

Tannoy TS 1201 (£600)

Available in any colour you like, provided it's black, Tannoy is offering three new subwoofers to tickle-up your bass. We take the top model for a drive
Review and Lab: Keith Howard

Not having had a Tannoy sub for review before, I was surprised to learn that the new, inexpensive TS range – of which this is the top model – is the first from this famous marque to include high-level inputs, which allow connection to the speaker terminals of a power amplifier. Of course, line-level inputs are also provided for direct connection to processors or multichannel disc players.

What this means is that Tannoy's latest trouser flappers – the 801 with an 8in driver, 1001 with a 10in driver and, you guessed it, 1201 with a 12in driver – are easier to dovetail into a wide variety of audio systems. In a home theatre context you will generally use the LFE output from the AV amplifier or processor, whereas in a conventional music replay system, where line-level outputs downstream of the volume control are often not available, the speaker-level inputs will be a boon.

Compact, closed box (as opposed to larger, reflex loaded) subs have burgeoned in recent years and the 1201 mostly fits the established pattern, its enclosure dimensions being just large

BASH

Many modern compact subs use class D switching amplifiers. More efficient than conventional linear amplifiers, they meet the high power requirement without needing much heatsink area to dissipate their low level of waste heat. Tannoy's TS series is different in using BASH amplifier technology, in which a conventional linear amplifier is used but with voltage rails that are modulated to match the signal, so that only a low voltage ever appears across the active output device(s). Efficiency is similar to class D, it's claimed, without the need for output filtering.



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enough to accommodate the driver on one face of its almost cubic cabinet. The familiar user adjustments of volume, bass extension, low-pass crossover frequency and phase are provided via a small dot-matrix display and selector on the sub's top surface, with three presets available – labelled audio, video and night – for saving different setups.

Also available are a shelf filter for boosting or attenuating the lower end of the frequency range and a parametric filter of adjustable centre frequency, level and Q which can be used to tame the most troublesome room mode within the sub's operating range. In Ford Model T fashion you can have any cabinet colour so long as it's black – and

not high-gloss black at that, rather a nondescript matt. But if that means the limited budget has been spent where it improves performance then fair enough. Cone feet are provided for ensuring a stable foundation on carpeted floors.

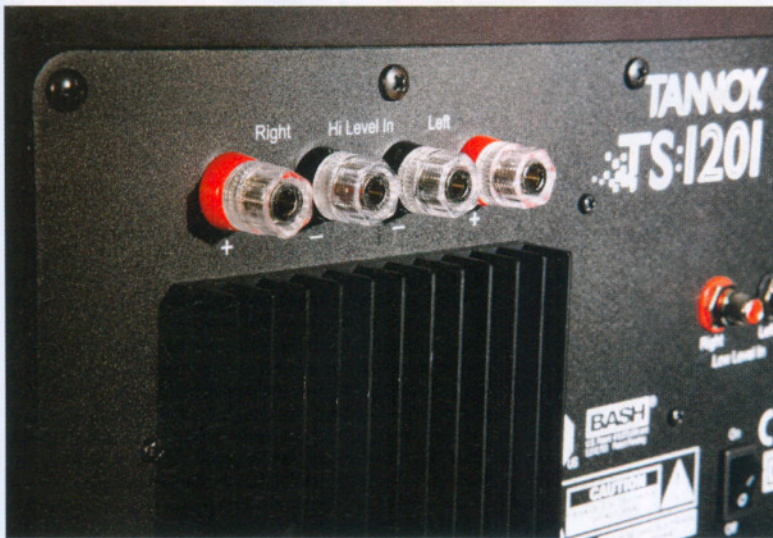
ROLL OUT THE BASS

I used the TS 1201 half-way between the main stereo pair – Thiel CS1.6s – in the junction of floor and front wall, which is known to be one of the optimum room positions for a single subwoofer. Once the crossover and volume settings had been optimised (I didn't have need of the shelf or parametric filters), I first rolled out my standard subwoofer test tracks, beginning with Eric Bromberg's string

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There usually isn't much of interest to say about subwoofer frequency responses beyond noting the maximum bass extension that's achieved. But things are different with the TS 1201 – and others in the TS range likewise, no doubt – because its frequency response is far from par for the course [see graph 1, below]. Most subs display a more or less flat response between their high-pass and low-pass roll-offs, both of which are usually variable. For this measurement (black trace), the TS 1201's high-pass and low-pass controls were set to provide the widest filtered bandwidth (the low-pass filter can be bypassed altogether for use with a filtered LFE output) and the shelf and parametric filters set to zero. And yet there's a marked and obviously deliberate shelving down of response between 60 and 45Hz, which engaging maximum shelf filter boost (blue trace) does little to counteract.

The reason for this will be apparent to everyone who knows the effect of room boundaries on bass output, each of which boosts power output at the lowest frequencies by 3dB and pressure by 6dB. If anything it's odd that more subwoofer manufacturers haven't sought to account for this as Tannoy has done. Measurements of low frequency phase distortion via peak in-band group delay and impulse response via ETC decay time [see graph 2, below] are controversial indicators of bass quality but the TS 1201's figures are mid-pack in both cases – neither as high as for steep roll-off, filter-assisted reflex models nor as low as for the 'fastest' closed box types. The 30Hz distortion figure is on the high side, suggesting that the TS 1201's big driver doesn't have a large linear excursion capability. KH



ABOVE: Unlike previous Tannoy subwoofers, the TS range offers high-level as well as line-level inputs, allowing connection to power amplifier output terminals

bass solo from the beginning of *The Saga of Harrison Crabfeathers* [A440 Records 4001]. While this doesn't plumb the depths in the way of a 32ft organ pipe, it does require tight low frequency control and good transient ability on its fast runs of notes. With its low-pass filter set to the minimum 50Hz, the 1201 passed this test

'Peter and the Wolf positively glowed with extra warmth'

well, adding welcome weight to the lowest fundamentals while being agile enough not to befuddle the sound.

But the extra oomph that a good sub brings to tracks like this is only part of its job description. It's often on tracks without obvious low bass content that a subwoofer proves its worth day to day, and nowhere more obviously than with music recorded in a large natural acoustic.

GLOWING PRAISE

One of my favourite old Decca orchestral recordings – of *Peter And The Wolf* conducted by Malcolm Sargent and narrated by a slightly tipsy sounding Ralph Richardson [Decca 458 595-2] – positively glowed with extra warmth and spaciousness with the 1201 connected, the woodwind instruments benefitting

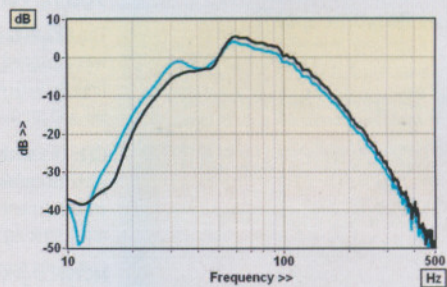
in particular. The same was true with solo tenor, in this case James Griffett singing old English folk songs in Boxgrove Priory [Regis RRC1112]. Take away the extra sub-gifted dimensionality from these pieces and you really miss it.

So, the TS 1201 is a fine sub at the price. Criticisms? Two minor ones. First, I wish that a remote control were available as an option, to make setup easier. It could easily be offered as the TS 1201 already has a remote sensor, intended for use by custom installers. Second, using the high-level inputs I found myself restricted to the lower end of the volume range, generally setting 3 or 4 out of a scale of 20. A lower input sensitivity would surely allow finer adjustment. ☹

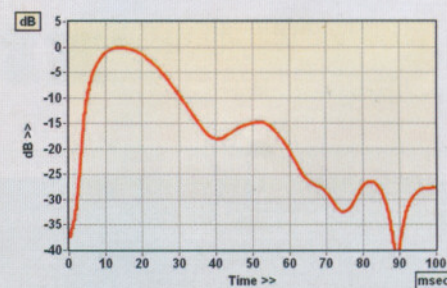
HI-FI NEWS VERDICT

This new budget subwoofer range from Tannoy won't win any prizes for aesthetics but where it really matters – sound quality – it delivers. Carefully positioned and set up, the TS 1201 serves up the extra bass weight you'd expect but also makes an important contribution to music lacking in obvious low frequency content, adding a warmth and spaciousness that you'll treasure more long-term.

Sound Quality: 78%



ABOVE: Frequency response without (black) and with (blue) +6dB shelf boost applied, showing little effect on the sub's loss in output below 60Hz



ABOVE: ETC (Energy Time curve) indicates the sub's impulse response decay rate is acceptable and on a par with others of this broad specification

HI-FI NEWS SPECIFICATIONS

Max LF bandwidth (-6dB ref 50Hz)	29Hz
LP filter bandwidth (-6dB ref 50Hz, default setting)	147Hz
Peak group delay (20Hz-100Hz, 80Hz LP filter)	49ms @ 21Hz
ETC decay time (to less than -20dB, 80Hz LP filter)	45ms
30Hz THD re. 90dB SPL at 3m (inc. 18dB boundary gain)	4.2%
Power consumption (Idle)	18W
Dimensions (HWD)	365x365x355mm