



## POLK AUDIO RTA 15TL SPEAKER SYSTEM

*Julian Hirsch, Hirsch-Houck Laboratories*

**T**HE RTA 15TL, which heads Polk Audio's line of three Real Time Array speakers, is the company's finest speaker system outside its flagship Stereo Dimensional Array (SDA) line. Although its design is apparently conventional, in a sense it derives from the SDA series, or at least from the technology that was developed in the creation of that series.

Polk SDA speakers are designed to create a wide sound stage, extending well beyond their physical spacing. The effect requires multiple arrays of

drivers and careful control of their phase relations and radiation angles. Not surprisingly, the SDA systems tend to be both large and expensive. In creating the RTA series, Polk's aim was to utilize the same basic line-source configuration as featured in the SDA systems, with just one of the SL3000 tweeters developed for the most recent SDA systems, to create affordable speakers of moderate size whose sound would surpass that of competitively priced systems.

The Polk RTA 15TL is a columnar, floor-standing system measuring 43

inches high, 12½ inches wide, and 15½ inches deep and weighing more than 70 pounds. A vertical array of four 6½-inch bass/midrange drivers, using trilaminate polymer cones, occupies most of the front panel. At their center, on the same vertical line, is the ferrofluid-cooled trilaminate-dome SL3000 tweeter. An angled "diffraction spoiler" extending upward and forward from the tweeter's mounting plate breaks up the symmetry of the vertical driver arrangement. The resulting reduced diffraction is said to smooth the response between 2,000 and 10,000 Hz, and Polk claims that it makes audible improvements in imaging as well as frequency response.

The vertical line array of the four small bass/midrange drivers radiates sound through a wide horizontal angle but focuses it into a narrow vertical angle. This pattern is said to minimize reflections from the floor and ceiling, providing superior imaging without limiting the location of listeners within the room.

Below the line array is a 10-inch passive cone radiator that extends the low-bass response of the system. A second passive cone, of the same size but with a different resonant frequency, is located at the bottom of the rear panel.

Polk's specifications for the RTA 15TL include a frequency response (between the -3-dB limits) of 27 to 25,000 Hz, a sensitivity of 90 dB, and an impedance characteristic compatible with 8-ohm amplifier outputs. The system is recommended for use with amplifiers rated between 30 and 250 watts per channel.

The Polk RTA 15TL is available finished in natural oak, natural walnut, and black oak, all with a high-gloss black-acrylic top surface. Price: \$1,400 a pair. Polk Audio, Inc., Dept. SR, 5601 Metro Dr., Baltimore, MD 21215.

### *Lab Tests*

Our frequency-response measurements generally confirmed the measurements made by Polk on our test samples. The room response of the speakers was exceptionally flat, sloping downward gently above 1,000 Hz, to -3 dB at 10,000 Hz, and rising to the midrange level at 15,000 to 20,000 Hz. There was a dip of 3 dB at 400 Hz, apparently caused by a floor reflec-

JOCK P. LEUNG