

progressive audio



ACTING ON IMPULSE

Progressive Audio boss Ralf Koenen focuses
its development work on impulse accuracy.

What do you do if the first impression of speaker, at least on appearance, is something like "That's a lot of money for such a light and delicate box"? Dismissing it out of hand would be foolish: so then begins the process of exploration in depth, to find out how the manufacturer justifies the price, and what customers will get for their money. That's the process we carried out to discover the inner values of the Progressive Audio "Extreme III".

After our very positive experiences with the smaller Extreme I, we'd already realized that this wouldn't be "just another speaker" claiming floorspace in our listening room: even the material from which the speakers are constructed is something special, being more commonly used in turntables than speakers: the Extreme III cabinet is made from acrylic.

Koenen is able to cast the 10mm thick panels, which are as strong as 28mm MDF, and stick them with by skillfully placed braces and a special gluing plan so that the joints are almost as inseparable as welded metals. Due to the extremely high internal attenuation, the resonances otherwise unavoidable in this material disappear as if by magic, meaning that as a supplementary means the Essen company only needs some damping material on opposite walls to prevent reflections. Compared to aluminum, Koenen says he saves a lot of additional damping measures that rob take the sound of life.

Division of labor has advantages

The coaxial midrange/tweeter, which combines a magnesium midrange cone and a fabric dome, is carried over from the smaller models, but since it only operates from 170Hz upwards here, it's doing a lot less work. Koenen says the smaller cone excursions required ensure an improved transient response and further reduce the already low distortion.

The woofers, which are connected in parallel, have an impedance of more than 20 ohms, which at this point avoids an adjustment by means of a crossover. Koenen's goal in the choice of the woofers was to bring a high degree of efficiency with a low bass despite the modest dimensions of the loudspeaker. The usual approach of a complex crossover is thus avoided, thus removing the chances of phase error and diminished dynamics.

Nothing off the shelf

To achieve this, Koenen had to delve deeper in his bag of tricks: he needed a woofer with a long coil former, untroubled by large excursions, while at the same time having a very deep lower resonance frequency to allow it to work up to the maximum displacement allowed by the coil gap. To implement this he chose magnesium, a lightweight but very strong cone material, driven by a large and powerful magnet, specially "baked" for him at Krupp, and of the kind commonly found, in a much smaller format, in cardiac pacemakers. Their secret lies in high permanence – in other words, they retain their magnetic force unchanged over a very long period of time.

This approach is preferable to the kind of designed sometimes found in drivers from Seas, using several magnets glued together, would have had the counterproductive effect of causing sound losses through eddy currents.

Bass tunable

The large dust-cap, stabilizing the diaphragm, is also not standard, allowing the driver to operate pistonically over a wide range the stabilization of membrane dust cap is also not as standard - the chassis operates over a wide range of piston-shaped. And while the mid/tweeter is in its own chamber, the enclosure for the bass units is reflex-ported, and tunable: if low frequencies tumble or roar, one merely pulls the reflex tube out a



▲ Elegant outriggers give the slim box the necessary stability. The spikes can be easily adjusted.



▲ The bass reflex tube is variable and can be adapted to any room to avoid bass droning – clever.



▲ The milling of the cone thickness is one of the many sound-enhancing details.

little. This means the bass level drops slightly sooner, but to a mild degree, which can even extend the usable bass response – clearly some serious work gone into this practical and cost-effective solution, which enables the bass to remain airy and agile even when the speaker is close to a wall. That’s not always the case with the more common ‘port bung’ solution.

Construction

The pictures of the crossover reveal quite a complex, separate network dividing the signal between the bass and the mid-range chassis, but the connoisseurs among you may be wondering why, in addition to parts from Cologne-based manufacturer Mundorf, there are also iron core coils. Koenen says this is a low-saturation iron material with advantages over air coils, because the resulting distortions in the working range of the driver are irrelevant.

It’s all a matter of the right material in the right place, which is why the Furutech terminals are rhodium-plated, this providing more durable protection against oxidization of the underlying copper than would gold.

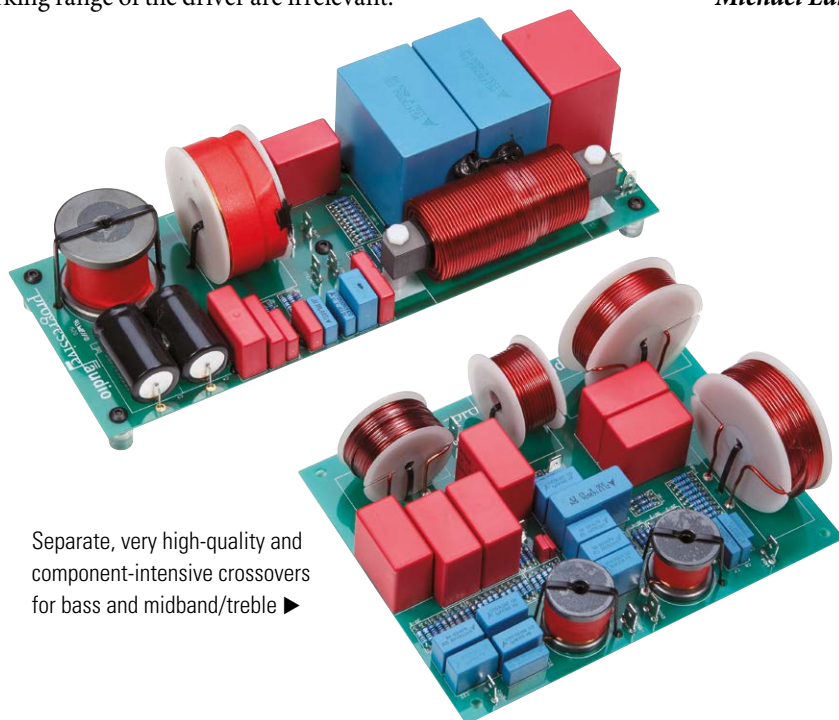
Spatial, impulsive, and bassy

Used with T + A’s PA 3100 HV and MP 3000 HV, Koenen’s creation immediately demonstrated its qualities. For the powerful amplifier, Extreme III proved no challenge: its smooth impedance and over 90 decibels of efficiency would even be well-suited to small tube amps.

We started with "Solitary Man" by Johnny Cash, and the Extreme III was convincing with a genuinely effective solidity and fine resolution. The sound was colorful and the timing steadfast, as it was with the Concerto de Aranjuez. Cellos were not faceless a rumble, but had contour and weight, while the speakers made a wonderful job of reproducing piano strings with both fine definition and excellent dynamics – whether from Jarrett or Argerich!

That this speaker, weighing just 25 kilos, could also plumb the depths of the frequency range without thickening up was never in any doubt: Koenen has mastered his craft, and created here a loudspeaker successful in every respect, and defying those initial impressions. Use it with honest electronics, and you’ll be richly rewarded.

Michael Lang



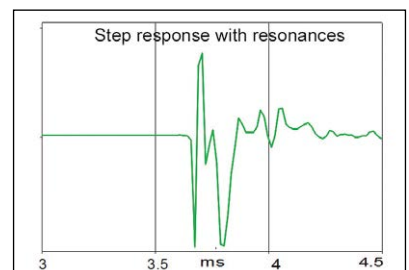
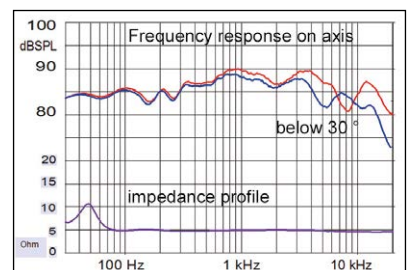
Separate, very high-quality and component-intensive crossovers for bass and midband/treble ►

PROGRESSIVE AUDIO EXTREME III

Pair from €7900 (in white or black),
 Dimensions: 17 x 100 x 38 cm (WxHxD)
 Warranty: 5 years
 Contact: Progressive Audio
 Phone: 02054/9385793
 www.progressiveaudio.de

The Extreme III delivers a picture of impressive solidity, with speed, and amazingly wide frequency response and fine resolution making it a real highlight. The treble is adjustable by + 1 db.

MEASUREMENT RESULTS



Nominal Impedance	4 W
Minimum impedance	4.8 W at 15000 Hertz
Maximum Impedance	11 W at 48 Hertz
Sound pressure (2.83 V/1m)	90.4 db SPL
Power for 94 db (1m)	3.2 W
Lower cutoff frequency (-3 db)	31 Hertz
Distortion factor at 63/3k/10k Hz	0.3 0.1 0.1%

LAB COMMENTS

The spatial frequency response isn’t exactly ruler-flat, but neither is it rough, nor an ear-wrenching mistake. The bass reaches deep down and without being overstressed. The impedance – which stays above four ohms – is makes the speaker as easygoing as does the surprisingly high efficiency and low distortion. The speakers should be toed in for listening, while the adjustable reflex tube makes the bass easy to adapt to most rooms.

STEREO-TEST

SOUND QUALITY	92%
PRICE/PERFORMANCE	
★ ★ ★ ★ ☆	
EXCELLENT	