



Experience the award-winning Sonoma™  
Electrostatic Headphone System



**TONE**Audio  
PRODUCT OF THE YEAR 2017



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# The Revolutionary Headphone and DAC from Warwick Acoustics Ltd

Just like a chain, an audio system is only as good as its weakest link. The Sonoma has been designed to be optimized for today's High Resolution Audio formats. Every component of the system has been chosen to deliver unparalleled levels of performance and sound quality.

## High-Precision Electrostatic Laminate Transducer

The Sonoma is the world's first headphone system to use the High-Precision Electrostatic Laminate (HPEL) audio transducer developed by Warwick Acoustics Ltd. This patented technology ushers in a new paradigm in the field of electrostatic transducers with all the benefits for which electrostatics are famous—very low moving mass for extended high frequency response (over 60 kHz) and unmatched transient response, while uniform drive over the entire panel minimizes break-up modes. The result? A listening experience of unrivalled transparency and musicality. Manufactured with modern automated techniques that ensure unprecedented consistency and matching between transducers, the simplicity of the HPEL's lightweight design also ensures exceptional comfort, durability and reliability.

## Injected Magnesium Ear-Cups

With excellent strength-to-weight ratio, high stiffness, superior acoustical damping and outstanding RFI/EMI shielding, magnesium is the ideal material in which to house the HPEL to ensure optimal performance. Low weight also contributes to outstanding headphone comfort.

## Handmade Hair Sheep Ear & Headband Pads

To ensure your comfort during long listening sessions, our ear-pads and headband are handmade from top-grain, Cabretta hair sheep leather, known for its light weight, durability and softness.

## Custom Low-Capacitance Cable

In collaboration with Straight Wire Inc., we have developed a special ultra-low capacitance cable to guarantee ideal signal transfer between amplifier and headphone. This extremely flexible, low weight cable is detachable via high-precision, self-latching connectors.

## Class-A Energizing Amplifier

Like all electrostatics, the HPEL requires a high-voltage drive amplifier in order to function. The supplied drive comes from an optimally matched, high-performance, discrete FET Class-A amplifier with very low distortion and wide bandwidth. The amplifier is encased in a completely shielded, machined aluminum enclosure to ensure isolation from all interference sources, and provides USB and coax S/PDIF digital as well as RCA analog inputs. The USB input accepts all Hi-Res Audio formats up to 32-bit/384 kHz PCM and DSD via DoP (DSD64 and DSD128), while the S/PDIF input accepts all PCM formats up to 24-bit/192 kHz.



## ESS SABRE Reference DAC

ESS is universally recognized as the world's premium DAC chip manufacturer, and we have opted for their 32-bit Reference DAC. Each stereo DAC chip is operated in mono mode to provide a measured 129 dB signal-to-noise ratio.

## Custom 64-Bit Double-Precision Fixed-Point DSP

In order to obtain the desired response at the output of the headphones, we digitally process all signals using custom 64-bit double-precision fixed-point arithmetic. Fixed-point is known to be superior in the world of audio processing, and our 64-bit arithmetic exceeds even the performance of professional audio workstations.

## AKM Premium ADC

All incoming analog signals must be converted to digital ahead of the DSP, and for this we use a multi-channel 32-bit/384 kHz AKM Premium ADC to deliver a measured signal-to-noise ratio in excess of 120 dB.

## Superior USB Data Cable

With gold-plated connectors and a silver-plated data path, the supplied USB cable, co-developed with Straight Wire, is the perfect connection between your digital music source and the Sonoma M1 system.

## Custom Universal Voltage PSU

Our custom-designed, universal voltage switch-mode power supply utilizes a fixed frequency design optimized for low noise within the audio bandwidth. To ensure a good connection with the amplifier unit, we use high-performance, locking DC power connectors. All audio circuitry within the amplifier is supplied by a secondary stage of ultra-low noise, high current linear regulation.



For further details:

[info@warwickacoustics.com](mailto:info@warwickacoustics.com)

[www.warwickacoustics.com](http://www.warwickacoustics.com)