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Classé CT-2300 Two-Channel Amplifier

A powerful seductive amplifier from our neighbors up North in Canada.

Review By Anthony Nicosia

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The first Classé amplifiers were designed in the 1980's by its founder David Reich. It was back then while walking through a high end audio salon in San Francisco that I first laid eyes upon one such model. Being so long ago it is hard to remember which model but the positive sonic impression it made remained with me for many years to come. So when the opportunity finally arose to actually place one of their newest units into my very own audio system the decision was quite a simple one. The answer of course being a resounding yes! Classé Audio makes not only stereo and mono block amplifiers but a stereo preamplifier, surround sound processors and five channel amplifiers as well. The company is located just outside of Montréal in the town of Lachine, within the providence of Québec Canada. Chairman is Mike Viglas while the design team is headed up by Richard Katezansky. Starting in 2001 the company is now both owned and distributed by the B&W Group. This group represents Classé Audio, B & W (Bowers and Wilkiens) and Rotel as well. Both manual and automatic assembly procedures are used in the manufacturing of their products. Premium quality parts crafted especially for them can be found inside, like with the transformers (in particular the mains transformer) as well as components for the ICTunnel system. According to their website:

"For those who invest in a Classé-based system, the entertainment experience can be truly breathtaking. Every Classé component is designed and built to last a lifetime; to engage and involve, long after its price is forgotten."

Design Concepts And Physical Appearance

This review started out with a request for the Classé CA-2300 power amplifier. Since however this model was back ordered (always a good sign of a quality product) and would delay its writing the offer to review the CT-2300 made sense as it was pretty much the rack mounted version of the CA-2300. While it differed in size, weight and appearance, I was told they would measure alike as their insides were basically the same. Although a bit different in appearance on the inside the same parts and circuit boards were used but placed differently to accommodate the transformers placement into the CT-2300's 3U chassis. One nice thing about going with the rack mounted version is its \$6500 retail price in contrast to the CA-2300's \$7000 price tag. This of course makes sense as cosmetic differences do have their costs. For those who do not mind the more industrial look of the CT-2300 (or who might even prefer it), that five hundred dollar saving could be put to use in other ways. The money could be spent on interconnects, loudspeaker cables, a new cartridge for your beloved turntable or maybe even that weekend away with someone special. Whatever you decide, the choice to save versus some appearance differences is yours to make. Now for those needing the CT-2300 for use in a professional equipment rack the decision is of course much simpler. Included for \$6500 are adjustable rack rails for installation and the Detachable Quiet Flow Faceplate. The need for the rack rails are obvious but the faceplate, made from a solid grade piece of 6063-T6 aluminum is unique in that it works together with the ICTunnel system helping to keep the unit cool during high demand situations. The ICTunnel is



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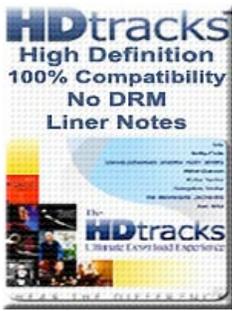
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found not only in the CT-2300 but the CA-2300 as well. The following is an excerpt from the Classé Audio web site offering a detailed description of its use ([see this link](#)).

"Hidden inside, our unique Intelligent Cooling Tunnel, or ICTunnel (pronounced Icy Tunnel) architecture and related circuitry quietly controls the amplifier temperature, ensuring optimum performance and reliability in enclosed, poorly ventilated environments.

Conventional high-end amplifiers use heatsinks with high thermal mass that rely on convection to cool the active circuits. They are slow to heat up and slow to cool down. Eventually they heat up their environment and as the air around them gets hotter, they become part of the problem. For this reason, high-powered amps and racks or cabinets don't easily mix.

Conventional heatsinks are simply shaped pieces of metal, relying on placement and ambient air to extract heat from the amplifier. The ICTunnel is more sophisticated, acting like the human hypothalamus regulating body temperature. The ICTunnel utilizes an aluminum bonded-fin heatsink, of the kind used in high powered medical, laser and test equipment. It exploits the principle of low thermal mass, so it heats quickly but can also be cooled quickly. Inside its relatively small size are fins providing nearly 31 square feet of surface area. The key to its operation is how the fins are spaced — as close as possible to each other to maximize the surface area inside the tunnel, but not so close as to heat each other. The ICTunnel utilizes a noiseless fan along with pressure and temperature sensors to maintain the amplifier's target temperature."

As you see this is a great feature to have even when installing the amplifier in a cabinet, such as with my Salamander audio rack found within my two-channel system. There are many who for one reason or another might even prefer amplifiers tucked out of the way inside cabinets rather than being displayed on the floor sitting atop dedicated amplifier stands in plain view of all who pass by. For those that extra \$500 worth of cosmetic considerations might just seem like a waste anyway. A careful inspection upon arrival revealed a sturdy product with excellent fit and finish. The faceplate snapped into place with relative ease and the most difficult part of the process was lifting all eighty-nine pounds of it onto the top shelf of my audio rack. On the front faceplate is an easy to use touch plate turning the unit on/off or in standby. Looking around to the rear of the unit one sees a decent sized fan which turned on for a moment whenever the amplifier was powered up, fuse, IEC outlet to connect a power cord, inputs for RCA/XLR connectors and two sets of binding posts per side making it easy to bi-wire your loudspeakers. Special high-performance feet like those used on the CA-2300 are optional and my unit did not come supplied with them but since I have numerous after-market footers this was an easy fix. Three rubber Mod Squad pieces found their way beneath the amplifier to rest between it and the wood top of my audio rack. For this review two sets of Cardas cables were used to bi-wire my Von Schweikert VR-35 loudspeakers while XLR connectors all around joined both amplifier and CD player to my preamplifier. Factory specifications state power rated at 300W rms into 8 ohms (24.8 dBW) with both channels driven and correctly doubling to 600W rms into 4 ohms (24.8 dBW) with both channels driven. Harmonic distortion was said to measure at 0.002% @ 1kHz balanced while 0.004% @ 1 kHz single ended or slightly quieter in balanced mode which is how this review was conducted.



Let The Music Begin

What better way to celebrate this new amplifier from Classé Audio then to open my newly acquired CD, *Trondheimsolistene in Folk Style* [2L68] with the Trondheim Soloists. This recording was made at the Selbu Church in Norway, the oldest part of which was built in 1183 AD. Relatively speaking it is a small church seating only 600 persons. On "Diplom", a folk suite for fiddle and string orchestra, the amplifier portrayed this intimate placement of a small group of musicians in a medium sized church with the correct tonal ambience and dynamics needed to do it justice. It left little between the music and myself as it drew me into each performance. Here the ability to reproduce the lightning quick fiddling of Gjermund Larsen as the bow danced rapidly across the strings helped capture the essence of this swift and fanciful Old Norwegian folk style song. Thinking to change things up a bit a switch to The Rolling Stones *Let It Bleed* [abkco 90042] SACD version was in order. Here we get a little Country American style with Mike and friends on "Country Honk". The opening sounds of cars passing by and even a horn sounded from one vehicle was full bodied and clear as were guitar and fiddle selections throughout the song. The soundstage was clear to the point that one could easily pinpoint individual musicians and to focus in on each ones separate contribution to the song. The CT-2300 had a way of highlighting the space between musicians and providing plenty of power to draw from so each could be heard at their very best. "Midnight Rambler" is a song Enjoy the Music.com's Editor Steven R. Rochlin might love as drums sounded especially detailed. Steven enjoys playing the drums and having heard some of the tracks he laid down it is easy to understand why. Here drums sounded up close and personal with great depth. This was not just

your background "fill in" variety music but rather each drums individual placement was accurately located within a vast soundscape. This made for a natural dimensionality presentation of the musician surrounded on all sides within the drum set.

Three-hundred watts of power at eight ohms can make for a lot of fun especially when talking about the Rolling Stones. With the CT-2300 playing no holds barred music there was a lot of smiling going on at my house that week. Listening at low levels the group sounded great but with the volume cranked up, up, up and even higher up they sounded better! No running out of steam here with the CT-2300, in fact I had to remind myself to keep it at safe decibel levels to protect me precious ears. There was no question this was going to be an enjoyable review; my only concern was how to pry my large Rolling Stone collection out of my hands so as to experience different styles of music. Sorry to move on Mick but as the song goes, "You Can't Always Get What You Want", speaking of which that seems like an appropriate song to leave this CD with. The opening choir with lead singer was quite inspiring while the ensuing guitar chords resounded from a silent background gave one a true sense of intimacy with the performance.

Looking back overall with this CD the amplifier provided one with a transparent window to peer through while observing a natural sounding musical event. While it is true that some flea powered amplifiers have a startling sense of realism that when coupled to a select group of loudspeakers with certain music can sound awe inspiring, they would never embarrass this amplifier. Having those extra digits in the watts department frees one from the constraints of higher sensitive loudspeakers, smaller rooms and musical tastes of a less complex nature. While the decision is ultimately yours to make the strengths of the CT-2300 makes that choice of amplifiers a little more difficult to choose between.

The Joy Of Vinyl

Joni Mitchell's *Court and Spark* [Asylum Records 7E-1001] album is always a joy to listen to and with the CT-2300 the performance sounded expansive moving beyond the loudspeakers to reveal a wider soundscape. Vinyl recordings tended to sound reminiscent of an amplifier generated by the warmth of tubes not just a powerhouse full of solid-state muscle. Analytical, yes but with a tender hand. Joni Mitchell's performances have a wonderful intimate feeling and tone about her voice that was not lost on this amplifier from Canada. No it did not display the full bloom of tube warmth found in my 1960's McIntosh MC275 but certainly never displayed any of the edge one might expect from lesser solid-state amplifiers. All in all the CT-2300 is a great combination of a gentle touch guided by tremendous power and grace. On "Help Me" the full range of her voice flowed forth, not missing an octave either way and the decay of notes when singing that classic phrase "feel goooooood" was excellent. Music from the band located behind her was displayed with good depth and particularly well-spaced apart from left to right. Depth and clarity abounded while the display of height with regard to her voice as she stood made for a realistic presentation of a live performance. Center fill was also excellent.

Muddy Waters *Hard Again* [Blue Sky Stereo X698] is an album if you do not yet own you might want to seek out. It is produced and performed with the aide of the great Johnny Winter (guitar). With "The Blues Had A Baby And They Named It Rock And Roll" the 3-D effect brought about by a proper layering of performers lent credence to the illusion of attending a live performance. The depth of soundscape was better than on the Joni Mitchell album showing what this amplifier was capable of revealing when given the proper recording. In other words throw the best you have at this baby then sit back and enjoy the ride. My head was moving with the music (always a good sign) while hands and feet were tapping right along with the song, meaning it passed my PRAT test. With Jonny Winter on guitar, Muddy Waters vocals/guitar, alongside the supporting cast of James Cotton, "Pine Top" Perkins, Bob Margolin, Charles Calmese and Willie "Big Eyes" Smith this album is a must have for collectors. We get a lot of great guitar work here and the CT-2300 kept up with the speed on all those lightning quick riffs and chords. Not sounding forced or artificial the work of each musician from the harmonica (which gave it a great blues feel); to piano, various guitars and drums took on a holographic sense giving a great lifelike presence to this recording. "Little Girl" is a must hear song on this album! Here the CT-2300 let you see through the soundscape with a clarity that benefited each performer's individual work. This amplifier engaged me with each musician showing its intricate side while lending a realistic feel to song after song.

Before leaving my beloved vinyl collect the urge to hear how the *Out of Africa* [MCA-11327] on the 180 gram virgin vinyl pressing might sound overcame me. Loving the clarinet "Concerto For Clarinet And Orchestra In A (K. 622)" written by Wolfgang Amadeus Mozart and performed by Jack Brymer (Clarinet) was a must listen for me. Here truth of timbre was excellent as this wood instrument sound natural and free of artificial glare. The accompanying orchestra sections could be heard properly layered front to back and expansive left to right. Sadly though this performance is very short so on I moved to "Karen's Journey/Siyawe". Here wood instruments and the percussion section take you on an African Safari full of mystery and excitement, a trip not to be missed. Yet the best was yet to come with the choir performing the African Traditional song "Siyawe". Upon turning the volume way up voices from the choir flowed over and surrounded me as the amplifier flexed its mighty muscles to show what it had hidden beneath that simple looking enclosure. While large and powerful it never failed to be polite and respectful of each performance. Not overbearing as is possible with three hundred watts of power it was yet quite intricate and revealing. But if challenged be prepared to feel its power, of which it has in ample abundance.

In Steps The Martin Logan Sequel II

One day while visiting with my friend Len, the owner of Blue Moon Audio in Pacifica California, I stumbled upon and bought a used pair of Martin Logan Sequel's. They had recently returned from the factory where they were upgrade to Sequel II's with the appropriate crossovers/bi-wiring capabilities and had they both 48" high frequency transducers replaced. Being that the Sequels can drop



down to a 2-ohm load they are better suited when matched with high current amplifiers and they just love being driven with all the watts you care to supply them with. Driving this amplifier hard into the Sequels for an extended period did not seem to faze the CT-2300 one little bit. Pushed hard for an extended period it gave the Sequels all they could handle and kept going. Where lesser amplifiers would have difficulties this amplifier seemed not to even notice. When driving the Sequel's as loud as I dared (for my ears sake) while listening to Yo-Yo Ma & Friends CD *Songs of Joy & Peace* [Sony Classical 88697-24414-2] all stayed well in the audio world. This is a great recording one which gets one of my highest recommendations. Here the large assortment of different instruments and vocal talent keeps this CD both interesting and refreshing. The midrange strength of this amplifier showed through with the playing of "Familia". Small details of vocal skills from the Asad family were clearly evident as the CT-2300 once again was able to isolate quite well the five vocal performances of their family members. Rene Fleming on "Touch the Hand of Love" was an equally moving performance as the emotional content of her voice was rendered true to form. That distinctive airy quality one looks for with regard to vocals was quite evident and a surprise from an amplifier of solid-state origin. It was easy to get lost in the music not the review, always a good sign of a high quality product. Lastly on "Dana Nobis Pacem (Give Us Peace) Auld Lang Syne with Chris Botti on trumpet and Yo-Yo Ma of course on cello, each instrument rang through with a sense of rightness to it that would seem to do justice to the original performance. The CT-2300 can also rock and those who crave that type of experience can surely enjoy this amplifier. When playing "Hells Bells", from the AC/DC *Back In Black* CD [EPIC EK 80207] the sound was dynamic and powerful.

Review Summation

For those not looking to spend mega dollars in order to get a well-balanced powerful amplifier, but still wanting to stay with a well-known company, check out the CT-2300 or if you prefer it's almost identical twin the CA-2300. It is large, heavy and well-built with an ample supply of watts to satisfy almost every audiophile's needs. Try as I could this powerhouse just would not get warm to the touch and even drove my more difficult Martin Logan Sequels without any problems. The nice thing about the CT-2300 is you get all that lower end brut power without having to sacrifice details or intimacy. It impressed me with its tube-like spaciousness and air coupled with solid-state control while doing so for only six thousand five hundred US dollars. Good job Classé Audio! Recommended!

The Listening Environment

The review room is eighteen feet eight inches long by thirteen feet wide with loudspeakers and equipment kept on the short wall. The cathedral ceiling starts at eight feet from the short wall slopping upwards to reach a height of thirteen feet in the middle than returning to eight feet at the opposite end. The hardwood floor is partially covered by a nine by six foot oriental rug lying down the long ways facing toward the loudspeakers, placed dead center between but not under the listener or the audio system. The room has no doors but there are two openings. One opening is in front of the right loudspeaker giving access to the hallway while the other is behind the listener's position opening to a formal dining area. There are three floor standing acoustical panels one in each corner behind the loudspeakers and another in front of the fireplace with numerous Auralex Studiofoam panels placed around the room. All the audio equipment is located in a Synergy Twin S30 Salamander audio rack placed about a foot away from and in the middle of the short wall opposite the listening position. Power conditioners are all located on the hardwood floor behind and to the left of the audio rack with the exception of the Audience Ar2p-T0 which is plugged directly into the socket behind the rack.

Review Equipment

Von Schweikert VR-35 Export Deluxe Loudspeakers
 Aesthetix Saturn Calypso Linestage
 Oppo Digital BDP-95 Universal player
 Oracle Delphi MK 1 Turntable, Grace 707 Tone arm with custom made interconnects
 Audio-Technica Prestige AT33PTG Moving Coil Cartridge
 Whest PhonoStage & .20+MsU.20 Power Supply
 VPI 16.5 Record Cleaning Machine
 Acoustic Revive RPT-4 Ultimate Power Supply Box
 Audience aR2p-T0 power conditioner
 PS Audio Power Port Receptacle
 Blue Circle Audio Mk III Power Line Conditioners (2)

Loudspeaker Cables: Cardas Golden Presence (2 pairs for bi-wiring)
Interconnects: Acoustic Revive XLR Balanced cables from preamplifier to amplifier, Monarchy Audio XLR
DAB-1 Balanced cables from CD player to preamplifier
Power Cords: Cardas Cross and Cardas Golden, Acoustic Revive and Mr. Cable "The Musician"
Cherry Synergy Twin S30 Salamander audio rack

Specifications

Type: Two channel solid-state amplifier
Frequency Response: 1 Hz to 80 kHz (-3dB)
Output Power: 300 W rms @ 8 Ohm (600 @ 4 Ohm)
Harmonic Distortion: <0.002% @ 1kHz balanced
Peak Output Voltage: 150V peak to peak
Input Impedance: 50kΩ balanced / single ended
Voltage Gain: 29 dB balanced / single ended
Intermodulation Distortion : >90dB below fundamental
Signal-To-Noise Ratio: -116dB at peak output
Dimensions: 19 x 18.5 x 8.75 (WxDxH in inches)
Weight: 100 lbs.
Warranty: Five years parts and labor
Price: \$6500

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