

ALEX HALBERSTADT

Lejonklou Entity

PHONO PREAMPLIFIER

S ometime around 483 BCE, in Kushinagar, the capital of the Malla Republic in what today is the Indian state of Uttar Pradesh, an aristocrat named Siddhārtha Gautama—known better to us as the Buddha, or the Awakened One—passed away. For 45 years, he had wandered the North Indian River Plain teaching a method of overcoming ignorance, craving, and the cycle of death and rebirth to a growing community of followers. As he lay dying, the 80-year-old teacher was surrounded by disciples, many of them crying. Gautama was by no account a sentimental man, and several times he told the monks to cut it out. According to a Pali scripture called the Mahāparinibbāna Sutta, the Buddha's last piece of advice to his disciples was "*appo dipo bhava*," most commonly translated into English as "Be a light unto yourself."

This teaching was radical for a South Asian spiritual teacher living in the 5th century BCE. It is also easily misunderstood. To be a light unto yourself does not mean to dispense with teachers or received knowledge; instead, the Buddha was encouraging us not to follow teachers blindly or turn knowledge into dogma. The value of every parcel of wisdom, every precept, every conviction, he told us, must be borne out in personal experience. Otherwise, it is useless. Ultimately our own experience is the *only* teacher. Really, how can it be otherwise?

More than many other pastimes, perfectionist audio is rife with dogma, pet theories, rival camps, and oversimplifications. Many among us swear that tube amps are "more musical" than transistor ones, others that tube amps are hopelessly colored, or that horn speakers are more dynamic than conventional ones, or that horn speakers are an incoherent mess, or that measurements are crucial



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to musical enjoyment, or that they are entirely irrelevant to it, and so on. Most equipment manufacturers align themselves with some of these positions and eventually double down in

overinflated marketing claims.

Once in a while, however, an obsessive appears who questions every assumption about what makes listening to recordings at home enjoyable and moving. Usually, or hopefully, the questioning involves 1) a recognition of how genuinely complex this process is, and 2) tens of thousands of hours of experimentation and listening.¹

These obsessives embody the Buddha's final teaching. They also tend to be uncompromising, eccentric, and on occasion, pains in the ass. One who springs to mind is the late Ken Shindo of

¹ Of course, speaking broadly, positioning yourself as a maverick can itself be an effective marketing strategy.—Jim Austin

SPECIFICATIONS

Description Single-box moving coil phono preamplifier. Inputs: one stereo pair RCA. Outputs: one stereo pair RCA. Gain: 71dB. Input impedance (switchable): 90, 120, 180 ohms, 10nF. Max nominal cartridge output level: 0.4mV at 3.54cm/s. Output impedance: 300 ohms.

Power consumption: less than 5W.

Dimensions 4.1" (103mm) × 2.3" (59mm) × 7.1" (180mm).
Weight: 2.1lb (970gm).

Finish Black.

Serial number of unit reviewed 057. Manufactured in Sweden.

Price \$2695. Approximate

number of dealers: Nine.

Warranty: Five years parts and labor, transferrable.

Manufacturer

Lejonklou HiFi AB
Skolgatan 3 753 12 Uppsala,
Sweden.

Tel: +4670 558 0549.

Web: lejonklou.com.

US distributor:

Nokturne Audio,

8259 Hugh St.,

Westland, MI 48185

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Japan's Shindo Laboratory, a man known for showing up at listening events with priceless magnums of rare burgundy. His amplification designs rely on tubes not used since the dawn of electrical recording, unexpected circuit designs, field coil speaker drivers, decades-old capacitors and resistors, and exacting and sometimes peculiar choices regarding every aspect of his products: the cases, wiring, connectors, feet, even the colors. Shindo believed that they all affected the listening experience and were worth investigating carefully.

The subject of this review—a moving coil phono stage called the Lejonklou Entity—comes from the mind and hands of another obsessive, one Fredrik Lejonklou (pronounced Lay-YON-clue) of Uppsala, Sweden. Compared to Shindo's, his amplification components rely on solid state devices instead of tubes, tend to be utilitarian in appearance, and (with one notable exception) are somewhat more affordable than Shindo's components. A cursory scan of his company's website showed me that Lejonklou is not interested in flattering anyone's assumptions or playing nice with the measurements crowd. "I don't really care whether it sounds 'correct,'" he



has written about his design process. "I care about how it feels. I want to be moved." Many of Lejonklou's US dealers also sell Shindo equipment. Perhaps they specialize in weirdos and free spirits.

With further clicking, I learned that Lejonklou designs using the Tune Method, popularized by Ivor Tiefenbrun of Linn. In brief, it entails comparing two components by listening to 10–20 seconds of the same song and determining which makes the melody more tuneful and easier to follow. Lejonklou suggests that this is best accomplished with mediocre recordings heard while standing outside the listening room, a technique that obscures sonic differences and makes it easier to focus on the musical ones. A pdf on the Lejonklou website offers more detail about this process.²

According to Thomas O'Keefe of Nokturne Audio, Lejonklou's US importer, Fredrik Lejonklou learned the method while working as a Linn retailer and applies it during hundreds of comparative listening tests, which he relies on to select everything: transistors,

² See lejonklou.com/wp-content/uploads/2014/10/Tune-Method.pdf.

MEASUREMENTS

I measured Lejonklou's Entity phono preamplifier with my Audio Precision SYS2722 system.¹ The single, moving coil-compatible input preserved absolute polarity and offered 70.2dB of gain. (Though this is slightly lower than the specified 71dB, my measurement was affected by the voltage-divider action between the preamp's input impedance and the Audio Precision's output impedance of 20 ohms.) The input impedance was 90 ohms with it set to "90," 120 ohms with it set to "120," and 180 ohms with it set to "180," all values consistent from 20Hz to 20kHz. The output impedance is specified as 300 ohms; I measured 264 ohms at 20Hz, 295 ohms at 1kHz, and 297 ohms at 20kHz.

The error in the Entity's RIAA equalization (fig.1) was low, though there was a very slight, 0.2dB boost in the midrange. The channel matching was excellent overall. Channel separation (not shown) was >80dB in both directions across the audioband.

The Lejonklou's unweighted, wideband S/N ratio, measured with the input shorted

to ground, was a very good 68dB (average of both channels), ref. 1kHz at 500µV. Restricting the measurement bandwidth to 22Hz–22kHz increased the ratio to 68.1dB in the left channel, 71dB in the right, and the A-weighted ratios were 74.9dB, left, and 77.7dB, right. Spectral analysis of the Entity's low-frequency noise floor revealed that both the random noise components and AC supply-related spurious were slightly

higher in level in the left channel (fig.2, blue trace) than the right (red trace).

The Entity's overload margin (ref. 1kHz at the standard MC level of 500µV) was a very good 14dB at 20Hz and 1kHz, but dropped to 2.2dB at the top of the audioband. The Lejonklou offered very low distortion. Fig.3 shows the spectrum

¹ See stereophile.com/content/measurements-maps-precision.

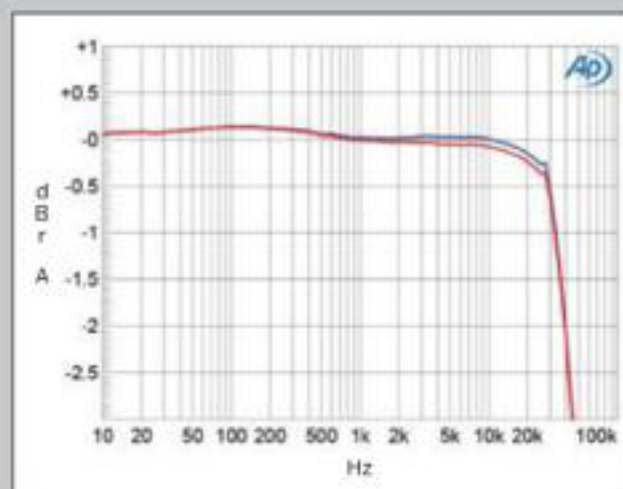


Fig.1 Lejonklou Entity, response with RIAA correction into 100k ohms (left channel blue, right red) (1dB/vertical div.).

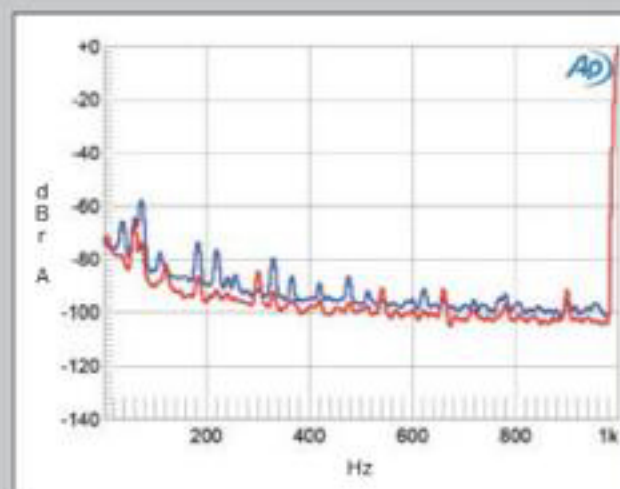


Fig.2 Lejonklou Entity, spectrum, DC–1kHz, of output ref. 500µV input (left channel blue, right red, linear frequency scale, 20dB/vertical div.).

wire, solder, even the washers used in his components' casework. He seems to embody Linn's motto "If it sounds better, it is better" but takes it to singular extremes. Here's one: He suggests that his digital streamer, the Källa, is best used for streaming music from Spotify, which Lejonklou believes sounds better than lossless streaming services like Tidal and Qobuz.

After learning about this rather daring opinion, I knew I wanted to hear Lejonklou's components. His question-everything approach reminded me of another Buddhist proverb about the dangers of dogma and assumptions, this one from the Zen tradition: "In the beginner's mind, there are many possibilities, but in the expert's, there are few." I called O'Keefe and asked to borrow the Entity, a phono stage designed for low-output moving coil cartridges that retails for \$2695. The Entity uses the same basic circuit as the Lejonklou SINGularity, although the latter has four power supplies, a pure dual-



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mono configuration with two independent, annealed-copper chassis, and several other differences, including a retail price of \$55,000.

My first encounter with the Entity was underwhelming. It arrived in a box Amazon might use to ship two bottles of multivitamins; inside the box, I found a rather featureless, black, sheet-metal box about the size of six

measurements, continued

of the preamplifier's output reproducing an input signal of 1kHz at 500 μ V. The only distortion harmonic that can be seen above the noise floor is the third, at -96dB (0.0015%). This very low distortion did not increase in level when I reduced the load impedance to the current-demanding 600 ohms. Increasing the input to 2mV, 2dB below the level where the Entity's output clips, actually reduced the level of the third harmonic by 10dB (fig.4), though

the second harmonic makes an appearance at a still vanishingly low -103dB (0.0007%). The Entity also offered a low level of intermodulation distortion, even just below clipping into 600 ohms (fig.5). The second-order difference product lay just above -70dB (0.03%).

The Lejonklou Entity offers accurate RIAA equalization, very low noise and distortion, and a bombproof output stage. The limited overload margin at the top of

the audioband means it will be best used with low-output moving coil cartridges. It is fair to note, therefore, that the preamplifier's manual does state that the maximum cartridge output is 0.4mV/400 μ V at the standard recorded velocity of 3.54cm/s. This would increase my measured overload margins by 2dB, and with a cartridge like Ortofon's Verismo, which has a nominal output of 200 μ V, the margins would be increased by another 6dB. — John Atkinson

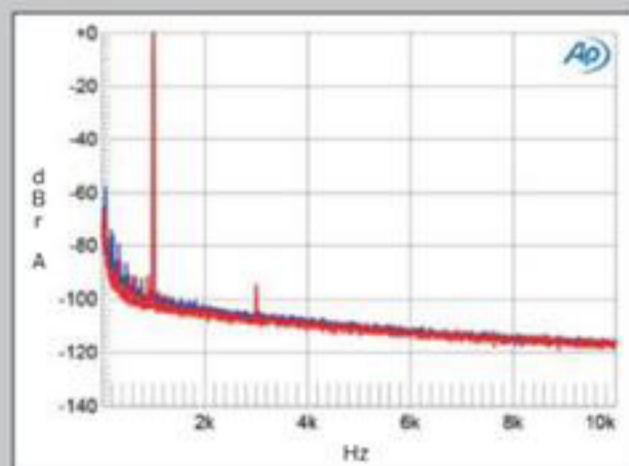


Fig.3 Lejonklou Entity, spectrum of 1kHz sine wave, DC-10kHz, into 100k ohms for 500 μ V input (left channel blue, right red, linear frequency scale).

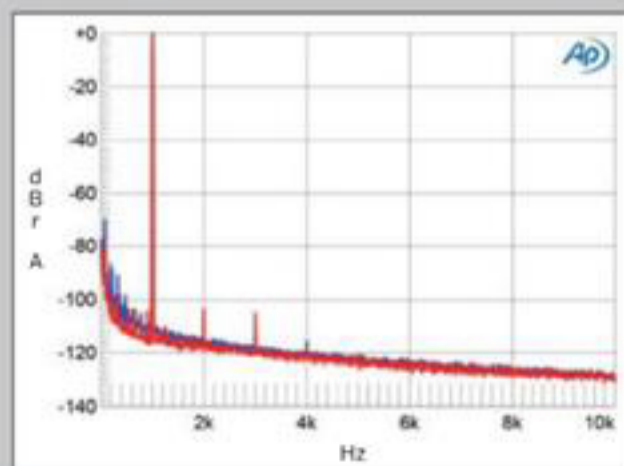


Fig.4 Lejonklou Entity, spectrum of 1kHz sine wave, DC-10kHz, into 100k ohms for 2mV input (left channel blue, right red, linear frequency scale).

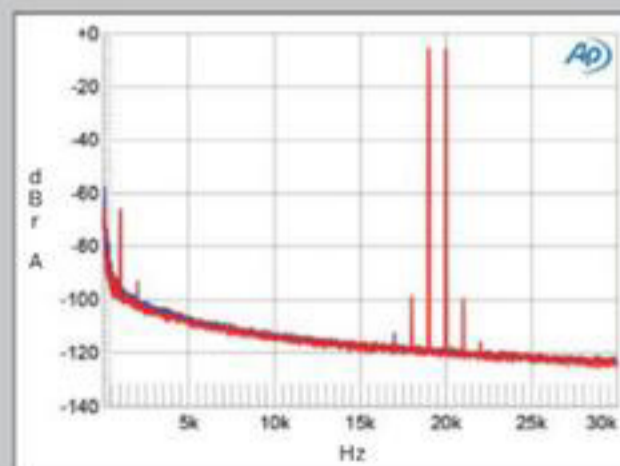


Fig.5 Lejonklou Entity, HF intermodulation spectrum, DC-30kHz, 19+20kHz into 100k ohms for 5mV peak input (left channel blue, right red, linear frequency scale).

chocolate brownies arranged end to end in two layers, weighing about 2lb. The front panel contained only the company logo. The back had two sets of RCA jacks, a ground lug, and a pair of three-way switches for setting cartridge loading, with options for 90, 120, and 180 ohms. Unusually, the power cord is captive: Lejonklou believes that in the context of his circuit, his power cord is bound to sound better than yours. The Entity is intended to be left on, so it dispenses with a power switch. The brief manual specifies a gain of 71dB and a maximum nominal cartridge output of 0.4mV. I wish I could tell you more about what's inside the Entity, but that is all the information I was able to glean. In an industry that still values massive faceplates and things machined out of aluminum billets, the Entity comes across as a punk statement in nondesign that dares the listener to rely on the ears and not the eyes.

Listening

I listened to the Entity with three cartridges—the Ortofon SPU Classic G, the Zu/Denon 103, and the Dynavector Te Kaitora Rua—with my Garrard 301 turntable and its Schick 12" arm and also on a Technics SL-1200G. My favorite way to listen with the Entity was to route its output through my Shindo Aurieges preamplifier to the preamp inputs on the Line Magnetic LM-845IA integrated amplifier so the Line Magnetic was used as amplifier only. It sounded more impactful and exciting that way than it did connected directly to the Line Magnetic's line inputs. Out of the box, music played by the solid state Entity sounded bleached, but after about 50 hours of use, this tendency disappeared and the Entity began to sing with its authentic voice.

With all three cartridges, the Entity sounded neutral, extended, and transparent. Listening to "Footprints" from Miles Davis's *Miles Smiles* (Columbia CS 9401), I was bowled over by the portrayal of cymbals. Tony Williams is the Walt Whitman of the cymbals, and the Entity rendered his shimmering, impressionistic, primal playing with matter-of-fact presence. Some phono stages make cymbals into sheets of white noise, but through the Entity they sounded embodied, controlled, and starkly metallic, with no hardness. The delightful Te Kaitora Rua, which has the most extended and detailed top end of the cartridges I auditioned with the Entity, made this track sound thrilling.

A lovely aspect of being a collector and appreciator of recorded music is coming late to classic records that others discovered decades earlier. For me, one of these is the eponymous first album by Crosby, Stills & Nash. When I encountered *Déjà vu* (by Crosby, Stills, Nash & Young) as a much younger listener, I admired Young's contributions, particularly "Helpless," but I judged the contributions from Stills and Nash to be dated white-bread anthems for privileged, flaxen-haired hippies.

What did I know? Today, I find the harmonies on *Crosby, Stills & Nash* to be mind-altering in their closeness and beauty. Listening through the Entity to "Helplessly Hoping" from a first pressing (Atlantic 8229) allowed me to hear the three vocalists spread across a soundfield that was unusually tall and wide, in which they were placed with remarkable specificity. The highly resolving Entity made even their intakes of breath audible, an effect I found oddly pleasurable.

The Entity's most impressive quality was how exciting it made listening to records. This was largely a function of the Swedish phono stage's knack for pace, rhythm, and timing. Another way to say it is that it made the musicians sound like they were playing together with uncommon empathy; yet another is to observe that the notes coming through the Entity were more musically meaningful than with the other phono amps I had on hand (about which more in a moment). Fredrik Lejonklou's little box lent Jean Shepherd's "Twice the Lovin' (In Half the Time)" from Marshall Crenshaw's

ASSOCIATED EQUIPMENT

Analog sources Garrard 301 turntable in a Box Furniture Co. plinth; Thomas Schick 12" tonearm and headshell. Technics SL-1200G turntable; Dynavector Te Kaitora Rua cartridge; Hana Umami Red cartridge; Ortofon SPU Classic G cartridge; Zu/Denon 103 cartridge.

Preamplification Shindo Aurieges preamplifier; Sutherland Little Loco phono preamplifier; Parasound Halo JC 3+ phono preamplifier.

Amplification Line Magnetic LM-845IA (used as a power amplifier); Pass Labs INT-60; Mark Levinson No5805; Ayre AX-5 Twenty.

Loudspeakers Altec Valencia 846A.

Cables Interconnect: Auditorium 23; Linn Silver; Audioquest FireBird and ThunderBird; Speaker: AudioQuest ThunderBird Zero; Auditorium 23; AC: AudioQuest Thunder and Hurricane; Triode Wire Labs Digital American. USB: AudioQuest Diamond; Ethernet: AudioQuest Diamond.

Accessories Box Furniture Co. Heritage stand; Box Furniture Co. amplifier stand; AudioQuest Niagara 3000 power conditioner; Sonore opticalModule; Sonore Audiophile Linear Power Supply, DJM Electronics Gigafoilv4-inline Ethernet filter; Vinnie Rossi Mini Pure-DC-4EVR 9-Volt DC Power Supply; IsoAcoustics OREA Bordeaux isolation footers; Cardas Myrtlewood blocks; Feickert Next Generation Universal Protractor, AudioQuest Anti-Static Record Brush; Last Stylus Cleaner; VPI Industries HW-16.5 record cleaning machine. — Alex Halberstadt

wonderful compilation *Hillbilly Music ... Thank God! Volume 1* (Bug/Capitol C1-91346) a downright amphetamine edge; Speedy West's steel guitar, though not particularly speedy on this track, sounded like a piece of electrified taffy being pulled in all directions, while the bass and drums maintained the terrifically frantic beat.

When he sent me the Entity, O'Keefe told me to experiment with the loading settings, suggesting that the results might surprise me. I found the settings to affect the sound more than I expected, and not always in predictable ways. With the Zu and its 40-ohm impedance, I found the 180-ohm setting to sound most open and extended—not surprising. With the 6-ohm Dynavector, I expected to prefer the lowest, 90-ohm setting, but found it rolled off the treble and emphasized the bass too much for my liking, whereas the 120-ohm setting sounded just right. O'Keefe suggested that sometimes the sound of a particular resistor matters more than its value. Who am I to disagree?

On a weeknight in March, Ken Micallef and Herb Reichert came over for some listening. Playing records on the Garrard 301 with the Dynavector cartridge mounted in the Schick arm, we decided to listen to the Lejonklou alongside the Sutherland Engineering Little Loco and the Tavish Audio Adagio, which Ken was kind enough to bring.

The Adagio (which retails for \$2190) can be used as a moving coil phono stage using its built-in Jensen transformer, but in this guise it was easily outclassed by the Entity, which sounded more energetic, detailed, and holographic. The Adagio's superb tubed moving magnet section made a much stronger case when paired with my Auditorium 23 SPU transformer. Listening to the Crosby, Stills & Nash track, the Adagio/A23 combination wasn't quite as fast, transparent, or resolving as the Entity, but it rendered the vocals with richer tonal colors and more texture and presence.

The Little Loco (which costs \$3900) made the track seductively smooth, refined, and dimensional, making the Entity sound a bit

brash, thin, and spatially flat in comparison. It was also marginally quieter. The more versatile Entity, though, had the upper hand in timing and excitement. When listening to the Little Loco, my first thought was “This sounds great”; with the Entity, it was “I love this record.” The Entity’s particular musical strengths were made obvious when I glanced around midsong and saw Herb and Ken bobbing their heads to the music, eyes closed.

For weeks after, whenever I played a record, I felt torn between the Entity and the Little Loco. I loved the tunefulness and drama of the former but wanted the more refined sound of the latter. Just then, a large envelope from Thomas O’Keefe arrived in my mailbox. It contained two pairs of Linn Silver interconnects (\$452 for a 1.2m pair), the cables Fredrik Lejonklou used when voicing the Entity. Cables are often considered an afterthought when reviewing a product, but with the work of certain obsessive audio designers who voice components by ear using a whole-system approach, that may not be a useful assumption. After all, you want to hear the component as close to the way the designer heard it. My Shindo Aurieges preamplifier, for example, sounds best with interconnects made by Shindo Laboratory and Auditorium 23, which are made specifically for Shindo gear. Besides, its delicate RCA jacks require ultralight cables, which rules out most of the audiophile competition.

With this in mind, I replaced the Auditorium 23 interconnects I had been using between the Entity and my preamp with the slightly heavier Linn cables and (cursing those delicate RCA jacks)



sat down to listen. The cable swap changed the sound of the Entity to a degree I was unprepared for. The Lejonklou Entity retained its remarkable timing and tunefulness but now sounded more refined, dimensional, controlled, and tonally richer. With the Linn cables in place, the sonic differences between the Little Loco and the Entity became vanishingly small, while the musical differences tilted my preference—slightly—toward the more affordable Swedish phono stage. I, too, remain gobsmacked by the transformation, but it is what I heard, and it was not even a little bit subtle. If you’re thinking of buying the Entity, factor these Linn cables into the price.

Wrapping up

In some ways, the Lejonklou Entity is baffling: a diminutive box with a captive power cord that could pass for an external hard drive but makes listening to records more dramatic and enjoyable than larger, costlier, more established competitors. I suspect it measures better as well. How it does this I cannot tell you, but it surely is related to the designer’s long hours of obsessive listening and tinkering and

years of iterative improvement. The Entity excels at communicating the emotion and meaning of music—the very things most of us sit down in front of our speakers to experience—and it does this considerably better than phono stages I’ve heard anywhere near its \$2695 price. Fredrik Lejonklou is someone who does things his own way and has supreme confidence in his ears. I cannot wait to hear more of his work. ■