

The Luxman EQ-500 Phono stage

Having owned Luxman products for longer than I can remember, I admit to having a soft spot for the brand.

My first hi-fi system, purchased in 1981, featured a Luxman L430 integrated amplifier and PD-284 turntable, still operating reliably in my living room today. This plays to their solid reputation of producing long lasting gear with a traditional flair – never flashy or the latest trend.

Should you own a Luxman product from the 1960s, you'll notice the similarity to the current products.

2020 marks the 95th anniversary of Luxman, one of the audio industries' longest standing brands, with a house sound that has remained consistent throughout its history. The Luxman sound is natural, and elegant - the same can be said of the current Luxman EQ500 Phono Preamplifier.



**The EQ-500 offers
aesthetic updates that
pay homage to the
past, yet respect
the future.**

Features and Functionality

The \$6,495 EQ-500 is the top model in Luxmans' analog range, above the solid-state EQ-250 Phono (\$2,295). It carries the same traditional look of its predecessors, with Luxman's hallmark toggle switches and rotary control knobs, yet the color and style of the front faceplate carry a younger and sportier look. Unlike the "38 range", which pays homage to models with a wooden outer case, the EQ-500 features a metal chassis with a thick aluminum face with a satin silver finish. The chassis has a standard size of 17.3" wide and just shy of 4" tall. The casework shares the same level of fit and finish with the top Luxman components.

The EQ-500 is an all-tube design, featuring three RCA phono inputs, and three outputs. Two are unbalanced RCAs, and 1 balanced XLR. All 3 inputs can accommodate both MM and MC Cartridges, with 3 different settings accessible on the front panel:

MM - for MM cartridges with approx. 4 mV output.
MC Low - for MC cartridges approx. 0.18mV output.
MC High - for MC cartridges approx. 0.44mV output.

The plethora of toggle switches and rotary knobs on the front offer near endless adjustability. Fortunately, you won't need to use them much beyond initial setup, unless you are changing phono cartridges constantly. The meter switch on the front panel does allow for turning the meters, but why would you ever want to turn them off? A plethora of front panel switches also allow control of output mode, mono/stereo functionality, high and low cut filters and even the ability to change the polarity of pin 1 and 2 of the XLR output. This comes in handy with a system that is not "all Luxman," to keep everything working smoothly. Finally, the switch marked "articulation" acts as a built in demagnetizer for your MC cartridges. Nice.

Following the instructions in the well written manual, (be sure to keep the volume control down all the way) leaving the articulation switch on for the required 30 seconds, though I could hear almost no difference before and after the demag operation.

The input, gain, and cartridge (MC/MM) rotary knobs are self-explanatory. Impedance allows infinite load adjustments between 30k and 100k ohms, while the capacitance control has six steps between 0 and 300 pF. Those with vintage MM cartridges will appreciate the ability to fine tune the EQ 500 in this manner.



What about loading selection for MC Cartridges? The EQ-500 utilizes step-up transformers as the first gain stage, with the load impedance defined by the turn ratio of the transformer. The EQ-500 has two MC gain settings, each corresponding to a specific gain ratio and therefore the actual load impedance is fixed for each setting. It's worth mentioning the owner's manual does not specify the actual load impedance seen by the cartridge. The impedance number printed in the manual corresponds to the recommended internal impedance of the cartridge for each input settings, not the actual loading.

The High MC position is suitable for MC cartridges with an internal impedance of up to 40Ω , translating to cartridges with an output of approximately 0.44mV. The Low MC position is for cartridges up to 2Ω , and these usually have an output of 0.18 mV. The actual loading impedance is not adjustable but is calculated to be approximately 50 \pm 4.4 ohms for the Low MC, and 110 \pm 40 ohms for the High MC input. This covers a wide range of cartridges on the market, except for the rare high output MC cartridges such as the Clearaudio Goldfinger (0.7 mV) which requires a loading impedance of approx. 270 to 300 ohm.

Under the Hood

Luxman America was tight-lipped about the circuitry design of the EQ-500, but they did give us some basic information. The design and engineering team features Mr. Doi, who conceived the product, Mr. Watanabe the actual engineer, and Mr. Nagatsuma, who did the final voicing/tuning on this project.

The first input stage for the MC section consists of 2 sets of discrete Step-Up transformers (2 for each channel) with a selectable gain ratio of 19 dB (Low MC) and 27 dB (High MC). This is followed by 2 discrete shunt regulated push-pull (SRPP) stages using 4 12AX7 tubes, and a cathode follower output stage with a pair of 12AU7 tubes. Paying homage to the highly respected E-06 phono released in 1987, the EQ-500 employs the same non-negative feedback capacitance resistance (CR Type) RIAA circuitry. The rectifier section does not employ the use of diodes, but a single EZ81 rectifier tube.

The internal layout of the EQ-500 is well thought out and pays respect to the Luxman heritage. The six tubes in the gain stage are hidden under a cover of solid copper. Each section of the circuitry is broken down into

individual modules, with plenty of shielding, neatly laid out in separate partitions. The critical capacitors in the signal path are sourced from German-made Mundorf M-Caps, unusual to be found inside a Japanese product.

As much as I respect the supplied Slovakian made JJ tubes, I prefer the sound of the old German made Telefunken. As soon as I put about 20 hours on the JJ Tubes, I swapped them with NOS Telefunken and never looked back. This entire review is based on Telefunken 12AX7, 12AU7s, and an RCA 6CA4 rectifier tube, instead of the stock configuration. As expected, the Telefunken are a major improvement with frequency extension, almost as if someone has physically lifted the frequency response curve at both ends of the spectrum. Higher notes are more extended, and lower notes are more weighty and solid. The holographic image projected in the acoustic space carries a lot more weight and presence, increasing dynamic contrast considerably. The tonality of the music became more natural and realistic. I highly suggest spending the additional \$600-\$700 for a set of NOS Telefunken to power your EQ-500.

I conducted this review mainly with 2 cartridges. The first is the My Sonic Lab Ultra Eminent BC, with an output of 0.2mV and a super low impedance of 0.6Ω , mounted on an Acoustical System Axiom Anniversary tonearm (\$ 30,000 USD, the first to land in N. America). The second is an Ana-Mighty Sound EMT Rebuilt TNT 15 with an output of 0.2mV and 6.5Ω impedance, mounted on a Glanz MH-124SD (Black Special edition \$ 20,000 USD, again the first in North America). Both of these mounted on a Micro Seiki RX-5000 turntable, and connected to the RCA inputs and set to the highest gain Low MC settings.

Extensive Listening

Long Play, an album by Taiwanese folk band "Xiao Juan and Residents of the Valley" is a reference quality recording produced by "Long Yuan" records of China. I was so taken with the quality of this record label that I decided to purchase the entire catalog! Playing the song "City of Heaven," originally composed by Joe Hisaishi for the Japanese Anime "Laputa", Xiao Juan voice came through with the utmost clarity and transparency. The album is particularly tricky to render, as the slightest hint of the lack of gain will manifest itself through a feeble or distorted voice. The sonic image will become a faint haze instead of a solid holographic image.



At 0.2 mV, or 0.0002 Volts, the EQ-500 has to multiply the cartridge signal by nearly 1000x to reach line level voltages. The EQ-500 delivered Xiao Juan's voice on the backdrop a pitch-black background with the complete absence of noise or hum. Her voice hangs in mid-air, with enough weight and presence to replicate her live presence in my audio room. The tonality of her voice veers slightly to the soft side of the spectrum than neutral, but not so much that she becomes fat and blurry, in fact it is perfect for my taste.

Onto a jazz album with slightly more instruments in the background, I pulled out Cécile McLorin Salvant's *For One To Love* album, playing the entire album. Cécile's voice is once again projected with clarity and realism, on the backdrop of a crisp yet weighty sounding concert piano. This time the vocal doesn't sound soft, but at no time does it become hard or abrasive. The individual notes of the piano of the velvet hammer were rhythmic and snappy, on lesser phono stages they can be muddy and jumbled together. The sounds of the cymbals are also distinctive and not intertwined with the piano - the EQ-500 passes the test with flying colors.

The EQ-500 pulled me through a major collection of long forgotten records, such as the Original Soundtrack of the 1970s movie *The Wicker Man*. I have almost forgotten that Sir Christopher Lee (Saruman in *Lord of the Rings*) can sing! In his deep and throaty voice, he sings the "Tinker of Rye" together with Diane Calento on the backdrop of a piano - again the sound is real and almost life like.

There's something special about old analog recordings which I can't say the same about with modern day digital recordings. Revisiting the high cut filter, it does take out some of the pops and crackle but at the same time it takes away the ambience which makes a recording feel real. I prefer to have the full unmitigated realism and imperfections come through the system and the Luxman EQ-500 does that exceedingly well.

I also pulled out the 1986 *The Mission* soundtrack by Morricone, which can be an audiophile's delight. Every track on this album is a never ending soundstage - expansive and deep, and somehow always infused with thunderous bass. If *The Mission* is not enough, then *The Emerald Forest* movie soundtrack will certainly shake the very foundation of your room. The album is worthy to be played in its entirety, but to satisfy my impatient nature, I play the "Initiation Ceremony & the Trance Dance" - well suited to show off the EQ-500's handling of explosive dynamics and soundstaging. The percussive notes are tight, distinctive, and chest pounding. The immediacy and the force of the instruments are rendered with an accurate sense of scale and dynamism.

In the end, the dynamic contrast exhibited by the Luxman EQ-500 almost reaches into the territory of the Burmester PH-100, or the Tenor P1. It does not have their frequency extension or solidity of holographic imagery, but the Burmester costs 3x as much, and the Tenor, 10x, so the Luxman EQ-500 is truly a bargain for what it does.

Over a period of 4 months I listened to hundreds of albums on the EQ-500. The sound reminds me of the McIntosh MP1100. It is slightly leaner than the warm sounding Ensemble Fonobrio, and not as voluptuous as the Aesthetix Rhea. It is slightly on the warmer and softer side of being neutral, and not as neutral as the AR Phono Ref 2 or Phono Ref 3, but it is most certainly not as sparkly, nor carry as much slam as the Manley Steelhead. It is a sound carrying enough natural realism to listen for hours without fatigue, yet not to the point of being heavily colored, drowning out other equipment in the reproduction chain.

Even with three other phono stages in my collection, all of which cost nearly 10 to 20 times the Luxman EQ-500, I liked it so much that I decided to purchase one, and it will likely be a permanent piece in my system.

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