

Company Philosophy

CAT's mission is to remove the barrier between the listener and the music and the company philosophy is to design products to neither add to nor detract from, the music.

The company maintains a low profile, not only in terms of exposure, but also on their website. The site opens with a quote from Buddha: "THREE THINGS CANNOT BE LONG HIDDEN: THE SUN, THE MOON AND THE TRUTH." Clearly, the people at CAT want us to care about music and not so much about technical details. I can respect that but there's one thing that I wanted to know but that's nowhere to be found: where are these products made? Elsewhere on the 'net, I found the answer: USA!



The JL5 even uses the same driver tube technology as THE STATEMENT amplifier. This driver is specifically optimized for the high current KT120 tube. The new JL5 is said to deliver the "drive anything" sound of its bigger brothers while being fully competitive with the older 6550 version of the more expensive JL2.

CAT also offers the JL5 Black Path Edition LE which is the Limited Edition. This is a brand-new upgraded version with Teflon boards that will be available soon.



With 120 Watts into 4 or 8 Ohms at 1% THD, a bandwidth of 1 Hz to 70 kHz at +0, -3dB and a 116dB noise floor, the JL5 promises stellar technical performance. The manufacturer feels that it is silly to use long internal lengths of cable just for the convenience of having all connectors on the amp's rear end. Instead, the JL5 has its input and output connections on the sides and right where the internal circuitry needs them. The input connectors sit right next to the input tubes and the speaker cable connectors sit right next to the output transformers. A nice extra benefit of the centrally-placed output transformers is that the amplifier has evenly distributed weight which makes its large heft easier to lift and move around.



JL5 with the Tube-Protector cages removed. This is necessary when using banana connectors.

The amp has 4 x 6922/6DJ8 driver/PS tubes and 8x KT120 power tubes in triode mode. Along with some more measurement specs, this concludes the technical information that is available on the [CAT website](#). Perhaps they want people to listen and not worry about the technology. But for those who are interested in the details, I found lots more useful information on the [GCAudio JL5 page](#), which I have summarized below.

[Power Supply and Circuitry](#)

The Power transformer is encased in a separate nickel-plated steel housing to contain the magnetic field.

An isolation transformer eliminates entry of AC power line noise into the amp, yielding greater benefits than add-on conditioners.

Slow filament power-up extends tube life greatly. Quadruple cascaded audio power supply uses a combination of time-compensated zero feedback MOSFETS and vacuum tubes.

Pure Triode audio circuitry eliminates the partition noise inherent in pentode designs and the resulting noise intermodulation ("grain").

Low feedback (about 7dB) properly compensated design eliminates the tonal hardness of high feedback and/or improperly compensated designs.

Ultra-wide open-loop in-circuit bandwidth of the output transformer enables operation of the amp's closed-loop response entirely within the open-loop response, eliminating any requirement to use high feedback to force the output stage to perform beyond its natural capability.

Massive 15lb. output transformers allow the magnetics to operate at maximum linearity while still maintaining extremely low bass capability.

Unprecedented stability into capacitive loads, thus great for driving even the most difficult electrostatic speakers.

Black Path Edition Features

Low-loss aerospace circuit board material.

Amorphous Alloy core has less than 1/12 the hysteresis of conventional grain-oriented silicon steel used by the competition.

Black Gate power supply capacitors and BLACK PATH audio capacitors.

Chassis Features

Heavy steel chassis, Mirror-polished stainless steel, and Golden Ratio proportions.

The output transformers are enclosed within their own magnetically isolated housing which is lined with Birch plywood. Constrained damping layer on the top plate silences vibration before it can be converted to electromechanical noise.

Mechanical isolation from floor vibration provided by anti-resonance viscoelastic feet.

Convenience Features

Fully auto-biasing. OptiBias(TM) compensates for power line fluctuations up to 10% either way meaning that the tubes always sound their best.

Tubes are operated at only 1/4 rated power for very long life expectancy.

Tube life indicator. Green indicates the tubes are still good. Red indicates time to replace.

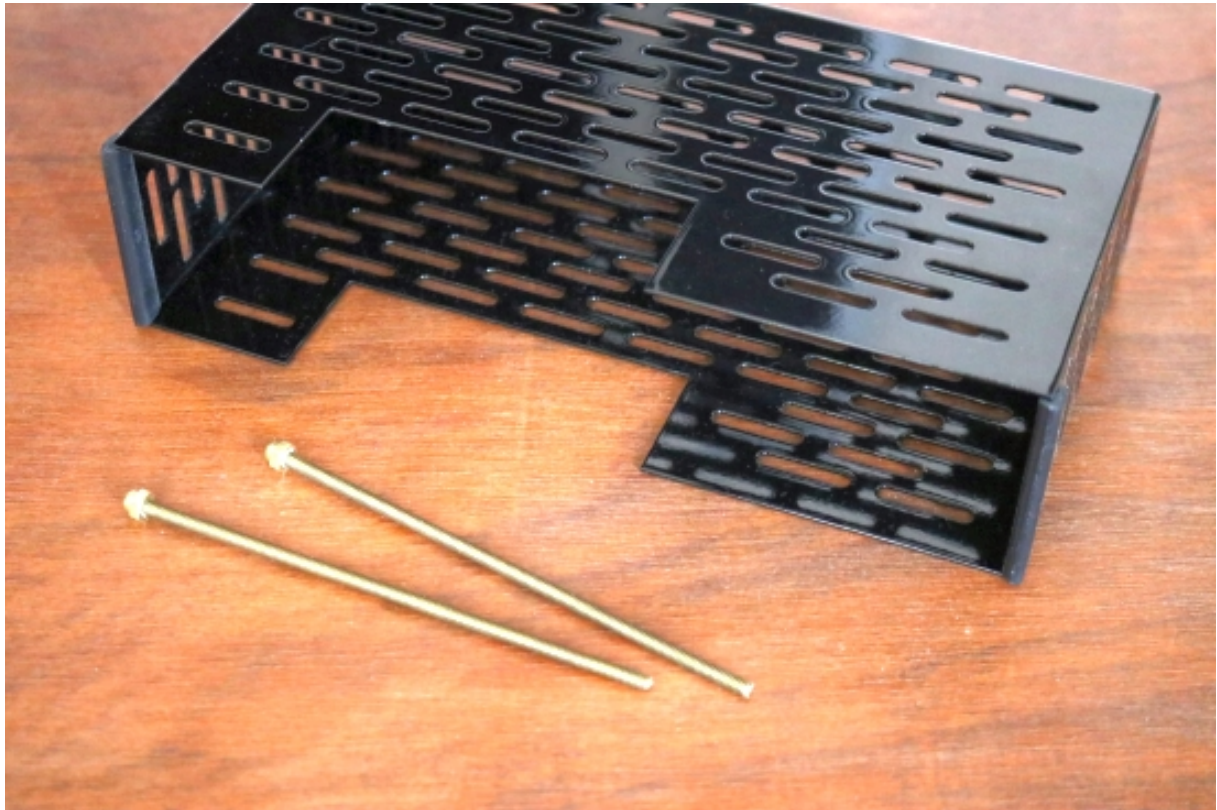


Power amplifiers do not get any simpler to connect than the JL5. There's nothing on the rear end but the power inlet and a big power switch



[With Xavian Perla Esclusiva](#)

In the secondary setup with the Xavian Perla Esclusiva loudspeakers, the JL5 looks positively majestic and it also sounds that way. Driven directly from the Ayon CD-10 II CD player and connected with AudioQuest Water interlinks and Driade Flow 405 speaker cables, the amplifier sounds generous in power and energy but also in a dimensional manner. Its pacing is perfect: neither slow nor hurried, and it has great dynamics. The amp throws a huge soundstage with great depth of imaging. It still amazes me that certain amplifiers can make the tiny Perlas image beyond the room's front wall boundary and the JL5 certainly belongs in this category.



The tube-protector cages are very solid and are fixed in position with two long screws

The bass, while big and majestic, has good control and is integrated very well, never overwhelming the musical whole. While the amp has a colorful, rich, and powerful delivery, it does not sound colored. In fact, I find its delivery to be very well-balanced, if not strictly linear. No doubt because it is a Triode design, the JL5 has less "bite" and precision in the frequency extremes than I typically hear in this system with either the NuPrime ST-10 or the Ayon Spirit III. The bass and treble are just a little round and sweet. Now, whether one interprets this as a deviation from linearity or as an increase in naturalness is a bit of a personal matter. I prefer tightness and control, but to be fair, one could also interpret these differences the other way around, the JL5 being more natural and the Ayon being comparatively dry or "transistor-y". It also depends on what kind of sound you are coming from.



When starting with the Ayon Spirit III and switching to the JL5, what I notice most is the aforementioned softening in the frequency extremes. But, arguably of more importance, I also notice the increased spaciousness and, specifically, an absolutely luscious midrange. Rich, inviting, organic, and emotionally compelling, this is, of course, a Triode design's main selling point. Especially with vocals and acoustical instruments, the JL5 sounds simply gorgeous. It has the kind of alluring delivery that makes one relax into the music.

Having listened to the JL5 for a while and switching to the Ayon Spirit III (as an integrated amp), the latter is very dry in comparison and with a very different dimensional presentation, smaller, more in-between the speakers and much more static. When eliminating the Ayon's built-in preamp by connecting its Direct Inputs, there are further gains in tightness, control, and articulation but also cleaner and drier, removing the presentation even further from the JL5's. Admittedly, this kind of presentation does work well with hard-hitting electronic music such as Billie Eilish's album "When we all fall asleep, where do we go?". Playing the same tracks on the JL5 I don't get the same kind of energetic vibe and that's because this kind of music relies heavily on rhythm and transients and much less on tonality or flow. But when playing more traditional music styles such as soul and anything that concentrates on acoustical instruments with the Ayon, there's now definitely some romance missing.

Relative matters aside, one thing that's beyond discussion is the JL5's ability to provide power, not only into medium loads such as the Xavians but also in more difficult loads such as the Magico S1 Mk2's, as I will describe in the next section. With the Xavians, I could not find the amp's limit, the speaker reaching their limit before the amp does. This is of great value as it is absolutely rare for the Triode mode's seductive midrange qualities to be combined with such bottomless energy reservoirs as with the JL5.



[8 Ohm versus 4 Ohm](#)

Although the Perlas present a nominal 8-Ohm load, I also tried the JL5's 4-Ohm outputs. Where such a mismatch usually leads to a darker and more relaxed sound, the JL5 presents the music simply on a smaller scale with less immediacy but with the overall balance intact. While the 8-Ohm outputs were clearly preferred, this bodes well for the next speaker matches that will follow.



[With Magico S1 Mk2](#)

In the main setup in the large room, the JL5 will be connected to Magico S1 Mk2 loudspeakers via Jorma Trinity speaker cables. For this review, I will use the Antipodes K50 Music Server streaming Roon RAAT directly to the CH Precision C1 DAC as well as streaming via the HQPlayer plugin to the Aqua LinQ that outputs via a Jorma AES/EBU cable to the Vermeer TWO. At this moment, the TWO is not yet RoonReady but it is UPnP compliant. For this review, though, I will keep it simple and simply leave the Jorma AES/EBU cable connected to the LinQ while swapping it between the C1 and the TWO.



Between the C1 and the TWO, I will be brief as this is detailed in detail in the TWO's review, but suffice to say that the Vermeer's tight, open and dynamic yet organic sound combines beautifully with the JL5.

I carried out this section of the review with three friends, two of which are tube aficionados who were interested in hearing the JL5. After having listened to a playlist selection with my usual C1+A1.5 combo and switching from the A1.5 to the JL5, the experience worked out similarly as with the Ayon Spirit III. First and foremost, we all noticed an increase in midrange magic and while the JL5's soundstage was not wider than that of the A1.5, it was *considerably* deeper and more 3D. The net effect was a very pleasant feeling of being engulfed in sound. Even though the S1's are baby-Magicos, they are a lot harder to drive properly than the Xavians but, again, the sound was uncolored and very well-balanced. And the JL5 had absolutely no problems playing very loudly. Clearly, it seems to be living up to its reputation of being able to drive just about anything.



As with the Xavians, the Magicos, too, benefited from the JL5's glorious midrange and we all agreed that, for vocal magic, there is no beating tubes. However, as lush and emotionally appealing the presentation, I also felt that the amp's softness at the frequency extremes and its slight rounding of transients diminished the music's "live" aspect, making rhythm-driven tracks sound less realistic than with the A1.5. Judging from my friends' responses, not everyone will experience it like this. Two of them (MP and JW) were clearly in favor of the JL5's more romantic approach while the third (Jan Cramer AKA Meneer Buis, AKA Mr. Tube) preferred the CH, in spite of his colorful tube-history. What I can add is that, so far, no tube amplifier has been able to make me forget about the CH A1.5 altogether. And that's only logical, for it is a transistor amp. I happen to favor the traditional transistor strengths and don't mind the relatively less-developed areas that tubes do so well. The two camps will always bring their relative benefits and the decision between the two remains a very personal one.

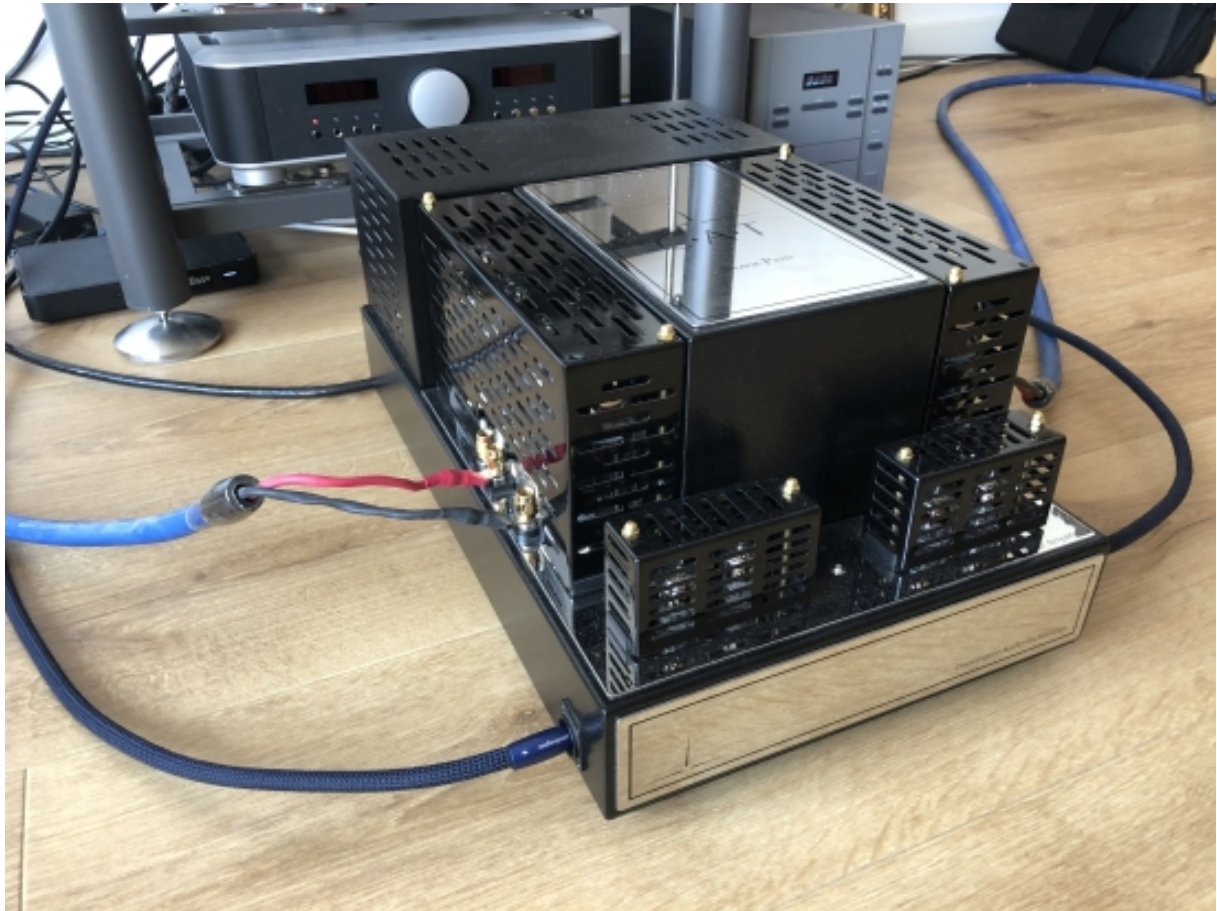
[With Martin Logan Spire](#)

The manufacturer indicates that not only does the JL5 drive just about any dynamic loudspeaker, it is extremely stable into capacitive loads and, as a result, also well-suited to drive even very difficult electrostatic speakers.

Alas, I sold my Martin Logan ESL15A's prior to the arrival of the JL5, otherwise, it would have been very interesting to see how what the CAT pairing would bring. Fortunately, audio buddy Niels (not to be confused with "Big Niels") has Martin Logan Spires which are an older but still relatively recent model. I've stepped aside to Niels' setup a couple of times before and I have tried a selection of tube amplifiers with his speakers before. So far, the result had always been a pleasingly rich sound with a magical midrange but nearly always with severe HF roll-off. This is only natural given that the speaker presents itself as a capacitive load that combines with the amplifier's output transformer to effectively form a low-pass filter.



Niels' setup consists of a custom-built Music Server, a Jeff Rowland Aeris DAC with PSU and an Analog Domain M75D integrated amplifier. Because the M75 has a proprietary connection that couples its pre- and power amp sections, we resorted to using the Aeris with an AudioQuest Water interlink directly into the JL5 using the DAC's digital volume control. The speaker cables are Cardas Clear Light. Given the speakers' below 1-Ohm load in the upper treble, I started with the CAT's 4-Ohm output and after a quick comparison, this also turned out to lead to the most balanced result.



To be honest, I'm not entirely sure how CAT has managed it but, indeed, the JL5 has considerably less treble roll-off than I anticipated. Granted, Niels' Analog Domain amp elicits airier and more open treble from the Spires but the JL5 counters with much deeper imaging and a midrange so organic that it took Niels a moment to come to grips with. As he puts it, the JL5 makes his speakers sound such that one stops pondering and just relax while the music pours out of the speakers with an effortless flow. What I noticed, in particular, is that the bass was rounder and fuller than with the Analog Domain but, as with all earlier loudspeakers, again very well-balanced and never attracting attention to itself. As regular readers will know and as I have probably made very clear in this article, I am a solid-state guy and I love tight and controlled bass, but still, I can't fault the JL5's very natural bass delivery. In addition, the JL5 has a very natural timbre which is especially important with Martin Logans as they can sound very slightly synthetic themselves. With the JL5, however, the speaker sounded wonderfully natural and acoustically highly convincing.

Conclusion

If there's one thing that this test confirmed, it's that the JL5 lives up to its promise of being able to drive basically all speakers out there, including electrostatics.

While its presentation of the music is notably different from that of an Audio Research Ref75 on the one hand (very tight and ultra-transparent) or an Ayon Spirit III on the other (very robust and sonorous), I would not characterize the JL5 as being editorializing in any particular manner.

The CAT has a slightly sweet but highly natural sound with the slight softening at the frequency extremes that typically come along with a Triode design. The benefits of its Triode circuit, however, are overwhelming with a gloriously rich and juicy midrange of the kind that transistors simply seem unable to recreate. Along with this comes wide and very deep imaging with the kind of 3D depth that makes vocals, strings, and piano so alluring. Unusually for a Triode design, the JL5 combines the aforementioned traits with seemingly bottomless power reserves and the ability to drive just about any loudspeaker, including electrostatics.