

MIX

Professional Audio and Music Production

ADAM Pro Audio A7 Monitors

by [Barry Rudolph](#)

FIELD TEST

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Pleasing and analytical sounding at the same time is the sonic signature of the Adam Professional Audio monitor line. It's easily hearable in their largest studio main monitor the S7A MK2 and all through their extensive line of home and studio speaker systems. Functioning like a sound microscope is partly due to the unique A.R.T. (Accelerated Ribbon Technology) tweeter transducer used in all their models.

Based on Oskar Heil's Air Motion Transformer, the A.R.T. transducer has a membrane with a folded diaphragm whose single folds move, squeezing air in and out. This is unlike conventional cone loudspeakers that use piston "motors" to move air in and out. The folded diaphragm moves air in and out four times faster than how quickly the folds themselves are moving. This action is more efficient and equates to increased clarity and better transient reproduction.

WHAT'S IN THE BOX?

The ADAM A7 (\$999/pair) is a two-way near-field design using the A.R.T. tweeter coupled with a 6.5-inch woofer that has a cone made from a new material called Rohacell. This carbon-fiber sandwich offers high rigidity and (therefore) high internal damping, but with low mass. A perfect complement to the A.R.T. tweeter, the lighter cone reacts to transients quickly for a more accurate and clearer sound.



The stylish A7 cabinet is made from MDF finished in matte black. It matches the rest of ADAM's A, P and S Series speakers, with faceted corners that are reminiscent of stealth aircraft designs. Dimensions are 13 X 7 X 11 inches (H-W-D) and each cabinet tips the scales at slightly less than 18 pounds each.

The A7 uses two Class-AB, 50-watt (RMS) monolithic IC power amps, one for each driver. Powered by an internal linear DC power supply, these amps have heat sinks on the rear of the cabinet and feature current limiting/short-circuit protection with long-term thermal protection that mutes the amps if they get too hot.

The 2.2kHz crossover network consists of three cascaded second-order Sallen-Key filter sections. There's a fourth-order (24dB/octave) highpass filter for the tweeter, a fourth-order lowpass filter for the woofer and another fourth-order, very low-frequency filter to block harmful subsonic frequencies that are too low for the woofer to reproduce.

The rear panel has a +/- 4dB tweeter master level control, and +/- 6dB/6kHz high and a +/- 6dB/150Hz "Room" EQ controls, plus the usual IEC AC power connector and 110/220VAC voltage-selector switch. Balanced XLR or unbalanced RCA jacks handle line-level inputs. The front panel has a power switch with a blue LED indicator and a detented gain control with a range between -30 and +5 dB to accommodate any inputs from pro or consumer-type gear.

IN MY STUDIO

I spent my time assessing the A7s by comparing them to the sound I'm used to: my own pair of ADAM S2.5As. The S2.5As are about twice the size, have a 9-inch woofer and the same A.R.T. transducer, are much higher powered and cost more than four times as much. My mixing space is just 10x10 feet--perfectly sized for mixing on small speakers. I operated the A7s vertically and on either side of my 20-inch monitor--i.e., 27 inches from the center-to-center of the left and right woofer cones. This worked out perfectly from my listening position on the third corner of the equilateral triangle.

I use 6-inch tall plinths, small platforms to raise the speakers so my ears line up to the space between the tweeter and woofer. Keeping my monitor levels at 85dB SPL (most of the time) or lower--the A7s are not even breaking a sweat at this 'old dude' volume. About the only time I like it loud is when the A&R guy or the artist's manager shows up.

To match the A7s as closely as possible to my S2.5As, I set the 150Hz Room EQ to +1.5 dB, the 6kHz Room EQ to +1 dB and the master tweeter level to +0.5 dB.

The low frequencies are well-heard for such a small woofer; I could hear all of bass notes very clearly on the A7s. I was mixing a rock track with Fender bass (i.e., not synth bass) and had no problems judging bass levels nor the relationship between the lows in the kick drum and the bass instrument. On the S2.5As, the situation was the same, although I could hear more of the deep bass; I recommend ADAM's optional Sub 10 to go with the A7s for surround mixing or if you just want to know exactly what's going on in "subwooferville."

The A7's stereo imaging and spectral balance were identical to the S2.5As, so determining EQ frequencies and amount in the mix is easy, while any EQ problems in the tracks were immediately noticeable. One of the benefits of superaccurate, small speakers is the clarity of the all-important midrange. The balance between the vocals and walls of guitars is readily apparent. Using the A7s, I spent less time "massaging"--readjusting levels, compressing and/or equalizing--the midrange elements to get them to "mesh."

For these reasons and more, Yamaha's NS-10Ms became popular as a secondary monitor back in the day when everyone always mixed "big" on a studio's soffit-mounted loudspeakers. I think the A7s represent the new NS-10Ms, yet the A7s do a better job and their top/bottom are much nicer to listen to at any volume.

By quick comparison, the S2.5A, with its much bigger woofer, sounds a little scooped out in the low midrange, or 250 to 400Hz area. This is a common sonic difference between speakers with different woofer cone sizes; however, it does not affect the way in which mixes I've done on ADAMs translate to other systems. I've mixed with great results on ADAM's S3A, S2.5A, S2A and now A7 monitors, yet all have different woofer configurations.

THE ART OF ADAM

I like mixing on ADAM monitors because I feel less fatigued and "dinged out" at the end of a long day of mixing. I attribute that to the A.R.T. transducer and the speaker's low distortion. With their precise and clear sound, the A7s are hard to beat as stereo or surround monitors for small rooms.

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