

LOUD AND ELEAR



Focal has also been offering headphones for a few years
– but only now has the French company decided
to make everything themselves.

Have you ever wondered why headphones have become so expensive? Yes, the demand for high-quality models has been a contributing factor, but there's something else: top-quality headphones aren't easy to make. Yes, some brands can produce reasonable-sounding models at low prices simply by virtue of economies of scale, but going beyond that into something truly special is just a bit more complex than it first appears. After all, have you ever heard of someone trying to build their own headphones – as is not uncommon practice with speakers or even amplifiers?

French manufacturer Focal, whose speakers thrill music lovers and recording professionals worldwide, made its debut in headphones with relatively low-budget models optimized for portable use and made in the Far East to Focal specifications, although the Spirit Professional was a design unashamedly aimed the studio user.

For their second launch of headphones, however, the developers became interested in showing what just they could do in this field and – as with the company's speakers – giving the competition food for thought by applying proprietary technology and unique solutions.

Completely open

The approach chosen for the Elear model we have here was that of an "ultra-near-field speaker", and just as speakers have to deal with room acoustics, so headphones have the problem of having to sound the same for many differently shaped ears. The Focal team says this sets very similar problems, especially when they'd decided early on to go for a completely open design in order to obstruct the music as little as possible, and to ensure a vibrant and natural sound.

After a short period of research they realized that the ear cushions turned out to be analogous to the room acoustics. Here, too, the key was to find the right mixture of diffusion and absorption by choosing the right materials.

A lack of spatial reproduction is a frequent criticism of headphones, including from us – not just when it comes to in-head localization – i.e. the feeling that the entire sound is located in the top of the head between the ears – but also regarding the separation of instruments and voices. For many headphones this seems to be an inherent problem, caused by the minute distance between driver and ear compare to that between the two drivers.

That's something even Focal can't

circumvent, so the designers opted for an arrangement placing the drivers as far in front of the ear as possible, giving a more "speaker-like" effect. This is a tricky strategy, requiring finesse in execution: if the distance to the ears becomes too great, dynamics and neutrality can suffer – not good when the specifications also called for extremely low distortion and resonance of driver and ear-piece.

At this point it became clear that the only solution was to design a driver from scratch, and according to Focal the result was to build a real "full-range speaker" whose individual components were miniaturized or completely left out. After all, not only size but also weight is a topic in headphone construction, and here the entire driver including its aluminum/magnesium chassis weighs just 150 mg – possibly a record – ensuring spontaneous, rapid impulse-response.

Another advantage of in-house production is quality, a reason often cited by Focal for its insistence on making its own speaker drive-units rather than sub-contracting manufacture or buying them in from a third party. Every driver it makes, including these miniature headphone units, is tested and recorded completely with a Klippel measurement tool, allowing



▲ A lot of effort for a tiny chassis – the driver coil manages without a mount.

▲ The driver, chassis and "motor" together weigh an incredibly light 150 mg.

◀ The cables are interchangeable. You can best recognize left/right by ensuring that the chassis sits at the front.



▲ It's easy to change the cable – and the left and right inputs are clearly marked.

precise pair matching – something that's standard when making expensive speakers, but exceptional for headphones.

Weight & comfort

At about 350 g, the Elear is no flyweight, but the elaborate, very cleanly made and cushioned headband unit, and the soft, comfortable ear-cushions do a fine job of disguising that weight. Meanwhile the cable was chosen for function rather than overt style: it's a 3 m oxygen-free copper design built to damp out microphonic effects and mechanical noise, and easily be exchanged if required.

Sound and dynamics

So... plug it the Elear, put it on, play the music and it quickly becomes clear that the French weren't exaggerating when they spoke of wanting to mix things

Sophisticated workmanship of casing and headband, encapsulating, soft ear cushions, and an aluminum/magnesium composite diaphragm – Focal's Elear ►

up the higher headphone price-class. Even at low volumes, the Elear worked impressively with the MalValves reference headphone amp to deliver a full and powerful sound, carried by a well-structured, detailed bass and with smooth integration across the entire frequency range.

Orchestral music, such as Beethoven's "Eroica" in a 1952 recording (!) under Furtwängler, sounded timeless, fresh, and not at all dusty. Whenever physical presence was important, it was there, with clear spatial separation of individual instruments and instrument groups. At higher volumes there was no trace of thickening or droning – everything remained smooth and undistorted, with no sense of the treble being detached from the rest of the sound, as can sometimes happen with headphones.

The Elear headphones sound perfectly integrated and unobtrusive, yet completely clean, and yet manage this without calling attention to all the good things they're doing, to the extent that it actually took us a while to hear this with diverse "audiophile voices" and their instrumental accompaniment.

But this is just one highlight of a design that performs well beyond its price class: it was also fantastic how relaxing it was to simply follow the music over extended periods, making listening to a whole CD – such as Natalie Merchant's "The House Carpenter's Daughter" – a complete pleasure.

Compared to the Elear quite a few old competitors sounded almost a bit anemic: what we have here is physical presence and fine resolution down to the smallest detail without ever becoming overly mechanical – a rarely found marriage of important musical attributes. Here it just works, for example when listening to an elegant, cleanly swinging bass foundation – fantastic!

It also almost goes without saying that the Elear confirmed its all-round ability by mastering the arsenal of the Australian rock classics by AC/DC, from "Ride On" to "For Those About To Rock", and doing so almost casually even at high volumes.

If you're considering some high-class, big-ticket headphones, you should definitely lend your ears to the Elear.

Michael Lang



FOCAL ELEAR

around € 1000, Weight: 330 g
 Warranty: 2 years
 Contact: Music Line
 Phone: +33 477/435700
 www.focal.com

Made for extended listening, both in terms of sound and comfort. Very good workmanship, a great measure of independent development work, and very tight tolerances. First in class and love at first sight!

EQUIPMENT

High sensitivity, low impedance, 3 m cable and replaceable ear cushions; aluminum headband with soft leather cushion; asymmetric driver mounting, German instructions

STEREO-TEST

SOUND QUALITY **91%**

PRICE/PERFORMANCE

★★★★☆
EXCELLENT