

# SR- $\lambda$ Lambda Professional

# SRM-1/ MK-2 Professional

electrostatic earspeaker system

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# STAX



## NEW STAX SR-LAMBDA PROFESSIONAL EARSPEAKER PROVIDES UNPRECEDENTED REALISM IN SOUND REPRODUCTION

**Selected by Daimler Benz for Sophisticated Research into  
Car-Noise Analysis**

The Stax SR-Lambda earspeaker, introduced in 1980, carried the outstanding purity and clarity of sound characteristic of the company's electrostatic earspeakers a major step further forward.

The large area of its driving unit, closely coupled OVER the complete ear shell, and the acoustically transparent outer casing, set important new levels in the elimination of tonal colouration. Along with the exceptional transience and freedom from inherent resonances typical of Stax electrostatics, it brought a crystalline liquidity, dynamic effortlessness, and tonal purity of great beauty. It quickly became a prime source of reference, both for ultra-critical monitoring and sheer entrancement in listening for pleasure.

One unexpected source of enthusiasm was from the world-famous West German automotive manufacturer, Daimler Benz. Daimler Benz wanted headphones for its research and quality control engineers, for use in car-noise analysis. Absolute

accuracy of response across an exceptional frequency range was vital, as was freedom from tonal coloration. And the Stax SR-Lambda was the unit most approaching that ideal.

However, a major source of car noise can be in the very-low frequency range, with dynamic extremes; both factors well beyond those applicable to recorded music. Handling these needs made it desirable that a large space be provided between the electrostatic element and the electrodes on either side, to give the element room for greater excursions.

This then created a somewhat weaker electrostatic field, permitting the sound pressure level to drop, particularly during high sound levels at low frequencies. The solution to this was to develop a new version of the SRM-1/Mk-2 high-biasing voltage driving unit.

After intensive experimentation, it was determined that optimum changes came when the electrode gap was increased

from the 0.3mm of the Lambda to 0.5mm, and the polarizing voltage was boosted 2.5 times, to 580v.

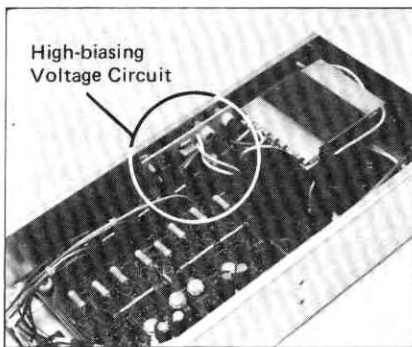
The changes were intended originally for units made specifically for Daimler Benz. However, it was found during development that linearity of low frequency response could be considerably improved by these modifications. Response on the existing SR-Lambda extends down to 8Hz, and this remains little changed, but low frequency sound pressure levels are maintained more effectively.

Other gains are also noteworthy. Distortion, already very low, is reduced a further 10%. Maximum sound pressure level is +5dB, and sensitivity +2dB.

From a musical point of view, the gains are subtle, until an exposed or firm bass line occurs. Suddenly, one is aware that the new unit has even greater dynamic range, tighter low-frequency transient response, and improved purity — the latter arising from the virtual elimination of a modest low-frequency second harmonic characteristic present in the original design.

For the accurate reproduction of music, the Stax SR-Lambda Professional earspeaker must undoubtedly rank as probably the world's finest, ahead of any other headphone unit or loudspeaker. Technical specifications are first class; however, it is in the seemingly limitless 'studio-window' quality that it excels.

Full realisation of the SR-Lambda Professional's potential demands a very high quality sound source, but once this requirement is met, the unit's sheer translucency, ultra-wide frequency and dynamic response, and unique freedom from tonal



High-biasing Voltage Circuit

colouration ensure a realism which goes beyond any previous experience in reproduced sound. One hears the slightest subtleties, such the distinction between the individual tonal qualities of two similar instruments or voices within an ensemble, or



The SRM-1/MK-2 Professional has two output sockets; one for the SR-Lambda Professional (labeled "PRO ONLY") and the other for conventional earspeakers (labeled "NORMAL").

the changes in skin tension and hand positions in drumming. And, importantly, the clarity is achieved within the original perspective, limited only by idiosyncracies of microphoning and mixing.

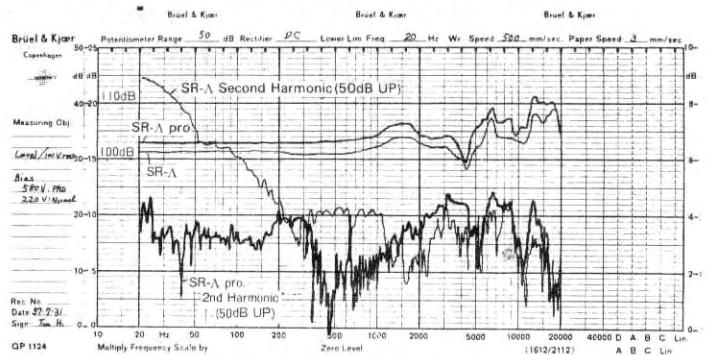
Great attention has also been paid to physical comfort. The earspeakers are supported by a wide, soft cloth band. The ear pad fits against the head, so the ear itself carries neither weight nor pressure. The ear pad is even contoured for the end of the jawbone — a nice touch. When the sound is so enticing, it's nice to be able to enjoy it in real comfort!

#### SR- $\Lambda$ Professional

- Type: electrostatic/push-pull
- Frequency Response: 8 – 35,000 Hz
- Impedance: 122k $\Omega$  (10kHz)
- Sensitivity: 107dB (100V, 1kHz)
- Earpad: soft artificial leather
- Cord: 2.5m long 6-strand
- Weight: 325g (without cord)

#### SRM-1/MK-2 Professional

- Frequency Response: DC – 20kHz ( $\pm 1$ dB)
- Distortion: 0.05% (1kHz)
- Input Impedance: 50k $\Omega$
- Sensitivity: 100mV
- Gain: 60dB
- Max. Output Voltage: 370V (1kHz)
- Power Consumption: 33W
- Dimensions: 150(W) x 87(H) x 370(D)
- Weight: 2.0kg



Distortion and frequency response of the SR-Lambda Professional in comparison with those of the existing SR-Lambda.