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–Review

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Images: Wojciech Pacuła | Falcon Acoustics

Loudspeakers | standmount

No 179

April 1, 2019



Manufacturer: **FALCON ACOUSTICS Ltd.**

Price in Poland: **11 990 PLN / pair**

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MADE IN UK

Provided for test by: **AUDIO ATELIER**

[LS3/5a is simply a symbol for many audio fans. And yet it refers to a product that would fit in a student's backpack. These are loudspeakers manufactured under the BBC license, intended for broadcasting studies, which have also conquered our audiophile world. This text will explain their history, why they are so unique and will tell you about their latest incarnation, the only version currently certified by BRITISH BROADCASTING CORPORATION.]

I can not name any other audio product that has been available in stores for so long and which would attract such a large crowd of admirers and sometimes even fanatics like the BBC's LS3/5a speakers. Although, when I thought about it, another product of this type came to my mind: the **McIntosh Mc275** power amplifier from 1962, today one can still buy it's already 6th version, and that not even counting



some special versions prepared for special occasions. If we would slightly bend the rules to this – very short - list we could add **Klipshorn Heresy** loudspeakers, introduced in 1957. The LS3/5a loudspeakers, however, beat both competitors in terms of the number of sold items (pairs) and fame. **From 1975, when they were designed, the number of all LS3/5a speakers sold reached from 60,000 to as many as 100,000 pieces** (this number varies depending on the source; the *Illustrated History of High-End Audio Volume 1: Loudspeakers* edited by Robert Harley cites the latter number).

And it wasn't really supposed to be like that. The speakers were designed in the **BBC's (British Broadcasting Corporation) research department for professionals**, engineers working in mobile sound production studios. Their story began in the late 1960s in the BBC Research Department, which was commissioned by its parent company to develop a small near field monitor. In 1970, engineers had a prototype ready, a 9-ohm LS3/5, utilizing KEF drivers: B110 (A6362) and T27 (A6340), and the BBC FL6/23 crossover. Its development **cost a staggering amount of 100,000 British pounds, and only 20 pairs were produced**

BBC decided that these loudspeakers would be produced under license by selected companies. There were many licensees over the years including: **KEF**, Spondor, Harbeth, Rogers Audio, **Chartwell**, Stirling Broadcast, Goodmans, Falcon



Acoustics and others. In total, there were **eleven of them, but no more than three in a given period**. Both these and other companies offered also similar speakers to LS3/5a, or perhaps – products inspired by them. Among them the most important variations were presented by Linn, **Harbeth** and **Chartwell**.

The one and only true LS3/5a had to be licensed by the BBC, and it was warranted only when a product passed meticulous tests in the BBC's laboratory and measured exactly the same as the original speakers made by KEF.

| LS3/5a by Falcon Acoustics

Falcon Acoustics | By the end of the previous millennium, the original, carefully stored drivers and licensed models disappeared from the market. All subsequent "LS3/5a" loudspeakers were just similar to the original ones, but they featured new drivers and - of course - they did not have the *imprimatur* from BBC. And yet in 2014, Falcon Acoustics presented its version of this legendary speaker, surprisingly with the BBC's blessing. And that's because **Falcon began producing identical, to those from 1975, drivers** the B110 and KEF T27 utilizing the same 15-ohm crossover.

Falcon Acoustics Ltd. was founded in 1972 by **Malcolm Jones**. He is a British engineer employed by Raymond Cooke, the KEF owner, in 1961 for the position of Chief Engineer. He was responsible for the most important speakers, but also - and perhaps above all - for KEF's drivers: B139, B200, B110, T15 and T27. He parted his ways with KEF in 1974, two years after founding his own company. Just before he left, he managed to finalize the development of yet another milestone, not only for KEF, but for the entire industry, the majestic KEF Reference 104 speakers.

Though Malcolm Jones was the face of the company, he was actually running it together with his wife Valerie from the very beginning. After retiring in 2006, Valerie Jones became seriously ill and passed away two years later. In 2009, Mr. Malcolm also retired and handed over the helms of his company to Jerry Bloomfield, while remaining in the company as a technical consultant.

— A FEW SIMPLE WORDS WITH... —

JERRY BLOOMFIELD

Owner



Falcon Acoustics A.D. 2018 – Malcolm Jones (on the right) and Jerry Bloomfield (on the left); Mr. Bloomfield holds a LS3/5a prototype in his hands. WOJCIECH PACUŁA: How far back does the story of Falcon Acoustics LS3/5a go?

JERRY BLOOMFIELD: The history of the Falcon Acoustics LS3/5a can be followed even further back to the design of the original drive units in 1964/1965 by Malcolm Jones who was then the Chief Designer for KEF and is also the founder of Falcon Acoustics.

When have you joined the Falcon Acoustics?

I took over Falcon Acoustics from Malcolm Jones in 2009. Malcolm stayed on as Technical Consultant and in 2011 Malcolm Jones re-designed the original B110 and T27 drive units. These are now made again using just the original materials by Falcon Acoustics.

The original notebooks used by Malcolm Jones at KEF with all the original test results for the B110 and T27 designs have been used to ensure 100% authenticity and accuracy to the original designs. Falcon Acoustics is one of the biggest drivers' suppliers in UK – are you going to sell also the B110 and T27?

These drive units are unique to Falcon, we do not supply them to any other manufacturer.

When checking out the crossover I noticed coils with Volt labels...

Indeed, the coils used in the LS3/5a crossover are custom made for us based strictly on our specifications by Volt Acoustics. These coils are identical to those that used to be produced in the 1970s. For example for Rogers. The BBC, in turn, used their own coils, also featuring transformer cores.

What was your goal, what did you want to achieve with your new/old LS3/5a?

Our objective is to produce a 100% authentic LS3/5a, no compromises on crossovers, no compromises on different drive units bought from suppliers, everything is to be exactly as the BBC originally specified and demanded. The Falcon LS3/5a is the only LS3/5a in production that is 100% correct to the original BBC 1976 LS3/5a Specification. It does not differ in any way from the original Specification.

These are fragments of a longer interview with Mr. Jerry Bloomfield; the whole interview will be published in May edition of the „High Fidelity“ magazine (HF | No. 180).

LS3/5a | The Falcon's version of the LS3/5a is - besides small elements, such as speaker terminals - **identical to the original**. First of all, there are the same drivers – this time produced by Falcon and redesigned by a man who originally developed them for KEF. These are a 19 mm Mylar dome tweeter and a 110mm low-midrange woofer with diaphragm made of material called Bextren. It features also the same cabinet made of birch plywood ("Baltic Birch"). There is also an identical front grill with a material called Tygan, hand-made by one of the British specialists; the grill features, as in the original model, Velcro to fix it to the front of the speaker. And there is a 15-ohm crossover, which is exactly the same as in the original LS3/5a.



These are really tiny speakers measuring just 305 x 190 x 165 mm and weighing 5.35 kg a piece. However, they look stunning. Simply astonishing! I felt similar before, with the Chartwell version, but this is yet another step towards perfection. The new speakers differ from the original ones in a few details. First of all, speaker terminals - those

used in the new Falcon are solid, rhodium-plated. The resistors and capacitors in the crossover are also different. But the coils are the same - the tested pair featured coils wound on a transformer carcass and made by Volt, which – let me remind you - produced drivers for the LS3/5a made by **Chartwell**.

Another novelty is also a selection of veneers to choose from. Three of them being basic ones: European Cherry, European Walnut and European Elm (each of these finishes costs PLN 11,990 per pair) and three "premium" ones: Rosewood, European Yew, Butt Burr Walnut (PLN 12,490 per pair).

Stands | These speakers were intended for listening in the so-called **near field**, meaning they should be placed 1-1,5 m from the listening position, and for use in small rooms of a mobile studio - hence their designation "LS3", which in BBC vocabulary meant these were speakers for mobile radio and television studios; the "LS5" series were intended for stationary studios. But when audiophiles started to use them, they had to operate in completely different conditions - larger rooms, placed further away from the listener and on the stands, not on the mixing console. Still, in the Falcon's manual, one finds information that the loudspeakers sound best when placed away from walls. One should also use stands of certain height of 600 to 700 mm, depending on how high one sits when listening to them.

To get exactly the sound, the company intended, they offers their own stands.

These were made of four metal beams

with a rectangular cross-section, welded to two countertops. These metal beam are set around the perimeter, so that the front side shows wider side of one of them and a shorter one of another. To properly tune them the company fills them with dry sand of appropriate weight. This is my speculation, but exactly this type of stands of identical (high) class of make and finish are produced by Polish companies - Rogoz Audio and VAP. Who knows, maybe it was one of them who worked with Falcon to make those stands. The stands cost PLN 4490 per pair.

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Recordings used for the test (a selection)

- *The Art of Fugue by J.S. Bach*, wyk. Charles Krigbaum, Red Rose Music RRM 5, SACD (2001)
- Ariel Ramirez, *Misa Criolla*, wyk. José Carreras, Philips/Lasting Impression Music LIM K2HD 040, K2HD Mastering, „24 Gold Direct-from-Master Edition UDM”, Master CD-R (1964/2009)
- Chet Baker, *Baker's Holiday*, Verve Records B0003279-16/SUHD 009960, Test Press SACD (1965/2004)
- Jean-Michel Jarre, *Equinoxe Infinity*, Sony Music | Columbia 1 90758 76442 9, CD (2018)
- Johann Sebastian Bach, *Sonatas & Partitas*, wiol. Henryk Szeryng, Sony Classical/Sony Music Japan SICC 840-1, 2 x CD (1965/2007)
- Mayo Nakano Piano Trio, *MIWAKU*, Briphonic BRPN-7007GL, Extreme Hard Glass CD-R (2017);
- Megadeth, *Countdown to Extinction*, Capitol/Mobile Fidelity Sound Lab, UDCD 765, gold-CD (1992/2006).
- Pet Shop Boys, *PopArt: Pet Shop Boys – The Hits*, Parlophone/Toshiba-EMI TOCP-66252-54, 3 x CCD (2003)
- Peter Gabriel, *So*, Realworld/Virgin SAPGCD5, SACD/CD (1987/2003)
- Stan Getz/Joao Gilberto, *Getz/Gilberto*, Verve/Lasting Impression Music LIM K2HD 036, K2HD Mastering, „24 Gold Direct-from-Master Edition UDM”, Master CD-R (1964/2009)
- Tsuyoshi Yamamoto Trio, *Midnight Sugar*, Three Blind Mice/Impex Records IMP8308, Gold HDCD (1974/2004)



Most comments concerning any version of the LS3/5a reflect a thought, that which could be summarized as: **these speakers did not get old at all**. Unlike – let me add - almost all other speakers from the 1970s. Amen, brothers, amen to that! It turns out that this design is actually a 'monitor', i.e. a speaker intended for monitoring - in other words: controlling - recordings. And as far as reliability is concerned, nothing has changed since then - either you do something right or you do not. The Falcon Acoustics LS3/5a are, next to Chartwell version, the best speakers of this type I have listened to. Even the original, 15-ohm KEF version

sound a little “dirtier”, less resolving. The differences are not large, yet modern solutions used to precisely manufacture drivers' membranes and high-quality components in the crossover let us get even closer to the "monitored" signal.



And now - we listen to a legend, a large part of British engineering enclosed in a box that would perfectly fit a pair of small size slippers. My Harbeth M40.1 feature a midrange driver chamber that would fit in the whole LS 3/5a speaker in. **So they can not be treated like full range speakers**, because they were never meant to be ones. It's just that Falcons do not provoke such leniency. Their limitations are clear, undisputed, but these are - so to speak – technical limitations, not musical ones.

Their most important advantage, the quality that most loudspeakers' designers dream about, regardless the price point, is **communicativeness**. What they offer seems to be tailored to suit listener's needs and sensitivity. They do not fight us, they do not try to convince us of anything. They create the world of a recording in front of us in such a way that one can believe in its truthfulness.

It is a psychoacoustics' phenomenon that is still not completely understood. These tiny loudspeakers are able to find proper channels to communicate with us, to deliver music to us in a more direct way, as if bypassing some decision centers. I'm exaggerating, it probably is not quite like that, and yet that was exactly my impression. In absolute terms, these speakers are almost completely **deprived of lower bass** and deliver a “light” form of its medium part. Their performance is almost entirely dominated by the midrange. Listening to them, it will be easy to understand where the so-called "British Sound" came from and why it was so popular. It's just about **beautiful timbre and perfect harmonics** together with the basic sound forming an internally rich,

multidimensional sound - a sound that one easily, really easily, associates with the term "natural". For a very long time, probably to this day, such presentation was associated with perfect reproduction of vocals and "incompatibility" with other types of music. It's not like that, it is not what BBC speakers, regardless of the purpose and size, were about. Falcons prove that they are **unbelievably versatile** and that their limitations do not limit what music they can play, but only limit their credibility - in the sense of: neutrality - with the transition to lower regions and transition to major orchestral performances.

Because they play every music with commitment. Knowing other speakers of this type, knowing what to expect from them, I could automatically reach for one of the *crooners* and purr along with Falcons using my beautiful vocal. But I actually started with Megadeth *Countdown To Extinction*, the Mobile Fidelity release, but still. It sounded very good. There was drive, rhythm, great guitars and very good vocals. The presentation lacked some momentum and power, it is probably clear. And yet the structure of this music, its emotional layer, mood - all of that has been conveyed in a very nice way. Looking at these tiny speakers, it's easy to come to the conclusion that they should play in small rooms placed rather close to the place where we sit. Experiments in my large room, at a distance of 2 m, however, produced at least satisfactory results. I liked recordings with **a small number of instruments** most as in these Falcons sounded like much larger speakers. I truly loved performance of Henryk Szeryng, with which the natural, dark ambiance accompanying his violin was rendered in such a fantastic way as if I listened to much more expensive loudspeakers.

Because these speakers offer an outstanding resolution. Within their limitations, they are able to present details every performance, recording and releases as if they did not have any limitations. They are not ruthless, but rather sympathetic with recordings. The best recordings, it's about emotions in them, not necessarily about the technical side, are presented in a truly refined way and they sound deep and dark. Those of lesser quality, such as the heavily compressed Megadeth, or the Pet Shop Boys recording – still sounded nice, enjoyable, with a pulse, an internal fire. I knew right away that it was a completely different presentation to the one I was used to, but without

any brightening of the sound, without exposing any problems these recordings had. Because it is, in general, a warm sound. Warm by excellent resolution and coherency.

The space was built surprisingly well, for this type of speakers. BBC monitors never really were described as masters of spatial presentation or imaging. And that's because the BBC engineers who developed them never talked about "space", they did not get excited about it, it was created sort of "by the way" while they dealt with other features of the presentation. The Falcon speakers are the first that present this aspect of the sound in such a great way. I think they owe it to the precision their drivers and crossovers are made with.

Although the sound does not come forward, the elements out of phase do not create a "bubble" around us, but what is presented behind speakers is **large, solid, strong**, perfectly combining the instruments and performers. Large images are slightly diminished by these speakers. Like, for example, in *Misa Criolla* with the beautiful part sang by José Carreras. It was a very special experience, but also the scale of the recording was reduced and limited. Simply because these are just small speakers, period.

Summary

The Falcon Acoustics LS3/5a speakers are the most beautiful sounding speakers of this type I know. On the one hand, they are versatile, but they are also really "specialized", that is, they will sound best in a **small room**, placed quite close to a listener. They do not play low bass. But the repertoire they are able to play is very wide, and good recordings of classical music, jazz and vocal music will be conveyed by them with breathtaking realism.



They do not have to play with a tube amplifier. They sounded fantastic with the Leben CS-300 (Custom Version), but they showed me what I paid for when buying the Soultion 710 solid-state power amplifier too. With Leben, they will create a pair so pleasant in listening, so unique that no one will pass by it indifferently. These are speakers that prove that top engineering is still - just - that, even fifty years later. ■

Technical specifications (according to manufacturer)

Frequency range (+/- 3dB): 70Hz – 20kHz

Sensitivity: 83dB (2.83V)

Nominal impedance: 15Ω

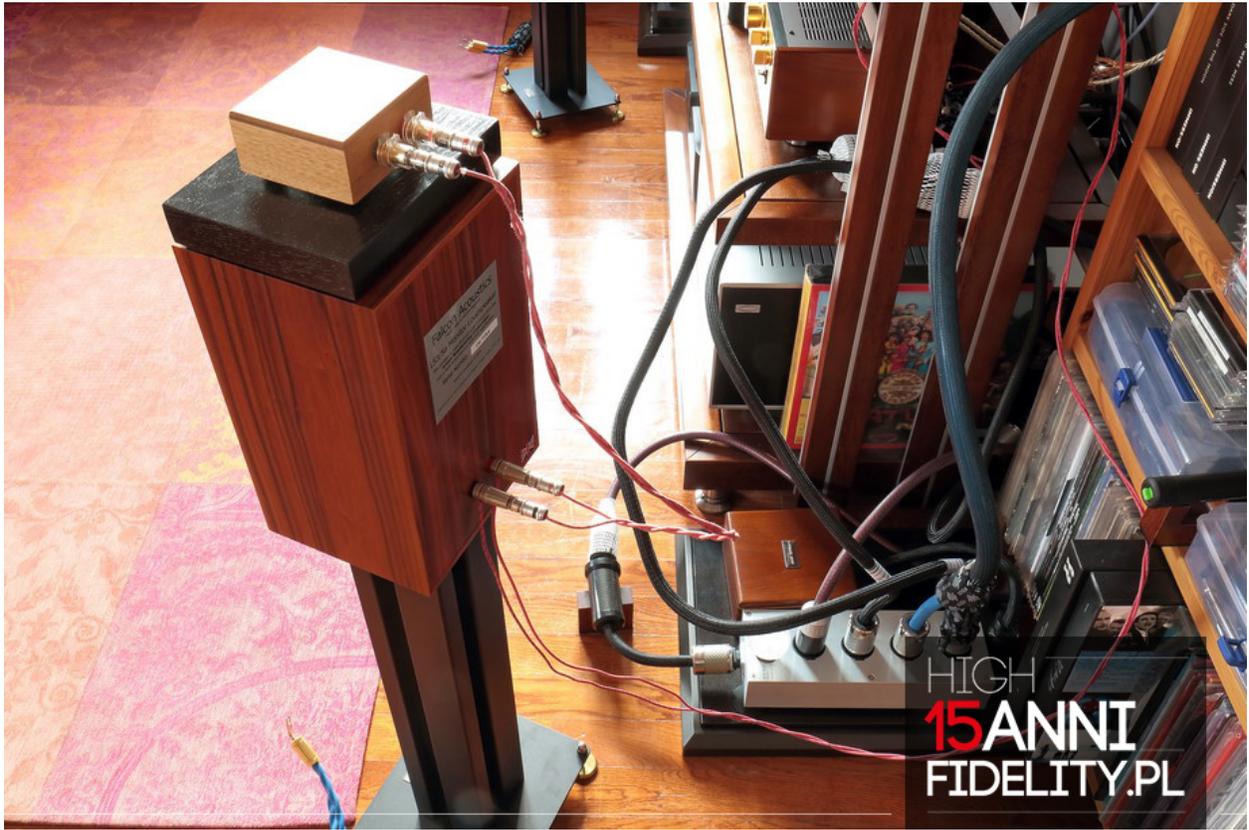
Crossover frequency: 3kHz

Dimensions (W x H x D): 304 x 190 x 165 mm

Weight: 5.35 kg/pc.

Galeria







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