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Volume 6, Issue 3

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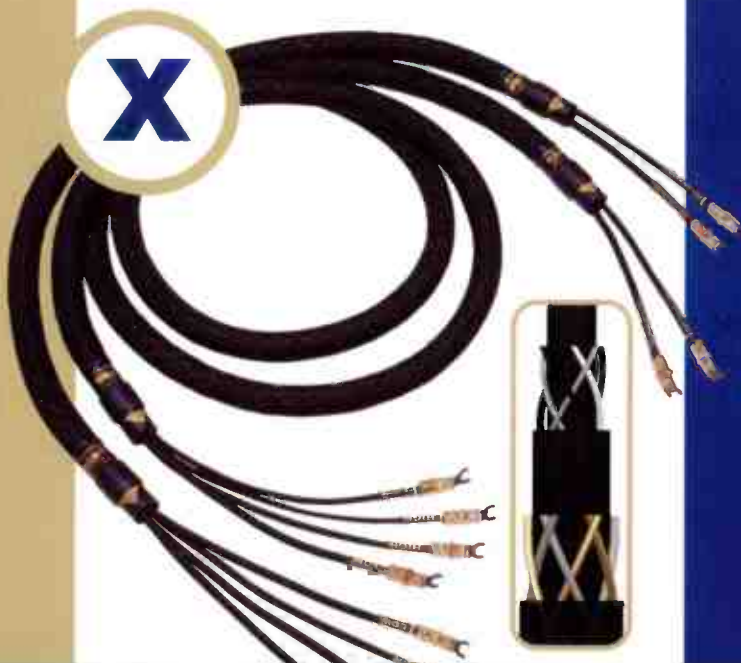
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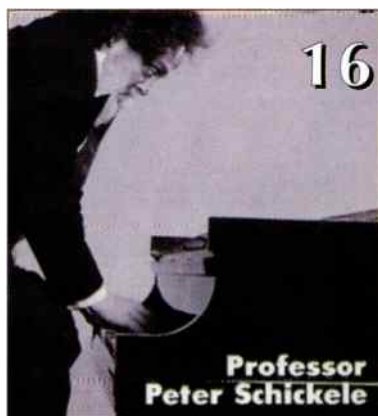
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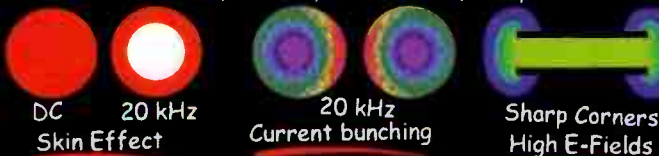
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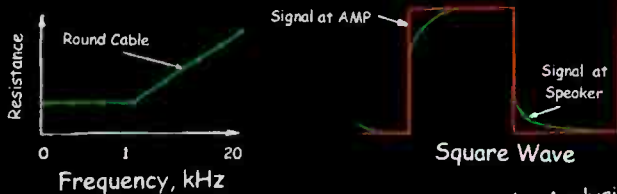
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New Products

The Castle Howard S3 Loudspeaker System

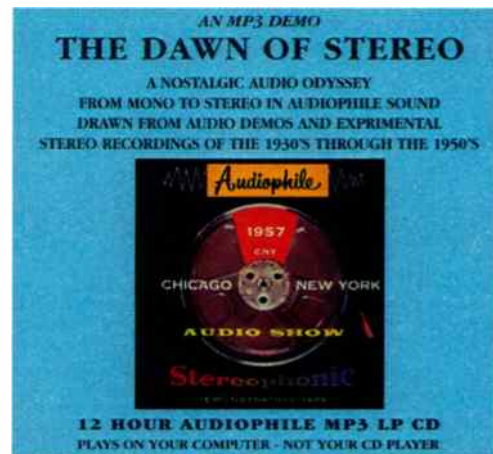
is a redesign, from the ground up, of the firm's quite successful large floor-standing system, the Howard S2. Castle has been known for nearly 30 years as one of Britain's leading speaker manufacturers, and the S2 was one of its best-selling products. Where the earlier system was a full-blown quarter-wave design in a slightly larger cabinet, the Howard S3 uses a twin-pipe quarter-wave internal design similar to the firm's Harlech. Drivers on the front panel are placed to produce best imaging. Two 150-mm woven carbon-fiber coned bass drivers are tuned to different frequencies; one fires vertically, the other forward. The pipes vent toward the plinth. The tweeter is a 28-mm fabric dome unit damped using a specially developed high-viscosity material. Low frequency extension is down to 32 Hz, which is very low for a system of this moderate overall volume: 8.4 inches wide by 12.8 deep by 39.7 inches tall. The system is available in nine real-wood veneers. Prices: Standard, \$2999; Deluxe, \$3599. Data: 716/283-4434.



The Dawn of Stereo CD

contains, on a single Balkan Records CD, nearly 12 hours of recordings captured at the transition of high-fidelity sound from mono to stereo. Taken largely from tapes and recordings in the Robert Oakes Jordan archive by Esoteric Sound, the 12-hour anthology includes rare experimental, early '50s stereo recordings as well as radio broadcasts that required the listener to use two separate tuners or receivers. Demos from several early tape recorder makers include Bell & Howell, Bell, and Ampex. Some 16 Mirage audiophile anthology programs from the '60s highlight the disc, which is led off with the 1933 funeral of Chicago Mayor Anton Cermak. How do they get that much time on a single CD? By using MP3 files, so the disc has to be played via a computer using Winamp or Real Player G2. Despite scuttlebutt about MP3 quality around the industry, minimum expected performance will be very good according to the specifications released by Esoteric Sound. Price: \$29.95.

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Whose Nest?

Dear Editor:

I was saddened to see your apparent tacit approval of Orinn Keepnews' recent bowdlerizing of the *Charlie Parker Live Royal Roost* material from 1948-49. This is one of the reasons I did not purchase the CD, preferring to stick with my older, beat up, but far truer to the original broadcast material vinyl LPs.

What Mr. Keepnews has done is in the tradition of the "great experts" of jazz record producers, to edit out what HE considers extraneous material, namely the glib, limited in vocabulary banter of raconteur Symphony Sid Torin (and his colleague Bob Garrity). Keepnews thus deprives the listener what the original listener heard, and Bird's music is shorn of context, atmosphere, and the heightened sense of Parker's genius in operating successfully against such a foil as Sid. (Plus, yagutta admit it, Sid is just plain fun).

There are other examples of the great experts at work. The only two boxed sets of the Jelly Roll Morton Library of Congress recordings extant eliminate huge portions of Jelly's commentary so as to present "just the music", when Jelly himself talking is as interesting. The late Martin Williams, in the Jelly Roll offerings in the various incarnations of the Smithsonian Collection eliminated the short prelude "skits" and went right to the music, not allowing us to hear either the complete originals or to decide for ourselves the value of the non-musical material. Finally, one of the best live on record introductions, that of the European announcer introduc-

ing the brand new in 1963 Miles Davis Quintet on Miles in Europe is entirely missing from the CD version.

Richard P. Clancy
Ashland, Massachusetts

Mr. Rozzi responds:

This is in response to Mr. Clancy's letter chiding both TAV Editor Gene Pitts and Savoy reissue producer Orrin Keepnews for their respective tacit and apparent approvals of nixing emcee Symphony Sid's redundant banter from Savoy's *Charlie Parker Live Royal Roost* recordings (1948-49).

To borrow a phrase from Sid, Clancy seems the "all-frantic one." While I'll be the first to admit that I enjoy the added ambiance of a good emcee's introduction (e.g., Mort Fega's apt intro of Miles' Quintet on Columbia's *The Complete Concert: 1964*), I must say that I agree with Keepnews' mission to "take the spotlight off of Sid and take the liberty of making this a Charlie Parker record." The previous releases of the live Bird material made for tedious listening because of Sid's inability to realize his own redundancy. I'm sure I speak for a great many listeners when I say I would have been in favor of the banter remaining if Sid had been the least bit inventive with his monologue. Enough of Symphony Sid was allowed to remain in this latest reissue to prompt a feeling of a real "knocked out groove." Bird took over from there.

Jazz, live and in the studio, is produced in a context involving real people. What a pleasure to have the supposedly taciturn Miles show up all over the place

talking in his studio recordings, giving direction to his cohorts, and otherwise engaging his non-musical colleagues ("Rudy, put this on the record, ALL of it!"; "Teo, Teo...", etc.: these are a part of the music for me. To edit them out, especially when original issues and many times reissues contained them, is to deprive future generations of complete enjoyment. Thank you.

Which Way?

Dear Editor:

I have received the sample issue you sent me, thanks! I enjoyed the read. Yesterday I was informed by the local Barnes & Nobel people that they carry the magazine in their store. I'll make sure to buy it regularly. Even though it's a glossy product, I must commend you for giving a high recommendation for an affordable product, the Akai minidisc recorder. I hope you'll continue in that direction without being boring or merely sensible.

Y. Norman
Via e-mail

The Editor responds:

Glad you liked it. The real way to make certain you see TAV regularly is to get a subscription—plus you save some money off the newsstand price. I am trying to be glossy with the magazine, too, but that ought not stand in the way of covering affordable products in an unBORing way. I am more interested in what works well than what costs the most or costs the least or what is "hottest" with the "In crowd" of editors this season. Best, Gene Pitts, Editor.

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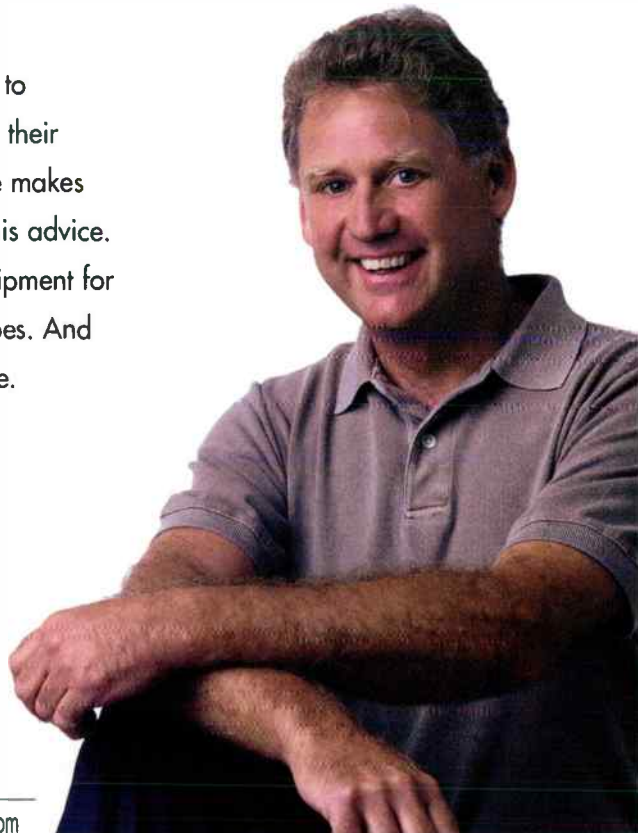
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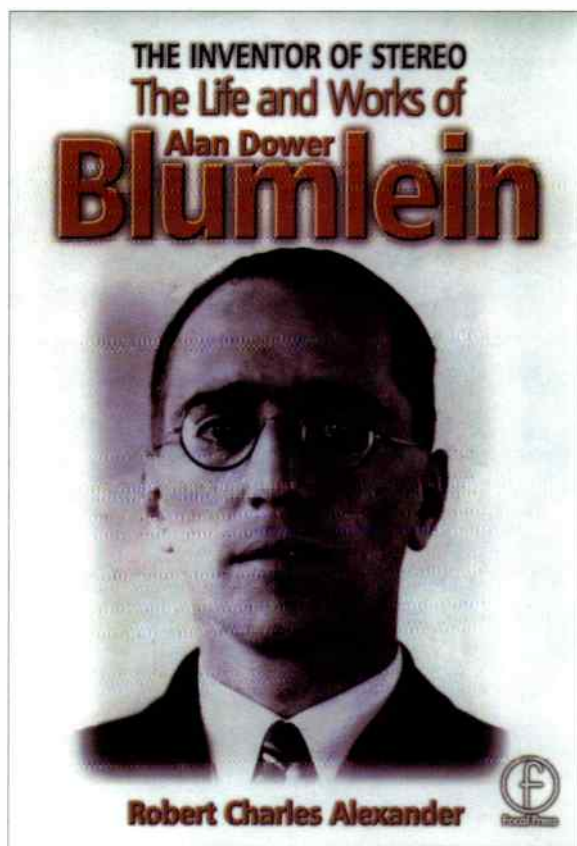
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***The Life and Works of
Alan Dower Blumlein,
The Inventor of Stereo***

By Robert Charles Alexander

448 pages, 100 b & w photographs
hardcover, \$56.95; paperback, \$24.95

Focal Press, ISBN 0240515773

Review by Ralph Glasgal,

www.ambiophonics.org

IF ONE WERE to combine the genes of Thomas Alva Edison, Alexander Graham Bell, Lee De Forest, and Edwin Armstrong into one genome, that individual would likely still be less inventive than Alan Dower Blumlein. Blumlein, an English electrical engineer, got the first of his 128 patents in 1927. He then proceeded to obtain patents at the rate of just under one per month for the next fifteen years. While Edison, over his long life, did secure many more patents than Blumlein, Blumlein's originality, versatility, technical skills, sophistication, leadership, and obvious brilliance, make Edison seem like a clumsy tinkerer by comparison. Yes, Edison invented the electric light, the cylinder phonograph, the ticker tape, and

dabbled in motion pictures, vacuum tubes, and power generation. But Blumlein invented coaxial cable, most of the basic elements of high definition black and white television including sync pulses, flyback scanning, and DC restoration, high gain TV transmission antennas, major improvements to kinoscopes and CRTs, lateral disc-cutting systems, frequency and time division multiplexing, the moving coil microphone, the velocity (polar) microphone, A.C. measurement bridges, the high input impedance vacuum tube voltmeter, DC power supply voltage regulation, self-starting synchronous motors, the cathode follower, the cascode R.F. amplifier, the transversal (tapped delay line) filter, the dif-

ferential amplifier and the three-wire balanced shielded cable to go with it (AES/EBU interface). Of the greatest interest to audiophiles is his invention of stereophonic sound. But he also invented the ultralinear amplifier later popularized by Williamson and Dynaco and was the first to describe quadrasonic sound and the M/S recording method.

As in the case of Edison, one can always argue that there was prior art and certainly Blumlein did not work in a vacuum or entirely alone and was aware of what others were doing in electronics. However, his originality cannot really be challenged. It certainly is no exaggeration to credit Blumlein with the invention of the key elements of the

first really workable airborne radar system and thereby arguably becoming the savior of his country. It was his work on radar that led to his death. In June of 1942 at the age of just under 39, he perished in the crash of a warplane while testing the first radar set model constructed using a magnetron. This design survived and was subsequently put into production at EMI and used to eradicate the German submarine fleet and bomb Germany with unerring accuracy.

One thing about Edison, Bell, De Forrest and Armstrong; they were all entrepreneurs with their own companies and were experts at public relations and strived to exploit their inventions commercially. Blumlein, on the other hand, worked first at a telephone company and then at Columbia Graphophone which merging with the Gramophone Co., became the EMI we know today. So essentially Blumlein worked for EMI all his professional life. Although personable and even charming, far from a recluse, and not at all shy, he nevertheless wrote only two articles and read virtually no papers at engineering society meetings. Everything he had to say about his work went into his patents.

Thus recognition in general and this first biography in particular were a long time in coming. In the years after the war, Blumlein's genius was so obscure that, as the author relates, Decca (London Records in the USA) spent five years inventing what they called 'stereophonic' sound only to find out, upon applying for a patent that Blumlein and EMI (Angel in the USA) were ahead of them by 23 years. This was good for audiophiles since it meant that stereo technology was in the public domain and no company could monopolize the technique. But the name stereo rather than Blumlein's binaural was then adopted even by EMI.

Robert Charles Alexander is a 36 year old musical arts devotee and later a self-taught audio engineer. His exhaustive biography of Blumlein runs 417 pages and includes many circuit drawings, pictures of equipment, and pictures of Blumlein's associates and family. The author states that there are only four extant pictures of Blumlein himself and only the one on the cover of the book and elsewhere really shows him clearly.

The biography, obviously a labor of love, includes extensive excerpts from many of Blumlein's patents. Although I have a master's degree in electrical engineering and read much technical literature, I found many of these excerpts unduly cryptic and incomprehensible.

Experience...



Alexander's comments as to what the inventions are meant to accomplish are often either perfunctory or very hard to fathom. Part of the problem is likely the difference between EMI technical parlance and the RCA vocabulary I was brought up on. But a good part of the difficulty with the more technical parts of this book lies with Alexander who is not well enough versed in basic electrical engineering principles to explain many of Blumlein's insights and inventions clearly and accurately.

However, less technical readers can skip over the passages on the patents. The chapters outlining the development of television as we know it today, with RCA allied with EMI against Farnsworth and Baird, are quite spellbinding. The section on the development of radar, including the involvement of Winston

Churchill, both before and after the plane crash that killed Blumlein, are likewise quite intriguing. Blumlein's untimely death gave rise to as many theories as to its cause as the Kennedy assassination. Alexander is at his best when relating the events leading up to the crash and its aftermath.

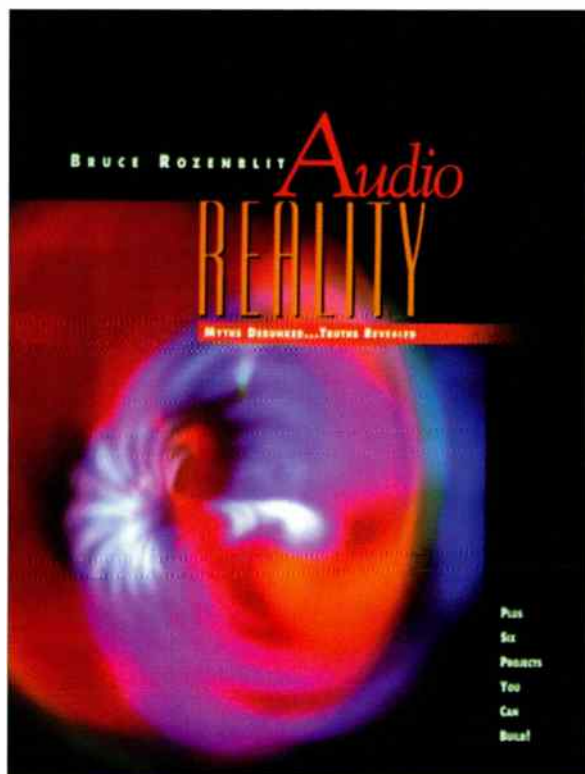
From an audiophile point of view, the chapter on the audio inventions of Blumlein is significant but not as exciting as the later chapters. The problem is that Blumlein had only very primitive microphones to work with and no storage medium such as tape or stereo disc to record to. By the time he perfected a stereo film recording system, EMI was off to the television races. Blumlein's monophonic disc cutting machines were used to make 78's until after the war, and he did make

one model of a stereo disc-cutting head.

If you wish to read a deeper analysis of Blumlein's patent on stereo, read my web-paper "The Blumlein Conspiracy, from the archives of EMI-5."

I must confess that I have always had a special interest in Blumlein since we were both EE's and worked for similar companies (EMI/RCA) on similar projects such as telephony, data communications, sound recording and video. We also both patented stereo dimension control circuits.

However, I think there is more than enough in this book for non-EEs to savor. I also feel that Americans should read of Blumlein's accomplishments so as to better appreciate that much of the electronic technology we enjoy everyday was not solely invented here.



***Audio Reality:
Myths Debunked ... Truths Revealed
By Bruce Rozenblit***

Transcendent Sound, Kansas City, 1999,
Phone: 816/333-7358;
website: www.transcendentsound.com
\$29.95, 127 8½x11-inch pages,
ISBN 0-9669611-0-2

Review by Howard Ferstler

OK, RIGHT AT THE TOP, this is not your typical "comprehensive-source," "how to shop for and set-up equipment" audio book, either high-end oriented or otherwise.

For example, it is not published by a "regular" book publisher, although it was put together with a fine professional-looking, paperback binding and an attractive, vividly colored, slick-surface cover. Transcendent Sound is the author's own company, though I've no doubt Rozenblit had an outside printer and graphic artist do the binding and layout work. What's more, while this book does discuss "myths" and certain, often esoteric ideas about audio, it also discusses some of

Rozenblit's own products, sometimes in great detail. Rozenblit does indeed "debunk" more than a few high-end myths, quite effectively in my opinion, though at times he also endorses ideas that more middle-of-the-road engineers might call "controversial."

However, Rozenblit's book is a good one overall, provided the reader is interested in electrical theory and construction projects, particularly those involving tube technology, and it certainly is often entertaining. The beginner should understand, however, that some of the discussions are not dead center in the full spectrum of ideas on these topics.

The book has three parts. First, we have the brief introductory section that outlines Rozenblit's philosophy and which spends some time debunking a few myths. Then we have the 45-page-long "Part One" entitled "Audio Science," which outlines a raft of audio principles. Finally, we have "Part Two" entitled "Projects," which carries us to very near the end of the book, and has a series of building projects with schematics for intrepid constructor types. These are tube-based projects, specifically of the "output-transformerless" design in which Rozenblit specializes. At the tail end of the book, we have a copy of Mr. Rozenblit's OTL patent, as well as a summarizing conclusion.

The typical reader should find Rozenblit's iconoclastic myth-busting comments quite interesting; they're dispersed throughout approximately the first half of the book, along with some very helpful information on basic audio and electronic principles. Some of the most "grabbing" comments are found in the introductory section. For example, on page 8, Rozenblit discusses the kind of esoteric parts found in some high-end electronic components and he states that "Contrary to commonplace reports in today's popular literature, the differences caused by these components are barely discernible, if detectable at all." This is definitely not the kind of comment that will endear him to the most hard-core members of the high-end-audio establishment. I like this kind of candor, and I also admire any writer, be he a component manufacturer or book author, who has the guts to make this kind of claim.

On the next page, Rozenblit points out that he is not afraid to place his own designs out in public "for all of the world to see," and he notes that "Becoming a commercial success is primarily dependent on marketing." He continues: "It doesn't matter what you are selling. You just

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have to do a really good job of selling it and the profits will come." If this is not "myth busting," I do not know what could be. He then continues: "The major product variation you are likely to see between the popular brands is in cosmetics alone, not in design or performance."

On page 11, Rozenblit really sticks his neck out in a discussion of amplifier distortion and says that "two or three percent distortion will sound fine at high volumes," but that "things fall apart when distortion rises to over 10 percent." While I think this is a bit extreme when discussing amplifiers (though maybe not woofers), it certainly is something that will get the reader's attention. Again on page 9, another statement caught my eye: "Reliability is everything." This item received no particular introductory or follow-up explanation, and was simply included in a list itemizing Rozenblit's basic philosophy of audio! As a confirmed audio skeptic, an "amps-are-amps" and "wire-is-wire" kind of guy, such statements get my attention in a very positive, large way.

Indeed, the rest of the book contains additional revealing information and definitely some strong assertions. These include his "debunking" of some of the more arcane and exotic ideas about wires and bi-wiring, skin effect, damping factor, power cords, balanced lines, heavy-metal chassis construction, and the use of negative feedback in amplifiers. His discussion of the sonic effects of not employing negative feedback wasn't what I expected, but I haven't experienced the sound of amplifiers that do not use it, so perhaps his explanation is spot on.

Now, I don't agree all of Rozenblit's ideas, nor do I think that some of the information

presented was all that important, even to do-it-yourselfers who wish to build the projects. For example, Part One contains a rather lengthy explanation of what seemed very rudimentary electrical and electronic principles and components. This seemed like overkill, particularly in a book that has construction projects apparently aimed at fairly knowledgeable enthusiasts. Again, an example, he talks about the "sound" of coupling capacitors in a way that I find not supportable.

I had some problems with certain comments by Rozenblit that response below 30 Hz really is not all that important since he feels there is not a lot of music down there. I believe he needs to get hold of some contemporary CDs and give them a listen, because there is quite a lot of musical energy below 40 Hz floating around these days. Here, I am including high-impact, Romantic-era compositions, as well as "serious" contemporary classical and popular music that make use of electronic synthesizers. And, of course, we have organ music, which is routinely potent below 40 Hz, and often nightmarishly strong right down to 20 Hz or lower.

At the end of the book, Rozenblit notes that "No matter what your opinions of tube equipment are, this field is by far the easiest way to get involved with building your own stereo equipment." Well, if that's the case, and building gear is your way of enjoying the hobby, this book will indeed be something you will enjoy. For myself, I feel that the equipment is just a means to enjoy the music, but I do admit that there are many ways to enjoy the hi-fi hobby, and that the building of one's own gear has a long and honorable history.

E DITORIAL

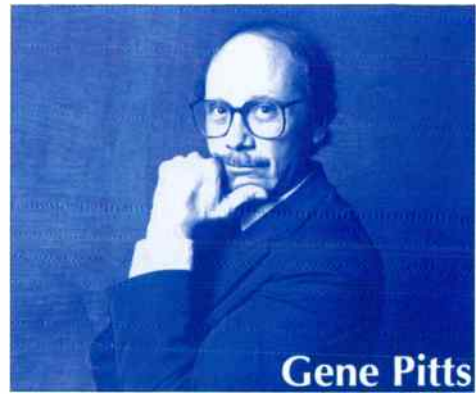
Music That Sells

THERE WAS A FULL-PAGE AD in *The New York Times* July 11th on page 11 of the first section. Its headline read, "If a song means a lot to you, imagine what it means to us." The sparse copy indicated that Metallica and Dr. Dre were not alone in standing up for "the rights of all artists to choose the way their music is distributed on the Internet, ... that when our music is available online our rights should be respected." The ad was "signed" by almost 70 musicians, ranging from Aimee Mann to Vince Gill. At the bottom were a website (www.ArtistsAgainstPiracy.com) and a phone number (323-850-5578).

The next day, July 12th, there was a story on the second page of *The Times* business section, titled "Rock Musicians Warn Legislators of Internet Piracy Peril." An accompanying photo showed Lars Ulrich of Metallica in animated conversation with Hank Barry, the chief executive of Napster, the Internet meeting site for computer users willing to share their music on line. (It will be remembered that both Metallica and Dr. Dre sued Napster in late April for copyright infringement.) The editor at *The Times* who did the page layout that day has a wonderful sense of humor, because right next to the "Internet Piracy Peril" story is one entitled "Technology Is Heightening Job Worries, [Alan] Greenspan Says."

I originally thought the editors of print magazines were going to be among those most seriously threatened by the new computer-based technologies. Instead, it turns out to be an opportunity, rather than a problem, just like the video cassette recorder was for the movie industry. Look at what Blockbuster and others did for movie industry finances, a new and massive revenue stream!

It seems to me that's what the Net potentially is for the bands and for the record industry, a massive opportunity to cash in on impulse sales. In fact, that's what I thought when I read that Metallica's lawyer had taken 13 boxes containing over 300,000 names of computer users who had "pirated" Metallica's songs via Napster.



"He's confused," I said to myself, "those Napster-ites aren't pirates, those are sales leads for that band's record company, if they bother to get into the right business. The guys that *really* ought to be worried are the retailers like Tower, the guys who opposed the CD because they didn't want to rebuild their LP record bins for the new format.

"And where is the piracy? Where is the lost sale? If no dollars have changed hands, where is the piracy? Where is the infringement? There is no reason to assume that just because someone gives away something for free, that someone else will actually pay cold hard cash for it.

"Maybe Metallica is getting all the profit they ever will out of this as it is. Maybe the price of their music via Napster has reached its equilibrium point, to use a Greenspan word. All the research I've heard of says that Generation D, the kids downloading MP3 music files, just isn't going to buy a piece of stamped plastic that has a 20-to-1 markup over the mechanicals cost to get the single good song on the CD.

"Are Metallica's and Dr. Dre's lawyers saying the buyer should pay per listener? Like at a concert? Or maybe we should pay per listen? Man, what a revisionist attitude about the copyright law. That's like that weird 'combustible' DVD system that Circuit City was trying to get off the ground."

Clearly, perhaps, some of those ideas date back to the Copycode Wars and the War of the DATs, but let me end by bringing to your attention a fine essay, "Can The Record Labels Survive The Internet?", by James Surowiecki in the June 5th issue of *The New Yorker*. He quotes Courtney Love, "If you want to talk about stealing, let's talk about record company contracts," but he also has two wonderful insights: First, that the record companies act as if they made packaged goods in that their "revenue model owes more to Wrigley's than to MTV." Second, that if the record companies are going get impulse sales and "realize the dream of any song, anywhere, anytime," they are going to have to be "willing to stand on their heads or they won't be standing at all."

Bass: How Low Can You Go?

Eric Busch*



EVER SINCE MAN FIRST felt the ground rumble and the air shake, deep bass has fascinated man (and some women). The reasons why are varied, but the main cause can be found in nature and in our past as a species. Usually deep bass (both acoustic and tactile) has been a harbinger of doom (or at least not very nice things) as most things in nature that produce deep or subsonic bass are not good for us (earthquakes,

**Measurement Specialist, DLC Design, Wixcom, MI.*

typhoons, thunder, tsunamis, etc.). Filmmakers often make use of this fact to create tension by using deep rumbles or bass instruments. Another form of fascination is due to the fact that we treat something we know is fake differently from something we believe to be natural. I have seen this quite often, as people react to deep or subsonic bass that is reproduced quite differently from that which is produced naturally. Part of this has to do with context (the source is not visible) and also the realization of how hard true subsonics

can be to reproduce (especially among speaker builders).

Given this background, the million-dollar question for audiophiles is "How low do I have to go?" The answer is 0 Hz! Seriously though, there are really two questions here: 1) What is on recordings that I want to bother trying to reproduce, and 2) How do I build or buy a subwoofer with sufficient performance to reproduce what I want? I will leave question No. 2 for another article (it has been covered adequately by others, and is not the main focus of this



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NBS interconnecting, speaker and AC cable have challenged my perceptions about cables in general, and more specifically their impact on music reproduction in my home. From the outset the products intrigued me based on the elaborate shielding techniques and excellent isolation from vibration borne of the materials used and overall construction methods employed.

Living in a high RFI area is not the only reason to own **shielded** cables. Until I heard the difference in really silent backgrounds and lowered noise floor vs. my frame of reference, I was unprepared for the revelatory difference in a high-resolution system. Lowering of the noise floor allows music to become more intelligible, and subjectively more dynamic: where it was once obscured in noise. It reduces listener fatigue as well. This type of noise was not present in the original performance and your ear/brain doesn't deal well with its presence. NBS Monitor 0 revealed these differences in an unparalleled manner.

The need to **isolate** cables from their environment is accepted high-end practice. There is constant low-level vibratory activity in our listening rooms. NBS Monitor 0 does a good job of physical isolation by itself. In this case it appears that the "bulk" of the cable works to its advantage in isolation.

Finally as it has been said about violins, the difference in a \$1M Stradivarius and a \$10K violin is **tone**. If there is a single sonic attribute I wish to complement you on, it is tone. Simply stated, the tonal color, body and richness your cables allow to come through unscathed is remarkable, and without equal in my experience.

I could speak to other sonic specifics, but I will leave that to the reviewers. In closing your cables do indeed live up to their name, Nothing But Signal.

Rick Brown
Woodbury, MN

CDs with Subsonic Content (Below 20 Hz)

No.	Freq.	DBfs	Track	Time	Album Title & Artist	Label & Catalog #
1	2 Hz	-9.0	6	0:30-END	<i>The Big Picture</i> , Erich Kunzel	Telarc CD-80437
2	5 Hz	-12.4	25	0:11-0:16	<i>The Short Tempered Clavier</i> , PDQ Bach	Telarc CD-80390
3	5 Hz	-13.7	1	3:30-8:10	<i>Battle Music of Beethoven and Liszt</i>	Telarc CD-80079
4	5 Hz	-16.1	4	5:14-5:15	<i>Big Notes</i> , Flim & The BB's	DMP CD-454
5	5 Hz	-20.1	19	0:22-0:58	<i>The Short Tempered Clavier</i> , PDQ Bach	Telarc CD-80390
6	6 Hz	-18.2	7	ALL	<i>St. Eustache Organ, Paris</i> , Jean Guilu	Dorian DOR-90134
7	6 Hz	-23.2	6	ALL	<i>St. Eustache Organ, Paris</i> , Jean Guilu	Dorian DOR-90134
8	6 Hz	-26.6	9	ALL	<i>St. Eustache Organ, Paris</i> , Jean Guilu	Dorian DOR-90134
9	7 Hz	-14.5	1	12:30-15:10	<i>1812 Overture</i> , Tchaikovsky	Telarc CD-80041
10	7 Hz	-17.8	25	ALL	<i>Sampler #5 & Sound Effects</i> , Micheal Bishop	Telarc CD-80005
11	7 Hz	-22.1	35	ALL	<i>Sonic Booms 2 (Mobile Fidelity)</i>	Bainbridge BCD 6285
12	7 Hz	-30.1	8	ALL	<i>St. Eustache Organ, Paris</i> , Jean Guilu	Dorian DOR-90134
13	7 Hz	-30.6	4	ALL	<i>St. Eustache Organ, Paris</i> , Jean Guilu	Dorian DOR-90134
14	8 Hz	-4.9	24	0:13-0:17	<i>The Short Tempered Clavier</i> , PDQ Bach	Telarc CD-80390
15	8 Hz	-14.7	32	ALL	<i>Sampler #5 & Sound Effects</i> , Micheal Bishop	Telarc CD-80005
16	8 Hz	-20.1	10	4:15-4:16	<i>Toxic Bass</i> , Toxic Bass	I.B.P. IBP-0008-2
17	9 Hz	-14.8	8	0:20-0:40	<i>Sonic Booms 3 (Mobile Fidelity)</i>	Bainbridge BCD 6284
18	10 Hz	-11.8	20	3:10-3:20	<i>Great Fantasy / Adventure Album</i> , Kunzel	Telarc CD-80342
19	10 Hz	-15.5	21	ALL	<i>Great Fantasy / Adventure Album</i> , Kunzel	Telarc CD-80342
20	10 Hz	-19.5	1	0:20-0:30	<i>Food For Woofers Volume #3</i> , B&W KOTF	I.R.S. FFW 003 CD
21	10 Hz	-20.5	5	2:20-2:40	<i>Fantastic Journey</i> , Erich Kunzel	Telarc CD-80231
22	11 Hz	-21.8	1	ALL	<i>Winter Light</i> , Linda Ronstadt	Asylum 61545-2
23	12 Hz	-14.9	12	3:10-3:20	<i>Illegal Bass</i> , Bass Outlaws	Newtown NTN 2210
24	13 Hz	-17.3	1	ALL	<i>Time Warp</i> , Erich Kunzel	Telarc CD-80106
25	13 Hz	-21.7	8	ALL	<i>Joshua Judges Ruth</i> , Lyle Lovett	Curb / MCA MCAD-10475
26	16 Hz	-11.7	16	3:00-3:40	<i>Romantic Organ Music Vol. 2</i> , Hurford	London 421 296-2
27	16 Hz	-11.9	18	0:12-END	<i>It Came From Outer Bass 2</i> , Techmaster P.E.B.	Newtown NTN 2211
28	16 Hz	-12.5	2	3:20-END	<i>Quad Maximus</i> , Bass Mekanik	Pandisc PDD-8848
29	16 Hz	-14.5	3	ALL	<i>Bass Box</i> , Seventh Order	Hip Rock DIDX 018599
30	16 Hz	-15.0	1	3:20-3:26	<i>Pomp & Pipes</i> , Frederick Fennell	Reference Recordings RR-58CD
31	16 Hz	-16.7	10	0:38-5:06	<i>Tyranny For You</i> , Front 242	Epic/Sony EK 46998
32	16 Hz	-21.8	1	0:48-0:50	<i>Joshua Judges Ruth</i> , Lyle Lovett	Curb / MCA MCAD-10475
33	17 Hz	-8.6	1	0:10-0:20	<i>Chiller</i> , Erich Kunzel	Telarc CD-80189
34	18 Hz	-7.1	1	3:50-3:55	<i>Illegal Bass</i> , Bass Outlaws	Newtown NTN 2210
35	18 Hz	-14.5	3	1:30-1:43	<i>Bass Ecstasy</i> , Bass Erotica	Neurodisk NRD-31005
36	18 Hz	-17.9	16	5:00-END	<i>Bachbusters</i> , Don Dorsey	Telarc CD-80123
37	19 Hz	-6.7	7	0:00-0:10	<i>Drivin Bass</i> , Bass Connection	Neurodisk CD-31004
38	19 Hz	-9.5	9	6:16-6:20	<i>Pomp & Pipes</i> , Frederick Fennell	Reference Recordings RR-58CD
39	19 Hz	-9.6	6	1:10-END	<i>More Bass Boom Bottom</i> , Power Supply	Hip Rock DIDX 022094
40	19 Hz	-9.9	2	ALL	<i>Cyberbass Virtual Reality</i> , Bass Syndicate	D M Records DMR-41265
41	20 Hz	-4.5	5	1:10-1:20	<i>Bass Society</i> , Bass Society	Majammy E-SA-1010
42	20 Hz	-7.9	1	ALL	<i>It Came From Outer Bass 2</i> , Techmaster P.E.B.	Newtown NTN 2211
43	20 Hz	-8.1	12	0:00-0:10	<i>Bass Is Loaded</i> , Bass Hit	Neurodisk CD-31002
44	20 Hz	-10.5	9	ALL	<i>Bass Overload</i> , Bass Alliance	D M Records DMR-41269

Frequency: Lowest significant frequency with potential to be perceived.

DBfs: Decibels below maximum digital record level

Time: Point(s) during track to find lowest frequency (ALL = various points in track).

CDs were played on a SONY CDP-610es (confirmed flat to below 2Hz) and measured on a Tektronix 2630 FFT analyser.

Popular CDs & LDs with Deep Bass (No Subsonic Bass)

No.	Freq.	DBfs	Track#	Track Title	Album Name	Artist
1	21 Hz	-15.5	1	Welcome 2 D World	<i>Bass Quake</i>	Bass Quake
<i>Claims subsonic bass</i>						
2	22 Hz	-4.3	11	ALL	<i>Drivin Bass</i>	Bass Conection
<i>Popular deep bass CD</i>						
3	22 Hz	-7.4	12	0:40-END	<i>Bass Overload</i>	Bass Alliance
<i>Popular deep bass CD</i>						
4	24 Hz	-6.4	1	Intro (It's Live)	<i>Bass Ecstasy</i>	Bass Erotica
<i>New Bass CD.</i>						
5	24 Hz	-13.8	2	The Gates of Dafos	<i>Dafos</i>	Hart/Airro/Purim
<i>Audiophile demo felt to contain subsonics.</i>						
6	24 Hz	-16.1	1	Side #1, 5:02	<i>Star Trek 6</i>	Paramount
<i>Shock wave from explosion hitting Excelsior.</i>						
7	25 Hz	-9.2	11	Bass Nation at War	<i>Bass Machine</i>	Techno Bass Crew
<i>Popular bass CD.</i>						
8	25 Hz	-10	3	Do Ya Like Bass	<i>Nightmare on Bass Street</i>	NmOBS
<i>Claims subsonic bass</i>						
9	26 Hz	-3.8	11	Boom Machine / 808XS	<i>Bass Explosion U.S.A #1</i>	808XS / DM Records
<i>New Bass CD compilation.</i>						
10	26 Hz	-8.9	26	T. Rex Approaches Close	<i>Jurassic Park</i>	Speilberg / Universal
<i>New home theater low frequency champ.</i>						
11	27 Hz	-10.1	10	The Longships	<i>Watermark</i>	Enya
<i>Thought to contain subsonics.</i>						
12	27Hz	-14.1	1	(a) Speak to Me	<i>Dark Side of The Moon</i>	Pink Floyd
<i>Thought to contain subsonics.</i>						
13	27 Hz	-15.6	14	Jurassic Bass	<i>Bass Station Zero</i>	Beat Dominator
<i>Popular bass CD</i>						
14	27 Hz	-15.8	3	Cave of Wonders Voice	<i>Aladdin / THX / CLV</i>	Walt Disney Studios
<i>Popular home theater demo.</i>						
15	27 Hz	-16.3	6	Cruisin'	<i>Hand On The Torch</i>	US3
<i>New Blue Note recording.</i>						
16	28 Hz	-6.4	1	The Science of Sound	<i>Digital Bass</i>	Bass 305
<i>Popular Bass CD</i>						
17	28 Hz	-6.8	15	Musclehead's Theme	<i>Atomic Bass</i>	Musclehead
<i>Claims subsonic bass.</i>						
18	28 Hz	-11.1	4	Space Shuttle Launch	<i>The Dream Is Alive</i>	Lumivision / Imax
<i>Thought to contain subsonics.</i>						
19	29 Hz	-14.8	3	Chapter #3, Gate Crash	<i>T2: Judgement Day</i>	Carlco
<i>Popular home theater demo.</i>						
20	29 Hz	-19.7	4	Z-Row Gravity	<i>Fresh Aire 5</i>	Mannhiem Steamroller
<i>Thought to contain subsonics.</i>						
21	30 Hz	-7.2	10	The Big Beat	<i>Techno-Bass</i>	Beat Dominator
<i>Popular bass CD</i>						
22	30 Hz	-10.1	10	Yellow Beats	<i>Bass Planet</i>	Dynamix 2
<i>Claims sub 8Hz bass.</i>						
23	30 Hz	-13.2	8	Viva Las Vegas	<i>Greatest Hits</i>	Z Z Top
<i>Thought to contain subsonics.</i>						
24	32 Hz	-17.7	6	Jim Keltner Drum Solo	<i>Track And Drum Record</i>	Sheffield Lab
<i>Popular audiophile demo for deep bass.</i>						
25	33 Hz	-18.58	1	Side #1, 5:00, Jet Flyby	<i>Top Gun</i>	Paramount
<i>Popular home theater demo.</i>						
26	34 Hz	-8.7	1	Rock On The Radio	<i>Firehouse</i>	Firehouse
<i>Popular car-audio demo for deep bass.</i>						
27	34 Hz	-9.33	7	Temple Caves	<i>Planet Drum</i>	Mickey Hart
<i>Thought to contain subsonics.</i>						
28	34 Hz	-14.3	11	Si Senor' The Hairy Grill	<i>One Second</i>	Yello
<i>Thought to contain subsonics.</i>						
29	34 Hz	-14.5	4	Joan of Arc	<i>Famous Blue Raincoat</i>	Jennifer Warnes
<i>Audiophile favorite for deep bass demos.</i>						
30	37 Hz	-15.7	4	The Sign	<i>The Sign</i>	Ace of Base
<i>Popular new release.</i>						
31	40 Hz	-5.5	20	To Luke From The Posse	<i>Banned in The USA</i>	2 Live Crew
<i>Poular rap CD thought to contain deep bass.</i>						
32	42 Hz	-11.7	1	Purple Haze	<i>Smash Hits</i>	Jimi Hendrix
<i>Clasic rock song with heavy kick drum.</i>						

Frequency: Lowest significant frequency with potential to be percieved.

DBfs: Decibels below maximum digital record level.

CDs were played on a Sony CDP-610es (confirmed flat to below 2 Hz) and measured on a Tektronix 2630 FFT analyser.

LDs were played on a Sony Laserdisk player (confirmed flat to below 2 Hz) and measured on a Tektronix 2630 FFT analyser.

article) and try to answer question No. 1. Ironically, a lot of subwoofer design is done without answering question No. 1, usually by making some assumptions about what is on recordings.

A little more history is required here (calm down, I'll get to the juicy stuff soon enough). Early recordings were very narrow bandwidth and either ignored deep bass altogether or had some form of high-pass filtering intrinsic in the system. The propagation of vented box systems during the golden age of audio (1930 - 1960) encouraged the development of subsonic or rumble filters to protect against the inevitable breath pops and other sources of unintentional subsonics.

There have been other issues to deal with over the years. I once talked with someone who was a recording engineer at Motown, and he said it was common practice to use at 70-Hz high-pass filter before mastering. This was used not so much over concern of subsonics, but to maximize record level and make the recordings sound "louder" (and due to the fact that most playback systems did not have much output below 70 Hz anyway).

Another common limitation was that all turntables inherently have a low-frequency limit due to the fact that the pickup is a mass reactance system. This tonearm resonance is usually set fairly low (below 10 Hz) and is usually fairly well damped, but almost all phono pre-amps have a subsonic filter built in to protect against turntable rumble.

The Limits of Digital

Fast forward to today, and we have digital media with no inherent low-frequency limit (actually, usually 1 - 2 Hz due

to a.c. coupling) and playback systems that play much deeper and louder than at any time in the past. There has long been the capability for recording and reproducing subsonics, but it was usually limited to a small percentage of the population.

So, what is on modern recordings that need to be reproduced (or filtered out to protect smaller subwoofers)? Well, you can see the results of analyzing several hundred CDs on Tables 1 and 2. The first is of CD tracks that contained true subsonics (20 Hz or lower) at a significant level (at least -30 dB from full-scale, and within -20 dB of upper bass levels). Table 2 is a listing of CD tracks that were good examples of deep (but not subsonic) bass, or ones that were thought to contain subsonics but in reality did not. While I have not been able to analyze all existing CDs, this is a fairly large and representative sample. Most of these CDs were my own, but some of them were recommended or loaned to me by fellow bass nuts looking for the ultimate in low end.

What does all this mean? Well, after spending several months slaving over a FFT analyzer, I can tell you a few things. First off, analyzing music in a relevant and repeatable way is not easy, and indeed can be very tedious (even with restricting the analysis to below 200 Hz)! Second, while subsonics are present on recordings, they are not as prevalent as was hypothesized by others and myself before I started my study. There were a lot of recordings

that were thought to contain subsonics, but when measured they did not.

Further analysis revealed something rather interesting things. Sometimes, it was just a matter of someone thinking that the fundamental was an octave lower. This was due either to the missing fundamental phenomenon (where 40, 60, and 80 Hz are present, fooling the brain into thinking the fundamental of 20 Hz is there as well, but just too low to be heard), or due to low levels of harmonics that play a similar trick. Sometimes a listener was just poorly versed in knowing the frequency of different sounds, and was often off by an octave or a 5th. The most common phenomenon was one where a note in the 30 - 80 Hz range was being amplitude modulated (intentionally or unintentionally) at a subsonic rate. This is also used quite often in movies, which often have nothing below 25Hz, as this is the lower limit of most theater and soundstage subwoofers.

Another interesting thing was that the breath pops and other subsonics, often worried about by live-sound engineers, are often filtered out before the recording is mastered. The only times I found significant subsonics were when the recording engineer intended to record sub-



sonics or when a more purist approach was taken and subsonics made it through (as in the Lyle Lovett and Dorian Organ CDs). The Dorian recording of the St. Eustache Organ in Paris was one of the most interesting examples of unfiltered purist recordings. The signals at 6 to 8 Hz are not pedal notes, and usually happen not when deep pedal notes are being played, but when there is a long run on the manuals (main keyboards). A short talk with a few people in the know about organ recordings confirmed that this subsonic "noise" is the blower motor for the pipes leaking through during high demand periods. The other interesting thing is that the Telarc *The Big Picture* and Bainbridge *Sonic Booms* CDs both contain excellent recording of space shuttle launches, but Bainbridge intentionally filtered the CD releases, while the Telarc CD has significant signal to below 2 Hz!

The Answer, Please

So the final answer to the million dollar question is, for most music, 30Hz will do just fine (synth and five-string bass go this low). For movie fans, 25 Hz or so at high (110 dB) sound-pressure levels (though a few of the newer movies are pushing that frequency lower). For organ music fans; 16 Hz is the name of the game (64-foot pipes do not do 8 Hz, as rumored, they are just more efficient half-wave resonators, as opposed to the quarter-wave of 16 Hz from 32-foot pipes).

Below 16 Hz is the domain of odd unintentional artifacts, the shock waves from cannon shots and door slams (as in the Flim & the BB's CD), large natural events (as in the space shuttle launches), or are synthesized from whole cloth or manipulated natural sounds (as in the T. Rex on *The Great Fantasy / Adventure Album* or the steam calliope explosion on the PDQ

Bach CD, both on the Telarc label).

What you want to reproduce is up to you, but a word of warning: The frequencies and levels listed on the charts are of the lowest significant frequency (that is high enough in level to potentially be audible). These CDs often contain even higher levels of signal within an octave above the frequency on the charts. For example, on the PDQ Bach CD, while the reported 5 Hz is at a fairly high level, it is merely the lower edge of a hump centered at 12 Hz that reaches to within 5 dB of full record level! I have tried this track (No. 25) on a number of vented systems and they all had serious problems.

So whatever low frequency limit you chose, please implement some sort of subsonic or rumble filter, so that you do not get any nasty surprises when T. Rex approaches or that steam calliope explodes.

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WIDESCREEN review - Issue 36

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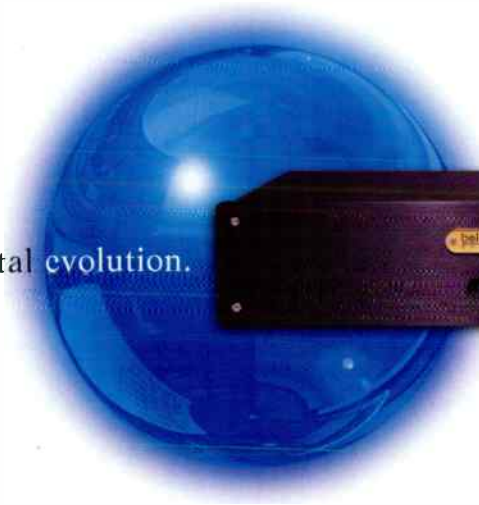
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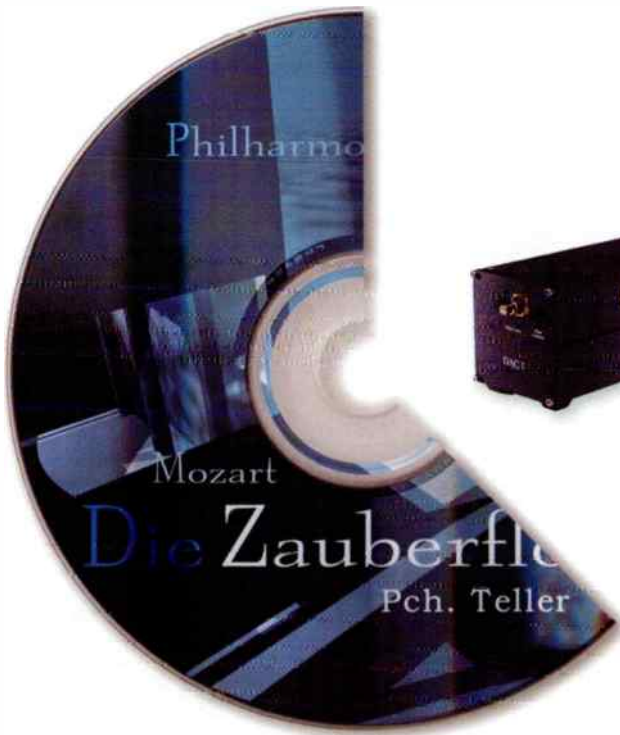


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3 Anniversaries

Bach, Copland & Weill

Benjamin Ivry



Benjamin Ivry is the author of a new life of Ravel (in press from Welcome Rain publishers), and biographies of Poulenc (Phaidon) and Rimbaud (Absolute Press) as well as a poetry collection, *Paradise for the Portuguese Queen* (Orchises).

COMPOSER ANNIVERSARIES are successful or not according to many variables. Mozart Year in 1991 brought forth many memorable CD releases and reissues, whereas Rossini's celebration the following year was a relative dud, perhaps because the singers who could perform that composer's music best were already nearing retirement age. In 1999, Duke Ellington's hundredth birthday was made much of, but Mexican composer Carlos Chavez, also born 100 years before, was mostly ignored, as his main podium advocate, conductor Eduardo Mata, had unfortunately died a few years earlier. This year, 2000, has already been proclaimed Johann Sebastian Bach Year, as the 250th anniversary of his death. It is also, we are regularly reminded by flacks and hacks, the centenary years of modern composers Kurt Weill and Aaron Copland. Outwardly, this splendid trio may seem to have little in common, but from their recordings, we may try to arrive at certain emotional truths about their music and anniversary celebrations in general.

No Bachmaninoff Here !

Art historian E.H. Gombrich once wrote that there is no wrong reason for liking a work of art, only for disliking it. Therefore, if you like a portrait painting because it resembles your Uncle Fred, that's fine. But if you dislike it for the same reason, you are being unjust. Thus, we can only applaud every excuse for reprinting CDs of Bach: The

German record company Hanssler has offered up 170 CDs of their traditional approach to Bach, while the more mainstream Warner-Teldec has produced an edition of 153 CDs of music by the great Johann Sebastian. Smaller but perhaps more choice, Harmonia Mundi offers 20 separate CDs and six box-sets in homage to the master born in Eisenach, Germany in 1685. Conductor John Eliot Gardiner has also announced a project to

record for Polygram all of Bach's hundreds of church cantatas, to join already existing sets conducted by the Dutchman Ton Koopman, as well as the pioneering and still champion collection led by Nikolaus Harnoncourt and Gustav Leonhardt. Performances on reissues range from the most stringently "historically accurate" to the kind of romantic excess that some critics have nicknamed "Bachmaninoff." Like a series of Alpine peaks, Bach's works tower over the music world: "The Passions According to St Matthew" and "St John," the "Christmas Oratorio," the Cantatas, the "Goldberg Variations," "Art of Fugue," "The Well-Tempered Clavier."

Any listener wanting to get back to Bach has an embarrassment of riches to choose from, even without investing in the multi-volume reissues: A good starting point is the Goldberg Variations as played by young French harpsichordist Pierre Hantai (on Opus 111 #3084, Harmonia Mundi distribution) where Hantai's trills are the epitome of the frenzied emotional intelligence that makes Bach's music so commanding. Hantai

also performs the solo part in the magisterial 5th Brandenburg Concerto (on Astree 8737, distributed by Harmonia Mundi) with truly unbelievable energy and virtuosity, outdoing the former most exciting rendition, an ancient recording by Alfred Cortot, by good measure.

This year, 2000, is the 250th anniversary of Bach's death, and the centenary years of Kurt Weill and Aaron Copland.

Other works by Bach command this kind of frantic performance energy, like the "Chaconne" for solo violin, yet also an architectural order that makes us revise our opinion of how formal art can be and still express hysterical feelings. The great Belgian violinist Arthur Grumiaux captured these aspects of Bach's Sonatas and Partitas for Solo Violin (on Philips 38736) as few before or since have done. Indeed, the balance needed to pull off this kind of piece is rare, given only to a few fiddlers each century, like Grumiaux and Nathan Milstein. Yehudi Menuhin, whose technique was more chancy, often flubbed a passage here and there, yet insisted on playing the Chaconne at the funerals of all his friends, until the composer William Walton, we learn from one biography, would creep out of memorial services, muttering, "It's Yehudi again with that goddam Chaconne!"

Canadian pianist Glenn Gould, who has been called the Bobby Fischer of classical music, seemed to incarnate the fine line dividing musical genius from madness. His version on organ, an instrument he mas-

tered as a child prodigy, of "Art of Fugue" (on Sony 52595) opens a furnace of communicative confidences. The organ itself, as the loudest and most potent classical instrument, is apt for such overwrought statements as Art of Fugue or indeed the notorious "Toccatina and Fugue in D Minor," which not by accident has been used as background music for mad scientists in Hollywood horror films.

Following for a moment this aspect of emotional abandonment within strict classical control, we quickly arrive at the Cantatas, where texts set to melodious tunes include such gorily morbid observations as "My Heart Swims in Blood" or "I Stand With One Foot in the Grave." From the matchless series of complete cantatas conducted by Nikolaus Harnoncourt and Gustav Leonhardt for Warner-Teldec (4509 91756-2 and 4509 91757-2) we may take two examples, Cantatas 31 and 50. In both, the use of boy choirs makes the soprano line in choirs soar above in raucous joy, like pullets pumped full of steroids. A chorus like "Der Himmel Lacht" or "Nun ist das Heil und die Kraft," with Harnoncourt's kids squalling away, is a matchless experience. Every listener can feel how a Sunday Cantata in church in Bach's time had all the compelling urgency of a station wagon full of shrieking kids.

This kind of excitement is plentiful in the St. Matthew Passion, in which the role of the Evangelist has been unforgettably recorded by Karl Erb, Peter Pears, and Hugues Cuenod, all sixty-ish high tenors who had performed the role for decades



Aaron Copland

Some 100 years after his birth, Aaron Copland is idolized as the folksy composer of such pops hits as "Fanfare for the Common Man," "Lincoln Portrait," and cowboy ballets like "Rodeo" and "Billy the Kid," not to mention down-home film scores for "Our Town," "Of Mice and Men," and "The Heiress." As more than one observer has mentioned, it is almost unbelievable that America could have embraced as its national composer a man who, according to a new biography by scholar Howard Pollack (Holt, 690 pages, \$37.50) was gay, a Communist, and a Jew. He had brushes with haters of all three minorities, including when a planned performance of "Lincoln Portrait" was canceled at Eisenhower's inauguration when McCarthyite powers declared him *persona non grata*. But mostly, Copland seems to have breezed through life with genial aplomb, a basically sweet and good-natured man who put up with a lot from friends — indeed, anyone who stayed so close to the often-impossible Leonard Bernstein for decades must have been preternaturally tolerant. As a result, this past August, it was announced that among centenary tributes the US Army Concert Band and Soldiers' Chorus would record two CDs, entitled "The Legacy of Aaron Copland," to be distributed to thousands of U.S. school libraries. Doubtless Copland himself would have got a good giggle about the irony that, given present asinine policies, if any of the Army performers admit to being gay, as Copland was, they will be swiftly booted out of the CD and the military both.

before recording it. By contrast, the Evangelist in Philippe Herreweghe's new version of the Matthew Passion (on Harmonia Mundi HMC 901676.78) is the fluty-voiced young Ian Bostridge, certainly a meteoric recording success, but one who probably deserves more time to let his interpretation mature. Before looking at the other two anniversary composers, it would be well to point to a few superb masters of Bach whose recordings have been so far cruelly ignored by recording companies: The great French cellist Paul Tortelier, whose early cycle of solo Suites are to my ears the most profoundly satisfying. Young German fiddle sensation Christian Tetzlaff, whose solo Sonatas and Partitas

recorded for Virgin are worthy of mention alongside Grumiaux's, but which have been inexplicably allowed to go out of print. And finally, the great American pianist Arthur Loesser, whose LPs of The Well-Tempered Clavier on Telarc, and French Suites and Italian Concerto published by the International Piano Library, should have been transferred to CD years ago — they would have been humane models for the kind of joyous celebratory Bach we need so much for this anniversary year, but sadly this was not to be. Well, Bach will still be here for his 300th anniversary, even if we won't be, and maybe artists like Loesser and Tortelier will be remembered then.

During his lifetime, Copland survived such frequent paradoxes by his essential good nature. He was truly helpful and encouraging to many composers, and he generally had a fine ear for talent, discovering not just Bernstein, but also Carlos Chavez and Toru Takemitsu. About choosing conductors, he was perhaps less gifted, admiring Serge Koussevitzsky because that largely amateur maestro performed a full dozen of his works. One reason why people continue to love Copland is because

of his real adherence to the notion of "The Gift to Be Simple," as one of his beloved "Old American Songs" states. He genuinely felt that being American was to be more guileless and direct than to be European, and having studied early in France, his rejection of the continental attitude kept him from preciousness. We can hear the "Old American Songs" in their first recording in an opportune new reissue from Sony Masterworks Heritage (on MHK 60899) in which Copland himself accomplishes the direct and unvarnished baritone William Warfield, far closer to the folk idiom than subsequent performers like the ubiquitous mezzo-soprano Marilyn Horne, who despite her other gifts insists on performing these songs as if they were sung by Azucena in Verdi's "Il Trovatore." These songs, like most of what Copland wrote, reflect his personal virtues: Gentlemanliness, retenue, kindness, and gentility all come through in these court-ing songs from another era. Even vulgar minstrel numbers are made more tolerant. A telling detail from the Warfield-

Copland performance comes from the "I Bought Me a Cat" song with all the barnyard noises that singers rightly find droll and irresistible. However, when the singer announces that he (or she, in Ms. Horne's case) has "bought me a wife," and the wife says "Honey, honey...", singers today cannot resist mak-

With a past like this, it is worth paying attention, and perhaps learning, when a composer has an anniversary.

ing the wife bray like a donkey. Whereas Warfield and Copland make the "Honey, honey" a wheedlingly endearing plea, full of gentle seduction. How much more humanely uxorious than the grosser caricature that these songs have become. But then, as Pollock points out, the state of Copland studies is appallingly primitive as few musicologists have deemed these "easily accessible" works worth the effort to analyze in authoritative editions. For tenured brains, anything understood and appreciated by the hoi polloi must be suspect, and the recent lavish use of Copland's music in a Spike Lee basketball film, "He Got Game," will no doubt scare off delicate-minded academics for years to come.

Yet the man himself had no such silly qualms. He joked about the popularity of his occasional patriotic works like "Lincoln Portrait," yet continued to conduct them whenever asked. Copland's clear-sightedness involved being truly open-minded, it seems. After "Billy the Kid," when he was asked to compose music for "Rodeo," he did not refuse, as others might

have done, on the grounds that he had already written one cowboy ballet. And he kept composing film scores and winning Oscar nominations, largely because he was in love with a male dancer who lived in Los Angeles and wanted excuses to make the trip. Thus can the personal life of a musician affect what he composes. I well recall when Copland would come to Yale University in the 1970s when he was already considerably senile, and would repeat anecdotes during public

speeches. Once, referring for a second time to a story about Gertrude Stein and Alice Toklas, he must have sensed a rustle in the audience, for he calmly added, "Oh, did I say that before? Never mind, I do that!" This aplomb, when faced by the mental deterioration that marked his last two decades and ended his composing career, is perhaps an even stronger testimony to the man's qualities than his lifelong courage as a gay left-wing Jew.

Although Copland was no master of the podium, he was like Hindemith in knowing how to negotiate his own scores quite well, especially if leading a superb orchestra like the Boston Symphony. And so plenty of his CDs are in print, with hardly any urgent need for new ones: His "Appalachian Spring" with the Boston Symphony (on BMG 61505) and the distinguished Sony Copland Collection (on SONY 47232, 465559, and 47236) largely with the London Symphony Orchestra, are fine testaments. For another take on his works, a splendidly energetic and motivated, if sometimes exaggerated, optic



Weill c. 1918 in Leipzig; photo by E. Hoenisch, courtesy of the Weill-Lenya Research Center, Kurt Weill Foundation for Music, New York.

may be had from Leonard Bernstein's many CDs. "Billy the Kid" from the Bernstein Early Years series (on BMG 60915) and a number of titles in the Sony Bernstein Century series (on SONY 63155, 63082, 60177, 63082) make a precious legacy. In a frenzied century, Copland was a tranquil man, the least theatrical of major composers since Brahms. His interpreters who invested the most love in his music, like Bernstein or the remarkable mezzo-soprano Jan DeGaetani in a recorded concert for the composer's 81st birthday (on Bridge 9046), understood him best.

Kurt Weill

From the open-hearted aw-shucks good nature of Aaron Copland to the ultimate composer of Berlin decadence, Kurt Weill, might seem a leap. Yet Weill, whose 100th birthday will also be celebrated in 2000,

is like Copland a composer of joy. A recent CD release, Lotte Lenya Sings Kurt Weill American Theatre Songs (on Sony 60647) illustrates this brilliantly with a duet between the gravelly-voiced Lenya (Mrs. Weill) and an even more gravelly-voiced Louis Armstrong on "Mack the Knife." Never before has the tale of a knife murderer been given with such unrestrained glee, very much in the near-voodoo laughing sadism of some earlier Armstrong numbers as "I'll Be Glad When You're Dead, You Rascal You." However, "Mack the Knife's" special comic energy is entirely Weill's, which is proven by another cut on the CD, a recording Lenya made before the Armstrong duet, in which she performs the song in German, accompanied by a Dixieland ensemble featuring trumpeter Turk Murphy. Different performers, but same "schadenfreude." This gritty humor brings Weill close to the sarcastic drawings of a satirist like George Grosz, whose real inspiration, like Weill's may have been long concealed because it was so linked to the Weimar culture from which it sprang. Even today, a vast number of people record Weill's music who have only a remote idea of the style and context, not to mention the German language. So the essen-

tial documents to understand this composer remain, of course, the CDs of Lenya like "Threepenny Opera," "Mahagonny," and song recitals (on Sony 42637, 37874, and 63222). After hearing these '50s recordings, the intrepid Weill fan had better delve into period compilations, like Capriccio 10347, which contains unforgettable documents like 1932 excerpts from "Mahagonny" with Lenya, conducted by Hans Sommer with electric theatricality. Also stunningly vivid are performances here of the acidulously ironic tenor Ernst Busch, conducted by Weill's student and friend Maurice Abravanel. And we can compare Lenya's youthful seductive tweety-bird voice in the languorous "Suarabaya Johnny" with contemporary singers like the Frenchwoman Marianne Oswald.

In later life, Lenya came across like a raspier version of Dame Judi Dench in "A Little Night Music," a powerhouse of an actress who cannot sing but can act a song unforgettably. Musicality is more than just carrying a tune in the theater. And so, another compilation, Weill From Berlin to Broadway (Pearl 9189), contains items like "September Song," which the actor Walter Huston delivers touchingly, although Lenya later claimed the most moving version she ever heard was by Jimmy Durante (!) Given Lenya's achievements as a non-singer and non-reader of music, she is enchantingly good-humored in a priceless rehearsal tape with Armstrong reprinted in the Sony theater songs collection. Yet her real musical limitations make one wonder what the University of Rochester could have been thinking when it scheduled this past December 3 an all-day

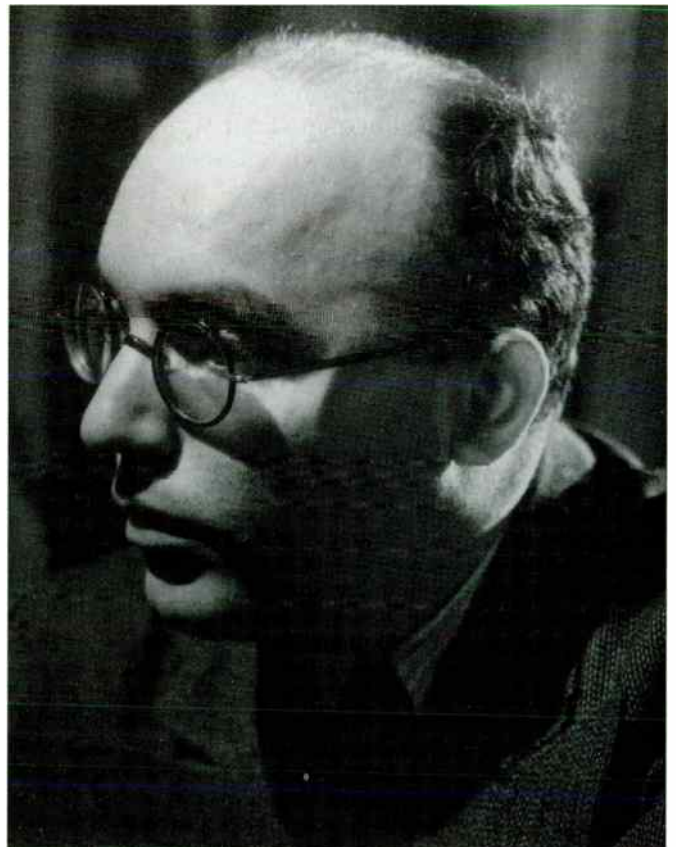
"Lotte Lenya Singing Competition." If any contestant shows up not knowing how to read music or carry a tune, and rasps away, will an immediate first prize be awarded? In fact, the very few real heirs to the Lenya stage presence who can also sing will be active, if sometimes hard to find, during Weill year. The great German singer Gisela May, whose CDs for Capriccio of Weill's music are probably the best since Lenya's, performed a concert on March 5, 2000 in Bremen, at 11:00 a.m. German audiences are used to doses of cynicism and dismay at such hours: Indeed, I recall a friend saying proudly that he attended in Kiel a concert one Sunday at 10:00 a.m. of Schoenberg's huge "Gurrelieder." Still, one would like to hear more of Ms. May, at approachable hours, and not just the myriad of other singers, some of them unnameably bad, who will be touring with works by Weill next year. Would that the late singer Cathy Berberian, who interpreted Weill's music as arranged in her husband Luciano Berio's "Recital I for Cathy," (on BMG 62540) was still among us.

Unlike the current messy situation in Copland studies, there is an authoritative edition of Weill's work underway from the Kurt Weill Foundation in New York. Two founders of that organization, Lys Simonette and Kim Kowalke, edited a splendid edition of the Weill-Lenya correspondence, *Speak Low* (When You Speak Love) (University of California Press, 554 pages). This book is amusingly raunchy, full of sexy jokes between a couple clearly involved with each other physically, which belies Lenya's lasting screen image as the lesbian lady with knife-in-

shoe in the James Bond film, "From Russia With Love." As an attractive new book edited by David Farneth, director of the Weill-Lenya Research Center, *Lenya The Legend: a Pictorial Autobiography* (Overlook Press, 219 pages, 45 dollars) testifies, Lenya enjoyed a good dirty story as much as anyone. She and Weill had a good chuckle at a dull performance of Puccini's "Suor Angelica" which he summed up as "all these nuns, and not a "schwanz" (a rude term for male sexual organ) in sight!" Their free-wheeling Berlin sensibilities — such as choosing a lesbian couple as witnesses for their marriage — survived their exile. Indeed, after Weill's death Lenya married a series of three gay alcoholics, all of whom predeceased her. But in Weill's short American period before his untimely death from a heart attack, he produced works of sincere urgency, no doubt motivated by wartime stresses. These works, including songs like "Lost in the Stars" and "September Song," as well as stage works like "Street Scene," are doubtless more overtly good-hearted and direct than his Berlin works. Indeed, he redeems American playwrights and lyricists such as Maxwell Anderson and Elmer Rice who would be totally unviable were it not for the fact that they worked with Weill. But to presume that these more

sincerely humane works are inferior to his work with the strong poet but lousy individual Bert Brecht, is a judgment that most sensible Weill experts are reluctant to leap to. Without claiming that everything Weill wrote in America was a masterpiece as lasting as "Threepenny Opera," we can use this anniversary year to try to integrate, as in the case of Copland, popular material the composer himself created and accepted as part of himself. The German-era Weill works will most certainly take care of themselves. As Lenya once remarked, "'The Threepenny Opera' will last a long time because it deals with corruption and poverty. Corruption, we know, has quite a future, and, Lord knows, what a past!"

And so do composer anniversaries, as all the signs indicate. Bach, Copland, and Weill may be only the beginning.



Weill c. 1933; photo courtesy of the Weill-Lenya Research Center, Kurt Weill Foundation for Music, New York.



Rock

Aimee Mann

Bachelor No. 2 Superego Records SE2002

Magnolia Reprise 9 47583-2

CHARACTERS: Thomas Paul Anderson, director of the acclaimed *Boogie Nights*, is struggling with ideas for his next screenplay. Aimee Mann, former lead vocalist of the rock group 'Til Tuesday, is seemingly at the end of her recording career. Mann's manager just hit her with a communiqué from Geffen Records — they'll drop her if the next album isn't a hit. She's been performing lately with husband Michael Penn (who had written songs for *Boogie Nights*) at the LA club Largo. Another regular at Largo is Anderson's girlfriend Fiona Apple. Anderson and Mann have struck up a friendship / mutual admiration society.

FADE IN: INTERIOR LIVING ROOM. Mann is playing snippets of new songs. Anderson listens intently. She sways awkwardly to an inner rhythm and sings: "Now that I've met you / would you object to / never seeing each other again / 'cause I can't afford to / climb aboard

you / no one's got that much ego to / spend." SLOW FADE TO BLACK

CUT TO: PRESS CONFERENCE. Following the premier of *Magnolia*, Anderson is speaking to reporters: "In my original screenplay, Claudia says, 'Now that I've met you, would you object to never seeing me again?' I must come clean. I did not write that line. Aimee Mann wrote that line as the opening of her song, 'Deathly,' and I wrote the screenplay backwards from that line. Aimee Mann is to *Magnolia* what Simon and Garfunkel are to *The Graduate*."

CUT TO: STAGE OF Los Angeles Shrine Auditorium. Aimee Mann sways awkwardly to the rhythm as she performs her Oscar-nominated song "Save Me" from *Magnolia*. The U.S. TV audience is 87 million and she's feeling a little nervous: "You look like / a perfect fit / a girl in need / of a tourniquet / but can you save me? / come on and save me."

Does the audience save her? Is it a happy ending? That's up to us — but the plot almost never got off the ground. Mann's manager, Michael Hausman (ex-'Til Tuesday drummer, ex-Mann boyfriend) was actually too optimistic about Geffen Records. The new album, a 13-song collection that includes three cuts from *Magnolia*, was killed before it even had a chance to fail. Head honcho Jimmy Iovine sent her back to the drawing board after listening to the final mixes. His comment: "Aimee doesn't expect us to put this record out as it is, does she?"

The release of *Magnolia* finally allowed seven of Mann's new songs to make it to CD. (The soundtrack also includes her cover of the Nilsson / Three Dog Night standard "One" and an instrumental version of "Nothing Is Good Enough;" filling out the CD are two oldies from Supertramp, "Goodbye Stranger" and "Logical Song," an R&B hit circa 1993, "Dreams,"

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— M.S., Atlanta GA

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by Gabrielle, and a classical orchestration of a theme from the movie.) Mann was forced to buy the rights to the master tapes from Iovine & company (a low six-figure sum, reportedly) in order to release *Bachelor No. 2*. It could have been worse: Other artists purged from the label were turned down flat when they tried to buy their recordings back.

The Sisyphean trials of Mann to get these songs released has been well documented, particularly by Jonathan Van Meter of the *New York Times Magazine*, who followed her for months during the darkest days of her labors. When A&R man Jim Barber told Hausman that he wasn't hearing a single in the new batch of songs, Mann responded with "Nothing Is Good Enough," a song either about a toxic relationship or a thoughtlessly poisonous record company executive: "Nothing is good enough / for people like you / who have to have someone / take the fall / and something to sabotage / determined to lose it all." Barber told the reporter that he took offense, and that he had actually been very helpful and specific in his criticisms. "I said to her: 'Aimee, this is why your choruses aren't working. This is the kind of chorus you should write.' I made

her a tape once of songs that I think have good choruses." As a dialog scene in our Aimee Mann screenplay, this may not have quite the delicious irony of that bit in *Amadeus* where the King tells Mozart, "Too many notes," but it's close.

Mann didn't ever get the choruses right enough, so now she has the dubious distinction of having never released a solo album on the label that recorded it. Three albums in eight years: *Whatever*, recorded by Giant before it went belly up, then released by Imago; *I'm With Stupid*, recorded by Imago before it shriveled and died, eventually released by Geffen; *Bachelor No. 2*, recorded for Interscope after it ingested Geffen in a frenzied, alcohol-fueled (Seagram's, of course) consolidation when parent company Universal bought Polygram, ultimately released by Mann's "vanity" label, Super-Ego. Couldn't be simpler.

Our unfinished screenplay, which must include flashbacks to the reported kidnapping at age four by her estranged mother, ends with Aimee Mann — critically praised, admired by fellow performers, often called one of the best songwriters of her generation — reduced to putting out essentially a vanity CD. Actually reduced isn't the right word, because *Bachelor No. 2* is both a triumph artistically and a lesson in how to succeed in business when the business you're in is brain dead. The album is available from her website, aimeemann.com, and if you buy only one thing on the Internet this year, it should be this album. (The second thing would be an extra copy as a gift, with maybe an Aimee Mann t-shirt thrown in. And if you don't already have the *Magnolia*

soundtrack, click "[Buy](#)" while you're on the website; let Mann make a few extra bucks off it.)

How good is this new work from Aimee Mann? Mann has always been an interesting talent, but now she's a MONSTER (in the nicest sense of the word). I'm not the only critic to see greatness in Mann. David Thigpen wrote in *Time* magazine that Mann's 1996 album *I'm With Stupid* was one of the "catchiest pop albums of the year, brimming with poised, three-minute mini-masterpieces. . . . Mann has the same skill that great tunesmiths like McCartney and Neil Young have: the knack for writing simple, beautiful, instantly engaging songs." A perceptive comment, debatable then, confirmed absolutely now by *Magnolia* and *Bachelor No. 2*. A review on sonicnet.com by Bud Scoppa follows up on the McCartney connection, and on the scope of Mann's achievement: "On the evidence of her work here, one would have to say there really isn't any pop-rock composer writing more sophisticated material these days than Aimee Mann. Always an inspired melodist, she's now assimilated Burt Bacharach as well as Lennon-McCartney."

I'll go so far as to say that the only thing separating Mann's new songs from, say, "Norwegian Wood," "Girl," or "In My Life" on *Rubber Soul* (aside from Mann's more mature lyrics) is a George Martin production. Not that Mann would accept the limitations of a producer's style, even George Martin's. Mann doesn't try to imitate the Beatles or any of her myriad UK influences (Zombies, Elvis Costello, Squeeze, XTC) so much as imply them. The influences insinuate themselves in the songs, adding subtle texture without becoming

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"Hey there!" distractions. (Hey, there's a George-Harrison riff; hey, there's a Karen Carpenter inflection; hey, there's a Beach Boys harmony.) The impulse to combine a sharp, pared down, avant garde austerity with the best of schmaltz was with Mann from early in her career; it's who she is, not a schtick she's affected.

In a 1984 *Boston Globe* interview, at a time when Mann wore spiky hair and entered "Battle of the Band" punk-rock contests to get noticed, she praised Devo and the Talking Heads, professed her love for Elvis Costello, then went on to say that what she really enjoyed listening to was Frank Sinatra, the Carpenters, and Burt Bacharach. This at a time when the Carpenters were considered the archetypes of treacle, Frank Sinatra was the last of the Neanderthals, and Burt Bacharach hadn't been rediscovered by Austin Powers.

Bachelor No. 2 is a fairly minimalist, seemingly low-budget production, but that's not to say Mann didn't get what she wanted. Van Meter describes Mann's firm obsessiveness during the mixing of "Nothing Is Good Enough:" "Mann is unhappy. She fears that the piano is too pretty, too 'ballady,' and too much like another song on the album. 'It's not the Moody Blues '70s flavor I was looking for.' A decision is made to bring in a different drummer, and Mann tells the piano player [Benmont Tench, a Tom Petty stalwart, is credited in the liner notes] to play his part as if he were 'a drunken clown.' Hausman suggests a 'John Lennon, immature piano player' approach." Listening to the song now, I hear the Moody Blues and Lennon

influences, but I never would have picked them out if I hadn't read the *Sunday Times* article.

And by the way, the song's waltz rhythm does sound too much like track #5, "Satellite," even with a different drummer and keyboard player. One could in fact criticize *Bachelor No. 2*

Mann has always been interesting, but now she's a Monster!

for being overall too ballady, too laid back. "Ghost World," for instance, has the makings of a classic teen-angst anthem ("I'm bailing this town, or / tearing it down, or / probably more / like hanging around"), but instead of upping the energy with soaring electric guitars, Mann adds poignancy and beauty to the arrangement with synth strings and Carpenters-style harmonies. And yet the choices feel felicitous, of a piece; Mann sets a tone and doesn't spoil it. Issues of monotony are moot when you have tunes this contagious.

The production quality from an audiophile standpoint is acceptable, though not something you'd use to show off your system. It's one of the few CDs I have that doesn't sound very promising on the car and office stereo, but actually gets much better on my high-end system. In other words, there are no nasties, so a serious listen on a very analytical stereo will not go unrewarded. By the way, the three songs that appear on both albums sound better—cleaner and crisper—on *Bachelor No. 2*, which was mastered by Bob Clearmountain. Don't expect audiophile magic, but be pre-

pared to enjoy the production nuances. And while you're listening, take out the liner notes and read the lyrics.

Often pop lyrics look either banal or hopelessly obscure when viewed through the clarifying objectivity of reading glasses. Black on white doesn't do favors to something meant to be felt in musical colors. Mann's lyrics are an exception. The wordplay is fun, for sure, but more important is the fact that her thoughts connect to deep wells of empathy, and her

metaphors illuminate rather than obfuscate. I started to look through the songs to find a lyric that illustrates this point, and I stopped at the first new song from *Magnolia*, "Momentum." A second glance through both albums suggests that almost any song here could serve just as well, but I'll stick with my initial choice: "And I know life is getting shorter / I can't bring myself to set the scene / Even when it's approaching torture / I've got my routine / But I can't confront the doubts I have / I can't admit that maybe the past was bad / And so, for the sake of momentum / I'm condemning the future to death so it can match the past." One could easily write a best-selling self-help book (or two or three) based on this song, and also a political tome about the irrationality of stasis-quo oriented, right-wing conservatism; the "Momentum Diet" book will follow—yes, you too can be as skinny as Aimee Mann.

Director Anderson, in the liner notes to *Magnolia*, remarks that her lyrics are so simple and direct that you may be mistaken in thinking you've thought of them yourself but neglected to write them down. "Like any

great writer, she has the ability to articulate. She is the great articulator of the biggest things we think about." Let's see, that would be: love and loss ("Susan"); friendship and isolation ("It Takes All Kinds"); the transparency and profound complexity of human motives ("You Do"); life and death ("Just Like Anyone," about not recognizing Jeff Buckley's cry for help prior to his suicide); and, most importantly, why we act like idiots most of the time (every song she writes).

But if she's so damn talented, so damn perceptive, so damn good, why do record execs think she so uncommercial? Jimmy Iovine can't be that dumb, can he? He did engineer *Born to Run*; he did produce hits for Tom Petty and Stevie Nicks. There's no easy answer; all one can say is that being able to help Stevie Nicks leave Fleetwood Mac doesn't qualify him to judge Aimee Mann. And further, if your biggest claim to fame lately is taking Death Row rappers and Marilyn Manson under your broad wings, then issues of taste may be a factor.

The awful irony is that the record company did have potential hits here. "Save Me" was nominated for an Academy Award. Although it didn't win, many critics (Roger Ebert and Peter Bogdonovich, for instance) picked it as clearly the best song among the nominees — that is, the song they'd continue to enjoy outside the movie theater. At my office, the *Magnolia* soundtrack is a favorite with everyone from young assistants to aging boomers like myself. Mann has a right to be bitter about how badly Iovine messed up: "A single is a record company's job: to pick out a song . . . and make sure people hear it."

Instead, Interscope strung her along, ignored phone calls, then killed the album at a time when Mann had a Lilith Fair tour coming up and could have promoted it. I guarantee you Madonna could have taken any of a dozen songs here and turned them into commercial singles simply by dubbing in her own lead vocal and putting the patented Madonna "hit factory" machine into gear.

Here's a "what if" thought experiment. Imagine there's no Beatles in 1963. The Merseybeat British Invasion happens without them. John, Paul, George and Ringo hook up a few years later, say 1967, and record *Sgt. Pepper's*. What would a record company with today's risk-averse attitude have done with it? "You don't expect us to release this?" would be one of the more kind comments, along with "listen to the Monkees, ape that sound, and come back with something the kids will buy."

Luckily for us, CDs are simple to manufacture, and the Web makes them easier to distribute. Gail Marowitz, V.P. of creative services at Sony Music and a good friend of Mann's, claims that "if Aimee sold 70,000 records independently, she would be making more money than if she sold 300,000 on a major label. . . . Ultimately, it's a very good thing." That being the case, look for more and more artists to get out from under oppressive contracts. Neil Strauss of the *New York Times* has written that record companies now "subtract 15 to 25 percent of the royalty rate of 12 to 13 percent that a new band receives for each record sold." The companies claim this is necessary because of the costs of internet technology, even

though, as Strauss notes, "This rationale seems strange because the distribution of music on the internet is supposed to save record labels money in CD manufacturing, packaging and shipping costs."

As The Boss said long ago on that famous hit single engineered by Jimmy Iovine, "We gotta get out while we're young / 'cause tramps like us, baby we were born to run." Mann is out, off and running; perhaps it would be a good idea for Iovine to get out now while he's at least on top, if not so young anymore.

People tend to confuse capitalism with "Big Business." The great thing about free markets is that when big businesses don't please their customers, they tend to become small businesses (or ex-businesses).

The Music Business seems to be entering just such a danger zone, hated by both suppliers and patrons. Young buyers aren't buying, new technologies aren't being embraced — in fact, they're being resisted as tech no-no's — and many once-favored artists are figuring out that their labels aren't in fact doing them any favors, commercially or artistically. Aimee Mann has become the poster girl for such artists, "exhibit A" as she says in "Nothing Is Good Enough." If the free market is as rational as theorists would have it, then Aimee Mann will find a way to be commercial while continuing to make music her way, and our screenplay will have the happy ending it deserves.





Worldbeat

Susana Baca *Eco De Sombras*
Luaka Bop 72438-48912-2-0

Alfred R. Fredel

WHEN I FIRST HEARD Susana Baca on the Luaka Bop compilation *The Soul of Black Peru* in 1995, I kept asking myself "Who is this woman and where can I get more of her music?" Oddly enough, this singer had never recorded a commercial album, even in her native Peru. In 1997, my desire to hear more of this voice and music was granted with her American solo debut album simply titled *Susana Baca*. She introduced her beautifully restrained trademark style that included the rich sounds of Afro-Peruvian folkloric music blended with Andean and Spanish influences. This recording quickly became one of the most popular albums on the World Music scene. In *Eco de Sombras*, Baca continues the evolution of Afro-Peruvian music and skillfully fuses many sounds from popular music into her carefully woven tapestry.

In *Eco De Sombras*, Susana Baca integrates the past and present creating a sultry mix of percussion, lyricism and sincere emotion. She returns with her four member band consisting of Rafael Muñoz on guitar, Hugo Bravo on percussion, Juan Medrano Cotito on cajón, and David Pinto on bass. She is also joined by some of American popular music's most innovative musicians including veterans Mark Ribot and Greg Cohen, John Medeski, and David Byrne. Producer Craig Street has done a thoughtful job with *Eco de Sombras*, paying careful attention to details in the reproduc-

tion of the textures and characteristics of Baca's lush and expressive voice, and has created a wonderful balance between instruments, percussion and voice.

Her native Peru is a country of beauty that boasts lush Amazonian jungles, the majestic Andes Mountains, and a bustling South Pacific coastline. It is on this coastline where many African slaves called home. These slaves were mostly from different tribes and backgrounds and found it difficult to communicate but kept their varied traditions alive through dance and music. The majority of the population in Peru is indigenous, with a minority of peoples of Spanish (mestizo), African and Asian descent. In this melting pot of cultures, Afro-Peruvian music adopted many outside influences including the guitar, language and many poetic forms from Spain as well as musical forms from Andean cultures. Although a very small portion of the population, the rich Afro-Peruvian culture survives, and is kept alive in the capable hands of Susana Baca. In 1992, together with husband Ricardo Periera, Susana Baca founded the Instituto Negro Continuo as a place that helps to teach and preserve Afro-Peruvian dance and music. It also serves to encourage young people to celebrate their past and to integrate it in the future.

In what was probably a truly unique situation, Susana Baca turned her home on the Pacific coast

near Lima into a recording studio with her bedroom, kitchen and other places in the house transformed into places of inspiration. It seems obvious to me that many people will find a sincere level of comfort in her voice and this is reflected in her music. As the band members prepared to record during the winter nights in Peru, Susana was using another of her many gifts as she filled the air with the smells of delicious Peruvian cooking. Her home was converted into a recording studio, but what this metamorphosis created, most importantly, was the spontaneity of a homegrown jam session.

In this new album, she has not forgotten the voices of her ancestors. The struggles of slave life are heard in songs like "El Mayoral" and "Golpe E' Tierra" where Susana effortlessly and clearly reveals the sadness that lives within the text of these songs. In "Panalivio" and "Zancudito" Baca creates an almost child-like atmosphere, with the innocence of a little girl mocking her misery. The addition of Mike Ribot and David Byrne on electric guitars and John Medeski on organ lend an

almost eerie quality to "Valentín" and "El Mayoral" making the emotional content in the lyrics even more effective. It is very clear that Susana Baca has great pride and dedication to her work and heritage.

Producer Craig Street has masterfully guided the musicians to create a recording that is open and relaxed. The album was recorded and mixed by Danny Kopelson and mastered at Sterling Sound by Greg Calbi.

Although it may not appear that the album was recorded in the most ideal conditions, the artistry and power of the music more than make up for anything that the most fastidious of listeners might find after many hours of nit-picking.

Eco de Sombras is a wonderful album with great scope and deep passion. This album is highly recommended along with the other two titles that include Susana Baca on the Luaka Bop label. The still waters may move slowly and softly in *Eco de Sombras*, but there is the depth of hundreds of years of history in these songs which Baca is more than happy to share.

**The quiet waters of
Eco De Sambras run deep
with passion and style.**

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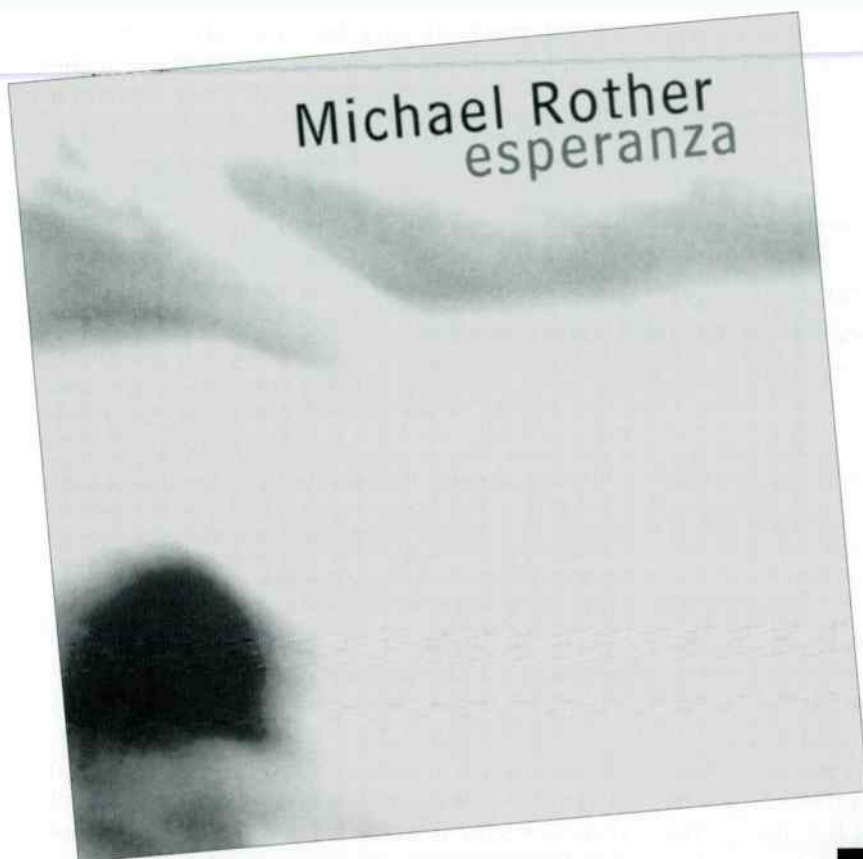
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Synth

Michael Rother *Esperanza*
Apostrophe Productions AP-001

LIFE IS FULL of funny coincidences. One day the editor of this mag phoned me where I work as a mastering engineer and asked if I would review an LP recording for the magazine. He said it reminded him of Brian Eno's *Music for Airports*. I've written some articles, but never reviewed anything (in print anyway), either a recording or gear. In my job, I get to hear a lot of albums, not all of which are par-

ticularly likeable. But, I thought, why not give it a try?

I received this LP a couple days later and put it on my turntable. I liked it from the first note. By the middle of the second cut, however, it sounded more than a little familiar. So I went over and took the record off the turntable. I looked carefully at the scribing in the lead-out groove under bright light, and sure enough, there was my

writing and initials. I had mastered this record! I chuckled to myself as I picked up the phone to call the editor, ready to accuse him of a weird practical joke after he saw my initials. "I think I'm going to have to disqualify myself on the grounds that I cut this album," I said. We both laughed for a moment. "Well", he said, "Why don't you just write about your reactions to the music without dwelling

too much on how incredibly good the mastering is?"

First off, this is a two-record set, recorded in Hamburg, Germany, so I assume Michael is German. Most titles are in German. Unlike some people, I like the sound of the Germanic languages. There is a precision to the words that is lacking in English. *Esperanza* contains titles like *Perlenklang* or "Pearl Sounds," *Unterwasserwolken* or "Under-water Clouds," *Gleitflug* or "Flying," and *Sudseewellen* or "South Sea (Pacific) Waves." There are 21 tracks, and (get this) four are bonus tracks. That means that Apostrophe Productions, which is licensing this in the U.S., has added these to the European release by Random Records. (I thought "bonus cuts" were only put onto CDs.)

Esperanza is an interesting album, even a good album in my opinion, but without dwelling on the sonics, this is not an audiophile demo disc. Although it is a good, clean recording, there are no fireworks. It seems everyone these days puts artists and music into categories, like little boxes, but I can't do this with Michael and his music. The music is mostly synthesized, which is just a statement of fact. It is fluid, not too repetitive and well orchestrated. (Is there a "synthetic" term for that?) Although Michael's musical "finger print" is on each piece, there is a great deal of variety, both musically and texturally. This is NOT a typical synth and drum machine album. It flows well. It is easy to listen to. It's Sunday morning music. (Is that a category? Sorry! Remember, I'm new at this. I like Mozart and Miles Davis on Sunday mornings, too. If they're in the same category, so be it!) It is thoughtful, rather meditative

music. I recommend it. My favorite tracks are "Silver Sands," "Esperanza," "Singapore-lore" and "Herzlicht."

One last point: I mentioned the album to Gary Salstrom, who is the head of plating at RTI, where it was pressed. He's the guy who turns the master lacquer discs into the metal

plates which stamp the records. His first remark was "Hey, I love that record, I play it all the time." This comment, you should understand, comes from another guy who hears lots of music which he probably would rather not listen to more than once. (Editor's Note: I get those discs, too. Far too often.—E.P.)

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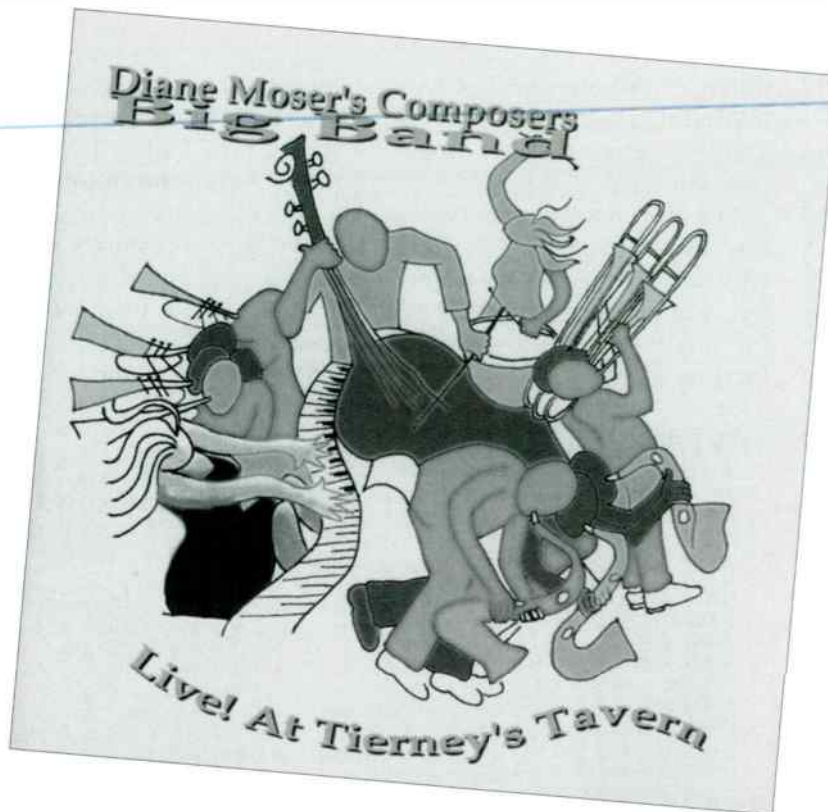
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Jazz

Diane Moser's Composers Big Band *Live! At Tierney's Tavern*
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WHAT WE HAVE HERE is the ability to communicate. This ain't no disco. This ain't no fusion. This is 17 musicians playing jazz. This is one well-rehearsed and precise band. The section work is tight, most of the compositions are notable, the solos are consistently interesting, and it's nice to hear sax players that don't sound like one of my favorite sax players, John Coltrane. Moser's Composers Big Band evokes the '50s, '60s, and '70s contemporary big bands, as well as some smaller units from those three decades.

This is a nice, live recording with a very high content of music, not a high-fidelity audiophile recording with a low music content. It isn't one you

can use to impress your hi-fi friends, while your jazz-loving friends wish you'd put on something interesting, preferably jazz.

Highlights include "Triple Blues," the slightly startling opening track, which is your nice, up-tempo, happy monster movie theme. The opening sounds like a collaboration circa 1961 between Oliver Nelson and Leonard Bernstein and is also reminiscent of Mingus' "Boogie Stop Shuffle" in a later section. Diane Moser takes an effective solo; too bad she's slightly low in the mix. The tune features some nice voicings and well-executed unison playing. Composer-arranger-sax player Ed Xiques makes particularly interesting use of the saxes.

Barbara Cifelli's bass clarinet introduces the theme to "Air" against a light rimshot count-off. With the guitar chording, it evokes a Chico Hamilton-Eric Dolphy Quintet sound. Then the band joins in and Gil Evans-style exotica comes to mind. Composer-tenor sax player Rob Middleton has a fine free-flowing solo with Larry Maltz chording adroitly behind him. After further solos on alto sax and trombone, we get some very tight and energetic section playing before finally coming back to that lovely small-group theme.

"Stand Clear of the Closing Doors" is described in the booklet as "the aural equivalent of strolling through the park on the

way towards the subway system." The piece starts slowly and gets slightly dissonant and tipsy. It features Ed Xiques' soprano sax and some 'bones in the theme. I would think this urban aural stroll was taken just after sunset by someone not fully sober. I could imagine this piece in a Russ Meyer movie. There are a number of tempo changes and themes which interweave throughout. A very provocative tour.

Also a standout performance is "In Walked Bo" which starts right off with the Bo Diddley beat and then goes into a New Orleans strut. A spirited, driving performance. This must have been great fun to see performed. It's a tune any stage terpsichorean would have loved to dance to. And trombones? Great googly moogly, all of them take the most outrageous, raucous solos, and the hot sauce is in the air, all over the place.

One of my personal favorites on the CD is "Hale Bop," which is a little more "out" than the other tunes. Marty Fogel really caught my ear with his dramatic entrance on tenor sax following Ben Williams' heated trombone solo. Fogel just tears it up, conjuring the sound and swagger of the great Albert Ayler. The band lays out during Fogel's solo, creating a tenor-led quartet though they rejoin for the theme. Very well done.

Hey, it's mellow funk time when "Spirits" comes up. Drummer Barbara Allen rolls this one to a start and Larry Maltz comes in like Kenny Burrell. Ed Xiques joins in after guitarist Maltz is done, with "an everything's mellow" alto solo. Matt Haviland follows on trombone (where's Neal Hefti?). Mike Spengler comes wailing in on trumpet and brings the swinging groove to a very satisfying close.

Okay, did I love all the tracks? No, the only standard and the only vocal, "Too Close for Comfort," was the least comfortable for me.

As John Lee Hooker said, "Them screwball chords don't mean a thing." The best thing this band does is play instrumentals, using challenging and modern material at that. For me, hearing interesting, well-played jazz is fine, but it's outright great when the pieces are original compositions from an excellent big band that make musical references to Gil Evans, Oliver Nelson, Stan Kenton, Count Basie, Charles Mingus, et al.

I really enjoyed this CD and listening made me want to hear Moser's big band live. I think I'll do just that. Now, Mr. Editor, isn't Tierney's town, Montclair, NJ, about 30 minutes drive from me? And doesn't Moser's band play there the last Wednesday night of most months?

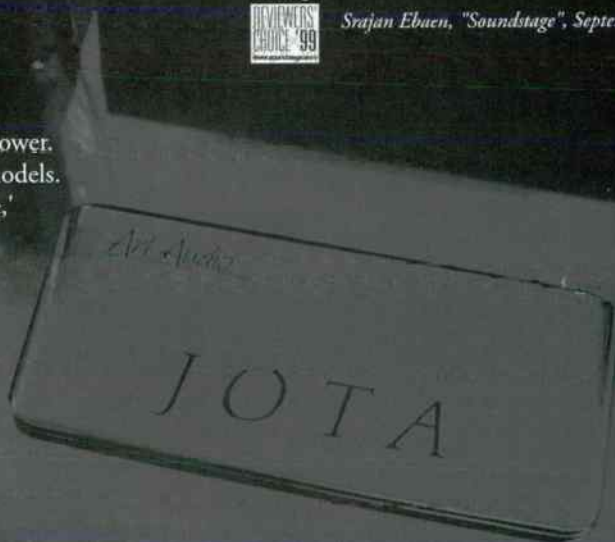
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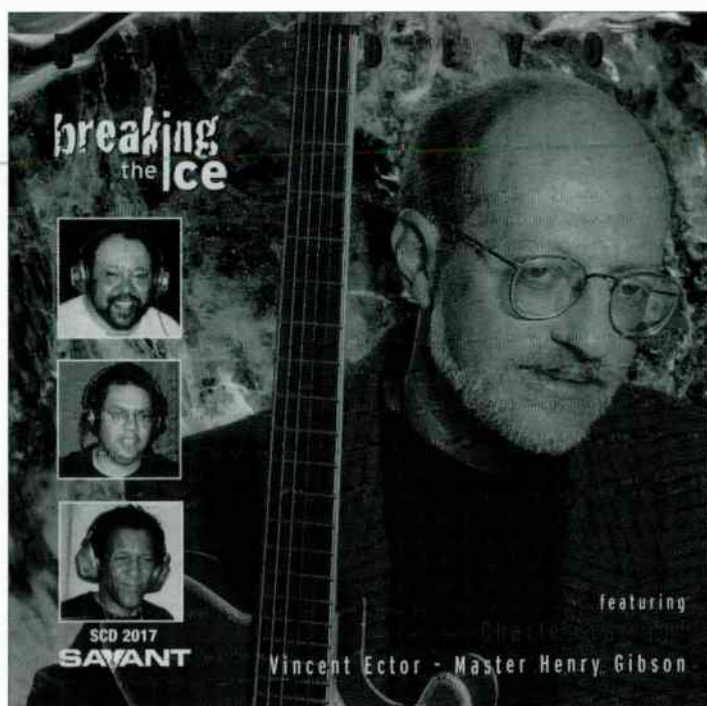
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THIS NEW CD features the guitar work of Bob DeVos, a new name (to me) but a fine instrumentalist. Stylistically, it derives from '60s funky organ trios, with added Latin percussion (a popular extra at that time which, unlike the organ trios, hasn't come back). Charles Earland, "The Mighty Burner," appears on Hammond B-3, and lives up to his nickname.

The title track is a medium-tempo funky blues with a catchy theme. Earland's midrangy sound is appropriately rich and greasy. DeVos adds his two-cents, playing bluesy short statements that extend out logically into longer melodic statements. His approach has some of Grant Greens percussiveness (and bluesiness), George Bensons's rich tone, with a touch of B.B. King for added grit. "Walk On By" runs, doesn't walk, and finds even Bacharach to be blue.

Earland screams through the changes, while DeVos offers nice note choices, off-center lines, and swings his kazatzkas off. Again, on "You Don't Know What Love Is," he does his version of the Midas thing, turning everything he touches into blues. A Meter's- style, Crescent City groove buoys "Rue De La Burner," on which DeVos balances funky riffing and thoughtful statements, while Earland's B-3 shouts and the rhythm makes sitting still impossible. B.B.King's "The Thrill Is Gone" and the disco-is-back "Forget Me Nots" (disco never really died—it just got a makeover and better PR) have DeVos changing to a more distorted rock tone, which he does well. It adds variety, though ultimately I find his "regular" tone more satisfying. He takes on modal improvisations on the high-octane "Chasing The Bunny," with a

nice constructed solo that builds as it goes along (am I imagining an Allman Brothers vibe here?). "Tri-Hog-Myth" (a tongue twister of a title AND melody based on "I Got Rhythm") and "Blues For Bee Dee" allow him to flex those Bebop chops, which are in fine shape, thank you.

Nit picking: Some tracks split the congas to both extremes of the stage, which violates The Audiophile Commandment "Thou shalt make images before you." Second complaint: I hate fade-outs in jazz. They seem to me like a lazy arranging, and I often feel some of the best playing is happening during and after the fade (this feeds my insecurities, and increases my therapy bills).

Quibbles aside, I enjoyed my time with this band, and recommend putting them on for a rousing, swinging good time.

TacT Audio Millennium Digital Power Amp



THE TACT M1 is the first of what may become a new breed of power amplifier. It is unique in that it directly takes a digital input signal, selected from any source, and generates power to drive speakers without any intervening active analog electronics.

The M1 does this by converting the signal from what's known as the pulse code modulation (PCM) format—in either the Sony-Philips digital interface format (S/P DIF) or the Audio Engineering Society-European Broadcast Union (AES/EBU) type—to pulse width modulation (PWM) at a high power level so that, when passed through an ordinary low-pass filter (one made from ordinary resistors, capacitors, and coils), it will drive

speakers directly. This PWM is similar to that produced in other digital switching amps like those from Spectron and some of the car amps produced by Infinity in the recent past, and, of course, the original Infinity "Swamp" switching amp of the '70s. [Editor's Note: Mr. King worked on the development of both Infinity's switching amp and pre-amp, and thus is intimately familiar with many of these techniques. — Gene Pitts]

The conversion of PCM to PWM is done by TacT digital-signal processing (DSP) they call Equibit. What's unusual in TacT's version of this process is that there is no negative feedback around the switching output stage; negative feedback has been used by engineers in their

designs for analog amps for many decades to reduce distortion and prevent catastrophic failure from oscillation. Instead, known non-linearities of the process are handled by being modeled in the conversion process itself. Matters are arranged such that a full-scale digital input signal produces full output of some 150 watts into an 8-ohm speaker load.

What about volume control, you ask? The output power of a PWM switching output stage is a function of its power supply voltage and the modulation level or duty cycle of the pulse width waveform. Reduce the power supply voltage, and the output power and consequent speaker volume is reduced. In the TacT M1, a combination of preci-

sion digital power-supply voltage control and reduction of the modulation level is used. For volume settings from about "100" on the front-panel display down to about "70," the power supply voltage is reduced from about 55 volts down to about 3 volts. Below that level, the modulation level of the PWM signal is reduced while the power supply voltage stays constant at the 3-volt level. The volume display numbers are in relative dB. In practice, it turns out that the range of 70 to 100 is where I mostly used the volume control. In this range, there was no loss of resolution. A simple but accurate way to think of all this is that the TacT M1 is a volume-controlled power digital-to-analog converter that drives your loudspeakers.

Prominent on the attractive front panel of the M1 is the large, heavy ring-shaped volume control surrounding the digital display. This ring is nicely mounted on ball bearings and is coupled to a digital encoder. I must say that spinning

TacT's M1 may be what all power amps will look like in the future.

this control to change volume just feels so very good! Within the display, the TacT logo is at the top in red. The volume, in relative dB from 3.7 to 99.9, is done in large green characters in the middle. At the bottom, the word "Equibit" is solidly lit

when there is a lock on the input signal; "Equibit" blinks when not locked.

On either side, arranged vertically, are indicators for selected analog inputs; "A1" to "A4" are on the left for the optional external analog-to-digital (A/D) converter connections, with the selected digital inputs, "D1" to "D4," on the right.

The M1 is a beautifully crafted piece of gear with parts and build quality of the highest order. Two pushbutton switches are set on either side of the display. The one on the left will switch analog inputs for the optional external TacT analog-to-digital converter. Digital sources are switched by the pushbutton on the right. A third push-button at the lower left of the front panel functions as the power on/off switch. Provisions are made for four digital inputs on the rear panel of the M1, one balanced AES/EBU, one RCA S/P DIF, and two BNC-style S/P DIF. Two pairs of very nice gold-plated, five-way binding post speaker connectors are located near the outside edges of the rear panel.

Additional rear panel connectors allow for connecting the aforementioned optional A/D converter, locking a suitably modified CD transport to the clock in the M1 for reduced interface jitter, and for interfacing with Crestron's line of home-control systems.

Listening Test

I started the actual review of the TacT M1 amplifier the moment I put it back in my system after listening to a pair of good tube amplifiers for about a week. The tube amplifiers were a mono pair of prototypes that a potential manufacturer had asked me to evaluate. Believe me, those tube amps were good to listen to.

My immediate impression of the TacT was the same as it had been every time I had previously put it in

NOTES

TacT M1 amplifier, \$9800.00, TacT Audio, Inc. 201 Gates Rd., Unit G, Little Ferry, NJ 07643, phone 201/440-9300, fax 201/440-5580, e-mail info@tactaudio.com.

Ancillary Equipment

Counterpoint DA-11A CD transport, Genesis Digital Lens, Classé DAC-1 D/A converter, a Pioneer DV-414 DVD player for playing 24/96 audio discs, and a Lucid 9624 A/D converter for digitizing analog sources. For playing vinyl records, I used a Kenwood KD 500 turntable fitted with an Infinity Black Widow arm and a new Win Research SMC-10 moving-coil cartridge playing through a Vendetta SCP-2C phono preamp. Additional signal sources included a Nakamichi ST-7 FM tuner, a Nakamichi 1000 cassette recorder, and a Technics 1500 open-reel recorder. When using analog power amplifiers, a First Sound Reference II passive preamplifier fed the amplifier via one-meter interconnects. Various interconnects were used to connect up the analog sources. Other power amplifiers used were my own pair of Quicksilver M-135 mono tube amps, a pair of Quicksilver Silver 60 mono tube amps, the aforementioned prototype pair of mono tube amplifiers, and an Arnoux Class-D digital switching unit. Speakers used were B&W 801 Series 3 and Genesis APM1. Speaker cables were a six-foot pair of Kimber BiFocal XL. Digital cables used were AES/EBU balanced Illuminati DX-50.

my system. "Wow, this thing is musical!" was again my immediate impression—right off the bat.

It is an interesting experience to be listening to a system where there are no analog electronics at all in the chain. One thing that stands out about the M1 is that it has a very low level of irritation or edginess, which is of number one importance to me. On my more difficult CDs, the presentation is smooth and musical yet with plenty of detail and resolution. This effect is most noticeable using the Counterpoint CD transport going through the Genesis Digital Lens.

Overall resolution, space, and delicacy using the Classé DAC-1 D/A converter and the tube power amplifiers was a mite better than the TacT M1. However, that compelling musicality of the M1 kept me smiling and listening to this amp. In my opinion, the TacT M1 is an extremely good amplifier and warrants a serious listen.

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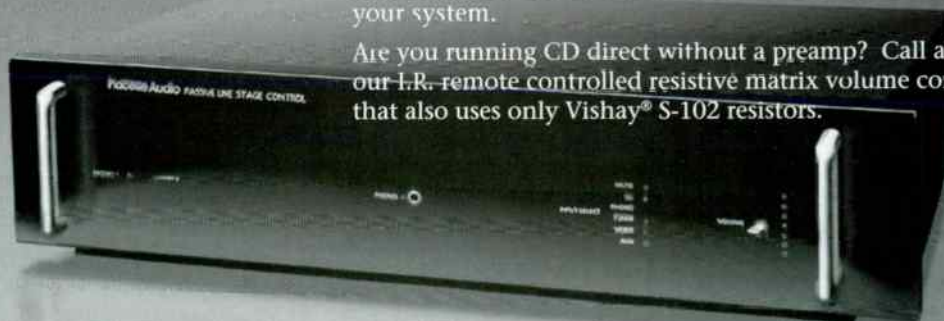
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Samsung Yepp' MP3 Recorder

Bernard Kingsley



SAMSUNG'S YEPP' is a small portable-type recorder of MP3 files. It offers some great technology and a couple of unusual features (like recording voice and holding an address book), and if that's not enough, it is a stunningly beautiful machine. While its purpose is audio, it definitely requires access to a computer and presents itself as a blend between the computer world and audio technology.

To "load" music into the Yepp', you must first obtain MP3 files (widely

available on the internet and often on CD ROM) and move them from your computer to the Yepp'. The Yepp' Internet Music player/recorder (YP-E64) comes with either 32- or 64-Mb of memory (the unit I reviewed had 64-Mb) and an additional memory card can be added. Typical four-minute music segments require about 4 Mb of RAM.

The player is amazing in some respects. It's beyond me how Samsung managed to get 64 Mb of memory into a case measuring no more than 2.5 inches by 3.5 inches that's about half an inch in depth. Specifications include a frequency response of 20 Hz to 20 KHz (no +/- tolerances given) with a signal-to-noise ratio of 90 dB. That S/N ratio may not be up there with CD players, but is well beyond most other electronics such as tape recorder/players.

The Yepp's attractive case is of aluminum and plastic. A large display area using LCDs dominates the front panel and can display up to 30 characters. A large round control button manages *Play*, *Forward*, *Reverse* (not *Rewind*) and *Stop* functions. Holding down *Stop* for more than a second or so powers down the unit. Also on the front panel are the *Record*, *Mode* and *Erase* buttons. On the side are buttons for volume control, a repeat switch and an *Equalizer* or tone control. The buttons are quite sensitive and Samsung has thoughtfully included a *Hold* switch that can disable the function buttons and prevent inadvertent changes.

The player/recorder comes with an earbud-type headphone and a cable to connect it to the parallel output of a computer. A microphone is built in. The Yepp' can also display an address book with telephone numbers once it has been downloaded to the player. Two supplied AAA batteries power the unit.

Out of the box, the player is loaded with a few demonstration MP3 files so that one can listen to music immediately. I listened to the player briefly before installing the software on my computer and the sound was quite good. Since the

Samsung's stunning Yepp' offers great technology, but its software can be tough to install.

Yepp' must have music downloaded to it from a computer, much of the instruction manual discusses the software installation and use. It's here where there are some problems. The supplied CD-ROM includes some sample MP3 files, proprietary software and RealAudio software. Samsung recommends reading the manual first, though they put that message on the manual itself and I suspect many will ignore it at their peril. Hey, we're Americans. [Dumb Editor's Note: Not to mention being "experienced editor-writer" types. -E.P.] We don't read manuals. This time you should.

Software Installation

The manual's initial discussion concerning the software is quite simple, but the software requires an ECP port and suggests users try to change from EPP to ECP in the computer's bios if necessary. Not something many folks will be comfortable with. [Dumb Editor's Note: I'm not. Gene Pitts]

Instructions for installation state that one should insert the CD-ROM into the computer and then just click the Next icons. Unfortunately, the Install program simply wouldn't come up on any of the three Windows 98 computers I tried with it. The CD was recognized and Install launched, but the startup screen never appeared. I used Win-

dows Explorer to find the set-up file and then installed the software. Using that approach, the Yepp's dedicated software (the Yepp Explorer), and the RealAudio software installed and ran without incident. [Dumb Editor's Note: I can do that. Gene Pitts]

The first computer I used could not connect to the Yepp'. No help was given in the instructions and I finally determined that the software driver for the Yepp' was interfering with my internal tape drive system. (The manual does include warnings that some external drives, such as Zip drives, may interfere and need to be disconnected.) I disabled the tape drive (this required getting inside the computer and disconnecting the drive as well as removing the software device drivers), and then it worked well. Whether or not someone would open a computer or give up a drive in order to use the Yepp' is an open question.

I next installed the driver on my laptop (using Windows Explorer) without problems. After reconfiguring RealAudio (not covered in the manual), I was able to move MP3 and address book files to the Yepp' using the Yepp' Explorer which has an interface somewhat similar to Windows Explorer.

Using the Yepp'

My first question on listening was "Where's the bass?" Fortunately, the fault was not in the player, as the headphones supplied simply didn't provide much bass in the "normal" mode. Earbud-type headphones are subject to personal fit, so other users might find the phones quite acceptable. I found piano sound to be tinny and bass lacking. Using Sony MDR V505 or Grado SR80 headphones delivered a full, rich sound with ample bass. There was adequate output to power just about any headphone that I tried to use.

Since MP3 files can vary in quality, I made a direct comparison by converting some Audio CD music to MP3 files. In all cases the sound was better on the CD; I perceived a lack of dynamic range with the MP3 format. Still, the Yepp' was as good or better than standard portable cassette sound. The player revealed good detail and a smooth frequency response.

The Yepp' offers tone adjustments of classical, rock and jazz with a "3D" option for each. While these options make the sound interesting, I generally preferred to listen in the Normal or classical mode.

I imported a phone book from the Windows address book. While not a unique feature, it may come in handy and requires little memory.

The Yepp can also make recordings with the built-in mike of more than four hours duration. The recorded sound was adequate for speech but you won't want to record music with the Yepp'. Still, it would cover a day of class lectures or conferences.

Conclusion

The Yepp' is a wonderful player, though its interface and software is not the best choice. Using the

Yepp's requires good familiarity with Windows and may need some expertise in adjustment to a computer's hardware drivers in some installs. If you do not have some computer knowledge (or access to someone who does), the player is not for you.

It's been fun to wow the neighborhood teenagers with this slick toy.

Also troublesome to me is the inclusion of RealAudio which has a reputation for being crash-prone and has been accused of serious privacy violations. As set up, the JukeBox software forwards information about your system and music playlist to the RealAudio marketing department when you go on-line. Several computer magazines have posted possible fixes for software crashes and a discussion of the alleged privacy violations. I found some excellent discussion of these issues on the PC World Magazine website: "Real Privacy" November 15, 1999 9:00 AM ET and "RealJukebox Woes Have MP3

Users Singing the Blues" December 14, 1999. To be fair though, the RealAudio installation was crash-proof on the three machines I installed it on.

Most Yepp' owners these days are likely to have computers with a USB port, and if Samsung had used that, instead of the Parallel port, installation and file transfer would have been simpler and faster. Setup can be improved if the install program is fixed and a USB cable included.

At a list price of \$249, the Samsung Yepp' isn't going to fly off the shelves. Nevertheless, it is a great example of what can be done with MP3 files, the very latest in technology and a lot of fun to use. Listening to it was enjoyable with my favorite albums and headphones. The Yepp' is well designed, extremely attractive, and convenient to use. Audio quality is very good for this format.

I very much enjoyed using the Yepp' and hated to see it go back to the Editor. [Dumb Editor's Note: I didn't hate to see it come back. It's been fun to slip into my role as the Ancient Fuddy-Duddy Deaf Audiophile and wow neighborhood teenagers with this slick toy.—E.P.]



N O T E S

Samsung Yepp' YP-E64, \$249.95. Samsung Electronics America, Inc., 105 Challenger Rd., Ridgefield Park, NJ, 07660; website <http://www.samsungyepp.com>, phone 201/229-4000, fax 201/229-4019.

Associated Equipment

Infinity 2000 AXT (Walsh tweeter modified by Infinity) speakers, Acurus A250 amplifier, Acurus RL11 preamp, Sony CDP 591 CD player, tuner from a Kenwood KR9600 receiver, and two computers: Home-built desktop with 200-MHz MMX Winchip CPU with 64 MB RAM and SoundBlaster Pro audio card, and Compaq Presario laptop with 380-MHz AMD K-6 CPU with 128 MB RAM and ESS audio board.



B&W Nautilus 801 Speaker

Les Turoczi

range of audio products. The original Quad electrostatic speakers were a mainstay at this shop, and the owner was proud to show other exotic equipment, both from abroad as well as the good old U.S. of A. One of the more unusual items that grabbed my attention in those days was a robot-looking speaker system that had a curved array of small electrostatic panels sitting atop a boxed woofer. The look seemed bizarre, at least for that time frame, but the sound was special. This was my very first experience with a B&W product and I still remember it fondly, especially the demo where they played music from original analog 15-ips master tapes, which the sales chap had helped to record. I'll always recall how the harpsichord material, in particular, came across with a remarkable lifelike directness.

Well, I couldn't afford that equipment then, but a lesson was learned from those enjoyable adventures. In fact, the British bug did bite me and eventually, after owning IMF Reference Monitors 20+ years ago, I still happily own a pair of Chartwell LS3/5a speakers which I bring out now and then just for the fun of it (or to check a piece of audio gear).

Over the years, I have enjoyed hearing several creative designs from B&W, including their megabuck full Nautilus creature when it was first introduced several years ago at a *Stereophile* High End show. Indeed, during the last two decades or so, their 801 and 801 Matrix models earned solid reputations as studio monitors in classical recording sessions. This may have served as partial impetus for B&W to refine and extend that design, thus coming up with the current Nautilus 801 system.

My sense is that jazz-, rock- and pop-recording engineers saw the widespread applications of the earlier 801 units in classical recordings, and many attempted to use these speakers to record their types of music. Sometimes, the stories go, these non-classical engineers weren't fully satisfied with the dynamic range abilities, maximum overall loudness and depth of bass extension of the earliest 801 models. Therefore, with much real effort, B&W released this most-recent iteration known as the Nautilus 801 system. It seems to have addressed those earlier concerns and is now able to nicely cover the full range of studio implementation requirements from classical to jazz, rock, and pop and beyond.

For the record, and the technically oriented, the heftily built and beautifully executed 801N is a three-

I SUSPECT IT WOULD be hard to find an audio enthusiast who has not auditioned, or at least heard of, Bowers and Wilkins (B&W) Loudspeakers. This British firm has been on the scene for decades and is known for top-notch R&D efforts, which have been developed over the company's long and admired history.

The Nautilus 801 (801N) speaker became available about a year and a half ago and its popularity is well founded, based upon its general reputation and sales records. Curiously, while the opinion in most of the audiophile press is largely positive, Internet e-chat gossip has been varied, or at least far ranging, and even occasionally confounding. That is to say, whereas the early audio magazine evaluations glowingly extolled the 801N's virtues and performance abilities, some voices of folks on public record via "rec.audio.nutcase" and some other worldwide web chat-sites, have spoken almost as frequently in the negative as in the positive. It is my hope that this review will help to clarify this conundrum, while adding a few new insights into the workings of the 801N loudspeaker system.

Some Background

As a graduate student back in the early 1970s at Rutgers University, I remember visiting a favorite audio store in New Brunswick, N.J., which carried a fine

way, vented-box system with a 1-inch, metal-dome tweeter; a 6-inch, woven-Kevlar, cone midrange driver, and a 15-inch, paper-Kevlar cone woofer. Each of these drivers and the enclosure system itself look to be of first-rate quality. This 8-ohm system has a sensitivity rating of 91 dB SPL (2.83 volts, 1 meter) with crossover points at 350 Hz and 4 kHz. The descriptive literature from B & W, by the way, is extravagantly done and contains much insightful detail and information.

The Evaluation Scheme

Once the North American Van Lines guys dropped off two large, palletted shipping boxes, Steve (my good buddy, listening pal, and electronics wiz) and I proceeded to carry out the speaker installation in my sound room. The speaker uncrating and initial placement took a fair amount of effort, and I would think, and hope, that the typical buyer would ask their dealer to handle those aspects of the installation...it ain't like working with mini monitors!

Both build quality and overall appearance were impressive, but be aware that each of these babies weighs in at about 230 pounds! The built-in casters helped the initial positioning effort and, after hook up to my Nestorovic NA-1 tube mono-block amps, it was a treat to hear the first sounds emanating from these beauties. Since these were new units, not previously broken-in, I decided to let them go through many hours of a Play cycle via CDs before trying any critical analysis.

With some of the break-in completed, I listened to a variety of favorite CDs just to get a general sense of things and also to determine how interaction with my electronics and room was unfolding. Clearly the speakers could make yummy sounds, but the imaging and bass balance needed attention, so moving the 801Ns around to alternate placements several times helped.

I was pleased to see that the speakers appeared to mate pretty readily with my gear, particularly since I had concerns about running them on tube amps. [N.B.: Early reviews of these speakers were fairly emphatic about using high-powered, high-priced solid-state amps, including recommendations of biamping for the extreme performance demands.]

I must say, however, that the 150-watt Nestorovic NA-1 monoblocks are no ordinary tube amps, especially since their output tubes were really designed as sweep-deflection tubes for CRT applications. I have enjoyed these amps for almost a decade now, and while they sound great to my ears, they do need occasional attention beyond biasing checks. I know this is not news to tube equipment owners, but after a couple of

weeks of operation, sure enough, there was a power supply failure (clearly a random act!) which meant that, my patient and good friend, Steve was called in for some of his able assistance with circuit rebuilding.

While that was going on, it was possible to try some readily available solid-state amplification since my resident Nestorovic System 12A speaker system is a satellite plus subwoofer arrangement. Typically a NA-1 tube amp runs each satellite, and a pair of 10-year-old Electron Kinetics Eagle 400 transistor monoblock amps run both subwoofers via an electronic crossover from 75 Hz down. The Eagles were now used full range on the

The B & W 801 Nautilus is big and heavy, so be prepared for for some work during set-up.

801Ns, which were pretty well broken-in by that point. The overall sound was different in several ways, with both predictable and surprising aspects. The bass was more taut, a bit deeper and slightly more powerful. The midrange became thinner, losing some depth and transparency. The treble became irritating! Things seemed harsh especially in the highs, so much so that I decided to put the grille covers back on the speakers; they had been tried both ways early-on while tube-amplified and were definitely more open and immediate without those grilles. That change didn't really help this situation much!

My first reaction to this less-than-happy circumstance was to try other speaker locations at that same 14-foot wide end of my listening room. Those trials were revelatory. When previously using the tube amps, I decided to toe-in each 801N to a fair degree, perhaps about 20-25 degrees; I did this in order to minimize the first-reflection impact from the adjacent sidewalls of my listening room (which is 14 x 23 x 8 feet). [After many experiments years ago, I determined that the layout of my sound system worked best using the speakers across the 14-foot width rather than across the long wall.] The 801Ns sat with 9 feet between their tweeter centers. Now by further exploration into toe-in effects, it was possible to ameliorate some of the more obvious reflection problems, but not enough to make things really enjoyable.

The next step was to think about a more modern solid-state amp as a substitute for the Eagles. Through the kindness of the folks at Rotel, it was possible for me to sample their RB-1090, a new \$2,000 stereo amp which is notable since it is rated at 380 watts/channel into 8 ohms while generating 700 watts/channel into a 4-ohm load. This is a well-made, serious design that is nothing if not a cost-effective way to get to large doses of fine-sounding power for your speakers. A formal review will be forthcoming soon, so stay tuned.

After arrival and a bit of burn-in time, the RB-1090 was set up using RCA-type cabling, since unbalanced operation is the normal mode of operation in my resident system. It became quickly apparent that most, but not all, of my difficulties with the mid-range and treble of the 801N sound were related to the decade-old Eagle amps (which I had always known to be excellent sub-woofer amps, nonetheless). I then allowed the Rotel amp to complete its burn-in process...no bagpipe music at 120 dB, please...and I resumed the critical listening process. Compared to the Eagle 400s there was no contest; the Rotel amp was a

clear winner. It gave a balanced, clean view of the music, although I thought the bass had been deeper with the Eagle 400s.

The next twist in the story relates to using the Rotel amp with balanced (XLR-type) interconnects. That option was not previously possible in my resident system, but could happen now since the ARC Ref 1 line stage was bristling with XLR connectors and the Rotel amp has them too. A set of balanced Vampire interconnects became available and that made a substantial improvement. The sound became richer, without overdoing it, a little less dark; thus, more open and in overall terms, quite enjoyable, even sweet. I know that there have been some reports claiming that use of this amp with balanced interconnects was of no value, but I am convinced that the improvements were real and repeatably manifested. Yes, I did go back and forth a few times to be sure!

The last chapter in the amplifier saga involved putting the NA-1 tube monoblocks back into service. Yes, much of the elusive magic and joy we valve fans are jazzed about did return to the listening experience AND this was clearly better than any of the previous amp set-ups. However, ...yes, however...all did not remain happy for long. Output tube failure now reared its ugly head and the NA-1 amps had to go away once more for therapy. Drat and Double Drat!

After buddy Steve had a chance to do some investigating into replacement 6KD6 output tubes, he spoke with Mile Nestorovic, the designer and manufacturer of my amps and speakers, about some subtle tube construction issues. Following a bit more research, NOS output tubes of a yet-better version were acquired and installed. Appropriate burn-in and tweaking occurred allowing my NA-1 amps to finally return with a feeling of rejuvenation and even more magic than before. (What we don't do for this hobby!)

To take things one step further, Steve was inspired

enough by our experiments with the Rotel single-ended vs. XLR findings to custom-make a set of balanced interconnects for running between the Nestorovic tube amps and the ARC Ref 1 line stage. Holy smokes! No, things didn't blow up...they just transformed into even better sonic performance. Even though the NA-1 amps were originally designed around balanced circuits, there are

no XLR connectors, only a pair of RCA jacks (of which only one is typically used for the unbalanced hook-up while the other sports a male RCA shorting plug). With these newly created ribbon-style cables, a whole new world opened up. Thanks,

Steve, for doing all of the research, trials and final implementation! Incidentally, this improvement has been confirmed on my resident system, once it was restored following the departure of the 801Ns. I am thrilled about that discovery!

Well, now that an array of amp-related variables had been addressed, my listening tests could proceed a bit more deliberately. This exercise in frustration and patience was ultimately quite helpful in giving me some ideas about the wide range of reports regarding conflicting listener perceptions which I alluded to earlier; more on that later.

Listening Results

Using CDs, LPs, DATs and FM, it was possible to get a pretty good feel for the 801Ns. In broad terms, these are speakers of high caliber. They are dynamically potent and convey transient information with extreme agility. The 801Ns also create believable and mightily large sonic images and, yes, they can play louder than I would ever want to listen to for long periods of time. Do keep in mind that speakers selling for \$11,000 a pair ought to be able to do all of that and more. So let's go deeper into the actual sonic performance outcomes. Note that wide varieties of music styles and performers were used in these evaluations. Jazz, some pop, classic rock, a plethora of classical music and several original DAT recordings comprised the lineup.

Let's look at a favorite CD, Joshua Judges Ruth from Lyle Lovett. Interesting music and sonic goodies abound here, but for me the three tracks of special interest are 3, 4, and 8. While this is a commercial release, and there is wide variation in recording techniques from track to track, the songs denoted convey Lyle's ability to move his voice from quietly intimate to brazenly insistent. Piano tone, guitar features, drum thwacks, and various other percussive effects all come across with command and vibrancy. The emotive dimensions of both the

The 801N's can create believable and very large sonic images, and will play at VERY LOUD levels.

music and performers are readily available and communicative on this disc; besides the sound quality, the music is just terrific too.

On the classical front many discs in both digital and analog form were employed. *Noye's Fludde* by Benjamin Britten on the Argo LP really showed off the spatial abilities of these speakers. Indeed, there is a section where the children's chorus marches about the Orford Church and the pattern of their gyrations was easily discernable via the 801Ns, probably better than I've ever heard previously. (The London CD version is also very good, but not quite as involving as the vinyl.)

The stable of Reference Recordings discs, including *Exotic Dances from the Opera, Poms and Pipes, Testament* and *Fiesta*, covers a wide spectrum of musical and sonic genres. The fundamental audio lesson one derives from these discs concerns spatial and soundstage variables, coupled with an awareness of gargantuan bass impact from the orchestra as well as on pipe organ material. While both frequency extremes are well represented in this palette of sonic goodies, what really always impresses me is how Keith Johnson so skillfully captures width, depth, and height in these perfor-

mances. During early speaker placement trials, with the 801Ns facing straight forward, these discs readily demonstrated how sidewall interactions could interfere with the perception of hall ambience, size and orchestral balance. This prompted my repositioning experiments that ultimately led to the toe-in choice I discussed earlier. Yes, the overall feel did improve, however, it didn't take long to notice an unwanted emphasis of upper midrange and higher frequencies. I believe characterizing this as "hyper-detailed" is somewhat overboard, but there was a kind of brightness that could be troubling on some recordings. In fact, among the regular members of my listening pals, a few were troubled by a "high frequency up-tilt" quality, to which they were especially sensitive. I certainly could understand their concerns. On discs of that sort, I frequently found myself reducing the problem by electing to sit in the farfield sofa instead of the nearfield chair. The close position was about 11 feet from the plane of the 801Ns, while the far seat was about 17 feet back. Also, I am aware that when listening to my own DAT recordings of a local madrigal group, the degree of sibilance on voices became exaggerated in comparison to the live event. DAT tapes of pipe organ and other music did not demonstrate this brightness to the same degree, but it was there nonetheless.

In some of my other recent reviews for TAV, I've discussed how this live-recording side of my audiophilia has been particularly instructive; these trials were perfect examples of that. The effect of un-toeing the speakers was too much of a compromise for me because I knew, only too well, of the sidewall reflection interference on imaging, to which I appear especially sensitive. I elected to settle for the marginally brighter tonal balance as a compromise. Although, given the opportunity, I would have rather had my cake and eaten it too, by using little or no toe-in. Yes, the room is indeed a significant component in any high-end sound system. [My resident speakers are usually toed-in, but with them, brightness has not been a factor.] Having a wider room probably would have made this a non-issue, but I am compelled to mention it here because any potential 801N owner should pay attention to factors such as these room interaction variables.

This reminds me to return to a comment I presented in my opening paragraphs, about how the general gossip on "e-chat" entries in cyberspace has occasionally focused on what some have called "over-hyped positive ranking" of the 801Ns. To be clear, and to the contrary, I think these B&W speakers are carefully designed, well executed and deserving of high praise relative to what is out there today in audioland. Because the 801Ns can be so revealing of problems in source material, upstream equipment, AND one's listening environment, it is all

NOTES

Bowers & Wilkins Nautilus 801 Speaker, \$11,000. B&W Loudspeakers of America, 54 No. Concord St., North Reading, MA 01864-2699; phone 978/664-2870; fax 978/664-4109; website www.bwspeakers.com, e-mail marketing@bwaudio.com.

Associated Equipment

Audio Research REF 1, Series II, line stage; Linn Sondek LP12 turntable, with Lingo, Cirkus, and Trampolin upgrades; NAIM ARO tonearm; Spectral MCIBB moving-coil cartridge; Audio Research PH3 SE phono stage; NAIM CD2 CD player; Magnum Dynalab Etude FM tuner; Tascam DA-P1 DAT recorder; Nestorovic System 12A Mk2 satellite and subwoofer speaker system; Nestorovic NA1 monoblock tube amps for satellites; Electron Kinetics Eagle 400 monoblock amps for subwoofers; Rowland SVX-3 electronic crossover; cabling, Cardas Hexlink for most of the system, van den Hul "First" carbon-fiber wires for the phono stage, and custom-made flat-ribbon balanced cables between the line stage and tube amps; each source component is on a separate "The Base" isolation device, and dedicated a.c. power lines and acoustic room treatments round out the system.

too easy to allow these speakers to sound less competent than they really are. Context is what this is all about and I know in my own circumstances, my listening environment is a form of context that has substantial impact on final musical presentation. Yours is too!

It would be fair to say that I have worked diligently over the years to reduce many of the negative room interactions that might influence my resident system. Therefore, with every new piece of equipment undertaken for review, it is important to reconfigure things to maximize each trial unto itself. With the 801Ns placed

across a 14-foot wide room as my only option here, it was impossible to do better. It was not feasible to turn around my listening space to employ the long wall for speaker placement, although had that been a practical option, I would have earnestly tried to do so. It doesn't come as a total surprise, then, to see why some listeners who have had unsatisfying experiences with these speakers find it easy to criticize the speakers even though their listening room, upstream equipment or recordings were more likely to have been the source of the problem. Giving these cyberspace nay-sayers benefit of the doubt, it's not hard to understand how a careless room or equipment setup could be the culprit in opinion formation.

So?

Where does this leave me, and you, on this speaker system?

The B&W Nautilus 801s are competent, powerful, highly dynamic, full-ranged and truly revealing transducers. I can understand why they are considered monitor loudspeakers. Just about every nuance and subtlety on the recording will be uncovered, if the ancillary equipment is up to par.

I think in a large room, logically laid out, with well-matched electronics, these B&W loudspeakers could be a terrific auditioning tool and a real window on the performance. In addition, I am most happy to report that while high-powered, solid-state amplifiers can work very well with these speakers, it is also true that high-quality, powerful tube amplifiers also bring much to the table. I firmly believe that the magic available from carefully designed, properly executed tube amps will be readily manifested through the 801Ns. Also, for my tastes, these speakers are more transparent, properly detailed and lively with their grilles off ... you can judge that one for yourself.

As for my concerns on tonal balance, some simple RTA investigations we made revealed a bump in the fre-

quency response in my room around 10 kHz, with gentle tapering above and below that point. This may explain the high frequency tilt that surfaced in my trials. I am fairly convinced that this is more a matter of on-axis directionality of the drivers rather than an actual inherent design flaw; B&W provides individual frequency response plots which seem to substantiate this. If you

can arrange to avoid the need for toe-in, I think any high-frequency tilt will become inconsequential. I can add that I have listened many times to a pair of 802Ns in a Krelled-out system at a friend's home with-

out hearing any such high frequency tilt. That installation is in a larger room, with almost no toe-in and, interestingly enough, the drivers in the "head unit" of the 802N system are identical to those of the 801N.

Lastly, I should mention that when I initially read the B&W literature and noticed that there was a 350-Hz crossover point between the 15-inch woofer and the 6-inch midrange driver, my mind began to fret over the possibility of some upper mid-bass to lower midrange performance problems. None of that was ever manifested and my paranoia on that issue was proven to be unfounded.

So if your prior exposure to these speakers was under compromised circumstances, you and they both deserve another hearing. Pay attention to speaker placement, particularly to the toe-in angle before passing a second judgment; if at all possible, try adjusting the placement and toe-in and you'll see how important those parameters can be. If you will be hearing these speakers for the first time, that same message applies. [Editor's Note: The message to me is that really a good speaker deserves a really good room and really good auxiliary gear.]

I trust that my extended description of the set-up and implementation process has not intruded too excessively into the actual findings of the 801N's performance abilities. It is my belief that most audio reviewers take their responsibilities seriously and, I for one, hope that I have successfully conveyed both the joy of discovery along the journey, as well as the outcome of reaching the destination.

Now, if I could only find a way to make my walls physically disappear without having to resort to extreme financial debt or sleight of hand. Were that so, the 801Ns would have easily found their way into my sound system for a long time to come. I hope that my reported trials and tribulations will not dissuade you from giving these sophisticated, well-made and good-looking units a careful and serious audition. They are very much worth that. Happy listening!

The 801N speakers are dynamically potent, with great agility on transients.

Sim Audio I-5 Integrated Amplifier

George Graves



I RECEIVED THE SIM AUDIO I-5 some months ago to review for this magazine. This amplifier, like most Sim Audio products, is very attractive looking. The case is made of gray anodized aluminum with a very thick front panel and measures about 17 X 15 X 3.5 inches. The side panels of the unit are designed as heat sinks for the output devices and are fanned out, giving the cabinet a rounded-over look on the ends. The unit has four feet deployed as cylindrical towers at the corners of the cabinet and these terminate in "Tiptoe"-like spiked-feet. The front panel of this amplifier is very simple, almost Spartan, in appearance. It has but one large knob just to the right of center, and five pushbuttons. The buttons are momentary-contact types and only initiate an action, rather than actually being analog switches. They allow one to turn the unit on or off, select the input source (the source selection goes to the next in line each time the button is pressed), engage the tape monitor function, mute the output, and turn the digital display on or off.

The knob is also for overall volume and serves as a "digital encoder," i.e. it is NOT a potentiometer, and has no position correlating to "output." As one turns the

control, an LED display, located on the left side of the front panel, changes from "0" to "50" for both channels. This display also gives a visual indication as the input selector cycles through the available inputs; it also shows balance between the two channels (which can only be set from the remote control) by displaying, numerically, the difference between the volume settings of the two channels.

Power, volume, balance, mute and input can all be selected from the substantially made remote control which seems to be machined from a solid piece of aluminum and is quite heavy. The remote seems to be not specifically designed for this component, because it has several functions not applicable to the Sim Audio I-5. I suspect that it is a general-purpose remote intended to control an entire Sim Audio system. Though the remote's control features (as well as those available on the front panel of the unit) are handled digitally, the manufacturer has done a beautiful job of keeping any potential digital noise out of the audio. During my entire time with this amplifier, using it either as a "line stage" pre-amp or as an integrated, I never once heard anything that could be remotely considered digital hash or switching noise.

The back panel sports a high-quality I.E.C. connector for power and five pairs of gold-plated Tiffany-style RCA input jacks designated "CD" and "A-1" through "A-4," as well as the customary tape output and a pre-amp output. Flanking the RCA jack field is a pair of high-quality, gold-plated, multi-purpose binding posts. These speaker connections can accommodate bare wire, spade lugs, or banana plugs and are located on industry standard, three-quarter inch centers.

Sim Audio claims that they have been able to reduce intermodulation distortion to a minimum in this design by using a dual differential configuration throughout the amplifier circuit which utilizes no overall feedback. Only the final stage has local feedback, which is used to control harmonic distortion. According to the manufacturer, this results in a very phase-coherent design which does not suffer from the types of distortion which plague designs utilizing overall system feedback. The Sim Audio I-5 is rated at 70 watts per channel.

When I first received this amplifier, I was somewhat at a loss as to how to use it; you see, my speakers are bi-amp'ed Magneplanar MG-3s. I use a pair of tube amps on the midrange and top end and a pair of

solid-state amps on the bass. This made it somewhat difficult to test the I-5 full range, so for the first couple of months I utilized the amplifier as a pre-amp only. Because I was very familiar with the tube-like sound of my Audio Research SP-9 Mk II, at first I found the I-5 a bit cold and clinical sounding. However, after several weeks of break-in, it became obvious that either I was mellowing or the I-5 was becoming much more musical. I listened to the amp in this configuration for a number of months. Convinced that I understood the musical signature of the unit's pre-amp section, I decided to try it full range on the Maggies. I was a little concerned that 70 watts might prove insufficient to drive my speakers, but on the other hand, I had been running my tube amps, a pair of VTL-140s, in their triode mode where they produced only 60 watts per channel. I realized that the the VTL amps were only driving the midrange and highs on the Maggies, and that the bass response requirements of the speakers represented an entirely different ballgame. With this thought in mind, I connected the I-5 up full range, which required rewiring the outboard crossover network on the speakers to operate from a single amplifier. That task completed, I connected the speakers, using Monster Cable M-1, to the speaker terminals on the amplifier. As with any piece of electronics that I test, I let the Sim Audio I-5 "cook" for 24 hours before beginning any serious listening.

Okay, Crank 'er Up!

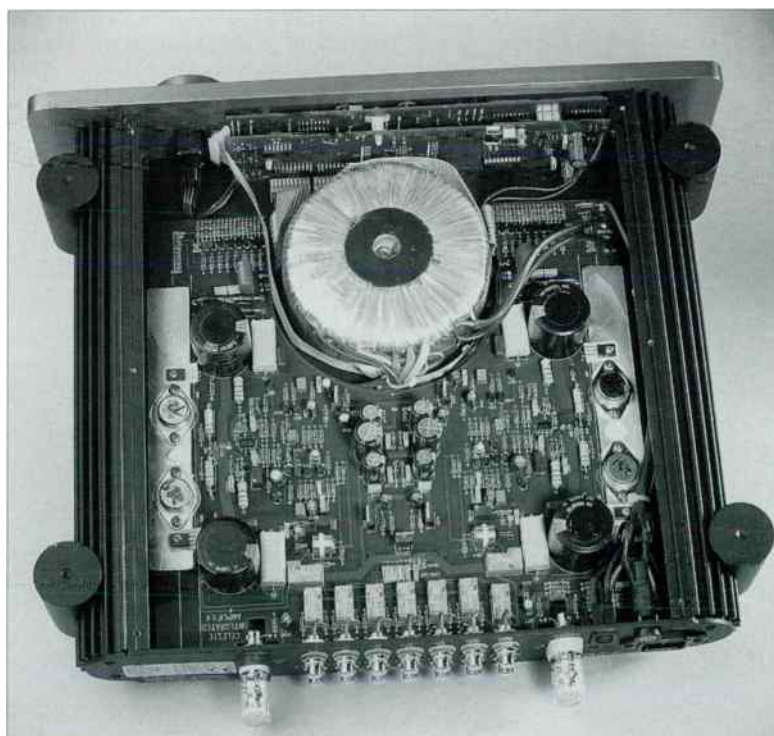
My first listening session began early one Saturday morning. I had turned the amplifier on before going to work the previous morning so I knew that the amplifier was well warmed-up. The sources I used to test the amplifier were a Pioneer Elite PD-75 CD player used as a digital source feeding a Sonic Frontiers Assembledge D2.6 digital processor as well as an Otari MX-5050 two-track reel-to-reel recorder playing master tapes that I have made of local symphony orchestras over the years, as well as tapes I have made of a number of well-known jazz artists. Since the Sim Audio I-5 has no phonograph stage, I was unable to use this source in my listening tests, which was to me a shame because I feel that vinyl

still represents an important and viable high-quality source for program material. I am saddened to see so many makers of otherwise fine pre-amps and high-end integrated amps abandon phono stages altogether, but I do understand where they are coming from. Better to let those interested in vinyl playback buy their own phono pre-amp than to make the vast majority of users who listen to no LPs pay for an expensive (if properly done) bit of circuitry that they will never use.

At first I kept the volume fairly low in order to avoid clipping the amplifier. However, I soon realized that I needn't have bothered because the amplifier has more than enough juice to drive the Maggies at levels sufficient to run me out of the house. Overall, I also found this to be a marvelous sounding amplifier! The bass is tight, as should be expected from a solid-state design, but the midrange was also warm and liquid. This type of midrange, I'd must add, was quite unexpected. My experience with other pieces of state-of-the-art transistor equipment had led me to expect a fairly cold and clinical sound, but I did not experience this "coldness" while using the I-5 as a pre-amp. I figured that this was due, in large part, to the fact that the midrange and highs in my reference system were being driven by a tube power amplifier so

that much of the solid-state "coldness" was, therefore, being ameliorated by those tubes. There was a touch of grain in the complete I-5's upper midrange, when compared with my VTLs, and since I did not hear it when using the I-5 just as a pre-amp, I suspect that it's a product of the power amplifier stage. And even though it was audible, I soon forgot about it as I experienced the other sonic goodies the whole package had to offer. The high frequencies were likewise very good. While I initially found them a bit glassy for my taste, changing the speaker cables from the Monster M-1 to some Swedish Symo cable lessened this to the point where this characteristic was all but forgotten as I listened to CD after CD.

The Naxos (8.550737) recording of *Vaughan Williams Symphony No. 7, "The Sinfonia antartica"* (this is the way the composer spelled it, trust me), is certainly one of the most spectacular-sounding CDs in recent memory and may possibly be among the very best-sounding digital recordings of all time. Played through the I-5, the lush string sound of the Bournemouth Symphony Orchestra, as captured by Naxos, is vibrantly alive, with plenty of air. The organ in the intermezzo has real authority and, contrary to my fears, the amplifier did not clip even when driving the rela-



tively inefficient Magneplanars to relatively high volume levels. This is a *big* 70 watts of power.

My next test was utilizing a master tape that I recorded some years ago for National Public Radio's "Jazz Alive" series of Dizzy Gillespie playing at the San Francisco Jazz Festival. Dizzy's trumpet is always a trying instrument to get just right on a home sound system. A master tape of it recorded at 15 inches per second only compounds the problem by adding a punch and a power to the sound of the trumpet rarely captured by commercial recordings. With the VU-meter needles banging the pins, and only the 15-ips tape's inherent headroom keeping things in line, this recording has caused more than one amplifier to run completely out of steam. I'm happy to report that the I-5 passed this test with flying colors, and that Dizzy's trumpet has rarely sounded more lifelike.

In one of my many past lives, I was the recording engineer for a major civic symphony orchestra, with a well-known conductor. For my imaging tests, I turned to one of these master tapes. Recorded using only two Sony C-37P big diaphragm condenser microphones, arranged as an X-Y pair, these tapes image perfectly. With good equipment, it is possible to ascertain the location of each instrument in the orchestra with pinpoint precision. I know this orchestra and these tapes so well that any flaw in the sound stage presented by any piece of equipment in the chain becomes immediately apparent. I threaded-up my profes-

sional Otari tape deck with a rousing performance of Stravinsky's "Petroushka." This is one of my favorite test tapes because it was recorded on the only roll of Sony's FerroChrome (Fe-Cr) recording tape that I had ever seen. This tape allows for far higher signal levels, and therefore a far greater dynamic range, than does any regular tape formulation of my acquaintance. The "Petroushka" employs a piano playing from within the orchestra. This piano, on this recording, can, on some equipment, become a vague sound source, difficult to place exactly and somewhat "phasey." I am happy to report that the I-5 was able to locate the piano just to the right of center, exactly where it is supposed to be, and it stayed there. The overall sound stage presented by this amplifier is fairly deep and very wide; stretching well beyond the outside edges of the speakers. I did notice a bit of foreshortening of depth at the very edges of the sound stage. In this particular case, the percussion instruments were not as far behind the first strings as they appear through my reference system (and, needless to say, in the live performance). This is possibly due to the integrated and non-dual mono nature of the I-5. Again, this is not a serious drawback and I've heard many instances where much more expensive equipment did not perform as well as the I-5 amplifier did in rendering this recording's particular sound stage. Image height was fair to good, with the triangle floating convincingly over the strings. The trumpet solo from the back of the orchestra was

startlingly real, not only in its spatial presentation, but in its bite and "brassiness" as well. All in all, I would rate the imaging capabilities of this amplifier pretty high. Again, what errors there are, are sins of omission rather than sins of commission, and they must be regarded in light of the unit's cost and the design restrictions of any integrated amplifier.

In the ensuing weeks I threw everything at this amplifier that I could throw at it. And I must say that I am very impressed. Yes, it does have some solid state "artifacts" such as a slight bit of glassiness in the high-end (but this characteristic does seem to be at least somewhat cable dependent, and might completely yield to further experimentation with cable selection) and a bit of upper midrange grain.

We must keep in mind here that I am comparing a \$2,600 integrated amplifier with a separate pre-amp and amplifier combination consisting of four mono-blocks, and representing an investment of close to \$15,000. As much as we may hate to admit it, there just ARE certain things which differentiate between a merely good stereo system and a system which can actually, occasionally, give one a glimpse through that open window to the live sound on the other side, and that these things simply cannot be done cheaply.

With that in mind, let me say that the Sim Audio I-5 represents a level of performance rarely encountered even in separates at this price point. Even allowing for the cost of the superb build quality of this unit and its fancy control system, I simply do not see how redirecting resources away from cosmetics and convenience toward sound quality could have improved the audio quality of this amplifier appreciably without its price going up considerably.

If you are in the market for a high-end amplification system but lack perhaps the room or the ready cash to indulge yourself with a Krell or a Levinson offering, here is a small integrated amplifier that certainly approaches this league in terms of sound quality and of build quality as well. I highly recommend that you arrange to audition the Sim Audio I-5 integrated amp as soon as possible. I believe you will thank me when you have.

N O T E S

Sim Audio I-5 Integrated Amplifier, \$2595.00. Sim Audio, 3276 First St., Unit 1, St.-Hubert, Quebec J3Y 8Y6, Canada; phone 877/980-2400, fax 450/445-6626, e-mail .

Associated Equipment

Magneplanar MG-3s speakers, Audio Research SP-9 Mk II pre-amp, two VTL-140 monobloc amplifiers, two Denon POA-6600A class A monobloc amplifiers, Pioneer Elite PD-75 CD player, Sonic Frontiers Assembledge D2.6 digital processor, Otari MX-5050 two-track reel-to-reel recorder. AudioQuest "Blue" and Monster M-1000 interconnects, Monster M-1 and Symo speaker cables.

PS Audio P300 Power Plant



THE PS AUDIO P300 Power Plant has received some rather intense interest from high-end audiophiles since its introduction at the Chicago Stereophile Show in May 1999. But what's going on here? Is this a new category of equipment? Or is the P300's type of circuitry already known and just boxed and named in a special way? Indeed, are audiophiles convinced that their local power companies are conspiring to offer crummy, cruddy, noisy and generally inferior electricity to our beloved components? While we will need to look further at those questions, I think I can lay to rest the rumor that some of the far-out practitioners of our hobby were actually hoping for a genuine in-house mini power-generating station, a top-of-the-line nuclear-powered model, with two-foot-thick lead shielding all around.

What we really have in the PS Audio P300, when exactly described, is a "regenerative a.c. synthesizer." What that is, we'll get to shortly, but first some basic observations and company history. Build quality of the attractively designed piece of equipment appears very high. Basically, the P300 looks like half of a stereo amp to my eye; it is narrow, but longer than its specified depth of 19 inches.

Paul McGowan, one of the two principals of the original PS Audio Company (well known for moderately priced amplification equipment), has recently resurrected the brand name. In between, he had helped develop the electronics for the justly famous servo-amplified and servo-controlled woofers for Genesis Technology speakers. As the owner of a pair of Genesis Model Vs which use these subwoofers, I can personally attest to their

quality. This first product for the reborn PS Audio is not an entirely new idea, I don't believe, even in the audio field. I think that at least one of the upgraded power supplies for Linn Sondek turntables used a similar technology, as did a model or entire series of Levinson amplifiers. It appears to me that Levinson's new No. 32 preamplifier has similar circuitry and designs including what PS Audio calls "power factor function." However, this specific function is user selectable and variable in the PS Audio Power Plant; in the Levinson, it is designed just for that one product and is not user adjustable.

Though many audiophiles are certain their listening rooms have poor power on tap at the a.c. outlets, my discussions with power company officials and engineers downplay the situation. Different states' regulatory commissions have some effect on the bottom line in this instance. They admit that trash in the form of transients can exist, such as when switching on power lines from one service location to another. In addition, things like lightening causes circuits to open and close which, in turn, causes sine waves to fluctuate and spikes to be generated, but these things typically happen a few times per day, not constantly.

Noise from radio frequency and electromagnetic forces are a separate and often more prevalent problem. Their presence or severity can vary greatly and are often directly proportional to the distance from the originating location. Moving closer to your power originating location would be an extreme but potentially very helpful solution. Other users on the same feeder line typically

cause these problems, but sometimes the noise and junk may be generated in your own home by various appliances, including the all-too-familiar adjustable or rotary dimmer switches. Switching of a refrigerator or furnace on and off or the noise of a personal electric heater during the winter can also cause line-noise difficulties.

Personally, I've stayed away from power-line conditioners for many years. A few of them seemed to help in

one respect or another but came with concurrent negative effects. So, I've just stuck with some good surge protectors like the TrippLite Isobar Ultra series.

Basically, the P300 is a power amp with a very clean, highly regulated, single-frequency output.

Power Procedures

The heart of Paul McGowan's approach with the P300 is to use an audio power amplifier with a highly regulated single-frequency output (typically 60 Hz) in a balanced power mode. Balanced power modes are nearly always preferred because of their relative immunity to noise and interference. The typical output of an a.c. outlet is, of course, unbalanced, one side having 115 volts and the other being neutral. The PS Audio Power Plant starts with a 60-Hz, 115-volt a.c. supply from a wall socket and eventually winds up providing a.c. "without any noise or problems." In theory, not much of anything can bother the Power Plant; no spikes, voltage fluctuation, noise or distortion is created. The amplification portion of the P300 has a straightforward job; it simply has to reproduce a single frequency! Loaded with filters, isolators, current turn-on limiters and on-going current monitoring, etc., the P300 should be almost bulletproof. My sample generated no more heat than my BEL 1001 mono-mode amps do. The P300 does not allow remote turn-on; it has to be separately switched on or left on all the time. What with the power consumption, I don't think it ought to be left on.

A unique feature of the Power Plant is the ability to adjust the output frequency from 50 Hz to as high as 120 Hz! PS Audio calls this their "Power Factor Function." It sounds like a marketing term or a misnomer and I'm unable to find similar reference to this term in my few reference books—which proves nothing. The company says that increasing the unit's Power Factor settings (increasing the frequency above 60 Hz) effectively increases the power

N O T E S

PS AUDIO P300 Power Plant, \$995.00. PS Audio International, P.O. Box 2037, Avon, CO 81620, phone 877/772-8340, fax 970/845-0914, website www.psaudio.com.

Associated Equipment

VPI Mk 11+ turntable, SME Mk IV tonearm, Grado "The Reference" phono cartridge, Pioneer DV414 DVD player, Audio Research SP-8 Mk II preamp with Musical Concepts Platinum line-stage modification, BEL 1001 Mk III mono block amplifiers, Genesis Model V speakers with 800-watt servo amp and eight-woofer bass system, Sims Navcom Pucks and marble slab for turntable, Nitty Gritty Model 2 record cleaner, and Isobar Ultra Model 6 surge suppressors.

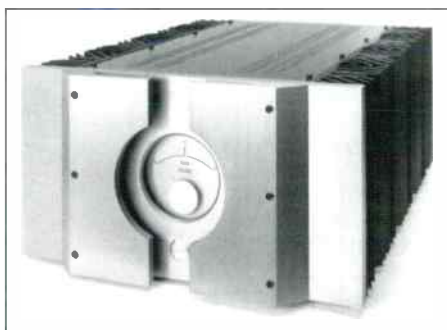
supply size in any connected equipment. Sounds neat and simple, right? Well, I have to say I don't really understand it, beyond the simple fact that instead of alternating 60 times per second, the current would be alternating 90 or 120 times per second. I asked Randy Readon, a local electronics guru with whom I've checked things in the past, and he agrees with PS Audio's claim that their units "effectively increase the power supply size in the equipment being supplied the increased Power Factor." However, I would not use the increased power factor setting with any equipment using an a.c. synchronous motor, things like some turntables and cassette decks. If you do, you may find that Schubert's "Unfinished Symphony" is finished in less than the usual time.

Personally, it makes me nervous to use this feature without a specific "okay" from the manufacturer of the equipment plugged into the P300. If this sounds like I'm trying to be controversial, perhaps it's because I can't fully predict what's going to happen. I did vary the output frequency to my tubed preamp and DVD/CD player, from 60 to 90 Hz, and I clearly heard differences with each change. The variations were consistent with changes I've heard from bigger or beefier power sup-

plies added to preamps or power amps or simply using an upscale or more powerful model from the same manufacturer. To an extent, within definite limits, these changes were similar to simply using the Power Plant as the a.c. source without activating the power function feature. At the 80-Hz setting, there were a few subtle instances of reduction of the response in the mid- to upper-bass range. At the 90-Hz setting, this was definitely more apparent in a slight alteration of the tonal balance by suppressing a bit of the natural fullness or richness of some notes. While it was an impressive and very powerful sound or feeling, it didn't seem as realistic.

During the review period for the PS Audio P300, I had a break down of my preamplifier, an Audio Research SP8 (last series) with mods by Musical Concepts. In addition to installing a new power transformer, John Hellig of Musical Concepts upgraded the unit with his new Platinum modifications including a significantly bigger power supply as well as some parts upgrades. This, in effect, made my line section the equal of his new top-of-the-line preamp, which will be introduced shortly. The result was of this was, as far as I could determine, audibly about the same (with one

One unusual feature of the Power Plant is its ability to adjust output frequency from 50 to 120 Hz.



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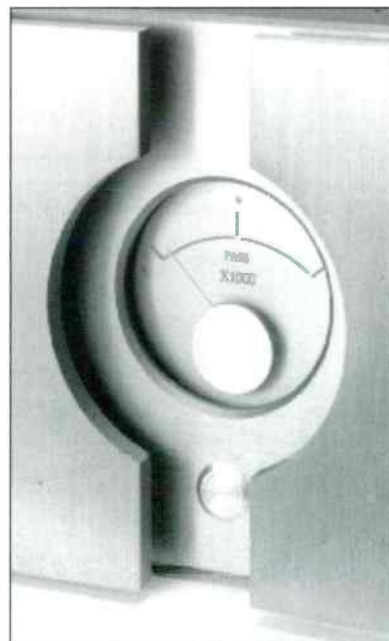
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exception) as the improvements created by the use of the Power Plant ~~without engaging its Power Factor Function!~~ The exception was that the P300 made more of a difference in reducing background noise than did the upgraded Musical Concepts power supply. Individual instruments and notes were more clearly separated from the background and from each other with the P300, which in turn improved apparent imaging. The improvements arising from use of the Power Plant were definitely additive to those created by my new line section's Platinum upgrade plus beefed-up power supply. Call that relationship symbiotic.

Just before receiving PS Audio's Power Plant, I had begun a project to review, for both music and sound quality, some Reference Recordings CDs; so logically I continued and they are the main sources for this review. Initially, I had not been aware of much change when I plugged my DVD/CD player into the P300. In this arrangement, I used the P300 only on the DVD/CD player, however, after many weeks of unchanging use, I did some in-and-out experimenting which showed some overall improvement with the DVD/CD being fed by the Power Plant. The biggest change was in the

lower couple of octaves of the audio spectrum, which were significantly tightened or solidified. For this entry-level model near the bottom of the maker's DVD/CD line, it would be illogical for them to have spent more than the minimum on the power supply, while still offering fine signal circuit design. It would have been interesting to compare the outstanding Denon Model 5000 DVD/CD player, with its superb power supply,

and see if the Power Plant made a comparable improvement. Indeed, would the P300 have made the greater difference with the product having a stronger power supply? I did not spend much time with my turntable during this review. When I did, with

just it plugged into the P300, I was unable to reliably and repeatedly hear an improvement.

Using the P300 with both my DVD/CD player and my preamp (this Power Plant model is not large enough to handle my amplifiers) resulted in a very noticeable overall improvement. Though noticeable in many aspects of sound reproduction, including more finer detail, less smearing or veiling, greater sense of depth and airiness, I reached the conclusion that there was one main factor responsible for most of these improve-

I got quite noticeable improvements using the Power Plant on my preamp and DVD/CD player.



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ments—the great reduction in background noise resulting in far greater audible clarity. In short, the PS Audio Power Plant basically does everything that is claimed for it; what more can be asked of it?

The last few products I've reviewed for TAV I have had to call "quite excellent." I don't want our readers to think that I'm trying to imitate some writers for a couple of unnamed magazines who seem to have never met a product that wasn't great, particularly if it was expensive. I can't know how good a product is until I've had sufficient listening time with it. Sometimes, I see a review of this or that product which uses such illogical reasoning or wild hyperbole of expression, that I get turned off. I hope that hasn't happened to you with my review of the P300. I've mentioned some things such as greater clarity, detail, airiness and improved dynamics so often that if I

did it one more time, it would have me wondering. What's going on, is there no end to these improvements? Well, a significant factor could be so simple that while my hearing is no better than anyone else's, my job as an equipment reviewer demands certain things

okay" product is definitely more enjoyable than the alternative.

But you are not a reviewer. You should have fun and enjoy the music while playing with the equipment. Beware of change just for the sake of change! Many years ago a reviewer wrote about a piece of equipment (probably a phono cartridge—I forget) and said something to the effect that it brought out all the apparent depth and sound staging on the recording, clearly revealing the semi-circle positioning of the male chorus. It was a Dave Wilson recording (yes, he of loudspeaker fame) and Wilson replied in the next issue, basically saying, "what a surprise. When I recorded that chorus, they were standing in a straight line!"

I certainly hope that PS Audio's Mr. McGowan doesn't find that I have given you a curve ball instead of the straight scoop about his P300 Power Plant.

The PS Audio Power Plant does everything that's claimed for it; what more can be asked of it?

like listening for the tiniest details or differences. Then I must try to accurately convey that information to you. This sort of listening is not relaxing or fun; done correctly it is often demanding. If this piece of gear had been disappointing, I would have reported that and editor Pitts would let you be so informed. Reviewing a good or even "just

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... This is the cream of the crop so far. At its price, it is definitely one to check out." I-5080 - Steve Lefkowitz - Listener Magazine - Summer 1999.

The key components to its sonic character are openness, rhythmic liveliness, and freedom from noise." P-5003 - Neil Gader - The Absolute Sound - no. 121

The I-5 is a high-quality integrated amplifier that will appeal to anyone looking for a taste of the best." Doug Schneider - Soundstage! - May 1999.

I can enthusiastically recommend the Moon I-5 one of high-end audio's undiscovered gems." Robert Harley - Fi Magazine - February 1999.

The Simaudio Moon P-5/W-5 is truly a worthy world-class reference-level 'statement' design package." David Robinson - Positive Feedback - Vol. 8 #2, 1999.

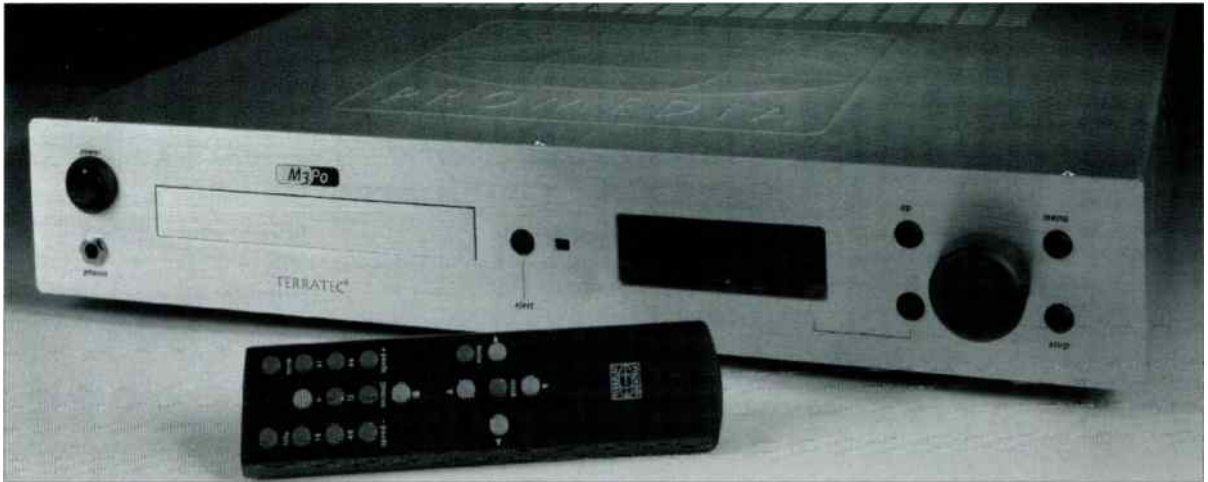
"Simaudio deserves recognition as a solid state brand of first rank, alongside well known luminaries such as Jeff Rowland, Krell and Levinson." Moon P-5 & W-5 - International Audio Review #80 - 1999.

The Moon W-5 is one of those few amps that can convey a real 'jump' with no loss of detail or focus." Kalman Rubinson - Stereophile - March 1999.

The Moon P-5 has transparency, very low noise and flexibility of control... and should be considered among the finest line preamps available today...

TerraTec M3PO CD Audio/MP3 Player

Bernard Kingsley



IF YOU HAVEN'T HEARD of TerraTec you can be forgiven. This German company hasn't yet made particularly significant inroads in the U.S. market, but does carry a line of audio- and computer-related components including some fine sound cards.

The M3PO from TerraTec is an unusual, complex and "busy" audio component. While serving as a standard CD player, it can also play computer-created CD-ROMs or even an (optionally installed) internal hard drive containing MPG files.

For some time now, the wide availability of MP3 files on the Internet has allowed us to download those files and the replay them off the hard drive or CD-ROMs, if the

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user can record (or "burn") CDs. Since most of us don't have our hi-fi connected to the computer, the M3PO will allow us to move our MP3 files to the audio system via CD-ROM. This may be the first attempt to bring MP3 files to the world of hi-fi.

The first impression of the M3PO is that it's heavier than most CD players, while its polished metal case has a look unlike other players. The top and sides are made of a single metal plate held on by 10 machine screws, while the metal is a silver color that's reminiscent of components of the early seventies. While the unit might look a bit out of place among your components, there are some positives here. The black-on-silver buttons and writing make it easy to read and use the controls.

The rear of the unit has two standard RCA-type phono outputs (with gold-plated connectors) and a power outlet. The M3PO uses a three-pronged grounding power cord; you will need to reach for the big one if you need to make use of

an extension cord. The supplied remote control is black with blue buttons and white markings making it easy to use. Layout of the controls was intuitive. The remote offers most commands available from the unit itself and a pause button which is not available on the front panel.

The controls and functions are software driven, and TerraTec indicates that software upgrades for the operating system of the M3PO may be available in the future. The instruction manual includes information on obtaining upgrades through the Internet or by CD ROM. Any standard hard drive can be installed in the unit.

The left front of the M3PO houses a large on/off toggle switch and a headphone output. The CD drawer has a small window on its right for the infrared remote and a large display area is adjacent. The display has bright yellow indicators with a dark green background. On the far right of the M3PO are four buttons (Up, Menu, Stop and an unmarked button with an "enter" function) with a large rotating knob in the

center. The knob can be rotated as well as pushed in for more options. The fact that there are so few visible controls is misleading since this player is capable of numerous functions within a menu structure.

The interior of the M3PO is well laid out. An ASUS CD-ROM drive is enclosed in a metal case on the left of the unit. The center contains rails for the optional hard drive and to the right is a single circuit board that is firmly attached to the metal base. In the rear of the unit is a power transformer in its own metal case. Slots in the cover above the transformer give ventilation, though the unit was cool to the touch even after hours of use. Parts and construction are solid.

The 44-page manual is informally written, offers clear and practical instructions, good illustrations, and some information on the MP3 format and copyright issues (though this seems to be a very rapidly moving target given recent court decisions). Some may wish for more

detailed instructions for some of the advanced functions, but I suspect most users won't have any problems. There are extensive references to more information available on the Internet. The unit also comes with a demonstration CD containing numerous MP3 files and a tutorial.

Controls and Operation

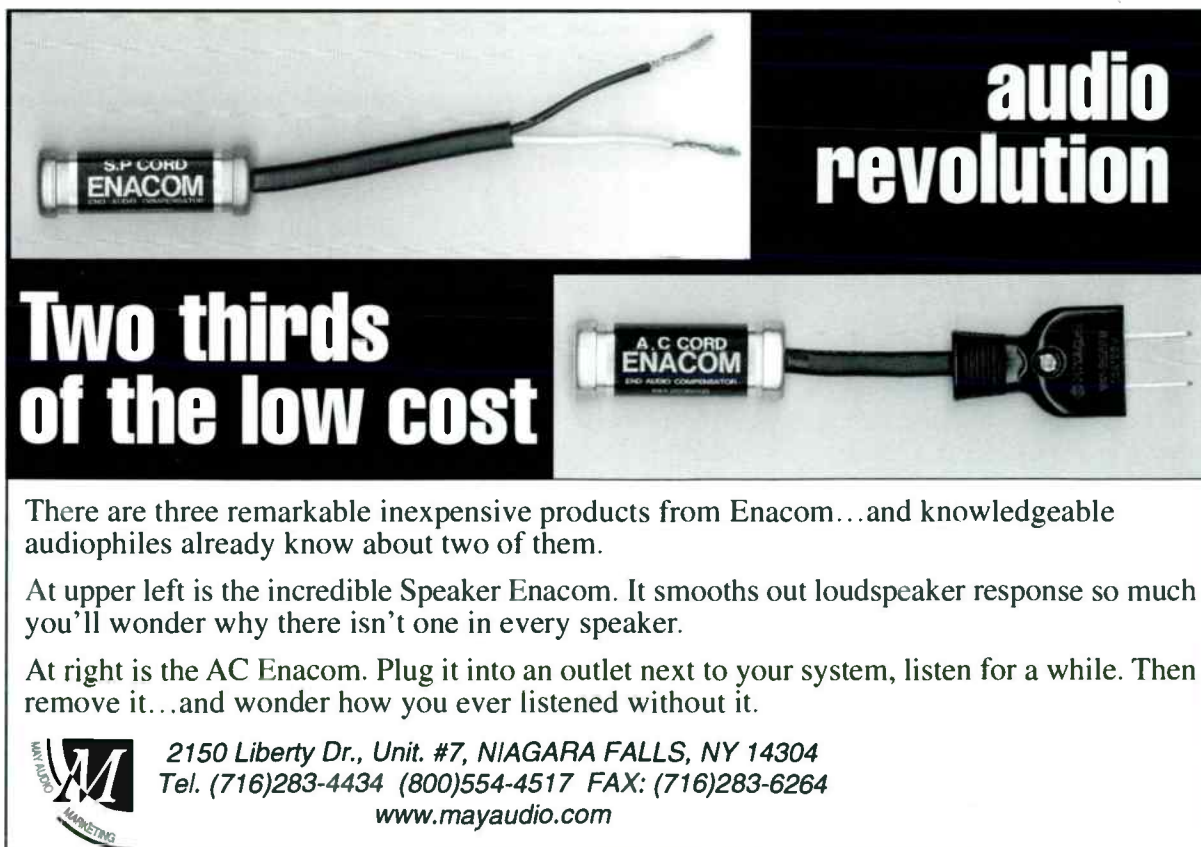
For audio CDs, the player is simple to operate. The CD drawer opens quickly (and closes a bit loudly). Inserting a CD will cause the player to display its basic information. Turning the knob will advance to the different tracks and pushing it will cause the MP3O to play that track.

The front panel display will normally show what type of CD is being used, the track number, the time into the track and the time remaining for the track. The display shows the status of just about everything. Perhaps the big display of "Tray Drawer Open" is a bit overkill.

Movement to other tracks can be done through the rotary knob, the enter button or the forward button on the remote. The speed of the player in going from one track to another was amazingly fast.

Pushing in on the Menu button will bring up a menu which can be navigated through the use of the rotary knob and the Up and Enter keys. TerraTec seems to have taken a fairly amount of care in programming this unit, so that the most frequently used menu items are quickly accessible. Users will quickly find the programming feature (called Playlist). These lists can be saved on the hard drive (if one is installed) and can also be created on a computer and then transferred to the M3PO's hard drive or on the CD-ROM containing the MP3 files. A Find function will let you enter the first few letters of a title (with the rotary knob) which the M3PO will then search for and find.

As a confirmed headphone listener, I was pleasantly surprised to




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find that the headphone output has a volume control which can be set through the menu. The TerraTec also has bass and treble controls which work only on MP3 files. The phono output was about 5 dB lower than that of the audio CD players I had on hand.

I used several CD-ROMs that contained MP3 files and had been burned using Windows 98. I also asked my friend Mike Stewart (an engineer with AT&T) to create a test CD-ROM using Windows 2000. That CD contained numerous directories and file types not supported by the M3PO. In all cases, the player recognized the directories, ignored files it wasn't designed to read, and allowed the creation of Playlists from the appropriate files. On just a few occasions, the player appeared to get "lost" and cycle back to the table of content while I was creating Playlists. I wasn't able to replicate these stumbles and the player always recovered on its own.

TerraTec indicates in the manual that the disc drawer will close by itself after a couple of minutes if left open and I found this feature annoying. While this does protect the machine from dust, it can be disconcerting to have the drawer close just as you are about to put a CD on it!

I also missed the ability to insert a pause when recording from the MP30. Many players have this feature and it would be especially helpful here since the transport does move very fast.

As is true with many CD players, placing the M3PO near a computer will cause the intrusion of some noise. My laptop computer created some noise when it was within two feet of the M3PO. However, a computer about four feet away from the unit did not cause problems.

Hard Drive Operation

TerraTec points out that a 30-GB hard drive can hold enough MP3

files to play continuously for 22 days! The M3PO has been tested for drives as large as 35 GB. Since the inclusion of an optional hard drive is one of its most significant feature, two drives were tested.

The most difficult part of installing a hard drive involves removing the cover. One of the 10 screws, all of which needed to be removed, was almost impossible to get out. Once inside the case, however, installation took no longer than three minutes. I installed a recent Maxtor 5.4-GB hard drive and later replaced that with an ancient IBM 128-MB drive. The player recognized both drives and all features worked well. It was possible to move files from the CD-ROM to the hard drive, play MP3 files on the drive and save Playlists to the hard drive.

I would not listen seriously with either of these drives in place since they were too noisy. TerraTec warns of this in the owner's manual. Hard drives are noisy even at idle, and with the players' case closed and several feet away from my listening position, the drives were still quite audible. The TerraTec web site does recommend some drives designed to be quiet.

Headphone Output

While the inclusion of a headphone output is often an afterthought, TerraTec seems to recognize that many users will want to edit files or create Playlists using headphones. The software volume control was easy to use and the player has enough output to drive even the most inefficient headphones. Accessing the volume control was easy from the menu and affects only the headphone output. Sound quality of the headphone output was several notches above what one usually finds in these units. It had the same characteristics as the audio outputs and made listening with my Grado SR80 head-

NOTES

TerraTec M3PO CD Audio/MP3 Player, \$449.99. TerraTec-US, 176 Oxford Rd., Fern Park, FL 32730, phone 407/331-4002, fax 407/331-8239; TerraTec Electronic GmbH, Herrenpfad 38, 41334 Nettetal, Germany, <http://www.terrateg.net/>, www.m3po.net.

Associated Equipment

Infinity 2000 AXT (Walsh tweeter modified by Infinity) speakers, Acurus A250 amplifier, Acurus RL11 preamp, Sony CDP 591 CD player, tuner from a Kenwood KR9600 receiver, and two computers: Home-built desktop with 200-MHz MMX Winchip CPU with 64 MB RAM and SoundBlaster Pro audio card, and Compaq Presario laptop with 380-MHz AMD K-6 CPU with 128 MB RAM and ESS audio board.

Recordings

Haydn and Boccherini: Cello Concertos, Naxos 8.550059
Houston Person: Lost & Found, 32 Jazz 32020
Francis Black: Sky Road, Celtic Heartbeat UD 53097
The Cranberries: Everybody Else Is Doing It, So Why Can't We?, Island 314-514 156-2
Matchbox 20: Yourself Or Someone Like You, Lava 92721-2

phones very enjoyable. The addition of a hard drive caused some noise to enter the headphone output, which had been silent with only the CD-ROM installed.

Listening

I listened to the M3PO critically when I first received the unit and then more casually using both regular audio CDs and those containing MP3 files while the MP3PO was attached to several audio systems.

If you have never listened to MP3 files on a good audio system, you are in for a surprise. While the files you can download from the Internet will vary in quality, the better ones are really very good and examples are found on the TerraTec's demonstration CD. No, MP3 has not yet reached the quality level of an audio CD, but the gap is closing and most listeners will be quite pleased with the sound. [Editor Note: It should be remembered that this is basically a digital re-recording medium for home use and that judgments of its quality should be made to equivalent media, e.g. Minidisc or DAT.—E.P.]

Some (mostly rock music) MP3 files had an exaggerated bass at around 100 Hz, and I suspect that they were mixed for anemic computer speakers or headphones. On audio CDs the bass was solid and the TerraTec produced the lowest octaves when present in the recording, but these frequencies were never overemphasized.

After living with the unit for two weeks, I again listened critically using audio CDs I have become very familiar with. During this listening phase, I found that the player's sound slightly bright, perhaps due to a very flat, extended upper frequency response. The effect was pleasant and never harsh.

This is one of those players which allowed me to "forget" that I was listening and just let me get lost in the music.

The player was noise-free to my perception. When played at sufficient volume I was able to hear the "live" sounds associated with the orchestra on the Haydn concerto (see sidebar) and found the imaging and sound stage stable. The horns on Lost and Found had exactly the right "bite" heard on the best CD players without any of the distortion I have found with the low priced CD players.

The bright sound of the player was demonstrated with very clear high frequencies and female vocal reproduction on the Francis Black album, while the players open, almost airy sound was demonstrated well on The Cranberries and Matchbox 20 CDs.

Conclusion

The TerraTec M3PO is a unique product and cannot easily be compared to other players. It is also an evolving unit. Since its operating system can be upgraded, I would recommend they provide software controls to defeat the auto-close feature and provide the ability to insert a pause in the Playlists.

As a CD audio player, the TerraTec stands on middle ground. It is more expensive than many other players on the market, but priced considerably lower than the high-end players. Sound quality tends to represent that position as well. While not the best CD player I have ever heard, it does provide better sound than the run-of-the-mill players so widely available.

Given its very good CD audio sound quality, solid construction, listenable headphone output, ability to play MP3 files, software upgrade capability, user-friendly remote and potential hard drive addition, the M3PO is priced quite reasonably at its \$500.00 MSRP. If you have wanted to include MP3 files into your audio system (or plan to do so) without a computer interface, the TerraTec provides a good solution.

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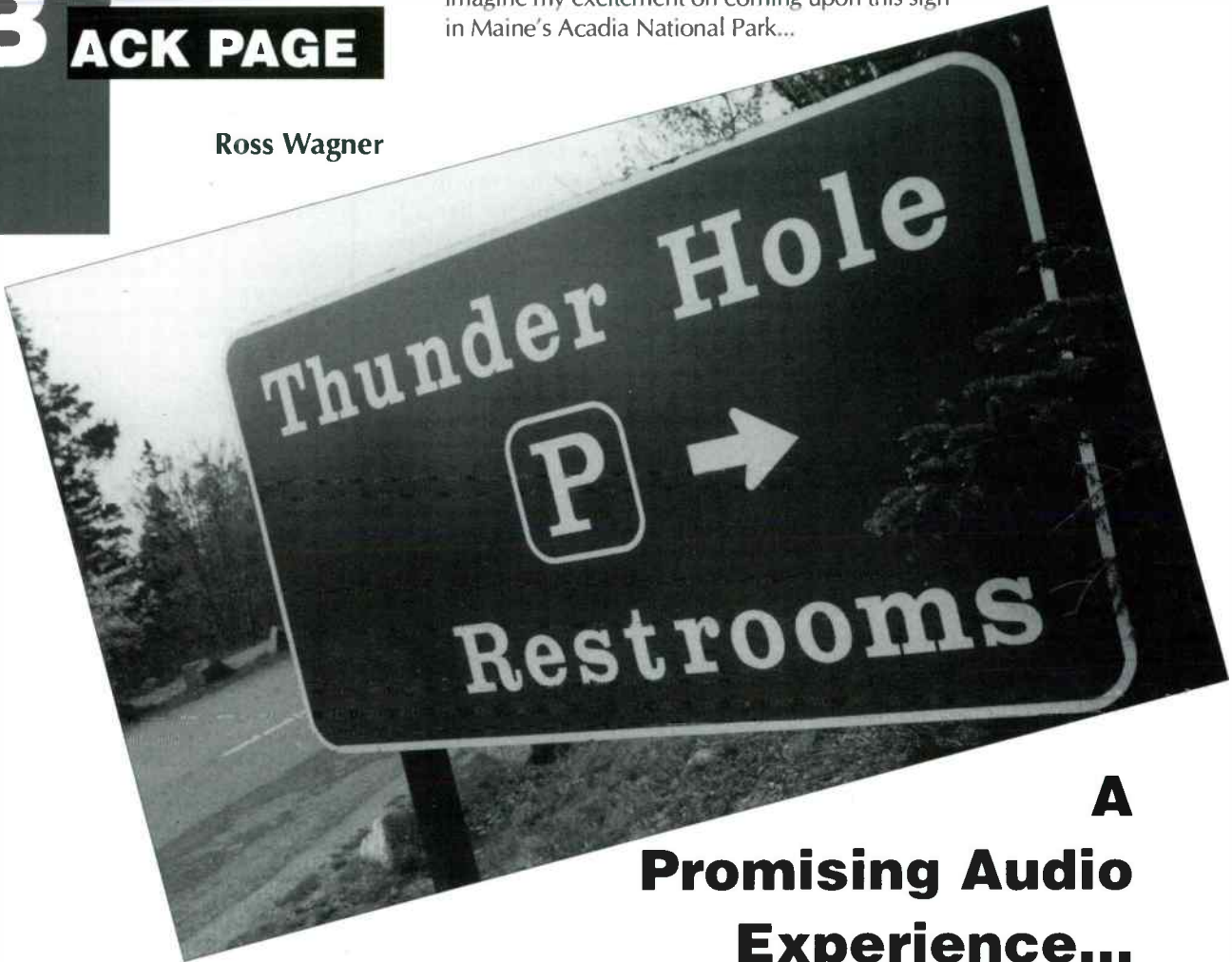
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Ross Wagner

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Therefore, I must leave it to the reader to conjecture as to the exact nature and sonic character of the Thunder Hole restrooms. Further, the reader is left to imagine what "unsafe conditions," man-made or otherwise, would force the closure.

ROSS WAGNER, of The Audiophile Society, took this photo and is the winner of our bi-monthly contest for photos relating to hi-fi or records. Let us publish yours and it will earn you \$25.00 or a one-year subscription. Sorry, we cannot return unused photos unless they are sent with a stamped self-addressed envelope.

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Home Theater, Feb, 97

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- Joseph M. Cierniak
The Sensible Sound, Issue # 60

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- Julian Hirsh
Stereo Review, Dec. 96



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