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KALMAN RUBINSON

ADAM Audio Classic Column MK3

LOUDSPEAKER

It was three or four years ago, at a CEDIA Expo, that I first happened upon Advanced Dynamic Audio Monitors, aka ADAM Audio. What grabbed me was the array of imposingly high-tech speakers comprising their elite Tensor line. Sitting out in the middle of the floor of the Atlanta Convention Center, they not only looked more advanced than anything else around, they had the audacity to sound superb in a totally inappropriate acoustic situation. Despite the surrounding busyness of the Expo, I was able to sit down and actually enjoy the Beatles' *Love* on DVD-Audio. Clearly, these guys knew what they were doing. I vowed to follow up on it.

ADAM's ribbon drivers are based on Oskar Heil's original Air Motion Transformer. The AMT was popular in the early 1970s, principally for its use as the tweeter in the AMT-1 loudspeaker, designed by ElectroStatic Sound Systems. Fundamentally, the AMT is a relatively long ribbon in which is embedded a serpentine aluminum strip that functions as a voice-coil. The strip is then folded, accordion-style, and suspended in a strong dipole magnetic field. When the signal current is passed through the aluminum strip, the alternating, now-adjacent portions of the strip attract and repel each other. The result is a rapid opening and closing of the accordion pleats that effects a rapid expiration and inspiration of air between them. According to Heil, this accelerates the air five times faster than could a diaphragm radiator, and contributes to the AMT's wide dynamic range. It has relatively high power handling because the actual area of the voice-coil and ribbon is many times larger than the area that faces the listener, due to the folding, and because the soft ribbon material is relatively nonresonant. The popularity of the commercial speaker resulted in the publication of many DIY articles based on it; I built a pair of AMT speakers based on a design published in *Audio Amateur* in 1977. New AMT-based commercial and DIY designs still appear today.

Physicist Klaus Heinz, who met Oskar Heil in 1982, says on ADAM's website that he thought that "the new kinematics to move the air was intellectually brilliant, and the audible success inspiring." Heinz and electrical engineer Roland Stenz founded ADAM Audio in Berlin, Germany, in 1999, and remain committed to the further development of the AMT principle. This has resulted in ADAM's eXtended Accelerating Ribbon Technology (X-ART), which eliminates "huge magnetic structures in front of the diaphragm," thereby removing some of the horn-like coloration of the original design and permitting wider dispersion. The use of modern materials, such as Kapton

SPECIFICATIONS

Description Three-and-a-half-way, reflex-loaded tower loudspeaker. Drive-units: X-ART ribbon tweeter, X-ART ribbon midrange, two 7.5" (186mm) HexaCone woofers. Crossover frequencies: 150, 800, 2800Hz. Frequency range: 33Hz-50kHz. Nominal impedance: 4 ohms. Sensitivity: 90dB/W/m. Power handling: 200-300W. **Dimensions** 47.5" (1205mm) H by 9" (230mm) W by 12" (300mm) D. Weight: 70.5 lbs (32kg). **Finishes** Gloss Black, Cherry, Walnut.

Serial Numbers of Units Reviewed H-06021, H-06022. **Price** $7000/pair. Approximate number of dealers: 12. Warranty: 10 years. **Manufacturer** ADAM Audio GmbH, Ederstrasse 16, D-12059 Berlin, Germany. Tel: (49) 30/86-30-097-0. Fax: (49) 30/86-30-097-7. US distributor: ADAM Audio USA Inc., 21 Tec Street, Hicksville, NY 11801. Tel: (516) 681-0690. Fax: (516) 977-1019. www.adam-audio.com.

ERIC SWANSON

The Classic Column MK3 is stabilized with a heavy base.

diaphragms and neodymium magnets, reduces distortion and improves sensitivity, dispersion, and power handling. These improvements have also made possible the manufacture of midrange X-ART drivers. The subject of this review, the Classic Column MK3, uses a small X-ART driver from 2.8kHz up, and a larger X-ART driver from 2.8kHz down to 800Hz.

Meanwhile, back in the States, years passed. At each subsequent CEDIA Expo or Consumer Electronics Show, ADAM's Roger Fortier and I kibitzed and reaffirmed that I really *should* write something for *Stereophile* about ADAM Audio. Recently, I visited a Manhattan audio shop and, lo and behold, there in the main listening room were ADAM Tensor Betas (*ca* $30,000/pair in semi-active form) and, in another room, the passive Classic Column MK3s. Both sounded exciting enough to get my juices flowing and overcome my long inertia. I chose the passive Classic Column because it's attractively priced at $7000/pair, and because I think most *Stereophile* readers prefer to use their own amps. There is also an active version ($10,000/pair) that may well be the subject for future investigation.

Description

When Roger Fortier delivered the Classic Column MK3s, I realized I'd chosen wisely. It's a clean, beautifully simple design with smartly chamfered edges, four drivers on the front, two ports on the back, and two pairs of multiway terminals for single or biwiring. The drivers are vertically arrayed: tweeter and midrange ribbons above, the two woofers below.

Those woofers have HexaCone diaphragms—honeycomb Nomex structures coated with Kevlar—and are individually loaded inside the cabinet, each with its own port.

MEASUREMENTS

I used DRA Labs' MLSSA system and a calibrated DPA 4006 microphone to measure the ADAM Classic Column MK3's frequency response in the farfield. For the nearfield responses I used an Earthworks QTC-40, with its small, ¼" capsule. I left the speaker's grille off for these measurements.

My estimate of the ADAM's voltage sensitivity was 88.5dB(B)/2.83V/m: slightly below the specified 90dB. The impedance remained below 6 ohms for much of the midrange and bass (fig.1), with a minimum magnitude of 3.35 ohms at 155Hz. The electrical phase angle was generally low, but the rising impedance and increasingly capacitive angle below 25Hz suggest the presence of a DC-blocking capacitor in the woofer feed.

While there is a suspicious-looking discontinuity at 600Hz in the impedance trace, I found no cabinet resonances at that frequency. The enclosure's sidewalls seemed well damped; only the rear panel had some significant resonant modes. Fig.2 shows a cumulative spectral-decay plot calculated from the output of a plastic-tape accelerometer fastened to the rear panel's center; modes of delayed energy can be seen at 313, 457, and 668Hz. I doubt these will have any audible consequences, given that this panel faces away from the listener.

The minimum value of 3.6 ohms at 44Hz in the impedance-magnitude trace suggests that this is the ports' tuning frequency—however, the nearfield responses of the upper woofer (fig.3, green trace) and lower woofer (blue) both have the expected minimum-motion notch a little lower in frequency, at 41Hz. This is where the back pressure from the port resonance holds the woofer cone stationary, and the outputs of the upper (red) and lower (brown) ports peaks narrowly between 30 and 60Hz. Both ports roll off sharply above that region, but also apparent in the midrange output of each port is a peak at 600Hz, the frequency of the glitch in the impedance graph. These peaks are well down in level, however.

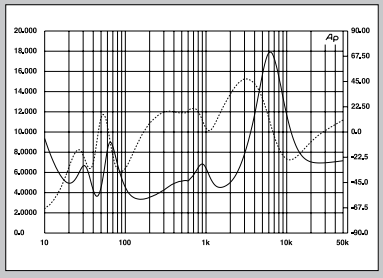

Fig.1 ADAM Classic Column MK3, electrical impedance (solid) and phase (dashed) (2 ohms/vertical div.).

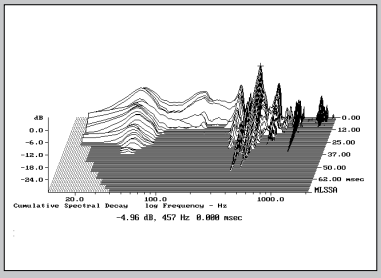

Fig.2 ADAM Classic Column MK3, cumulative spectral-decay plot calculated from output of accelerometer fastened to center of rear panel (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz).

ADAM states that the Classic Column is a 3.5-way speaker, which is confirmed by the inclusion of a 150Hz crossover specification, with both woofers operating together below that frequency. The lower woofer rolls off above 150Hz, leaving the upper woofer to provide a better blend with the midrange in terms of dispersion.

The Classic Column is supported by a stiff, heavy base, to which are affixed adjustable and imposing spike feet. The grille is magnetically attached; those of us who tend to eschew grilles can have a front panel unmarked by unused fasteners. All in all, an impressively executed design.

Set-Up

Fortier and I placed the Columns in the spots where similar speakers had worked so well in the past, hooked them up to the system, and let 'em rip. My first impression was distinctly positive. There was no doubt that the Column was a well-balanced, full-range speaker—exactly what I'd been led to expect from what I'd heard in my previous encounters with them. On axis, there was no significant difference between the sounds, grilles on and grilles off, but the soundstage's width and, to a smaller degree, its depth seemed a bit limited with them on. This precipitated a series of adjustments of position, toe-in angle, and grilles on/off. The optimal combination seemed to be: speakers toed in so that their tweeter axes crossed 1–2' behind the listening position More acute toe-in angles increased the soundstage width a bit at the expense of depth; less acute angles produced the opposite effect. I reached the same conclusion as before about the grilles, and the same preference: leave 'em off.

Listening

Considering all the technical attention ADAM has lavished on their X-ART drivers, it was interesting that my attention was first drawn to the low end of the audioband. The extreme bottom end was extremely detailed and extended. A classic test track, "Cosmic Hippo," from Béla Fleck's *Flight of the Cosmic Hippo* (CD, Warner Bros. 26562-2), offered a good demonstration of the Column's bass. The first verse usually sounds full and deep through most competent systems, but in the second verse the bass line is an octave deeper, which often results in a significantly more woolly texture or in outright woofer stress. Through the Columns there was none of that: the second verse simply sounded awesomely deeper. In the same range, all the timpani strokes in Michael Tilson Thomas and the San Francisco Symphony's new recording of Beethoven's Symphony 7 (SACD/CD, SFS Media 10116) were tight but resonant and lively, the impact of mallet on skin unobscured.

Cello and guitar had a natural balance of fundamentals, harmonics, and transients that added up to a most realistic presence.

measurements, continued

Fig.3 shows that the lower woofer (blue trace) rolls off above 150Hz, while the upper woofer (green) extends two octaves higher in frequency, before crossing over to the X-ART units (black) just below 1kHz. The upper woofer rolls off sharply, and while a peak at 4kHz is apparent in its output, this is well suppressed by the crossover. The response of the AMT drive-units is extremely flat, with just a slight excess apparent around 10kHz—not a region that adds brightness—and an output that extends at full level to the 30kHz limit of the graph. Fig.4 shows how these individual responses sum in the farfield, averaged across a 30° horizontal window on the tweeter axis—the low frequencies extend to the port tuning frequency of 44Hz, with then a steep rolloff. Higher in frequency, this speaker is extraordinarily flat.

Whether so flat an on-axis response translates to a neutral tonal balance depends a great deal on a speaker's behavior off axis. The Classic Column MK3's horizontal dispersion is shown in fig.5. The speaker's off-axis behavior is relatively uniform up to 12kHz, above which the radiation pattern dramatically narrows, which, in a typical room, will compensate for the slight excess at the base of the top octave.

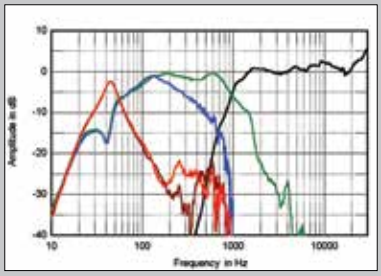

Fig.3 ADAM Classic Column MK3, acoustic crossover on HF axis at 50", corrected for microphone response, with nearfield responses of: upper woofer (green trace), lower woofer (blue), upper port (red), lower port (brown), respectively plotted below 1kHz, 6kHz, 900Hz, 900Hz.

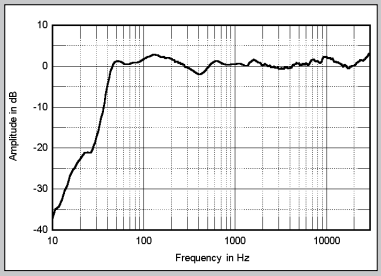

Fig.4 ADAM Classic Column MK3, anechoic response on HF axis at 50", averaged across 30° horizontal window and corrected for microphone response, with complex sum of nearfield woofer and port responses plotted below 300Hz.

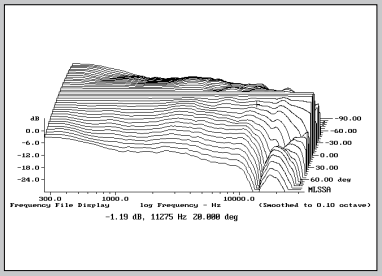

Fig.5 ADAM Classic Column MK3, lateral response family at 50", normalized to response on HF axis, from back to front: differences in response 90–5° off axis, reference response, differences in response 5–90° off axis.

Two pairs of binding posts allow for bi-wiring or bi-amping.

Moving up the audioband, first male and then female voices were imbued with their characteristic chest and head resonances, but in seemingly perfect equilibrium with the rest of the range of each voice. Whether the voice was low, such as that of Leonard Cohen on his *I'm Your Man* (CD, Columbia CK 44191), or of bass Gottlob Frick as Rocco in Beethoven's *Fidelio*, with Otto Klemperer and the Philharmonia Orchestra (CD, EMI CMS 7 69324 2)—or higher, such as soprano Dawn Upshaw's in Golijov's *Three Songs*, with Robert Spano and the Atlanta Symphony (CD, Deutsche Grammophon B0009069-02); or Lisa Gerrard's in Dead Can Dance's *Into the Labyrinth* (CD, 4AD 45384-2)—each was portrayed with uncanny clarity. Similarly, cello and guitar had a natural balance of fundamentals, harmonics, and transients that added up to a most realistic presence right there between the Columns. Of course, aside from their fundamental tones, most of these sounds get their unique qualities from frequencies above 800Hz; the great success of the Columns must also have been due to the excellent blend that ADAM Audio has made of the outputs of their X-ART ribbons and these cone drivers.

Now for the real glory of the Classic Column MK3: From the midrange up, the sound was marvelously transparent. Almost every disc I listened to through the ADAMs offered new revelations of detail and nuance, regardless of how familiar I was with it. It didn't matter what I played—the Column's extraordinary X-ART midrange and treble drivers never failed to impress me. Nor were their detail and clarity byproducts of a tipped-up HF range. Switching from the McIntosh MC303 three-channel amp to the Bel Canto REF1000 Mk.II monoblocks, I noted some softening of the HF—and even more with the Anthem Statement M1 monoblocks.

measurements, continued

In the vertical plane (fig.6), the ADAM's response hardly changes at all over a ±5° window centered on the tweeter axis, which is significant considering that the tweeter is a high 42" from the ground.

Turning to the time domain, fig.7 indicates that the tweeter and woofers are connected in positive acoustic polarity, the midrange driver in inverted polarity. However, the decay of each drive-unit's step blends smoothly with the start of that of the next-lower unit, which suggests optimal crossover design and correlates with the superb integration of the drive-unit outputs seen in fig.4. Kal Rubinson commented very favorably on the Classic Column Mk3's upper-frequency transparency, and the ADAM's cumulative spectral-decay plot on the tweeter axis is indeed superbly clean (fig.8). (Ignore the black ridge of energy just below 16kHz in this graph, which is caused by interference from the measurement computer's video circuitry.)

Measuring audio components can sometimes be a frustrating business, as anomalous behavior requires further investigation to make sure that what is being observed is intrinsic to the device under test. By contrast, examining the ADAM Classic Column MK3's performance was an unalloyed pleasure: Each measurement indicated sensible and effective audio engineering.**—John Atkinson**

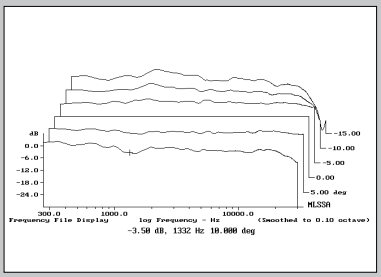

Fig.6 ADAM Classic Column MK3, vertical response family at 50", normalized to response on HF axis, from back to front: differences in response 15–5° above axis, reference response, differences in response 5–10° below axis.

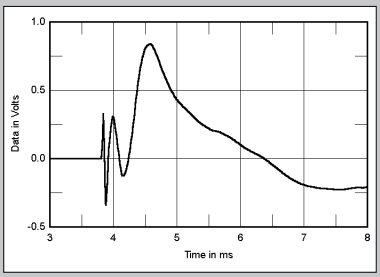

Fig.7 ADAM Classic Column MK3, step response on HF axis at 50" (5ms time window, 30kHz bandwidth).

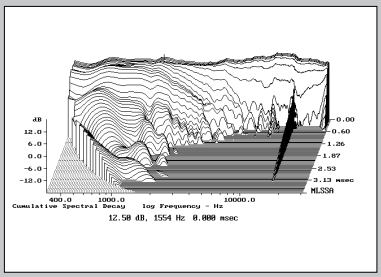

Fig.8 ADAM Classic Column MK3, cumulative spectral-decay plot on HF axis at 50" (0.15ms risetime).

John Atkinson's measurements will augment these impressions, but at no time did the Column's treble sound bright to me. The delicacy of its detail was come by honestly.

I pulled out the original CD edition of Atrium Musicae de Madrid's *La Folia de la Spagna* (CD, Harmonia Mundi 1951050), which combines sound effects with music ranging from the serious to the silly. The great variety of instrumental voices, wide dynamic range, and spacious soundstaging has long made this a great system demo, and all of those qualities were evident as never before through the Classic Column MK3s. In fact, I heard a few whispered comments by performers that I'd never noticed before. Dynamic shading was both exquisite and broad. My wife thinks her cat lost more than a few hairs when, in past playings of this disc, he levitated in response to the crack of a whip—but had he heard it through the Columns, he probably would have lost a few of his nine lives. It almost knocked me over—and I *knew* it was coming.

The Columns carried over all of these felicities to bigger, denser music, which they portrayed with no loss of transparency or detail. The finale of Mahler's Symphony 2, with Iván Fischer conducting the Budapest Festival Orchestra (SACD/CD, Channel Classics CCS SA 23506), was spacious and massive. The low and midbass were full and well defined. The soundstage, even in just two channels, was broad and deep, with an imposing feeling of presence and proximity. However, as in the concert hall, the Columns allowed me to revel in the waves of glorious exultation *and* focus on the melodic lines woven by individual voices and instruments.

Conclusions

Overall, the characteristics of ADAM Audio's Classic Column MK3 include a smooth and natural spectral balance, remarkable transparency across the spectrum (and most notably from the midrange up), and tight, full, well-extended bass. It could also deliver dynamic contrasts both subtle and staggering. Its excellent soundstage, however, was quite forward, and seemed to begin in the room, right at the speakers' baffles. Indeed, it created the illusion of listening in the nearfield, even at my normal listening distance of 12'.

The Classic Column MK3 will thrill many listeners—it did me—but some, also including myself, prefer to look *into* a soundstage without being smack up against it. Of course, this is greatly a matter of taste and a function of one's choice of music. The Columns delivered thrilling impact and presence with pop and rock. I listen mostly to classical music, which is composed, performed, and recorded to be heard some distance from the stage. Nonetheless, the Columns' presentation of *all* sorts of music was thoroughly engrossing and convincing, however much it differed from my usual preferences.

In appearance and footprint, the Classic Column MK3 bears some resemblance to the Aerial Acoustics 7T, which I reviewed in the March 2012 issue ($9850/pair; see www.stereophile.com/content/aerial-acoustics-model-7t-loudspeaker). The 7Ts' sound is smoothly balanced and open, and they produced what was, for me, an appropriately distanced soundstage with classical recordings. The Aerial's bass seemed less full than the Column's, but the 7T was unperturbed by organ-pedal notes at high volumes. Although the Column seemed to go deeper at any reasonable volume, I could get them to misbehave if I pursued such a cruel intention. If you audition both, I don't think you'd have difficulty choosing between them—but I wouldn't presume to predict what that choice would be.

All that said, I'd choose ADAM Audio's Classic Column MK3 in a heartbeat if my listening room could accommodate more than one speaker system. Compared to the awesome spaciousness and warmth of the Bowers & Wilkins 800 Diamond, the Classic Column MK3 is a splash of cool water in the face and a kick in the butt. It gave me an alternate and entirely refreshing depiction of everything I threw at it. ADAM Audio may be a name new to the American high end, but my hat's off to them: The Column MK3 is aptly named a Classic. ■

ASSOCIATED EQUIPMENT

Digital Sources Sony XA-5400ES SACD/CD player, Oppo BDP-95 universal Blu-ray player.
Preamplification Meridian HD621 HDMI audio processor & 861 Reference v6 digital surround controller, Bryston SP-3 surround processor.
Power Amplifiers McIntosh MC303 (three-channel); Bel Canto Design REF1000 Mk.II, Anthem Statement M1 (both monoblocks).
Loudspeakers Aerial Acoustics 7T, Bowers & Wilkins 800 Diamond.
Cables Digital: Black Cat Veloce. Interconnect: van den Hul Flat 180 HDMI, AudioQuest Vodka HDMI & Cheetah/DBS balanced. Speaker: AudioQuest Mont Blanc/DBS biwire.
AC: JPS Aluminata, AudioQuest NRG-10 & IEC>3US.
Accessories APC S-15, Environmental Potentials EP-2450 power conditioners.—**Kalman Rubinson**