Review of Tektron' Neptune by
Charles Brown, 04/2024, on:

Audiophilia

Tektron Italia Neptune Reference Vacuum Tube Integrated Amplifier

I have for you here the drop-dead-gorgeous Italian-made Neptune Vacuum Tube Integrated Single-Ended Triode Amplifier with 211 Tubes by Tektron from Catania, Sicily (**USD 19,500**). This beauty is the quintessential example of "form following function," in the best of Italian manufacturing traditions, where style and elegance are always the Janus-headed partners of form. Since the Renaissance, the best of Italian creations have integrated form with style, and the Neptune is a wondrous example of this tradition. I should state this beauty is courtesy of the ineffable, Don Corby, owner and operator of Corbys Audio, purveyor of first-class high-end audio equipment and, himself, a consummate gentleman. It's my great pleasure to publicly acknowledge his assistance.

On the Tektron website, this beautifully crafted message is displayed from the designer, Alessandro Coletta, about the new Masterpiece series of which the Neptune is the apex:
We have imagined a product line that embodies the best of our 35 years of experience and development. We have designed a line that has surpassed anything we have done so far. The aesthetic design represents the history and future of Tektron. We wanted something to make us dream and bring us to a new dimension so we have created the "Masterpiece" line.

The Neptune is a Single-Ended Triode construction featuring matched tubes: two 211s and two 6SN7 tubes; three line inputs, two unbalanced RCA inputs and one balanced XLR input, with a 400 mV signal input. The outputs produce 19 Watts per channel and for some of you concerned with manual adjustment of tube bias, the Neptune comes with automatic bias. Two further adjustors on the platform of the amp reduce hum, an electronic phenomenon I did not hear once through my speakers. The input connectors are of the highest quality, solidly built and connected, with, once again, a high-quality internal potentiometer with remote control.

The front of the Neptune shows three adjustment knobs of beautifully polished stainless steel—one for input adjustor, one for on/off mode, and one for volume. These beautifully crafted and wonderfully pragmatic adjustors are nicely weighted leaving no doubt as to the integrity and standards of the designer and manufacturer. As an aside, I preferred using the manual front panel knobs to the remote—that is how much I love the feel of these adjustors.

The two smaller 6SN7 tubes are used for preamplification and to drive the mighty 211 power tubes. As was related to me through email by Angela, the owner's assistant, this amplifier for Tektron is "…the start of a new project, with a design constructed to be more dynamic and more powerful than previous models. The power supply is purposely constructed with lower ripple and less noise with two inductances". And Attilio (the owner) ensures by working closely with an Italian firm, that the highest quality of components is used with his transformers. The Neptune comes with the higher "tension 211 tubes offering a more dynamic sound than the classic 300B tubes."

All of this tube marvel sits upon a thick aluminum chassis where the inner workings of the amp, the capacitors and resistors, are neatly and efficiently organized. Dimensions are 60cm by 46cm by 24 cm, depth by width by height, weighing in at 35 kg—certainly heavy enough to give me and my wife a significant workout when moving it in place.

We'll talk about some listening examples shortly, but it is obvious I admire the architecture of the Neptune. And in a moment of complete honesty, I'll admit to having a warm spot for valve amps, in general. I am aware of the practical disadvantages of tubes when it comes to playing music all day. The expense of replacing tubes is a serious concern. I am also aware of the so-called "measurement advantages" that most solid-state amps have over tubes and the serious level of discussion that animates the tube vs. non-tube enthusiasts.

It's quite a controversy. But I am willing to state in the end, regardless of our obsession with measurements, your ear is the final determinant of what you like; and when I say "ear" I mean your cerebral cortex and your entire memory construct that each human on this planet is gifted with. I will venture to say that your aural judgement of what is good is far more than just what your ear tells you; it is also an aspect of conditioning. What do I mean by this?

In 2024, just about all of us have been raised in the post-tube era, the era of the solid-state transistor-based era. We swim in a streamed, digital ocean, where we don't build superb public venues with outstanding acoustics for musicians. We are so acclimated to a type of sound, an apologia for this type of sound based solely on "objective" numbers—and the bigger the numbers, of course, the better—we consider other options outdated. We have become nodding agents to numbers. But numbers don't talk to your ear. Tube amps sound different. FETs, BJTs, SETs and transistors sound different. Full Stop.

We can thank Nobu Shishido from Japan for the Single Ended Triode amplifier revival in the 1970s when he combined a Single Ended Triode amp with very high-sensitivity speakers. The reaction to this combination was revelatory—listeners reported an immediacy of sound and the music stretching way out in front of the speakers that was far and away from what had been heard before. I don't think anyone could have foreseen Lee DeForest's triode vacuum tube of 1907 and his amplifier patent of 1912 resurrected in a world that had moved, seemingly, permanently into the hegemony of the solid-state paradigm. But never say never.

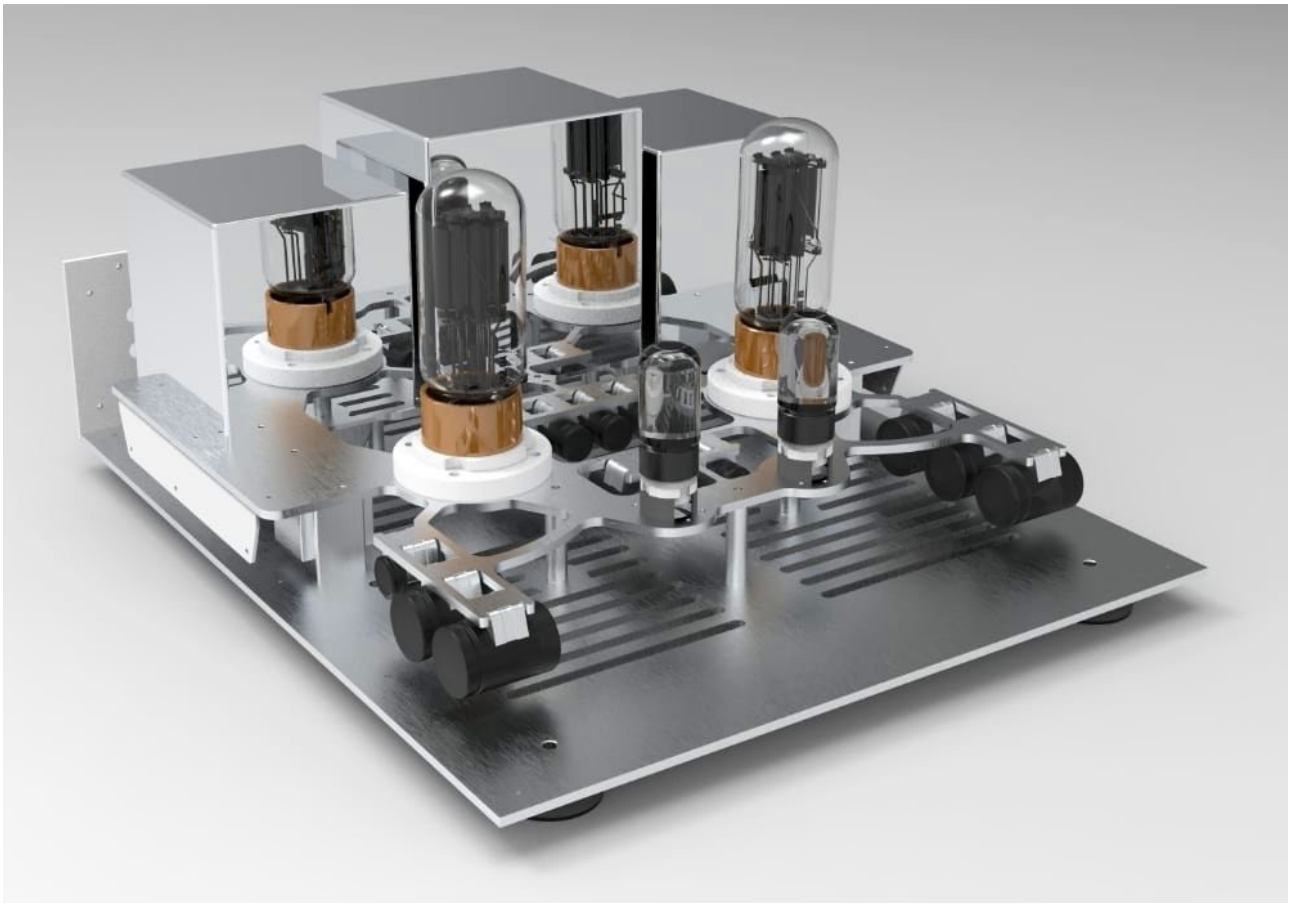
So what is the uniqueness of a single-ended triode vacuum tube, invented almost 120 years ago? Well, of all the vacuum tubes the SET is the simplest of constructs. Unlike pentode tubes—the most ubiquitous tube amp before the reappearance of the triode—the triode has but three elements that amplify the entire audio signal. That is, the entire waveform is generated within one tube and is generated without interruption. In "push-pull" tube amps, one half of the waveform is passed from one tube to another tube, hence the name push-pull action, creating for one nanosecond a gap in the waveform. The triode amp, on the other hand, has a lower wattage output, for sure, but the whole analog sine wave is generated and recycled throughout one tube thereby creating a technical cohesiveness that translates into, what many of us hear, as a genuine musical sonority. We shall talk specifically about the Neptune's sound in just a moment, but it's important to be reminded that the SET amp requires no phase splitter, and uses almost no negative feedback. You are looking at an engineering paradigm of brilliant simplicity. And they sound like it. Let me give you an example.

From the most recent stunning compilation of Rachmaninoff's sacred choral writing based on the Russian Orthodox liturgy, comes *All Night Vigil* with the Kansas City and Phoenix Chorales on Chandos, conducted by Charles Bruffy. The Audia Flight FL CD THREE S Player—also made in Italy (review forthcoming)—courtesy of Bryan Taylor from The Gramophone in Edmonton, Alberta is aligned with the Neptune, producing a glorious sound. This is the acme of choral singing in North America, if not the world. Recorded in Kansas City's Cathedral of St. Peter the Apostle, and, by the way, recorded brilliantly by Chandos engineers, the Neptune reproduces the authentic resonance. One is bathed in a warm and profoundly liquid-like musical sound that almost creates its own aura, it's so transparent and ethereal. I have seen, stood, sat in, and wandered around some of the great cathedrals of Europe. I don't know this cathedral in Kansas City, but the authenticity of Neptune's rendering of this Chandos CD brings with it an analog level of overtones from the choirs that is spectacular. Not icy clear, but clear, rich and warm and evidential of the sound I have heard in European cathedrals. This combination of choirs yields 56 members of which 16 choristers are basses. Now, I would have thought that the chances of replicating the Russian Bass, that almost superman of all basses that Rachmaninoff and so many other great Russian composers wrote for, would be impossible in North America—boy, was I wrong.

The basses in this combined choral group are outstanding in pitch accuracy and projection. The Neptune projects a warm and balanced mid-range, yet offers, a fulsome projection of these 16 “Russian” basses, heard so audibly on the C below the bass clef at the end of the first amen. Anyone who has been in a great cathedral clearly recognizes the atmospheric height—some almost seven stories high—of the vaulted ceiling. Great recording engineers can capture the height of this sound without allowing excessive echo. But it takes a great amp to reproduce that sound; the Neptune does this with 19 Watts per channel and moderately dB-sensitive speakers. I turn the volume up, the marvellous 211s do their job and the sound of the Russian Orthodox liturgy transcends my speakers, my ceiling, and my room until I believe I am in the Cathedral of St. Peter the Apostle, bathed in an image of holy light. The choirs and cathedral as acoustic vessels have done their job; the engineers have done their job and the Neptune with its 211 power tubes has definitely done its job. We’ll come to another example shortly, but first, let’s talk more technical details.

SET amps on the surface seem to have the most distressing of numbers. Output is less than 25W on average, with a very high Total Harmonic Distortion rating at the amp’s output. In addition, there is a high impedance output. The key is SET amps require speakers of very high sensitivity—certainly 93dBs and above. Some would say 95 dBs and above. My Tri-Art B series 4 Open Baffle Loudspeakers with 93dBs driven by the Neptune amp and its 211 tubes, displayed no negative damping factor at all. Certainly, nothing I could detect. With this level of sensitivity in a speaker, one doesn’t require 250W per channel as in some solid-state amps.
When one listens to a live orchestra, ensemble, or HiFi, waves of sound move out toward you, through you, around you, and above you in what are called complex waveforms. We are used to showing the analog wave as a simple roller coaster wave on a graph. But within that analog wave are a large number of smaller varying-sized waveforms, in essence, displaying the vast overtones and harmonics embedded in each note that is played by acoustic instruments. A 3rd space C on the French Horn is not simply a C. There are a series of harmonics built into this pitch. We are hardwired to pick up these stunning subtleties through our aural capacity and to sense sounds and motion through our biofield. How? Because we are analog beings; we hear analog sine waves, not 0s and 1s.

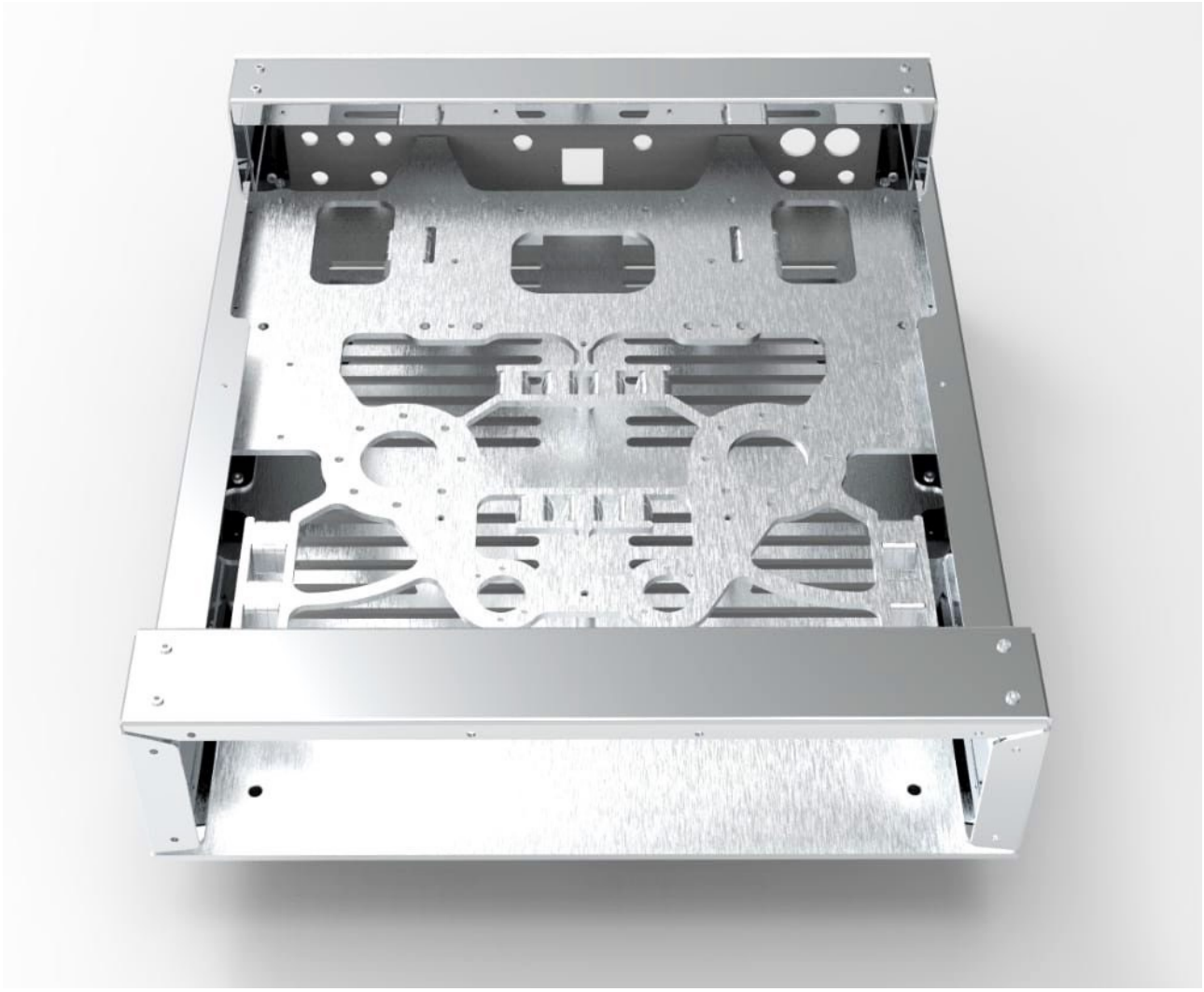
Now, a digital waveform must be sampled or derived from the original analog waveform and these samples are associated with a voltage in a binary format of 1s and 0s at a certain KHz. The sampling transfer may or may not reproduce transients in all of its nuances. The renowned Bernie Grundman, master recording engineer and owner of Bernie Grundman Mastering in Los Angeles has made the point in a fascinating conversation with two other famous recording engineers that analog recordings of chamber music, orchestras, jazz ensembles, all acoustic ensembles, when transferred to a digital format lose "something." Bernie states, in the first hearing of a digitized analog performance, it may appear to be "crystal clear." But that icy clarity is, in fact, according to Grundman, the transfer loss from analog to digital of the subtle and complex overtones and natural resonances captured on the original analog recording from acoustic instruments. As one listens ever more closely, the natural ambiences and transients may sound superficially anemic and without life. Bernie goes even further, adding if the digital transfer is put through too many processes, for example, PCM (Pulse Code Modulation) to DSD (Direct Stream Digital) and more—the results all begin to sound the same. If we were cyborgs, that might not be a problem. But we're not. And in perhaps a moment of impressive candour, Grundman calls the present state of recordings "the digital disease", where everything begins to sound the same. It's clear he is referring to both the analog to digital transfer of complex waveforms, but also the present output of "pop" music created entirely through Logic Pro or the Sequence program of the day, with sampled sounds, compression and the like. SET amps restore a semblance of analog sound to digitally transferred or created music.



The chassis and implemented topology are as elegant as the sound.

Let's listen to another example.
I am embarrassed to admit I just discovered the Tring recording of Mahler's *5th Symphony* with Frank Shipway leading the Royal Philharmonic Orchestra. I have since bought the CD from a British retailer on eBay and hope it arrives before this review goes out because I have missed out on a great musician and performance. Shipway is not a conductor whose name is synonymous with a large discography, or, for that matter, performances of the late great 19th and early 20th century European masters. However, when Shipway was killed in a traffic accident in 2014 at the age of 79, he was still fit as a horse and had so much more to record. He left behind a mishmash of recordings of light classic overtures with the RPO, but also a few great recordings: Richard Strauss's *Eine Alpensinfonie* with the Orquestra Sinfônica do Estado de São Paulo; Shostakovich's *Symphony No. 10* with the RPO, and, perhaps, one of the most impressive performances of Mahler's *Symphony 5* to date; recorded in 1996 and impressive enough for the music critic, Tony Duggan, to hope that Shipway would record more Mahler. Alas, it was not meant to be.

However, having listened to his recording through my Apple streaming service, USB'd to my Mytec HiFi Manhattan II DAC through the Neptune and out through my Tri-Art B series 4 Open Baffle speakers at least 7 times now, I am quite frankly dumbfounded. I have a large number of recordings of Mahler's 5th, but the Shipway/RPO performance is special. Here's what Mahler himself said about his own *5th Symphony*: "It is clear that all the experience I had gained in writing the first four symphonies completely let me down in this one—for a completely new style demanded a new technique". Mahler is referring to his 5th, 6th and 7th symphonies, as works generated without a program, without theology, without voice and poetry. Mahler had entered the creative world of Brahms and Beethoven. Shipway and the RPO take Mahler literally, as a study in contrasting opposites. His funeral march opening is huge and heavy, whilst the adjoining thematic material is veiled and hushed, allowing him to return to the full tutti sections again with driven boldness. The French horns are superb, more of an older generation of playing, not the concealed homogenized sound that comes out of so many French horn sections presently. The RPO fears no comparison to Bernstein/Vienna, Chailly/ Concertgebouw and Abbado/Lucerne. As a life lesson, let me say established reputation doesn't necessarily build a great performance; it is the energy, the manic attention to detail and the passion coming from the conductor that will take a good orchestra to Dionysian ecstasy and Apollian accuracy. This is such a recording! And the Neptune faithfully represents this dichotomy brilliantly. How so?



SETs on a tank. Beautiful sound that will last the test of time.

Shipway's recording is full-ranging, bold and dynamic—recorded in Watford Coliseum (previously Watford Town Hall), first established in 1938, now used as an entertainment centre—alas!). The acoustics are surprisingly good, giving a full amplitude to the horns and brass and revealing an unfailing purity of sound and accuracy from the upper strings. The bass is perhaps slightly muddied in spots, but this, in no way, mars the overall impression of a stunning sound and performance. The Neptune's macrodynamics are represented with a clear, yet golden glow that is so typical of SET amps but with a bonus from the Neptune's 211 power tubes. With no negative feedback required, neither local nor global and low levels of distortion, the 211s create a substantially open and spacious soundstage, augmenting the perception of depth and instrument placement with this orchestra and this recording. The Neptune renders the graininess of the violas and the cellos in the first movement beautifully—so natural, so musical.

I imagine Attilio, owner of Tektron, has chosen the 211s for reasons including its low output impedance and its thoriated Tungsram cathode, delicate but built to last 10,000 hours. This thoriated Tungsram cathode is a special type of hot cathode that efficiently emits electrons thanks to the addition of thorium to the tungsten filament. Discovered in 1914 and made practical in 1923—still an extraordinary wonder. What does this do to the sound? Rounded, overtone rich, warm capable of recovering from Shipway's intense pianissimos to the thundering fortes. Transients, whether that be cymbal crashes or fortissimo timpani rolls, are reproduced realistically with no scarcity of realism. Especially in Shipway's rendition of Mahler's pianissimo passages, the microdynamics emerge as whispers with weight, a remarkable performance feat, both orchestrally and for the Neptune.
The last movement of the 5th is my favourite because it's so damn approachable and allows a conductor like Shipway to turn the music into one hell of a joyous romp. The mid-range of the orchestra is liquid warm and one feels you are brought into the midst of the orchestra, with enough space between the sections of the orchestra and the soloists, to create audible breathability in the sound and utmost clarity—tube clarity! An impressive achievement. There is no flatulence in the bass, even accounting for some of the original recording moments of slight bass-muddiness. One hears a natural sound—thanks also to the open baffle Tri-Art speakers—taut bass sound from the double basses and tuba. The strings and, violins specifically, of the RPO may not be Berlin's, but, again, they are pushed to the wall by Shipway and their accuracy and tonal clarity are beautifully displayed by the Neptune. Slight roll-off in the high B notes in the violins at 23 measures past rehearsal number 15, but also a sense of airiness in most of the treble range in the orchestra.

A final example and I will wrap this up. Miles Davis' *Kind of Blue*, first cut, "So What'" played on my Pro-Ject turntable with the Shelter Model 501 111 MC phono cartridge, into my Sutherland Engineering KC Vibe Mk2 Phonostage and then into the Neptune, out into the Tri-Art open baffle speakers. What more can I describe? The spaciousness of the original recording with the warmth and golden clarity of the Neptune SET amp. Recorded at Columbia Records studio in New York City by Fred Plaut and Irving Townsend over two days in 1959, Miles, Bill, John, Cannonball and others, eschewed traditional chord structures and made use of scales and modes as the basis for improvisation.

Davis's melancholic muted trumpet work, Evan's light atmospheric piano work and just an overall intimacy and sense of space captured by the recording engineers and this album was hailed as one of the greatest of jazz recordings. The small original ensemble that made the recording has even more space between their sound and the intimacy of the recording is offered through the Neptune with the harmonic richness we would expect from a live performance. Enough said.

Summary

There is nothing new in the technical details I've just outlined in this review. To the well-versed readers of Audiophilia, my statements may be redundant platitudes, but, in my opinion, they are worth restating. So much ink has been spilled over the measurements and the analytical side of valve amps and solid state amps that one can easily lose perspective as to the final and ultimate goal of listening. And the sound of a great Single-Ended Triode tube amp, like the Neptune by Tektron Italia, as part of a synergistic system to deliver that great music—well, for me this is the answer.

So, suppose you are the type of audiophile where listening to music is a moment of edification. In that case, this Neptune Single Ended Triode Amplifier from Tektron (**USD 19,500**), sculpted with the sophistication of Italian manufacturing, where design and function follow the higher spirit of beauty and style, and where the engineering exactitude and sophistication behind this amp offers the best of "tube" consciousness and listening, then you must give this amp your serious consideration.