



NOT A POSER

It is an archetypical American. So it's all about standing out? Only at first glance, because behind the imposing appearance of the VAC 170iQ hides clever, detailed and in part very filigree technology.

When I met Kevin Hayes, head of development and owner of the American amplifier manufacturer VAC – the abbreviation stands for Valve Amplification Company – at a trade fair in the USA a few years ago, he pleasantly surprised me: in the midst of all the hustle and bazaar-like competition, he was able to impress with quietly, competently and with gentle humor stated remarks about his tube amplifiers. It left me with a slight sadness as I went on, because as high quality and tempting as the amplifiers were, a test was out of the question, due to the lack of a German importer at the time. Fortunately this has changed since this year's HighEnd.

We decided on the entry-level model of the current product range: an integrated amplifier, which will cost around 11,000 euros at your trusted dealer.

This is certainly a price range where most of us have to first take a deep breath

and then ask ourselves whether there is not already a (too) large selection of alternatives in this price segment, and what special features the Sigma 170 iQ has to offer in order to gain a position in competing with the top dogs as well as the exotics. From the outside, a more than solid touch quality and the considerable weight provide a first impression that inspires confidence.

The VAC is not an equipment-miracle, but it is still surprisingly versatile. Four LEDs on the front panel show whether the power tubes are working without problems and whether the “iQ circuit”, which is still to be explained, can perform its function of bias control and adjustment. As soon as the bias control recognizes aging tubes, but can still readjust their operating points to such an extent that they work properly, a green LED lights up. Only when nothing works

anymore or a tube is defective, the clever amplifier switches off in order to prevent possible further damage to the device, and signals this with a red LED.

Features and options

On the rear, our VAC has one XLR and three RCA inputs, one of which has been optionally equipped with a switchable phono stage for MM and MC systems. The impedances for the quiet MC systems can be adjusted in three stages at the top of the VAC; switching between MM and MC is done here as well. Additionally, there are outputs for connecting a power amplifier or a subwoofer as well as a loop-through option for home cinema fans on the rear. The feature-package is rounded off by the various taps for speakers. In any case, it is worth experimenting with all three options between four and 16 ohms to get the optimal sound. All sockets are solid and of high mechanical quality. For the sake of completeness, a mute switch on the front and a plastic remote control for volume and muting are to be mentioned in terms of equipment, as well as the



◀ The plastic remote control is simple in design: loud/quiet, muting – that's it.



◀ A rather wild looking mix of boards and some cables. The quality of the components is consistently high.

fitting their budget and subsequently moving with the result into the measurement lab to have the correctness of their theoretical considerations confirmed. Various inconsistencies on the measuring bench can then be smoothed with manageable effort. Only then the resulting product is heard, and when satisfied, it goes into production. At VAC they don't take the easy route. Once the concept is in place and initial audio samples have been successfully completed, components in some assemblies are selectively replaced. This process is then repeated until they are sure to have achieved the best possible sound within the given limits. A time-consuming process, yes, but assuming that people with trained ears work at VAC, a promising one.

The thing about the bias

The special feature of the VAC bias circuit is that it takes into account the quiescent current in real time even with changing heat conditions of the tubes, varying mains voltage, different volume levels and even aging tubes, i.e. further parameters than just measuring the tube once in idle mode without music. This system was patented by Hayes, who founded his company in 1990. The most attractive effect of this system, besides an always optimal sound, is a significantly longer lifetime of the tubes.

Large caliber

If an amplifier is in the five-digit price range and is not explicitly recommended by the manufacturer for very specific loudspeaker concepts, it must prove itself on

exchangeable power cable – an option that one should consider very seriously in order to be able to fully exploit the sound potential of this amplifier.

One of the points that astonished me again when I met Mr. Hayes this time, was his completely non-dogmatic handling of the way he conceived his amplifiers.

It doesn't have to be a specific tube, and especially not a hyped one like the KT 150. Four Russian KT 88 Gold Lion are used in the iQ 170, which are tested, measured and matched according to various parameters at VAC. He doesn't even think much of the war of faith about the effect of a negative feedback loop; he gives all his creations a low dose of this distortion-reducing medicine. Perhaps you have already heard that point-to-point wiring is supposed to be superior to a PCB-equipped solution? Here, again, Hayes keeps both feet on the ground. Besides some neatly equipped boards there are also various cables inside the 170er, which appear quite random in their course. The American also shows his pragmatic side when it comes to volume

control, using a selected, motor-driven, blue Alps potentiometer. Inspired from his listening experience, it sounds better this way than with any electronic solution he has heard so far. You believe him all the more after realizing that even in his most expensive preamplifiers a potentiometer is used – although it is one that costs him almost 1500 dollars in purchase. Please don't ask me, which amount changes the owner for the complete preamplifier...

Components are heard

There are quite a few developers in the hi-fi world who design their products on a computer, ordering components in the quality

Solid rear panel jacks and separate taps for speakers with four, eight or 16 ohms nominal impedance that can be safely tested. ▶





▲ The Class A phono stage is completely implemented as a triode circuit, sounds excellent and is amplified for MC systems by an extremely high-quality and low-noise transformer by 20 dB.

common, high- or highest quality loudspeakers – in this case, amongst others, on one of our references, the 800 B&W.

After a fitting break-in time of almost 100 hours in the listening room, already the first notes revealed that there was not only someone who knew his trade, but who was a proper sound artist at work here. The lightness with which Johnny Cash’s “One” was projected into the room was extraordinary. And because the STEREO Listening Test LP II caressed our ears so fascinatingly via the very low-noise but all the more powerful phono stage, using the Transrotor Rondino Nero with the in-house Figaro pickup, we left aside the digital sources almost entirely.

Those who claim tube amps had no

control over loudspeakers will be taught better with the VAC 170 once more. A damping factor in the three-digit range indicates from lab-sides what is possible in terms of sound. The floating elegance with which even exhausting pieces such as “If I Only Could” by the Blues Company are blasted into the room without sounding either vulgar or unclean, make even experienced and powerful transistor competitors sweat – and the listeners ponder. Doug MacLeod’s “Rosa Lee” sounded intense, rhythmically precise and gripping, in the bass with the right mix of punch, accuracy and swing. At outside temperatures of almost 30°, Lyn Stanley’s story about “A Summer Place” sounded more comprehensible than ever.

But even in pop and rock the VAC wasn’t shaken by anything, even at high levels that the B&W as well as the DALI Epicon 6 are easily capable of. Good pop music, usually not known for ingenious recording techniques, got under your skin e.g. with Eurythmics.

Joe Bonamassa, this time on the road live with interpretations of English blues legends at the “Old Royal Naval College”, rushed tirelessly over the guitar strings to underpin his claim to the title of “Speedmaster”. The VAC managed to breathe soul into the slightly towards the sterile and technical tilting music and to convey that the audience was completely enthusiastic despite or perhaps precisely because of the current guitar superstar’s love of technique. Just like we were of the VAC iQ 170.

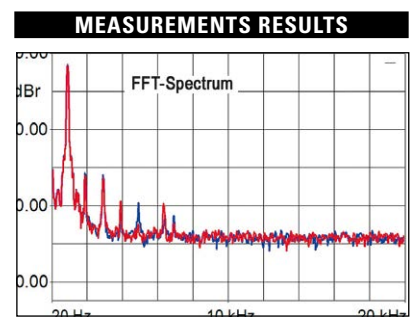
Michael Lang

Solid toggle switches for on/off, muting and home cinema function, each indicated by an LED. ▼



VAC SIGMA 170i Q
 from 10990 €
 (Phono MM/MC optional, 1590 €; XLR input 890 €; Glass tube cage according to CE standard: 890 €)
 Dimensions: 46 x21 x48 cm (WxHxD)
 Warranty: 2 years
 Contact: Valve Amplification Company
 +1 941 952 9695, www.vac-amps.com

The US tube specialist is celebrating an extremely strong debut on the German market with this outstanding integrated amplifier, which drives even sophisticated loudspeakers without any problems. Excellent optional phono stage.



Continuous power (8 Ohm / 4 Ohm)	64 W/62 W
Pulse power 4 Ohm (1kHz)	80 W
THD at 50mW/5W/1dB Pmax	0.08 %/0.1 %/0.2 %
Intermod. 50mW/5W/1dB Pmax	0.08 %/0.1 %/0.2 %
Signal to noise ratio at 50mW/ 5W	63.7 dB/80.2 dB
Intoxicating. Phono MM (5 mV for 5 watts)	70.1 dB(A)
Signal to noise ratio Phono MC (0.5 mV for 5 Watt)	68.7 dB(A)
Attenuation at 4 Ohm (63Hz/1kHz/14kHz)	66.3/50/142
Upper cut-off frequency (-3dB/40hm)	>80 kHz
Crosstalk Line 1 > Line 2	70.2 dB
Synchronization error Volume at -60dB	1.2 dB
Power Consumption Stby/idle (at) /215 W(223.5 volts)	

LAB COMMENTS:

AC phasing on test unit

Good performance, low distortion, low noise, high bandwidth and an enormous attenuation factor for a tube amplifier.

FEATURES

Four inputs, one with optional Phono-MM/-MC; XLR input at extra charge; Pre-Out, home cinema loop; remote control; fully automatic bias control.

STEREO-TEST

SOUND QUALITY **98%**

PRICE/PERFORMANCE

★★★★☆

VERY GOOD