



meter with 1 watt input into 4 ohms. Nominally Low-frequency response: 3 DB down-point at 52 Hz. Response: +1.5 DB, -2 DB from 58 Hz to 30 KHz, measured outdoors in a 2 (pi) environment. System Q: Nominally .7. Volume of enclosure: Inside dimensions .55 cubic feet, including stuffing. Weight: Packed in carton 11.79 Kg (26 lb.) (one speaker per box); unpacked 9.97 Kg (22 lb.). Weight: Packed in carton 11.79 Kg (26 lb.) (one speaker per box); unpacked 9.97 Kg (22 lb.).



### MODEL AR11 - Audiophile 3.5 Inch Two-Way Surround/ Speaker

Dimensions: 355.6 mm (14") height x 228.6 mm (9") width x 50.8 mm (2") depth including grille. When two or more of these units are mounted against the wall/LARGE STRUCTURE, in conjunction with the (234) (232) or (117) subwoofer, they should provide you with an exceptionally wide and realistic stereo sound stage. This speaker was designed to provide the listener with the highest quality of sound and to be also decoratively available to go in most living rooms without any degradation of musical reproduction. Also the drivers are not only mounted to the face of the enclosure, but they are securely fastened to the rear as well. This makes for a lighter, stronger, uncolored, and more vibration free speaker enclosure. NOTE: this speaker is wonderfully designed for surround, rear hookup design, and even stand alone, such as high quality extension speakers for bedroom, den, or office type units.

Woofer: 88.9 mm (3.5") acoustic suspension woofer, and the woofer is a long throw, high performance 3.5 inch transducer, utilizing a new type polypropylene cone mounted with a soft foam surround, for smooth extended base response not normally found in this size woofer. Impedance: 4 ohms  $\pm$  .5 ohms from 150 Hz to 15 KHz with control in FULLY CLOCKWISE position. Efficiency: Average sensitivity is 88 DB at 1 meter with 1 watt input into 4 ohms. Minimum amplifier power requirements: 15 watts RMS into 4 ohms. Power handling: Up to 100 watts music power per channel. Low-frequency response: 3 DB downpoint at about 125 Hz. Response: +1.5 DB, -2 DB from 150 Hz to 20 KHz, measured outdoors in a 2 (pi) environment. System Q: .8

### MODEL 117 - 8 Inch Dual Voice Coil SUBWOOFER:

Cabinet dimensions: 355.6 mm (14 inches) high, 279.4 mm (11 inches) wide. 215.9 mm (8.5 inches) depth, including grille. When one or more of these units are placed against the floor/wall or used as stand alone systems positioned VERTICAL/horizontal on the floor near the wall, they should provide you with an exceptionally rich, powerful, deep base, for enhancing the satellites so they will help provide you a more accurate, wide range, realistic, sound stage. This speaker was also designed to provide the listener with the highest quality of MUSICAL REPRODUCTION, with incredibly little compromise, and to be also decoratively available to go in most living rooms without any degradation of musical reproduction. Specifications: This is a special extra long throw, dual coil subwoofer system, an acoustic suspension design, or widely known as sealed box design. Drive unit: 203.2 mm (8") high compliance, long throw, acoustic suspension type woofer. Crossover frequency: 100 Hz, Constant voltage constant resistance type. Impedance: Nominally 4 ohms. Efficiency: Average sensitivity is 85 DB at 1 meter with 1 watt input into 4 ohms, one channel driven. If placed at the floor/wall position there should be an approximate "3 DB" increase in level. Nominal Low-frequency response: 3 DB downpoint at 38 Hz. Top end cut off, 3 db downpoint, at 100 Hz. System Q: Nominally .6. Volume of enclosure: .65 cubic feet, including stuffing. Weight: Packed in carton 61.77 Kg (28 lb.); unpacked 52.9 Kg (24 lb.).



### MODEL 232 - 12 Inch Dual Voice Coil SUBWOOFER:

Dimensions: 635 mm (25 inches) high, 431.8 mm (17 inches) wide. 241.3 mm (9.5 inches) depth, including grille. Woofer: 305 mm (12") high compliance, long throw, acoustic suspension type woofer. Incorporating a heavy 1.45 Kg (3.2 lb) ceramic magnet, this woofer magnet produces an air-gap flux-density of approximately 10.5 Kilogauss. For increased power handling capability, we employ a long dual 2-layer, 2" (51 mm) diameter voice coil wound with #25 gauge wire. In order to ensure maximum extended deep bass response with minimal distortion, the woofer was designed with a vented pole piece, in order to utilize the volume under the dust cap normally thrown away by most manufacturers. This also allows us to extend the free air resonance to a nominal 13 Hz, so that in the completed system more than 50% of the total suspension stiffness is contributed by the air that is sealed inside the cabinet. Crossover frequency: 100 HZ, Constant voltage constant resistance type. Impedance: Nominally 4 ohms. Efficiency: Average sensitivity is 86 DB at 1 meter with 1 watt input into 4 ohms, one channel driven. If placed at the floor/wall position there should be an approximate "3 DB" increase in level. In-box resonance: Nominally 27 Hz. Nominal Low-frequency response: 3 DB down point at 27 Hz. Top end cut off, 3 db down point, at 100 hz with proper loading at the output terminals. System Q: Nominally .7. Volume of enclosure: 2 cubic feet, including stuffing and heavy cabinet construction. Weight: Packed in carton 20.8 Kg (45.9 lb.); unpacked 19.4 Kg (42.8 lb.).



### MODEL 234 - 12 Inch Dual Voice Coil SUBWOOFER (ACTIVE/PASSIVE)

(Same as Model AR232, but has bi-amp capability. If you wish to bi-amp this system, first disconnect the cable, and then place the switch in the active mode. At this point have two amplifiers at hand, hooking one to the woofer, and the other amplifier to the satellite cup located at the top of the small satellite system enclosure. Again make sure the phasing is correct, and then enjoy the music. NOTE: placing the switch in the active mode does not change the compensation network inside the speaker system. The woofer remains resistive in both switch settings; Also because of the low crossover point you may for conveyance place this system anywhere in the room; however, to take advantage of all the base you can get, you should placed the woofer against the short wall about two/4 feet from the corner of the room. However if you wish to use the network inside the enclosure, you would first place the switches in the passive mode and then connect the amplifier directly to the binding post plugs marked (input) terminals, in the woofer terminal cups, then place a 50 watt 4 Ohm resistor across the binding post labeled (satellite). This will load the network for proper cutoff of the woofer section. Then connect your second amplifier, less power usually than the woofer amplifier, to the terminal cup located near the top of the small satellite system. Now you can adjust the levels of the two amplifiers/speakers independent of each other.

