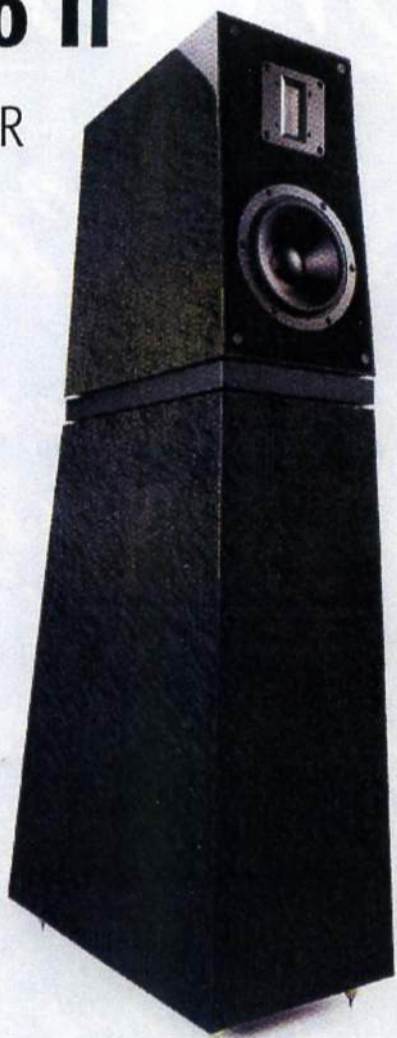


Verity Audio Sarastro II

FRED KAPLAN

LOUDSPEAKER



Verity Audio Sarastro II loudspeaker

DESCRIPTION Three-way, dual-enclosure, floorstanding loudspeaker. Drive-units: 2"-tall aluminum-ribbon tweeter, 6" doped polypropylene-cone midrange, 11" polypropylene-cone woofer. Cross-over frequencies: 150Hz, 5.5kHz. Frequency range: 25Hz–60kHz. Sensitivity: 93dB/2.83V/m. Normal impedance: 8 ohms nominal, 4 ohms minimal.

DIMENSIONS 47.5" (1210mm) H by 14" (350mm) W by 20" (505mm) D. Weight: 150 lbs (68kg).

FINISHES Italian high-gloss piano-black lacquer; makore, high-gloss silver, quilted big-leaf maple available at extra cost.

SERIAL NUMBERS OF UNITS

REVIEWED SM 1197, SM 1198.

PRICE \$39,995/pair. Approximate number of dealers: 14 of 22.

MANUFACTURER Verity Audio, Inc., 1005 Saint-Jean-Baptiste Avenue, Suite 150, Quebec, Quebec G2E 5L1, Canada. Tel: (418) 682-9940. Fax: (418) 682-8644.

Web: www.verityaudio.com.

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I've been listening with great pleasure to Verity Audio's Parsifal Ovation loudspeakers the past few years, so I was intrigued to hear the company's step-up model, the Sarastro II. At 150 lbs each and \$39,995/pair, the Sarastro II weighs and costs nearly twice as much as the Ovation. Would it *sound* twice as good?

Though bigger than the Parsifal in every way, the Sarastro II still cuts a relatively trim profile, unless you view it from the side. In that case, the rear of the woofer cabinet slopes out like Darth Vader's gown to accommodate its 11" rear-firing polypropylene driver with its 4" high-power motor. Atop this sits, as in most of Verity's other models, a smaller enclosure, this one containing a 6" polypropylene midrange cone and a tweeter featuring a 2" tall aluminum ribbon. The upper enclosure is separated from the woofer cabinet not by cones, as in many two-story speakers, but rather by a 1¼"-thick plate of damped aluminum, to keep low-frequency rumbles from passing between the cabinets. This plate is reinforced on top and bottom with pads of sticky Sorbothane, to damp vibrations in the mid- to high frequencies.

The cabinets themselves, made of 1"-thick MDF, are very rigid, as are their extensive layers of internal bracing, and are coated with polyester lacquer in a piano-black finish (also available, at extra prices are finishes of high-gloss silver, makore, or quilted big-leaf

maple). The assembly is coupled to the floor by adjustable, tight-locking spikes of solid brass and stainless steel.

The woofer and midrange drivers are custom-built by the Danish firm Audio Technology, but the Sarastro's design and the philosophy behind it come from Verity's proprietors, Bruno Bouchard and Julien Pelchat, music-loving Quebecois engineers who have spent much of their time the past two decades doing research and development into loud-speaker behavior.

The Sarastro II's midrange driver uses an underhung voice-coil—*ie*, a coil that's shorter than the magnet—which is said to maximize linearity. A copper Faraday ring on the coil's formers keeps the magnetic field focused in the gap containing the voice-coil, to prevent variations in the signal from producing variations in the field's intensity. Keeping this driver under control is a delicate task, as it covers an unusually wide bandwidth, from 150Hz to 5.5kHz. The idea is, first, to keep the music's midrange as smooth as

possible, and second, to free the ribbon tweeter from the burden of reproducing fundamental tones (the highest note on a piano sings at about 4.2kHz) and letting it do what it does best: emit high frequencies, which it does across six octaves, all the way up to a claimed 60kHz.

both sets of crossovers, the bracing and air flow inside both cabinets, and all the internal wiring (which is now solid silver with OFC conductors suspended in a Dual Micro Mono-Filament design).

But it's the woofer—11" in diameter, weighing about 35 lbs, with an under-

IT'S THE SPEAKER'S NEW TWEETER THAT LED VERITY TO UPGRADE THE ORIGINAL SARASTRO.

It's the speaker's new tweeter that led Verity to upgrade the original Sarastro (which Michael Fremer reviewed in the March 2005 *Stereophile*, Vol.28 No.3). The older version was also a ribbon design, but the tweeter in the II is designed and manufactured by Verity. It incorporates a reworked magnet, a wider ribbon element, a suspension that handles power more efficiently, and a redesigned front plate better to match the dispersion of the midrange driver. However, all of these changes required adjustments to

hung 4" voice-coil and a 4" flared port of aluminum—that is the most controversial and potentially problematic element of the Sarastro II. It's rear-mounted. (Verity's smaller Parsifal lets you turn the woofer cabinet in either direction, to fire forward or back, but there's no such flexibility with the Sarastro.) Most speaker designers try to minimize, or simply ignore, the effect of room reflections. But Bouchard and Pelchat have found that almost all rooms boost bass to some degree, so the Sarastro is *designed* to exploit these

MEASUREMENTS

As Fred Kaplan explains, the primary difference between the Sarastro II and the original Sarastro (reviewed by Michael Fremer in March 2005), is the upgraded tweeter and associated changes to the crossover. In many respects, the new loudspeaker measured very similarly to the earlier version—you can find my measurements of the Sarastro I at www.stereophile.com/floorloudspeakers/305verity/index5.html.

My B-weighted estimate of the Verity's voltage sensitivity on its tweeter axis was identical to that of the Mk.I, at 92.5dB(B)/2.83V/m, which is usefully higher than average. Its impedance (fig.1) is also very similar to that of the original Sarastro, staying above 6 ohms for much of the audioband. The minimum value is 3 ohms at 8kHz, though the electrical phase angle is not quite as severe in the mid-treble as the Mk.I's.

The vibrational behavior of the two enclosures was also similar to the original speaker's. The back panel of the head unit was the liveliest, with fairly strong modes at 430Hz and 512Hz, but as this panel faces away from the listener, the audible effect should be minimal. The front panel of the bass unit had a low-level mode apparent at 310Hz. FK didn't comment on any midrange congestion that might have resulted from this behavior.

Fig.2 shows the responses of the midrange unit (black trace), head-unit port (blue), woofer (red), and bass-unit port (green). The midrange unit has a minimum-motion notch in its output at 54Hz; the head-unit's port actually peaks higher in frequency, in the region where the midrange unit also peaks before starting its rolloff. As with the original Sarastro, the series capacitor in the midrange unit's crossover upsets the driver's reflex tuning. I wonder if this behavior

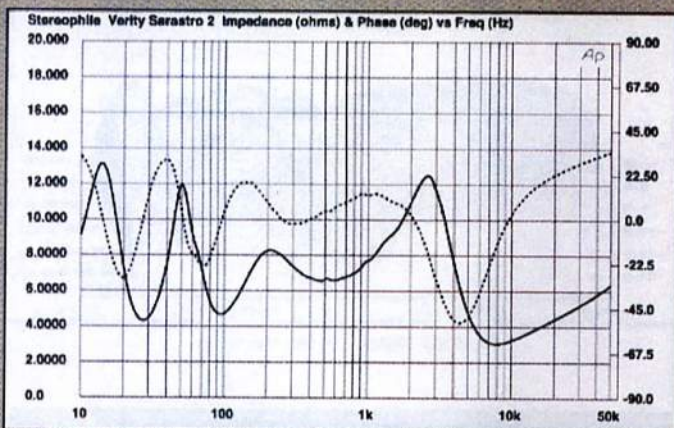


Fig.1 Verity Sarastro II, electrical impedance (solid) and phase (dashed). (2 ohms/vertical div.)

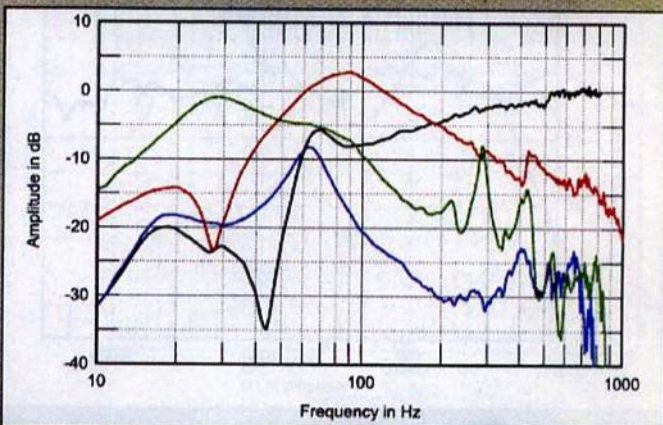


Fig.2 Verity Sarastro II, nearfield responses of midrange unit (black), head-unit port (blue), woofer (red), and bass-unit port (green), scaled in the ratio of the radiating diameters.

