



REL

T1 subwoofer

While subwoofers are a dime a dozen these days, few companies take this Rodney Dangerfield of the speaker world quite as seriously as Britain's REL. Founded long before the popularity of home theater systems forced speaker manufacturers to look for a more compact way to reproduce bass, REL's approach has always been to supplement the range of whatever speakers its subs are partnered with, filling in only the very lowest octave or so below their natural range.

REL's new entry-level T-Series includes three models, topping out with the T1, which the company sent me to test. The T1 uses both an active 10-inch woofer and a same-size passive radiator. It's very compact as serious subs go, comprising what is essentially a 14-inch cube extended somewhat by the domed grill on the front (which covers the passive radiator) and a pair of glossy black steel bands that act as feet to suspend it a couple of inches off the ground. The domed grill adds an attractive styling element, complemented by the black, white, or cherry finish.

As usual with REL, the woofer fires down at the floor to form a pressure wave. The wrinkle with the T-Series is that the forward-firing passive radiator replaces the bass-reflex port or sealed enclosure normally found in REL's other subs.

Rather than asking your surround processor to handle all of the bass management duties for movies and music, REL recommends a connection routine that's different from the norm. The T1 has a mono RCA input for a low-frequency effects (LFE) signal, but this is used strictly for 5.1-channel surround sources with a separate LFE track. For other material, including two-channel stereo music, REL prefers that you set the front left and right speakers as Large, and then run a parallel speaker-level signal from the front left and right amplifier outputs to the T1's speaker-level input. Both the speaker-level and LFE inputs are always active, and they have individual controls to tune levels independently for both two-channel music and multichannel movie sources. The only catch is that your main left and right speakers receive a full-range

signal all of the time — a potential issue for small satellite speakers with limited power-handling capabilities.

The T1 is powered by a 300-watt Class AB amplifier. REL chose not to include an automated signal-sensing power switch, feeling that these tend to turn the sub off unexpectedly during long quiet passages in movies where the soundtrack lacks bass. Even though the amp is designed to remain continuously on, it idles at a modest 4 watts and shouldn't run your power bill up too dramatically.

Other controls include a 30-to-120-Hz variable crossover that lets you match the T1's low-pass frequency to your main speakers, and a phase-reversal switch to help align the sub and speakers around the crossover frequency. While a phase switch is a welcome addition, a continuous 0°-to-180° phase adjustment like we see on many other subs would make it possible to fine-tune setup more precisely.

SETUP

To test the T1's ability to work with various types of speakers, I used it in two rather different setups. REL's importer Sumiko sent along a pair of Vienna Acoustics Haydn Grands, which (despite the name) are small, stand-mounted mini-monitors. This let me hear how well the

The Short Form

Snapshot

This chameleon-like subwoofer proves that, when it comes to bass, quality is more important than quantity

Plus

- ❖ Exceptionally tuneful, unmuddied bass
- ❖ Flexible input and setup options
- ❖ Small size lets it fit into almost any room

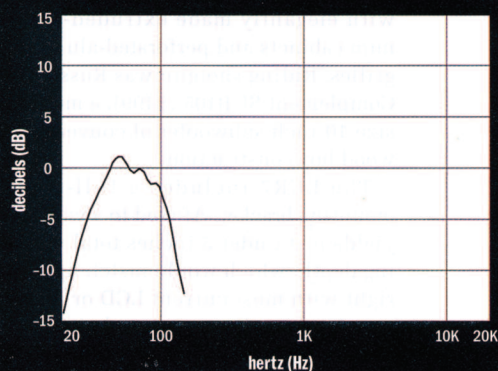
Minus

- ❖ No automatic power standby mode
- ❖ Requires careful setup to perform its best
- ❖ Can't move as much air as some larger rivals in its price range

Price \$998

Test Bench

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The T1's crossover dial is marked from 30 to 120 Hz, but its true turnover frequencies only run from 58 to 102 Hz, and there's up to 14 dB of level/crossover interaction. For example, with the crossover set to 30 Hz, the sub's turnover frequency is 58 Hz and there's a 14 dB reduction in output level. When the crossover control is moved up to noon (middle of the dial), the true turnover frequency is also 58 Hz but there's only a 7 dB cut in level. The T1 produces audible blats when overdriven below 50 Hz, and its SPL capability falls by 2.1 dB per octave below 62 Hz. — Tom Nousaine

T1 would blend with a speaker with limited bass extension. I also used my own Snell AIIIIs — true full-range speakers — which let me focus on the T1 sub's LFE performance.

REL optimized the T1 for placement in the front corner of a room, a position that uses the walls and floor to maximize a sub's output by directing all of the energy into the room. The sub responded noticeably to subtle changes in position, level, and crossover settings, making it clear that extra setup care can reap significant improvements in how well the T1 integrates with your other speakers. Thankfully, the T1's manual is well written, and offers plenty of tips to help you get the best possible performance.

MUSIC PERFORMANCE

REL developed its reputation building what the company likes to call “sub-bass systems” for enhancing music playback, so it's no surprise that musical performance is a key strength of its designs. What is unexpected is that REL manages to maintain impressive tunefulness in a sub as compact as the T1. In my experience, small subs with high-excursion drivers can move plenty of air and create an impressive pants-leg-flapping rumble, but they run into trouble when attempting to reproduce specific notes and tunes.

“Anna Stesia” from Prince's *Lovesexy* might be a hard- and compressed-sounding mess of a recording, but it does include some seriously deep synth-bass. The

T1 used in tandem with the diminutive Haydn Grand speakers demonstrated how well the REL could integrate with a smaller speaker, extending its reach into the lowest octaves. While I couldn't finger any part of the sound as coming directly from the T1, that synth-bass line all but disappeared when I switched off the sub.

With Venezuelan conductor Gustavo Dudamel's remarkable recording of Beethoven's 7th Symphony, the T1 clearly contributed texture and weight to the lower strings, as well as plenty of impact from the tympani. What was striking wasn't the quantity of bass but its quality and tunefulness. There was also a sense of fullness that came without making the sound muddy or thick.

MOVIE PERFORMANCE

While REL's emphasis with the T1 is on tunefulness and clarity, that's not to suggest that it doesn't go deep. With the right material, it produced plenty of bass that you could feel as well as hear. It's just not designed to bowl you over and make you say, “Wow, there's that sub kicking in again!”

What the T1 *does* have is a chameleon-like ability to disappear sonically into a system and blend impeccably with the rest of the speakers. The effect is more as if you replaced your main speakers with a much larger and more full-range model from the same company, rather than adding something that's designed to impress on its own.

The scene from the animated movie *Over the Hedge* where the turtle Verne first explores the new housing development is a good source of subtle low-frequency detail. With the REL, sounds like the statue falling over onto the grass and the SUV that drives over Verne were especially clear and unclouded.

The Haunting has plenty of over-the-top bass effects, and using the T1 for the “Creaking Pipes” chapter demonstrated just how tight and extended the T1's response could be — as long as levels were kept to within its limits. When pushed too hard, the bass radiator would start to make strange noises as it reached the limits of its excursion — although it took truly silly volume levels to get to that point.

A scene from *Master and Commander* where enemy cannonballs rip through the timbers of the ship demonstrated the T1's impressive impact. The sound of the British vessel crashing over the ocean waves was crisp and taut, with plenty of low-bass extension. And I didn't get any sense of bass energy overload, which can be a problem with less well-behaved subs.

BOTTOM LINE

If your idea of a great subwoofer is one that can inflict the maximum amount of structural damage to your home for the lowest price, then the T1 is clearly not for you. REL's design approach is far more subtle, going back to the original thinking behind the subwoofer concept, which was to extend the low-frequency reach of an existing system coherently and discreetly. But that's not to suggest that the T1 is in any way effete or wimpy. Using its separate LFE level control, you can set up the T1 to let loose its subtle prowess on music while delivering a real kick for movies. That level of flexibility, in my opinion, is the sign of a great sub. **S&V**

Key Features

- ❖ 300-watt Class AB amplifier
- ❖ 10-inch woofer; 10-inch passive radiator
- ❖ Speaker and LFE inputs with separate level controls
- ❖ Finishes: black, white, and cherry
- ❖ 15¾ x 14¼ x 16½ in; 40 lb

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