

Choice EXOTICA T+A CRITERION TCD 210 S
LOUDSPEAKER **£5,900**



Towering infernos

Six grand is a lot of money for a speaker, says **David Price**, but T+A's Criterion TCD 210 S makes music on a massive scale

It's not easy designing a £6K speaker, not least because there are quite a few very good ones already on sale, offering a wide variety of characters. So where does the T+A TCD 210 S fit in, in the great scheme of things? It is large, heavy and transmission line-loaded, claiming high sound levels and a very wide (25Hz to 35kHz) bandwidth sound, from thunderous low bass to bat-bothering treble. Quoted sensitivity is 88dB/1W/1m, which is so-so for a big box (many rivals go

An engrossing sound, that is both epic in scale and highly expressive

considerably louder for the same amount of power), but you can still get away with an enthusiastic 50W amplifier. Anything less won't stretch these large power towers.

Although not radically different, the 210 is certainly a little unusual – inasmuch as it features the aforementioned transmission line-loaded bass units (two of them), plus twin midrange drivers in a D'Appolito configuration. A T+A Waveguide tweeter takes care of the high frequencies all by itself. Transmission line-loading is a long, specially shaped 'organ pipe' inside the speaker cabinet; it uses a tube-like resonant cavity of a specific length to 'load' the bass driver inside the cabinet in such a way to minimise its acoustical impedance.

These loudspeakers are complex inside, which goes some way to explaining their vast weight. There's an inner casing, which is slotted and bonded under pressure with air-tight chambers for the midrange drivers and tweeter. The pressure chamber

sits right behind the bass units, which are coupled to a long transmission line tube, designed to provide an optimum damping effect. All inner case components are manufactured from different thicknesses of MDF and particle board to minimise resonances, and these are bonded to the 30mm-thick external side panels. Overall finish is superlative, which isn't entirely unexpected for T+A.

The drivers haven't exactly been overlooked either. The woofers, and twin 220mm long-travel bass units, tuned to the transmission line cause most of the vibrations! For modern floorstanders, these are large bass cones, and run in tandem as they can shift almost as much air as your average wardrobe-sized seventies speaker. The cones have stiffening ribs with well-damped surrounds and the drivers have diecast aluminium baskets and massive magnets. They are claimed to give bass as low as 25Hz.

The two 170mm midrange drivers work from 200 to 2,000Hz, and sit above and below the tweeter; the use of this configuration with the tweeter

DETAILS

PRODUCT
T+A Criterion
TCD 210 S

ORIGIN
Germany

TYPE
Loudspeaker

WEIGHT
47kg

DIMENSIONS
(WxHxD)
1,220 x 300 x
440mm

FEATURES
• D'Appolito
treble/mid driver
arrangement
• 2x 220mm
bass drivers
• 2x 170mm
mid drivers
• 1x 25mm tweeter

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in the middle is supposed to improve radiation and phase characteristics. Dubbed 'Greycone', the material is air-dried wood fibre and graphite, which is said to produce a stable, well-damped cone. This is slotted and sealed with a special adhesive to further stiffen it, and there's a machined aluminium phase plug. The matching Waveguide tweeter is designed for an even dispersion pattern from 2kHz upwards; it sports a 25mm woven dome – said to be smoother sounding than metal types. The three-way crossover is claimed to use "the best available components". Build and finish is superb.

Being so big – in my largish listening room, this seemed only one size down from a wardrobe – the 210 could present some people with problems setting up. You need them sitting in (at least) an equilateral triangle with either one at least 2m away. This is what T+A specifies as the minimum distance, and I'd suggest at least 50cm on top of that if possible. The pair needs to be a good metre away from the rear wall, too, if not the company says you'll start getting bass reinforcement; 3dB close up to the back wall and 6dB if in corners. Properly placed, the 210 gives an even sound, but despite the handbook's advice you might want to remove the fitted metal grilles; they resonate far too much.

Sound quality

Any 120cm tall floorstander should be pumping out a powerful, large scale sound that extends from the low bass register to the high treble in an even way – and that is precisely what you get with the T+A. The Criterion 210 sounds like it looks, which is to say sophisticated and commanding, and this goes for any type of music ▶

The 30mm-thick external side panels are hand assembled in Germany



Q&A

Jochen Fabricius
T+A speaker designer



DP: Why does the speaker use transmission line-loading?

JF: If done right, TLs have some advantages compared with bass reflex-loaded speakers. Both reduce excursion and damp the speaker resonance, but TLs provide this over a much higher bandwidth, while maintaining a softer roll-off, which puts its bass response near that of a closed cabinet.

Why did you decide to use treated fabric in the tweeter?

Metal dome tweeters usually have a huge resonance, which must be damped by a so-called diffuser plate right in front of the dome. This distorts the wavefront of the speaker and, therefore, the waveguide won't work as good as it does with a soft dome. We use a copper cap on the pole piece to extend high-frequency response and reduce distortion, and ferrofluid in the air gap to improve power handling.

Can you explain what materials are used in the drivers?

The midrange units have an improved formulation of our Greycone seen in the previous Criterion line. The cone is made from air-dried wood fibres mixed with graphite particles, and it is sliced and glued together in a quasi-random manne to prevent resonances and cone break up. And there's more copper in the magnet system, reducing flux-modulation and, therefore, distortion. The bass units use a slightly different version of the same material with more graphite and an embossed structure.

Why is it that a D'Appolito arrangement is used?

It reduces floor and ceiling reflections in the midrange. In combination with the waveguide tweeter this gives a well-behaved dispersion pattern in the vertical and horizontal direction, which is beneficial to both precision of detail and spaciousness. Besides this, it gives a virtual point source, and improves power handling. The combination of a waveguide tweeter together with D'Appolito arrangement is quite unique to our knowledge.



As we've come to expect from T+A, every detail of the Criterion is a work of beauty

you care to play on it. Drop Donald Byrd's *Streetlady* onto the turntable, and you hear an unusually large and widescreen presentation of this classic BlueNote jazz/funk waxing. Bass is solid and meaty, although it sounds completely different to many other loudspeakers, as there's no obvious 'sweet spot' hanging around 100Hz, to give the middle notes on a bass guitar extra boost. Rather, this speaker is very even down below, and lets you follow the bassline without accenting any particular area of the fretboard. At first it sounds just a little underwhelming, but it has a couthness that many conventionally ported speakers lack. It goes down amazingly low, yet is fast and supple and strong – just as it should be.

I'm happy to hear that the Criterion makes a pretty suave move from low to mid; like its low bass, there's a smoothness and an evenness to it, which shows excellent breeding. The midband is wide and open, and tonally quite smooth. On the Donald Byrd track, I love the delicate flute work; this isn't an easy instrument to render smoothly, but these speakers don't fail. At the same time, snare drums have great bite, and guitars come over with great speed and dexterity. The result is an extremely engaging and enjoyable listen.

Tonally the 210 S has a bright and spry presentation, remaining couth and composed. It doesn't bark out at the listener, etching the music on your

forehead, but it's an extremely detailed and revealing device. For example, Scritti Politti's *Perfect Way* is a bright slice of eighties pop, one with lots of rhythmic stops and starts that are always good at tripping up a big speaker such as this. Yet the T+A handles the song really rather well, making clear its superb bass from the very beginning. As the bass synth noodles up and down the scale, the 210 handles it manfully, pile-driving out large swathes of subsonics without breaking into a sweat. Still,

Overall finish is superlative, which isn't entirely unexpected for T+A

the bass never overpowers the midband, which is a veritable battlefield of percussion and synthesised arpeggios; again it remains smooth and composed, yet it's able to convey the track's powerful dynamic accenting in its entirety. The result is an engrossing sound, that is epic in scale and highly expressive, but still coherent and believable.

Conclusion

Big and powerful with sledgehammer bass, the T+A TCD 210 S is an accomplished all rounder with a sophisticated, yet involving sound. Everything is delivered with ease, but you never forget there's an iron fist underneath that velvet glove. It's a very well balanced big box, so much so that it seems less susceptible to changes of music than many – lots of high end speakers sing with classical for example, but bore with rock. The only criticisms is that in trying to be all things to all men, it isn't quite the best at anything. Rather, it scores very highly across a wide range of virtues – and is duly recommended for precisely this reason ●



The 210 S faces a wide range of competition that does some things a lot better than, and others a lot worse. Quad's £5,500 ESL-2805 has a wider and more spacious sound with almost supernatural levels of detail, but lacks the sheer bass extension and grunt of the T+A. The same can be said for the £6,500 MartinLogan Ethos, which is altogether more transparent and natural sounding than the T+A, and has decent bass extension too; still, it goes nowhere near as loud and isn't as wideband. Spendor's £7,000 ST is far more of a direct rival, with a big full range sound, but is a little more couth and genteel, lacking guts but adding grace.

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY

★★★★★

VALUE FOR MONEY

★★★★★

BUILD QUALITY

★★★★★

EASE OF DRIVE

★★★★☆

OVERALL

★★★★★

LIKE: Powerful, large scale sound; wide bandwidth; fast transients; great detailing

DISLIKE: Size; weight; resonant metal grilles

WE SAY: Brilliant big bangers with a smooth and open, yet commanding, sound