly for the P2 as well. Regarding the distance to the rear wall of the room, a little patience and experimentation is worthwhile, especially when rear passive

radiators support the low frequency range, as is the case here. I tested distances between 20 and 40 inches. The choice of amplifiers is critical. Manger Audio explicitly recommends fast amplifiers with high bandwidth, preferably above 150 kHz, to correctly control the fast drivers of the P2. It doesn't necessarily have to be a megahertz amplifier by Spectral - no, you should ►



Top Secret: Daniela Manger discovered a woofer that completely convinced her.



focus on fast and stable. In the beginning I used the SPL Performer 800e which worked very well. But the excellent Pass XA25 did an even better job. It's a pity that no tube amplifier was available that time - it would have been worth a try. The P2 passed her maturity test with flying colors. It does not work wonders in the bass range - Daniela Manger herself knows that and recommends adding a subwoofer. Some people may need it, although I prefer this inimitable and unobtrusive long-term quality of the P2. When reading the title of this review, some of you might have remembered the groundbreaking movie of 1967 called "The Graduate." In a nutshell, here's the plot: graduate Benjamin Braddock, played by Dustin Hoffmann, successively enters into two "forbidden" relationships. The first one with a married woman (Mrs. Robinson), the second one with her daughter (Elaine). At that time the movie was quite revolutionary. It upset society and illustrated rigid preconceptions and unworldliness from a new perspective. The same applies to the Manger P2 in a metaphorical sense. You can enter into a special relationship with this product, if you dare to. Neither unworldly nor rigid, but emo-

tional and definitely unique. And if you're still hesitant, you should consider Manger Audio's alluring offer and put your relationship to a 10-day test before you buy: at a fee of 160 euros the company will set up the P2 at your home without obligation. The loudspeakers will be delivered and picked up again - you don't have to worry about anything. And if you're lucky, Daniela Manger does it in person. In this case, FIDELITY readers with good manners will help her as much as they can, of course. After that 10-day period you will most likely set out for your nearest Manger dealer to make the P2 your own.

If time and impulse response and the conveyance of musical excitement has top priority for you and you're thinking in the long term, you should definitely put the Manger loudspeakers to the test. The important factors are your budget and your listening environment, which of the S1, P1, C1, or P2 models you choose is secondary.

The P2 has the potential of becoming the destination of a long journey. The only thing that's missing is your personal maturity test.

#### Floorstanding Loudspeaker | Manger P2

**System:** 2-way floorstanding loudspeaker, sealed | **Frequency Range:** 30Hz – 40kHz | **Efficiency Factor:** 89dB/W/m | **Nominal Impedance:** 8Ω | **Crossover Frequency:** 340Hz | **Max. Sound Pressure:** 112dB | **Drivers:** Manger Sound Transducer (mid-high range), 8" woofer, 2 passive membranes | **Finish:** all RAL and NCS colors matte, veneer, or ultrahigh gloss | **Connectors:** bi-wiring terminal with WBT binding posts Nextgen Cu | **Specials:** SAM processing available, 10-day trial period without obligation (160 €) | **Dimensions (W/H/D):** 10.6"/44.9"/8.3" | **Weight:** 70.5 lbs | **Warranty:** 5 years

**Manger Audio | Hendunger Straße 53 | D-97638 Mellrichstadt | Phone +4997769816 | [www.mangeraudio.com](http://www.mangeraudio.com)**

#### TEAMMATES

**Turntable:** Transrotor Massimo with 2 motors | **Tone Arm:** Schick 9.6 | **Cartridge:** Ikeda 9TS | **Phono Preamplifier (integrated):** McIntosh C1100AC, Nagra PL-P | **DAC+Streaming:** Auralic Altair | **Preamplifier:** McIntosh C1100AC, Nagra PL-P | **Power Amplifier:** SPL 800e Performer, PASS XA25 | **Loudspeaker:** Dynaudio Special Forty | **Cables:** Graditech, HMS, Van den Hul, Cardas | **Power Supply:** PS Audio Dectec | **Accessories:** Tabula Rasa, Dereneville Turntable Mat |