

Audio Design Associates Duo Tuner

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AUDIO DESIGN Associates (ADA) was founded nearly 30 years ago by Peter McKean and Albert Langella. I can remember stopping at the company's exhibits at several early Consumer Electronics Shows and thinking, "These guys are nut cases. Who cares about multi-room audio?" Well, now I am eating my antiquated thoughts because bigger magazines than this one, for example the January 2006 issue of *Architectural Digest*, suggest that no home designer should do a job without such a system in it. Frankly, I concur; no truly competent designer should do a top-flight job these days without including both multi-room audio and multi-room video.

ADA was the one of the first to go into this field and apparently will continue to be a leading innovator in multi-zone/multi-source audio and video. For instance, the company now will install for you their iHome Multi-Center. In conjunction with the MusicGiants Network, an early leader and specialist in high-quality downloads, ADA offers extensive music libraries from the four major record label groups as a new source of quality audio throughout one's home.

As new technical products emerge (first HDTV and now HD Radio) I too, as a reviewer, am caught up in the advertising hype. "I got to have HD; I must; no way around it!" Consequently, the ADA DuoTuner caught my attention because it is one of the few professional-grade HD products available and offers an abundance of features and configurations that just might satisfy my new craving. I would not even let UPS bring it to me, I rushed to White Plains, NY, myself and was graciously loaned a review sample.

By "Duo Tuner, ADA means that the unit is a two-slot tuner that can be fitted with pairs of AM/FM with HD/WX modules, either two Sirius or two XM modules, or either one AM/FM with HD/WX module accompanied by either a Sirius or a XM module. Licensing agreements prohibit mixing Sirius and XM in the same unit, probably to avoid some type of inter-galactic war in your listening room. I choose a Duo Tuner with AM/FM with HD/WX and XM for review to avoid this difficulty. Two modules share the same controls and common display; antenna inputs are separate, as are audio outputs for each module. This

means a preamp or integrated amplifier with switching between two pairs of RCAs will be needed to listen to either radio source if the tuner is divorced from a multi-room system. An optical output is provided for HD Radio; it is an option on XM and Sirius modules.

How It Looks

This Duo Tuner is an attractive slim-line black model, basically designed for rack-mount usage, but it will not be ashamed to show its face in the open. It is a rather large tuner, at 19 inches wide by 17 inches deep and just 2 inches high. The display is green with yellowish lettering. Three smallish click-type controls coupled with momentary-click in/out switches mounted on the same shafts provide for changing all modes and functions: AM, AM HD, FM, FM HD, WX, scroll modes of text data for normal RBDS and HD, manual station tuning, channel select for XM, preset select, mono/stereo, and high filter to slope-off noise. Also, XM displays of Category, Channel select, Preset number, Artist, and song Title are possible. Basically, if the tuner can be operated at near eye-level, over-

all operation is a breeze; just read the book. Two rather-quiet mini fans cool the unit from the right side, and the resulting noise was barely noticeable because the fans are operating at half voltage. Internal construction looks first-class.

Proof of the Pudding

Tuner evaluations usually have two primary considerations: R.F. prowess and overall audio quality, and it is extremely rare to find a tuner with both. The Duo Tuner excels in both categories on FM. It offers good sensitivity, coupled with 20-dB adjacent-channel selectivity, and this allows reception of any station within reason. To do better on adjacent-channels, without splatter between stations, it would take a customized tuner, but then the narrow bandwidth most likely would slice the edges off a signal where the HD digital data resides and negate HD reception.

Pitting the ADA tuner against some very good upgraded or customized tuners I had on hand, including a Magnum Dynalab FT-101, Luxman T-12, Audiophonics ST-3120, and a stock PSE Studio III, the Duo was not exceeded as far as station pulling power was concerned (that is, in sensitivity) and only slightly bettered in selectivity. The PSE tuner, however, had a slight edge in overall life-like presentation with super-low distortion, but the concern here is what can be purchased in 2006, so the Duo Tuner can inhale a little pride through its two fans. In the HD mode, reception was what was expected: It takes a lot of signal strength for HD recovery, about four times as much as analog. It is a system misdesign, in my opinion anyway, not the fault of the tuner; therefore, an antenna that gathers lots of signal will be needed unless the tuner is used close to a HD station's tower lights. The Magnum Dynalab Model 205 Signal Sleuth may be of some help here with boosting low signal levels. Also, see a coming issue of *TAV* for antenna tips to aid reception.

Audio quality evaluation is a little more involved, but I had a chance to align my live-music memory brain cells the day before voting "Yeah!" or "Nay!" on this

tuner. On March 26, 2006, Kenneth Dake, Director of Music at the Marble Collegiate Church on Fifth Avenue in New York City, gave an organ recital on the Cadet Chapel Organ at West Point, NY, where the Curator of Organs, William Chapman, had just tuned 185 ranks of the 355-rank organ. Needless to say, I enjoyed a live audio extravaganza. Then, gilding the lily, the next morning, I listened to a one-

You might not expect a great tuner in a multi-room system, but ADA has one.

hour weekly organ-music program, "Pipes and Pizzazz," hosted by John Vanderlee on WVKR (91.3) from Vassar College, Poughkeepsie, NY, one of the better-sounding analog FM stations in my area currently.

Featured on the program were several selections played by Tom Hazelton, widely known as the "Dean of the American Theatre Organ." Mr. Hazelton passed away March 13, 2006, and the program was primarily a memorial to this excellent artist.

One Wurlitzer selection was recorded at the old Paramount Theater, which now houses the Schwartz Athletic Center for the Brooklyn, NY, Campus of Long Island University as well as the preserved organ still used at Blackbird's games and for concerts, although I understand there may be some water damage to the building that is now being repaired. What was impressive via the DuoTuner was not so much the organ's sound, but the "liveness" of a three-minute presentation by Mr. Hazelton about the history of the organ (1995). I could hear multiple reverberations off the ceiling, floor, and sidewalls along with his point source voice. A look at the picture of the ceiling in the gymnasium yields clues to the multiple reflection points off this decorative masterpiece and what I was hearing on the personal recording of the program's host. To reproduce all the ambience is an unusual audio trait, because normally only two-dimensional presentations can be heard, not four. What this indicates

is that this tuner has exceptional phase linearity and can easily reflect what is broadcast.

The music selection singled out to evaluate the Duo Tuner via the same program was a selection by Tom Hazelton at the Riverside Church, NYC (late 2000), *Tocatta and Fugue in D Minor* by Johann Sebastian Bach, very similar to the Bach *Passacaglia and Fugue in C Minor* featured at West Point the day before and very similar in organ tonal footprint. Cranking the two well-seasoned AudioSource AMPOnes and the isobaric-configured Amrita Monitors full-bore, the tuner muted deep, deep individual notes had unusual clarity, with no bloating or sameness. The tuner is not overly bass-

heavy or bass-shy, but if used in a system where a little extra bass heft is needed, it might sound lean, but that's not the tuner's difficulty. Midrange and high frequencies had the right balance, and low distortion proved itself not only in the voice recording I mention above, but also in the correct harmonic structure that did not muddy up low-frequency tones. Background noise, white noise between four to seven kiloHertz, on weaker FM stations took on a non-peaky softness rather than the typical annoying hiss, which indicates very low intermodulation distortion. The tuner also incorporates a mild high-blend on feeble signals that works very well, preserving stereo separation and minimizing noise in the analog FM stereo mode.

FM HD Audio

In simple terms, HD radio is designed to provide enhanced fidelity of normal stereo programming and allows up to eight additional channels of lower fidelity programming, all piggy-backed on the same station. One problem conducting a contrasting evaluation between analog FM and HD FM is having apples with apples. I can't imagine management of a station insisting that the engineering staff make sure the old analog system sounds superior to the new HD, but I can imagine the other way around; consequently, I think the truth will be hidden, at least with the way broadcasts are likely to be received. What I have noticed is that when

going to HD, the soundstage is more expansive and the sound is brighter. This may be caused by intentional differences in new processing of the analog audio, or it could be that HD is better. However, at this time, I do not think so when comparing the best of each. Also, because the digital HD signal must use "look-ahead limiting," a buffering delay of about three seconds is used. Correspondingly, the normal old analog audio must also be delayed, which throws additional digital equipment into its audio path. This is usually done with an AD converter, digital processing with delay, then a DA converter. Thus, since one apple is made slightly rotten, a true A/B comparison cannot be made.

On the analog side, I have run and have heard some super-quality analog stations, ones where I can't imagine radio sounding much better. For example, about 15 months ago, I vacationed in Naples, FL and became fascinated by the dynamic range and pristine sound quality of radio station WAVV (101.1), licensed to Marco Island. Therefore, I contacted the engineer, Al Baxa, and did some investigation. There was nothing unusual: Music was transferred unto an AudioVAULT hard-drive system, analog from then on through a Harris Medallist control board, Optimod 8400 audio processor, Mosley PCL-606 composite microwave link, Broadcast Electronics FX-50 exciter and a 20-year-old Broadcast Electronics BE30A transmitter. In broadcast brands, this is the considered good equipment, but I think the key was the simplicity of the audio path and

well-controlled and judicious settings of analog compression and limiting. Reproduction of familiar big-band era music floored me. Bite on brass was superb and voices were perfect. I will concede this: The ADA Duo-Tuner is about as good as you can buy for analog FM or HD FM reception. I did not have means to test the audio though the

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tuner's optical output, but the manufacturer states I would not hear much difference because the tuner already incorporates a superior quality 24-bit DA converter.

Could I have gotten superior reproduction playing the same CD or vinyl at home? I question that. Farther north and in the present, I find exceptional audio finesse from the evening music on WNYC (93.9) in New York City and general programming on WJFF (90.5), Hydropowered Radio, Jeffersonville, NY. (This station generates its own power for the studio.)

AM Evaluation

I believe that most current HD reception product manufacturers are purposely doping their tuners' circuitries to favor HD; otherwise, why buy it? New has to be better. The emperor's new clothes must set the fashion industry on fire. This slanting to favor the new seems particularly apparent to me on AM, and I am speaking from "been there, done

that" as chief engineer of two AM and six FM stations. Consider this: The 38-kHz subcarrier used to transmit the L-R portion in the current analog FM transmission system is an AM subcarrier using the FM main carrier as an electronic wheel barrel. Consequently, what is considered all FM is actually half AM. Then, has AM proven to be inferior?

I don't think so. My point being that there is not now nor was there ever anything technically wrong with AM, but the limitations of transmission techniques dictated by the FCC and modern skunked-up AM sections of tuners and receivers. Some may remember in the old

days listening to top-forty and other formatted stations half way across the nation at night on any decent car or home radio. WOWO, Fort Wayne, Indiana had an on-air slogan: "The Highest Fidelity Station in the Nation," and it just might have been. WNEW, NYC, 1130 AM, also made this claim for a short while in the late '50s.

How does the AM section of the ADA tuner sound? Muffled on regular AM, as typical, and far better in the HD mode using NYC's WOR signal. Speech now had crispness and clarity in HD, like it is supposed to, not to disappoint the emperor. Note that good analog response above 10 kHz is possible with AM. The Sansui TU-S77AMX and TU-D99AMX tuners of the '80s were good out to 13.5 kHz, with a sharp notch at 10 kHz to prevent whistles between stations that are spaced 10 kHz apart. It sounded like FM, especially when decoding the Kahn system for AM stereo: All the highs were there, but very smooth, perhaps superior to conventional FM because it was not saddled with a transmit pre-emphasis and receive de-emphasis curve used on FM. As with all AM tuners, the best antenna to be found is the only way of getting any AM stations at all in HD. There is only one antenna input to serve both the AM and FM sections of the ADA tuner. This is not the best way to go because the directional pattern of a loop antenna is needed to reduce noise from undesired interference and signals. ADA does make a combiner for AM and FM antennas, but I did not have one to evaluate at the time of writing.

N O T E S

Audio Design Associates Duo Tuner, dual-slot configuration, \$2,195. Audio Design Associates, 602 Mamaroneck Ave., White Plains, NY 10605, phones 800-HD-AUDIO, 914-946-9595, www.ada-usa.com.

Associated Equipment

Two AudioSource AMP One amplifiers strapped mono, B&K Pro-5 modified preamplifier, Amrita Monitors, BBE Sound 482 Sonic Maximizer, Magnum Dynalab 205 Signal Sleuth, twisted pair interconnects, and ATS Reference Series "Platinum" #12 speaker cables.

The Weather Band

This is a nice feature to make you aware of normal forecasts and dangerous weather conditions. ADA has purposely altered the response for speech clarity. No complaints, it got my area weather stations clearly using several FM antennas, which are certainly not optimized for the 162-MHz weather channels.

XM Performance

Evaluating XM is not an easy task because it is not a flawless audio source. Some channels, especially the CW and classical groups, are quite acceptable in overall audio quality, most likely because the music is taken directly from CDs. However, other channels often have phase error that sounds like the musical selections were dubbed from tape onto a hard drive with the heads on the tape playback deck misaligned and not optimized for each tape transferred. I find this disgusting in this modern audio era. If you want to hear this effect at its extreme, listen to the Preview Channel.

The Duo Tuner the fourth XM-equipped unit I have had in my sys-

tem, so hopefully you'll find some meat in my opinions. My reference XM unit at this time is an early Sony DRN-XM01 car and home tuner, which has bettered previous units with superior dynamics, bass extension, and less listener fatigue.

All this aside, how does the DuoTuner reproduce what XM dishes out, good or bad? Happily, I found it was fairly close to the reference Sony. Coupling it with a BBE Audio 482 processor, which corrects for phase error between

**I like ADA's Duo Tuner.
It is a quality unit which
comes at a fair price.**

lows, mids, and highs in reference to an internal standard, I liked what I heard. While one can argue that something else in the audio path is not beneficial, I would agree if the test case were untarnished audio; however, XM is mostly not and needs electronic polishing. By lessening phase

error from the tape dubbing or extreme audio processing, improved stereo separation, less smearing of highs, and increased presence was quite dramatic. The Duo Tuner XM module and the 482 are electronically in love with each other, whereas that was not so with the Sony.

Conclusion

Yes, I like the Duo Tuner. Considering that some of the past and present great FM tuners cost nearly \$5,600 and do not include HD, XM, or Sirius, then \$2,195 does not seem out of place for a quality component. Therefore, I vote "YEAH!" If you already own an ADA or similar multi-zone system, individual modules can be added for \$995. ADA also manufactures three additional tuners and a receiver: Tune Suite, a four-slot tuner with one module and balanced outputs for \$2,499. Additional modules are \$600 each. Also, there is the HD-Pro, a dual-slot HD Tuner designed for the broadcaster for \$3,500 and a Suite 8100 multi-room receiver with HD Radio, XM or Sirius for \$4,199.

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