"HERTZ SO GOOD ... this sub dives deep ... deeper than we could hear, in fact!"

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by Steven Kim

We've had Paradigm's top-end Signature SUB 25 in our room for quite a while now, but trust us, coming to grips with how this beast performs has been truly challenging. Obviously, it goes really low, really loud—the combination of a 15-inch front-mounted driver, an amp capable of cranking out 3,000-watts (if your electrical service is up to snuff), and Paradigm's design and engineering chops pretty much guarantees that much. But after the novelty of cranking up the bass and making everything in the room rattle wears off, you've got to integrate the bass with the rest of your system. How well a sub can pull off this disappearing act is the true test of its worth. Read on to find out how well Paradigm's big dog pulled off this stunt.

INITIAL IMPRESSIONS

There's just no way to make a 23 x 18 x 20-inch box look small, but as you'd expect from a Paradigm Signature product, the fit and finish were superb. Good thing too, because cranking out 20 Hz (and lower) tones will quickly expose any mechanical flaws. The SUB 25 is sturdy and Paradigm even took efforts to make it handsome for what it is. The smooth curves on the side and top panels all blend seamlessly together and the milled aluminum back panel with its smoothly operating switches will remind owners that they're living the good life.

The SUB 25 has continuous controls for basic sub adjustment—level, phase and crossover frequency, and there's also a mini USB port for automated tuning via Paradigm's Perfect Bass Kit software. As you might expect for a reference sub, there's both RCA and XLR connectivity, and eco-conscious folks will like the fact that the SUB 25 can be set to switch on by either auto-sensing signal or a 12V trigger. It's worth noting that power cycles are silent —no scary thumps here!

MANUAL SETUP

If you're like us, getting a new toy like the SUB 25 just demands some initial playing around. Before we started proper setup, we schlepped it in place next to our reference sub, set the level at about one third, plugged it in and ran some music as a "smoke test." The Paradigm logo on the front lit up very faintly in blue and we got way too much

bass. After backing the SUB 25's level down, we broke out our SPL meter and jumped into some test tones.

THIS SUB DIVES DEEP …

Deeper than we could hear, in fact. Even at low volumes, stuff on our walls was rattling, the pets were running for cover, and our SPL meter told us something was a-going on. So yeah, the SUB 25 does at least 17 Hz, but we didn't hear it in our ears.

"We expected a lot from the SUB 25 … we're happy to report that after getting the setup dialed in, the SUB 25 did not disappoint."

Having a subwoofer that is separate from your primary speakers is advantageous for two reasons really. First, producing really deep bass requires either a lot of power or a lot of volume, neither of which you probably want to saddle your L/R speakers with. Second, being able to position your subwoofer independently from your mains allows you to optimize the bass response in your room. Especially at low frequencies, the room has a dramatic effect on sound quality—ever notice how you hear more bass when you're standing next to a wall than in the middle of the room? Before setting loose any electronic/signal processing magic on your sub, it's best to try and simply find the best place to put it in your room. You can search the web for various subwoofer placement practices—even if your choices for sub placement are limited, use one (we're partial to the "crawl for bass" approach).

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Some people just have a knack for setting speakers up. For the rest of us, there's room analyzer software (we used Room EQ Wizard) to help. We spent a good amount of time listening to test tones and looking at the resulting graphs to dial in the SUB 25 level, phase and crossover controls, and ended up with a pretty smooth transition from our main speakers to the SUB 25. We should mention that we're not big fans of rear-panel controls, and the SUB 25's are no exception. Tuning the sub involves reaching behind, twiddling a knob, and then assessing the change. It's a minor gripe, especially since most users only do the setup once, but it's a lot of back and forth that's made worse by the fact that it's hard to see the knob settings since they're around back. Remote controllable knobs or a separate knob control panel (maybe even use that USB connection) would make setup so much easier.

THE PERFECT BASS KIT

Paradigm was kind enough to send along the $300 Perfect Bass Kit (PBK-1). If you're going to cough up the money for a SUB 25 and you don't have some other form of room correction in your system, we'd suggest you get with the times and pick up the PBK-1 as well. It's unlikely that an AV enthusiast considering the SUB 25 won't have some room correction in their receiver/processor, but we suspect that dynamic shifts significantly when music-only shoppers get involved.

"… response was tight, quick and punchy when necessary (bass drums, for example) but also able to give plenty of 'purr' to instruments like plucked stand-up bass. Of course, if you want to give your living room a little more of a club feel, just dial up the SUB 25's level and break out the glow sticks—it'll do a fine job of that too."

The PBK-1 includes a mic stand, calibrated USB microphone and software (Windows only) that borrows room correction technology from Anthem, the sister company of Paradigm. Plug the SUB 25 into one USB port on your computer, the calibrated mic into another, and fire up the software. Then you can take from 5 to 10 sweep measurements from around the room and the calculated room corrections are sent to the SUB 25.

This approach is interesting for a few reasons. Because the SUB 25 only accepts an analog input signal, it must be digitized before the PBK-1's EQ/filtering can work its magic. The tin-foil hat crowd might not like the idea of

one more analog to digital roundtrip, but we're just talking about the subwoofer signal here. Another concern might be any additional delay induced by the roundtrip. Again, sub effects are much more forgiving of any delay than, say, the dialog channel, and Paradigm uses IIR (infinite impulse response) filters, which have less latency than FIR (finite impulse response). Finally, the PBK-1 only deals with modifying the SUB 25's signal—there's no high-pass breakout on the SUB 25 to send filtered audio back to your main channels. In other words, the PBK-1 won't give you the full-range room EQ that the Anthem Room Correction software in conjunction with an Anthem processor will.

Tin-foil hats notwithstanding, in the real world the PBK-1 delivered as promised. The measured responses that we got after the PBK-1 treatment were smoother than our manually tuned results. Particularly dips and peaks at around 30, 55 and 90 Hz were much smoother. A narrow 90-Hz crater that we have in our room was still present, but much better after using the PBK-1. Most importantly, things sounded slightly clearer after room correction with the PBK-1.

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LISTENING

Finally, we were ready for serious auditioning. We expected a lot from the SUB 25—it is perched at the top of Paradigm's subwoofer food chain after all. We're happy to report that after getting the setup dialed in, the SUB 25 did not disappoint. For perspective, our personal subwoofer also features a 15-inch driver in a big sealed cabinet, and it moves 20 Hz waves across our living room. So we know what deep bass sounds like, and the Paradigm never once made us feel like we had taken a step backwards in performance.

"Listening to the 'Ice Field' scene from Titan AE is always good for a subwoofer workout, and the SUB 25 made us appreciate how wonderfully ridiculous this hobby is. But besides obvious show-off material, we really appreciated the effortless kind of bass the SUB 25 turned out in less over-the-top circumstances …"

On music-only content we really prefer the subwoofer to be almost invisible. Subwoofers that are boomy or have a strong peak (like less well-designed ported models) in their response tend to stick out and emphasize certain instruments. The SUB 25 did not show these kind of flaws—the bass response was tight, quick and punchy when necessary (bass drums, for example), but also able to give plenty of "purr" to instruments like plucked stand-up bass. Of course, if you want to give your living room a little more of a club feel, just dial up the SUB 25's level and break out the glow sticks—it'll do a fine job of that too.

But we imagine most of you are here for HT content—you know, explosions and other manly fare! Don't fret, the SUB 25 will do your soundtracks justice too. Listening to the "Ice Field" scene from *Titan AE* is always good for a subwoofer workout, and the SUB 25 made us appreciate how wonderfully ridiculous this hobby is. But besides obvious show-off material, we really appreciated the effortless kind of bass the SUB 25 turned out in less over-the-top circumstances. There's surprisingly deep bass tucked away in sections of *The Incredibles* for example, that really does add a lot to the overall feeling of certain scenes. *Dark City* has bass effects that—when not in your face—do add to an ominous feeling that is different from the typical "shock and awe" demo material.

SUMMARY

Okay, so it's no surprise that the SUB 25 can deliver the goods. Honestly, we'd expect nothing less from a Paradigm Signature product. For most setups, this is way more subwoofer than is needed, even if you stick to vanilla 120V, 15A service and the included NEMA 6-15 plug (250V, 15A) stays in the box. The SUB 25 starts and stops on a dime, and delivers all the small Hertz in your music and soundtracks with no apologies. Think of it as a ninja bodyguard packed full of bass—you won't even know it's there until it's called upon, and then things get done with quick, effortless precision before it disappears again. Honestly, that's about the highest praise we can lay on a sub.

At the price, it is very expensive. No doubt, that money has gone into first rate fit and finish, solid engineering, and yes, a name that's trusted and (relatively) well known. Purchasers of Paradigm gear know that it's backed by a company that will be around for the long haul for service and support. Let's be honest, even if you don't know anyone who can afford a SUB 25, it's obvious that they're out there. In the crazy world of audio gear, the SUB 25 is definitely high-end, but not exotic expensive—in other words, familiar territory for Paradigm's Signature speakers. This is the most expensive sub Paradigm makes and products that carry a "statement" label have a few roles to fill; not all of them have to do strictly with performance. Considering that the SUB 25 can probably run with the best subs out there—we haven't listened to them all—the price feels about right for this kind of luxury level product. Not many will buy it, but those that do are willing to put some price on the fact that all their gear is Paradigm, and they can rest assured that it's the best sub Paradigm knows how to make.

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For the rest of us, there's probably a better value proposition right within the Paradigm lineup—a pair of SUB 12s. Taming those pesky room response problems is way easier with two subs, and we imagine most folks can live with the SUB 12's response of "only" 16 Hz …