## ADAM ANF10 Studio Loudspeaker Review

## Small size, Surprising sound

by Lynn Fuston

OUTLINE:

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B) Description of the ANF10s
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Last fall at AES 2004 I got my first look at the newest ADAM speaker, a passive two-way bass reflex cabinet with 7" woofer and folded ribbon tweeter called the ANF10. It intrigued me because it sounded very ADAM-esque, was extremely affordable and put out a surprisingly large sound for its diminutive footprint.

But, there are lots of speakers that are small. That in itself doesn't justify their existence. The biggest problem I typically have with small monitors is that they usually earn praise as long as one qualifier is applied. "They sound really good *for their size*." "They sure have a nice bottom end *for their size*." How many times have you heard that phrase. The other qualifying phrase is *for the price*. I don't like having to make excuses for gear like that.

Well, that said, the ANF10s are both small and inexpensive. How small? Try 13" tall x 7" wide x 11" deep. The cardboard boxes they come packed in from Germany are smaller than my normal Tannoy monitors. How inexpensive? The price for these is \$750. That's for the **pair**, not just one speaker. That's pretty affordable. I was showing them to one engineer, who was familiar with ADAMs and wished he could afford a pair, and he jokingly said "Have they broken the price barrier yet?" The most successful ADAM speaker so far, the one that put ADAM on the US map, is the S3A, a truly wonderful tri-amped speaker that is \$2675. Multiply by two for stereo. As wonderful as they are, over \$5K for two speakers is out of reach for a lot of people. So the price on the ANF10s is very appealing. They look like ADAMs with beveled upper corners near the folded ribbon tweeter and a front-mounted port. So how close of a family resemblance is there to the other successful ADAM siblings?

For those unfamiliar with ADAM speakers, their trademarks are 1) active multi-amped designs, with 2) folded ribbon tweeters, 3) Hexacone woofers and 4) amazing imaging.

1) While all the other ADAM monitors are powered, even down to the "Artist," an attractive \$800 monitor "for the desktop producer," the ANF10 is the first *passive* ADAM monitor. Having no integrated power amps means "BYOA" (Bring Your Own Amp), a concept that has never bothered me. (If you want a powered two-way ADAM monitor with similar dimensions, the ADAM P11A fits the bill, but at \$1050 each.) I would recommend a good strong amp to make the ANF10s sound great. I hooked up my Harman-Kardon Citation 16As (175W RMS a side) and the ANF10s seemed very happy even with the amps lighting up all the power output LEDs. That's a lot of power, especially for a small speaker. The only time the speakers complained was on occasional low frequency information in the sub-80 Hz range at full power. What 7" driver wouldn't cough with 40 Hz at 175W? Not any that I know. But the ANF10s are not terribly efficient so make sure you drive them with a powerful amp. (After comparing them with other comparably sized monitors, I found out their efficiency is about average.) Give them plenty of high octane power and they will reward you by getting frighteningly loud. I listened to several songs with levels averaging over 100 dB SPL, loud enough for anyone who cares about their long term hearing.

2) The folded ribbon tweeters that are used on all ADAM monitors utilize A.R.T. (Accelerated Ribbon Technology) which use a pleated diaphragm with conductive stripes on the pleats, so that applying alternating current causes the diaphragm to squeeze air out instead of pushing it like a conventional voice coil driven transducer. The folded ribbon on the ANF10 is a redesign of the same tweeter used on the bigger ADAMs using the same principle and same diaphragm but smaller magnets. The crossover frequency is 1.8 kHz.

3) The diaphragms of the woofers in most ADAMs are made of a special material called HexaCone. Quoting ADAM's literature, "The core is a honeycomb structure made of a very light, stiff material called Nomex, coated on both sides with Kevlar. These diaphragms are more rigid than other cone material, which gives them a remarkably tight and accurate low frequency response." The ANF10s use a coated paper woofer instead, with a smaller voice coil (26mm, 1" for us non-metrics), sourced from the Danish company Vifa.

4) The excellent imaging is one of ADAMs strongest selling points. Each time I listen to them I learn something new about the reference mixes I am using. When I initially heard the S3As in my studio, I immediately noticed things about my mixes that I would change. The same was true when I heard the S5As, the 100 lb. \$13,750 per pair big brother to the S3As, only more so. After hearing my mixes on the S5As I made a list of things that I needed to change. The same revealing imaging is evident in the ANF10s.

So there are similarities and differences between these mini ADAMs and the rest of the ADAM line, as you would expect from a speaker that costs 1/7th as much as the S3A. But is this cost effective, smaller package just a marketing compromise or a useful tool?



To start, let me say that my first impression of these speakers in my control room was very positive. I set them up and put in a CD, listening from around the room at a moderate level while I worked. They are very pleasant speakers to listen to, making me think they would be great speakers for a home surround system. When I compared them with my Tannoy monitors (DMT-10s), I noticed that they were less efficient, meaning that I had to crank them up when switching back and forth. Efficiency is rated at 89 dB SPL/1W/1M. By comparison, comparably sized speakers from Event, Dynaudio, Alesis and Mackie range from 87 to 90 dB efficiency, while the standard Yamaha NS-10 spec'd at 90dB/1W/1M, so this is pretty typical.

They seemed a little darker than my Tannoys which surprised me, because the signature ADAM sound is very clear and open on top, with response spec'd to 35K. I had them sitting upright with the tweeter on top. After further listening, I discovered that the directionality of the tweeter was responsible for that impression. I had them sitting above ear level and the vertical dispersion of the tweeter makes it best when used at eye/ear level, which is where

most console mounted loudspeakers reside. After living with them for awhile, I noticed this trait often. If the dispersion on a tweeter is not very wide, you can hear a beaming (like the directional beam of a flashlight) of the uppermost frequencies directly in front of the tweeter. If you sit in front of the speaker, as most of us do, then this is not an issue. For people off axis, they will get a different impression of the top end. This is not unique to ribbon tweeters because all tweeters exhibit this characteristic.

As I mentioned before, with the right power amp, these babies will play very loud. Even David Bryce of ADAM US was shocked when I told him how hard I was pushing them. It was a blast and no one who walked into the room would ever have believed all that sound was coming out of these little speakers. The bottom end has a lot of output around 120 Hz so that you feel like you're hearing a lot more low end than the speaker is capable of putting out. It's a faux-bass reminiscent of the NS-10 sound, where you know there's nothing below about 65 Hz but you can enjoy listening to the bottom anyway. I found judging the mix level on bass guitar was very easy with these all by themselves. Judging the bottom register of the kick drum, on the other hand, was difficult for me. But since I used them with a subwoofer which I would recommend, that filled in the questionable 20-65 Hz range making it easier to judge. I think the best environment for these speakers would be with an active sub with built-in crossover so that they be relieved from handling the bottom 2 octaves (from 20 Hz to 80 Hz). Even though I successfully ran them full range with a sub, I think taking the lowest frequencies out of the 7<sup>m</sup> driver would free it up more in the midrange where it already does a commendable job.

The imaging and clarity both were very good. I heard overzealous de-essing on albums that I had not noticed before, and discovered panning details that I had missed in the past. For instance, have you ever noticed that Robert Plant's vocal and the female harmony on <u>The Battle of Evermore</u> (from the 1971 album **Led Zeppelin**) is off center to the left, about 11 o'clock? I never had. But on these speakers I did immediately. Noises and problems are very apparent, which is a good thing in a studio monitor so you can catch problems before anyone else who buys the record hears them.

The build quality seems very good, and the cabinets are strong without being heavy (22 lbs. each), which makes these great for location recording. The thickness of the cabinet walls is 6mm less than on the S-series ADAMs, which accounts for their light weight. There is nothing fancy, with two drivers and a port on the front and two binding posts on the back. There are no adjustments and no grill cloths.

All in all, I am very impressed with the ANF10s. Their pleasing sonic character and the honest (sometimes too honest) presentation of my mixes make them a very good studio monitor. While you can use them without a sub, I would recommend adding one, which turns them into a very capable full-range monitor that is very affordable. My friend, George Cumbee of Classic Recording, echoed my sentiments after hearing them side by side with the \$3K active monitors he normally uses. "Wow. I could actually MIX on these!" I agree. There aren't any other speakers I've heard under \$1000 that I can say that about.



## **SIDEBAR 1**

Merits:

Great sound Will play very loud Shielded Lightweight Small footprint 7" driver delivers very smooth midrange

Weaknesses:

Narrow dispersion on top end Best used with subwoofer

## **SIDEBAR 2**

Specifications:

Design: 2-way passive bass reflex speaker Woofer: 180 mm (7"), coated paper Tweeter: A.R.T. folded ribbon tweeter Freq. response (± 3 dB) 50 Hz - 35 kHz Power handling: 60 W (sin), 90 W (music) Inputs: Binding posts Dimensions: (W x H x D): 180mm (7") x 330mm (13") x 280mm (11") Weight: 5 kg (22 lbs.) Warranty: 2 years