

Von Schweikert Audio

World Class Reference Speaker Systems for Music and Film

LCR-15 Full-Range Speaker System

The LCR-15 may be used as a full-range speaker in conventional stereo configurations, or as a dedicated dialogue center channel in Home Theater applications (LCR designates a speaker that can be used in the Left, Center, and Right main positions). As a full-range speaker for music, VSA engineered powerful bass response, combined with spectacular stereo imaging, into a small cabinet. For use as a center channel, we created superb vocal intelligibility by use of two small bass/midrange drivers, as opposed to a larger singular unit, enabling a quasi three-way design.

Our design approach was facilitated by the use of special diaphragm materials providing the highest *Clarity Factor* available. Our composite woofer cone, fabricated from cellulose acetate pulp impregnated with mica substrate and damped with carbon fiber/resin polymer, has a very high Youngs Modulus (ratio of weight to rigidity). This permits the woofer/midrange drivers to deliver thundering bass response in combination with breathtaking vocal clarity and intelligibility. The Ferrofluid cooled composite fabric/polymer resin dome tweeter can handle the dynamic range and volume levels necessary for thrilling realism without harshness or distortion.

In order to reproduce deep and powerful bass without the use of reflex porting, which often adds lower midrange anomalies as well as “one note bass”, we chose a pressure release system. Sealed box designs eliminate midrange resonances but suffer from limited



excursion and dynamic range due to an air spring. Our cabinet utilizes two “breathing tubes” to decrease this pressure, thus increasing dynamic range. Note that these vents do not contribute to bass output, so mounting within a wall unit or cabinet is perfectly acceptable.

The LCR-15’s specialized crossover design allows the speaker to be used horizontally or vertically. Our GAIN (*Global Axis Integration Network*) crossover system enables flat frequency response with either placement. The GAIN filter is a synthesized steep-slope design formed from cascading low order filters in an arrangement enabling a “bubble” of sound to be radiated, rather than the conventional “flashlight beam” effect caused by excess driver overlap. Additional benefits to our circuit include fewer parts in the signal path, audiophile-quality parts to increase clarity and transparency, as well as resin potting to reduce vibrational distortion.

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Specifications

System Type: Shielded quasi three-way *full-range* dialogue/general purpose speaker system. One of the two woofers is used for bass purposes only, while the second is used for midbass and midrange. Can be placed horizontally or vertically. The optional VR-Stand may also be used.

Bass Loading: *Aperiodic Pressure Release* design using 100% stuffing density. Note that the vents are not bass reflex ports, but act as pressure release orifices. Can be placed inside a wall unit.

Bass Drivers: 2-5.5" heavy-duty bass/mids with cast frame, cellulose acetate pulp cones impregnated with mica substrate and damped with a carbon fiber/resin polymer, *Low Distortion Motor* system, butyl rubber surrounds, long throw spider, high temperature voice coil and magnetic shielding. This new driver design has very natural sound quality with inaudible coloration or distortion.

Tweeter: 1" composite silk/polymer resin dome with Ferrofluid cooling, high temperature voice coil, *Low Distortion Motor* design, and magnetic shielding. This tweeter is very musical, without harshness, even at high volume levels that would cause "standard" tweeters to distort.

Crossover: *Global Axis Integration Network* (synthesized steep filters with phase-consistent behavior) with 220Hz and 2.2kHz crossover points. This crossover design has been engineered to

radiate sound in a wide "bubble" instead of a "beam", so that phase and frequency response do not radically change off-axis. The audiophile-quality parts have been hand selected, including polypropylene capacitors and premium air core inductors.

Binding Posts: High quality audiophile five-way binding posts with rhodium plating.

Frequency Response: 35Hz to 25kHz (-6dB points, in-room)

Sensitivity: 87.5 dB @one watt/one meter.

Power Handling: 8 watts min., 200 watts peak.

Impedance: 8 ohms nominal (7 ohms minimum, 19 ohms maximum). SET friendly!

Weight: 28 lbs. packed for shipping, 22 lbs. raw.

Dimensions: 17.5" Wide x 10.25" Deep x 7.5" High (horizontally placed).

Warranty: Ten years parts and labor, excluding abuse such as burnt voice coils.

Finishes: Blond Maple (pictured), black ash, dark red cherry, and African Hazelwood.

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