

TESSERACT

Signature



AVALON
ACOUSTICS

HIGH RESOLUTION

REFERENCE TRANSDUCERS

TESSERACT *Signature*

TESSERACT Signature represents the culmination of more than 30 years of research into the subtleties of musical waveforms and the psychoacoustic perception of sounds in space. Our study of physical forms and how they react with ambient musical information has led us to two essential innovative results. First, it is possible to make a large full range system fully disappear sonically. Second, it is possible to create 3-dimensional images within a soundstage using conventional stereo recordings.

Our Stealth Technology, the redirecting and diffusion of ambient room energy, makes the disappearing act possible. The use of tensor field mathematics, assigning a value and direction to expanding harmonic waves, along with prodigious 'number crunching', has given us the ability to make reliable predictions regarding which physical forms will best disappear in space. Making an array which is over 7 feet tall disappear is quite a feat of practical mathematical prediction and actual form fabrication.

Sonic Holography is accomplished through meticulousness in recovery and preservation of low level signal information which is encoded into any well made recording. Whenever a microphone is open it is collecting phase and spatial information which needs to be fully decoded by a playback system. This fragile information may be destroyed at many stages of the recording/playback process. Our goal is to preserve as much of the truth that lives within each recording without putting our own fingerprints on the final presentation.

Most importantly, we never apply technique without considering the effect it will have on the emotional content of the presentation. For us, technique is always in service to the music. There must be an aesthetic or emotional result for each intellectual or technical choice we make, one that speaks to our souls.

"A signature is the mark we make to signify responsibility. We pledge our bond that the article is authentic, truthful, and faithfully represents our intentions. Each Signature design is a reaffirmation of my personal commitment to Fidelity. Not a concept to be taken lightly, Fidelity is a vow of allegiance to preservation of truth, without leaving any fingerprints.

The delicately nuanced structure of music requires an authentic translation, lest we lose the intent and humanity of the artist. Each of these Signature designs is a work of art unique unto itself, a portal into an exploration of musical history and self."

Neil Patel



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FEATURES

- Sonic Holography: Superlative 3-dimensional imaging capability with two-channel source material
- Silent Inert Composite construction
- Proprietary Quad driver internally powered Isobaric transmission line system
- Symmetrical impedance characteristics
- Constant driver to driver Q
- Purely Pistonic driver behavior throughout the bandwidth
- Point source focus
- Phase linear filter topologies
- Fully damped non-reactive amplifier load
- Stealth Technology: Acoustic radiation control for launch surface and room ambience return energy
- Linear octave to octave radiation balance

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SYSTEM PERFORMANCE

Specifications:

- Response: 16 Hz to 70 kHz (+/- 0.5 dB anechoic, +/- 1 dB in room response typical)
- In room low frequency response: (-1.5 dB @ 16Hz, -3 dB @ 13Hz typical, dependent upon room volume)
- Efficiency: 93.5 dB (1 watt @ 1 meter)
- Harmonic distortion: 0.30 % throughout the bandwidth at rated efficiency
- Inter-driver phase deviation: 3 degrees within all cross bands
- Noise floor: 68 dB from signal level (maximum noise level), 76dB Typical
- Group delay distortion: 3 milliseconds 100 Hz to 16 Hz. 1 millisecond 100 Hz to 20 KHz.
- Impedance: 6 ohms nominal (4 ohms minimum @ 80 Hz)
- Recommended amplifier power: 15 to 500 Watts

Powered Isobaric Transmission Line Specs:

- Power: 3.2 Kilowatts per channel
- Automatic signal sensing and gain matching
- Master Gain: +/- 2.5 dB (fixed resistor elements of 0.25 dB increments)
- Toggle switch for selecting low frequency contouring: Maximum extension or Transient Speed
- Tempered-scale aperiodic tuning
- Fully Analog symmetrical circuitry
- No digital signal conversion or manipulation

Driver Complement (Per Channel):

- 4 x 15" low Q high force factor sub-woofers
- 1 x 11" ceramic/honeycomb underhung voice-coil midbass
- 1 x 4.5" ceramic underhung voice-coil midrange
- 1 x .78 " diamond underhung voice-coil tweeter

Physical Parameters:

- Four independent cabinets, two per channel vertically integrated
- Overall Height: 87" (221 cm)
- Width: 29" (74 cm)
- Depth: 32" (82 cm)
- Weight: 827 lbs. per channel (375 kilos), 1653 lbs. total (750 Kilos)
- Shipping weight: 2002 lbs. (908 kilos)

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