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## Focal-JMLab Nova Utopia Be loudspeaker

Since 1993, Focal's Utopia series of speaker's has embodied everything that founder-CEO Jacques Mahul knows about speaker design, and 2003 saw the introduction of the second generation of the line: the Utopia Be speakers. Each new Utopia model features a tweeter with a pure beryllium dome and an extensive redesign of the earlier model's basic structures, all under the guiding hands of Mahul and chief designer Dominic Baker . . .

One thing about the Utopia line has not changed: the exquisite level of finish. The Nova Be is jewel-like in the precision of its assembly and finish (mine had the Signature finish: burl ash with a rich, claret-like burgundy tint). Not one person who said "Wow! What the hell do those *cost*, anyway?" was surprised when I told them. Everything – from the woofer's grille cover to the superb terminals and massive spikes – bespeaks for the most attentive craftsmanship and the highest quality of parts.

Focal has for years been an innovator in driver and cabinet



design, and the new Utopia series further advances the company's reputation in these fields. The most ballyhooed, and immediately noticeable, upgrade in the Be series is the new beryllium tweeter, which gives the line (including the Nova Be) its names. Focal worked for 'years to develop a tweeter using this ultra-light, ultra-stiff material. When I asked Focal's Gerard Chrétien how much had been spent on R&D for this driver, he shook his head ruefully, saying "We do not know, and we do not want to know. It took us over three years to do it, but Jacques wanted it done."

Beryllium is 2.5 times less dense than titanium and 1.5 times less dense than aluminum, but is three and five times stiff, respectively. For domes of identical mass, beryllium is seven times more rigid than one made of titanium or aluminum, and the velocity of soundwaves traveling through it is three and 2.5 times faster than through, respectively, titanium or aluminum. While there's a huge upside to a beryllium dome, many complications are involved in the manufacturing. The metal is scarce and horribly expensive in its pure form, which is produced in

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only three countries: the US, Russia, and France. It can also be highly toxic in powdered form when worked or machined.

Like Focal's Tioxid tweeter, the Be tweeter is an inverted dome. Focal's white paper asserts this "reverse" shape, like that of a conventional dynamic driver, provides a much more stable interface between the voice-coil and the driven dome structure. This, in turn, means that more of the energy put into the tweeter by the magnetic structure is radiated as sound. When asked about the upper limit of the Be tweeter's linear response, Jacques Mahul gave an ineffably Gallic shrug, "We do not know. Our microphones can only register up to 40kHz, and there is no breakup before that point."

It's not only the Be tweeter's dome that's exotic. The magnet structure features a samarium-cobalt magnet surrounded by a neodymium ring magnet, which concentrates the magnetic flux. This permits the samarium-cobalt magnet, which is less powerful but capable of accommodating much higher temperatures than neodymium, to do the heavy lifting while maintaining the benefits of the powerful but less robust neodymium.

The Utopia line has always exclusively used Focal's patented W-cone drivers. These are likely the lightest and stiffest cones made anywhere. Chrétien explained that the W-cone can be optimized for different applications by varying the number of glass-fiber layers used to reinforce the cone. This gives great flexibility in optimizing damping characteristics for each frequency range while maintaining minimal weight and maximally piston behavior.

Driving these advanced cones is Focal's new magnetic structure, called Power Flower. This technology has been long used on the Utopia woofers; the Be series marks its first application in the midrange driver. Instead of one large magnet, the Power Flower is six identical magnets surrounding the voice coil. The plates that secure the magnets

are machined into the form that most effectively prevents escape of the magnetic field, the structure's shape giving rise to its name. Using multiple smaller magnets also facilitates greater power handling capability and allows for tighter manufacturing tolerances and better heat dissipation than does the use of a single large magnet.

The crossover and cabinet designs are of luxury class. Each Nova Utopia Be cabinet is designed so that all frequencies are said to arrive at the listener's position simultaneously. The massive, 2"-thick front baffles – each of the four drivers lives in its own physically separate cabinet – is concave when viewed from the side. The Nova is so heavy because it's so painstakingly and expensively braced. Care is taken with the bass cabinet to ensure that the bracing required does not compromise the free flow of air

mandated by the massive, ported 13" woofer.

The crossover circuit board is a work of art itself, and is secured to the cabinet with a massive brushed-aluminum plate that contains the speaker's serial number, the name of the assembler, and a single pair of heavy WBT binding post. (Jacques Mahul is immovably opposed to biwiring.) The Optimum Phase Crossover is engineered by Focal to preserve the signal's phase integrity . . . Given the amount of time and money spent on its development and the hoopla surrounding its introduction, it seems appropriate to begin with the beryllium tweeter. And what a tweeter it is. When he first saw young Jack Nicklaus play, golfing legend Bobby Jones commented that "He plays a game with which I am not familiar." So does the new Be tweeter. After the



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# “The Focal-JMLab Nova Utopia Be is a flat-out wonderful loudspeaker”

break-in period, it quickly became evident that the beryllium dome represents a quantum advance in tweeter technology. I'd wondered if I could hear the effect of the driver's breakup point being so far beyond the audible spectrum. Not only could I hear the difference, it was about as hard to overlook as a bear in a phone booth. The Be tweeter's signature was a dramatic cleaning-up of the upper octaves that was at times hard to believe. As the tweeter kicks in at 2.5kHz and continued to even-Mahul-doesn't-know-where, a large chunk of the audible spectrum was clarified . . .

It's absence of breakup modes let it respond to virtually any amount of high-frequency energy in a linear and predictable fashion. The Be tweeter revealed the sort of detail I had previously heard only under optimal circumstances. Not only was the Nova's treble almost absurdly extended and transparent, it never, ever, sounded

etched, harsh, or exhibited any sort of grain structure, no matter how I stressed it.

The blazing brilliance of George Malcolm's interpretation of Bach's Chromatic Fantasy and Fugue in d (LP, London CS6197) is a tweeter-buster: torrential cascades of notes that seem to prefigure Liszt played with complete virtuosity on a very closely miked harpsichord. This wonderful exercise in the mathematics of music was captured extravagantly and easily; the Be tweeter handled it all with supreme ease, delivering state-of-the-art performance.

The Nova's midrange performance was exactly neutral and convincing. “The Boxer” and the title track from Emmylou Harris' *Roses in the Snow* (LP, Warner Bros. BSK 3422) were spine chilling. My feeling of “I want to believe this is real” morphed effortlessly into “I can believe this is real.” Jerry Garcia's ghostly, wailing

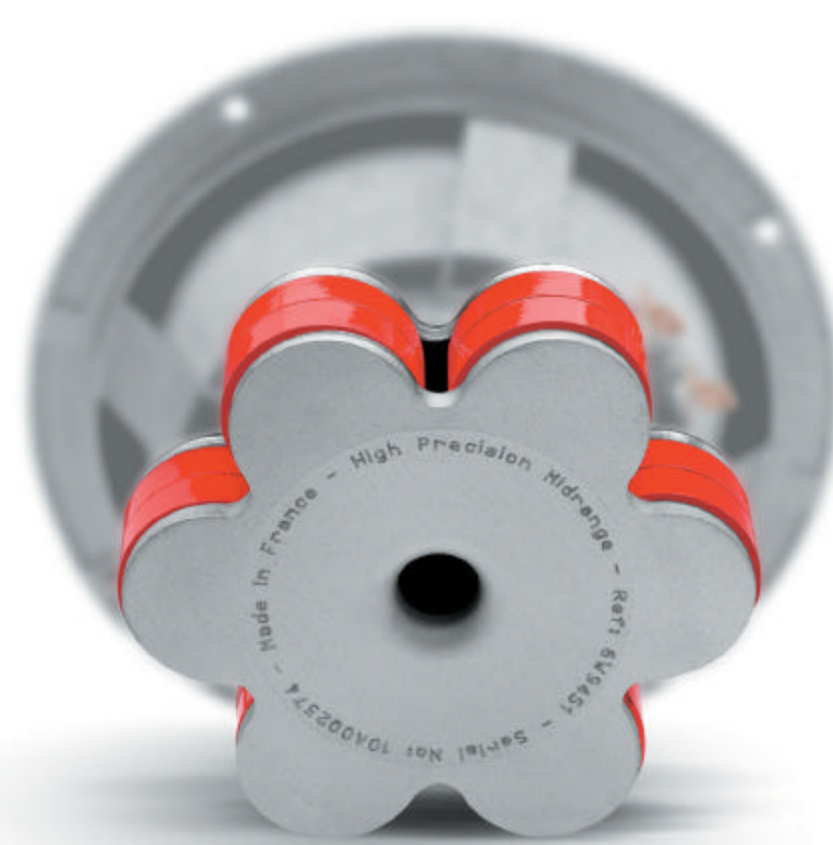
steel guitar in the quietly menacing “Candyman,” from the Grateful Dead's *American Beauty* (LP, Mobile Fidelity MFSL 1-014), was eerie and chilling.

The sensuality that the Utopia's midrange could render was on display to delectable effect with Carly Simon's “(Last Night) When We Were Young.” From *Film Noir* (CD, Arista 48984-2). This was a woman singing, one who has seen more than a little of the world, and the mixture of sexiness and gentle regret that Simon brought to her performance was pure romantic overload . . .

All-acoustic recordings showed the depth and entirety of the Nova's neutrality. Walter Leigh's *Concertino for Harpsichord and String Orchestra*, performed by Trevor Pinnock, Braithwaite, and the London Philharmonic (UK LP, Lyrita SRCS.126), showed exquisite string tones with nary a harmonic missing in action. Dead Can Dance's “Yulunga” had exceedingly impressive transparency, the acoustics of the Quivvy Church recording site suffusing my room with its ambience.

The Nova's bass took a little time to settle in, but once it had stabilized it was a precise reflection of the amplifier it was coupled with. Overall, that big woofer best loved the grip and control of powerful solid-state amps. The colossal, subterranean synth bass on “domination” and “Marrakesh,” from Peter Kruder's *Peace Orchestra* (German CD, G-Stone G-CD 004), and “Let's Feel the Music,” from Sugar's *Shine* (Korean CD, Starworld/BMG PD-6621), were overwhelming . . .

The Nova's ability to respond evenly and continuously to transients in every part of the audible spectrum could be compared only to the very finest electrostatic speakers that I have heard. Those next-to-nothing cones and massive magnet structures combined to deliver instantaneous reactions and swift settling times. Overhang was not within the Nova's vocabulary, but a degree of sheer speed heretofore unimaginable from dynamic drivers certainly was. Retrieval of detail was



## “Oh, how I wish I could afford to keep the pair of them”

as good as it gets. The bas drum on “Vacquero,” from Tiny Island’s eponymous debut (SACD, Opus3 CD 19824), perfectly defined the contours and shape of the 13<sup>th</sup>-century Swedish stone church in which it was recorded.

The Nova Utopias’ soundstaging abilities depended upon the recording and the equipment upstream of them . .

Thanks to their time and phase coherency, the Novas did a startling job of vanishing as an apparent source of sound.

Power, efficiency, and lightening-stroke transient response added up to superb dynamic performance . . .

Listening to large-scaled music on speakers that have the muscle to handle it is one of audio’s greatest pleasures.

The Novas came through in championship form. Rimsky-Korsakov’s *Capriccio Espagnol* remains one of the great orchestral showstoppers, and Kiril Kondrashin’s interpretation (LP, RCA/Classic LSC-2323) blasted the walls out of the room and put me in the vast space of the Manhattan Center . . .

Do not conclude from this that the Nova Be is a mere pumped-up Ahnold-style muscle-flexer. This speaker had a striking ability to get the scale of *all* types of music exactly on the mark. The remastered version of Nick Drake’s *Bryter Layter* (CD, Island IMCD 71/846-005 2) is a study in musical intimacy; on it, the Novas dazzled . . .

Before the Nova Utopia Be, I had never observed so high a degree of congruence between a speaker manufacturer’s white-paper claims for the superiority of its technology and my experiences of the same speaker in my listening room. Everything that the Nova did there followed logically from Jacques Mahul and Dominic Baker’s design concept. The Utopia’s incredibly light, exceedingly stiff cones, enormous magnetic structures, and massively braced and reinforced cabinetry, together with the extraordinary amount of attention paid to phase and time alignment, should add up to a speaker that sounded exactly as the Nova sounded. It did.

The Focal-JMLab Nova Utopia Be is a flat-out wonderful loudspeaker. Innovative design, superlative execution, and breathtaking construction and appearance add up to a speaker that can compete in every way with all but the largest, most impractical behemoths. It performed splendidly and consistently with both tube and solid-state amplifiers, though its substantial woofer did prefer the control offered by big solid-state. The Nova’s exceptional transparency and remarkable extension mean that it *must* be paired with a suitably neutral power amplifier in order to realize its full potential. When the right match is made, it’s hard to conceive of a speaker more completely and uniformly



musically rewarding, and impossible to imagine a large system as beautiful or as elegant. I give it my highest possible recommendation, and oh, how I wish I could afford to keep the pair of them.