

Prove Magazine – Italy

ELAC FS 409 Review

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Quality components, solid construction, attractive design and convincing sound quality: these are the qualities that make the Floor Stander 409 a genuine new contender.

Elac was founded in the late '20s, first as a company specializing in the production of sonar devices for capturing sound transmitted in water. With a fast postwar conversion, products were manufactured from 1945 with the Elac brand, on behalf of Siemens. Towards the end of the 40s we have the first hi-fi product with the Elac name, a turntable with mechanical changer.

From the mid-80s Elac became involved with speakers thanks to its historic ring tweeter capable of emitting 360 degrees. This writer fondly remembers that the relatively expensive 4Pi tweeter marked the beginning of the brand as a speaker producer, and was given to this Italian magazine, entrusted previously only to those who could afford a real anechoic chamber.

Exactly twenty-three years and two months later, another Elac product makes its way into our laboratory. Their unique characteristics remain too, with tweeters that work on a

very different principle to conventional dome-shaped tweeters. They played any music we tried in front of our measurement microphone.

The brand is proud to produce all of what they need in-house, and you know how important I regard the difference between manufacturers and assemblers. The model we tested is placed almost in the center of the range. Elac is characterized by the Jet 5 tweeter (the smaller of the two Heil designs from the German manufacturer), a midrange 5 inch and two 180 mm woofers. Both the woofer and midrange use a particular construction that allows the concave surface to be faceted like a diamond.

The Construction

Removing the drive units is an easy operation: screws with a long thread through very tough baskets on a discreet front panel. Once the transducers are removed, we can take a look inside the cabinet which is coated

with an acoustically absorbent fluffy material of dense and dark color. In the lower part of the speaker that handles the bass load of two 135 mm drivers.

This is a useful procedure, as we see how the damping material is rolled up and placed in a specific order. Already this little attention to detail tells us that the manufacturer likes low tolerances of operation between the two speakers. This is achieved without losses caused by different and often messy placement of the damping material.



On the inner wall, taking almost a whole panel of the cabinet, is positioned the crossover. The input connectors are only two and are fixed on the back in a terminal pan that also forms part of the crossover. A beautiful piece of engineering. The cabinet is made from a highly absorbent MDF veneered with a substantial layer of real wood *both* inside and outside. Even this small difference, invisible from the outside, tells us that cabinet resonances are very low and kept

under strict control. The midrange works in a separate compartment with a volume of a couple of liters, which is also filled with damping material. The depth is shorter than that of the cabinet and then the back space remains free up to the tweeter and is still available to the two woofers for additional bass capacity.

The speaker base is generously sized and presents two flares large feet struts. We need to understand that Elac is very attentive to performance and not just to follow fashion. The speaker base is raised slightly from the floor thanks to a platform distanced from the cabinet of some centimeters.



At first glance, the woofer drivers are quite special. The basket is made of aluminum and is almost aerodynamic in shape. They are centered and “suspended” in the air with the front profile very similar to that of the rear. This means that they do not have unusual air compression and help dissipate and heat produced from the voice coil. The midrange is the exact replica of the woofer but on a slightly reduced scale.

The three transducers all have a concave membrane

which is multifaceted like that of a gemstone. To touch they seem extremely hard and firm. A material like this alone would certainly be lightweight but would present a critical challenge in gluing to the voice coil. In fact, watching the back side of the membrane as it moves sees that the concave base and multifaceted surface as fixed and integral with a cellulose cone of the usual form. This means it can easily be fixed to the voice coil support which eye should be 38 millimeters.

The impedance of the woofer appears high enough not to have an excessive load at the expense of low frequencies. Although the two woofers are equipped with two separate filter blocks, they emit practically in parallel for all frequencies up to 140 Hz, as we shall see in sidebar dedicated to the crossover.

The Jet 5 tweeter is directly derived from the Heil tweeter and is ingenious in operation, with a membrane of significant surface area folded into many small loops and embedded in a powerful magnetic field. This compresses the air in and out, depending on the current circulating, in a movement that is far more linear when compared to a dome and its possible deformations. Elac produces two tweeter models, the Jet 5 used on this speaker and a larger unit, composed of a Jet 5 design working integral to a circular ring of considerable thickness which extends down virtually to the lower-middle range.

The Jet 5 tweeter here has a sensitivity of nearly 94 decibels with extremely low distortion, so that it is also produced for other speaker manufacturers [e.g. Burmeister and Audiovector].



Listening

To test this Elac design, I did things right. First by emptying the listening room to get the best conditions and then by using first impressions and shrewd positioning, helped, I admit, by pink noise measurements. With the first notes, I noticed a couple of features which for me are the foundation of a high performance design: articulation and good tonal balance.

The loudspeaker was positioned less than one meter from the rear wall. The cabinet design and position of the bass reflex port mean that positioning is less critical, especially when the only frequencies have wavelength of several meters.

In our listening environment, the speaker is far enough from the side walls meaning that the only relevant distance is that between the speakers, which can easily reach three meters without emptying the central part of the soundstage. When listening in mono and the stage is reduced to a portion of restricted space, centered right in front of me, then I know you've got a perfect placement. Once you restore the stereo, you can add only height and size. Elac propose a slight toe-in, but the balance between width and depth, two qualities

that are hardly separable from each other, is remarkable. The tweeter needs a little running in, and in the first few minutes may seem a little hard and crisp.

For electronic power I chose a solid state amp that is not afraid of anything from a load point of view but which has a treble performance that is clean and would not limit the quality of Jet 5. After a period of time the tweeter softens and seems to extend its response higher.

Almost instantaneously you appreciate that the beauty of the FS409 midrange comes from both the tweeter as much as from the midrange unit. Aside from good integration between each drive unit, the speaker gives correct timbre and remarkable articulation - a very capable transducer. Due to the speaker's good timing, harmonics will be properly reproduced, but it is the bass impact that I particularly like. Notes start and stop, the snap of a skin bass drum and the depth of the bass guitar, almost percussive, but still confined in a portion of space separate from other instruments.



I also note that despite the low pass filter being a second order crossover (lower woofers), this is not evident at the transition between the two woofers (normally this transition is enhanced by a simple first order design). The female voice appears very clean and balanced, perhaps just moved forward a little but always correct even when you decide to increase the volume level. The first track of my test disc is known as the Teutonic Killer, but with the FS409, there is no emphasis on the "S" even though the recording

is enhanced and is pushed forward a little.

The bass reproduction is not over blown, but stands out and tells us in no uncertain terms that the designer has not replaced quality with quantity. The bass has enough power but remains fortunately well damped and "round" at the right point, with excellent power handling and any unwanted resonances being minimised by the crystal membrane surface.

The reproduction of various choir components is defined, easy to localize and clean right through the range, giving ambience and remarkably natural sound levels. In short, the speaker will steer your amplifier decision to one that can push well without ever overdoing it, but conversely remaining tonally stable even when the level rises and approaches the limits of the electronics.

Beautiful and true reproduction of piano is also worth mentioning, both in terms of rhythm and accuracy. The soundstage is checked and measured without microphones (stolen of course from Mr Cicogna)... and I paint an image at the center of the room, of a natural size and a tone that is pleasant and well-balanced. The tracks at the end of my test disc are rock and are not good, but highlight strong dynamics and low compression at high power. Further, the voice stiffened only in those conditions where you do not know if it is the electronics or the speaker that have reached their own limit.

Conclusion

Of course, the return to the Italian market of Elac in the panorama of the prestige speakers could not be better. A beautiful component, clean and balanced in sound with remarkable performance both in-room and in the laboratory. Beautiful speakers, which the manufacturer produces in-house with the help of their own research center is also remarkable. We know this is the hallmark of high performance manufacturers that

allow such performance to be obtained. The Heil tweeter aligns perfectly with the other drivers and its speed and timing is constant and pleasant. The price is not low, but it is of construction quality that provides a reference level of performance.

Gian Piero Matarazzo



Listening- Allegri's View

We have recently auditioned a number of speaker brands that, despite having a certain tradition, are not well known on the Italian market but which have demonstrated excellent performance and ambitions to be a leader. Among these German speakers is the Elac FS 409, whose solid construction, finish and use of premium components leads to a product worthy of attention.

We begin the description of performance by starting with timbre, which manifests itself very well balanced and is of great class. All the frequency ranges are well presented with excellent balance and precision, certainly one of the major advantages of this speaker.

The bass is sufficiently present and authoritative although not particularly deep or "fast" but perfectly enjoyable and satisfying. The midrange offers a nuanced presentation, of pleasant detail that enhances both the human voice, male and female alike, and acoustic instruments. It good to know that the more you listen, the more you appreciate, further enhanced by the provision of great treble, which in my opinion is the strong suit of this speaker.

The Jet 5 tweeter is amongst the most simultaneously detailed and sweet that I can remember. The harmonic decay, above all, is amazing and instills in the listener a very convincing impression of air and naturalness. It's an absolute relief that the sound is natural and not at all fatiguing. Listening to the best recordings brings a smile to your face. It doesn't correct any weaknesses but brings to life good music software without accentuating any imbalances that on other systems would prove intrusive.

The FS 409 shows no preference for any specific type of music. I like classical music, in particular for the grace and elegance of stringed instruments that the Elac enjoys, combined with a good dose of strength that brings to life full orchestral passages of vigor. Similarly jazz is sounds great with the right dynamics and clarity, never aggressive, on instruments such as the trumpet or sax.

I felt that this speaker is not at all difficult to drive meaning that a sense of rhythm and energy can be realized any number of possible combinations. During testing, the FS 409 was not fussed when connected to a 70 watt solid state integrated but switched gears when it was connected to a tube amplifier of higher rank. In this configuration the tonal qualities were well integrated with the characteristics of hot power - approximately 45 watts combined.

In general the sound stage was impeccable, producing an image that stretched to fill the environment in width and in height perfectly, with depth giving all dimensions. In the light of this, I can say that the FS 409 challenges any of the competition with equal configurations, i.e. speakers with high range tweeter, midrange and woofer arrays, which are now faced with a dangerous outsider.

A. Allegri



Listening – Cicogna's View

The Elac speakers I really liked were the BS 403, a small compact system among the most convincing to ever pass through my music room. Then it was the turn of the active version, running in a wireless configuration. On reviewing the BS 403 test and listening impressions, I spoke of "exquisite musicality" and this was a stamp of approval, correct and pleasant. Here, we were talking of a small system (BS stands for Book Shelf) and it is evident that its performance in terms dynamics and frequency range were proportional to its size. But it is sometimes the ability to play a range of media, understood in its broadest sense, that is the focus of attention. Without a wide frequency range, the rest of the performance would merely be a "side dish". Quiet for some, thrilling for others, but useless for producing the real scale of music.

We already know that the smaller models in the 400 series exhibit a tonal framework of great musicality, combined with an extended response (in relation to the size) and power handling consistent with the quality of drivers used. Go read those reports, steeped in musical references rather than technological.

Inevitably we broaden our analysis to the floor standing models of the 400 series, the slim and stylish Elac FS 409, submitted for listening review and even greater technical analysis. Nor did I have the opportunity to listen at the office, where they were connected to premium electronics. The results were convincing without even bothering particularly expensive or difficult amplifiers. The high end components are common for all of the 400 series. But here we add support for the low end with a pair of woofers with a nominal diameter of 180 mm and a sophisticated cabinet. Importantly, the midrange woofer is relieved from the task of playing bass and plays with even more dynamic midrange and medium low response. With an accurate and natural timbre, the mid is relaxed and open, allowing the pair of woofers to do their thing.

With the right music, the result is what you expect from the very best speaker systems. It makes no sense to talk about a "German" sound, rather than "English" or "Italian". The speakers sound good regardless of nationality. There's a phrasing on the organ pedals that indicates a fullness and total control on the two deepest octaves, where good systems always play most consistently. But it's not only low frequencies that distinguish the good from the great. Here we talk about a response that

is consistently refined and yet defined, and incisive, if necessary, able to fathom without the embarrassment sound paths more complex, but without those elements of aggression or carelessness that some less experienced listeners might mistake for "precision".

Just listen to the simultaneously detailed and smooth sound of the Principal Clarinet in "Rhapsody in Blue" by Gershwin to show the superb balance in the midrange performance. The piano enters with strength, well at the center of the sound stage in this older Decca recording (Dutoit), with the brass section intense and polished. Good dynamics overall, allow listeners a generous sound without any compression of the peaks.

The FS409s brought our music to life and this could be easily seen in our baroque repertoire with original instruments, where their lively character is fine and detailed thanks to the tweeter. Handel's "Watermusic" is always a nice test and Gardiner's historic interpretation provides brilliant horns that sound natural and round without being shrill. Do not miss the Bach Cantatas from the local label BIS, which give brilliant voice and instruments – a brilliant balance. Achieving the right reproduction of a great classical repertoire will give an evocative and pleasant reproduction of jazz, fusion and pop. Clear articulation with rhythmic support and a dynamic sound will be enhanced if you partner this speaker with a capable amplifier with good current.

At Kiel they know what to make and the new direction of Elac will receive attention from the audiophile-conscious and not just as a passing fashion.

Happy listening.

M. Cicogna

ELAC FS 409 Speaker System

Manufacturer: Elac Electroacoustic GmbH, Rendsburger Landstrasse 215, 24113 Kiel, Germany. Tel. + 49-431-64774-0 www.elac.com

Distributor for Italy: Audio LP, Street, Tesa 20, 34138 Trieste.

[Distributor for Australia – Synergy Audio Visual – www.synergyaudio.com – 03 9459 7474]

Price: [AUD\$10,995 inc GST]

FEATURES DECLARED FROM THE MANUFACTURER

Type: bass reflex floor

Min Power Recommended 40-450 watts rms.

Max Power Rated: 200-280 watts rms.

Sensitivity: 89 dB with 2.83 V at 1 meter. response

Frequency: 28-50000 Hz \pm 3 dB.

Impedance: 4-8 ohms.

Impedance: 3.4 ohms at 105 Hz.

Design: three ways and means.

Crossover frequency: 140-360-2700 Hz, second order electric.

Tweeter: Jet 5.

Midrange: 150 mm cone AS-XR.

Woofer: two 180 mm Cone AS-XR.

Dimensions (WxHxD): 290x1.180x380 mm.

Weight: 32.5 kg