



## Tonal Balance

Angstrom loudspeakers have achieved a very even tonal balance without sacrificing efficiency and power handling. Our carefully designed control of resonance has resulted in high fidelity systems that react to dynamic signals without compression and distortion. Realistic reproduction of music requires that the loudest sounds be reproduced as accurately as the softest. At the height of an orchestral crescendo playing at realistic levels, both amplifier and loudspeakers are being stressed near their limits. The loudspeaker must accurately follow the signal without compressing it or distorting. To do this it must be able to absorb and dissipate the heat generated by high power operation

High temperature operation requires the use of sophisticated materials and construction techniques. Kapton voice coil formers, polypropylene capacitors, high temperature adhesives, and over-spec'd crossover components resist high temperatures. Aluminum coil forms and domes, ferro-fluid cooled tweeter voice coils, thermally massive magnet structures, and, on some models, cast alloy woofer frames and polypropylene encapsulated magnets (for thermal Impedance matching) all contribute to wicking away the heat that robs lesser speakers of their tonal balance, or causes them to fail prematurely. High drive levels can cause voice coils to exceed temperatures of over 280 degrees C. This can easily result in two or three db's of compression. Loudspeaker electronics must be cool.

In addition to the acoustical criteria addressed above, Angstrom loudspeakers include an array of audiophile and aesthetic features not normally found in their price range.

- \* Integrated grille/baffle/absorption-blanket system to prevent diffraction induced energy-time smearing and the resultant timbral colourations.
- \* Driver Impedance compensation circuits to maximize available amplifier power.
- \* Polypropylene and polyester capacitors in the signal path, except where the inductance of a high quality electrolytic is required circuit element.
- \* Non-standard value crossover components for the flattest frequency and power response/smoothest DI and new-ideal symmetry between stereo pairs.
- \* Bi-wire and Bi-amping capability for optimization of the amplifier/cable/loudspeaker system.
- \* Five way, gold plated (most models) binding posts for secure, low resistance connection to the amplifier.
- \* Separate epoxy glass PC boards for the high pass and low pass filters.
- \* Epoxy powder paint (powder coating), electrostatically applied, environmentally friendly.
- \* Silver solder used on critical connections.
- \* Several models wired internally with Atmos Air cable from Germany.
- \* Our new Ambienti in ceiling / in wall loudspeakers use space age material called VECTRAN as a cone material.

*Angstrom*  
LOUDSPEAKERS