



Zsolt Huszti (left) and Attila Olah

HEED AUDIO FACTORY TOUR

Heed Audio amplifiers have become available in Australia for the first time, through new distributor Hi-Fi Collective. Editor Greg Borrowman travelled to Budapest at his own expense to tour the factory and conduct this interview.

Hungarian-made Heed Audio amplifiers are now well-known in Europe, indeed Zsolt Huszti, the R&D Director (and majority partner) at Heed Audio says that in France the brand has the same market share as Rega. So I was surprised when Huszti told me he had to be dragged kicking and screaming into building his amplifiers... it was something he really didn't want to do.

But the story really starts at a time when Hungary was behind the Iron Curtain and Huszti was an electronics technician with a fascination for British audio equipment. 'The problem was that there was no legal way to import it into Hungary for retail sale,' he said, 'It was possible to obtain the equipment if you travelled somewhere the equipment

was available, after which you could bring it back into Hungary personally but you needed an invitation letter from someone outside the Iron Curtain in order to travel. My brother Alpar had lived in Germany since 1980 so in 1987 we came to a partnership arrangement where I would have a showroom where I could demonstrate hi-fi equipment—mainly Linn, Rega, KEF and other British brands, and whenever I sold something, Alpar would send the buyer an invitation letter that allowed them to travel, after which they'd go to Germany to pick up their gear from him.' This arrangement went on for two years, after which the law changed, and Huszti switched his business model to be a normal distributor and retailer, but the legal change also brought with it taxes in Hungary that had not previously existed, and it was these taxes that kick-started Huszti's career as a manufacturer.

'The tax was so high on both electronics and loudspeakers that I approached the famous English amplifier designer Richard Hay [Radford, Nytek Audio], to ask if I could import his Ion Systems amplifiers into Hungary in parts, and assemble them here. Then, when he closed his company, I asked him for the rights to continue building his Obelisk range of amplifiers here in Hungary but sell them under the Heed Audio brand,' he said. 'As for the speakers, I designed and built them myself, because I'm a loudspeaker designer as well as an electronics engineer. The amplifiers sold well, but the speakers were enormously successful for me... I was selling 1,500 pairs of them a year.'

Heed Audio's success was brought to a sudden halt in 1992 when Hungary got caught in the recession and the resulting financial crisis caused inflation in Hungary to reach 60 per cent. 'The result of that was that I lost 90 per cent of our business, and had to close it down,' said Huszti. 'Since there was no work for me in Hungary, I decided to take a holiday in Great Britain, partly to catch up with Richard Hay, during which I also met John Wright, of TDL. After John and I had chatted for around half an hour, he offered me a job.'

I couldn't start immediately because Hungary was not a part of the EU, so I had to return to Hungary with my employment offer, and start the paperwork war necessary for me to leave Hungary to work in England. That process ended up taking around six months, during which time John unfortunately died of cancer, so I was back to square one.' [In a rather tragic co-incidence, Richard Hay also died of cancer, in October 2012. Also, as a result of a curious turn of events Hay had started distributing Huszti's Hungarian-made Heed Audio amplifiers in the UK, but branded 'T-Source' rather than Heed Audio.)

After Wright's death prevented his move to England, Huszti changed careers and became a journalist...or to be even more precise, the writer, editor and publisher of his own hi-fi magazine, *Hang & Technika*. 'As there was no work in Hungary, I had to create my own employment, and a friend suggested I start a magazine for hi-fi hobbyists, so that's what I did. I would design speakers suitable for readers to build, using parts available in Hungary, and we'd publish these do-it-yourself projects in the magazine. We also published articles for DIY amplifiers.'

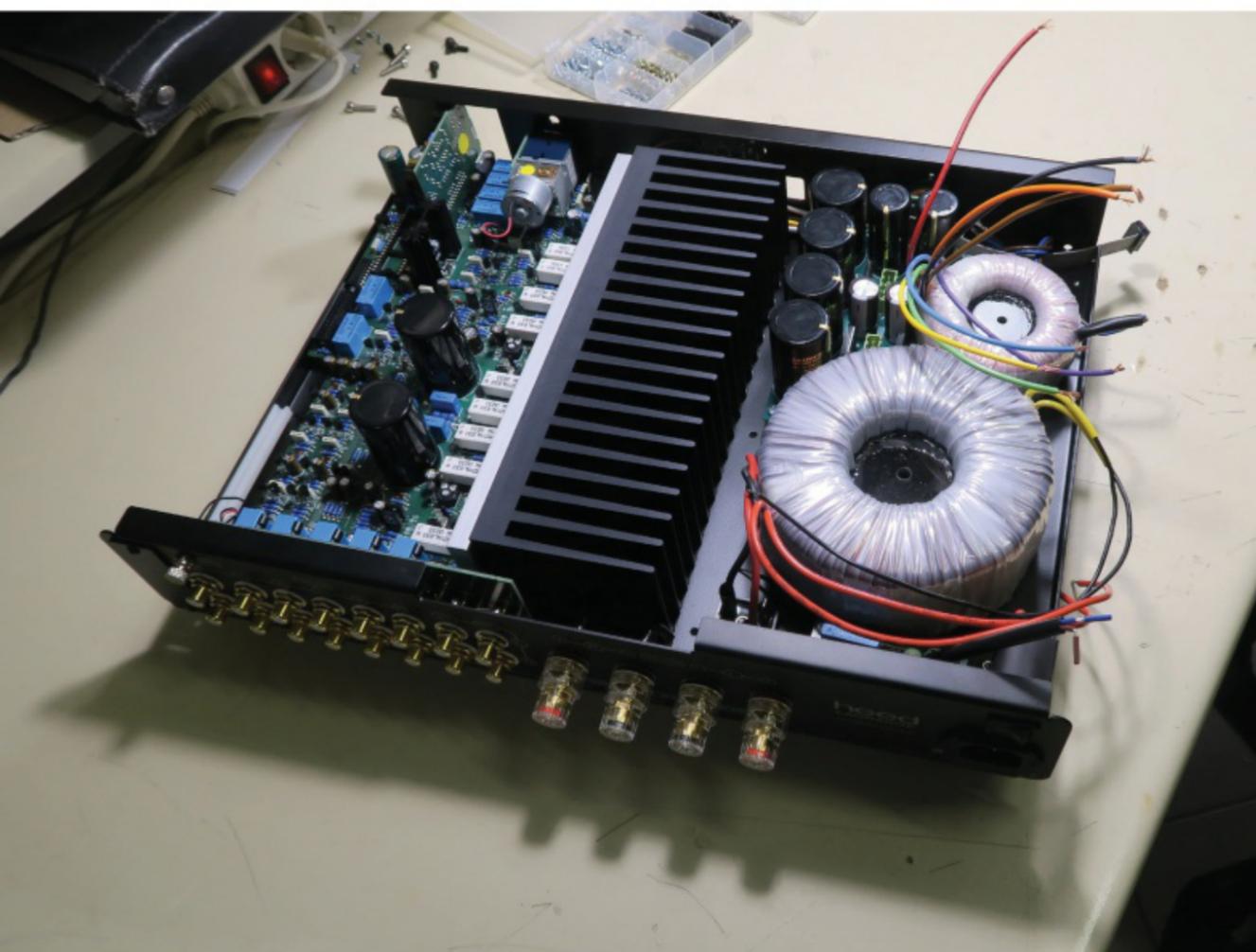
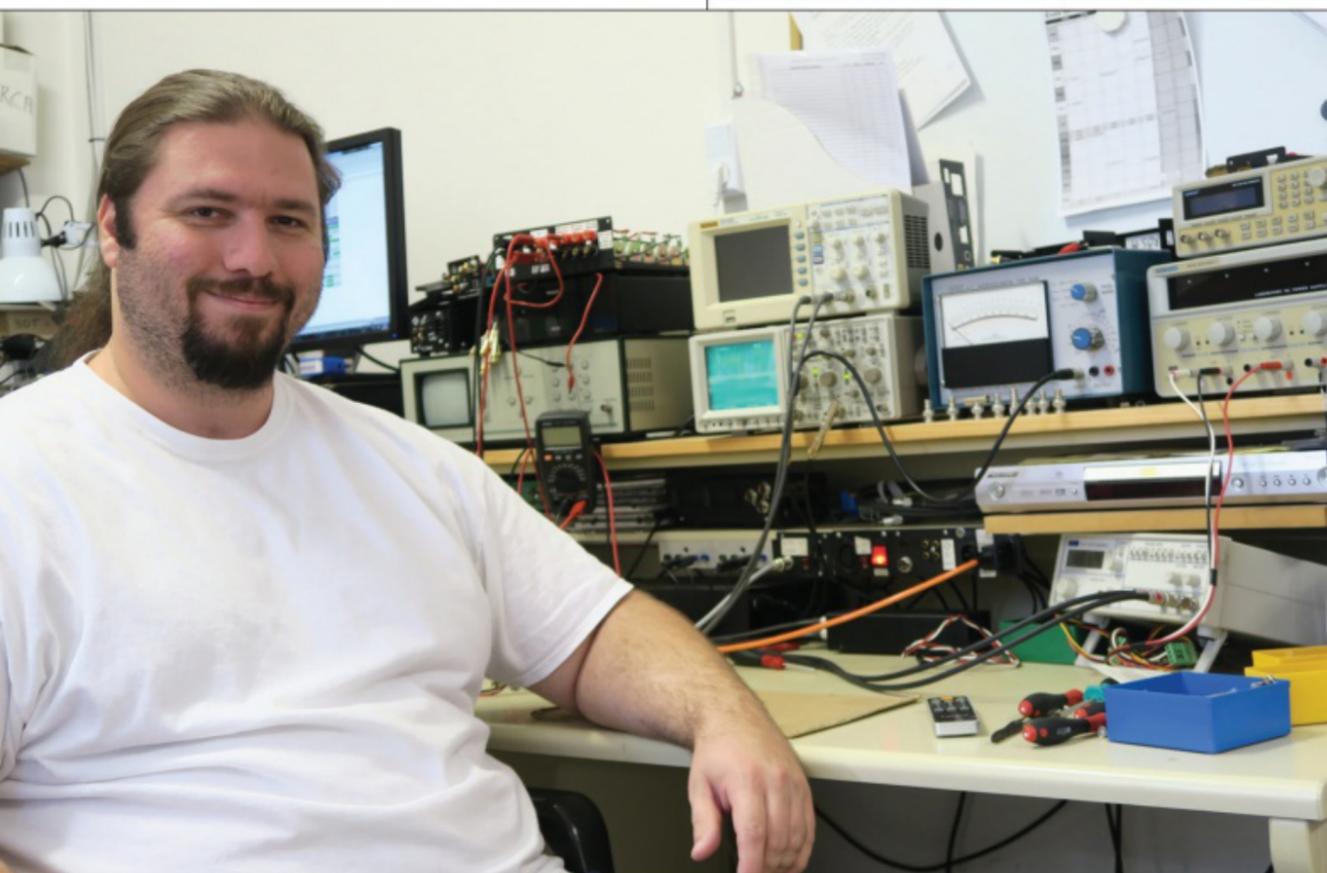
At the turn of the century, after two successful years as a magazine publisher, the Rega's Hungarian distributor asked Huszti to design and build a power supply that was more suited to the Hungarian power grid than the one Rega was supplying to him at the time. The order quantity was sufficiently large that Huszti re-opened his factory and started building not only the power supplies but also phono amplifiers and headphone amplifiers. Four years later, Huszti appointed a new distributor in Germany who remembered the Obelisk amplifiers Huszti had been building back in the 80s and 90s. 'He asked me if I still had all the parts to build them, and when I told him that I did, he replied that he'd like to place an order,' said Huszti, 'but I turned him down. I had decided that I never again wanted to be involved with manufacturing high-end audio amplifiers. It's too difficult, too expensive and just too much of a headache.'

As history shows, his German distributor eventually talked him into it, but the amplifier that Huszti delivered was a heavily revised version of the original Obelisk, one totally re-worked by a talented young Hungarian electronics designer called Attila Oláh. The two met after Huszti had employed two young university students to move all the equipment and inventory in

his factory from its original location to the one where it is now. Attila was one of those two 'movers' but since he was undertaking a degree in electronics, he became interested in what Huszti was doing, and after looking at the schematics of the Obelisk, told him he could see ways of improving it. 'I became so excited by the opportunity to be involved in creating a new version of the Obelisk, which was a very famous design,' said Oláh, 'that I switched my major from telecommunications to audio electronics and digital technologies, and also started working part-time at Heed. Then, when I finished my degree, my part-time job turned into full-time employment.' Attila is now not only responsible for the electronic design of all Heed products, he's also a part-owner of the company. Huszti is responsible for chassis design and cosmetics and production engineering...plus he helps Oláh with the final audio tuning of the amplifiers.

Oláh says that the hardest lesson he learned as a new designer was that designing an amplifier was often almost the easiest part of the task. 'Here in Hungary, obtaining the components necessary to build an amplifier is always a problem,' he said. 'We buy our toroidal transformers from the UK, our alloy parts from Slovenia and our acrylics from Germany. I always ask our suppliers for a guarantee that any component I order from them for use in my circuits will continue to be available for many years to ensure continuity of supply, and the longevity of the product itself, but we still buy in big quantities, not only to keep our costs down, but to make sure we have a large-enough stockpile of critical parts to cover shipping delays and component shortages. It's also necessary to do this to guard against the possibility that a manufacturer will cease production of a device, despite giving us a guarantee.'





In this event we can sometimes substitute a similar part, but sometimes a particular part is so critical to the sound quality of the amplifier that there simply is no substitute possible,

Despite being a relatively youthful electronics designer, Oláh is rather old-school regarding his circuit designs.

and it's these parts that we stock in the largest quantities. Unfortunately, they're usually the most expensive parts of the product.'

Heed also has problems sourcing its chassis. 'Ensuring high quality and on-time delivery is a constant challenge for us', said Huszti. 'We build in redundancy by using two different suppliers for our chassis, but even they have no control over the cost of the raw material, and one year the price of aluminium increased by 22 per cent.'

Despite being a relatively youthful electronics designer, Oláh is rather old-school regarding his circuit designs. 'I use what's called transcap (tuned non-direct coupled amplifier) topologies that are very similar to tube amplifier circuits,' he said.

I believe we're the only company in the world that's using this topology. Using capacitor-coupled circuitry at a time when most amplifier manufacturers are using d.c. coupling is highly unusual. They use d.c. coupling because capacitor-coupling results in slightly lower power output and higher distortion figures, but they forget that capacitor-coupling sounds better. A power amplifier needs to drive a loudspeaker, and a loudspeaker likes to be capacitor-coupled, rather than d.c.-coupled. We also use standard bipolar PNP/NPN output stages that also look very much the stages used in a tube amp.'

It isn't only Oláh who's 'old school' at Heed Audio. The company's production line is totally old-school. Every product is completely built by hand... it's something Huszti is very proud of, in fact, despite the fact that it means his labour costs are very high. 'It's almost unheard-of for amplifier at these price levels to be hand-crafted in this way,' he said. 'We don't even use a flow-soldering bath. Every single component is inserted into the PCB by hand, and soldered by hand, which is quite something when you consider that the Lagrange [amplifier] has 316 parts in it.'

Since he'd mentioned it, we just had to ask why Huszti and Oláh had called the amplifier 'LaGrange', and it turned out that they'd named it after the 18th century French physicist, Joseph-Louis Lagrange, who wrote an essay on the 'Three Body Problem.' His name is now best-known in the context of astronomical physics, where Lagrange points are positions in space where the gravitational pull of two large masses precisely equals the centripetal force required for a small object to move with them. They're very useful because they can be used by spacecraft to reduce fuel consumption.

As to why Huszti called his company Heed Audio in the first place, it is because the output circuitry of first Heed Audio amplifier was operated in bridged mode and the Hungarian word for 'bridge' (híd) is pronounced 'Heed'. 'I also wanted a short name, and one that sounded English, rather than Hungarian, plus I also thought that the name looked good in print with lower case 'h', as in 'heed' on a front panel, he said. 'And last but—far from least—I also thought the word 'Heed' sounded good when spoken out loud, and I was planning for my company to be all about good sound.'

After this lengthy explanation, Huszti turned to me and grinned. 'I thought myself very clever for thinking of that name,' he said. 'But you have to remember that back then I was only thirty years old.' 🎧