TEAC AP-507 class D stereo power amplifier Review

By: Doug Schroeder | October 2025

Rediscovery of TEAC as a serious audiophile brand was one of my highlights of 2024. The moderately affordable VRDS-701 Preamp/DAC/CD Player (the actual name is longer, so I have shortened it) and accompanying CG-10M-X Master Clock Generator set a new standard in preamplification and CD playback in my system and opened my eyes to the advancements taking place in the industry. Trickle down is real, and over a period of perhaps ten years, the audiophile can holistically upgrade their sound for a fraction of what it cost the previous decade. I bought both of those products after the review, and I have not regretted it one second! They have been anchoring systems with several genres of speakers – hybrid horn (Colibri C2), hybrid array (Legacy Audio Wisper DSW Clarity Edition), dipole (Kingsound King III), and concentric (PureAudioProject Trio15 10" Coaxial) all to good effect. I strongly recommend that if you have been churning a separates system in the hopes of hitting the right combo, check out the TEAC 700 series line.

I had not bought the AP-701B amplifiers that I reviewed because they were quite like the Legacy Audio i.V4 Ultra Amplifiers, which also are class D, but higher power. The Legacy amps are on loan, so it would be redundant to purchase class D amps for similar purposes. I did wish to follow up, however, by handling the smaller form factor that is the TEAC AP-507 amplifiers, chiefly because they use the newer Hypex NCOREx power module. It is a new generation product, which has superior resolution and is said by TEAC to confer, "an immersive, three-dimensional soundstage and a more expansive spatial presence."

The NCOREx amplifier module is "tuned" for TEAC. It offers 95wpc into 8 Ohms in either the stereo or Biamp mode, and 350wpc into 8 Ohms in the BTL (Bridge Tied Load; effectively switched to Mono internally) mode. The Owner's Manual points out that the stereo or bi-amp modes are suitable for speakers with a nominal impedance of 4-16 Ohms, and BTL mode is suitable for speakers with nominal impedance of 8-16 Ohms. TEAC doesn't recommend running the amp into a 4 Ohms load in BTL mode.

As a reminder, never join external channels of a Class D amp to achieve mono operation. Any Class D amp that offers the equivalent of mono operation, usually referred to as BTL, will indicate that operation in the Owner's Manual and typically will show the connections for it. TEAC offers very clear directions how to hook up the amp singly, or a pair of the amps in Bi-amp mode or BTL mode.

TEAC is not afraid to try unorthodox designs to improve sound quality. One of the more unusual features of the AP-507 is that it has a "semi-floating aluminum top plate." In other words, the top plate is not screwed down. When I opened the box and heard jangling metal, I was concerned that something had broken in transit. I thought that odd considering the robust packaging and apparent lack of damage. Upon investigation I learned that it was intentional as a design feature to aid the sound quality.

I'm not convinced the loose top plate does much of anything sonically. While a loose plate may assist marginally in heat dissipation over an anchored lid, previous testing with footers and weights atop components had no discernible impact on the sound as opposed to components without such trappings. I suggest potential buyers of the AP-507 focus on the topology of the component and system configuration to achieve excellent results. Through the decades of testing such things informally, changes outside of the power and signal pathways have been insipient to cause significant sound improvement. The amplifier's 3-point Stress-Less Isolation Foot system along with the semi-floating lid are said to create a more open and natural listening experience. They did not seem to hurt the sound quality, so I treat them as neutral design features. Be aware that the thin rubber discs that the owner applies to the metal footers can leave residue if the TEAC components are placed atop other components. I suggest that you place a barrier, a piece of cloth or leather, etc., between the footers and the surface they rest upon.

Aesthetics and features

TEAC's entire current lineup hearkens back to the glory days of the 60's and 70's, with black cases and large meters on the amps. Tidy toggle switches and handles resembling those found on professional gear are used across the line. Tiny, low contrast lettering on the front makes the name of each button or switch practically hidden from middle-aged eyes. TEAC needs to address that shortcoming. Making the lettering either larger or more contrasting to the chassis would help.

The Mellow-Yellow, Dual Pointer VU Meters are a welcome change from the worn-out blue meters McIntosh uses. Please don't hate on me for saying so; the look of McIntosh is at once classic and tedious, like Harley Davidson motorcycles. Meters don't make components sound better, so TEAC could eliminate them, but why? It's fun to see needles dancing with the music! If the company was making OK sounding gear, I might suggest they allocate resources to the circuitry, but they are rocking class D sound, so I'm not going to give them a hard time for including them.

The front of the amp is clean, with the Power toggle switch on the left of the meters and a dual function button to control the Dimmer for the meters and a Meter Gain adjustment for sensitivity to the input signal. I like the +2-dB setting as the meters show more movement. It reminds me of the old days when meters in my system were pegged, reaching the red zone, or the signal pushing LED meters from green to yellow to red. I do not play music at live or concert levels, so I can keep them on a more sensitive setting without them being plastered to the upper end of the range.

The back of the unit is organized similarly to the AP-701, with the Left/Right channel inputs, 12V Trigger functions (In and Through), Input Selector (RCA or XLR), and Output Mode (Stereo, Bi-amp, and BTL). There is also a Micro USB port which is reserved strictly for maintenance access by TEAC. while another marked off area contains the Left inputs, The switches for Input Selector and Output Mode are tiny and placed near the bottom of the backside. They are small and it takes little pressure to slide the switch entirely to the other side.

One must exercise gentleness to find each setting to be sure of the mode the amp. I had to use a flashlight and peer intently right at the indicator to be sure that it was on the preferred setting. The offset speaker posts with BTL mode using the top two is good design. The offset placement of the posts is especially beneficial for longer stiff leads on speaker cables. The amplifier takes a typical 15A IEC plug. The amp is sensitive to switching power cords, and I recommend the owner may wish to explore aftermarket cords for all equipment, amps included.

Also, the 12V trigger causes an unintended effect when used with the VRDS701. There is no soft shut down, but the amp is turned off at the same time as the VRDS-701. Consequently, there is a pop associated with the amp's powering off heard through the speakers. It doesn't hurt the speakers, but it is annoying. Typically, the power amplifier is to be turned off prior to the preamp, not simultaneously. Turning off the amplifier prior to the preamp causes a slight surge to the speakers that results in an unpleasant popping sound. Perhaps TEAC can put a second or two delay in the circuit such that the amps do not cause the popping sound when shutting down.

The AP-507 does not have an external fuse, but it does have a built-in protection circuit. If the protection circuit activates, perhaps due to an excessive load due to cables being shorted from improper connections or high temperature (the unit runs cool, even after hours of use), the Level Meter lights will blink. The unit is to be set to Standby for several minutes and then powered on. I never had power interruption with the AP-507.

The AP-507 has fully balanced circuitry and is said to ensure ultra-low signal to noise ratio. However, I found that in my room it emitted a noticeable electronic noise, especially with higher efficiency speakers. With lower efficiency speakers such as the Legacy Audio Whisper, the noise is reduced quite a bit to the point of being negligible. When the amp was used in Stereo mode, the noise level was tolerable with speakers like the Colibri C2, but it jumped when the amp was used in BTL mode, as the power was doubled to 350wpc. With a hybrid horn like the Colibri C2 I could not ignore the level of the electronic noise during quiet passages. That was a shame, because the amps are distinctly clean and

revealing, which would accommodate the openness of the Colibri C2. I recommend those who have higher efficiency speakers try out the AP-507 in their system to see if it will work well.

Was the noise the result of my room's electrical supply? I have two sets of dimming lights in my room, and there have been occasions when components have been particularly sensitive to them. If the lights are on fully or off, the noise is all but eliminated, but if the lights are dimmed, then the noise can intrude. However, I found that even turning the lights off entirely did not eliminate the noise. One solution I tried was insertion of cheater plugs (3 to 2 prong adapters) for the power cords, and that reduced the noise by a perceived 50%, but it did not eliminate it altogether.

Other components such as the Heaven 11 Billie Amp Mk2, which is a tube hybrid class D integrated amplifier, or the PS Audio Stellar Strata Mk2 Integrated Amplifier have never had noise issues. Conversely, the Legacy i.V4 Ultra Amplifier at times has been a bit noisy like the AP-507, but not as loudly. All this took place while using the TEAC VRDS-701 and CG-10M-X upstream, so using a full TEAC system is not a fix for the potential of the AP-507 exhibiting noise. The simplest solution is to use these amplifiers with less efficient speakers and if necessary, insert an adapter plug.

I cannot say definitively what was causing the noise, but it is less likely to be an issue for people who have less efficient speakers. As I worked through my collection of speakers from the most efficient (Colibri C2) to least (Kingsound King III electrostatic), the noise receded until it was a nonissue.

A light and airy sound

There is a notable difference in sound between the AP-701 and AP-507 revealed in the increased resolution and detail retrieval of the new NCOREx module. Another difference is what I would describe as higher illumination. You may ask what "illumination" is supposed to mean, how does that describe sound? The terms dark, recessed, warm, or thick are often used to denote a heavier, less see-through presentation. For instance, an amp that has a darker, less illumined character will present the notes of an instrument or a singer's voice as opaque, solid, perhaps flat in character. Conversely, a more illuminated amplifier lets the listener hear more into the note itself, and more into the soundstage, as though a light has been directed toward the back of the soundstage, allowing more to be seen.

The effect livens up older recordings to give them a more contemporary feel. Four-decade old CDs of artists like the Alan Parsons Project benefitted from the new module's teasing out minutia in the recording. The experience of listening to the recordings seemed more like I was entering the studio rather than listening to a product the studio made decades ago.

The AP-507 seemed as a series of spotlights highlighting members of a band such that they stood out against a black background as they played. It seemed easier to pick out the individual contributions of players and singers when in the past they tended to blend into the mix such that it was more difficult to hear them individually.

I tried some challenging music with the amplifier such as ZEDD's "Automatic Yes" and "Tangerine Rays" from the album *Telos.* There is a heavy synth presence and massive LF, which the AP-507 and the rest of the TEAC stack rendered cleanly. Another delight was a remake of the Bee Gee's hit "Staying Alive" by Electro Deluxe. Quickly paced music does not get bogged down with the AP-507, as happens with some class A/B amplifiers. The extra resolution capability of the NCOREx module renders split second dead air space between super-fast bass notes. I typically do not listen to EDM (Electronic Dance Music) with its overwrought LF foundation, but with a capable system, it is quite interesting. If you asked me ten years ago whether I would spend even one minute listening to highly manipulated and punctuated massive bass, I would have laughed at the idea. Yet, here I am considering the quality of music which melodically jagged and plumbs below 20Hz often. Even amid the forest of LF tree trunk-sized notes the lyrics were clean.

Turning to acoustic music, Molly Tuttle's speedy guitar fingering on "Everything Burns" was captured without running together, which gave it a sense of immediacy. The AP-507 did strike me as a quicker sounding amp than the AP-701. I suspect that is due to the extra resolution I sensed, as notes seemed more complete, with leading and tailing edges easily discernible. Tonally, with the Legacy Wisper the AP-507 was spot on, frankly, one of the most gorgeous pairings of amplifier and these speakers I have experienced. That is quite a compliment to TEAC's Class D design with the NCOREx, because I have used a fair number of amps that cost five times the pair of AP-507. If a shell of one of those big buck amps was placed over the top of the TEAC amp, I suspect the performance would be adjudged premium due to supposed pedigree of the amplifier.

Compared to the Legacy i.V4 Ultra

I heard wonderful bass elucidation and a surprising degree of macrodynamics from the AP-507. The Legacy i.V4 Ultra is a bit more shaded, less illuminated, and compared to the AP-507 seemed to have a bit more grunt, more heft. I was surprised when I replayed the same tracks with four channels of the i.V4 Ultra in passive bi-amp mode, the closest equivalent to the AP-507 in BTL mode, to hear less output at the same volume setting on the VRDS-701. The output of the AP-507 must be set high, because I had to nearly double the volume on the VRDS-701 to achieve similar listening levels with the Legacy amplifier!

The different gain structure of the two amps might also explain why the electronic noise emitted by the AP-507 is louder than the Legacy amp. Listening closely, the i.V4 Ultra also had the same electronic noise as the TEAC amplifier, but it was about half as loud, much less noticeable. It stands to reason that the

higher output of the AP-507 would cause it to emit more noise, but also play the signal with more authority at a given listening level.

That the AP-507 was more impactful in BTL mode bi-wired to the PureAudioProject Trio15 10" Coaxial Speakers was surprising. Looking at specifications, one would be led to conclude that since the i.V4 Ultra offers 600wpc into 8 Ohms and the AP-507 offers 350wpc in BTL mode, the TEAC would be the "weaker" amp. But that was not so. The TEAC had a more intense, perhaps contemporary sound with its unvarnished openness and cleanness.

I was able to achieve a Goldilocks result with the PS Audio AirLens streamer and the TEAC components, along with the PureAudioProject Trio15 10" Coaxial Speakers. Upright bass, piano, and voices are superb with the AP-507. Tonally, the AP-507's illumination properties make it susceptible to sounding emphasized in the treble, but working with cables moderated it. I use both models of Iconoclast Speaker Cables, the TPC (copper) and SPTPC (silver plated copper). Their tonal properties are slightly different, so that switching them on the bass and mid/treble posts can shift a system's tonal balance. Initially, I tried the Iconoclast SPTPC on the mid/treble posts because I thought that it would prevent too much treble information. I had put the Iconoclast TPC on the bass because the Perlisten D212s Subwoofers could fill in what was missing. As I listened to Christopher Cross on his *Café Carlysle Sessions* album, a primary test track to judge the tonality of a system, I heard too much nasal qualities and a bit of strain in his voice when he reached for higher notes. Having built many systems which do not exhibit those characteristics, I knew immediately that there was too much high-end energy. The solution was to swap the speaker cables, putting the copper TPC Speaker Cables on the mid/treble and the SPTPC (silver over copper) on the bass. The tonal balance shifted in a most pleasing way, warming Cross's voice and still pulling an uncanny amount of detail from the recording.

Two flavors of power

The AP-507 presents itself through two sonic palates, associated with the ability to switch it between Bi-Amp and BTL modes. The Bi-amp mode does not take full advantage of the maximum power offered, but it does utilize both channels at 95 watts into 8 Ohms. Why would a person wish to operate the amplifier in a less powerful mode? All things equal, I usually recommend operating an amplifier at a higher output. On certain occasions, the nuances, the perceptually important characteristics of the sound quality are different enough that one might opt for slightly lower power and an alternative tonal character. Audiophiles who seek lower powered tube amplifiers most often do so because they feel the beauty of the music is better served than with higher-powered solid-state amplifiers.

In this instance, though the macrodynamics and sound stage depth potentially offered by the AP-507 are reduced somewhat by operation in the Bi-Amp mode, the amplifier seems more balanced overall. The illumination characteristic which can seem to emphasize the higher frequencies is lowered, yielding a more mature, mellow nature. In that respect, the AP-507 is more like the Legacy i.V4 Ultra. The i.V4 Ultra is unfailingly inoffensive and can be mated with any speaker without undue emphasis on the top or bottom of the frequency range. The AP-507 is similar when used in Bi-Amp mode, and it does so with about the same macrodynamic impact as the Legacy amplifier. The bonus is that the electronic noise is muted better and may be a nonissue to most users.

The other sonic palate of the AP-507 falls into the category of expected class D amplifier sound, highly detailed and with less coloration or warmth. The output of the amplifier in this mode is truly surprising, and those seeking to drive their speakers with authority should try the BTL mode. The power gained in use of BTL mode would serve well to bring forth more liveliness from speakers having 4 Ohm nominal impedance. However, all speakers benefit from higher, clean power. Do not presume that an 8 Ohm speaker would not be enhanced by the BTL mode. As with other features of fine components which offer alternative modes, the hobbyist must try all arrangements, all settings, to find those which are preferable.

Pay attention to cabling

Those who have been in the game long enough and have handled their share of sets of cables know how critical they are to enhancing the performance of a system. Every cable in every position of a system is critical to optimizing performance.

When I put the PureAudioProject 10" Coaxial Speakers into the system, I wanted to increase the warmth in the midrange. Using the amplifier in Bi-Amp mode, I relied upon a Y Cable at the RCA Analogue output of the VRDS-701 to split the signal so that the pair of AP-507 amps could receive a line level signal, but also that the Perlisten D212s Subwoofers could receive the same signal. For that purpose I used an Audio Sensibility silver OFC cable, but I suspected I could further improve the warmth of the system by replacing it with an Audioquest Y Cable. I needed no exorbitantly priced cable but was able to obtain the desired tonal balance with a set of Audioquest FLX-X F22M Splitters (male to 2 female). The sonic change was akin to if a person had inserted a tube buffer stage!

If upon trying the AP-507 you think that it is too bright, take a close look at your cabling. Interconnects have pervasive influence upon an amp's sound, and the AP-507 is no exception.

TEAC and NCOREx a solid choice

Class D amplifier modules are so exacting, with so much resolving power that swaths of music that were obscured become noticeable. I have been using some of my reference music for decades, and one would think that every nuance of the recording would be exposed by now. Not so. The NCOREx seems to subtly shuffle recordings much the way an engineer in a studio might tune performances through slight adjustments of small parts of the frequency spectrum, causing the recording to reveal previously unnoticed elements. Listeners who wish to hear everything going on in a piece of music will enjoy the performance of the AP-507.

I wish to steer readers seeking a warm and syrupy sound and who complain that some systems have too much detail or definition away from this amplifier. Such enthusiasts prefer a more convoluted and tonally darker sound, even if it is significantly less revealing of the recording. I wish to promote this amplifier to listeners who cannot get enough of the minutia of a recording. If a tubey, warm sound seems convoluted to you, and a solid state, highly precise sound seems lifelike to you, then likely you would appreciate the AP-507.

If you are flummoxed by the myriad of choices for sources, preamplification, and amplification and wish to simply the process of selecting equipment, The TEAC 700 Series products I have reviewed have been pleasantly surprising in that they perform at a very high level. This is a brand that I can recommend excellent results without spending inordinately on components. As I have used a variety of speaker genres, dynamic, omnidirectional, hybrid line source, dipole, and hybrid horn, with the TEAC separates, I believe that the budget audiophile who adopts TEAC as their system brand will be well rewarded.

Associated Components:

Digital Sources: Bricasti M5 Network Player, PS Audio AirLens, TEAC VRDS-701 Dual Monaural USB/DAC CD Player/Pre-Amp/Headphone Amplifier and TEAC CG-10M-X Master Clock Generator

Streaming Music Service: Tidal premium; Qobuz

Interface: ROON; Audrivana

DAC: (Placeholder) Eastern Electric Minimax with discrete opamps rolled in

Preamp: (Placeholder) Cambrige Audio Azur 840E

Amps: Legacy Audio i.V4 Ultra

Integrated: Heaven 11 Billie Amp Mk2 (two units used in horizontal bi-amp configuration); PS Audio Stellar Strata Mk2 (two units used in horizontal bi-amp configuration)

Speakers: Legacy Audio DSW Clarity Edition; Kings Audio King III electrostatic speakers; Pure Audio Project Trio15 10" Coaxial version; Kings Audio King Tower omnidirectional; Aspen Acoustics Grand Aspen; Wharfedale Opus 2-M2 Monitors

Subwoofers: Perlisten D212s Subwoofers

IC's: Iconoclast RCA and XLR Generation 2 with Ultra-Pure Ohno Continuous Cast Copper conductors

Speaker Cables: Iconoclast Series 2 TPC Speaker Cable; Iconoclast Series 2 SPTPC Speaker Cable

Digital Cables: AudioQuest Digital Coaxial Carbon 1.5m; AudioQuest Digital Coaxial Coffee 1.5m; Iconoclast RCA or XLR 2m Interconnect used as digital link; Audioquest

USB: AudioQuest Cinnamon USB 1.5m; Audioquest Coffee USB 1.5m; Clarity Cable Supernatural 1m

Power Cables: Iconoclast BAV Power Cord; Clarity Cable Vortex; Snake River Audio Signature Series

Power Conditioning: Wireworld Matrix Power Cord Extender; Tice Audio Solo