Opera Quinta V2

The new Opera Quinta is an evolution of the previous model. Thanks to a careful study of the loudspeaker's individual components, we were able to exceed the 87-88 dB sensitivity limit, even reaching 91 decibels, that guarantees excellent dynamics and very linear performances even at high signal levels. Due to contained phase rotation, the load seen by the amplifier does not appear critical at all, guaranteeing good drivability even with amplifiers of limited power.

The cabinet

As with the Prima V2, the utmost care has been taken in the internal design of the enclosure and in eliminating any colorations it might add to the signal sent from the amplifier to the loudspeakers. To improve sound articulation, the new shape of the cabinet was the result of countless tests that led to minimizing midrange reflections. This was achieved thanks to the internal design with no walls parallel to each other and a relationship between the various dimensions that minimizes standing waves.
The midrange operates in a completely sealed chamber, with a resonance frequency less than half the actual crossover point, providing substantial power headroom even below its intended playback range. Careful attention was also paid to the loudspeaker housings on the front panel, which is machined internally to reduce reflections from inside the cabinet that can pass through the loudspeaker membranes and color the sound. The sound pressure emitted by the individual walls was measured with excellent accuracy with an accelerometer and an in-house developed technique. The cabinet has therefore been optimized to reduce these emissions, measured

at high power, to achieve almost inaudible noise level and in any case below the average ambient noise.
The midrange enclosure features a steeply angled rear wall to deflect internal reflections toward the sound-absorbing material lining the interior surfaces. This polyurethane-based damping material was selected for its specific density, chosen to maximize the attenuation of internal reflections. Particular attention was also paid to eliminating vibrations on the side panels, minimized by using two carefully placed internal braces.

Speakers

Once again, the loudspeakers were optimized through a fruitful collaboration between OPERA and Scan-Speak, aimed at achieving a well-balanced compromise between damping and power handling. A key feature of this system is its ability to deliver a full-bodied bass response, even at very low listening volumes. The 18 cm nominal drivers are housed in a generously sized bass reflex cabinet, tuned to a very low frequency using two rear-firing ports. These ports are carefully dimensioned to ensure minimal turbulence, even at high sound pressure levels.
The system features two 18 cm drivers with a manufacturing tolerance of less than 3%, closely related to the driver used in the OPERA Prima V2. However, in this case, they are connected in series to avoid excessively lowering the impedance. The strict production tolerances ensure consistent behavior, both in terms of the reflex loading and the impedance curve seen by the crossover. The amplifier is presented with a relatively high impedance with minimal phase shift, making this a very easy load for most amplifiers.
The midrange driver, responsible for vocal reproduction, operates from 230 Hz to 2300 Hz via a relatively simple band-pass filter network, made possible by the excellent linearity of its fiberglass cone, manufactured using a proprietary process. Despite the simplicity of the circuit, the midrange's acoustic response features a steep roll-off. Careful selection of the high-pass filter components allows for a dual-slope profile that ensures perfect phase alignment with the two woofers below.
The tweeter is essentially the same component used in the OPERA Prima V2, derived from a standard Scan-Speak model with a reinforced motor

assembly. It is capable of handling high power levels with very low distortion. Its soft dome, hand-treated by the Danish manufacturer, provides an extended and refined high-frequency response that remains smooth and fatigue-free over long listening sessions.

The Crossover

The crossover design may appear relatively simple at first glance, yet it carefully distinguishes between the electrical response at the speaker terminals and the actual acoustic output of the drivers—which is ultimately what we hear. The low-pass section for the two woofers features a tailored slope that blends seamlessly with the midrange, ensuring near-perfect acoustic phase alignment.

The system's high sensitivity allowed us to fine-tune the tuning frequency, resulting in bass that is not only extended but also exceptionally well-damped. While the slopes of the three filter networks are relatively gentle in electrical terms, they collectively produce a steep acoustic roll-off, enhancing the clarity and articulation the drivers are capable of delivering.

It's also worth noting that the acoustic phase alignment across this three-way system is particularly tight throughout the entire frequency range handled by the midrange. This holds true both on-axis and off-axis, contributing to excellent vocal resolution and a well-defined soundstage.

Technical specification

	Quinta V2
Type	Three-way Rear Bass-Reflex Floorstanding Speaker
Drivers	**Tw** 26 mm Soft Dome Tweeter Double Ferrite Magnet, Alu Front plate **Mid** 150mm Coated Fiberglass Cone Ferrite Magnet **Woofer** 2x 180mm Black anodized Alu Cone, Ferrite Magnet
Sensitivity (2.83V/1m)	91dB
Frequency response (-3 dB)	40Hz - 28000Hz
Nominal impedance	6 Ohms
Minimum impedance	4.3 Ohms
Maximum power:	200W without clipping
Recommended amplifier power	25 - 150 W
Crossover frequency	250 - 2300Hz
Dimension	Cabinet only: 237x1100x440mm (lxhxd) Complete loudspeaker (with base): 319x1158x529mm (lxhxd)
Net Weight	39Kg