

REVIEW

REL T9i SUBWOOFER



Integrating a subwoofer into a 2-Channel Hifi system is often far more difficult than adding one in a Home Cinema setup. Both require fine tuning in order to convey a cohesive response and unilateral load of the room, but in order to achieve the speed, poise and polish needed for convincing musical playback, the task of joining the lower frequencies of a subwoofer to the main speakers can be extremely frustrating, yet ultimately rewarding. Dan Worth integrates the £1000 REL T9i Subwoofer into his system.

DAN WORTH

Over the past 20 years or so I have had numerous subwoofers in both AV and Hifi sound systems, some can be fantastic for speed and punch and others great for huge impact and pressurised room interaction - or high spls. Cone size, cone material, cabinet structure, amplification type and strength, feet type, platform material and overall positioning all play a part in overall performance.

Technologically, subwoofers have come on a bundle since the earlier incarnations of bolting a high wattage A/B plate amplifier to a carpeted box or slapping a huge driver into a coffin sized enclosure. These days performance is obtained from notably smaller and stiffer enclosures, stronger drive units and more rigid baskets, along with, and in the majority of cases, Class D amplification, requiring lower output power supplies - which in turn generate less heat, ultimately making them more efficient and also offering the end user greater flexibility in placement.

In comparison to the larger coffee table sized subwoofers of yesteryear REL have dedicated their abilities to all of the above and the result is a new-look line up, designed for maximum performance from as small a footprint as feasibly possible.

I remember owning a few of REL's older behemoths, including the Stadium - an isobaric loaded twin 10" Volt driver monster which could in theory strip the artex of ceilings in neighbouring streets, not just adjoining homes. A Strata III - a single 10" long-throw, downward firing unit utilising REL's ABC filtering circuitry and 100W DC-coupled MOSFET amplifier, which was a step up from previous versions in speed and ultimate control - and a Storm - I can't remember which model it was but I think was a 10" driver, 100W and weighed around

30kgs or so. I've had many other subwoofers in my time, some dedicated for just one format and others which crossed over into both music and cinema systems - some better than others.

FIT AND FINISH

The fit and finish of the latest range of REL subwoofers is stunning, if not somewhat limited in colour choice. My first comments to the U.K. Sales Manager was "just black or white gloss?" and I literally answered my own question as he began to speak. It quickly dawned on me that specific wood veneers would be hard to match with main speakers and it's better to have a contrasting sub than one that's kind of close. He elaborated by saying "Yes, your speakers are a light cheery, now the English light cherry is significantly different to say a Scandinavian or American light cherry, it's better to have something pretty in its own right, making its own statement, rather than trying, yet failing to match the main speakers correctly". I'll give REL 10/10 for common sense here, I completely agree with the approach.

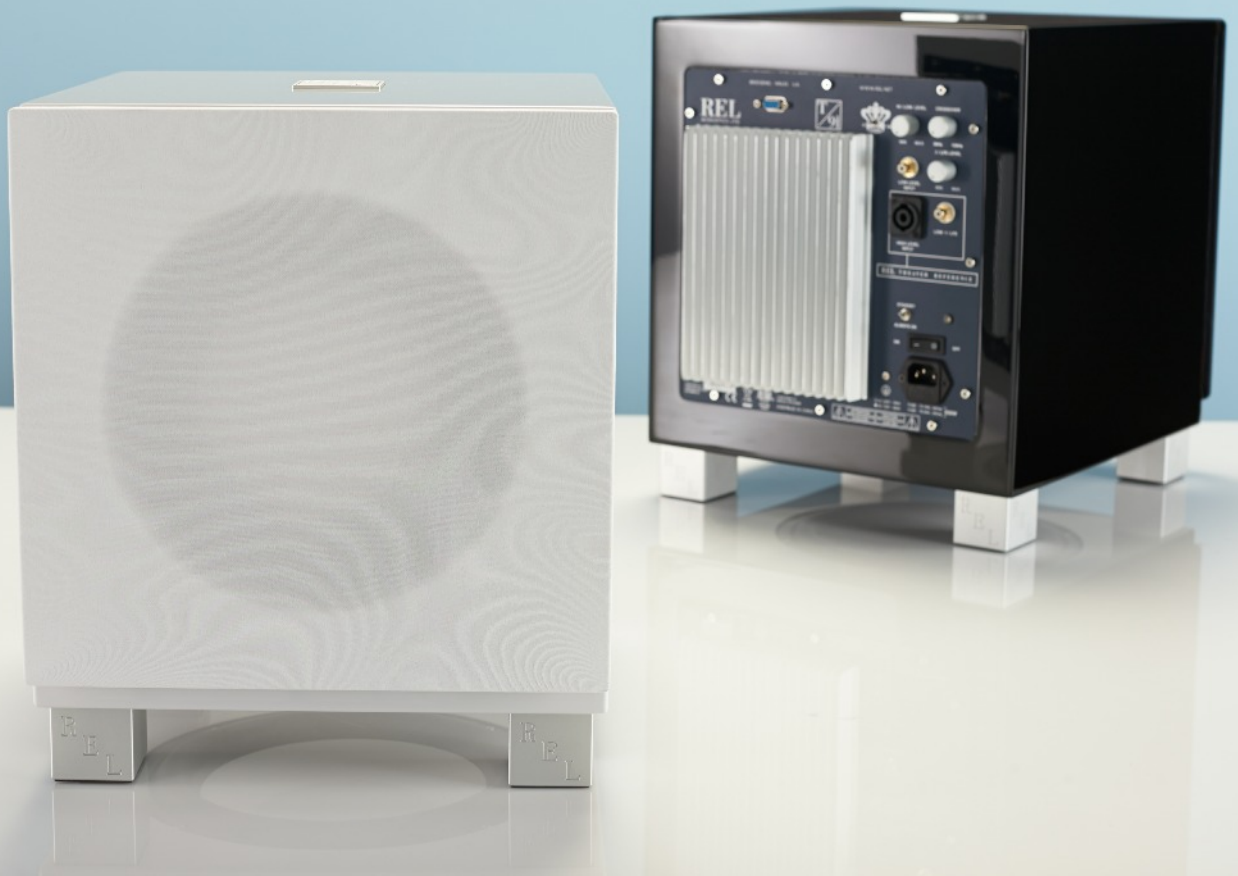
There are companies that vinyl wrap items, you can take them a sample piece or a photo of something you wish to match (much like buying paint) and they can in high-definition repeat the colour, or perceived texture and wrap your subwoofer for a very reasonable price, which in turn protects the original finish for further system changes or resale as these vinyl wraps go on as easy as they come off, leaving nothing but REL's twelve pass multi-direction deep lacquer finish. Just as it was when it came out of the box.

All knobs/dials along with the rear heat sink are finished in a matching satin, slightly darker than neutral anodisation, which adds to the overall high quality finish and attention to detail, with matching engraved alloy



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square feet which have a sorbothane pad at the bottom, rated to weight. REL do not favour spikes as they can concentrate vibrations rather than eliminate room interaction on a structural level and I agree with their choice. For me, I would still pursue further isolation with possible granite, bamboo or mica type platforms - possibly on sorbothane, especially for those with floorboards in order to add some further reinforcement to low level extremes.

What is interesting about the feet on their subwoofers is that they are all of differing sizes and heights dependent on model and frequency tested for best integration of the downward facing passive bass radiators.

The badge on the top of each subwoofer has varying sizes, as this is not just a simple panel mounted badge, it's actually a structural asset. The badge is a plug, a metal shaft that proceeds into the cabinet walls and acts as a 'null point', curbing and eradicating structural borne vibrations in order to keep the chassis more inert.

BASIC INSTALLATION

This can always be tricky but extremely rewarding with some patience and a good array of music.

The first step is to ascertain an initial preferable position for the subwoofer to live and I advise a little flexibility on its specific placement but I'm lucky enough to be able to work my room around a system and remodel if necessary.

Connecting the REL subwoofer is a breeze. Ensure that you use the high-level input and not RCA, especially for 2-Channel. Refer to the manual for the colour coded wire identifications of left and right channels pertaining to the 'high level input' cables provided - these connect directly to the output speaker terminals on the main amplifier and have bare wire ends. I'd advise to attach spades or bananas to these, which would be the opposite to what you already have your main speakers terminated with. If your main speakers already have bananas, then add spades, unscrew your binding posts a little and insert the spades, ensuring that once screwed back down tightly you double check the bananas are pushed fully back in. Likewise for main speakers that already have spade terminated loudspeaker cables.

Note: REL do not provide a left and right phono input jack on their current range of subwoofers.

If the main speakers are actives and if the preamplifier or DAC/pre has a second set of outputs then a Y-Splitter Cable can be used to send both channels of information to the line level input on the subwoofer, or I'm instructed that a single phono cable, preferably from the right channel output will suffice - I actually tried a single cable during the review with a line level from just the right channel and I must say, the presence and drama of the sub was fantastic in this configuration, although the high level connections to both stereo channels superseded any of the aforementioned alternatives. REL include a 10m stereo cable for this purpose which has a 'speakon' plug at the sub end - a locking socket used in PA gear. Other aftermarket variants and lengths are available and making your own if you are a bit of a tweaker like myself is a very simple task.

A very standard, what I and many call a 'throw away' power cable is included in the package; I'd like to see something a little more heavy duty and nicer for the more expensive subwoofers, but then I could say that about every manufacturer of high end gear - the included cable is certified and more than fit for the job electrically.

Note: give some forethought to possible subwoofer placement and how long you may require the power cable to be, there's nothing worse than sitting there with you nice new shiny subwoofer and nowhere to plug it in.

TUNING

On the rear of the T9i are inputs for line level, LFE (dedicated subwoofer output) and the high level, which would be fed by the left and right outputs from the speaker binding posts on the amplifier - which is how I have the subwoofer setup.

Controls for gain, crossover frequency and phase will tune the T9i into any setup. This is where patience, positioning and lots and lots of listening comes into play.

Note : Don't get frustrated if you have dedicated a good amount of time to trying to dial in the sub and aren't getting great results, because sometimes it's only when you place the sub where you would either least expect it to work or wasn't planning on aesthetically having it that all of a sudden everything makes sense.

Put on a piece of music that you know very well to begin, preferably a piece with a good bass response and turn the gain on the subwoofer to just over half way.

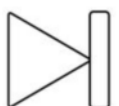
Toggle the phase control switch from 0 - 180 degrees finding the loudest of the two settings, in most cases this will be 0 degrees. Leave the switch here.

Begin to play some music and have a walk around the room to identify any bass nodes (accumulated areas of too much bass).

Some people like to then dial the gain on the sub back to what they believe is a reasonable level and others like to start at zero gain and work their way up. There's no right or wrong way here, but the idea is to have the gain set to a level where you cannot hear the sub as a defined speaker, you simply want to have it merged ever so gently in that you do not notice it's there until you switch it off altogether.

Continue to play the same piece of music, adjusting the gain level until you can just hear the sub as a more localised point and then turn the gain back a notch.

Adjusting the crossover next - this will allow you to have the sub integrate its first point of integration to where your own loudspeakers trail off. REL I think have been extremely clever here in not marking the frequencies around the dial. Most people have a preconceived idea of where a sub's crossover point should be due to the spec sheet of their speakers. However, in the real world and with roll-off and room acoustics, the same speakers will respond differently depending on environment and placement.



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Note: ensuring that your loudspeakers are positioned correctly first of all and your sweet spot is even to the listening position. This is extremely important for linear bass response. You will be surprised at how many rooms require one speaker slightly more forward than the other and how effective a non-symmetrical toe in can be, so again, take your time and explore this thoroughly.

Leaving the numbers off the crossover frequency dial takes away any preconceived ideas about where the dial should be set, again I'd suggest setting it initially to half way and work your way back a click or two at a time.

What your listening out for here is a moment where you feel that all of a sudden an overlapping, over pronounced bottom end, or hump disappears into a more linear and cohesive extension of what your main speakers already achieve in the bass regions.

Once at this point turn the sub off and on again, repeating the same music over and over, as you get to the lower end of your crossover adjustments - you may find that you now need to add a click or two upwards on the gain to compensate for the lower bass notes which do not sound as loud now.

When you get to this stage the ultimate fine tuning comes into play and the fun for me really begins.

FINE TUNING

The following couple of sections will explain a little more of the fine tuning of the subwoofer into your room.

Any audiophile who is truly committed to having the most linear response from his or her setup will love the really nitty-gritty of ultimate fine tuning. This is where the smallest adjustments in positioning and dialing in the crossover and gain gives the biggest rewards.

It's a wise decision to have some musical material that isn't your normal listening fodder too, this can help to throw a spanner in the works and bring you back down to Earth when you find yourself so heavily invested in getting one genre correct, to only find the next time you come to listen and play something else that you're not beating yourself around the head and thinking that you need to start all over again.

Remember - your tuning a bass speaker to your loudspeakers and room, not to a particular type of music.

Your previous efforts should have now found a good dB level and fairly accurate crossover point to compliment a wide range of music as the sub will now be fairly well tuned to the speakers. One of the most exciting aspects of this new-found synergy is that as well as obtaining extended bass from the main speakers a richer midrange and vocal will be heard. Also, the top-end will be under-pinned with more perceived body and richer undertones, fleshing out the entire frequency range is the key ability of a well-made sub.

CONSIDERING ROOM NODES

It's time to walk around your listening space again. With your newly configured settings the hope is that you will not find any points where bass is gathering and giving a boomy effect.

If you find any large over-bearing areas of boom, the solution is to slightly move the subwoofer's angle, on axis firstly and then secondly off axis to a new location. Try initially by pivoting the subwoofer's toe-in angle, spinning it slightly and keeping one back foot stationary and re-checking the node(s).

In most situations this will increase or decrease the size of the node(s).

Angle the sub to remain where the node(s) are at their lowest and begin moving the subwoofer a few inches left, right, backwards or forwards and re-check your node(s). Very often they will be cured with very small amounts of adjustments to positioning.

I myself had two large nodes in my room, toeing and small movements of the T9i increased and decreased them to such a degree that the feedback I was given warranted me to actually move the unit around a foot and a half in total with an extra 30% toeing to my initial setup position, although my gain and crossover levels remained very consistent.

Ensure that you listen to your room and what feedback it is giving you, rely on the settings installed to the subwoofer from the and don't allow any frustration to doubt your initial intently setup parameters.

Once you have lowered the room node(s) to a non-obtrusive level, you can again very fine tune a notch at a time the gain and/or crossover as the room will respond more linearly, these adjustments will be super fine and usually just to preference after following the initial setup steps.

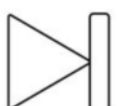
Some may prefer a little more bass than others do, but I stress again, for the most natural reproduction any subwoofer should simply disappear, should not be able to be localised and for any 2-Channel system is simply to extend and enhance frequency response, not overall thump levels so to speak. If you can only tell that a subwoofer was present in the system once switched off then you have integrated it correctly.

THE SOUND

REL's T9i sits at the top of the Ti range and alike 99% of REL's subwoofers is an infinite baffle design or closed non-ported box, making the unit very fast and expressive. Once configured correctly my Ayon's became very well fleshed out and richer in tonality through their entire frequency range.

I played London Grammar's 'Hey Now' as one of my first pieces of music, simply to hear what the T9i offered to the clarity of the rubber ball used to strike the skin of each of the five consecutive bass notes. I was pleased that the leading edges of these notes remained defined and without any blunting due to the woofers integration - something that would no doubt happen when integrating a subwoofer with a ported enclosure or simply setting the crossover incorrectly. Each decay made way for the next leading edge and Hannah Reid's vocal had the usual amounts of tonal accuracy, with the T9i adding an extra portion of texture to her sultry tone.

I played one of my usual test tracks - Rachele Farell's 'I Can't Explain'. Now I have refrained from talking about this track of late but it was very important for clarification of the T9i's abilities in a stereo system. As previously mentioned Rachele has a world record for her vocal range



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and with the subwoofer in place it felt as if I was, for the very time so much closer to hearing her live. My Ayons would always reproduce her beautiful vocal with incredible range and articulation but now with the T9i in place I had the pleasure of greater tonal accuracy and a good sprinkle more emotion. Another pertinent point to mention on this piece of music was the "colour" of the piano. I would say that previous to having a decent subwoofer with the Ayons, the piano sounded a little more heavy in overtones, whereas now it was underpinned with a new found room acoustic that made the musician feel so much more alive and real in his ability to manage attention on his instrument and not just being overshadowed for five and half minutes whilst Rachelle wails into the microphone.

I had enjoyed my system very much since integrating the T9i - initially before getting the pairing correct there was a clear lack of synergy and I'd say within about an hour/hour and a half of careful listening, tweaking of levels and placement of the modestly sized sub the results were really paying off.

I switched the REL off again after some time of recreational listening, where I had put the iPad I use to write on to one side whilst getting lost in the music to be somewhat understandably disappointed with the lack of body and tonal richness I was left with just listening to the main speakers alone, which are reported to go down to a respectable 35hz and never have conveyed any lack of body - previous to pairing with a sub, which I had only ever done twice before with these speakers, which was a complete let down if I'm honest - one the same cost as the T9i and another three times the cost.

It's been a long time since I used a REL subwoofer and from memory I'd say that the performance of today's offerings really are in another class if the T9i is anything to go by. Tighter, more expressive and more controlled at their frequency's lowest extremes. One concern that kept poking at me was that I was using a thousand pounds worth of subwoofer with speakers that cost a hell of a lot more, even before their £3500 crossover upgrades. With the inspiring level of performance I was hearing, my thoughts immediately wondered to thinking about how the companies 'S' range of subwoofers would sound and how much more intricate the details of the lowest abilities of an 'S' range sub would factor in.

I will indeed convey my thoughts later this year once I start to explore more from the latest range of REL subwoofers, but for now let's curb my wandering imagination and get back to the product in hand.

With the notable speed and accuracy of the T9i sub I played a range of Pop and Electronica. Impressive could be considered an understatement. I've always been a kid at heart and I've always had that little adrenaline rush come over me when I go back to some of the heavy dance and trance music of my late teens. I'll say thanks to REL here as I was certainly transported back to my happy place where nothing else mattered but the music and the nights were long.

Pressure levels in my room were to the point where the room seemed to have its own pulsating heartbeat and transients were fast and impactful - especially when following quite passages, but the most impressive aspect of the whole system was the timing, the undeniable accuracy and speed of the sub that kept up so well with my all ceramic array of drive units. There has only been a handful of nightclubs I ever remember having really good sound systems, with most being overly

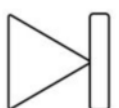
bright, grainy and so poorly timed, with bass notes aplenty. The T9i was just what the Ayons needed to flex their muscles and portray a captivating experience that brought some real fun to this review and really proved that with a little patience, the careful setup period undertook to bring the REL into the system so cohesively had certainly paid off.

Talking about fun - one of the most important factors of building a system for me and integrating a subwoofer is achieving good bounce from the bass. Good bounce keeps the music flowing, it's essentially the primary factor in what makes us toe-tap and makes us want to sing and dance along to the music. This is where the high-end can often fail to impress a lot of us. Often equipment can be too detailed, over accurate and just lose any real flow, stopping us from enjoying the music. I've owned many cheaper systems and also heard many cheaper systems that, in comparison to a lot of the more expensive setups I've heard, lack the overall resolution, focus and dynamics but absolutely excel on music, fun, bounciness and emotion.

Having a review system is an extremely tricky setup to put together - for one it has to be transparent and effective enough to outline any product inserted anywhere in the chain and two it still has to reach you personally. Now many will say "it must sound good he's a reviewer" but believe me, we have a harder job of keeping consistency in our systems than anybody else. There is the constant upheaval of products coming in and out. Opinions from manufacturers and industry professionals, as well as friends and our biggest critics - ourselves! The only tip I can give anybody is sheer perseverance and the ability to walk away and come back another day if things aren't sounding right. I have had some hideous times with my system in the past through a number of factors or bad influences, but in time we all learn how to setup correctly and trust our own ears, that's why it's a hobby. So, my advice is just have fun with it and take your time.

When the U.K. Sales Manager for REL - Rob Hunt arrived with a T9i in hand, of course the sensible thing to do was to have him sit down for a good period of time and understand what my system does before we integrate the sub. I must admit I was very flattered when he said "this has to be one of the best review systems I've ever heard" adding "even though it would warrant one of our better subs realistically, I think that you will be amazed at what the T9i is going to add once we configure it". Once added and with a huge smile I remember saying to Rob, "I don't know about the best system you have heard Rob, but I'd defiantly say that this is the best I've heard this current setup - when can I try the 'S' range?", we both smiled and had a little laugh before we just sat there quietly going through various tracks from different genres.

And that's my point you see, it doesn't matter how much something costs, it's the way it connects the music to you and how lost you can get in the emotional qualities of a performance - whether it's JS Bach or Bastille, the reward is in the time you take to find equipment that focuses on the performance and how well you can integrate all the component parts. For me, I was very happy with my system and adding the T9i from REL with an open mind gave me another layer of tonal colour, richness, undertones and musicality that was first noticeable in added bass extension but was just as quickly apparent in fleshing out every part of the frequency range in such a natural and impactful



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way, that it actually took me a while after taking the T9i out of my system to adjust back to my normal presentation.

CONCLUSION

I'll be the first to admit that I didn't hold out much hope in being able to integrate a subwoofer so easily into my current setup. Primarily due to not accounting for one over recent years and placing more and more furniture into the space, which in turn decreased the ability of positioning for such an addition.

But I have to give great credit to the guys at REL Acoustics for creating a subwoofer which A. has the perfect range of controls to seamlessly take on the remaining last couple notes in the bottom end so well as well as fleshing out the midrange and treble very naturally and B. has such a fast and agile responsiveness that it kept up with the speed of my ceramic drivers.

Once the careful tuning and positioning was achieved, a whole new layer of tonality brings music more to life. Every detail from top to bottom gained a more organic feel and the overall presence of vocals, whether female or male took on a more life-like appeal. I urge anybody considering a subwoofer in their system to take a look at what is affordable to them within the vast range at REL and even though a final fit and finish sub for me to compliment my main speakers would be somewhere a little further up the line, I could honestly say that the T9i was an act I would visit again without hesitation. As stated above careful integration is key, with the results being incredibly rewarding.

AT A GLANCE

Build Quality: Excellent finish, right down to the knobs and feet

Sound Quality: Once integrated well the T9i will surpass expectations

Value For Money: great!

Pros: Attractive and well finished, with a sound quality that matches, impactful, delicate and cohesive

Cons: As with all subwoofers, integration is dependant on room configuration and can take some patience to evolve the speaker into a strong cohesive match

Price :£1000

Finishes: Gloss Black, Gloss White

