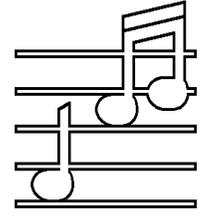


AUDIO BASICS



AN IRREGULAR NEWSLETTER OF AUDIO INFORMATION

June, 1997

We Have a New Web Site at <http://www.avahifi.com/>

Our Web Site is finally up and running with nearly 80 pages of information for you. It contains our complete catalog (with many color pictures), a collection of past *Audio Basics* editorials, many review reprints, and much more.

It is organized with forward and previous buttons on each page so you can step through the entire site sequentially and be sure not to miss anything, or you can jump from topic to topic as you desire.

We have posted the diagrams for our troubleshooting flow chart and connecting our bridge circuits to two amps and to one amp. We have posted our current product upgrade listing, complete product price sheet, shipping information, and even an order form.

There is complete information about every product we make, and even a photo of Frank.

The "Seven Shiny Pennies", "Tire Testing Without a Pressure Gauge", and "Wire Challenge" editorials are posted for your reevaluation.

We have a listing of every product review ever done about us and reprints of many.

The Web Site will be an ongoing project for us, hopefully never getting stale. We plan on a do-it-yourself construction section, posting the schematics, board layouts, and step by step plans for many of our high quality Versa-Kit projects.

Frequently Asked Questions is a section not completed yet, and one with which we need your help. Write or e-mail me (at our new e-mail address: info@avahifi.com) with your suggestions of what Frequently Asked Questions should be posted and answered.

The biró speakers really are as good as we say!

The following letter essentially reflects a consensus of opinion of all our biró customers. It describes the musicality of these remarkable speakers better than we can. If you don't own them, you are missing a lot.

Note that the new L/2 models, at \$999 a pair, provide almost all the virtues of the L/1s, missing only a bit of the space and air and bass extension. There is a review of these coming in a future issue of *Sensible Sound* along with reviews of the Fet Valve 550hc amp and Fet Valve EC preamp.

Anyway, read Barney Feingold's comments carefully. They are thoughtful and accurate.

May 26, 1997

Dear Frank,

I'm writing to you to let you know how delighted I am by the performance of my biró L/1s. The longer I have them, the more they amaze me. As you probably know, they are driven by an AVA 440 watt Omega III amplifier, Omega III preamplifier, and TOPP-DAC. They rest on heavy, low-resonance, sand-filled 20" metal stands with small "acoustic footprints," securely connected to the Omega III 440 with heavy gauge copper wire. The room that houses them has a concrete floor and four walls of "outside construction." Speaker and listener positions are chosen (by computer analysis and listening tests) to minimize room

resonances. The floor is covered with thick, dense commercial carpet. Finally, the speakers and stands are nestled in a pair of Watkins Echo-Muffs — devices that surround them on three sides with four inch thick open-cell polyurethane foam, thus suppressing rear and side wall reflections. A self-powered, servo-controlled Genesis subwoofer with a 12-inch Kevlar cone (also positioned using computer analysis of resonance modes) can be used to supplement the bottom end.

While the birós are easy to enjoy, they are difficult to evaluate critically. Their performance is best characterized by identifying what they do not do. They simply draw less attention to themselves than any other speaker I have heard. While this “says it all,” let me describe some characteristics that, to my ears, make the birós extraordinary.

Their neutrality. The biró’s overall tonal balance is remarkably close to that of my beloved reference, the Stax Signature headphones used with the Stax ED-1 (their dedicated equalizer) and is essentially identical to that of the standard monitors of the classical recording industry, the B&W 801s (with which I had the opportunity to compare them in your shop). The biró’s neutrality is most striking on voice — perhaps because human vocal sounds are so familiar. Although voices sound “real” only on the best recordings, on the vast majority of recordings they approach that ideal more closely than any other speaker I’ve heard. In fact, when listening to the birós, I often have the sense of being able to separate the colorations of the recording from the inherent character of voices.

Their neutrality is also evident in reproduction of instruments. Instrumental timbres in most small ensemble recordings and many carefully-done recordings of larger ensembles are very close to “right.” In short, the birós present as convincing a portrayal of overall tonal balance as recordings allow.

Their “listening ease.” As you know, even highly-regarded speakers often have high-Q (narrow, sharp) peaks in frequency response. At concert hall levels, sensitive listeners (like those in my family) often find such speakers painful to listen to — a phenomenon my family calls a speaker’s “flinch factor.” The birós have no such peaks. Listening to them at realistic levels, my family is relaxed and comfortable. As I will discuss below, their comfort is enhanced by their absence of strain with changing volume levels.

Their “pitch definition.” As you know, poorly damped speakers allow transients to excite their resonances, thus muddying reproduction and imbuing transients with a characteristic similarity.

Since music consists largely of transients, most speakers, by repeatedly imposing their own “resonance signature” on music, “sing their own songs” instead those they’re supposed to reproduce. The popping champagne corks on track three of Telarc’s “Ein Straussfest” readily reveal this problem. A few transducers — like the biró’s — communicate the dramatic differences between these “pops.” Most, including many highly-regarded transducers, transform them into similar sonic events.

Since all musical sounds have pitch, pitch definition affects the accuracy of reproduction of essentially all musical events — including such subtle sounds as the rattle of a snare, the attack of a trumpet or oboe, the impact a piano’s hammer, the pluck of a harpsichord’s quill, the repeated capture and release of a string by a bow, the consonants of human language and the expressive subtleties of the human voice. The biró’s pitch definition — and thus their intelligibility — are unequaled by any speakers I know.

Their dynamics. While I never heard a recording convincingly portray the dynamics of unamplified music, I am consistently amazed by the biró’s ability to generate steep, coherent wavefronts — the kind that knock me back in my chair. Some day I may stop chuckling when listening to Stravinsky’s Rite of Spring or Firebird on the birós.

However, that time is not yet in sight. Their transparency and detail. The rapidity of the biró’s return to silence in the absence of a signal is stunning. Even in the wake of the violent wavefronts I alluded to above, the birós consistently reveal subtle details. I have never heard their equal in resolution of the rattle of a snare drum, the subtleties of a vibraphone, or the separation of instrumental and vocal lines and timbres. I am consistently amazed by the biró’s ability to reveal tonal and expressive qualities of each individual voice in a choral ensemble and subtleties of construction, technique, and expression in the instruments of chamber ensembles I have never heard speakers that approach the biró’s intelligibility, capacity to resolve detail, or ability to reveal the elusive, low-level information that places performers accurately in acoustic spaces.

The integration of their drivers. I am unable to hear any evidence that the birós are two-way systems. Treble, midrange and bass frequencies are reproduced with no audible evidence of separate drivers. The crossover is entirely seamless; transients in the crossover range give no evidence of fragmentation; they sing as if reproduced by one driver. From their lower limit to the highest audible frequencies, the biró’s neutrality, pitch

definition, transparency and detail are consistent, and consistently superb.

Their imaging. On many recordings, the birós disappear, leaving three-dimensional images floating around their end of the room. This ability seems due, in large part, to characteristics discussed above; their neutrality, their pitch definition, their transparency and their detail all help them provide information necessary to construct convincing models of instruments and acoustic spaces. However, these virtues would be of little value if my pair of birós differed significantly in any of these characteristics. However, I find myself incapable of hearing differences between the my two speakers. While the biró's quality control has no drawbacks, their detail and resolution do. The "images" created by poor recordings (especially "multi-miked" recordings designed to compensate for the deficiencies of low-definition stereo systems) can sound distressingly confusing on the birós. And the birós do little to hide the sins of poorly designed electronics.

Their bass. Down to their practical limit (as I have set them up, they are about 3 dB down at 45 Hz.), their distortion, attack, decay, and pitch definition are superb. While other speakers (like the 801s) go lower and louder, I much prefer the biró's bass quality. The birós, in any case, are far from bass-shy. My subwoofer adds little but an occasional sense of pressure and fullness. Their smooth, low rolloff and lack of exaggerated mid-bass (characteristic of most other small speakers) allow them to blend superbly with my "sub."

Their ability to disappear. The birós are free of the limitations of both "big" and "small" speakers. Whatever their virtues, "big" speakers often suffer from resonances in the large panels from which their boxes are made (or, in planar speakers, from resonances in their radiating surfaces and supporting structures), diffraction problems (due to the large panels on which drivers are mounted), and poor driver integration due to wide spacing of drivers and complex crossovers. The birós, with their small, non-resonant box, closely-spaced drivers, free-air mounted tweeters, and two-way design, avoid these problems.

Whatever their virtues, "small" speakers often sound "strained" at concert hall levels. As noted above, the birós have exhibited no sense of strain at the levels I have listened, and, when challenged, can generate formidable wavefronts.

What do I wish were different? While I delight in having speakers that combine almost magical sound with unassuming appearance (and they blend well with my stands, which add some visual interest), I sometimes wish they had more visual

panache. And while they go respectably low and play bass very cleanly. (I'm not sure I'd bother purchasing a subwoofer if I didn't have one), I wouldn't mind if they went lower. However, I wouldn't sacrifice their sonic virtues for either of these. The birós do superbly everything I ask a speaker to do. If offered the industry standard B&W 801s at the same price, I would unhesitatingly choose the birós. They may not go as low or loud, but, to my ears, even the notoriously clear and neutral 801s sound colored, resonant, and confused by comparison.

Sincerely,

Barnet Feingold

AVA Used Equipment List 6/11/97

Omega III Pat-4 preamplifier. \$295.00. Excellent new high slew rate - high drive current AVA circuits in a very nice used Dyna Pat-4 chassis with phono and five sets of line inputs, tape inputs and outputs, separate bass and treble controls for each channel, precision stepped volume and balance controls, mono stereo switches, three position high filter, built in high quality AVA headphone amplifier circuit, and a one year AVA parts and labor warranty.

Omega III DH-100 preamplifier. \$295.00. New AVA circuits in used DH-100 chassis with tone controls, phono, tuner, CD, and tape inputs, tape and line outputs, precision stepped volume and balance controls, one year parts and labor AVA warranty.

Fet Three Plus DH-100 preamplifier. \$195.00. Excellent 1989 AVA circuits in very clean Hafler DH-100 chassis with tone controls, phono, tuner, CD, and tape inputs, tape and line outputs, volume and balance controls, 90 day parts and labor AVA warranty.

Delta 120 amplifier. \$245.00. New AVA circuits installed in 1991, a trade in to a big new Omega III amplifier. In superb electrical/mechanical condition with 1 year parts and labor warranty. A really nice tube-like sounding 60 watt per channel quiet and reliable amplifier. Great for a second system, TV or surround sound, or along with a used Omega II or III preamp a great start for a high quality component system for the kids.

Omega III Double 400 ultra high current high powered amplifier in Dyna St-416 chassis with AVA black faceplate, 16 big-die power mos-fets for safe 1/2 ohm load driving capability, quiet cooling fan, shielded toroid power transformer, 250 watts per channel plus, super smooth, super powerful, super durable. \$1695.00 with new 3 year parts and labor warranty. This is a special amp built for FVA's own use.

New Omega III 200 Amplifier in excellent used Dyna St-150 chassis with black AVA faceplate, and shielded toroid power transformer. 100 watts per channel and

FIRST CLASS MAIL

Audio Basics June, 1997
Audio by Van Alstine, Inc.
2202 River Hills Drive
Burnsville, MN 55337 USA

OUR 30TH YEAR IN BUSINESS!

Audio by Van Alstine was founded in 1967, thirty years ago, by Frank Van Alstine and Paul Jensen. Originally known as Jensens Stereo Shop, the company was wholly purchased by Frank and Darlene Van Alstine in the mid 1970s. In the mid 1980s we incorporated under the name Audio by Van Alstine, Inc. (we got tired of telephone calls demanding warranty repairs on Jensen car speakers while you wait).

We started out by selling original Dynakit (custom wired for kit price) and ADC, RTR, and Aztec speakers, along with Dual turntables and Grado cartridges. We picked up B&W when they came into the country and gradually learned how to improve the Dyna designs with our own upgrades. The scope and professionalism of our design work improved drastically when Aado Perandi joined us in the late 1970s. He brought complete scientific evaluation, thorough circuit analysis, and original design work to our products, taking us from Dyna modifiers to a complete first class audio design laboratory. Our daughter, Vanessa, recently was awarded a Masters Degree in Electrical Engineering and will carry on our traditions into the future.

Now we design our own metal, heat sinks, and all of our high quality audio circuits, both analog and digital, from scratch and to our extremely high standards. Musicality, durability, and affordability are our goals, and we think we have succeeded in providing you with the highest possible quality for the money. We would like to provide you with thirty more years of listening pleasure. Thanks for your business and your support. FVA

300 v/ μ S slew rate state of the art active feedback circuit set. A smaller chassis version of our own new chassis Ω mega III 200 with equal performance and the same new 3 year parts and labor warranty at a \$150 price savings. \$549.00. Can be built as Ω mega III 240 amp with 120 watts per channel for \$100 extra.

New Ω mega III 400 Amplifier in excellent used Dyna St-410 chassis with black AVA faceplate and shielded toroid power transformer. 200+ watts per channel and 300 v/ μ S slew rate state of the art active feedback circuit set. Performance equal to a new Ω mega III 440 with the same new 3 year parts and labor warranty at a \$250 price savings. \$1149.00.

New Ω mega III 260 Amplifier in excellent used Dyna St-410 chassis with black AVA faceplate and shielded toroid power transformer. 130+ watts per channel and 300 v/ μ S slew rate state of the art active feedback

circuit set. Performance equal to a new Ω mega III 260 with the same new 3 year parts and labor warranty at a \$200 price savings. \$699.00.

Complete Super 70i Vacuum Tube Power Amplifier with all new tubes, AVA mother board, AVA jack sets, and in great working order. One year parts and labor warranty (except tubes). \$699.00.

Add \$30 shipping for big amplifiers, \$18 shipping for small amplifiers, \$12.00 shipping for preamps anywhere in the continental USA.

Our new Winter/Spring 1997 36 page catalog (beige cover) is available for free. Call us at 612-890-3517 or write if you didn't get it yet.

Visit our new comprehensive web site at <http://WWW.AVAHIFI.COM>.

Frank and Darlene Van Alstine