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By Graig Neville

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The TEAC Reference 500 Series does not chase a singular audiophile ideal. It does not attempt to overwhelm the listener with brute-force dynamics, exaggerated warmth, or ultra-analytical detail retrieval designed to impress in the first thirty seconds. Instead, the system pursues something more difficult to engineer and ultimately more valuable in long-term listening: balance.

With that in mind, I requested the full stack of the new TEAC Reference 500 Series components for review. This included the TEAC UD-507, TEAC AP-507, TEAC NT-507, and TEAC PE-505. Individually, these are compact high-end audio components competing in one of the most crowded segments of the modern audiophile market: affordable luxury hi-fi. Together, however, they reveal a much more coherent philosophy centered around engineering discipline, intelligent system architecture, and long-term musical engagement.

The deeper I listened, the more apparent it became that the TEAC Reference 500 Series is not really about any one component. Its strength is systemic.



The A4 Form Factor as an Engineering Constraint: Understanding the TEAC Reference 500 Series

At the heart of the TEAC Reference 500 Series is the half-width chassis. At approximately 290 mm wide (roughly 11.4 inches), every component in the line shares a common footprint that allows stacking, flexible placement, and a unified industrial design language. This is not simply a cosmetic choice. It is the defining engineering constraint of the entire platform. Within that compact A4-sized footprint, TEAC must solve problems that many high-end audio manufacturers address through sheer physical scale: heat management, power supply architecture, vibration control, grounding strategy, signal isolation, digital noise rejection, and mechanical resonance.

Many flagship high-end audio brands solve these problems with massive chassis, oversized transformers, large heat sinks, physical separation between circuits, and extremely heavy linear power supplies. TEAC cannot do that here. Instead, it solves those engineering challenges through efficiency, careful mechanical design, controlled resonance paths, optimized analog stages, intelligent grounding architecture, low-noise digital implementation, and highly refined Class-D amplification. This is where the relationship to [Esoteric](#) becomes clear. The philosophy is shared even if the execution differs.

Esoteric pursues performance through mass and scale. TEAC pursues performance through precision and efficiency. The objective remains the same: remove barriers between the source and the listener in order to strengthen the connection to music. That philosophy defines the entire TEAC Reference 500 Series platform.



The Transition from 505 to 507

The evolution from the earlier 505-series products to the new 507-series models reflects that philosophy perfectly. TEAC did not reinvent the platform. It refined it. Changes include improved analog buffer stages, enhanced NCOREx amplifier implementation, cleaner digital interfaces, lower noise floor, stronger clock discipline, and improved mechanical damping. These are not headline-grabbing features designed for marketing copy. They are incremental reductions in distortion, noise, and interference.

Not more spectacle. Not more features. Simply less error. This feels like mature engineering rather than reactive product development. The goal was never to create an entirely new sonic personality. Instead, TEAC appears focused on removing additional obstacles between the recording and the listener while preserving the core identity of the system. That is the right kind of progress.

System Architecture — Designed as an Ecosystem

The TEAC Reference 500 Series works best when understood as a complete modular ecosystem rather than a collection of unrelated components. The current core lineup consists of:



- TEAC UD-507
- TEAC AP-507
- TEAC NT-507T
- TEAC PE-505

Together, these create a complete front-end and amplification platform without forcing every function into a single oversized integrated amplifier. That separation matters. It allows shorter internal signal paths, reduced interaction between noisy digital circuitry and sensitive analog stages, improved serviceability, easier future upgrades, and more intelligent system matching. Unlike one-box solutions attempting to consolidate every possible feature into a single chassis, TEAC's approach assumes that integration is best achieved through intelligent separation rather than brute-force consolidation. The result is a system architecture that feels purposeful rather than compromised.

TEAC UD-507 — DAC, Preamplifier, and Headphone Amplifier

Retailing at \$2,999, the UD-507 functions as the control center of the TEAC Reference Series 500 system. It combines a USB DAC, preamplifier, and headphone amplifier within a compact chassis while maintaining fully balanced architecture and surprisingly serious analog implementation.

This is not simply a convenience product. The UD-507 is built around dual-mono architecture, independent analog and digital power regulation, balanced analog output stages, low output impedance, and improved clock discipline over the previous generation.

The analog stage is particularly important. Many DAC/preamplifier combinations at this price point measure beautifully while struggling with real-world drive capability. They behave more like sources than true preamplifiers. The UD-507 avoids much of that weakness by maintaining enough output authority to properly interface with dedicated power amplifiers such as the TEAC AP-507.



I asked Jo Yoshida, TEAC Brand Manager, “For the UD-507 what chip/design is being used in the DAC? Is it a Delta-Sigma design or something else? Is there a separate standalone DAC planned in the future?”
The reply:

“The UD-507 employs TEAC’s original TRDD5 discrete DAC architecture. This is a multi-level delta-sigma design, with 16 elements per channel (eight for the positive phase and eight for the negative phase). It operates with a processing resolution of 64-bit/512Fs, enabling highly accurate signal reproduction. At this time, there are no plans to introduce a standalone DAC model based on this architecture.”

Sonically, the UD-507 reflects the broader personality of the TEAC Reference 500 Series system. It is balanced, quiet, stable, and notably low in digital glare. More importantly, it avoids imposing an obvious

sonic signature onto the music. That restraint becomes one of its greatest strengths over longer listening sessions.

The DAC does not romanticize recordings, but it also avoids sounding sterile or clinical. Compared to my Schiit Yggdrasil, the UD-507 is slightly less harmonically dense and perhaps a touch less smooth. Compared to my ampsandsound ANK 4.1x Pro, it is not as warm or overtly inviting. However, both of those are standalone components costing considerably more than the DAC section inside the UD-507. More importantly, the TEAC component maintained tonal consistency with the rest of the TEAC Reference 500 Series stack. The presentation remained coherent and musically believable.

The UD-507 performed its job with honesty and competence while remaining highly versatile for such a compact component.



TEAC AP-507 — Compact Class-D Done Correctly

At a U.S. MSRP of \$2,499, the AP-507 is perhaps the clearest expression of the engineering priorities of the TEAC Reference 500 Series. The amplifier uses Hypex NCOREx output modules and is rated at approximately 95 watts per channel into 8 ohms, 170 watts into 4 ohms, and 350 watts in bridged mono operation. On paper, those specifications may not appear extraordinary in today's Class-D market. That

misses the point. The AP-507 is not trying to compete through raw output. The goal is stability, low distortion, low noise, and consistent real-world performance within a compact chassis.

Equally important is TEAC's implementation surrounding the NCOREx module itself. The AP-507 incorporates fully balanced analog input stages, dual-mono buffer topology, carefully optimized gain structure, and thoughtful impedance matching. This is where TEAC differentiates itself from generic OEM Class-D implementations. The AP-507 is not simply a Hypex module in a box. It is a complete amplifier designed around how that module behaves within an integrated system. The sonic result is clean, neutral, and fast without becoming thin or aggressive.

Compared to my Mark Levinson No.5805, the TEAC presents less physical weight and less harmonic density, particularly in the lower octaves. The Levinson sounds fuller, richer, and more authoritative. The AP-507 sounds leaner and slightly more direct. But it is also less editorial. That distinction becomes important over time.

My reference Triangle Magellan Quatuor loudspeakers are probably larger and more demanding than the AP-507 ideally prefers. I suspect pairing the amplifier with slightly smaller or more efficient loudspeakers would further optimize the system balance. That left me curious whether running dual AP-507s in bridged mono configuration would improve overall authority and low-frequency control. Given the amplifier's clean tonal balance and low-noise presentation, I suspect many listeners will find excellent synergy with carefully selected speakers.

TEAC NT-507T — Streaming Without the Noise

Retailing at approximately \$2,499, the NT-507T was one of the most surprising components in the TEAC Reference 500 Series system. Designed around TEAC's G4 network engine and a dedicated linear power supply, the NT-507T is a pure network transport rather than an all-in-one streaming DAC.

There is no internal DAC. That omission is intentional. Instead, TEAC focuses entirely on low-noise digital delivery through USB output while isolating network activity and streaming-related electrical noise away from the analog conversion stage handled by the UD-507. This is an unusually mature design philosophy in a market often dominated by feature accumulation.

The NT-507T supports SFP optical networking, Wi-Fi 6, Roon Ready integration, Qobuz, and Tidal Connect while emphasizing clock stability, USB integrity, jitter reduction, and low-noise power delivery. Rather than treating streaming as a convenience feature, TEAC treats digital noise as a legitimate engineering problem.

I asked Jo Yoshida about the G4 network engine and its contribution to overall performance: For the NT-507T what is special about the G4 engine and how does it affect the sound?

“The G4 engine features SFP input, enabling electrical isolation from the network and helping to suppress noise carried through the network ground. This contributes to a lower noise floor, allowing finer detail and spatial information to be reproduced with greater clarity. As an alternative, a DAC (Direct Attach Copper) cable can be used for a more direct connection. This option offers a denser tonal presentation, while maintaining precise imaging and a high level of resolution.”



I did not have the direct-attach copper cable available during the review period, but my listening impressions aligned strongly with Yoshida’s comments. The NT-507T produced a notably spacious and stable presentation with excellent soundstage organization and convincing spatial depth. Achieving believable three-dimensionality in digital playback is difficult, and the TEAC streamer consistently performed better in this regard than many digital front ends I have used previously.

Compared directly against my Aurender N150, the TEAC often sounded more open spatially while maintaining excellent image precision and tonal stability. More importantly, it increased my emotional connection to streamed music. That matters more than any specification sheet. The NT-507T is one of the most compelling streaming products I have encountered recently and is absolutely worthy of serious consideration for modern high-end digital audio systems.



TEAC PE-505 — Analog Flexibility Without Romance

At approximately \$2,499.99, the PE-505 departs slightly from the rest of the TEAC Reference 500 Series lineup, though philosophically it may actually represent the bridge between the older 505 generation and the newer 507 products. The PE-505 is a fully balanced phono stage supporting both moving magnet and moving coil cartridges with adjustable loading, capacitance, gain, and selectable EQ curves beyond standard RIAA equalization. It is compact, flexible, and technically serious.

Unlike many smaller phono stages that sacrifice configurability in favor of simplicity, the PE-505 clearly targets enthusiasts with real cartridge setup requirements. Again, TEAC avoids romantic voicing. The PE-505 is not trying to sound “tube-like.” It is trying to be quiet, accurate, stable, and adaptable. That approach worked exceptionally well in my system.

Finding the right phono stage pairing for my restored Garrard 401 turntable with SME 3009 tonearm and Shure V15V moving magnet cartridge has been surprisingly difficult. Many modern phono stages prioritize moving coil support while treating moving magnet compatibility almost as an afterthought. My Mark Levinson No.5805 previously demonstrated how important adjustable capacitance can be for optimizing moving magnet performance, and that experience led me to realize there was additional performance still hidden within the Garrard setup.

The PE-505 unlocked much of that potential. The moving magnet performance in particular sounded exceptionally natural and musically convincing. The component maintained the same low-fatigue, balanced presentation characterizing the rest of the TEAC Reference 500 Series while adding impressive flexibility. Moving coil performance was similar sonically with perhaps a touch more upper treble energy, but tonal neutrality. The flexibility of having both adjustable resistance and capacitance was phenomenal as a reviewer's tool and for those with multiple cartridges and tone arms.

Once again I asked Jo Yoshida of TEAC about the design goals behind the PE-505: I really like the features and flexibility of the PE-505. Were there any special design goals TEAC was targeting for this model? The price seems high compared to the rest of the 500 series products, so there must be a reason? Is there a 507 version planned in the future?

"Thank you for your interest in the PE-505. The primary design goal for this model was to create a fully balanced phono equalizer amplifier capable of handling balanced transmission from MC cartridges, while remaining relatively accessible in price. We aimed to offer a more spatially expressive and highly resolved analog playback experience, challenging conventional expectations of analog sound."

The PE-505 ended up being one of the easiest components in the TEAC Reference 500 Series stack to appreciate over long-term listening. Its neutrality, flexibility, and low-noise behavior consistently allowed the character of the cartridge and recording to dominate the listening experience rather than the phono stage itself.





Listening Impressions — When the System Disappears

The true achievement of the TEAC Reference 500 Series is not that any individual component dominates its category. Instead, the system succeeds because every component appears engineered toward the same goal: balance, coherence, and musical trustworthiness. That became increasingly obvious over time.

Individually, the weaknesses of the various components were relatively easy to identify. The TEAC AP-507 does not produce the scale or low-frequency authority of my Mark Levinson No.5805. The TEAC UD-507 is not as harmonically dense as my Schiit Yggdrasil nor as warm as my ampsandsound setup. The overall system does not pursue exaggerated dynamics, hyper-detail retrieval, or lush tonal coloration. Yet none of those limitations became distracting. That is ultimately what makes the TEAC Reference 500 Series so compelling.

The individual compromises are balanced carefully enough that no single weakness dominates the listening experience. Nothing consistently calls attention to itself long enough to disconnect the listener from the music. The shortcomings remain intellectually identifiable while becoming emotionally irrelevant. That distinction matters enormously in long-term listening. Many high-end systems impress immediately through oversized dynamics, dramatic tonal color, elevated detail retrieval, or exaggerated

warmth. Those qualities can sound spectacular initially but become increasingly fatiguing or emotionally distancing over time. The TEAC approach is fundamentally different.



Rather than emphasizing one extraordinary strength, the TEAC Reference 500 Series focuses on proportionality and consistency across the entire system. Bass remains articulate, controlled, and appropriately scaled. Treble stays extended without becoming sharp or analytical. Vocals remain centered and believable without excessive warmth or forwardness. Digital playback avoids the etched leading edges and glare that often make long streaming sessions exhausting. The system rarely flatters recordings, but it also rarely punishes them. It simply presents them. That quality is often mistaken for restraint when it is actually confidence.

Over time, I found myself thinking less about equipment evaluation and more about listening to music. Grover Neville summarized it perfectly during one listening session when he observed that the TEAC Reference 500 Series stack allowed you to forget about the gear entirely. That may sound simple, but in high-end audio it is remarkably difficult to achieve.

The musicality of the TEAC Reference 500 Series does not come from euphonic coloration or obvious sonic personality. It comes from balance, low listening fatigue, tonal coherence, and the absence of

major distractions. The system consistently gets out of its own way. That is not a lesser form of performance. In many ways, it may be the hardest kind to engineer successfully.



Final Verdict — A Different Kind of High-End Audio

Some manufacturers sell power. Some sell warmth. Some sell features. Some sell lifestyle. The TEAC Reference 500 Series is harder to summarize because it refuses to overcommit to any one of those categories.

It does not possess one dramatic headline feature. Its advantage is systemic. Within the physical and engineering limitations of the compact A4 chassis, TEAC has created one of the most musically coherent and easy-to-live-with high-end audio systems I have experienced at this price level. Compared to the Mark Levinson No.5805, the TEAC system is not as warm, rich, or physically authoritative. It does not try to be. Its achievement is different.

The TEAC Reference 500 Series delivers a highly musical, highly balanced, and highly coherent presentation with remarkably few weaknesses demanding constant attention. That may ultimately be its greatest accomplishment. The system disappears sonically not because its limitations are absent, but because they are managed intelligently enough that they rarely interfere with the musical experience itself. You stop analyzing the equipment. You stop listening for flaws. You stop chasing spectacle. You simply listen to music.

In real-world long-term ownership, that may be the most valuable quality a high-end audio system can possess.

