

Wilson Audio Specialties WATT/Puppy 7 Loudspeaker System

Robert Harley

It is axiomatic that to achieve a big sound, one needs a big loudspeaker. By “big” sound I don’t just mean the size of the soundstage that the speaker generates (although that is certainly an important criterion), but its ability to accurately render music’s large-scale dynamic structure, deliver authoritative bass down to 25Hz, reproduce loud and complex passages without congealing detail, and present transient impact with a high “jump factor.”

Loudspeakers that meet these performance criteria are generally large, expensive, complex, often finicky, and require a sizeable room. Physically smaller loudspeakers can be musically satisfying, but fall short of delivering the visceral thrill that only big speakers are uniquely capable of.

This conundrum has, however, been definitively solved by the arrival of the new Wilson Audio Specialties WATT/Puppy 7 loudspeaker. This loudspeaker is unlike any other in my experience in its ability to deliver the “big” sound associated with massive systems from a compact, small-footprint enclosure.

I may be either the best or the worst reviewer for the new WP7. In my 14 years of full-time audio writing, this is the first time I’ve had a Wilson product in my home (save for a few months with the Wilson Sophia). Thus, I brought to the review process none of the pro or con polarization that Wilson loudspeakers seem to engender—I approached the product fresh. Conversely, I cannot report on how this latest version of the WATT/Puppy compares to its predecessors, nor can I trace the sonic evolution of this landmark 17-year-old speaker line.

What I *can* report is that the WP7 is truly a great loudspeaker by any measure. It not only met the highest standards of performance for a loudspeaker of this price and size, but exceeded any other comparably-sized system in those areas in which smaller loudspeakers often fall short—large-scale dynamics, bass extension and weight, and the ability to play loudly without strain.

The most striking aspect of the WP7 was its ability to render massive dynamic contrasts with the speed and clarity of electrostats *and* the weight, impact, and power that only dynamic drivers can deliver. Not only can this loudspeaker turn on a dime dynamically, but it can do so with convincing authority and impact. Nor was its extraordinary transient fidelity confined to the midband, as is so often the case; it extended down into the bass to create the most coherent dynamic presentation I’ve heard from any loudspeaker. The system seemed to speak with one voice dynamically rather than change in character with the instrumentation or the register. (Some loudspeakers with superb transient fidelity in the midband cannot maintain dynamic contrast in the bass. As a result, the sonic fabric appears, distractingly, to be stitched together from separate materials rather than from a single bolt of cloth.)

Moreover, transient information had a “suddenness,” both in attack and decay, that was nothing short of revelatory. It was as though all the information in a musical transient was, for once, lined up properly, with none of the time smearing which we’ve become so used to. This time



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smearing, which can be blamed in part on enclosures that store energy and release it over time, diminishes a transient's impact, and with it, the sense of musical realism, life, palpability, and excitement. Snare drum reproduced through the WP7 had the most realistic sense of "pop" and impact I've heard from any loudspeaker I've had in my home. Similarly, bass drum was taut and quick, with its dynamic envelope precisely defined. The musical result was a sense of life, immediacy, and rhythmic drive. Rather than just hearing a drum kit, I experienced a greater impression of the drummer actually playing music.

In addition to getting large-scale dynamics right, the WP7 had extraordinary resolution of low-level dynamics. For example, I could hear the fine transient detail of a bass clarinet's reed vibrating (in certain recordings). I didn't appreciate this quality for its own sake, but for the realism and tangibility it added to instrumental textures. The most delicate inner details were resolved way down below the resolution floor of other dynamic loudspeakers, infusing the music with a captivating immediacy. The recorded acoustic, in particular, was rendered with a finely filigreed quality that conveyed the hall's character. Listen, for example, to the lush acoustic of the Troy Savings Bank Music Hall in Ulrike-Anima Mathé's performance of the Max Reger violin sonatas on the Dorian label. The WP7's low-level resolution makes for a more convincing impression of an instrument surrounded by air

within the acoustic. (Incidentally, my listening room is extremely quiet, with a measured performance of better than NC20—see my review of the Acoustic Room Systems treatment in Issue 139.) The WP7 let me hear deep into the music, literally (in terms of low-level-detail resolution) and figuratively (in the way it allowed me to discover musical meaning in newly resolved subtleties).

Perhaps as the result of this high resolution and low coloration, the WP7 had an astonishing palpability and focus. Vocals took on an almost eerie realism as they projected out from the loudspeaker. This palpability was not the result of a forward midband, but of a lifelike sense of "action" (Jonathan Valin's term for the way in which the sound of an instrument or voice expands outward as it gets louder). The WP7 excelled at reproducing this bloom, tracking the way it expands and contracts with an instrument's dynamic envelope, just as it does in real life. The trumpet is an extreme example of action; as it goes loud, the sound blossoms and expands into space, then contracts as the instrument gets quiet.

Although the WP7's bass was quick, clean, and articulate as described earlier, it gave up nothing in warmth, weight, and fullness. Acoustic bass in jazz recordings had a "roundness" that suggested a large vibrating wooden body. Extension was remarkable by any measure, not just by the standards of a loudspeaker that is only 41" high with a roughly 12" x 18" footprint. I found the

Technology, Build, and Finish Quality

This new WATT is the seventh generation of a product that dates back seventeen years (see TAS Retrospective this issue). The original WATT was a radical design in its day—its ultra-dense and low-resonance cabinet seemed overkill to some, but the WATT nonetheless was seminal in demonstrating the sonic benefits of reducing cabinet resonances.

This new generation builds on the idea, reflected in the WATT's extraordinary cabinet, that enclosure vibration is the enemy of good sound. The enclosure is made from the Wilson-developed "M" material, a dense, non-resonant composite. M material is reportedly very expensive and difficult to cut and machine, but according to Wilson, is vastly better than medium-density fiberboard (MDF). (Wilson has working examples of the same drivers and crossovers mounted in different cabinet materials to demonstrate the material's effect on performance.) This M material replaces the ceramic-filled methacrylate panels in the WATT 6. Ten-pound lead panels line the sides of each cabinet, and twenty different glues are used in the construction. The WATT's bottom panel is made from Wilson's cost-no-object X material, which reportedly is as rigid as steel. In addition to the effects of these construction tech-

niques, the WATT's small size and truncated-pyramid shape with no parallel walls naturally reduce resonances. When we consider that the acoustic output of a vibrating surface is a function of the surface's size and excursion, we can appreciate how the small and dense WATT is about as vibration-free as a loudspeaker can be made.

The enclosure is sanded, and then covered with Gel-Coat to both seal it against humidity and provide a smooth surface for painting. Twenty-four colors are available (including many automotive paints), and Wilson will color-match to any paint sample.

The WATT employs a 7" midrange driver sourced from ScanSpeak and a 1" custom titanium inverted-dome tweeter produced by Focal. The crossover is at 2kHz, and the circuit—all new in the 7—is built in three-dimensions rather than on a circuit board that could allow electromagnetic interference between components.

The bottom panel accepts spikes for stand-mounting, or in the more common application, mounting on top of the Puppy woofer. A panel on the bottom plate provides access to resistors that can be changed (only by a Wilson dealer) to tailor the frequency response to a particular room. (My review samples were

auditioned with the stock resistors.)

The Puppy employs two 8" Dynaudio woofers in a ported enclosure. These drivers are new to the 7. The latest Puppy also benefits from X and M material, as well as an entirely new crossover. The sleeve mounted in the rear-panel port can be changed to match the power amplifier's damping factor.

The spiking system includes spacers that vary the system's height and tilt to time-align the drivers at different listening heights and distances. The term "spikes" somehow doesn't seem appropriate for the massive machined devices that support the Puppy.

This new generation of WP represents a departure in sonic signature for Wilson Audio. The Sophia, WP7, and the just-released X-2 Alexandria (\$????) can be considered in this family of new designs. Dave Wilson also redesigned the crossovers to take advantage of the lower levels of resolution realized by the new cabinet materials.

Finally, it is difficult to overstate the WP7's build quality, attention to detail, and finish. Here's just one example that could stand for many others: the tuning port sleeve is machined from a block of aluminum. There's a well-known \$80k loudspeaker I know of that uses plastic port sleeves. —RH

WP7's bass and dynamic capability musically satisfying in my smallish room (14.5' x 21' with a 9' ceiling). Only when playing torture-test recordings (*Pomp and Pipes* on Reference Recordings, for example) at higher-than-normal levels did I test the system's limits. No, the WP7 won't move as much air as massive loudspeakers, but this restriction was never a real-world factor in my room with the music I enjoy, played at loud but not excessive listening levels. Moreover, I've found that some loudspeakers optimized for very high output in the lowermost octave sacrifice pitch definition and dynamic agility. For me, the WP7 struck the ideal balance between sheer bass power and articulation.

The soundstage was exceptionally well-defined, with tight image focus within an expansive space. Small changes in position were easily resolved; instruments next to each other remained clearly delineated rather than blurred. I was also impressed by the WP7's ability to accurately convey image size. Smaller instruments—solo violin and classical guitar, for examples—were reproduced with the correct scale. Many large loudspeaker systems, in their quest to correctly reproduce the size and scale of the largest "instrument" of all (a 60'-wide orchestra), sometimes tend to make all instruments sound larger than life.


Conclusion

Although I had admired many aspects of Wilson loudspeakers when hearing them at trade shows, they never captivated me musically the way the new WATT/Puppy 7 has. Whether I'd never heard previous versions of the

WATT/Puppies in the right circumstances or whether Wilson Audio has effected a significant advance with this new generation of loudspeaker, I don't know.

I can, however, say without reservation that the WP7 produced the best overall sound I've experienced in my home (particularly when driven by the VTL TL7.5 preamplifier and 450 amplifiers with Transparent cabling). Some of this performance may be due to the ARS room treatment, an advantage not enjoyed by previously reviewed loudspeakers.

Nonetheless, the WP7 is a stunning achievement not just for its outstanding musicality, but because it reproduces music with the size, scale, sheer volume, bass extension, and dynamic impact of systems three times its size. I need to clarify that last statement; no other loudspeaker I've heard in my home has approached the WP7 in transient fidelity or dynamic accuracy—regardless of size or price.

Often-overlooked aspects of buying an expensive audio product are the company's longevity, its customer-service record, your ability to obtain repairs in the future, and resale value. When you buy something as expensive as this you're not only purchasing a product but betting on the company. Given Wilson Audio's track record, it makes it that much easier to unhesitatingly give the WATT/Puppy 7 my highest recommendation. 

A Tempting Alternative

As great a loudspeaker as the WATT/Puppy 7 is, its price tag of \$22,400 is a big chunk of money. Fortunately, there's a (relatively) affordable alternative: Wilson Audio's Sophia. At about half the price of the WATT/Puppy 7 (\$11,700 per pair), the Sophia delivers a surprising amount of the WP7's performance.

The family resemblance is striking. The two loudspeakers are obviously cut from the same cloth sonically, with the Sophia offering many of the WP7's qualities—dynamic agility, bass extension, transient fidelity, resolution, focus, palpable rendering of instrumental textures—though not to quite the same degree. Like the WP7, the Sophia is well balanced and provides a much bigger sound than its cabinet dimensions would suggest. Its fit 'n' finish is just as impressive as that of the WATT, though less elaborate. The two loudspeakers even look alike, although the Sophia is housed in a single enclosure rather than the WP's two boxes.

Here's the icing on the cake: the Sophia's highish sensitivity, flat impedance curve, and resistive rather than reactive load make it very easy to drive. That means the Sophia can be driven by low-powered (read: inexpensive) amplifiers. I achieved superb results driving the Sophia with the 25Wpc Naim Nait 5 integrated amplifier (\$1450). Though this combination didn't fully exploit the Sophia's dynamic capabilities, it was intensely musical and produced a sound I would have been happy to live with. —RH

SPECIFICATIONS

Three-way floor-standing dynamic loudspeaker

Frequency response (with port contribution): 21Hz–21kHz, +0, –3dB

Loading: Bass-reflex

Driver complement: Two 8" woofers (Puppy); one 7" midrange, one 1" inverted-dome tweeter (WATT)

Sensitivity: 92dB 1W/1m

Impedance: 4 ohms nominal (3 ohms minimum, 11 ohms maximum)

Dimensions: 11.25" x 14.125" x 16.5" (WATT); 12.25" x 26.5" x 18.5" (Puppy)

Weight: 65 lbs (WATT); 105 lbs (Puppy) (net)

ASSOCIATED COMPONENTS

Meridian 800 upsampling CD and DVD-A player; Ayre CX-7 and Naim CD5 CD players; Audio Research SP16, VTL TL7.5, and Musical Fidelity A308 preamplifiers; Plinius Odeon, Plinius SA-102, VTL 450 and Audio Research VS55 power amplifiers; MIT Oracle and Transparent Reference XL V interconnects and loudspeaker cable; custom-built listening room with optimum dimensional ratios and room treatment by Acoustic Room Systems

MANUFACTURER INFORMATION

Wilson Audio Specialties

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Price: \$10,500 per pair (WATT); \$11,900 per pair (Puppy). Prices for standard colors (black, cashmere beige, Mercedes silver, and dark titanium). Twenty other finishes available (premium: \$400 WATT, \$500 Puppy). Custom color matching available.

MANUFACTURER COMMENTS

Aesthetix Io and Callisto

Editor,

I wish to express my sincere gratitude to Mr. Valin for his incredibly thorough review. His consideration of the Io and Callisto as “landmark designs” like the ARC SP10 MkII or SP3A-1 was the most poignant for me, as I have long been a fan of those legendary designs.

The Io and Callisto were originally designed in 1994. The circuit design remains identical to this day, although huge sonic improvements have been attained in the Signature versions through carefully selected capacitor, resistor, and wire upgrades. The earlier versions have been reviewed in TAS, and received awards and recommendations; the Signature versions reviewed are truly improved. Upgrades to earlier versions are available, with no difference between a newly manufactured one and one that has been upgraded. We can also add a second power supply to any version of the Io or Callisto.

The Io and Callisto are not for every consumer, because of their size and price. We have endeavored to bring their performance to a more accessible level with our new Saturn Series. Consisting of the Rhea phono, Calypso line and Janus all-in-one preamps, these are single chassis components that are direct descendents of the Io and Callisto. They use fewer tubes, solid-state discrete regulation, full remote control (even phono gain and loading), consume less power, and produce less heat. Their cost is roughly half of the Io and Callisto.

Mr. Valin’s comment about “having to get off one’s fat ass” to adjust the Callisto is true. I have been working on a motorized remote control system for the Callisto that will adjust volume, balance, phase and allow direct muting. It should be available by fall. Lastly, while Mr. Valin preferred single-ended connections in his system, it should be understood that a preference for either is highly system dependent.

Jim White, Aesthetix

Plinius SA102 Integrated Amplifier

Editor,

Further to our investigations of the SA102 reviewed by Wayne Garcia we have found that some incorrect resistor values were inserted into pre-driver section in both channels of the amplifier.

Under certain circumstances this would cause a small burst of high-frequency oscillation that may have been the smearing that Wayne reported. Although this is of a very low level it is conceivable that this could be detected in a high-resolution system. Our factory records showed that five SA102s manufactured on that day were affected and all were delivered to the U.S. Our U.S. Distributor, Advanced Audio, has located and modified these amplifiers and our factory test routine has been updated to prevent this happening in the future.

We sincerely apologize for the inconvenience and hope that another look at the SA102 by TAS will show its true capabilities.

Peter Thomson

Spendor S3/5se Loudspeaker

Dear Editor:

There was always something magical about the sound of the Spendor S3/5 mini-monitor and its predecessor, the legendary LS3/5a. When we designed the new S3/5se, we were determined not to lose the captivating sound that has always characterized these ‘BBC inspired’ reference class loudspeakers. We also wanted to demonstrate that under its new ownership Spendor is in safe and caring hands. So we were very pleased to read your accurate review of the Spendor S3/5se loudspeaker in which Paul Seydor has examined its full capabilities with amplifiers ranging from normal to exotic. We were delighted that Paul felt able to assure your readers that “Spendor is still Spendor.”

Philip Swift

Managing Director, Spendor Audio Systems Ltd

Sugden A21a Integrated Amplifier

Editor:

We’d like to focus on three elements we found particularly noteworthy in Neil Gader’s thoughtful review.

1. Temptation. Neil experienced a phenomenon common among listeners of the Sugden A21a—the temptation to turn up the volume to hear even more of the natural presentation our Class A “full-throttle approach” can offer, until the amp runs out of steam as all amps eventually do. Other types of designs of higher power rating can exhibit more audible distortion well before the onset of clipping. The more subtle dimensionality and ambience Neil notes also reflect the absence of distortion and noise in the A21a. For these reasons you may just end up listening to it more comfortably for longer sessions. One thing the A21a will not sustain is head-banging at a rave. As much as we’d like it to happen, it can’t be done. Sorry, mate!

2. Caveat. “Careful system-matching is a must rather than an option.” However, this may be as much a matter of the inherent quality of the speaker design itself as its efficiency. NG writes “at lower volumes it sounded awfully sweet [by implication microdynamic] on the [inefficient] ATC SCM20SL.” This is largely due to our Class A design which offers splendid late-night/apartment listening—rare among amp designs with lower current.

3. Philosophy. J. E. Sugden and Co. indeed follows the adage NG invokes: “If it ain’t broke, don’t fix it.” A pioneering and classic design handmade in West Yorkshire by a family-owned company still speaks strong value and validity 30 years on—even if the A21a profile is retro and the siren call of its bells and whistles is inaudible. What better hi-fi investment and experience can one offer?

George Stanwick

Stanalogue Audio Imports

Wilson Audio WATT/Puppy System 7

Editor:

Our thanks to Robert Harley for his concise, yet insightful assessment of the Wilson Audio WATT/Puppy System 7. We especially appreciated Mr. Harley's complete understanding of the performance capabilities of the system in spite of his relative lack of prior in-depth experience with our products. In some respects, this is the situation experienced by many new purchasers of our products, so Mr. Harley's comments are quite relevant to the prospective consumer. Two aspects of the review were particularly gratifying to me, personally.

The first is the clean, unambiguous, and efficient language of the text. The review lucidly presented the merits of the WP-7 and the reviewer's response to them. Refreshingly absent were any hints of self-aggrandizing elitism (which is offensive to the target party and boring to everyone else) or sophomoric specious conjecture. Every detail was well researched and accurately portrayed.

The second satisfying aspect was the

realization that when you are investing in *any* high-end work of industrial art, you are acquiring more than the hardware. Parts of the "product" include elements as practical as customer service and as profound as the depth of the *quality of execution* of the concepts embodied in the hardware. Those elements should be part of every high-end product assessment as they were so clearly in this fine review of our Wilson Audio WATT/Puppy System 7!

David Wilson

Wilson Audio Specialties

Plinius

Editor: