

THE JOURNEY TO UTOPIA

Is such a trip even possible? With the newly introduced Sopra No. 2, Focal is sending a speaker down this path - a speaker which after a determined development effort is knocking at the door with respect to the great Utopia Series. This exclusive STEREO test report, however, wasn't a walk in the park for them.



HI-FI EXCLUSIVE FLOOR STANDING LOUDSPEAKERS

It's a safe bet that this speaker will stir and electrify the high-end audio community. And it doesn't even need to be presented in its garish 'Electric Orange' shock color, as seen on the left. The new Sopra No. 2, whose name means 'superiority', is positioned just below the sophisticated Utopia line, sharing more than the same visual character. The ambitious task facing the development group at Focal was to create a floor standing loudspeaker offering the essential qualities of top-of-the-line Focal models, but in a more compact size, and at a lower price.

Not a simple task. Because in addition

to their unerring precision, the massively large Utopias derive a large part of their sonic fascination from the ease with which they move air in the lowest registers. Anyone attempting to accomplish this in a smaller cabinet will see themselves, as the French would frankly say, caught in a vicious audiophile cycle. Smaller enclosures mandate small woofers. This then requires lower efficiency, which in turn creates a demand for more power from the amplifier to achieve the

same levels—in and of itself a disadvantage—and leads to longer cone excursions for the bass driver. Distortion increases, and what the French describe as 'blurred sound'—smear and undifferentiated reproduction—is the consequence.

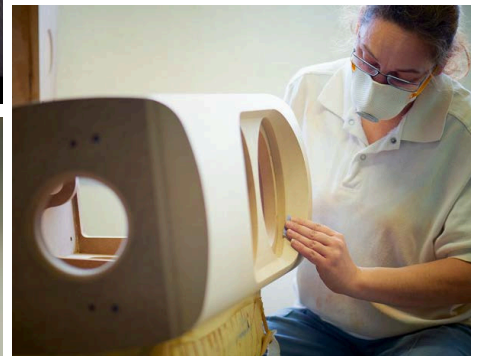
Performance with a high-end flair

So, in juggling these various issues, the Sopra No. 2's performance at the outset, was about as far away from a razor sharp Blu-ray image as a blurred vacation photo. You curious readers who have already jumped to the lab results will have seen, however, that Focal ultimately managed to successfully combine high sensitivity with exemplary low frequency response, outstandingly low distortion, and, thus, finally break the vicious cycle.

It helped that as a vertically integrated speaker specialist, Focal was capable of utilizing sophisticated software simulation in the design process. In addition, they not only build their own drivers in-house, including the unique ultra-light and ultra-hard beryllium tweeter used



▲ The beryllium tweeter is a Focal highlight that the Sopras share with the great Utopias.



◀ The cabinets for Focal's Utopia, Sopra, and Electra Series speakers are all assembled in France, seen here being sanded, painted, and polished. Then finally, drivers are inserted.

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A clear view of the tweeter module from behind (right). With 'Infinite Horn Loading' the rear sound components are directed away to eliminate interference. ▶



TEST-COMPONENTS

TURNTABLE/PHONO-AMP: Clearaudio Innovation Wood, Universal, Stradivari V2/Absolute Phono

SACD PLAYER: Accuphase DP-550

INTEGRATED AMP: Symphonic Line RG 9 MK4 Reference HD

PRE/POWER AMP: Acoustic Arts TUBE PREAMP II/AMP II

LOUDSPEAKERS: DALI Epicon 6, KEF Reference 5

LS-KABEL: In-Akustik LS-1608/LS-2404, Silent Wire LS16 mk2

in the Sopra, but they also manufacture their own cabinets. Focal's new production facility had also just opened, which allowed them to immediately implement important changes and fine adjustments to the speakers. This turned out to be of critical importance.

Believe it or not, but as a reviewer you get a feeling about a loudspeaker when setting it up. By observing whether it is sensitive to small variances in the set-up, or how the sound takes shape when the channels lock into place with that final millimeter-exact adjustment, you begin to understand the extent to which the manufacturer has truly gotten into the tonal structure. And, what can I say?—we felt the new Focals, because of their precision and response to even the smallest change, actually tested us and our ability to get perfect performance out of them.

Everything turned out to be optimized when we set the Sopras up just above the shoulders of the middle listener, with vertical alignment confirmed by a carpenter's level, and utilizing the integrated spikes built into their glass bottomplate. The team simply marveled at their beautiful sound quality.

The 'soundtrack' used in positioning the Sopras was once again Maria Phils' 'Malvina' from the STEREO listening test CD VI, heard hundreds of times before. With their mixture of spaciousness and sharp focus, powerful but contoured bass, and crystal clear rendering of voices, they delivered beautiful music that

came across without an artificial touch. They balanced all parameters, and accomplished this in the least compromised way possible.

In the end, the performance was so elevated that the Sopras remarkably seemed to disengage from the room, and 'Malvina' appeared—in all its facets, and also as a coherent whole. All this was accomplished with the distinguished and dominating flair that differentiates real high-end, and in so doing moved the Sopras closer to the Utopias, which they formally emulate in terms of driver complement—bass and midrange, as well as the beryllium tweeter placed in between.

And with the Red Norvo Quartet's 'Saturday Night'—another classic listening test—the Sopras were thrilling in the way they captured the dry, highly dynamic vibraphone bursts and attacks, and at the same time the soft voices in the background—the random audience noises—placing these sounds at the correct distance from the band with rarely heard clarity. Hat's off!



▲ One pair of binding posts are sufficient for the Sopra - and us as well. Connect to a high quality amp, and off you go!

Fight the eddy currents!

But the Focals can also grab. And they did so with Monty Alexander's 'Moanin', where they delivered the taut and powerful bass with authority—and at virtually any volume. There's no question that besides the ability to gently reproduce sublime accents with sensitivity, the Sopra No. 2 can deliver crisp and abrupt passages with the force of a hammer—and with its efficiency, only moderately challenge the amplifier. And certainly none of this really mattered to the massive Acoustic Arts power amp which was used for this exercise.

Despite all the power, you have to wonder how the Sopras do it. Although their new 18 cm bass driver offers the same sophistication found in the mid-range transducer, and was adapted specifically for the 'Sandwich W' diaphragm

The spikes which are integrated into the glass bottom plate are both delight and simple to adjust. The package includes floor protectors. ▼



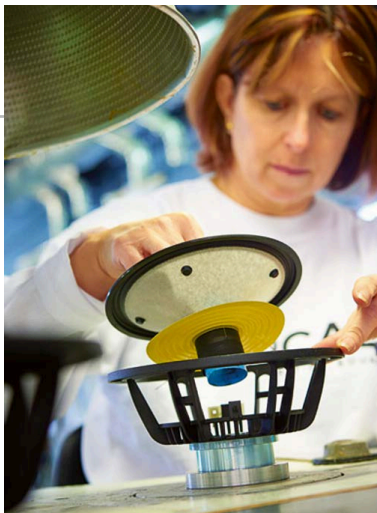
HI-FI EXCLUSIVE FLOOR STANDING LOUDSPEAKERS

The compact No. 1 is part of the Focal Sopra line. Its price including stands is around €8,000*/pr. ►

configuration (made up of a synthetic foam core and a fiber glass film), its motor assembly was redesigned during the development process.

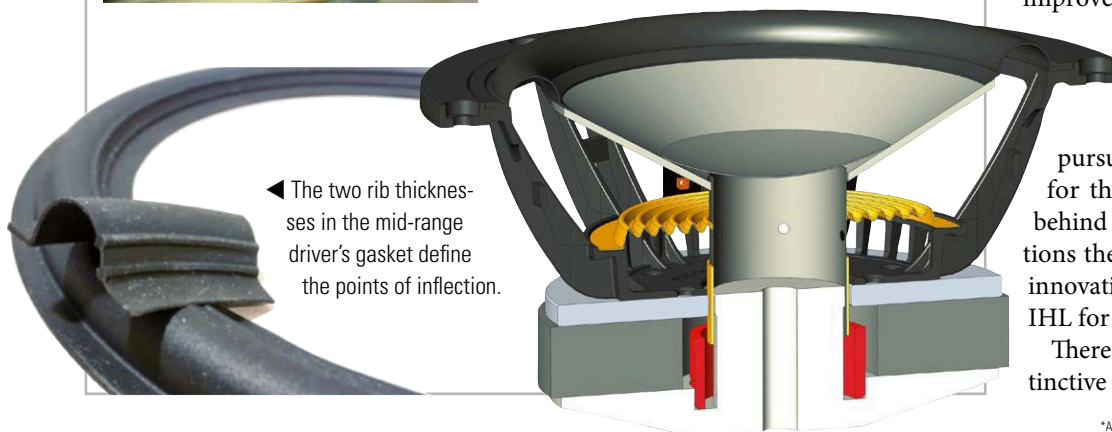
The manufacturer, which employs more than 200 people, spent many years experimenting with the problem of complex interactions involving multiple factors in a dynamic driver's electromagnetic system. These interactions manifest themselves in many different ways and are affected by the location of the voice coil in relation to the magnetic field. An important part of what Focal did over this period was to run elaborate computer simulations and practical tests to gain an understanding of electromagnetic eddy currents, their harmful effects, the mechanisms by which they impede the movement of the diaphragm, and ultimately finding a solution.

The key turned out to be a Faraday ring in the magnet assembly. This, isn't in and



◀ Focal manufactures Sopra's drivers at the company location in Saint-Étienne, France. Here, a voice coil/cone assembly for a midrange driver is being mounted into the magnet system and frame.

In this cut-away drawing of the woofer you'll see the Faraday ring (highlighted in red), which is used to counter disturbing eddy currents. Its position is the result of extensive computer simulation and practical testing. ▼



◀ The two rib thicknesses in the mid-range driver's gasket define the points of inflection.

of itself actually an innovation, however, and is used by other manufacturers to counter phenomena described long ago. But in diving deeper, Focal found that the ring should sit very specifically at the bottom of the pole piece, without any physical contact with the pole piece itself or the magnet.

Is this ultimately why the Sopras' sound so lifelike and relaxed? After all, these qualities have long distinguished Focal, but they may now be even slightly improved. Ultimately, at this high level, the French fight for every ounce of improvement.

As a consequence of this kind of commitment, Focal also pursued and came up with a solution for the braking compression effects behind the dome tweeter, and the reflections they generate. The remedy was an innovation called Infinite Horn Loading, IHL for short.

There may be a question about the distinctive silvery lattice on the Sopra's back

*All prices listed are German retail prices incl. VAT valid at the time of evaluation.

panel. It's not a cover for a bass reflex port, as you might suspect. (The port itself is actually located on the speaker's underside and integrated into the glass base.) This particular opening allows the dome's rear radiation to escape into the open air and dissipate—eliminating any possibility of interference. As part of its design, the manufacturer built a complete module, isolating and separating it from the bass and midrange chambers.

Incidentally, I can't help but offer this thought regarding midrange—'in the land of charming language you love beautiful voices'. So not surprisingly, with the Sopra, Focal also introduced a new feature called the Tuned Mass Damper (TMD), an innovation implemented in its 16.5 cm midrange driver. It consists of two carefully calculated rib thicknesses in the driver's gasket to assist in the precise deflection of the membrane. Not worth talking about? Well, Focal reports that they went through more than 100 iterations before settling on the right combination.

Unity & resolution



▲ He should certainly be proud. Focal-grand seigneur Gérard Chrétien, who guided the Sopra-project.

These are the most important elements of the technical description as it relates to the Sopra series (there is still a compact model in the line called the No. 1). But before totally losing ourselves in the no. 2's technical innovations, we preferred to listen to music. For our evaluations, we decided to remove the guard over the extremely fragile beryllium tweeter, which was held in place by two tiny socket screws. Admittedly, this step only provided a touch more transparency and naturalness, but what the heck!

The fact that the No. 2 is outfitted with only one pair of speaker terminals didn't really bother us. This avoids the issue of a discontinuity—a loss of sound—when using a single cable for dual terminal bi-wire connection, misaligned jumpers, or entirely unsuitable sheet metal bridges. As for the cable, while the Sopra clearly revealed differences between cables, it showed no preference nor dislikes. Depending on the amp, room acoustics, and listening preferences, the listener should be able to adequately choose cables for his particular situation. With these things in mind, his choice should be just fine.

Even though the Sopras can easily work with and motivate playing partners, including smaller amplifiers, they really appreciate perfection. The Sopras were in top form as described above, when we used them with our best reference components. They were never overstated; and they presented themselves as honest, extremely transparent portals for virtually every kind of music. Sol Gabetta's lively interpretation of Baroque cello concertos, for instance, radiated from their membranes with delicacy and softness, while the low frequency pulses at the beginning of Carolin No's 'Still Waters Run Deep (Listening Test-CD VIII) were convincingly succinct and uninhibited.

Two advantages in particular should be pointed out from among this speaker's strengths—its ability to create credible sonic images and present them as a tightly knit whole; and then its radical openness, which reveals itself in the most delicate ways. Listening to the Sopra no. 2 was pure pleasure—and a journey right up to the sonic cosmos of the Utopias.

Matthias Böde

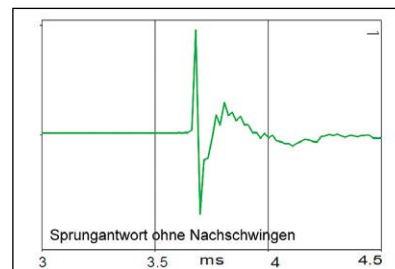
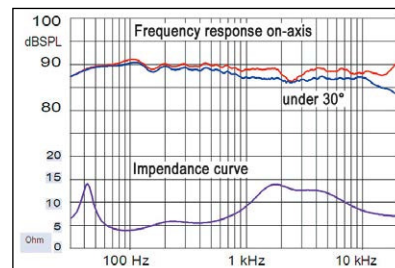


FOCAL SOPRA N°2

Price € 12,000*/pr (four lacquers and one veneer)
 Size: 36x119x54 cm (WxHxD)
 Warranty: 10 years
 Contact: Focal
 Tel: + 33 477 435 700
 www.focal.com

The new Sopra is imbued with technical highlights such 'Sandwich W' composite cones, alongside the company's famous beryllium tweeter. Smart design details and extremely careful coordination make the Sopra an absolutely top tier product.

MEASUREMENT RESULTS



Nominal Impedance	4 Ω
minimum Impedance	3.4 Ω at 90 Hertz
maximum Impedance	14.2 Ω at 1800 Hertz
Sound Pressure (2.83 V/1m)	90 dB SPL
Power for 94 dB (1m)	4.7 W
Low frequency extreme (-3 dB)	33 Hertz
Distortion at 63 / 3k / 10k Hz	0.3 0.1 0.1 %

LABORATORY COMMENT

Excellent linear on-axis frequency response (red line), with a very gentle drop towards the low frequency range. The small narrow band intrusion between two and three kilohertz is irrelevant in practice, since it disappears at an angle (blue line). High efficiency, and a non-critical impedance curve. The minimum at 90 Hz will not scare any amp. Excellent step response. Drivers reaction is almost coincident with the impulse, and ringing is nearly non-existent.

STEREO-TEST

SOUND QUALITY 95%

PRICE/PERFORMANCE

★★★★☆

EXCELLENT

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