

Making The John Lennon Anthology · Producer/Songwriter Glen Ballard · All Access: Garbage

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PMC IB1S

MIDFIELD STUDIO MONITORS

The Professional Monitor Company's PMC IB1S midfield studio monitors provide one of the most sensational listening experiences I have enjoyed. I found it practically heartbreaking to have to return them to the manufacturer after the evaluation.

Retailing for \$4,500 a pair, the IB1S measures 29.1x13x18.3-inches (HxWxD) and occupies a little more than four cubic feet of studio

BY HUNTER PIPES



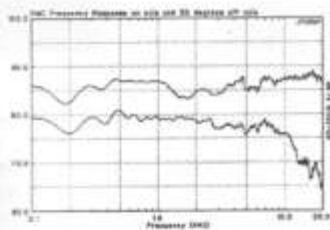
Lab Analysis: PMC IB1S Monitor

by John Schaffer and Rob Baum

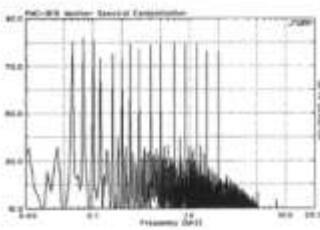
The PMC IB1S is a three-way system. The 1-inch Vifa soft-dome HF tweeter is driven by a 1-inch-diameter voice coil and is mounted to a 4-inch-diameter, horn-loaded faceplate. The pole piece is vented into a sealed plastic enclosure. The unshielded driver is supplied with two 0.11-inch male connectors. The midrange driver, a Vifa 3-inch dome unit with a 3-inch diameter voice coil, has a 6-inch diameter, shallow, horn-loaded plastic faceplate. The design uses a central slug of either neodymium or Alnico magnet, so it is inherently shielded. The motor case is vented into a sealed plastic tube rear enclosure, and there are two 0.11-inch male connectors.

The 10-inch woofer has a 3/8-inch-thick flat diaphragm and is constructed from textile skins on either side of a honeycomb diaphragm, which is attached to a half-roll butyl rubber surround. Flat di-

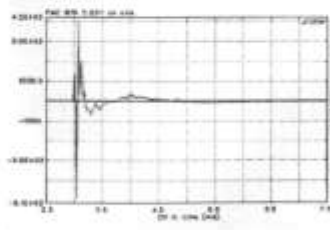
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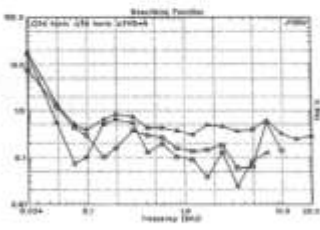
The on-axis frequency response (top trace) is generally smooth to 1 kHz, dipping from 1,200 to 3k Hz, with a generally rising response from 1.8 to 20 kHz. The 30-degree off-axis response (bottom trace) smoothly tapers down by 5 dB from 500 Hz to 11 kHz then drops off rapidly.



Spectral contamination distortion is around 40 to 45 dB below the input test tones in the mid band, and improves at lower frequencies.



Impulse response is well-behaved, particularly considering the use of three drivers.



Harmonic distortion is very low (about 0.2%) between 100 and 5k Hz, but rises at the frequency extremes.

—FROM PAGE 188, LAB ANALYSIS: PMC IBIS MONITOR

aphragms permit shallow baskets or frames, and consume less volume inside the enclosure than cones; hence, the popularity of flat woofers in car audio, where space is at a premium. The cast-aluminum basket is powder-coated black, and the surround is attached by screws into the main body of the basket. The woofer's top plate is 18.5 mm thick, and the 3-inch diameter voice coil is underhung, i.e., the voice coil is shorter than the top plate. The unshielded woofer uses a 7-inch diameter cupped (as opposed to flat) spider. The one-piece backplate and pole piece are forged. The conventional ceramic (ferrite) magnet is 8 $\frac{1}{2}$ -inches in diameter and 1 inch thick. The wire terminals are spring loaded barrel terminals.

The PMC IBIS cabinet uses a slot-loaded scoop design, is built of 1-inch-thick MDF, and is finished in black textured paint. T-nuts are used for all threaded fasteners, and the enclosure is heavily stuffed with polyester foam. All the drivers are recessed, as is the crossover panel. The crossover uses three pairs of gold-plated five-way binding posts on an MDF rear panel, allowing for tri-amped or full range use.

TEST RESULTS

The on-axis frequency response is fairly flat above 500 Hz, except for a shallow dip between 1,200 and 3k Hz. The frequency response rises by about 5 dB from 1.8 to 20 kHz. The off-axis response smoothly tapers down by 5 dB from 500 to 11k Hz, and then decreases rapidly above 11 kHz. The PMC exhibits a fine transient response, particularly for a three-way system. The drivers are generally in good acoustic alignment with each other.

Harmonic distortion measured well, and was approximately 0.2% for the two decades from 100 Hz to 10 kHz, rising only at the frequency extremes. The spectral contamination distortion test is a measure of the speaker's nonlinear distortion (i.e., the generation of frequencies not harmonically related to the original input frequencies, and therefore very objectionable). The PMC generated spectral contamination (or self-noise) at a level of about 45 dB below the input test tones. ■

John Schaffer and Rob Baum are test engineers with Menlo Scientific, an independent acoustic lab based in Berkeley, Calif. For more on testing methodology, refer to the Feb. '98 issue of Mix, or visit www.mixonline.com.

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