

TWEETER:

In the satellite system, 1 inch (25 mm), round (cropped). We have designed a superior, new tweeter which has a very low mass gold anodized aluminum diaphragm mounted to a specially formulated soft polyamide surround, and uniquely designed flexible tinsel leads. This allows the high frequency device to have a resonant frequency of nearly 700 cycles with a Q of less than .5. This means that the one inch tweeter is critically damped, to also produce a smooth, color free response near and below the crossover point, and to maintain an exceptionally wide range, and superior performance to well beyond audibility.



TWEETER CONTROL (Satellites):

The control, located in the recessed panel on the back of the loudspeaker, allows unusual flexibility. The High Frequency Control (H.F) allows you to raise and lower the entire response of the tweeter with respect to the midrange and/or woofer.

GRILLE:

In order to complement the finish and to maintain the optimum acoustic characteristics of the drivers, we use an acoustically transparent cloth grille. Also, a specially designed grille frame to minimize edge diffraction, is used to help maintain a smooth power response throughout the entire frequency band.

CABINET DESIGN:

All models are made of solid wood with a thin, translucent, lacquer finish. All visible edges have a radius. Front and back is made of high density, high quality particle board with a soft, black acoustic blanket on the front surrounding the drivers. A special acoustic blanket was chosen for all of our speaker systems' front baffles to improve signal damping, and to maintain a high quality, color-free, middle and high frequency smooth response.

DRIVER DESIGN:

Woofer design: To maintain a high standard of quality control, we found it necessary to design and scrutinize carefully our own drivers. Incorporating long voice coils and heavy ceramic magnets for good damping and distortion free base response. For increased power handling capability, we employ long 2-layer, high temperature, voice coils, wound on rigid high temperature capton/aluminum supports, and heavy gauge wire. In order to ensure maximum extended deep bass response with minimal distortion, the woofers are 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 low end response, to a nominally low free air resonance, so that in the completed system more than 60% of the total suspension stiffness is contributed by the air that is sealed inside the cabinet. All cones are constructed of stiff, but lossy specially treated, highly damped paper material. Surround is polyurethane foam for maximum smooth top-end rolloff without the normal ringing found in most woofers. We have taken care to ensure that the cone/surround attachment has as little phase anomaly as possible.

CROSSOVER DESIGN:

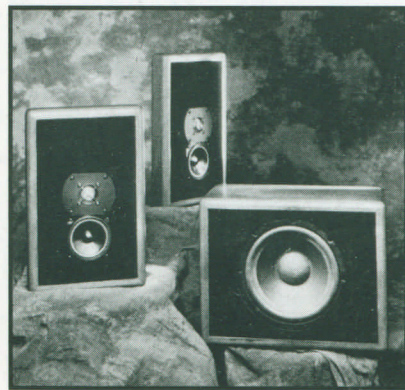
Through a unique design, our crossover takes the complete advantages of a first-order, constant-voltage-transfer network, and an exceptionally good mechanical cutoff from the drive units for an excellent transient response, and smooth transition between midrange and woofer. To avoid distortion, due to core hysteresis and saturation, the crossover chokes used in our systems are wound multilayered iron core and/or air core with heavy gauge wire to minimize the DC resistance, and to maintain the efficiency, and the integrity of the (Q) designed in the original driver specification as closely as possible.

Wire Size and Fusing:

Additional resistance inserted between the amplifier and the loud speaker, such as that due to too small a wire size or to a fuse in the line, or both, can cause a loss of power and change the system Q of the speaker. For a 20-foot run between amplifier and speaker, we recommend the use of #12-gauge wire.

AMPLIFIER POWER:

Minimum amplifier power requirements: 20 watts per channel RMS into 4 ohms. Power handling: Up to 300 W watts music power per channel.



ABOUT THE DESIGNER:

Roy Cizek has been in the speaker business for over thirty years. He is well-known with all audiophile circles and is well respected among his peers. He is an absolute perfectionist when it comes to his speakers, and he will not release a model for production until it has passed all of his rigorous standards. He has always been famous for his bass sound quality, and now he is going after the best overall sound reproduction possible. As a youngster, he experimented with concepts in sound, building his first speaker when he was just twelve years old. He was born with acute sense of hearing which further developed in his formative years. He pursued his love of music with a college double major of music and physics and a degree in electrical engineering. He began his own company at twenty-one years old, Cizek Enterprises. As his experience in building speakers grew, so did his curiosity. In 1974, he decided he wanted to understand mathematically the sound he was producing and proceeded to pursue this knowledge through a double major, math and electronics at the Massachusetts Institute of Technology. Throughout the years, he has served as Audio Engineer, Senior Design Engineer, Directing Production Engineer, Consultant to Manufacturers and Educators, Inventor (with over 8 patents to his credit). Employed by: JBL Harman; Altec Lansing; Audio Dynamics (ADC); Sound Research; Los Angeles Community College, The Economy Efficiency Commission; Connecticut Dept. of Education; University of Michigan; Indiana University; The MO-Weiss Company; Acoustic Research Company; Acoustaphase; Ultrawood; ERA automotive speaker design. Privately Owned Companies: Cizek Enterprises; Cizek Audio; Sound Research; Audio Engineering, Inc.; Complete Computer Service; and the current, High Tech Aspirin, Inc. Roy is now in the midst of his best work yet, a quest for the best sound quality, the nicest looking designs ever, and an emphasis on maximum efficiency with reduction in size. We hope you enjoy the new *WAF/Audiophile speakers in the following pages, and we thank you for your interest in our speakers. (WAF=Wife Acceptance Factor)



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