

Equipment Report



Icon Audio LA4 MkIII Signature Line Preamplifier

Happily Ever After

Dick Olsher

This being my first tango with Icon Audio gear, I asked David Shaw, Icon's founder and designer, to fill in a few gaps for me. To begin with, I wondered why Icon Audio is all about tubes. Apparently, David's valve passion was kindled some 25 years ago when a friend asked his opinion about a restored Leak EL34/KT66 power amplifier. He was rather smug about this, having recently swapped his QUAD for a Krell amplifier, which he was very pleased with. After trying the Leak at home, he was astonished that such a "primitive" design could "trounce the Krell in just about every way." And the rest, as they say, is history.

Established in 2000, Icon Audio is wholly owned by David, which means that he is not under pressure from shareholders or partners for profit or dividends. No wonder that his philosophy is to make products that either do not currently exist in the marketplace or, if there are similar designs, to make them at least as good at a value price. Toward that end, initial production is performed at his small factory in Zhuhai, China. David says that he discovered early on that for the best quality control all products needed to be finished at his Leicester, UK, facility. The final assembly is done by a team of four, all of whom happen to be mu-

sicians. Following a burn-in process, every product is auditioned to ensure that sound quality is as it should be, or else it is returned to the lab for a checkup. Having control over the final assembly makes it easy to update designs and implement custom modifications and upgrades.

The LA4 was originally conceived as a driver for Icon's early 300B and KT88 power amplifiers. As a line preamp, it was refined over time, most recently to reduce gain and improve feedback implementation. The circuit topology incorporates classic design elements, which include tube rectification and a cascaded gain stage, followed by a cathode-follower output buffer.

David loves 6SN7s. "I love their sound," he says, "and find them robust and reliable." So, naturally, the tube of choice here is the 6SN7, which is not often seen in line-preamp applications. It should come as no surprise when I tell you that the 6SN7 is also my favorite line driver, and it certainly perked my interest in the LA4.

The LA4 is actually outfitted with a trio of clear-glass Psvane CV181 dual triodes, which are electrically akin to a 6SN7 (6.3V/0.6A filament), rather than the British military CV181 (6.3V/0.95A filament). David believes that tube life is to a large degree proportional to temperature, and he is therefore not a fan of "coated glass" premium-type tubes, which he maintains will run hotter than the standard clear-glass types. When visiting Psvane's factory in Changsha, Hunan province, he asked if they could do a run of their CV181 without the internal coating, which turned out to be no problem.

The design goals were to make a relatively simple line preamp with fairly low gain and with low output impedance (<100 ohms) that would allow it to effectively drive long interconnect runs, where distributed capacitance becomes a significant factor. In addition, keeping the output impedance low allows the LA4 to drive power amps with input impedance as low as 10k ohms without loss of treble response. David says that over the years he had looked at the circuit many times to see what could be altered or improved, and each time he ended up reverting to the original circuit based on listening tests. This is where

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Specs & Pricing

Frequency response: 10Hz–30kHz (+0/-0.1dB)

THD: 0.01% @ 1kHz, 2V rms

Max gain: 12dB (input voltage x4)

Output impedance: <100 ohms

Maximum output: 30 V

Noise: -90dB

Tube complement: 3x 6SN7 (or CV181, 6H8C); 1x GZ34/5AR4

Weight: 25 lbs.

Price: \$3095 (Signature version); \$2400 (Standard version)

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Associated Equipment

Speakers: Fyne Audio F1-8, Fleetwood Sound Company DeVille; Audiostatic ES-240; Innersound Isis 3.5

Power amplifier: Will Vincent ST-70, Berning EA-230, NYAL Moscode 600 (upgraded), First Watt F-8, Pass Labs Aleph 5, Krell KSA-100, Sumo Andromeda

Phono front end: Bang & Olufsen Beogram 8000 turntable w/ MMC 20CL cartridge; Pentagon phonostage; Revox B795 turntable; TPAD 1000 phonostage; Sound Tradition MC-10 step-up transformer

Digital front end: Audirvana 3.5 software; Qobuz streaming; audiolab 6000CDT transport; Audio Note 2.1 Signature, Denafrips Terminator, & Soekris dac1421 DACs; Matrix Audio X-SPDIF 2 USB bridge; UpTone Audio isoREGEN; Alldaq ADQ-USB 3.0 isolator

Cable & interconnects: Acrotec, Mogami & Kimber KCAG interconnects; Acrotec 6N, Analysis Plus Oval 12, ChromaLeaf Canare 4S11, & Take Five Audio Cryo treated Mogami 3103 speaker cable

Accessories: Sound Application CF-X & TT-7 power line conditioners

rectifier (274B), white-base CV181 triodes, and an upgrade from the stock SCR coupling capacitors to Mundorf silver/gold-in-oil premium types. Note that the Mundorf caps do require an extended break-in period to reach their full sonic potential.

Icon's policy has been to deploy point-to-point wiring and avoid printed circuit boards. There's much more to this practice than simply emulating vintage gear. A major benefit, according to David, is the ability to optimize the placement of signal, DC, and AC power wires. The end result is a three-dimensional chassis layout, which is impractical to create with PCBs. Other advantages of point-to-point wiring are that upgrades and circuit revisions are easy to implement, and a burnt-out component does not require a new board. I took a peek inside the chassis and saw a neat and tidy wiring scheme.

Line preamps based on the 12AX7 family of dual triodes dominate the market. I've owned a fair number of such designs over the years. Every time I switch over to a 6SN7-based design, especially one that's tube rectified, I'm struck by the shift in tonal balance. It's about tonal gravitas, rendering of the lower midrange with authority, and portraying the orchestral power range with realistic tonal density. My first impression of the LA4 was exactly that. But there was more to it than this. Much ink has been spilt over the power-amp/speaker interface, but equally important is the preamp/power-amp interface. And it's not just about the preamp's source impedance, which admittedly is an important factor. In my ex-

perience, that alone accounts for a passive preamp's inability to drive long interconnect runs and the resultant loss of microdynamic detail. It's also about synergistic meshing of the preamp's distortion spectrum with that of the power amp. To investigate that performance aspect, I was determined to evaluate the LA4 in the context of at least six power amps. In all cases, the LA4 managed to enhance sound quality in significant ways. A few examples follow.

Will Vincent's magnificent Dynaco 70 creation matches well with the Fleetwood DeVille loudspeaker, and clearly shines as one of the best-sounding Ultralinear amps money can buy. The familiar billowing and deeply layered soundstage, big enough to get lost in, was on full display. But instead of being painted with broad brush strokes, the LA4 tightened image focus and, as a bonus, improved bass definition, an area in which the ST-70 has always been weak. The usual strong suits, a full-bodied midrange and lush harmonic textures, were still there in spades. Bottom line: The ST-70 never sounded any better.

The First Watt F8's vaunted textural purity was in no way diminished with the LA4 in the chain. It benefited from the LA4's spatial resolution, so much so that image separation was nothing short of amazing. Transient decay was clearly elucidated and, in general, there was a remarkable level of detail being revealed without etching or brightening of harmonic textures.

Staying with Nelson Pass designs, I shifted to the Pass Labs Aleph 5, a recent acquisition of mine that originally left the factory in 1999—an

"listening judgment must take precedence over technical considerations."

There are four single-ended line inputs, one tape loop, and two main outputs. Output signal polarity is non-inverting. There is no balance control or headphone jack, but there is a remote-controlled Alps volume pot. The remote-control circuit is powered by its own transformer winding in order to avoid any unwanted interaction. The Signature version features an upgraded tube

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oldie to be sure, but one that I've fallen in love with, and which I've affectionately dubbed the "porcupine," covered as it is with heat sinks all over its body. It must be one of the most liquid-sounding solid-state amplifiers on the planet. With the LA4 at the helm, bass lines were refined and exceptionally well detailed. Complex passages were well resolved without loss of clarity or detail. Tonal colors were reproduced with superb fidelity, being vibrant and engaging. Dynamic shadings were nicely drawn out from soft to very loud, at times being outright explosive.

At this point in the proceedings I felt I had a good handle on the sound of the LA4 and inferred that its son-

ic virtues of transient clarity, image focus, vocal projection, and bass definition were due in large part to the stock CV181. But on the downside, it lacked a romantic disposition, the lush textures and *über-sweetness* I'm addicted to. This wasn't an issue when partnering tube amps, but was noticeable with solid-state amplification. And that brings up the subject of tube rolling.

I asked David about that. He said that he personally never found significant differences between brands and types, and while he has measured different characteristics even for tubes in the same batch, a well-designed circuit with degenerative local and global feedback should null-out such differences. But he

does admit to occasionally "having a sneaking suspicion that some brands have better long-term listening quality, which only becomes apparent after several sessions." He agreed that, in general, tube rolling is obviously a fun thing, and believes that flexibility (if practical) is important for allowing the customer choices in operation. So, with his tacit approval, I was off to try a few 6SN7 alternatives.

Specifically, I was interested in trying out the 7N7 and 7AF7 loctals, 6SN7 near-equivalents via adapters, albeit with a loss in overall gain. Note that I only replaced V1 and V2, the gain stage tubes, leaving the cathode follower (V3) alone. In particular, the 7AF7 worked extremely well for the end result I was after; namely, textural sweetness galore. It wasn't as focused or tight in the bass as the CV181, but it nicely vitalized textures when partnering solid-state designs. Neutrality or warmth—both are possible with the right 6SN7. And that is the important point about tube rolling: It allows the end user to voice the LA4 to match a particular system or sonic preference.

It would seem that David Shaw has cracked the code for preamp excellence. His classic recipe includes a 6SN7 gain stage, a tube buffer, and a tube-rectified power supply. This combination, together with excellent engineering and parts selection, makes the Icon Audio LA4 Signature into a formidable line preamp. This is one preamp I could live with happily ever after. **tas**

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