







Laudspeaker Genuin Audio Ava

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Three years ago: at the HIGH END show in Munich, the performance of Genuin Audio's Ava active speaker was so impressive that it earned itself the title of "Best Sound of the Show". Two months ago: it finally made a guest appearance at my place. Hang on, what am I saying? Guest appearance? No, the Ava is a keeper!



The last of my speaker reviews?

I first got to know the Cottbus-based company Genuin Audio because of its work as a Germany-wide distributor for brands such as Swisscables and Perreaux. In the course of time, however, owner Thomas Wendt shifted his business focus and had his own products developed which correspond to his own ideas of modern music reproduction. For this purpose, he gathered renowned technicians from the high-end and pro-audio sector around him, who, with their technical background and expertise, diligently implemented the boss's lofty demands. The Drive turntable, the Point tonearm, the Sting cartridge and the Pearl phono stage were the first. They were all praised by the local trade media (*image hifi* 2017/04) and some of them were even awarded prizes. They were also extremely well received by analogue enthusiasts because of their extraordinarily good price-performance ratio. This was followed by digital devices such as the Tars music server and – after two years of development – the first fully active floorstanding loudspeaker, Neo. Its technology formed the basis for the design of the more compact Ava active loudspeaker.

As luck would have it, the Ava saw the light of day at exactly the time when I myself was toying with the idea of a fully active loudspeaker. After almost 40 years of intensive involvement with valve amplifiers and high-efficiency loudspeakers, still a passion of mine, the feeling of having "arrived" had still not really set in, although I was always able to enjoy music on a totally privileged level. I think many audiophiles might feel the same way. It would probably be possible to achieve a state of wishful audiophile nirvana on the path I have taken so far – but I myself have neither the financial wherewithal nor the space. In addition, experience has taught me that every change on the amplifier side of my system usually entailed a change of loudspeaker, and of course vice versa. These desires for change usually arose after I had observed the synergistic effects between amplifier electronics and speakers over a longer period of time and the reproduction of a wide variety of musical styles had not fully won me over in every audiophile discipline. As the owner of a recording studio for many years, I kept an eye on pro-audio technology at the same time. All



the professional "monitoring" I have dealt with in the course of time scored on neutrality, but lacked emotional appeal for my "home use taste". So the best way to describe what I wanted in terms of amplifier-loudspeaker pairing was "the best of studio and hi-fi technology" – a distinction that I would award to the Ava by Genuin Audio with no ifs, buts or maybes. But more on that below.

So what are the advantages of a fully active loudspeaker and especially a speaker equipped with Class D and DSP technology? Ignoring for a moment the saving of space and cables, the optimal interaction of amplifier electronics and loudspeaker to which we have already alluded, should



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be mentioned: a perfectly thought-out and implemented active concept saves you the tedious search for an amp and a speaker that are not only convincing in every respect in terms of sound, but also combine well. Of course, there are combinations that work excellently, even real dream pairings. However, the latter are hard to find at a price of 17,500 euros – that's how much a pair of Avas costs – especially if you're looking for power amplifier leviathans that pack two times 1000 watts of power – like the eight Class D modules by Danish digital expert Pascal Audio that are installed in a pair of Avas. It should be well known by now that Class D amplifiers are much easier on the wallet in terms of power consumption than valve and solid state amps

of other types – a fact that is even more important considering the current political and economic situation. But back to Pascal Audio: a bridged pair of these power amps is responsible for driving the SSF082.00L woofer by the Italian pro audio expert Lavoce, which is only 8 inches wide. This is a long-throw woofer with a ferrite magnet, a 50-millimetre voice coil made of copper-coated aluminium wire and a coated, water-repellent paper cone. The other two power amplifiers feed a 6.5 inch small 6C150 coaxial chassis from BMS in Hanover, consisting of a tweeter unit with coated paper cone and ferrite magnet and a 1 inch ring radiator with polyester cone and neodymium magnet.

Now to the subject of DSP: the ill effects of acous-



tically unfavourable room conditions can be ironed out by clever use of digital signal processing. For this reason, the Genuin Audio development team decided to equip the Pascal Audio Class D modules with SHARC 32-bit DSP boards from Analog Devices. This "Super Harvard Architecture" was originally developed as a pure CPU and, now in its sixth generation, works with floating-point arithmetic. Such a floating-point DSP can be programmed pretty much however you wish to. In the Ava, it forms the basis for a digital crossover that takes over all control tasks. In order to control the high, mid and low frequencies perfectly in terms of time and frequency behaviour, Genuin Audio not only uses linear IIR filtering with infinite impulse res-

ponse, but also linear-phase, discrete FIR filtering with finite impulse response. For this transversal filtering, each chassis is measured individually in order to tailor-make the DSP programme. This is to ensure the absolute time correctness of the music signal over the entire bandwidth – to my knowledge a unique procedure in loudspeaker design. The crossover frequencies of the digital Linkwitz-Riley crossover are 48 decibels at 170 Hertz (LF/MF) and 1600 Hertz (MF/HF). From about 170 Hertz upwards, the acoustic phase of the loudspeaker is in linear phase. In addition, the DSP has various protective functions, which makes a lot of sense in view of the 1000 watts of power amp output, which is supposed to guarantee undistorted transmission of





Previous spread: The objective in developing the Ava was to use a driver that would allow the construction of a compact cabinet with a very low cut-off frequency. They found what they were looking for in the BMS mid-high unit (right). According to Genuin Audio, the coaxial driver is perfectly suited to realise an optimal point-source radiation from about 150 Hertz upwards. This would considerably improve localisation and spatial imaging. The choice of the Lavoce long-throw woofer (left) was made after various comparisons and measurements in the test chamber. A high power handling with a correspondingly high sound pressure level had to be ensured in order not to limit the particularly dynamic reproduction qualities of the tweeter

signal peaks. If this high average power were to be applied to the drivers over an extended period of time, this could lead to damage. Therefore, peak and thermal limiters ensure that the loudspeakers are not affected by extremes of volume, clip limiters do the same for the power amplifiers. All limiters work "predictively" and without negative feedback. According to Genuin Audio, digital limiters have no effect on the music signal as long as they are not active.

All settings as well as firmware updates are implemented with specially programmed system software. Contact to the loudspeaker is made via USB or network connection. The software has three user levels: "Developer", "Service" and "User", whereby the developer mode allows access to all parameters. In user mode, for example, various filters can be adjusted, sources

selected and gain settings made. However, I was particularly interested in the service mode, in which, among other things, the DSP filter settings can be changed to correct the room conditions. The prerequisite for this is, of course, the correct recording of the parameters of the listening room and the correct interpretation of the determined data – a complicated process for which my horizon of experience alone is not sufficient. So it's good that Genuin Audio offers a calibration service. This service costs at least 400 euros, depending on the journey and the time involved, but in my opinion it is a sensible investment for life. I believe that once you have experienced an active loudspeaker that is acoustically perfectly integrated in the room, there is no going back to conventional passive constructions.

Speaking of perfect integration: the Ava, designed as a compact loudspeaker, naturally requires a stand. In principle, any stand that can stably hold the speaker's near 27 kilograms will do. If

Partnering equipment

Turntable: Pear Audio Blue Odar **Tonearms:** ViV Laboratory Rigid Float Mk2 7", Pear Audio Blue Cornet 3 12" **Headshells:** Acoustical Systems Arché 5D, SteinMusic Ametrin 1, Oyaide HS-TF Carbon **Cartridges:** Lyra Kleos, Koetsu Rosewood Signature **Phono stages:** Rike Audio Natalija Pre 2, Genuin Audio Pearl **MC transformer:** Phasemation T-300 **CD player:** Sony CDP-X5000 (Clockwork Audio modification) **D/A converter:** Canever ZeroUno SE **Music server:** Genuin Audio Tars **Integrated amplifier:** Kondo Audio Note Overture PM-2 i **Loudspeakers:** Martion Bullfrog **Cables:** Schnerzinger Resolution Line AC, XLR & RCA, Schnerzinger Essential Line Phono-RCA & SPDIF-RCA, RCA Kondo Vc-II NF, Kondo Operia SPc 2.5 LS, Kondo ACc Persimmon, Biophotone NF & LS8, Acoustic System Liveline NF, Fast Audio Black Science NF, Tiglon MGL-D1R (S/PDIF), Clockwork Audio (S/PDIF) **Accessories:** Turntable platter supports from Black Forest Audio Däd!Mät! and SteinMusic Pi Perfect Interface, Schnerzinger Operator power strip, Grid Protector System, Multi Guard System, Cable Protector & Signal Protector, CAD Ground Control, Black Forest Audio SoundPucks & SoundSheets Audiophil Schumann generator, TAOC racks, SteinMusic Harmonizer and Blue Suns, Acoustic Revive RL-30 Vinyl Record Demagnetizer, Audiodesksysteme Gläss Vinyl Cleaner PRO X and Sound Improver, Audio Exklusiv d.c.d. Base and Silentplugs, FPH Acoustic Vibration Dampers, Duende-Criatura Damping Rings, Fastaudio Absorbers, Acoustic System Resonators, MFE Power Strip, AMR, Furutech and AHP Fine Fuses, Acoustical Systems SMARTractor and HELOX Record Clamp, Levin Design Record and Needle Brush, MFE Phase Tester & Power Strip, complete tube equipment from BTB Elektronik



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you want to be on the safe side, Liedtke-Metalldesign in Elmshorn offers an acoustically optimised stand specially designed for the Ava for just under 1,000 euros, which sound engineer Marco Schoen, who performs the calibration on behalf of Genuin Audio, brought with him. Before measuring, I took a closer look at the Ava's excellent workmanship: the two-tone look with its contrast between the light ash veneer and the front painted with black Nextel lacquer is very appealing. The design, which is somewhere between a classic studio monitor and a living room friendly loudspeaker, should also appeal to more demanding "home regimes". It goes without saying that Genuin Audio followed the

form-follows-function principle in the development of the Ava: in order to keep the powerful woofer under control, the cabinet, which is available with various veneers and lacquers, is made of MDF boards up to 54 millimetres thickness, grooved and ribbed internally. An integral part is the precisely calculated, flow-optimised bass reflex tunnel. Inside the cabinet, the magnet for the bass driver is fixed in place to prevent unwanted resonance. The plastic front panels are lined on the inside with damping wool. Diffraction-optimised edge geometry is designed to avoid edge dispersion in the mid-high range and, in combination with the ring radiator working on a short metal horn, to ensure a



three-dimensional sound image that is completely detached from the loudspeaker, with extraordinary efficiency enhancement in the high-frequency range. To get the Ava up and running, all you need are two mains cables for power and a preamplifier or source with volume control, connected either to the (analogue) fully balanced XLR inputs or to the (digital) AES/EBU sockets. In my case, the ZeroUno SE from CanEVER provided the preamplification, the wiring was analogue, using the fabulous Schnerzinger Resolution Line cables. According to the Genuin Audio boss, his team is working flat out on a preamplifier and DAC that will be the ideal partner for the two fully active speakers and is sup-

posed to complete the Cottbus-based high-end manufacturer's product range. Knowing Thomas Wendt, who lives by the motto "When we do something, we do it right", this should prove interesting.

Back to the topic of calibration: if this procedure is too time-consuming for you, you can alternatively select your favourite sound from the three presets "Neutral", "Wall" and "HiFi". Without measuring the room parameters, however, it is not possible to detect critical peaks, as they were revealed in my listening room. After several listening tests, we succeeded in eliminating them via the DSP with narrow-band filter interventions of -2 decibels at 80 and 275 as well as a little more broadband at 2300 Hertz



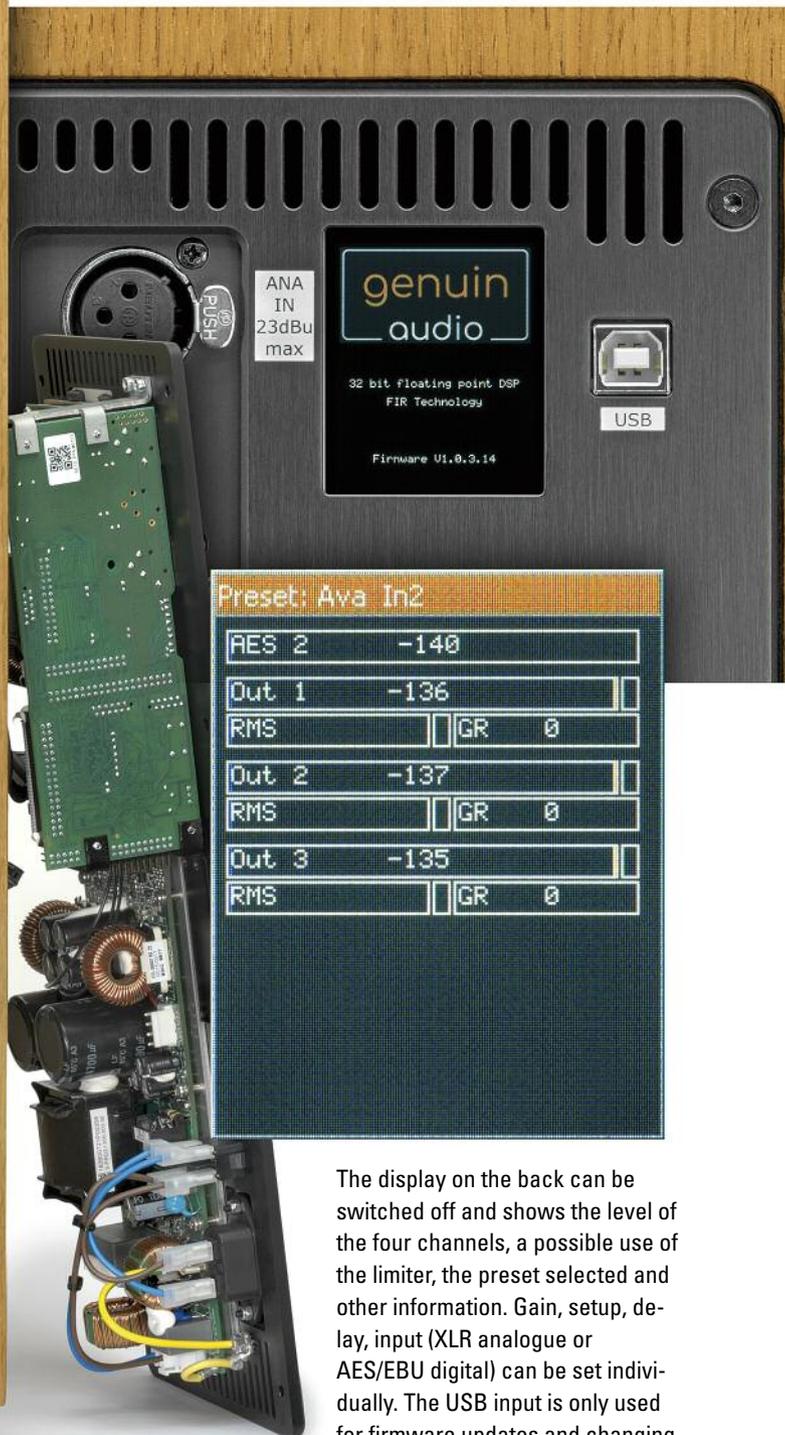


Previous spread: Two 24-bit converters "work" per channel, digitising the analogue input signal and providing a dynamic corridor of 128 decibels. The circuit board design is also home to a quartet of Class D power amplifier modules from Pascal Audio, which are located on the circuit side behind the digital crossover, the "SHARC" 32-bit DSP module. According to the manufacturer, a sophisticated combination of IIR and FIR filters ensures perfect amplitude and phase characteristics as well as absolutely correct time response

and correcting them at 20 Hertz with a high-pass filter of -12 decibels per octave. All in all, these were rather subtle interventions, but they had a great effect on the sound – for the first time since I started working with loudspeakers, I was able to experience what it means in terms of sound when the listening room does not have a negative influence on the propagation of the sound! Any music material, especially critical in the bass range, that I fed the Ava with from now on, showed a previously unheard-of clean and highly precise, micro-information-rich side. Pure madness!

The opening bars of Björk's "Hyperballad" from the Post album (One Little Indian/Mother Records/Polydor, 527733-2, EUR 1995, CD) usually cause veritable orgies of vibration on (not only) my parquet floor. From now on, my upstairs neighbours will be relieved to hear that the electronic sub-bass heard below room volume will no longer disturb anyone's sleep. The low frequency performance itself gives me great pleasure: The DSP filters do not lead to any loss of dynamics! The bass reaches down to the deepest cellar floor, pushing and shoving with unrestrained energy. Since there are no more room modes drowning out the mid-range, information suddenly reaches my ears that I had not perceived before: in the solo intro to "It's Been So Long" on the album Aurora (Blue Note/EMI, 5099969 491702, F 2009, CD) by the Israeli jazz bassist Avishai Cohen, the gliding of

the fingers over the frets and the buzzing of the steel strings are presented in a completely new light. It becomes clear that the Ava is a high-precision instrument: with the precision of an experienced surgeon, it exposes the sound microcosm of "Long Way From Home" from Gilad Hekselman's masterpiece Far Star (Edition Records, EDNLP1201, EUR 2022, Ltd. LP) and maps the individual instruments with a selectivity that I can only describe as benchmark-setting. If you think that this Class D Ava is extremely transparent and of high resolution, but perhaps cool or even sterile, you've got another thing coming: the decision to use power amplifier modules from Pascal Audio proves to be an acoustic stroke of luck. When I compare them with the seemingly dust-dry first generation Hypex NCore NC400 modules, I realise how rapidly digital amplifier technology has developed. Of course, the midrange-emphasising timbral splendour of a 300B or 2A3 tube amplifier offers a certain melodiousness. However, this melodiousness thing, strictly speaking, is mere "embellishment", which can make great recordings start to seem unrealistic. Genuin Audio, on the other hand, is to be congratulated on having created a loudspeaker with the Ava that, for all its linearity and neutrality, does not ignore the emotional factor. Samuel Barber's Adagio For Strings, recorded by the Pittsburgh Symphony Orchestra under the direction of Manfred Honeck (Reference Recordings-/FRESH!/Pittsburgh Live/Sieveling Sound, FR-724SACD, D 2017, Multichannel Hybrid SACD), hits me right in the heart. The Ava turns the meditative playing of the orchestra into a lifelike, sonically detached spectacle with realistic timbres and a broad and deep soundstage. It's the same with the Polish National Radio Symphony Orchestra's recording of Henryk Górecki's Symphony No. 3 Op. 36 conducted by Krzysztof Penderecki (Domino/GoodToGo, WIGLP395X, UK 2019, LP), where Beth Gibbons, vocalist with Bristolian band Portishead, made her debut as a soprano. Not only does her voice peel beautifully freely from the grand orchestral action – the live recording also makes it clear that the Ava is not



The display on the back can be switched off and shows the level of the four channels, a possible use of the limiter, the preset selected and other information. Gain, setup, delay, input (XLR analogue or AES/EBU digital) can be set individually. The USB input is only used for firmware updates and changing the setting parameters

one of those speakers where you have to turn the amp right up to 'feel' the speaker. Even at low volumes – for example, when I get the urge to listen to music in the middle of the night – the full dynamic range is available. Of course, the Ava also tempts me to set neighbour-unfriendly levels. The temptation to listen to Closure / Continuation (Music For Nations/Columbia International/Sony Music, 19439956921, EUR 2022, ltd. 3-LP), the new album by Porcupine Tree, released after a twelve-year break from the band, and to listen to Steven Wilson's electric guitar riffs, Richard Barbieri's filigree keyboard playing and Gavin Harrison's energetically grooving drums at live volume is too great to resist – after all, the Ava's authoritative, uncompressive articulation is one of its outstanding traits.

You will now understand – at least in theory – why the Ava is staying with me – even if this means that I will have to refrain from further loudspeaker and power amp reviews for the time being. But I'm happy to accept this in view of this amazing performance.

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Operating principle: Fully active 3-way bass reflex loudspeaker with DSP **Frequency response:** 30 –20,000 Hz **Drivers:** BMS coaxial 6.5" 6C150 tweeter unit with ferrite magnet, coated paper cone and integral 1" ring radiator with neodymium magnet and polyester cone, 8" SSF082.00L long-throw Lavoce woofer with ferrite magnet, 50mm copper-clad aluminium wire voice coil and coated water-repellent paper cone **Amplification:** four x 1,000 watts of power **Special features:** one 24-bit analogue-to-digital converter per channel, Digital crossover: "SHARC" 32-bit DSP module from Analog Devices with floating point architecture, 3 different presets (neutral, wall, hi-fi) **Inputs:** 1 x XLR (analogue, balanced), XLR AES/EBU (digital), 1 x USB (control only) **Enclosure:** Up to 54 mm thick MDF walls, MDF bass reflex port at the rear, damped front made of Nextel-lacquered plastic, elaborately angled internal bracing, internal cabling made of high-quality OFC copper by Sommer Cable, spikes made of stainless steel, on-site calibration on request (from 400 euros) **Finishes:** "Two-tone" look with Nextel-lacquered plastic front (black) and veneered MDF body (black ash, sapele, smoked oak, natural oak) or matt silk lacquer (black or white) **Dimensions (W/H/D):** 25.6/55.7/43.7 cm **Weight:** 26.6 kg **Warranty:** 2 years **Price per pair:** 17,500 euros

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