

Win Gear For Your Studio—Over \$2700 Worth! See Page 33

# RECORDING

The magazine for the recording musician®

## How To Mic Instruments From A TO Z



Learn Dozens Of Useful Techniques — Understand Spec Sheets — Separate Fact From Fiction — Master Recording The Grand Piano

VOL. TWENTY NINE  
NUMBER EIGHT  
MAY 2016  
USA \$5.99  
CANADA \$5.99



# 11 Hot Products On Review:

ADAM Audio • DPA Microphones • DynaMount • Mesanovic  
Radial Engineering • Roswell Pro Audio • Shure • Zoom





# REVIEW

BY MIKE METLAY

## ADAM Audio A7X Monitors and Sub10 MK2 Subwoofer

An integrated system for glorious sound from top to bottom



ADAM Audio is a German firm that is largely responsible for the repopularization in recent years of the Air Motion Transformer (AMT) tweeter invented in the 1960s by Dr. Oskar Heil. Recently, ADAM has been reintroducing the audio world to its A-Series nearfield monitors by making them available for a limited time in discounted bundles with ADAM's Sub series of subwoofers. ADAM chose each bundle so the SPL capabilities of the satellites and sub are well matched.

Currently, there are four such packages, each of which includes two monitors, one sub, covering the entire ADAM A line. From smallest to largest, they pair the A3X with the Sub7 (\$1199), the A5X with the Sub8 (\$1599), the A7X with the Sub 10 MK2 (\$2549), and the A8X with the Sub12 (\$3499). For this review, I got to try out the A7X with the Sub10 MK2, the A7X being practically the only speaker in the lineup that we haven't reviewed already!

### Accelerated air ribbon motion what?

ADAM's X-ART tweeters feature a long ribbon of very light and thin metallized plastic that's gently folded into an accordion pleat. When subjected to a magnetic field, the material opens and closes like a bellows, squeezing air out at very high velocity. This is a principle similar to how human vocal cords work.

Why do this? The combination of extremely light weight, high air velocity compared to the relatively slow speed of the vibrating bellows (four times as fast on these speakers), and the fact that the assembly is actually a large piece of plastic folded down into a very small space, means that these tweeters are enormously efficient and react very quickly to tiny and rapid changes in signal. They move a lot of air with fairly little amplification, producing sweet clear treble that goes on forever.

You'll sometimes hear them referred to as "ribbon tweeters" or "folded ribbons" because of the pleated plastic ribbon, but they're actually not true (planar) ribbon tweeters, which have their own advantages and disadvantages, and are far less common these days.

### The A7X

The A7X is a biamplified 2-way nearfield monitor with an X-ART tweeter and a 7" carbon/Rohacell/glass-fiber woofer, housed in ADAM's distinctly angled cabinet with a 50 W Class AB amp for the tweeter and a 100 W PWM amp for the woofer. The enclosure is 13.5 x 8 x 11 inches in size and weighs a hair over 20 lbs.

The front panel features the tweeter, woofer, dual front-firing ports, a power switch and power/clip LED, and an input sensitivity control (from mute to +14 dB with a detent at unity gain). On the rear panel, you'll find balanced XLR and unbalanced RCA inputs, a standard IEC power cable jack with fuse tray, and three recessed EQ trimpots. These trimpots are stepped for easy and reliable channel matching; there are high and low bands with  $\pm 6$  dB of gain and corner frequencies of 5 kHz and 300 Hz, and a tweeter gain control of  $\pm 4$  dB.

Note that ADAM calls the EQ bands "shelving filters"; in practice they work more like filters than shelves, producing a gentle broad peak/dip centered around 80 Hz in the lows and a significant boost or cut that increases with increasing frequency, well beyond 20 kHz. These tweaks are intended for the same sorts of room corrections as other speakers' EQ controls, but beware: ADAM gives you plenty of rope to

hang yourself with in the EQ department! If you find yourself needing the whole 6 dB of boost or cut to get the A7X sounding right, you should pause to analyze and correct your room's anomalies if you possibly can. For my tests, I listened with the tweeter gain left flat and a very tiny bass cut (1 dB or less) to compensate for placement near a reflective boundary.

Listening to the A7X by itself after a two-day burn-in, I was struck by just how good it sounded as an overall monitor. ADAM claims a frequency response of 42 Hz to 50 kHz but doesn't list tolerances; one might guess that they were  $\pm 3$  dB, but a 7" woofer that's only 3 dB down at 42 Hz would be impressive indeed. This is my pet peeve with spec sheets for monitors; that low frequency number is the most important spec, and I want to know what it actually means. 3 dB down? 6 dB? 10 dB? More?

As it stands, the woofer delivers a good amount of clear solid bass, extended but not thumpy. 42 Hz is just about enough to hear the low E fundamental of a bass guitar (41 Hz), and in my listening, I was hearing it in acceptable balance with higher



harmonics. Kick drum punch and low notes on the piano were also solid and believable, but I have to admit I don't have very much music in my collection where the pianist makes a lot of use of that low A (27 Hz)!

As I listened up the spectrum, there were no obvious weirdnesses in the vicinity of the crossover (3 kHz), and the mids and highs were as lovely and clear as I've come to expect from well-made air motion tweeters. Acoustic music was simply glorious on the A7X, with clarity, vibrancy, and exquisite detail. Great recordings sounded great and less-than-great recordings couldn't hide their warts. The X-ART tweeters were especially good at highlighting digital artifacts like overzealous noise reduction and lossy data compression; they're fantastic for the engineer who may be too eager to think of digital processes as magic black boxes that can't screw up his audio because the computer is obviously smarter than he is!

The A7X continues to build upon the ADAM tradition of exceptional quality and clarity. I have a real love for folded-ribbon speakers in general; my most-used casual listening speakers are an old pair of ADAM A5s. The A7X was familiar to me, and yet its strong extension and high power handling were revelations. I had a blast working with them. Well... I guess I have to admit that the "blast" part really happened when I added the subwoofer!

### The Sub10 MK2

ADAM Audio has matched up its satellite/sub bundles based on SPL at one meter; the A7X sounds exceptionally clear at lower listening levels, but it can in fact go up to a shattering 114 dB SPL (peak), with a steady 106 dB SPL being no problem at all. The subwoofer that matches that power delivery is the Sub10 MK2, a real behemoth of a speaker by almost any measure.

Measuring 22 x 12 x 15.5 inches in size and weighing a hefty 46.3 lbs., the Sub10 MK2 takes its name from its 10" front-firing coated-paper woofer. The cabinet rests on sturdy metal feet with nonskid pads, giving clearance for a huge flared down-firing port. Rear panel connections include balanced XLR and unbalanced RCA inputs and outputs for the Left and Right signals, and a separate XLR out to daisy-chain more subs. There's no sub-mute footswitch, which I missed having.

Controls include knobs for Sub Level (mute to +6 dBu) and Sub Filter (lowpass filter with corner frequency from 50 Hz to 150 Hz, with a detent at 85 Hz, the recommended setting for surround use). There are switches for always-on vs. "standby until

you receive audio, then back to standby after 15 minutes of silence", subwoofer polarity inversion, and an 85 Hz highpass filter for the satellites so they're not trying to process the audio handled by the sub (especially for surround—see above). Use of this filter is a matter of preference; I like my satellites to deliver their full frequency response and be supplemented where needed by the sub, so after a few trials with it on, I turned it off and left it off.

The Sub10 MK2 has a 200 W power amp and can deliver up to 113 dB at one meter, making it well matched to the A7X. Once I got it placed, I tended to set it very conservatively, just adding a bit of low-end "feel" rather than earthshaking bass. I did make an exception one evening and cranked it up for dance mixes, and had a lot of fun before I had to dial it back and save my ears (and my stomach).

The amount of power the Sub10 MK2 can deliver is seductive, especially when you have to "give good client" for rock, pop, or dance music. While I feel it's a great match to the A7X (reaching down to 25 Hz), it has to be set with care so that it's giving you the right amount of bass at the listening levels normally used in your studio. Remember those pesky Equal Loudness Curves—the balance of bass to mids changes with listening level!

### Final thoughts

Any time you use a smaller monitor to record and mix music, you should always check your work on larger monitors to make sure the extreme bass holds up properly. The lower the bass extension of your small monitors, the narrower the range of frequencies you need to worry about.

In the case of the A7X, that range begins at about 45 to 50 Hz. Really deep bass and piano notes (especially if the bassist has a 5-string with a low B) will fall below that, as will some of the boom of a kick drum or a sub-bass synthesizer used to emphasize the lows in dance music. So if you're doing anything that relies on significant low end, you'll want to supplement the A7X with the Sub10 MK2. The result is an incredibly powerful and well-balanced listening system that covers the full frequency spectrum with aplomb. It won't let you down... but please keep your usual levels below 90 dB if you want to still be doing this job years from now.

**Prices:** A7X, \$749.99 each; Sub10 MK2, \$1499.99; A7X-Sub10 MK2 bundle, \$2549 (until June 30, 2016)

**More from:** ADAM Audio,

