



MADE FOR HEROIC DEEDS

The Virtus I4S amplifier and the Verto D4S DAC from the “Foundation” series are designed to make it easier to enter the world of sound offered by the Slovak manufacturer Canor, thanks to their more affordable prices.

Text: Micheal Lang



The fan mounted on the underside of the I4S does its work silently.

new "Foundation" series, which features a very clean design and a slim profile, in order to finally shed its "insider's secret" status and attract the attention of a broader customer base with its visual appeal. From now on, the company aims to also appeal to an audience seeking high-quality audio reproduction but not necessarily with a preference for tube amplifiers. In addition, the enclosures are also manufactured in-house.

Convincing operating concept

Despite their wide range of features, both the DAC and the integrated amplifier are straightforward to use and clearly structured. Both units feature a touch-sensitive glass front panel for adjusting various settings, which can also be done using the included remote control. This remote is flawless in terms of functionality, has a wide range, and can still reliably control the devices even from a distance of 4 meters. However, unlike the actual devices of the "Foundation" series, it does not feature a metal casing.

The I4S amplifier, in particular, with its central, multi-function display integrated into the smooth-running volume control knob, is a real pleasure to use. That also includes the input selection with adjustable sensitivity, a multi-step dimming function, and fine-tuning for MM and MC cartridges.

The amplifier's thermal health can be monitored via the temperature display, which can be activated as needed. To improve heat dissipation, the MOSFET transistors – which sound a bit like vacuum tubes – are mounted on copper plates. If necessary, the fan located on the underside provides additional support to dissipate excess heat. During

our testing phase, however, the fan operated silently and inaudibly.

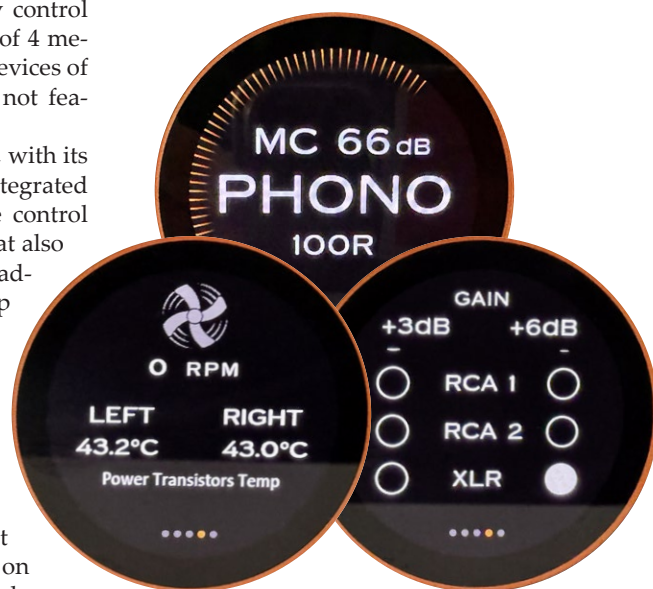
A look at the rear panels of our test units was also convincing: The Virtus I4S amplifier features two RCA jacks for high-level sources such as the Verto D4S DAC or a traditional analog signal source, an input for a turntable, and a balanced input with XLR jacks. Rather than being implemented internally with a cheap chip, as is often the case, this input has been designed using discrete components to ensure maximum sound quality. There's also a preamp output for connecting a subwoofer, as well as two trigger jacks for simultaneously turning other devices on or off. Speaker cables connect to sturdy terminals via banana plugs or cable lugs.

The D4S, its digital counterpart, also proves to be a high-quality interface between a wide variety of digital sources, thanks to its numerous galvanically isolated inputs and outputs. Via its USB input, it handles just about any data stream you can imagine, and doesn't hesitate to process either PCM (up to 24-bit/768 kHz) or DSD signals (up to DSD 512). The rear panel also offers a generously equipped connection panel, ranging from HDMI to classic S/PDIF inputs and an AES/EBU input via an XLR jack. Analog output is available via RCA or XLR connections. A physical power switch, accompanied by trigger jacks, is located on the rear panel, just as they are on the amplifier.

Unfortunately, the front panel of the DAC does not feature the I4S's sophisti-

Our first thoughts upon reading the names of these two devices was, quite involuntarily, "Star Wars" and its two heroes, R2-D2 and C-3PO, made of metal and silicon. After all, metal and silicon are also the main components of the two test devices. Furthermore, as we discovered very soon after they warmed up, they have another thing in common with the space heroes: the ability to quickly win over everyone who interacts with them, no matter if through visuals, feel or sound.

Founded in 1995, Canor – based in Prešov, Slovakia – has taken another step forward with the two current models in its



The display in the I4S volume control is communicative and easy to read.

TEST INTEGRATED AMPLIFIER & D/A-CONVERTER



The rear of the DAC includes everything you could want digitally with USB, HDMI, coax, 2 x optical, and AES/EBU. Analog output is via fixed-level RCA and XLR outputs.

cated multifunction control button, but it more than makes up for this with a highly responsive touchscreen that allows you to select the desired input as well as one of the 8 switchable digital filters. These filters allow for a sound balance that can be adjusted in subtle nuances, enabling fine-tuned sound tuning ranging from crisp and dynamic to particularly smooth and harmonious.

We can't report any miraculous results with immediately noticeable changes, but if you've been listening with one filter setting for a while and then switch to another, you can definitely hear the difference. And after some more time to get used to it, you'll be able to assess the differences in terms of quality – even without the exceptional hearing of a bat.

One of the questions that kept us wondering as we got to know the devices bet-

ter over the weeks was: Why is the D4S limited to a pure DAC functionality and why wasn't it also designed to work as a music streamer?

According to Canor, the wide range of affordable and, for the most part, easy-to-use streamers from Far Eastern manufacturers makes it virtually impossible for a medium-sized European company to compete on equal footing in this segment – especially if it doesn't want to sell its customers a device that will become technically obsolete after only a short time. Canor does, however, offer firmware updates for the DAC; on the hardware side, though, the company deliberately limits itself to components that will remain technically up-to-date for a long time. In terms of service, this means that even years after a purchase, there is no risk of repairs being compromised by components that are no longer available or a lack of update capabilities.

Sophisticated, but without tubes

Let's now take a look under the precision-crafted solid aluminum hood, which is available in aluminum, black, or a bronze shade. There, we discover that both devices in the "Foundation" series – unlike typical Canor products – operate without tubes. Instead, all signals pass through what are known as semiconductors – a term electronics engineers use to refer to

transistors, diodes, and integrated circuits (ICs). The entire circuit design in the Canor devices is completely discrete – meaning constructed without ICs, which are always suspected of causing sonic problems such as increased distortion, heightened noise levels, and a loss of dynamic range.



Michael Lang
STEREO editor

“A DUO THAT CONVINCES WITH MUSICALITY, FEATURES, AND BUILD QUALITY.”

Both devices feature a clean internal design and are channel-isolated, built with high-quality components to ensure many years of trouble-free operation. The analog output stage of the D/A converter boasts a balanced design. Each channel is equipped with one high-quality ESS Sabre 9038 DAC chip. Until recently, the chips in this series

TEST DEVICES

Turntable: Yamaha PX-2

Phono preamp: Lehmannaudio; Waxwing

Streamer/DAC: Eversolo Z10

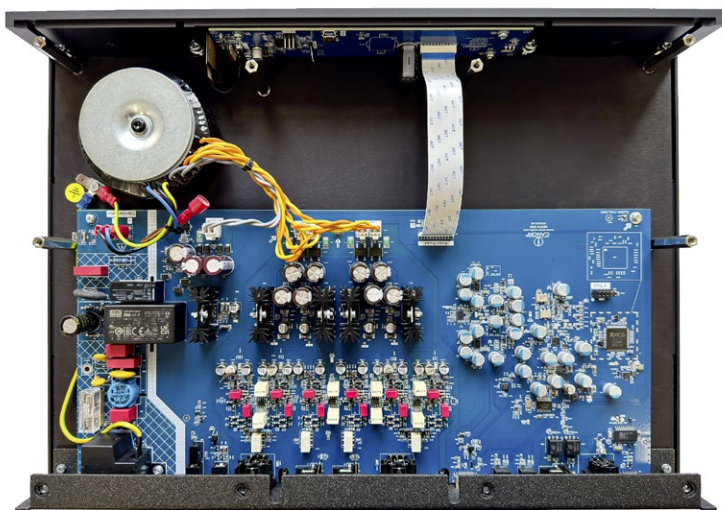
Integrated amplifier: Musical Fidelity M6xi

Speakers: Gauder DARC 140, DALI Rubikore 8, Canton Vento 101

Cables: Cardas, NBS, Stockfisch



The I4S is extensively equipped and, in addition to two line-level RCA inputs and an XLR input, also features a high-quality phono input for MM and MC systems.



The symmetrically designed DAC with its strong power supply is the real surprise of this review.



The silently operating fan and the copper heat sinks ensure a uniform temperature environment for the transistors.

were still considered the absolute pinnacle of performance. It was only with the arrival of the California-based company's 9039 series – which is still rarely seen – that the 38 series was dethroned. However, this does not change the fact that these digital converters still rank among the crème de la crème in terms of sound quality.

The amplifier appears to operate conventionally using classic AB technology. It features a linear power supply with a powerful toroidal transformer and delivers approximately 80 watts per channel to the speakers at 8 ohms. Energy storage is handled by electrolytic capacitors with a generously sized capacity of 40,000 microfarads. The transistors themselves would be capable of delivering up to 500 watts, but this design ensures that ample power reserves are always available, guaranteeing stress-free and thermally safe operation.

To achieve sonic perfection, the Slovakian developers have equipped the amplifier with a special and particularly clever correction loop, such as is also found in the manufacturer's higher-priced models. It's clever because it checks the signal for any distortion not just at the output stage, but well in advance – immediately after it is generated – and only intervenes when necessary. This prevents the signal path from being unnecessarily

lengthened. The goal is to keep the sound vivid and dynamic without sacrificing control over the speakers.

It is also particularly noteworthy how consistently Canor has prioritized the quality of the phono stage and the headphone output. Although these components are now found fairly regularly in amplifiers priced between 2,500 and 5,000 euros, they often seem more like a tedious formality that was included in the developers' specifications under the motto "The market demands it."

The discrete design of both the phono stage and the headphone amplifier in the I45 tells a different story. What's fascinating here is that, in addition to the adjustability of gain, capacitance, and resistance – whether connecting an MM cartridge or using an MC pickup – the signal remains virtually noise-free even at a high gain of up to 66 decibels. This flexibility, combined with the absence of noise, makes it a first-class partner even for very high-quality cartridges, easily holding its own against a wide range of separate phono preamps.

The headphone amplifier does not offer the same flexibility as its phono counterpart. However, thanks to its circuit design featuring voltage-controlled J-FET transistors, it is powerful enough to handle even demanding headphones, such as many electrostatic models.

After a convincing performance in our measurement lab, with negligible distortion and minimal residual noise, we were eager to see whether Canor's first transistorized duo would confirm the sonic impressions we'd had so far with the Slovak company's test units.

Straight to the heart

There wasn't much to beat around the bush about: What these two flat devices had to offer – both as soloists and as a duo – was simply a joy to experience. In particular, the ease with which the duo could switch between the most diverse demands – from Martha Argerich's feather-light piano touches to the kick drum beats of Led Zeppelin and Michael Jackson that really hit you in the gut – kept us spellbound throughout the performance.



The remote control transmits broadly with long range.



The color-switchable display provides comprehensive info on everything worth knowing if desired. At the push of a button, however, it only shows the most important items: input and filter.

TEST INTEGRATED AMPLIFIER & D/A-CONVERTER

Admittedly, compared to more powerful competitors, the I4S sometimes lacked a tiny bit of low-end punch – which, colloquially speaking, could also be described as having a less “fat” bass. To compensate, however, nothing sounded muddy; textures in the lower registers were precisely discernible without ever sounding thin. Voices ranging from Lyn Stanley to Joni Mitchell filled the room with a sense of depth and the right sense of scale; their “s” sounds were free of any hissing and full of natural nuances and timbres.

Even the value-for-money-champion Eversolo DAC-Z10 couldn't pull ahead; sometimes the DAC-Z10 had a slight edge, sometimes the D4S did, without either one clearly emerging as the winner. It depended more on the music and personal taste than on a question of quality. However, the Canor clearly has the better build quality.

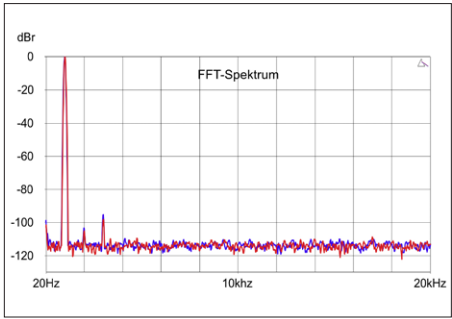
Music machines with feeling

When the duo played together, the fine-tuning was just right, and there was no need to dwell on this or that detail, as their performance clearly directed the audience's attention toward a relaxed – yet not without tension – enjoyment of the music.

Instead of nitpicking over individual details, this combo knew how to present music in context, with the ability to give sounds time and space to fade in and out. Tonally, the sound was a touch on the lean side with a spacious soundstage. Whether listening to solo voices or a choir, a thrilling experience unfolded, so that the door to rarely heard music opened almost of its own accord. And isn't that one of the most beautiful experiences a hi-fi system can offer a music lover – opening the door to music that had previously been overlooked? ■



The Canor devices look especially elegant in the bronze-colored finish.



The D4S FFT diagram shows that the developers did a thorough job.

STEREO TEST RESULT: PROFOUND. CRITICAL. TRANSPARENT.

CANOR FOUNDATION VERTO D4S

Product type	D/A converter
Website	www.canor-audio.com
Price in euros	2.500
Dimensions (W x H x D) in cm	43 x 7.5 x 31.5
Weight in kg	8
German distributor	www.idc-klaassen.com
Phone	+49 231 22178822
MEASUREMENTS	30 %
Output impedance (in ohms)	good (140 / 240)
Output voltage (in volts)	very good (2.1 / 4.1)
THD at -9 dBFS (in percent)	very good (0,0012)
Signal-to-noise ratio: digital zero (in decibels)	satisfactory (92)
FFT spectrum	very good
Power consumption idle (in watts)	satisfactory (17)
FEATURES	55 %
Haptics & Workmanship	very good
Headphone output	no
Digital inputs	2x optical, coax, AES / EBU, USB, HDMI
Outputs	RCA / XLR
Color variants & finishes	silver, black, bronze
Tone control	yes, via filters
Music formats	everything except MQA
Volume control	no
Hard mains switch	yes
HANDLING & OPERATION	15 %
Operation on the device / display	very good
Quality of the manual	very good
Warranty in years	satisfactory (2)
PRACTICAL GRADE	good 2.0
Sound description	nimble and elegant, gentle, with high resolution
SOUND SCORE	89 / 100

WHAT WE'VE HEARD



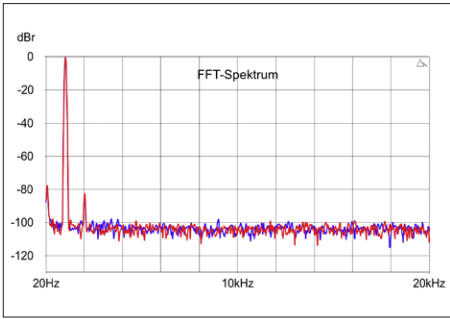
LED ZEPPELIN: IN THROUGH THE OUT DOOR

Great hard rock from an exceptional band.

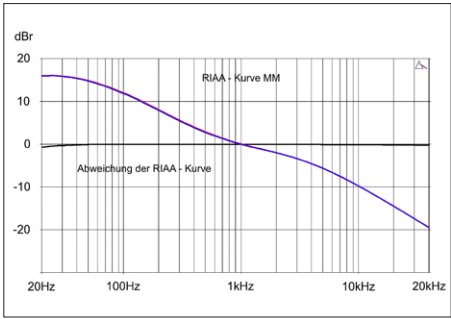


PETER NEUMANN: MOZART REQUIEM

The power of choir voices in a large hall does not leave you unmoved.



The I4S distortion figures are very low and demonstrate the care taken in development.



The phono frequency response is linear and makes using high-quality cartridges worthwhile.

STEREO TEST RESULT: PROFOUND. CRITICAL. TRANSPARENT.		
CANOR FOUNDATION VIRTUS I4S		
Product type	Integrated amplifier	
Website	www.canor-audio.com	
Price in euros	2.800	
Dimensions (W x H x D) in cm	43 x 7 x 31.5	
Weight in kg	11	
German distributor/ phone	www.idc-klaassen.com / +49 231 22178822	
MEASUREMENTS	30 %	good 1.8
Continuous power per channel into 4 ohms at 1 % THD (in W)	good (106)	
Impulse power into 4 ohms (1 kHz; in watts)	good (135)	
Intermodulation at 5 watts (in percent)	very good (0.0037)	
Damping factor into 4 ohms	very good (82)	
Channel separation (in decibels)	good (79)	
Channel balance volume control (in decibels)	satisfactory (0.8)	
Upper cutoff frequency (in kHz)	very good (>80)	
Distortion factor at 5 watts (in percent)	good (0.012)	
Signal-to-noise ratio at 5 watts (in decibels)	satisfactory (79)	
FFT spectrum	very good	
Power consumption idle (in watts)	good (40)	
FEATURES	35 %	good 1.9
Haptics & Workmanship	very good	
Number of analog inputs (RCA / XLR)	very good (3 / 1)	
Special interfaces	Phono MM / MC; headphone	
Tone controls or room correction	no	
Pre-out / hard mains switch	yes / yes	
Color variants / finishes	silver, black, bronze	
HANDLING & OPERATION	35 %	good 1.6
Quality of the remote / manual	good / very good	
Operation on the device / display	very good	
Warranty in years	satisfactory (2)	
PRACTICAL MARK	good 1.8	
Sound description	fast, tonally lean but not bright, precisely resolving	
SOUND SCORE	79 / 100	