

# Review



S1/IW Three-way In-wall Loudspeaker (rosewood gloss finish) shown as reviewed with optional B1 Three-way In-wall Loudspeaker Box (black satin finish) and optional ST/B1 Three-way In-wall Loudspeaker Box Stand (rosewood gloss finish).

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Product Review  
The Audiophile Voice  
Number 1, Vol. 7, January/February 2001

## Induction Dynamics ID-S1/IW Speakers

James T. Frane

So, you say that someone in your household would rather not have speakers in the room, and maybe this doesn't seem reasonable to you? You say someone has asked if the speakers could be hidden from view and you have tried to explain why not?

Induction Dynamics may have a solution for both of you with their Model ID-S1/IW (who thinks up model numbers? Actually, there is logic to the numbers, but they're just not easy to say or to remember). The ID-S1/IWs have an important feature that may be uniquely theirs they are designed for either in-wall installation or mounting on stands without loss of sound quality. I reviewed them as the stand-mounted version and it should be noted that the stand I received was a prototype. The main speakers are wide-range, three-way speakers in aluminum sub-enclosures (powder-coated for corrosion resistance) designed to fit between wall studs. When on stands, the sub-enclosures are mounted inside wood cabinets using specially designed hollow bolts that Induction Dynamics calls "Stud Grabbers." Then, the systems are bolted to an angle brace on each stand for stability.

Beautifully finished front baffles are used in both versions. Cloth-covered aluminum grilles have posts designed to fit sockets on the fronts of the speakers. The cloth covering on these grilles had recently been changed to a thicker material that prevented full engagement of the posts. I was thus unable to audition the speakers with grilles in place; later conversations with the manufacturer indicated this has been corrected by lengthening the posts. The stands put the speakers at the right height for seated listeners. Wing bolts are supplied (four per speaker), so tools aren't required, but putting the assembly together will be

appearance to blend with most decors, whether in-wall or stand-mounted."

"This much versatility would be hard to find in another speaker."



Back of S1/IW Three-way In-wall Loudspeaker showing wiring, components, connections and electronics housed behind sturdy aluminum cages.



Sealed, heavy duty, one-piece aluminum box anchors securely between wall studs using exclusive, patent pending wall mounting system.



S1/IW Three-way In-wall Loudspeaker for "in-wall" applications.

much easier with two people. The prototype stands were not as stable as they might be, but Induction Dynamics' Amy Hoffman informed me that the production version uses a thicker angle brace. The standard front-baffle finish is cherry; rosewood is premium, and custom paint and stains are available. The review samples had rosewood veneered front baffles and stands with black enclosures; the subwoofer enclosure was rosewood veneer as well.

From top to bottom on the main speakers are an 1-1/8-inch inverted titanium dome with a small phase-control disc, a three-inch dome midrange, two side-by-side flared vents, and finally a 6 1/2 inch Kevlar cone woofer. All are centered on the front baffle. The outside enclosures (for stand mounting) are 24 3/4 inches high x 13 1/2 inches wide x 8 inches deep. Although the front baffles are wide, completely covering the front of the enclosure, the edges are smoothly beveled to mitigate diffraction effects.

The crossovers in the main speakers are noteworthy because this patented technology achieves a slope in excess of 30 dB per octave within a half octave of the crossover frequency. The design is covered in detail in U.S. Patents 5,568,560 and 5,937,072. The firm's literature states that the advantages of this design are:

1) Steep crossover slopes are desirable because they allow the operating ranges of the speakers to be extended, and 2) audio crossover circuits with steep crossover slopes reduce or eliminate interference between speakers operating at adjacent frequency ranges.

A powered subwoofer (Model ID-SW1) with its own separate, dedicated amplifier is designed to mate with the ID-S1/IWs. The closed box subwoofer is 17 inches high x 17 inches wide x 17 1/2 inches deep and contains dual 15 inch laminated cones with cast frames, rubber surrounds, and 120-ounce magnets bolted face-to-face in a compound push-pull configuration. The black subwoofer amp has a built-in 80-Hz



S1/IW Three-way In-wall Loudspeaker installed in the B1 Three-way In-wall Loudspeaker Box for "on-wall" applications.



S1/IW Three-way In-wall Loudspeaker installed in the B1 Three-way In-wall Loudspeaker Box and mounted on a ST/B1 Three-way In-wall Loudspeaker Box Stand for "freestanding" applications.

electronic crossover that can be bypassed.

(For clarity and simplicity, I will refer to the ID-S1/IW speakers as the S1/IWs; their matching ID-ST1/IW stands as ST1/IW and the ID-SW1 subwoofer as SW1. Induction Dynamics has designed the S1/IWs for both audio and home theater applications.)

Opinions among my family members varied a bit on the aesthetics of the gloss finish on the rosewood review samples. Some would have preferred a less glossy appearance, while others thought the result was beautiful. Both glossy and satin finishes are available at the same cost. The owner's manual for the main speakers is 10 pages long and covers a few basics, including locating and cutting holes in walls and installing the speakers in a wall. The subwoofer manual is 11 pages and covers the different subwoofer variations in their line, as well as subwoofer hookup options. I would like to have seen more information and recommendations about placement effects in a room, as well as more of the details found in their color brochure.

## Placement

I placed the S1/IWs 9 feet apart, 4 feet from the wall behind them, and each 9 feet from the listening position. The nearest sidewall was 5 feet away. Toeing them in between 15 and 20 degrees gave the best overall sound and presentation in my room, but differences were not large as I moved them about. I think there is likely to be placement flexibility in most rooms. The subwoofer was situated behind the right speaker for no other reason than convenience of connection. It worked very well there, as I think it would in many other locations.

## Listening

In addition to music, I auditioned the S1/IWs using the test cuts on Chesky Record's Jazz Sampler and Audiophile Test Compact Disc, Volume 1 (JD37). On the left-right imaging test, each of the announcer's positions, including off-stage right and left,

were located properly, but the center location extended from one speaker to the other, rather than being at a spot between them. In the "up" test, the sound moved straight up from each speaker. "Over" arched just about a foot above the tops of the speakers at the center point. "Lateral" was level with the tweeters as it panned across. The depth test, in which the announcer and a tambourine move successively farther away from the microphone in increments, was believable. Kenny Burrell's *Guitar Forms* (Verve 825 576-2) was reproduced with realism and a high level of detail. The spaciousness of the recording location came through very well. Count Basie Meets Oscar Peterson's *The Timekeepers* (Pablo OJCCD-790-2) had accurate tonality and located the two pianos at opposite sides. There was a three-dimensional quality about the performance that added to a feeling of being there.

Following extended listening, I took frequency response measurements at the listening position using pink noise and the ADC analyzer. The measurements confirmed my assessment that the lows were extended and the highs had a gradual downward slope. The highs were detailed, smooth and open.

I did most of my listening with the subwoofer in the system. The drivers and subwoofer presented well-integrated sounds as if from a single source. The subwoofer position was never identifiable the lows seemed to come from the main speakers. Even without the sub, the main speakers sounded very good and went down to the mid-50 Hz region, but the added lows with the sub provided a definite enhancement. The sub amp-volume control has a center "zero" position with "+" and "-" positions to either side. After experimenting, I settled on using the "zero" position. Too much bass resulted if the control was moved more than one step toward "+" past null. The subwoofer amp never became more than slightly warm to the touch during use. A soft thump through the sub always resulted on turnoff irrespective of the sequence I used to turn

off components.

Soundstage width and depth varied with the recording these are speakers that reproduce well the details that were recorded. The image could extend beyond the speakers as well as reaching behind the wall in back of them, depending on the recording. Poor miking or mixing techniques were readily apparent.

The S1/IWs' dynamic performance was exceptionally good. The cannon shots in the "Ouverture solennelle" from the 1812 by Tchalkovsky, performed by the Israel Philharmonic and Leonard Bernstein (Deutsche Grammophon CMD-01A), sounded as good as I have heard them, which is to say realistic, loud, deep, and articulate. There was never any apparent wind noise through the vents. The soundstage height was normal for each recording and the performers appeared in a horizontal arc in front of me. In general, orchestral works were presented with a realistic breadth and depth. On Bach's Suites for Unaccompanied Cello (Yo-Yo Ma, CBS Masterworks, M2K37867), the cello was sonorous and detailed. Male and female voices, such as those of Nat King Cole and Julie London, as well as those of announcers on FM, sounded very natural. I played a wide variety of types of music, and enjoyed the music through these speakers. I frequently found myself wandering away from analyzing the sound and just enjoying the music.

I later tried to emulate as closely as possible the way the system might sound when installed in a wall, so I put the main speakers with their backs as close to the wall behind them as the baseboard and stands would permit (this left about a three-inch space between speakers and wall). The soundstage depth decreased significantly, but the sound was otherwise much the same.

## Conclusion

Induction Dynamics has designed these speakers for audio and for home-theater

applications. The S1/IWs ability to handle dynamics, integrate well with the subwoofer, as well as their tonal accuracy, and reproduction of ambiance on the recording seem to make them well suited to both roles. The flexibility of the design that allows in-wall mounting in their sub-enclosures is an added bonus. The steeply sloped, patented crossover design does its job competently. The overall sound is coherent, musically involving, and tempts one to listen longer than planned. It was well balanced and full range, even at low listening levels. The Induction Dynamics speaker are solid, well-built with quality components, and the choice of finishes should provide an appearance to blend with most decors, whether in-wall or stand-mounted. This much versatility would be hard to find in another speaker.

Although I didn't make cutouts in my wall to try them in-wall, I have no doubt they will also provide superior sound in that configuration. The S1/IWs and SW1 have been well thought out and executed.

**[S1/IW Three-way In-wall Loudspeaker specifications page](#)**

Review originally published in The Audiophile Voice  
Vol. 7, Issue No. 1, January/February 2001

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Guts & Elbow Grease Publishing Ltd.  
The Audiophile Voice, PO Box 43537  
Upper Montclair, NJ 07043

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