Volume 6, Issue 1 "...by audiophiles for audiophiles."

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**Reviews:** Sony Super Audio

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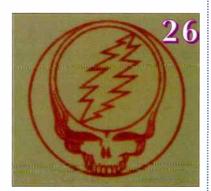
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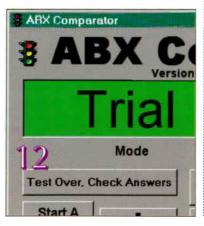
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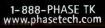
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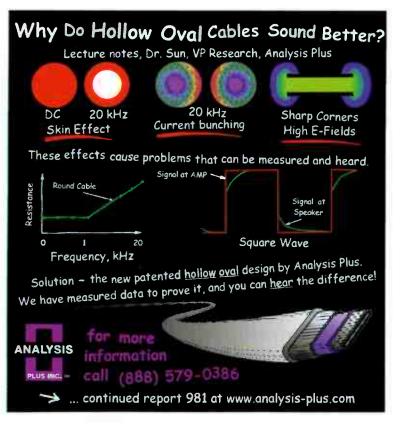
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# New Products

#### The Audio Control lasys HT

is a re-engineered version of the firm's portable acoustic analyzer and has been adapted for optimization of 5.1- and 7.1-channel surround-systems. Because the system provides real answers, not just raw data, relatively non-technical users can find themselves at home with the analyzer in less than an hour. The unit includes a high-precision real-time digital spectrum analyzer, with pink-noise, sinewave, and single-sweep wave generators, and a calibrated microphone. Measurements of amplitude, frequency, and time can be taken from speakers, amps, crossovers, etc. Price: \$3,995.00. Data: 425/775-8461.



#### The Infinity Prelude MTS Loudspeaker

was demonstrated at the 2000 Winter CES in a private suite in the Hilton Hotel. Despite walls and room furnishings that led TAV's editor to expect a bright and perhaps even harsh sound, the system was extremely pleasing, delivering solid low bass with lots of punch, excellent imaging and soundstaging, instrumentally accurate timbre, a long range of dynamic linearity, and the strength to produce really loud sound pressure levels. The system uses a new speaker technology in which ceramic material is deep anodized on both sides of an aluminum core. Driver compliment is a 1-inch tweeter, a 3<sup>1</sup>/<sub>2</sub>-inch midrange, four 51/4-inch mid-bass drivers, and a 12-inch subwoofer. The ceramic anodizing pushes the tweeter's resonant frequency peak up to 28 kHz, well above its operating range in the system as well as far above the upper limit of hearing. Also included is a 850-watt amp and the firm's proprietary R.A.B.O.S., an unusually effective single-band parametric equalizer which operates in the 20-80 Hz range. Price: \$8000.00. Data: www.infinitysystems.com.

#### The Cerwin-Vega LW-15 Subwoofer

is the top of a new line of high-performance subwoofers from the "Loud is better if it's clean" company. The basic design uses a forward-firing woofer to maximize output, while the ported cabinet increases output level by about 3 dB over a closed-box design. The drivers in each of the systems use cast aluminum frames, a low-mass cone design, oversized voice coils, and a very large magnet structure for increased efficiency and greater reliability. Each system offers Auto-On switching for ease of use, and have a 180-degree phase switch so that sound can be optimized in almost any location. Rated frequency response for the LW-15 is 27 to 150 Hz; the system has a crossover that is continuously variable from 40 to 150 Hz. Price: \$599.00. Data: www.cerwinvega.com.





the audiophile voice

#### The Legacy LFXtreme Subwoofer

delivers authoritative bass impact using a 1,000watt amplifier. The handsome system is able to produce air displacement of over 400 cubic inches, an extraordinary amount. A "Blend" feature helps prevent the peaks and dips at different frequencies at different places in the listening area that are the result of driver interaction. Price: \$3,700.00 in rosewood. Data: www.legacy-audio.com.



#### The RBH MC-6CT Speaker

is three-way, free-standing tower model, which uses a 1inch aluminum dome tweeter and three 6.5-inch aluminumdiaphragm drivers for midrange and low frequencies. The proprietary designs of the drivers make use of aluminum, says RBH, for its inherent stiffness and selfdampening properties. The system's crossover uses a design with steep slopes for "increased power handling, smooth integration between drivers, and lowered driver distortion. Price: \$999.00 in black stained oak. Data: www.rbhsound.com.



# **Experience...**



#### **How It Works**

Dear Editor:

As a former Fi subscriber, I would like to add my thanks for allowing me to sample your magazine. I enjoy the mix of music and equipment articles. Based on what I have seen so far, I shall certainly continue to subscribe to TAV.

Having said I that, I must comment on one aspect of James Frane's review of the Sim Audio Moon P3 preamp. Having barely caught my breath into the review, I read "...Supplied small pointed cones screw into these holes. Lused Mach 1 Acoustic isolation feet rather than the pointed cones." Suddenly the review was not of the P3, but was of the P3 Mkr ("r" for reviewer). I have some of these feet myself, but the point is to review the manufacturer's product. He should have done the bulk of the review with the product as is it came out of the box inserted directly into his reference system. Later into the review, it would have been useful to know the effects of changing the feet or trying different cables. Unfortunately, this seems to be a common fault among many reviewers who love to clamp, lead brick, bladderize, and/or disc before they do anything else. Your readers do not always have access to (or money to buy) the extra accessories that reviewers do; we need the unvarnished ("untweaked") truth.

Mannie Smith

Norfolk, VA

#### Jim Frane responds:

I would have certainly used the feet for the product had they been sent. When the box arrived, I noted the holes in the stanchions and inquired of SimAudio as to their purpose. When I was made aware they were for the pointed feet, I requested a set. They were not sent despite an acknowledgement they would be. My choice was to hold up the review for who knows how long (the cones never arrived) or to proceed, hence the review as written. The Editor comments:

In my experience, things like these feet don't make a difference in non-microphonic equipment or gear where there isn't a transducer. Items like a solidstate preamp just don't have an entry point for vibration from the stand to affect the signal. Something like a turntable is a different story. But these are two different domains.

#### Transitioning

Dear Editor:

I'm sorry I never heard of your magazine before this, but am now a subscriber due to the demise of Fi Magazine. I've been involved with hi-fi for over 35 years (recently got my Medicare card), and currently receive The Absolute Sound and Stereophile. If you've read Stereophile's letters, you get an idea of who I am by my acid comments early this year concerning Jonathan Scull's tweaks, and a subsequent apology since one tweak I tried did improve the sound emanating from my Martin-Logan Monoliths.

My inquiry to you may seem foolish, and if so, just ignore this letter if you choose not to reply. Since my interrst in hi-fi goes back thre decades, and I know good sound but cannot tell you the difference between a watt and a volt, I take personal interest in what I consider "good things" for this hobby. One of them was the publication of *Fi Magazine*.

Fi had all the ingredients for sustained publication, as did Sounds Like several years ago. I wonder why such quality publications in the audiophile arena fail to succeed. I would think that those of "us" would jump at the chance to purchase a good, new magazine that helps sustain and possibly increase potential interest in superior sound.

If you would care to comment, I would appreciate it. In any event, as a new subscriber, I wish you continued success and happy listening.

Harvey Fleischman Boynton Beach, FL

The Editor responds:

Thanks for your kind words. I will look up your letters in *Stereophile*. I hope I get to republish your "acid comments." Who holds the copyright?

Frankly, I don't know why Fi Magazine failed-or more properly withdrew from the arena, as they were a success in making a good magazine. The reasons why magazines go away are quite numerous. For a hobby magazine, they often have nothing to do with the magazine's dedication to the sport. That is, their heart can be in the right place, as Fi's was, but the business side might do them in. They may not get enough readers. They may not have a good business model. They may not have expertise in the physical making of a magazine. Their suppliers may rip them off with

inflated prices. They may not get enough advertising pages. Their advertisers may not pay enough to keep them in business. Perhaps the most common reason is that there is not enough start-up money. There have even been cases where funds are siphoned off to other projects. I don't think any of these were true at *Fi Magazine*, so I am at a loss to explain the difficulty. But then, I wasn't there either. The best I can do is wish them good luck and happy listening.

#### Cosmo-Dreck?

Dear Editor:

I just got though reading a recent issue of *The Audiophile Voice*, and it is a refreshing departure from the usual cosmopolitan audio dreck. Will Stephen Sank be reviewing more equipment for the magazine? Also, I'm looking for a review of the now-unavailable Meitner BiDAT processor. Which issue was this unit reviewed in, and is a back issue still available? I will be sending in an extension to my subscription.

Sherwin Cheng

Cliffside Park, NJ

The Editor Responds:

"Cosmopolitan audio dreck," eh? Is that anything like "Euro-Trash"? But, seriously, thanks for the kind words; we hope we will continue to please you. I hope that Stephen Sank will continue to write for TAV, but that has some difficulties. First, he has a business of his own, making amplifiers, which another reader tells me are quite good . . . good enough that I am actively considering reviewing them. Not only does the making of amps take up Sank's time, it disgualifies him from reviewing amps, so . . . On the BiDAT review, that was in Vol. 2, No. 2 and came out in January 1996. Yes, that back issue is available, as is almost every other. A list of gear we reviewed, by issue, is in our website www.audiophilevoice.com. We sell back issues for \$6.95 each postpaid via Priority Mail.

#### Surprise, Surprise

Dear Editor:

[hank you for the pleasant surprise. I did not know *Fi Magazine* flamed out, only that I had not received an issue for a while. Their obcession with super high-end gear I believe was their downfall.

I have, on occasion, picked up your magazine at the newsstand and enjoyed the fact that your record reviews were first, and the reviews of the gear. This is the appropriate relationship. I also have a subscription to *The American Record Guild*.

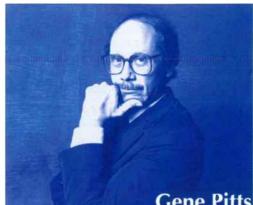
Randolph D. Hedgebeth Tacoma, WA

# True Audio Perfection.





## Adieu, Audio



Gene Pit

OU'VE PROBABLY heard by now: Audio Magazine, the oldest and generally considered the second largest hi-fi hobby magazine, was put to rest in mid-January. The February-March issue was its last

as a monthly. Since I worked on the magazine for about 25 years, on and off, until September, 1995, my feelings about the event are rather complex.

Audio had been continuously published since its founding as Audio Engineering (Æ) in 1947, successfully making a very difficult transition from being a subscription-oriented magazine for professional broadcast and recording engineers to consumer or newsstand publication covering the thenfledgling hobby of high fidelity.

The Audio Engineering Society was begun because of a series of letters published in the pages of  $\mathcal{A}$ , and some of its papers appeared there. When the Journal of the Audio Engineering Society was begun in the early 1950s, Æ changed its name to Audio to reduce confusion. About that time, two other hi-fi-oriented magazines were started, High Fidelity and Stereo Review; both became more successful than Audio, using a less-technical approach with more music coverage.

Audio was owned by several publishing firms, each larger than the last. "Mac" McProud was editor, owner and publisher from March 1948 until mid-1966 when he sold the magazine to North American Publishing, a Philadelphia firm mostly doing magazines aimed at the printing industry. In the fall of 1979, North American sold Audio to CBS Magazines, which had the financial might of the broadcast network behind it and which soon became a strong force in magazine publishing. Indeed, when Ziff-Davis saw that the future was computers and decided to sell 24 of its magazines, CBS bought a dozen consumer titles including Stereo Review. Not long after, High Fidelity, owned by ABC Leisure Magazines (yeah, another broadcast branch-out), died and its sub list was sold and then "incorporated" into Stereo Review. When the control of CBS passed from William

Paley to Larry Tisch, the magazine group went through a leveraged buyout, becoming Diamandis Communications Inc. or DCI. A year or so later, DCI had been purchased by Hachette Filipacchi Magazines, the current owner of Audio.

Group Publisher Tony Catalano was terse in his distributed remarks: "Faced with ongoing difficulties in the market sector now served by Audio, we have had to reconsider publication of a magazine dedicated only to high-performance audio products. The decision to discontinue a magazine as venerable as Audio is a difficult one. However, we have concluded that we and our marketing partners would be better served in the long run by focusing our resources on the growth markets served by our other publications."

#### Grace Notes: Naim's Iulian Vereker

Julian Vereker, MBE, founder of Naim Audio, died from cancer at the age of 54, on January 14, 2000 at his home near Salisbury, England. Vereker's career started with an early enthusiasm for racing Austin Minis. From motorsport he acquired an interest in making things, and his early business ventures included making a machine to perforate film, the manufacture of disco lighting and making active loudspeakers.

He went on to found Naim Audio, which he built into a leading specialist manufacturer, important for enhancing the reputation of the British hi-fi industry. The Naim music label is testimony to his lifelong interest in recording and love of the music world. His commitment to Naim Audio did not prevent him from getting involved in other manufacturing ventures, in areas as diverse as plastic molding, folding bike manufacturing, and computers and software. His death coincided with the launch of his latest boat, the last in a long line of innovative sailing craft. Memorial donations may be made c/o I.N. Newman Ltd., Griffin House, 55 Winchester Street, Salisbury, Wiltshire SP1 1HL, for distribution to cancer charities.-Ivor Tiefenbrun, Linn

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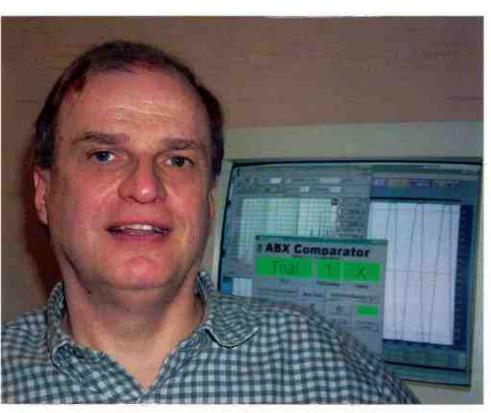
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MAY HAVE A BUSINESS VENTURE that is based on the growth of web commerce, but please don't assume that I am a strong web commerce advocate. I have some concerns about the effect of web commerce on the technical performance of A/V equipment. These concerns are based on my belief that product quality and performance are partially determined by how they are sold. I'm old enough to remember when anything that was made of plastic or sold by a demonstration on TV was pretty much junk. Remember Ronco and K-Tel? These were shrewd marketing companies that made millions of dollars by figuring out what kind of product could be sold exclusively on TV. It seems like it took a certain com-

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bination of flash and trash to get people to dash to their mailboxes with cash.

Today, there are many wellrespected A/V manufacturers who won't let their products be sold over the web. While not many are forthcoming with detailed explanations,

it is clear that their idea of a quality job of selling and servicing a product is not based on web commerce.

I think that one key to doing a quality job of selling a product

involves personal service. I remember a friend who made good money in the early '60s by buying Dyna and Eico hi-fi kits, assembling them, and then demonstrating and installing them in people's houses. Some suggest that this is where many specialty A/V dealers are again heading. However, at this time most A/V equipment is demonstrated and sold in stores.

I'm a long-time critic of selling A/V equipment in stores, partially because I did that for about six or seven years of my life. One major problem with store demos is that the performance of equipment is often highly dependent on its operational environment. Another is that there is a time factor in store selling, particularly if the store has lots of customers in it.

One of the charming aspects of web commerce is the fact that transactions are initiated at the time and place of the customer's choosing. One of the not-socharming aspects of web commerce is that live product demonstrations are very infrequent, to the point of being nonexistent.

For many things, say clothing, there seems to be no really good solution for the problem of live product demonstrations, at least until teleportation is perfected. However, the web seems to be shaping itself as an A/V medium, so why not demonstrate A/V products over the web?

At this time and for a few years yet, the web lacks the

How do you test or demo audio quality over the web? You might try a \*.WAV file, downloadable and convenient.

> bandwidth necessary for distributing quality video in what I what I would consider a timely fashion. So right away, I'm going to restrict my discussion to the audio side of A/V.

I believe that practically speaking everything that an audio system or system component does can be reduced to a digital data file. There is even a common file format for storing data like this on Windows PCs called the "\*.WAV" file.

In my experience, the fastest widely available means for distributing audio is the specialized modem attached to a cable TV system. However, a cable modem run in fits and spurts. Part of the reason for this is the basic nature of the web itself. Furthermore, not everybody can possibly have a cable modem, and many have to satisfy themselves with DSL or 56 Kb modems. Therefore, I'm going to restrict myself to demonstration methods that don't rely on realtime distribution of audio data, but instead rely on interested parties downloading audio ("\*.WAV") files to their local computer system and doing their interactive demonstrations using a program that manages those files for them.

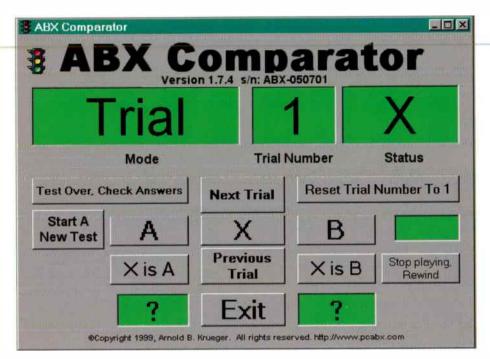
I have long been an advocate of the notion that comparisons of audio equipment should, when the best and most reliable results are desired, be done via means of a level-matched Double Blind test (DBT). One well-known and generally

accepted form of the DBT is called "The ABX Test". Together with a number of associates, including David Clark, Bernhard Muller, and David Carlstrom, I developed the first ABX Comparator about 23

years ago. I am the person who built the first rough working prototype of the ABX Comparator, and it follows that on one rainy day in April in the late '70s, I did the first ABX test.

When the four of us (and two others who prefer their privacy) formed the ABX Company to build and market ABX Comparators, we had dreams of selling them to audio stores. However, this was not to be for many reasons, including the rather lengthy and precise setup procedures that are required for a quality test.

Two of the key features of quality A/B testing are the ability to rapidly and conveniently switch between components and level matching. I would add a little note here that just because the ability to switch rapidly needs to be there for sensitivity, this does not mean that it must be used incessantly. However, setting up a non-intrusive switchbox that allows selection among numerous components and keeping shelves of equipment in perfect levelmatched adjustment is difficult, costly, and takes a lot of time. Store demonstrations with ABX Comparators just never became popular at all. They did become



### Computer screen-shot of the PC-ABX Comparator; using it is easy.

widely used in research and development labs, particularly in mainstream audio companies.

That was then, and this is now. Now it is possible to encapsulate the output of any audio component into a \*.WAV file. It is also easy to ensure that all such \*.WAV files are levelmatched. The \*.WAV files can also be downloaded over the web and stored on people's computers.

I had done something that was like almost two years ago with a series of "Perceptual Challenge" audio CDs. I used a CD-R to create discs with audio tracks that incorporated two different kinds of signal processing. I flipped coins to randomize the track lists, and burned CDs in accordance with the randomized track lists. People listened to them and told me what they thought the order of the tracks was, which I compared to my records. Several listeners produced outstandingly accurate

results. However, I found that selecting tracks on a CD player was awkward and could be frustrating compared to the operation of the old ABX Comparator. Obviously, the \*.WAV files can be selected and played with a computer program. This has been done a number of times over the past few years. Harman International has been publicizing the fact that their Revel Specialty Audio loudspeaker subsidiary has been using a DBT program for at least a year. The Motion Picture Expert's Group (MPEG) published an paper on listening tests of audio software about a year ago, and included a screen-shot of the computer program they used for the purpose. I've seen mentions on the web of other such programs. The ABX partners had discussed this from time to time over the years, but more in the context of a program that operated relays to do switching of electrical signals. This idea was again suggested to me on the "rec.audio.opinion" USENET newsgroup by Paul Dormer about a year ago.

Last spring I actually wrote a ABX-based DBT \*.WAV file comparison program in Visual Basic and got it to work to my satisfaction. During the summer, my friend Mark Ziemba needed such a program to collect data for an AES paper that he presented last fall in New York. I got a number of friends and associates to test it and I incorporated some of their suggestions.

Last fall I purchased a new domain name, www.pcabx.com, and built a freeware web site devoted to distributing my ABX Comparator and various \*.WAV files based on the operation of various kinds of audio products. This site is a companion to my technical testing web site, www.pcavtech.com which has been operational for almost two years and receives 15,000 to 20,000 unique visitors every month and 2,000 to 4,000 page hits a day.

My plan is to provide web vendors with a venue for demonstrating their wares. I anticipate that vendors would provide products for testing, pay me an up-front fee for testing and creating the \*.WAV files, and pay me monthly rent for space on my site for their files. I would perform the tests and provide the site infrastructure for facilitating end-users doing inhome demonstrations of various audio products. At this time I have basic versions of much of this in place along with a few product test files.

Please accept my invitation to visit www.pcabx.com at your earliest convenience. I think that by making the web a place where things like sound quality are demonstrated the best possible way, the industry will be stimulated to develop equipment with new, even higher levels of performance.



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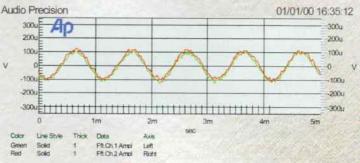
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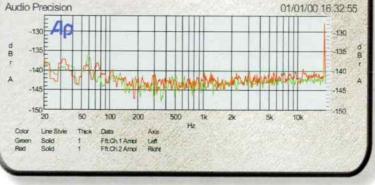
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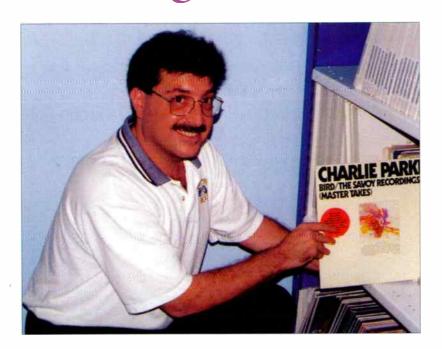
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# Savoy Jazz Originals: Bringin' 'em Home

James Rozzi



Dan Marx, Denon's Project Coordinator

JOOD NEWS: The Savoy masters are back home. Thanks to the stroke of a pen, the vaults housing the world's original modern jazz independent label are back on American soil at a CD plant in Madison, Georgia. And they're being cleaned and reissued. If these two things doesn't prompt a visual of a jazz fan smiling happily to the strains of a patriotic song in the background ("Ornithology" played rambunctiously by some formidable jazz quintet), nothing will. How we love happy endings.

A similar situation: I had called Columbia Records on countless occasions in the past, but I specifically remember my disquiet the first times several years back when their New York office answered the phone with "Good afternoon...Sony." Sony? As in Sony from Japan?" I felt confused and a bit upset. Okay, so where are the masters to Miles Davis' Kind of Blue LP? How about those amazing Duke Ellington sides? What about all those great films, classic and otherwise?

That the Savoy label was purchased Denon may not incite the same emotions for you. But for jazz aficionados, the thought of all those fragile classic Savoy lacquers and acetates being purchased by Denon, then flown overseas to Japan in the back of a 747 was at best disquieting for me. Certainly, in the end, we all saw and heard the results, some of the most sonically correct

reissues ever to hit the bins. But still...Bird's first takes as a leader...Miles Davis' first sides with Bird...Dexter Gordon, Fats Navarro, Little Jimmy Scott, Johnny Otis... The Savoy jazz and early R&B acetates and tapes were not in their country of origin, and they belonged here. It's the same thing as Egypt or Greece wanting antiquities back from the Smithsonian or the British Museum! Or maybe it's that America has Jazz Masters and Japan has their Living National Treasures who make swords, or pottery, or cloth.... Irreplaceable parts of national heritage, dammit! And, I am happy to report, the Savoy masters are back here in the U.S.

the audiophile voice World Radio History

Actually, we're seeing the start of Denon's most significant Savoy reissue program to date. "What we're doing now is different from any reissue project Savoy has ever been subject to," relates Denon's Project Coordinator Dan Marx. "We're calling this series, Savoy Jazz Originals. Whereas the Japanese took 12-inch LPs and duplicated the format verbatim onto CD while enhancing the sound, we're redesigning a 60- to 70minute CD, or multi-disc compilation by artist.

"There's a lot of

artPEPPER THE Disco

room for creative packaging, which was never explored in the past," Marx expounds. "We're adding intelligent liner notes and searching out historical artifacts to add to the package. We are blessed with having a wonderful archive, so we have numerous contracts, correspondences, and photos to add."

"The original lacquer discs provide a remarkably stable environment," Marx relates, "although they're limited in dynamic range compared to modern recording. The beauty of the digital domain is that we can get much closer to the first

generation. So, technically, we're bringing the sound to today's standards without adversely affecting the music.

"Soundwise, we're using today's tools, programs such Sonic as

Solutions and a more adept, discreet version

of CEDAR. They're much more advanced than ever. We play lacquers and are constantly amazed at how clean they are and how little we have to do to them. All of the tape transfers that have been done over the years many of which were necessary to salvage the material include the artifacts of the technology at the time. The big ques-

tion: Was EQ added or not? Just the very nature of the final mastering and vinyl pressing at every generation adds to the level of noise."

Denon sound engineer Paul Reid III is the man in the studio working on all of the Savoy material. "I have a 1964 Macintosh stereo at home, and I like vinyl more than I like CDs," he opens our conversation in his thick Georgia Then accent. chuckling, "I guess that makes me an audiophile.″ He 🥻 quickly gets serious: "I am AP. an analog kind of

guy,

so when working on the Savoy masters, I try to stay analog as long as possible. We have a scheme where we can go all the way through the system for analyzing lacquers and tapes without passing through a digital circuit. We find analog has built-in safeties that smooth and soften the sound a little more, especially using a tube compressor versus a digital compressor. With digital, we're losing a sense of warmth, so I wait as long as possible before going digital."

SAVOY JAZZ ORIGINALS

charliePARKER

performances

ROYAL ROOST 1948-1949

CARNEGIE HALL 1947 CHICAGO 1950

After Reid deems necessary certain analog EQ and preamp adjustments, the sound finally goes digital via an Apogee 20bit A-to-D converter. CEDAR is the

first

Producer," grins the 76 year old. "Dan refused to call me the Reissue Producer. We wanted something that sounded grander. Semantics...to reissue is to reintroduce the same thing."

With the first Denon series of releases titled Savoy Jazz Originals, with the Charlie Parker in all fairness is to improve the sound quality, which I think we have done." In the case of Bird's live radio broadcasts from New York's Royal Roost, Keepnews has edited out a sizable quantity of redundant banter from disc jockey and emcee Symphony Sid, all of which was completely reproduced in past releases. "I took the revolutionary step of deciding this was supposed to be a Charlie Parker record, not a Symphony Sid record," laughs Keepnews. Three CDs now constitute the Royal Roost recordings, with a fourth CD capturing live

Bird by James Kreigsman

ital process the sound goes through, then it's stored on Reid's hard drive. Reid then uses Sonic Solutions to rearrange tracks, add pause time between tracks, and adjust levels up or down a couple of dB for uniformity. Any persistent noises (not removed by CEDAR) are isolated on computer screen, then removed by hitting delete; Sonic Solutions automatically reconstructs the missing millisecond of music. The step down from 20-bits to 16-bits is accomplished with a Digital Audio Transquantitizer. "My philosophy regarding EQ," Reid affirms, "is to try to get the band out of the box and into the room. That's all\_just get rid of that boxy sound."

CHARLIE PARKER

To Denon, doing things right has also meant enlisting triple Grammy-winning producer and historian Orrin Keepnews. As founder and producer of New York's legendary Riverside Records, Keepnews was responsible for several decades' worth of exceptional jazz recordings from the label's inception in 1953. "I'm the Compilation

Keepnews and Marx came across a good amount of previously undiscovered material. On Dexter Gordon: Settin' the Pace (SVY-17027), they found four alternate takes to a vital session. four additional tunes with trumpeter Fats Navarro, One alternate take from a session with Bud Powell also has been found.

SAVOY RECORDING ARTIST

dig-

"We're putting another Bud Powell piano solo out into the world, which is a nice thing to do," Keepnews proudly announces. "This is all very exploratory for me, and therefore very exciting."

"The Bird (Charlie Parker: The Complete Live Performances on Savoy (SVY-17021-24) has been gone over with a fine-toothed comb," Keepnews continues. "There's nothing previously unissued there. All you can do recordings from Carnegie Hall and Chicago.

Nat Adderley

Dan Marx states, "For the *Erroll Garner: The Complete Savoy Master Takes* (SVY-17025-26), it's obvious there are alternate takes, but it's also obvious from the acetates that the artist didn't want these released. There is one vocal by Garner which we'd like to release, but

the audiophile voice

#### **Dexter Gordon**

Byas,

h i s estate wouldn't go for it. We feel it's a tremendous song." The fourth release in Denon's first wave of Savoy

compilations, Kenny Dorham: Blues in Bebop (SVY-17028), showcases a developing young talent, who soon joined the ranks of the finest of jazz trumpeters.

"I don't know how much we're going to be able to uncover in the long run," sums up Keepnews. "But if you go into reissuing with a positive outlook if you don't decide beforehand everything must have been uncovered because it's been so many years, you can surprise the hell out of yourself." Case in point: The recently released, three-CD compilation, The Johnny Otis Rhythm & Blues Caravan, The Complete Savoy Sessions (SVY 92859) R&B sessions from the late '40s and early '50s featuring Little Esther Phillips contains nine unreleased tracks.

The three discs of *The Savoy* Story, Volume One: Jazz (SVY 92856) lean heavily on heavyweight saxophonists. Ben Webster, Lester Young, Illinois Jacquet, Charlie Parker, Don Dexter Gordon, Serge Chaloff, and others join forces with the finest rhythm sections of their time for hard-blowing

improvisational forays. The

pianists Erroll Garner, Marian McPartland, George Shearing, along with trumpeters Fats Navarro, Miles Davis, and Dizzy Gillespie also highlight this fine documentation from swing to bop.

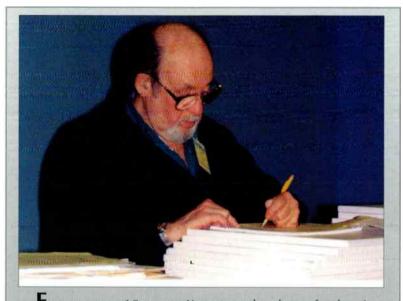
Trumpeter Fats Navarro: Goin' to Minton's (SVY 92861) from the mid to late '40s and vibraphonist Milt Jackson: Early Modern (SVY 92862) from the early '50s conclude the currently available batch of blistering bebop, with promises of more compilations to come. Modern hardbop jazz is represented well with three distinct, historically important releases. West Coast alto saxophonist Art Pepper: The Discovery Sessions (SVY 92846), from the early '50s delivers Pepper at his saltiest. Young alto saxophonist Cannonball



Founded in 1939 in Newark, New Jersey by Herman Lubinsky, Savoy ranks second to none with regard to documentation of gospel (Esther Ford, James Cleveland, etc.), traditional blues (Sonny Terry & Brownie McGhee, Sunnyland Slim, etc.) early R&B (Johnny Otis, Paul Williams, Little Esther Phillips, etc.), and modern jazz. A substantial catalog of seminal artists makes Savoy one of the most important independents of the century. From 1945 to 1952, artists and repertory was handled by Teddy Reiga large, gruff man able to convince Lubinsky of the importance of recording an innovative, highly controversial form of jazz known as bebop. As a result, many of the most important recordings of bop's pioneer virtuosi Charlie Parker, Dexter Gordon, Fats Navarro, Milt Jackson, Bud Powell, etc.were captured on acetate for the world to savor. Ozzie Cadena continued jazz A&R from 1954 to 1959 when the label saw the reissuing of many important recordings onto LP, along with new sessions by the likes of Yusef Lateef, Wilbur Harden and John Coltrane, and Cannonball Adderley. In 1948, Savoy also began to acquire and issue classic material from noted labels such as National, Discovery, Century, and Crown. Savoy was eventually purchased by Arista, then Muse, and finally, Denon.

Volume 6, Issue 1

### Founding Father: Orrin Keepnews



FOR THE PAST 18 years, Keepnews has been freelancing, often producing reissues of the same material (Thelonious Monk, Wes Montgomery, Bill Evans, et al.) he recorded in the first place. So, when it comes to examining material in the vaults and deciding what should and should not be released, he is very discriminating concerning the differences between an out-and-out rejected take and what can properly be called an alternate.

"Sometimes it's as simple as the take having been passed over because the musicians screwed up the ending," Keepnews relates. "Originally, there's nothing you can do with it, but in a reissue, suddenly it becomes a good idea to go ahead and include that. It increases the historical interest. Remember, reissues are often generated from quite a different point of view. You're not dealing with an artist who's trying to establish himself in the world; you're dealing with an artist whose position has been assured for a number of years. That's the retrospective. It's very different. If something is legitimately of interest, that alternate is certainly fair game for historical purposes.

"With luck and diligence and a little ability to interpret what it is you're seeing and hearing, chances are pretty good at finding unreleased material. Hopefully, we'll continue to unearth a reasonable amount to keep the real enthusiasts happy, and to keep them from saying, 'I've heard it all before.'"

Adderley and brother trumpeter Nat swing hard on two CDs as The Adderley Brothers: The Summer of '55 (SVY 93860); and last a two-CD set from the exciting, experimental trumpet and saxophone quintet of Wilbur Harden/John Coltrane:

On the short vocal list, a three-CD box of the individual vocal styling of *Little Jimmy Scott: The Savoy Years* and More (SVY92857) is a superbly musical way to round out the latest of the Savoy compilations.

Back in the studio, engineer Paul Reid III cues up the original Charlie Parker acetate to Parker's Mood, sets the stylus gently in the groove, and begins a series of minute adjustments in EQ. The sound quality emanating from the 51-year-old lacquer disc is unbelievably clear and penetrating. Bird is blowing the slow blues ever so sweetly. If it weren't that it's obviously mono, you'd swear this classic was recorded yesterday. "This already sounds good," Reid nods, "so I might just tighten up the low end, maybe try to bring out the cymbals a little bit." A thought then occurs to me: "Don't you ever get nervous handling those Parker acetates?" I ask, thinking I'd be a mess at the prospect of dropping one.

Reid hesitates then answers, "The other day around 11 o'clock, I began getting the coffee shakes. I mean, I could hardly hold the needle. I had to get up and walk it off. It was the first time I've ever had to delay work because of a coffee buzz." (Editor's Note: Could it be that a coffee buzz is potentially more dangerous to the Savoy heritage than purchase and export by a foreign record label?)

For those of us who appreciate the bebop era as jazz's finest hour, we highly recommend expeditious removal of Denon's coffee machine and anxiously await more extraordinary music from this Southern-based label.

#### the audiophile voice

World Radio History

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World Radio History

Jack Skowron

# Prestige 50<sup>th</sup> Anniversary Commemorative Edition

STANDED TO COLOSSUS

ANTASY RECORDS has been celebrating its golden anniversary, and they are certainly to be congratulated for keeping the faith. Aside from Prestige, they own many labels important in the history of jazz—Milestone, Riverside, Pablo—as well as other labels that are musically significant—Stax/Volt, Takoma, Kicking Mule.

I will take a close look at three of their specially mastered Prestige CD releases, but you should be aware that the series includes 10 more of their classic recordings including *Thelonius* Monk and Sonny Rollins, Gene Ammons' Boss Tenor, Eric Dolphy's Outward Bound, Cookin' with the Miles Davis Quintet, Miles Davis and the Modern Jazz Giants, Groovy by the Red Garland Trio, and The Modern Jazz Quartet's *Django*. As these are all modern jazz masterpieces, those of you with short attention spans can skip all the following prose for this summary: I you don't have these albums, or have inferior pressings, run, don't walk to your nearest music emporium. Those of you starting jazz collections or wanting to learn about jazz have the perfect starting place.

This series, the jackets tell us, was mastered in analog from original master tapes using the JVC K2 Super Coding System. This system, which is used by JVC on the acclaimed XRCD 2 audiophile discs, is claimed to maintain the resolution of 20-bit mastering and eliminate timebase jitter in the digital datastream. While JVC sells its discs for \$25 to \$30, these from Prestige list at \$14.98 each. I understand there are plans to release 20 more in Y2K.

SOUTRANE

Solutione, recorded by Rudy Van Gelder (as are all the albums I'm covering), places 'Trane in front of the Red Garland Trio (Garland, piano; Paul Chambers, bass; Arthur Taylor, drums), which proves to be a most compatible match. Garland and company are elegant, soulful, understated, which contrasts well with 'Trane's intense, probing, dense style during this early stage of his career. 'Trane, who had already developed some renown in the bands of Miles Davis and Thelonious Monk, was in his formative stages, playing what

the audiophile voice

MILES DAVIS ALL STARS Ira Gitler dubbed "sheets of sound" (almost every writer since has used this phrase). Coltrane would fill up almost all the spaces with rapid volleys of notes, trying out different chord or scale possibilities. His timbre, was unconventional, with a hardness to it (neither Coleman

Hawkins- nor Lester Young-based), and felt to be harsh by some. He and Sonny Rollins were considered the two top tenorists at the time, and many critics preferred Rollins' more lush sound.

"Good Bait" opens up at a loping medium swing. 'Trane's solo fea-

tures rapid runs of notes which build in his patented rhythmic conception, while Garland double-times parts of his. "I Want To Talk About You" features passionate ballad playing by 'Trane and company, the sax just tears your heart out, while the piano's block-chord soloing is lovely. Coltrane shows he can slowly build solo intensity here. He does exciting things on an uptempo "You Say You Care," each chorus a notch more intense than the last. The ballad. "Theme for Ernie," featuring Garland, is followed by a sprint through "Russian Lullaby" that has one gasping for air. 'Trane seems to have no oxygen requirement, however, as he races along filling every space with sound.

I compared this with two other issues I had available. First I listened to the Prestige Coltrane box set (PCD 4405-2), which had more rolled-off bass, less air, less sparkle on top, and smoothed out Coltrane's rich, edgy timbre. An OJC LP (OJC021) was better than the box set CD, but the new CD issue was still better. Sonny Rollins' Saxophone Colossus is one of those rare albums that approach total perfection. Backed by Tommy Flanagan, piano; Doug Watkins, bass, and Max Roach, drums, they recorded five timeless tunes, at least one of which is considered a masterpiece. While

These fine Prestige Compact Disc reissues from Fantasy offer enduring jazz and "nothing better" sound.

> Coltrane had a somewhat dry tone, and focused in his solos on exploring chords, scales and modes, Rollins had a rich, wet sound, paid much attention to dynamics, doing somersaults around the melody. (He's a gymnast to 'Tranes marathon runner). He also had a playful and wry sense of humor 'Trane never had. He made his first foray into Caribbean rhythms on St. Thomas, a bouncy, familiar theme (written by Rollins), on which he lets his thematic variations become cries. Speaking of cries, a more impassioned ballad than "You Don't Know What Love Is" hasn't been recorded. His around-the-beat, thematic manipulations encompass riffs, sighs, wails, oriental scales, and outbursts. "Strode Rode," another Rollins tune, moves along at a medium tempo, and features a fine solo from Flanagan and exciting four bar sax-drum trades. "Moritat" (a.k.a. "Mack the Knife") has Rollins playing longer, airier lines, with smoother rhythms. Again Flanagan and Roach make strong solo statements, Roach bringing out more aggressive

ness in Rollins. The final track, "Blue 7," is considered by some to be a masterpiece of extended improvisation. It unhurriedly unfolds, starting with two choruses of walking bass, then the melody, a catchy blues ending jarringly on an "off" note. Everyone solos over its 11-

> minute duration. Flanagan is stately and understated (his style also a good contrast with Rollins' more extroverted outings), while Roach is very melodic in his approach, based on triplets and rolls, always relating to the themes even while veering away

from them. Rollins truly takes the theme apart, playing riffs, extended melodic lines, always with a logic that can be followed. You can also just listen to his music as a cool blues improv without all the analysis, as he plays his butt off.

For sonic comparison of this album, I had DCC's fine vinyl reissue (LPZ-2008) on hand, but no digitized version of this recording. The CD again sounded fine, with good tight bass, a nice open sound, and good cymbal sound. The LP, however, had more of these same attributes, with Rollins' sax sounding richer, the cymbals cleaner, with the bass maybe slightly less tight than on the digital disc. I hesitate to make too much of this, however, as my analog rig (fully loaded Linn LP12, Itok arm, Sumiko SHO cartridge, sitting atop a Machina Dynamica isolation stand) is quite superior to my aging digital gear (Proceed PCD on a Seismic Sink). (Hey, every time I think I'm ready to upgrade, it seems another upheaval, like the current imminent arrival of SACD/DVD-A, makes it seem like a poor invest-



tel/fax 508-994-8450 e-mail hyendaudio@juno.com ment of not inconsiderable dollars).

Next up is Miles Davis' Walkin'. Miles is credited with launching many of the sub-genres of jazz during his career. This album is thought of as both a progenitor of hard bop as well as the first to take advantage of the increased playing time of the new LP format, allowing soloists to stretch out for longer than the 45's or 78's usual three- to fourminute limit. Hard bop sought to take the advances of bebop but make them more user-friendly, by slowing down somewhat, cramming in fewer chords, and going with a more soulful approach. The rhythm section here is Horace Silver, piano; Percy Heath, bass, and Kenny Clarke, drums. Miles has much of the approach that would make him non-jazz listeners' favorite jazzman. These include a burnished tone (still with slightly rough edges here), and a slow, relaxed melodic approach to improvisation.

"Walkin'," the first track, clocks in at 13:26, providing ample solo time for all on this sauntering blues. Davis leaves space between terse melodic statements, slowly building to a climax. J.J. Johnson had chops superior to any trombonist extant at the time, and also a fine sense of order and theme development, which is demonstrated here. Lucky Thompson starts his tenor solo as low key as the others, but soon, as he picks up the tempo and then the intensity, with the brassmen comping behind him, you have the high point of the track. After Silver's characteristically simple but tuneful solo, Davis reprises, then the band riffs its way out in a very swinging manner.

"Blue 'N' Boogie" is a bebopspeed blues featuring the same soloists (Thompson again a monster), Miles-sounding slightly uncomfortable. "Solar" (and the final two tracks) replaces the above front line with Davey Schildkraut (alto) while maintaining the same rhythm section. This Davis composition bounces along at Miles' preferred medium tempo and features his delicate Harmon mute sound and a solo from Schildkraut that jumps out of the speakers. "You Don't Know What Love Is", again muted, is melancholy and introspective (contrasting with the searing pain of the Rollins version). The uptempo "Love Me Or Leave Me" again has Miles using his Harmon mute (his trademark sound in later years). The band cooks, and Miles appears to be perfectly comfortable now.

For comparison, I had a JVC XRCD issue (JVCXR-0047-2), and the sonics were guite close (this is in the first XRCD series, not the more recent XRCD2, which uses the updated K2 mastering used for the Prestige series). It was a very close call. I felt on some tracks the XRCD might have had some more sparkle in the top end, while sometimes I felt the Fantasy captured the instrumental textures (ever so slightly) better. The XRCD packaging, however, kills Fantasy's—as it should given the prices. A comparison with an LP, part of the Prestige Miles Davis Chronicles Box (currently available as a CD set) found this 1980 issue to be inferior to both CDs, with cymbals becoming an undifferentiated swish, loss of some trumpet brassiness, flabbier bass, and a slight phasey quality throughout.

So, these Prestige albums sound good, feature indispensable music, and are a bargain to boot. What are you waiting for?

the audiophile voice

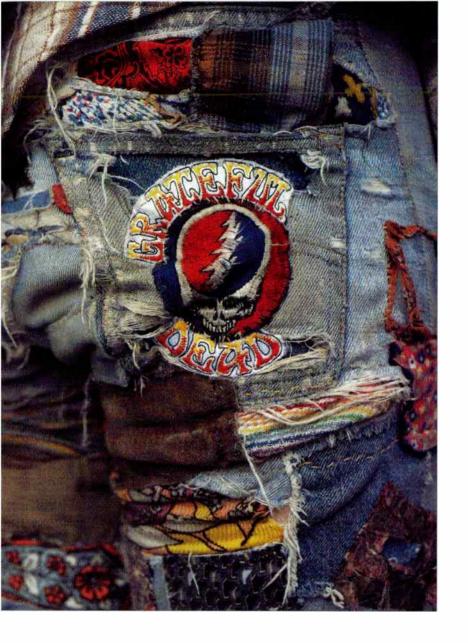


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#### **Michael Tearson**

# Rock

The Grateful Dead: So Many Roads Grateful Dead/Arista GDCD 4066 **DINCE THE GRATEFUL DEAD** hung up their touring shoes in the wake of Jerry Garcia's death, there has been a steady flow of *Live Dead* from their archives hitting the shelves. The Dick's Picks series put together by the late Dick Latvala has made almost a score of great vintage Dead performances readily available. But the problem with entire Dead concerts, for all save the Deadhead fanatics, is that you must slog through a lot of middling, meandering, often plodding stuff to get to those moments of diamond brilliance.

#### the audiophile voice

World Radio History

The beauty of this new five-CD boxed set *So Many Roads* is that they have done all that slogging for you and whittled it all down to the gems. With literally thousands of hours to sift, compilation producers Blair Jackson, Steve Silberman and Grateful Dead "Radio Hour" host/producer David Gans (who probably knows the archives better than anyone else alive) had an impossible job to do, and they have done it most impressively

Even better, none of the 42 selections have ever been on CD before. Only three selections had been previously released at all: The opening two tracks which were a 1965 single for Autumn Records and the terrific 1966-live "I Know You Rider" which was the centerpiece of the 1970 Sunflower/MGM album Vintage Dead. There are studio demos of "Mason's Children" and "To Lay Me Down" from the Workingman's Dead and A m e r i c a n Beauty sessions and "Believe It Or Not" and "Gentlemen Start Your Engines" from the Built to Last sessions. All of the rest are in concert performances.

The set's sequence is chronological with a couple slight liberties taken in the name of making the program flow better, a wise programming decision that

yields dual dividends. Most obviously, it allows the listener to follow and appreciate the band's evolution in a linear time-line. Every Grateful Dead line-up is represented. Early '90s Dead part-timer pianist Bruce Hornsby appears in a killer 1991 "Terrapin Station." Jazz sax great Branford Marsalis, the only nonD e a d player who appears, is showcased in a memorable 1990 "Bird Song."

ROADS

It is a bit more subtle, but the chronological order spotlights the parallel evolution of remote sound-recording quality over a 30-year period. The worst sound of all is on those early Autumn sessions, and admittedly much, but by no means all, of the early material sounds dodgy by

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today's standards: Raw and often tinny and thin. Product of the times. Even though the early board mixes have poor balance, at least you can hear all of the parts. As the sets progress, the sound gets clearer and crisper so that by the time you get to the '80s and '90s, the sound is amazingly clear and brilliant.

The packaging is excellent, and I would not be surprised to see it nab some awards. The

holds song-by-song notes which cross-reference other available versions of the selections. In a separate similarly bound, 58page hardbound book, there is further annotation with oodles of great photos. There are six essays in appreciation of the band from both insider and outsider viewpoints. These go a long way in trying to denote what made the Dead so special and so culturally significant. A

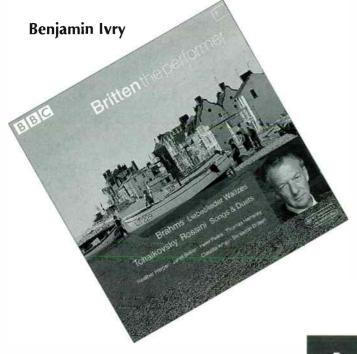
seventh piece outlines the seleclion process for the box, and it also details the technology of the recording rigs that were employed over the years. This last helps explain the varying sound quality of those early pieces.

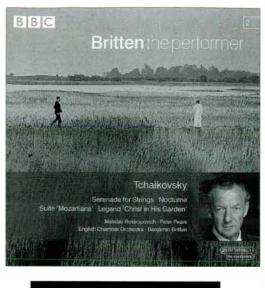
the

In the end, So Many Roads is truly a monumental release. This is immediately the single best place to go for a complete overview of the Grateful Dead's entire arc. All that was great and good about the Dead is here. Add in that virtually the whole five-CD set is previously unavailable and it ranks with the three volumes of Bob Dylan's indispensable Bootleg Series as an absolutely essential and defining addition to the artist's recorded oeuvre. [Editor's Note: And to the legacy and history of modern American music.1

Boxed-set retrospectives just don't get any better or more compelling than this one.







Classical

Benjamin Britten: "The Performer" Series BBC (Koch in the U.S.)

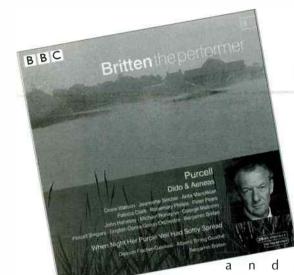
HEN DOES A famous modern composer seem too wellknown? With dozens of books in print about him, Benjamin Britten (1913-1976), who wrote masterworks like "Peter Grimes" and "Death in Venice," may appear a victim of overexposure. Yet a good amount of what is written gives scant attention to Britten's music, which is why he is remembered, after all. His Englishness and homosexuality seem to fascinate people as much as his music per se, and this is reflected on the web: Internet sites about Britten include him in a list of "Famous British Pedophiles" as well as a jocular homepage by science fiction writer and university professor Chuck Rothman about how Britten was in love with Rothman's then-pubescent father, Bobby.

A good occasion to return to the real basis of Britten's achievement is the BBC's longdelayed publication of some gems from its musical archives, and the 15 CD set, *Britten the*  Performer, is of tremendous importance. Britten was a superb pianist and gifted conductor, and his partnership with the tenor Peter Pears produced wonderful studio recordings for Decca, almost all of them unavailable today. Thus the appearance of live radio recordings in good sound is doubly precious.

The BBC series features CD covers with romantic landscapes of Aldeburgh, the Suffolk seacoast town where Britten and Pears lived and established an important music festival where the recordings were made. Lest dewy-eyed Brit-o-philes get the wrong idea, the real heart of this brutal backwater was revealed in 1996 when the Suffolk Council proposed that a statue of Britten be erected near where the composer is buried, beside Pears, in the town's churchyard. The Aldeburgh Town Council rejected the plan because "there is more to Aldeburgh than just Benjamin Britten." Malcolm Williamson, Master of the

Queen's Music, stated: "Britten's music is ephemeral. It will not last. The homosexual, paedophillia thing is coming to the fore and there's going to be a terrific swing against him." The Aldeburgh council decided to cancel plans for the statue on the grounds that the town had "too many memorials to the composer," placing a "commemorative seat" instead in the cemetery where he is buried."

If such philistinism is possible, then rather than making any touristic pilgrimage to Aldeburgh, a far more fitting tribute to Britten is to buy and listen to his music-making on these recordings (BBCB 8001-2 to 8015-2), which are among the finest classical performances released in recent years. Volume One offers Brahms's "Liebeslieder Waltzes," with Britten and Chilean-born virtuoso Claudio Arrau playing piano duet in a 1968 performance. This work is devilishly hard to perform with the virtuostic nonchalance required, but Britten



Arrau play it with elegant aplomb, as if they hadn't a care in the world. This is a sign of Britten's performing genius, as he was in fact such a bundle of nerves that he was sick to his stomach before and after every public appearance. The "Liebeslieder" singers include soprano Heather Harper and mezzo Janet Baker at their peak, and a buoyant Peter Pears, who was born to sing the solo about a "small, dainty bird." This deliciously blithe performance outdoes every other one on record. It is aptly complemented by Rossini duets sung by Harper and Baker, including a "Regata Veneziana" in which Britten elicits chuckles of delight with his wittily burlesque piano playing. Britten's comic genius is generally underestimated, despite his sly drollery in works like "Albert Herring." This CD re-establishes his sense of humor, and its only flaw is that the CD booklet lacks texts of the works included, a fault unfortunately repeated in the rest of the series

Volume Two is a Tchaikovsky program, with a booklet note which perhaps naively omits the emotional identification Britten may well have felt with the most notoriously homosexual of classical composers. Britten's conducting of the "Serenade for Strings" and "Mozartiana" suite, both famous as set to dances by George Balanchine, removes these works from the field of choreography. Instead they are starkly emotional statements of northern solitude. The English Chamber Orchestra plays with admirable attentiveness, as they do on Tchaikovsky's "Romeo and Juliet" and "Francesca da Rimini" on Vol. 12. Would that the BBC series might also reprint the Britten-Pears duo's extensive radio recordings of works by Francis Poulenc, another com-

poser Britten was drawn to. Another Britten enthusiasm which might surprise some was for Mahler, whose Symphony No.4 is featured on the fourth CD. Both Britten and Pears were fascinated by German culture, which may explain their great mastery of *lieder*, this was partly a matter of deep friendships, with people like Prince Henry of Hesse, which went so far as to make them choose "neutrality" during the Second World War, tolerate out-and-out and approvers of German fascism like the crackpot conductor Reginald Goodall. Britten's Mahler is tender and freshly poetic; in the final movement, set for the voice of an angelic singer, he uses a female soprano, as is traditional. Had he chosen a boy soprano, as Leonard Bernstein did in a celebrated recording of this work ( on DG 42360720), the result might have been too emotionally revealing. As it is, Britten evoked the virtue of purity, all-important for him, through such ideally fresh-voiced soloists as the young soprano Elly Ameling, in two songs from "Des Knaben Wunderhorn" on the same CD.

There are too many wonders and splendors in these CDs to go into much detail about them in an article of this size, but rest assured that each one is a precious gift to music lovers. There is a live Purcell's "Dido and Aeneas," never before available, to go along with his legendary studio recording, alas out of print, of the same composer's "Fairy Queen." There are many songs by Schubert, Schumann, and Wolf, exemplary for Pears' singing and Britten's playing, and their musicality as an ensemble. Only one currently active *lieder* team regularly reaches this level,



M i t s u k o Shirai and Hartmut Holl, and it is to be hoped that these newly printed treasures will help to serve as a model for young and less-than-young performers.

Amazingly forceful performances of Mozart piano concertos by Sviatoslav Richter, a vigorous "Ode for St. Cecilia's Day" by Handel, and unsurpassed versions of music by British composers like Bridge, Warlock, Holst, and Britten himself are more highlights. Whether or not the political sages of Aldeburgh, like the rustics in Britten's opera "A Midsummer Night's Dream," build a statue to his memory, he has triumphantly raised his own monument. It is finally available to us all, thanks to the belated generosity of the BBC.

the audiophile voice





Mustafa Al Sunni Songs of the Sudan Nimbus5583

#### **Alfred Fredel**

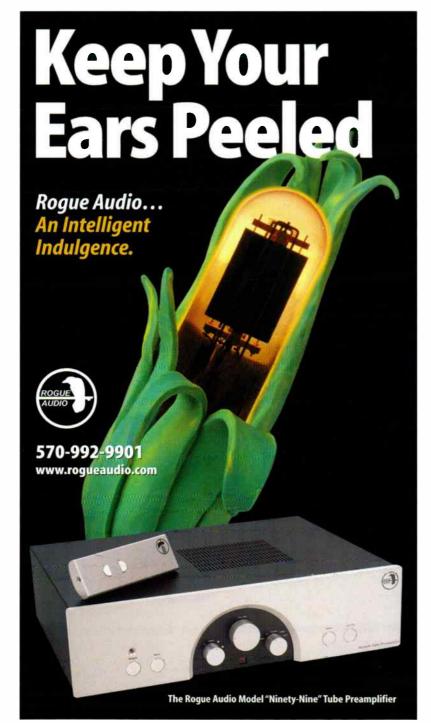
HE SUDAN is a republic that is in Northeast African and is the largest country on the African continent. Its northern border is Egypt and to the east lie Eritrea, Ethiopia and the Red Sea. The south borders Kenya, Uganda and Zaire with Chad, Libya and the Central African Republic to the west. The country is composed principally of Arabs in the north and black Africans in the south. This mixture of peoples, cultures and languages has created great tension throughout history. With the Arabs eventu-

ally seizing control of this land, many of the Arabs in the south now have mixed lineage. All trade and social contact between the diverse populations of this region were brought together when the cities of Khartoum and Omdurman became the focal points of culture and politics. Situated where the Blue Nile and the White Nile rivers meet, these two cities were the cradles of Sudanese popular music.

Sudanese popular music first appeared in the early 1900s and

combined traditional folk songs with new influences. The Arabic lute called the oud, which lent itself well to vocal accompaniment, replaced the more limited indigenous lyre. The singing style in this music incorporates a great deal of tremolo that is used throughout the Arab world. Much of the music is based on the pentatonic scale, which is used frequently in Eastern Africa. The text is customarily poetry set in Arabian forms and the rhythm is taken from the Arabian Gulf as well as from Latin America. All these influences blended together to create a sound that is unmistakably Sudanese.

In this recording, Mustafa Al Sunni who is known for his extensive repertoire, brings the listener many examples of folk songs called turath as well as classical songs called *hagiba*. The folk songs are central to Sudanese life, often-accompanying rituals and ceremonies. They are rhythmically specific to certain events such as the praise of bravery among warriors, weddings, love and many other applications. The classical songs are works that are composed in the classic Arabic style where



musicians and poets worked together to set words to traditional melodies. The bulk of these songs were composed between 1910-1950 for radio broadcasts. This practice is still in use today where there is great value placed on these musicians and writers who both receive great praise and money.

Mr. Sunni's voice is very sweet and contains great sensitivity. He skillfully demonstrates the intense feelings of longing and love, which are typical to the texts of this music. He is at ease with the various melismatic passages that flow freely through most of the songs on this album. His soft voice is complimented by the rhythmic strumming of his oud. The triple-headed bongo drum played by Abd al Hafez Karar lends a carefully balanced accent to the music. The music is soulful and simple and includes just two instruments (oud and bongo) and voice.

In Songs of the Sudan, Nimbus Records brings the listener a taste of the simple musical pleasures that are available from around the world. One can imagine being in the vast African Sahara with a few men relaxing at night around a fire, the smell of Arabic coffee in the air, while these songs fill the quiet night. The notes by Anderson Bakewell are both intelligent and informative. All the songs are translated and their origins are explained clearly. The music is presented simply, without any unnecessary effects. The voice and instruments are well balanced and recording is tastefully set at a good level that is not overbearing. If you enjoy Arabic as well as a very earthy sound, Songs of the Sudan is an adventure not to be missed.



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> > World Radio History

# Sony SCD-1 SACD Player The Next Resolution

**Arnis Balgalvis** 

SUPER AUDIO CD

LL OF US regularly encounter interesting experiences in our audio lives. But every so often an occasion comes our way so remarkable that it leaves an indelible mark. These experiences extraordinare, because of their striking significance, are destined to remain with us. We realize immediately that something very meaningful has occurred, and these episodes become reference points and a basic part of our thinking. I am certain every one of us has a compilation of such memorable events that, for the most part, guide us, but at other times, haunt us.

My own list basically started in 1959 during a visit to Bud Fried's City Line Lectronics store near Philadelphia. I had gone there to hear the original Quad ESL which was just starting its ascent to stardom. Driven by a Quad II power amp, a Quad

preamp, with a Decca phono cartridge on the tonearm providing source signal, and in mono no less, the speaker produced a sound that seemed then to be very close to what I had been searching for. Talk about haunting! It put me in one of those frames of mind where I was completely consumed by the desire to acquire these goodies. It took a good five years to fulfill my dream, which was by then in stereo, and I continued to live with ESLs from Quad for about 15 years.

My list of landmark experiences continues with an encounter with the Dahlquist DQ-10 at its unveiling at a NYC Hi-Fi show; later hearing all the good qualities that digital sound had to offer such as great dynamics, background silence, and unwavering pitch on the too often maligned Sony CDP-101; Dan D'Agostino's Krell and

Martin-Logan speaker demo at a Chicago CES that was of such exceptional quality that the press contingent actually applauded the presentation. Then, at the first Stereophile show in NYC, the Apogee Divas sent me into such a spin that I used and enjoyed the speaker as my reference for many years. To me, that Diva demo was still one of the most dramatic and captivating presentations I ever experienced. Again at a Chicago CES, in the Avalon and Jadis room, they had managed to set up a pair of Avalon Eclipses so effectively that the presentation remains imbedded in my mind as an example of overwhelmingly superior imaging and spaciousness.

Now the Sony SCD-1 Super Audio Compact Disc (SACD) Player is joining my list. Right from the get go, when I first heard the unit at the last AES

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www.customhousecable.com bobch1@cwix.com Barracuda/Benchmark 1+2 HiRes/HiBand/HDTV RGB/Component Cable Toslink/Gold Connectors Spikes/Cones/Dampers convention in NYC, it impressed me. This was also where I was – bowled over by an absolutely stunning demonstration of Sony's Direct Stream Digital (DSD) system and what it can do in a multi-channel application. Sony played a six-channel recording of a full orchestra with solo violin, stored on a hard

disc, via—you guessed it—a six-channel system. This was by far the best recreation of full orchestral sound I have ever heard. The timbres, the dynamics, the scale, and the detail: These are just a few of the very positive

characteristics that were so much in abundance. It was an exceptionally remarkable experience!

These two experiences with the SCD-1 took place while I was still just "scheduled" to receive a SCD-1 review sample. Had anyone planned this sequence intentionally, which I don't believe they could have, it would not have been possible to do a better job of raising the level of my anticipation.

The Super Audio Compact Disc is Sony's shot across the bow of the DVD-Audio armada. It is Sony's answer to the sonic challenge presented by the higher sampling and bit rates called out in the DVD-Audio spec. The goal of both camps is the same: Significantly better sound. The routes, however, could scarcely be more different.

Just in and of itself, the SACD project presents some very significant challenges. Not only did Sony wish to go all out to create a new and improved audio format, but it would have to be one that continued to be back-compatible with the original Sony/Philips CD patents and machines, with the higher rates used with DAT, and the lower sampling frequency (32 kHz) used by digital broadcasting in Europe. At the same time they wanted to exceed the sonic standard created by the additional bits and faster sampling of DVD-Audio over the standard CD. Further, there are all those analog masters in the Columbia

Is this the dawn of a new era in superior sonics? Probably!

> vaults, all of which needed transfer to a high-quality digital format, one that would not deteriorate over time as analog does. Re-recording a digital master tape does not, of course, add the 3-dB generation noise that occurs with analog.

Sony's answer was the SACD, a system which features a twolayer arrangement of data. The first layer is indistinguishable from the current CD specifications of 16-bit, 44.1-kHz sampling frequency in the Red Book standard PCM. Its presence is optional, and when it's there, the disc is said to be a hybrid. The second layer is a "Sony special," namely a single-bit, digital bit stream sampled 2.8224 million times per second; Sony calls it the Direct Stream Digital (DSD) process. The important point here is that DSD is not PCM. According to Sony's tech gurus, the DSD method of digitizing the analog information has none of the disadvantages that the analog signal suffers when any PCM method is implemented. Sony claims a significant increase in fidelity for DSD, which is intended to satisfy everyone who values a more

natural presentation of recorded sounds in a playback venue. In one fell swoop, Sony's SACD sidesteps the double inventory dilemma. There are, of course, no changes in the physical dimensions of the disc, so there's no problem with transports; the SACD disc, since it adheres to all prevailing stan-

dards, is identical in size to the current Compact Disc as is the DVD-Audio disc.

While DVD-Audio also aspires to provide unprecedented fidelity, it unavoidably presents stores and users with the .

predicament of double inventory. DVD-Audio discs will not be backwards compatible—they cannot be played on existing CD players. Since the SACDs and Sony's SCD-1 are available in stores as you read this, Sony has to be congratulated for beating the competition to the market.

#### The SCD-1

For starters, let's get some of the basics straight. First, the Sony SCD-1 player will do two things. It will play every Red Book 16/44.1 CD released to date and it will also play the new Sony-Philips Super Audio Compact Discs (SACDs). It will not play any DVD-Audio discs now or even later on when the conglomerates finally agree on the many specification possibilities available and when they come up with an encryption scheme that suits all the music companies.

While it's good news that the CD playback capability of the SCD-1 is extremely accomplished, the far better news is that the SACD playback capability puts SCD-1 unit in a class by itself. The amount of sonic improvement—notice I did not term this a mere refinement exhibited by the SCD-1 has never before been offered to the consumer.

Secondly, the SCD-1 is a stereo-only device. That is not because DSD is not capable of more channels, and indeed Sony demonstrated multi-channel playback of a Philips recording

in their suite at the St. Tropez during the Annual Winter Gathering in Las Vegas. However, because Sony recognizes that today's software and the equipment available for playback overwhelmingly

exists in a two-channel stereo mode, they've chosen to offer a standard stereo version first. Much has been made of the fact that the SCD-1 is two channel as though it were a shortcoming. I find it fascinating that people cannot enjoy what is generously handed to them, namely an unprecedented improvement in the quality of two-channel playback, without expecting something more. Besides, just where are the high-quality playback facilities that would be used presently to realize this multichannel dream? None of my friends have them, but everyone can pop the SCD-1 into their system right now. (Editor's Note:

#### Is the SCD-1's \$5,000 price daunting? Many D/A and transport pairs are in the same league.

Most of Arnie's review was written prior to the Winter Consumer Electronics Show where Philips, for their part, said they intended to have a multichannel unit out by the end of the year.) DSD is not available for home theater applications yet, but can support multi-channel applications just fine. Third, some have complained about the \$5,000 price of the Sony SCD-1, ignoring its little brother, the SCD-777ES, at \$3,500. True, both are a lot of money for a lot of people. But the initial intended market for the SCD-1 is the audiophile community, generally thought to be not a whole lot of people.

However, this target group, while not necessarily wealthy, is also no stranger to seeing and often paying hefty prices. For starters, let's not ignore several CD-only high-end players currently

available which sport prices well above the \$5000 point. The truth is that audiophiles do have a reputation for spending lots of money for the right equipment, especially when it comes to source components. Based on my experience with the SCD-1, it certainly is the right equipment, and by a wide margin.



I do feel pretty certain, don't I? Well, having examined the unit every which way possible, I can only come to one conclusion: The SCD-1 is an absolutely stunning piece of equipment. Its construction is flawless, the styling is elegant, and the ergonomics are very user friend-

ly. At almost 60 pounds, the SCD-1 must be the heaviest CD player in the world. And believe me, there are no lead weights hidden inside—the SCD-1 is simply one solid piece of gear.

But sonics define the

bottom line. For starters, as a CD player the SCD-1 is absolutely marvelous. "Anything you can do I can do better" it seems to be saying. In my experience with CD players I have not found anything better. In this area this is as good as it gets.

Let me point out that last year the best Sony CD-only player, the ES CDP-XA7ES, sold for \$3000 and certainly was guite a remarkable CD player. But put the SCD-1 next to it and we all know which unit we all will lust after. Sony knows full well there is more to a successful product launch than looks alone. Therefore, as you will see, they added a number of significant refinements and innovative techniques to the SCD-1 on the CD side of the equation, so that it can unequivocally be recognized as their top performer in that arena.

But you know what puts it in a class by itself? SACD, that's what! And once you have heard SACD there's no going back. It simply is an unprecedented and gigantic step forward in the playback process for music reproduction in the home.

Having lived with the SCD-1 I have to confess to a sneaking suspicion, and this is not something someone told me off the record – this is pure conjecture on my part. You see, I think that \$5000 price tag on the SCD-1 is on the low side. The elegant execution, the exquisite build quality, coupled with the refined performance, be it CD or SACD,

As far as I'm concerned, Sony's SCD-1 is a classic, and a bargain as well.

> adds, to my mind, up to a lot more than \$5000. It is even more obvious when the SCD-1 is matched up with other CD players sonically.

> Here's my reasoning. Sony/Philips is going up against the world with SACD since their royalty income from CDs is at stake here. That's billions and billions, no, not light years, but dollars. So do you think for one moment that a huge corporation like Sony will let profitability be a consideration on the initial run of SCD-1 players? I don't think so. They are bursting on the scene with no holds barred and guns blazing. As far as I'm concerned, not only is the SCD-1 a classic, it is a bargain as well.

#### The Physical Aspects

The Sony SCD-1 is 17 inches wide, by 5-7/8 inches high by 17-1/8 inches deep. Until you have handled it you will not believe its official 58.3 pounds weight. Take my word, it is by far the heaviest "CD Player" I have ever encountered. It is also the highest performance "CD Player" I have had the pleasure to use. That's in the CD only mode. Go to SACD and it's a whole new ball game. Everything happens on top. The SCD-1 is a top-loader, and it is also at the front of the horizontal cover plate where all the controls are lined up in a row parallel to the front panel. A very informative display panel adorns the center of the front panel, while the power on/off

button is located off to the left.

When you've pushed the "open/close" button, a ¼-inch thick machined panel lifts slightly and then proceeds to glide horizontally towards the right. This exposes a cav-

ity where the disc to be played can be comfortably placed on a spindle to support it during playback. A circular metal weight, referred to as the "stabilizer," is used to hold down the disc to the spindle. The stabilizer must be in place to start the play-back procedure. Failing to have the stabilizer on the spindle will elicit a message in the display to alert the user of the omission.

All the control buttons are lined up along the front of the top panel. Here we find a large "open/close" control on the far left, with the "time", "text", "digital out", and "filter" controls grouped slightly to the right. The "time" function provides the usual choice of total time on disc, or time left on track, or time of track played. Some SACDs and CDs will contain text information describing the title of the album, the artist, and current track. Whenever the SCD-1 detects this data, it is shown on the front display.

The "Filter" switch, usable during CD playback only, allows the user to select any one of five filters for altering "the sound to match your listening environment and the music source," to quote Sony from the instruction manual. This is a variable-coefficient digital filter implemented in CD players to eliminate noise during the sampling process. Having a variable-coefficient digital filter at their disposal, Sony chose to provide some of the filter versions available so users can

choose a particular filter they find most pleasing for the situation. By changing the digital filter characteristics, the perceived musical presentation can be altered. Sony will not disclose anything related to the filter characteristics, be it a set of curves or description.

The filters are designated "STD," "1," "2," "3," and "4," with the selected filter displayed on the front panel. Each time the "Filter" button is depressed, the sound mutes momentarily along with a concurrent display of a "D-Fil Setting" banner on the front panel.

The "Digital out" button activates the digital PCM bitstream outputs on the rear panel, but only for CDs (16 bit/44.1). Unless the digital output bitstream is used, the "Digital out" switch should always be in the "off" position since CDP digital activity can affect analog circuit-

Sony put considerable thought and expense into the transport of the SCD-1.

> ry. The selected position is displayed on the panel on the line "Digital Filter": "16 BIT" or "OFF".

Further to the right are three buttons for the normal "Play," "Pause," and "Stop" functions, and two more to advance or retreat whole tracks. The last switch in this group controls the selection of the CD or SACD playback mode. The "play," "pause," "stop" and "CD" or "SACD" positions have lights next to them to indicate the selected mode.

The very light and very handy remote control mirrors all these functions. Additional buttons

> appear to provide the ability to repeating a track or a whole disc, to search within a track, and to select an index where applicable.

The SCD-1 rear panel layout affords additional conveniences. Audio

outputs appear on a pair of XLR connectors for the balanced configuration (pin 3 hot), while the single-ended outputs are available on pair of RCA jacks. The balanced outputs have a disable switch right next to them.

The single-ended audio output stage consists of discrete



buffer circuit driven by op-amps. Of course we would like such circuitry to be discrete all the way, but then again it could have been op-amps all the way.

The balanced outputs are created by the implementation of an op-amp. That is not good. This additional circuitry can

come in handy only when very noisy situations are encountered and one has to resort to balanced cables. Otherwise the signal travels through more circuitry with a degrading effect. The balanced out-

puts can be disabled with rear panel switch. This is good. That remark is not based on attitude, but on the fact that the balanced circuits, when active, load down the single-ended circuitry. By defeating the XLR outputs, the single-ended outputs can perform unimpeded.

Two types of remote controls can be selected with the rear panel CD1/CD2 switch to accommodate other Sony CD players.

Also on the rear panel is the 'Standard/Custom" filter switch. Normally locked in the "Standard" position, it limits ultra-sonic energy from entering the preamp that follows the SCD-1 as well as the power amp and speakers. However, the bandwidth is limited to 50 kHz. In the "Custom" position, the high frequency cut-off occurs at 100 kHz. This increases the bandwidth of the upper frequencies and provides wide-band sound, but at the expense of the introduction of some additional out-of-band energy.

The SPDIF output is available on an RCA jack or a Toslink optical connector. As mentioned earlier the digital output is enabled with the top-panel switch and this status is displayed on the front panel. An IFC jack for a detachable power cord completes the rear panel conveniences.

I must compliment Sony for the extremely accomplished presentation of the SCD-1. It is obvious that a lot of thought went into this product as far as

The SCD-1 exceeded my sonic expectations; the "lows" are lower and the "highs" higher.

styling and appearance are concerned. The choice of the champagne-anodized color for the top and front panels, the very deliberate beveling applied to the sides which makes the front panel significantly narrower than the overall unit, the clean layout of the back panel, and the high-tech motion and appearance of the transport cover all combine to incarnate an absolutely admirable accomplishment for and a desire to own this unit.

#### The Inside Story

The SCD-1 uses a stationary optical pickup and moves the spinning disc relative to the pickup. Sony is the only manufacturer to use this configuration, claiming reduced servo current variations which, in turn, translate into cleaner sound.

Please understand that the demands for SACD playback are by far more stringent than they are for CD only. The spacing between adjacent SACD tracks is roughly half those of a standard CD, and SACD spins three times faster, and the SACD pits carrying the data are half as long. Thus, the extent to which the SACD requirements are fulfilled go a long way to improve the performance of the CD playback situation. In order for the SCD-1 to meet the demands of SACD playback, a new design for the drive motor was implemented. With minimal servo current variations and long life being important design goals for the motor, Sony went to a sap-

phire sleeve in conjunction with a ruby thrust ball. For stabilizing the drive, they selected a 6mm milled aluminum plate and used another 6mm plate for the spindle cutout. This assembly sits

on the base plate of the SCD-1 and is supported by four pillars with dampers to prevent external vibrations from interfering. The base is a double layer, 5mm metal plate and, along with the seven high-carbon cast-iron pillars sunk into it, forms the foundation for the SCD-1. For the two side walls, you get a 4.5-mm metal plate and the top is a 5-mm metal panel. The finished SCD-1 sits on five complicated isolation feet. Each foot consists of a gel-like material sandwiched between brass and high-carbon cast-iron surface and incorporates a pin-point contact for bearing the load.

Another absolutely imperative implementation is the use of two separate power supplies starting all the way back to the transformers: One for the digital and servo circuitry and another for the analog sections.

The SCD-1 has two lasers, one which works at 780 nanometers for standard CD playback, while the other uses 650-nanometer light for the high-density layer.

This arrangement allows the SCD-1 to play conventional CDs, single- and dual-layer high-density SACDs, and hybrid SACDs. The hybrid disc consists

the audiophile voice

of two layers with the layer closest to the label side containing the standard CD information, while the layer furthest from the label carries the SACD data. The layer carrying the SACD data is transparent for the 780-nm CD laser, but reflects the 680-nm SACD laser. It is this dual-layer

configuration which allows the hybrid SACD discs to be played in a conventional CD player, giving the Sony/Philips SACDs backwards compatibility with currently available hardware.

The signals representing the data on the disk appear in r.f. form and are similar enough to use the same r.f. amplifier, demodulator, data error-correction circuitry. The same goes for extracting the clock and synch signals. At this point the DSD and CD signals are completely different and two separate pro-

cessing paths are followed. The 16/44.1 PCM data is routed to a 24-bit variable-coefficient digital filter. In this filter, the 64-times oversampling and noise shaping are performed, resulting in 2.8224 MHz, 1-bit data. (Isn't that interesting?)

When DSD data is involved,

#### If ever there was a "must-audition" product for an audiophile, Sony's SCD-1 is it.

Sony uses ACPDM or Accurate Complimentary Pulse Density Modulation. Suffice it to say that this technique produces exactly complimentary transitions in each clock period, giving precise amplitude for data pulses as delivered to the D/A. Without ACPDM, the data pattern would introduce distortion for each 1to-0 or 0-to-1 transition, causing glitches whenever consecutive 1s and 0s appear.

But we're not done yet. You see, high-speed digital filters can introduce noise that results in a type of jitter, and jitter is the jword in digital. Enter S-TACT, which stands for Synchronous

> Time Accuracy Controller. This circuit isolates the pulse generator and several digital operations from the D/A converter and produces precisely controlled periods for each pulse.

At this point the data, be it CD or DSD derived, consists of voltage pulses fed into the Current Pulse D/A converter. The output is a series of current pulses, which is then integrated by a capacitor to produce an analog signal.

An analog low-pass filter using a generalized-impedance



"The Legend room is among the very best-sounding I heard at the Hi Fi '99 show."

- Greg Weaver, SoundStage

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Sony SCD-1 Super Audio Disc Player, \$5,000.00. Sony Electronics Inc., 1 Sony Dr., Park Ridge, NJ 07656; http://www.sony.com.

#### Associated Equipment:

Wadia 270 Transport, Wadia 271 Processor, Ayre K-1 preamplifier, Krell FPB-350M monoblock power amplifiers, Avalon Acoustics Eidolon and Hales Transcendence 8 loudspeakers; TARA Labs Air One, Cardas Neutral Reference, Goertz, and Monster Cable Sigma Retro interconnects and speaker cables, and PS Audio The Power Plant, and a.c. power line enhancement products.

converter (GIC) topology has been chosen to shed the quantization noise residing in the ultrasonic part of the spectrum. A GIC topology thankfully has passive components in the signal path and uses active components to bypass unwanted contaminated signals, obviously something very desirable for keeping the audio signal pure.

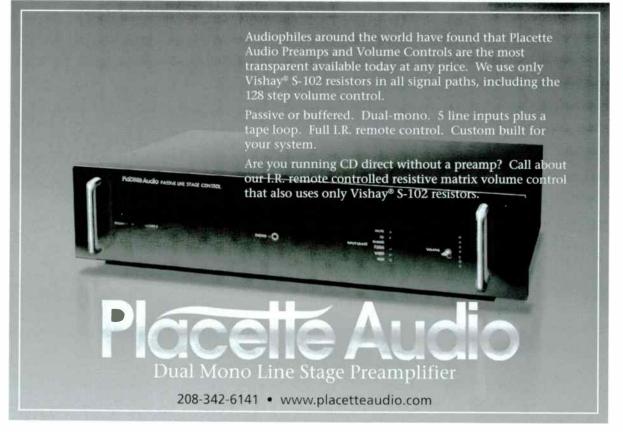
#### **Getting Started**

One advantage of being a little later in the path to "hot" equipment to review is that more software becomes available with passing time. So while the earlier reviewers had to contend with only a handful of SACD discs, I had 19 to play. -This situation benefits the reader since I have been able to judge the SCD-1 more thoroughly.

Another fortunate development took place when I decided to buy a pair of Avalon Acoustic Eidolons. This speaker system has provided me with resolving power in very important areas thus giving me a select vantage from which to view the capabilities of the SCD-1.

#### The Sound of DSD

In a word, fabulous! This is by far the biggest single step forward to advance the technology of sound reproduction in the home since the introduction of stereo. It's remarkable because the increase in what I will inadequately call "fidelity," is absolutely staggering. Even taking into account the fact that DSD is in its very early stages of development, the SCD-1 has exceeded my fondest hopes.



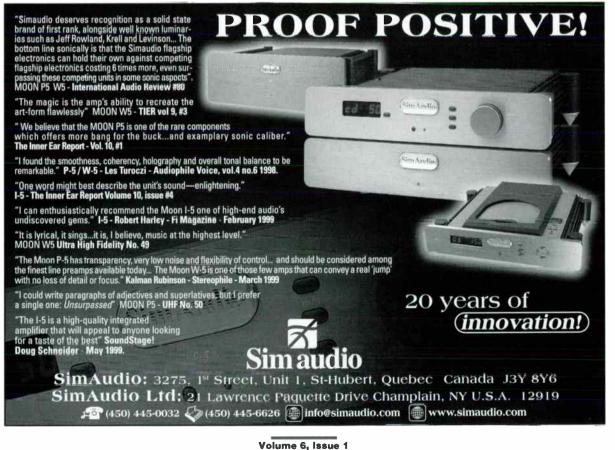
And that's with all the hype and other things going on. Despite the great anticipation and even greater expectation on my part, its very refined level still caught me by surprise.

At this point some words of caution and clarification are in order. Please understand that the capability of the SACD is exceedingly high. Therefore being the very refined system that it is, its unprecedented resolving power can perform miracles in revealing sonically accomplished passages, certainly when referenced to what we can get out of our best 16 bit/44.1 kHz systems. At the same time this refinement can also bring out all the big, the bad, and the ugly contained in any recording, but more so when the recording itself is marginal. In order to appreciate the true wealth of sonic riches that have been captured to their fullest by the DSD process, it is imperative to use only the very best recordings.

Here are recordings that, in my opinion, tell the SACD tale very completely: *dmp Does* DSD, a sampler put out by Tom Jung, and Joe Harley's Blues Quest, a compilation of his recordings for AudioQuest now released as a SACD promo. There is also Sony's own DSD demo SACD which revealed the best recorded string tone in my experience, though I found it somewhat limited from the sonic perspective since it concentrated on only the sound of Yo-Yo Ma's cello on several cuts and a string quartet on the rest.

Thanks to an angel, I had the privilege to enjoy some SACDs that, unfortunately, are only available in Japan at this time. These discs are DSD recordings. I mention the DSD issue because recording direct to DSD is the way to go. The musical signal simply does not suffer any additional conversions. To some it may be sacrilege to hear this, but even going to an additional step such as analog tape is disruptive. The operative word here is "additional," which obviously means more processing. The AudioQuest *Blues Quest* SACD is a great example of what a half-track, 30-ips tape can sound like. However, recording directly to hard disc is unquestionably a significantly simplified signal path.

Furthermore, the particular analog-to-digital converter is important. It should be an obvious matter by this time, but every time a new format is introduced, we forget about details and consider only the end result. DSD is no different. I found the recordings that used the Ed Meitner EMM Labs' A/Ds to have the most transparency and harmonic richness. By the way, the SACDs from Tom Jung and those from Sony featuring Yo-Yo



Ma are true DSD recordings, as opposed to just having been DSD mastered. Believe me, it does make a big difference.

I know I often bring up the equipment used in my evaluations, but I was again lucky enough to have the audio muses line up the right goodies in my basement. Consequently, I could get the most out of the SCD-1. This time around I boldly went and did something about what I had been lusting after for a long time. I brought my misery to an end and acquired a pair of Avalon Acoustics Eidolon loudspeakers. Suffice it to say that in one particular respect this component is very much like the SCD-1, it exceeded most of my expectations. I can also say that the Eidolons are the best loudspeakers, by guite a margin, that I have ever had the pleasure to use.

Listening fatigue is one very important aspect of digital that has been a unhappy subject in the audiophile community. Well, I'm here to tell you that the SCD-1 playing SACDs simply puts an end to that lament. It is that non-fatiguing.

At a live performance we all have come to realize that regardless of how boisterous or complex the music gets it can be enjoyed thoroughly. Rarely is there a condition that is felt to

be "too loud." Listening to the SCD-1 left me with a similar impression. The music could be doing some very serious dBs and yet, refreshingly, the comfort level remained quite uncompromised. But the great part was that this was not a short-term effect. After enjoying some very long listening sessions, it dawned on me that the reason I was remarkably unwearied was the absence of nagging artifacts that come with PCM. These relaxed DSD setting translated, of course, into some rather prolonged evenings filled with sonic delights.

DSD takes unraveling musical complexities to the next level. It really shines with massed brass instruments, massed string tone, and vocals, be they grouped or in a solo setting. Exactly those areas where 44.1/16 fears to tread. Tom Jung's dmp does DSD is a great example of that. His recording of the Stockholm Jazz Orchestra is absolutely stunning. I have not ever experienced this kind of resolution of intricate intonations, while also being assaulted by the raw power of massed brass instruments, except at nonamplified live concerts. The constituents of such cacophony, be they subtle or substantial, now appear far more individualized. The intent of the performers is thus unraveled, setting the stage for a greater appreciation of the music. And that is what the whole show is all about.

What the SCD-1 also does exceptionally well is deal with detail. At this stage of the game I am so impressed with its ability to reveal what appear to be milli-morsels—I'm leaving micro-morsels for the next time around-of dynamics, harmonics, and similarly essential subtleties to an absolutely stunning degree. Soundspace is huge. The space around performers and instruments is mesmerizing. The stage is now very close to being delineated to a degree that I had only hoped for before the arrival of the SCD-1. That goes for the depth dimension as well as the lateral stereo spread. I'm sure the Eidolons have a lot to do with what is revealed, but if something is not there to be revealed it will not show up!

#### Summary

The Sony SCD-1 is a landmark product. Were it to bring us only the wonders of DSD, I would hold it in a very high regard on that basis alone. After all that is its most basic reason for existence. But the finding that the SCD-1 is extremely capable in the 44.1/16 realm as well is, to me, the icing on the cake. This unit demonstrates just how seriously Sony is approaching their launch of SACD, the only format that is backwards compatible and precludes double inventory problems in the stores.

The form and function of the SCD-1 as used for playing back

music deserves accolades. Fortunately I can echo, without hesitation, the chorus of the multitudes of positive comments that this unit has received.

If there ever was a must-audition for every self-respecting audiophile, the Sony SCD-1 is, without a doubt, just that.



## Rogue Audío M-120 Monoblock Tube Amplífíers

#### John Gatski



A COUPLE OF YEARS ago or so, I discovered the made-in-Pennsylvania, Rogue Audio line of vacuum tube products. After a review of the company's initial amp and preamp offerings, I came away impressed with the winning combination of sound quality and incredible value. These high-end sounding products went for less than \$1,500 each.

Fast forward to 1999, and Rogue Audio comes out with the M-120 monoblock tube amp that sounds better than the original Rogue amp and comes in at only \$2,695 per pair.

#### Features

Each M-120 is rated at 120 watts of Class AB power in the ultra linear mode and about 60 watts in the internally-switch-able triode mode. The design uses four Sovtek KT-88 output tubes, two 12AU7 driver tubes, and a 12AX7 phase inverter.

JohnGatski is an avid audiophile, guitar amp collector, and the publisher of **Pro Audio Review** magazine. According to designer and Rogue Audio President Mark O'Brien, the amp has a stiffer power supply than the original Model 88, which put out 60 watts per channel using two 6550s on each side.

The Rogue Audio M-120 is similar looking to its now little brother, the '88, with its silver front panel and black box esthetics. The tubes are located in the rear section of the chassis, but are out in the open with just a basic metal shroud, which is just big enough to keep something big from falling onto the tubes.

Since I reviewed the original amp and preamp, Rogue engineers have improved the structural design of their amp by installing a thicker front faceplate. Operating a small start-up company, one trying to be cost effective in manufacturing without sacrificing sonics, Mark O'Brien said the original amp chassis were not as stiff and the circuit boards were not as solidly mounted as the amps are today. Also, the Rogue M-120 now has separate binding posts for 8-ohm and 4-ohm speakers. (The owner has to remove the top of Model 88 and change wires on the internal side of the speaker posts to access 4 ohms.) The M-120's triode/ultra linear switch also is more accessible than with the '88.

The amplifier dimensions are 14.5 inches wide x 19 inches deep x 7 inches high. Each amp weighs in at 42 pounds. Since these babies are high-power tube amps, they need plenty of air around them to keep cool.

The specifications are 120 watts (ultra linear) with less than 0.1 percent distortion. The rated bandwidth of 5 Hz to 50 kHz, +/- 1 dB. No rating is given in the manual for the triode mode, but O'Brien said it would crank out about 75 watts in that mode.

Inside, the Rogue engineers did a nice job of circuit layout and wiring, tidy indeed. I could not help noticing the huge power supply. (The mass was a foreboding sign of the "untube" like, solid, tight and deep bass that was to emanate from my loudspeakers during the listening trials).

#### Setup

I find tube components can be mixed and matched with solid state and other tube pieces of gear when you're trying to find the ideal combination to get the best sound. So I went in search of a preamp from my shelves of spares. I tried the Rogue Model 66 tube preamp. It is a sweet sounding preamp with fairly solid bass, but the high end was a little strident with the Chinese 12AU7s I had recently installed (they were the only ones I had on hand; they had been changed because the original Yugoslavian tubes had gone extremely microphonic; you could hear them "sing" with the music). I tried the Legacy Audio high-current preamp, which had extremely tight bass and a nice sound stage but also was slightly more emphasized in the high end. I finally settled on my Pass Laboratories Aleph P, a Class-A MOS-FET design that never fails to impress.

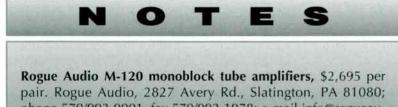
I connected the preamp to a Pass DAC 1, Class-A MOSFET, 20-bit digital converter which was fed by a Denon transport. All interconnects were all Alpha-Core Goertz solid silver cables. The amp was linked to a pair of Legacy Classic II speakers via a pair of 10-gauge Alpha-Core Goertz cables.

I unbolted the wooden shipping bases that are attached to the bottom of each amp, which are used to help keep them secure in transit. I inserted the tubes into their respective sockets, reinserted the protective tube shrouds (which look amazingly like the metal wire used in grocery carts), and turned them on. I soon discovered an overly strong, hot paint smell. It took about about a week to dissipate, Mark O'Brien assured me that on later models a different paint is used that does not smell. Once warmed up, the M-120s get pretty warm. They need a lot of ventilation space.

#### The Audition

Once the amps warmed up, they were ready for a spin around the old audiophile block. I had high expectations for these amps. I popped in my tried and true The Guitar Artistry of Charlie Byrd (Riverside OICCD-945-2). Although recorded in 1960, it is an excellent jazz guitar recording. Right off the bat, the Rogue M-120s made me take notice. Very smooth resolution of the classical guitar and nice detail in the sound stage. Drums were just okay, but that is mostly an artifact of the recording.

I next put on a jazz trumpet recording. I find that trumpets and trombones are good instruments to test an amp's (and preamps) ability to negotiate high energy-modulated music in the



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ear's most sensitive range. If the component imparts harshness, it hurts. If the bite of the horns is too soft, you don't get that spunky brass realism. I am happy to report that the Rogue pair reproduced the selections from the superbly recorded Clark Terry Live At the Village Gate (Chesky-JD 49). The trumpet and other horn accompaniment came through the speakers with realistic bite, but lacking the gritty harshness that forces the listener to turn it down.

The dmp recording of Joe Beck and Ali Ryerson—Alto (dmp-CD-521) was my next test, This recording used the Sony Direct Stream Digital (DSD) process and then was converted back to 16-bit. The M-120 reproduced the delicate flute lines and the understated guitar plating beautifully.

To ascertain how well the bass would hold up without massive boom associated with lesser tube amps, I popped in SuperBass (Telarc CD-83393), a live recording with Ray Brown, John Clayton and Christian McBride on basses, Benny Green on piano and Gregory Hutchinson on drums. The Legacy Classic can deliver bass down to 30 Hz that is tight and deep. For a modestly price set of tube amps, the Rogues did pretty well with the upright basses, perhaps just a touch plumper than some very expensive solidstate amps I have tried. Still, the bass was impressive and the drums hits were resolved with convincing kick as well.

Switching to popular music, I played the ballad "Pretty Little Adriana" from Vince Gill's High Lonesome Sound (MCAD-11422) CD from a couple of years ago. Gill's tenor voice, the soft percussion and his Telecaster leads were real sweet

sounding. I also sampled the rockabilly twang of *Jim Campilongo and The 10 Gallon Cats* (Blue Hen Records (OWR-0028) on their debut album. The instrumentals have great reverb from the guitar and pedal steel guitar and was a good test for the Rogue to resolve the detail of the reverb decay. They did a real nice job delivering the subtlety—with that tube smoothness.

On several classical CDs, including violin and cello concertos and full orchestral pieces, the M-120 really excelled. The cello was rich without bloating, and piano selections showcased the liveness of the in-studio performances—with the natural reverb decay and full sound of the instrument's wood resonance.

On pop music with heavy mid-bass content (Hip-Hop, for example, the low-end performance thickened a tad, and I

Art Audio

could hear the difference when compared with my Legacy highcurrent solid-state amp to the Rogues. But that slight difference was only in the A-B comparison. In my opinion, these high-power Rogues still resolve mid and upper bass better than many of the tube amps I have tried especially those old classic valve amps.

I also tried the amp in the triode mode. The triode mode seems to pass more of the natural harmonics in the midrange. But to my ears, the trade off is a subtle decrease in the high-end presence that the ultra-linear mode portrays well.

I also noticed that the particular tubes one used made an audible difference. The Sovteks had a nice overall balance. I substituted some Chinese tubes and found them to deliver more presence in the treble. As always, I suggest that tube amp owners try different brands of tubes and use the ones that suit their sonic tastes.

The only knock on this amp is ergonomic. You need stands that are deep because of the front-toback size. I ended up setting the amps on the wood shipping bases they were boxed with and placed them on the floor. The amps hung too far off the ends of my normal amp stands. Had to turn them sideways.

#### Conclusion

Kudos to the Rogue Audio design team for putting so much good sound in a tube amp that has a modest audiophile price. At \$2,695 per pair, the Rogue Audio M-120 monoblock tube amplifiers are a terrific buy. The sound is open, detailed, tight, yet tube smooth. (P.S., I spent a little time recently, listening to the M-120s with Rogue's new Model 99, a 6SN7GT-based preamp; it was superb. Can't wait for a full-time trial)

"From full orchestra to solo cello, from piano to pipe organ, from small choir to the Mikado, and from Van Morrison to Bill Evans, I felt the Diavolo produced excellent, wide range, dynamically powerful, involving music. I think the Art Audio people have a solid amplifier here."

> Les Turoczi, The Audiophile Voice, Vol.4, Issue 6

"The Berglund/Bournemouth Shastakovich Eleventh [FMI SLS 5177] provides one of audio's greatest challenges... Too many components fail to maneuver through the demanding moments of this symphony without stumbling... Well, the "little" Art Audio, confronted by this test, not only retained its composure, but gave one of the best presentations I have heard."

> -Aaron M. Shatzman, The Absolute Sound, February 99, Issue 116 (reprinted by permission of TAS)

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The Art Audio Diavolo. Pure class 'A' transformer-coupled, triode, single-ended amplification.

## Sunfíre True Subwoofer Sígnature



**ERHAPS WITH JUST** a bit of immodesty, Bob Carver has employed the adjective "amazing" in the description of some of his designs. However, in the case of the True Subwoofer, which debuted in 1996, "amazing" seems most apt. Never has there been a subwoofer that could pump out such prodigious deep bass, at levels capable of rattling the contents of a house, from an enclosure smaller than a one foot stack of 12-inch LPs. This extraordinary feat is made possible by the two-inch excursion of its active and passive drivers. (Most subwoofer cones move no more than small fractions of an inch.) To produce such mammoth cone flex, the active driver is backed by a 225-ounce (14-pound) magnet and is driven by an on-board, 2700-watt amplifier!

In Vol. 3, No. 2 of *The Audiophile Voice*, I reviewed the True Subwoofer most enthusiastically and I have been living happily with two of them ever since. Sunfire continues to manufacture the True Subwoofer in "Mark-II" status with a retail price of S1299.00 each. I returned the original subwoofers to Sunfire when the Mark-II version became available, and purchased a pair for my own system. The adjustable crossover-frequency range has been lowered from 40-120 Hz on the original to 35-100 Hz on the Mk-II. The roll-off on the upper end of the bass is also a bit steeper on the Mk-II. In other respects, the original system remains unchanged.

#### The True Subwoofer Signature

When I received a call from Randy Bingham of Sunfire asking if I would like to audition a Signature version of the True Subwoofer, I expressed some reluctance. "How much better could the Signatures be than the Mark-IIs?" I wondered. The Signatures were capable of playing 6 dB louder, but the Mark -IIs were already more than loud enough. The Signatures were also described as going 2 Hz lower, carrying a specified response of 16 to 100 Hz -0, -3 dB. Their lowest cross-over point was now 30 Hz, instead of 35 Hz.

These appeared to be modest improvements but were they worth the extra \$600.00 tacked onto the Mk-II's price? The Signatures would retail at \$1895.00. Despite this reservation, I agreed to give them a listen and I soon took delivery of a pair of Signatures; I wanted to use them in stereo which is how I have been using the Mk-IIs. Like the originals and the Mk-IIs, they were protectively packaged for shipment with boxes within boxes. A set of foam corners protect the inner box inside of which is yet another set of corners to protect the heavily wrapped subwoofer.

Usually a special edition, or in this case a signature version, of an existing product has its upgrades tucked beneath its skin and hidden



from view. Here the changes are all readily apparent. Although the Signature's enclosure is of the same material as the original, it has been bulked up into a 13-inch cube. It still seems quite small, but larger than the 11inch cube of the original and the Mk-II. The active and passive drivers are also larger. The

diameter of the driver's flat surface is 8 inches, up from the 6-inch driver on the smaller sub, providing a 78 percent increase in radiating surface.

#### Controls, Inputs and Outputs

The metal control panel, placed on one side of the subwoofer between the active and drivers, remains passive unchanged except for the crossover markings. An 8-foot, heavy-duty, grounded a.c. power cord is hardwired and enters the enclosure passing through the control panel. Controls consist of continuously variable rotary knobs for volume, crossover frequency, and phase. A two-position toggle switch is marked "Flat" and "Video"; in the latter position, there is a steep roll-off below 30 Hz. Input and output connectors are also mounted on the panel. Gold-plated RCA plugs accept signals from a preamp or linelevel source. The sub also has rugged binding posts designed to accept bare wire, spades, or

banana plugs coming from an amp's or receiver's speaker-level output. Another pair of goldplated RCA plugs provide a linelevel output signal which is flat above 70 Hz but has a 6-dB-peroctave roll-off below 70Hz.

There is no on-off switch; when plugged into an a.c. outlet, the subwoofer goes into a

#### Since Signature costs an extra \$600 over the Sunfire Mk-II subwoofer, initially I had reservations.

standby mode and a red LED at the top of the panel glows. With some bass information, even at a low level, the amplifier wakes up and the indicator glows brightly. After 15 minutes without a signal, the subwoofer reverts back to standby. In actual use, there is no cycling between active and standby modes. Even a string quartet at a moderate to low listening level is enough to keep the subwoofer working.

Mounted behind the control panel is a board which supports a 2700-watt amplifier. The enormous power of this tiny amp has been the source of much discussion in the industry, and if you are curious, I suggest you send for Bob Carver's white paper on the subject, free for the asking from Sunfire. The bottom line is that the design works; and, in the many months that I have the original True used Subwoofers, the Mk-IIs and now the Signatures, the control panel, which also serves to dissipate amplifier heat, has never gotten hot to the touch and none of the subwoofers has ever triggered a 20-amp circuit breaker even though they were used in pairs on the same a.c. line.

#### Listening

Since I had my own pair of the True Subwoofer Mk-IIs and a pair of the Signatures, I thought it would be of interest to go back to my original review, repeat the listening evaluations, but this time compare the Mk-IIs and the Signatures. But first, a word about using two subs

instead of one. A single Mk-II placed in a corner gives me all the deep bass I need. However, using two subwoofers connected In stereo, heightens the sense of hall ambiance. It's subtle,

but it's there. I can't close my eyes and point to a bass source the way one can with a voice or instrument; but, when I turn one of the subs down or off, even if the music has no bass content, the audible image of the hall shrinks and becomes less palpable. As a result, I prefer listening to a stereo pair of subs.

At first I experimented placing the subwoofers next to, just in front, and then behind my primary speakers. But I've ended up placing them diagonally in the room corners behind my primary speakers. Here they produce the deepest bass with the greatest sense of solidity.

#### Listening: Rogers LS3/5A

Despite the many changes in small box speakers over the past 20 years, I still enjoy these BBC mini-monitors from a past age. Compressed dynamics, little bass, and an inability to play at loud listening levels are offset by a sweet natural midrange and unobjectionable colorations. Using them with the original True Subwoofers, I found the LS3/5As to be transformed into something resembling a fullrange speaker. I heard the weight of the orchestra and the solid support of the lower strings that the Rogers by themselves cannot approach. Listening to the same orchestral recordings again, I could not hear any significant differences between the Mk-IIs and the Signatures. They both worked very well with the LS3/5As.

In my earlier review, I had been particularly impressed using the LS3/5As connected through the True Subwoofers high-pass outputs. By rolling off bass information below 70 Hz,

they could play at least 6 dB louder and they became more dynamic as well. Using both subs in stereo provided very satisfactory reproduction of organ recordings. Repeating this listening evaluation with both the Mk-IIs and the Signatures, I could hear some minor differences that were not apparent with the orchestral recordings. On bass pedal lines, the Signatures were a bit more supportive and the sense of pitch was more distinct.

I did change my mind about using the 70-Hz high pass outputs for the LS3/5As. With the exception of organ music, the increased dynamics and higher playback levels provided by using the subwoofers' high pass

#### the I got good results using ected the True Subwoofer True Signature with a wide varis outbase ety of other speakers.

outputs were offset by a slight loss of imaging, transparency, and mid-range liquidity. I find that I now prefer listening to the LS3/SAs full range with a slight preference for the Signatures over the Mk-IIs.

#### Listening: Quad 63

My Quads were purchased new in 1986 as "Professional Models" and have since been



**Sunfire True Subwoofer Signature,** \$1,895.00. Sunfire Corporation, P.O. Box 1589, Snohomish, WA 98290, phone; 425/335-4748, fax 425/335-4746. Internal amplifier output: 2,700 watts average power. Crossover: Adjustable from 30 Hz to 100 Hz. Frequency response: 16 Hz to 100 Hz, +0, -3 dB. Maximum output: Greater than 116 dB SPL from 16 Hz to 100 Hz at one meter including room gain. Dimensions: 13-inch cube Weight: 53 pounds. Warranty: Two years including parts and labor.

#### **Associated Equipment**

Linn LP 12 Lingo turntable with Ekos arm; Koetsu Rosewood Signature cartridge; Linn Karik/Numerik CD player; Audio Research PH3 SE phono stage; Audio Research LS 15 preamplifier; Pass Laboratories Aleph 2 monoblock, Audio Research VT 100, and Sunfire Signature amplifiers; Rogers LS3/5A, Quad Pro 63, Wilson Audio WATT/Puppy V.1 speakers; Audio Research interconnect; Tara RSC Master Generation 2 Speaker Cable and various accessories including ASC Tube Traps, Bob Young Line Filters, G and G Discoveries Pon-Tunes, and Target stands. extensively modified. (An article describing their rebuilding may be found in *The Audiophile Voice* Vol. 4, No. 1) In my 19 x 23 foot listening room, the Quads produce useable bass down to 40 Hz but roll-off begins at about 55 Hz. In part, their placement, 18 inches off

the floor and at least four and a half feet from the nearest wall, contributes to the lack of bass support. The result is a 5-dB drop at 50 Hz and a 9-dB drop at 40 Hz. With the Quads playing full range,

I get my best results with the Mk-IIs' crossover set at its lowest point, 35 Hz. Switching to the Signatures, I found a setting halfway between the 30-Hz and 65-Hz markings produced the smoothest response. Using a Stereophile test CD, I substituted a tripod-mounted Radio Shack sound level meter for my listening chair. After some minor adjustments in speaker location, I was able to set the Signature's volume control to produce a +3/-2 dB response from 200 Hz down to 25 Hz. Certainly this was a huge improvement over the Quads by themselves and flatter than I could get from the Mk-IIs. Due to room resonances perhaps, I did get a 6-dB bump at 31.5 Hz, but I would never have known it had it not showed up on the meter. With both the Mk-IIs and the Signatures, a 90degree setting of the phase control was the most effective.

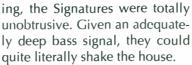
I liked the Sunfire Signatures with the Quad playing fullrange. Bass response is a little smoother than with the Mk-IIs, deep bass is slightly firmer with a better sense of pitch and a rise time that seems faster. Transients like the whack of a bass drum are just a little bit cleaner as well.

#### Listening: Wilson WATT/Puppy 5.1

The Signatures did less for these speakers than either the LS3/5As or the Quads. The WATT/Puppies can play at very high listening levels and are capable of moving a lot of air

down in that 40 to 60 Hz region. Coupled with wide dynamics and fast transients, one can experience a tactile as well as aural response to loud mid-bass. What these speakers can't do is produce the lowest organ, synthesizer and percussive information at the same high volume levels. By

placing a Signature in a room comer behind each WATT/Puppy, this deep solid bass could be recovered, and very high listening levels were possible. When there was little bass information in the record-



Like the other primary speakers, I ran the WATT/Puppies fullrange, but the Signatures were at their best when I used the lowest

#### I like the Sunfire True Subwoofer Signature; I'm really quite enthusiastic.

crossover setting of 30 Hz. The Signatures roll off above 30 Hz is gentle enough so that double basses playing in the octave (42 to 84 Hz) above their deepest open string, gain supportive strength and warmth. Even cellos, bassoons, the bass clarinet

and the deeper brass become more substantial. Where the Signatures make their biggest impact is with organ and bass As good as the drum. WATT/Puppies' bass is, they can not reproduce that visceral, skintingling deep bass without the help of a good subwoofer.

When comparing the Signatures with the Mk-IIs in conjunction with the WATT/Puppies, the Signatures exhibited another advantage. The LS3/5As and the Ouads worked best with the crossover set somewhere around 40 Hz. The

WATT/Puppies were at their best with the subwoofers at the lowest crossover setting possible. The Signatures could work in a slightly deeper range than the Mk-IIs. They were also less likely to interfere with the bottom end of the Puppies which was

Heylette

award-winner

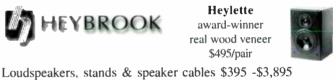
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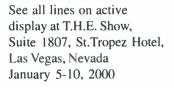


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never a problem with either the Quads or the LS3/5As.

#### Conclusion

Is the Signature a better subwoofer than the Mark-II?

It most certainly is.

Is it worth an extra \$600.00? Maybe.

The Signature can play twice as loud. But in my experience, this is gross overkill. In my slightly damped 19 x 23 foot listening room, a single Mk-II placed in a corner can produce all the shuddering deep bass my ears and body can handle. The Signatures have marginally superior transients, can go a bit deeper and provide a slightly better sense of pitch. If one is using a full-range speaker without either an external crossover or the high-pass outputs that the Sunfire subs provide (and I recommend not using these outputs), then the ability to adjust the Signature model's crossover

frequency as low as 30 Hz is quite clearly advantageous.

There were two other pleasant surprises when I switched from the Mk-IIs to the Signatures. In order to avoid low levels of hum, I have had to use a two-prong cheater plug where ever I connected a Mk-II to an a.c. outlet. These are not needed with the Signatures. Both have been totally free of hum with their three-prong power cords plugged directly Into wall outlets.

One other difference I am at a total loss to explain: With the Mk-Ils, I have a bass feed-back problem when playing records with my Linn LP 12 turntable, which has a notorious reputation for coupling with airborne deep bass. This has been enough of a problem that I usually turned the Mk-Ils level way down when I played an LP at higher levels. The feedback problem hasn't gone away, but for some reason it is far less evident with the Signatures. I hope my reaction to the Signatures has not seemed guarded or tepid. I am actually quite enthusiastic and have purchased both review samples.

I am using them as a stereo pair in my primary system with either the Quads or the WATT/Puppies. One of the Mk-Ils is now part of a secondary system in a smaller room with either the Rogers LS3/5As or Totem Ones. Because of its small size, it can be tucked away, almost out of sight. The remaining Mk-II will probably end up somewhere else in the family.

Obviously, I do like the Signature model, but my enthusiasm for the Mk-II remains. Had the Signatures not come along, I could have continued to live happily with a pair of Mk-IIs. Both the Mk-II and Signature subwoofers do their jobs and do them very well and both are highly recommended.



the audiophile voice

## *Legend Audío* LM-Tríode Monoblock Amplifiers and LAD-L2 Preamplifier

AM NOT GOING to write a cutesy introduction to this review. I am not going to invent new words to describe how the product performed, and I'm not going tell a story of how I received it on a Wednesday afternoon while the rain tapped lightly on my window as I gently carried the carefully packaged brown carton up the soft carpeted stairs to my cozy listening studio, yada yada, blab blab blab. In other words, I will not insult you with poor writing or little to say, let some other magazine do that. This whole darn business of reviewing audio equipment is way out of control not only with poor and ineffective prose, but (worse yet) with improperly set-up sys-

#### Peter Breuninger

tems or inappropriate (impedance) matching of components. There are no qualifications for a professional reviewer, and I use the word professional very loosely here, most reviewers are not paid for their work (well knowns excluded, Fremer, Tellig, Colloms, etc.). (Editor's Note: Or when they are paid, they generally aren't paid a living wage. E.P.) Another problem is the reviewer with a big ego (surprise, surprise) who likes to bully manufacturers with long loan times and demands of insultingly low "industry accommodation" prices. One reviewer told me with a great pride that he and his reviewing partner liked see how many years they could keep a piece of equipment; "Kinda like a game," he mused, "we never return manufacturer phone calls and stall returns with every possible excuse." Well, you get the drift....

I am therefore duty bound to say, this is a professional review, written by an experienced audio reviewer who painstakingly insures proper setup and matching of each component under evaluation. If you are new to these pages, please be advised that my reviewing expertise is best with low-powered tube amplifiers and analogue playback devices, in particular reelto-reel tape recorders and LP systems.



I have discovered over the years that there is no positive correlation between the cost of a component and its performance. What this too often means is that the more you spend on this hobby, the less real return you receive in improved sonics. As an equipment consumer, please check your gullibility at the door when you read about five-figure prices for components that "redefine the state of the art". Most often the state of the art only resides in the reviewer's mind. I'll say this, too, throughout my years of evaluating components, particularly those of the analog persuation, it's not the individual piece of equipment that's most important, it's the set up and matching with the rest of the system that's paramount.

The Legend Audio design LM-Triode monoblocks and the LAD-L2 line stage are, as you might expect, perfectly matched to one another, and when they

are taken as a team, they need no further experimentation except perhaps for some testing of interconnects other than those which are "options" from Legend. In comparison to my reference cables from Crystal, Nordost, Kimber, and Goertz, Legend wire is equivalent or better in "optimizing" a system configuration. Wire is very impedance dependent, I find, and it cannot be judged without differing loads. In one system Kimber optimizes the connection, in another it is Legend. If you simply read reviews and judge wire directly from what that reviewer says, you will be very disappointed if your system differs even slightly in impedance from the reviewer's.

Loudspeakers used for this evaluation were the Classic Audio Studio Standard IIs, a large, squat three-way horn design with a 15-inch bass reflex with all TAD drivers that some

consider the best in the business. These speakers are very efficient and easy to drive with sensitivity of 97 dB SPL, one watt, one meter, and with a ruler flat 8-ohm impedance. Source components included the excellent BAT CD player; tables from Walker, SOTA, Thorens, Michell; phono amplifiers from Benz/Lukashack, EAR, and the CAT's phono stage, and cartridges from ClearAudio, Denon, Koetsu, and Sumiko. Of these source components, the BAT CD player and EAR phono amp are the only I don't own outright

The six-month review period intersected with a singled-ended amplifier survey for another magazine and thus offered many combinations for the Legend line stage and multi comparisons for the Legend LM-Triode monoblocks. It is rare to have so many amplifiers (15) to mate with a linestage and to compare with one another. Please be



Reference Quality Pure Class A Power Amplifier

#### S40

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#### M70

Monaural Power Amplifier

70 watts per channel

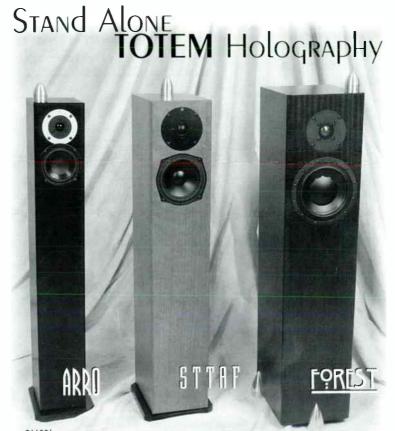
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#### the audiophile voice

advised that the amplifiers in the single-ended survey included the best in the world. Singleended triode (SETs) amplifiers are the most expensive per watt amplifiers available and the most difficult to match to a loudspeaker. SET power out puts rarely go over 10 watts and their output impedances are many times higher than push-pull amplifiers. What this means is that the Legend LM monoblocks were up against the stiffest competition in the top echelon of a far greater performance category. Yes, everything you read about single ended amps is true. They have better detail, more natural transients, far more acoustic envelope, multi-dimensional timbre recreation, and most importantly, no sonic enjoyment barriers. But unless you have heard single-ended system done right, you will not understand. I can write any word I choose, paint any acoustic picture imaginable, and conjure up the actual Genie form Aesop's fables to grant you my very own personal sonic experiences, and you will fall miles short of the getting "it." The only way to experience "it" is to live with "it." You cannot visit, you cannot eat, you cannot touch, you cannot see, you cannot smell, and most of all you cannot hear "it" in one listening session. Now that I've elevated the SET experience to unobtainable through the written word, let me tell you the Legend the LM Triode mono blocks are the only amplifiers in my experience that come asymptotic to "it." So to begin...

#### Legend LM-Triode Monoblocks

These Legend amps are 40watt workhorse reference amplifiers that allow mortals to sip from the cup of the Single-Ended Gods. Yes, my ears are over sensitive to crossover notch distortion, an unavoidable roadblock imposed on the listener by splitting the musical analog into two separate and distinct halfs that unite again at the output transformer. Perfect matching never occurs, Humpty Dumpty never becomes whole, and that tinny little microscopic mismatch appears as a distortion. You may not know it as a distortion for you may have never experienced reproduced sound without it. It is no different from living without eyeglasses. You become accustomed and you adapt, but these are simple



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human survival tricks, mind you. Survive to procreate, that's the biological job assignment. Listening to music not only passes the time of life, but enriches our living experience to strengthen the individual and to improve the race. It may take a

little thinking and dot connection to get my drift, but this business of music creation, and ours of recreation, is nothing short of survival of the fittest. Suppose that we men are happier, more adjusted, we are not then more

appealing to the opposite sex, and thus more apt and able to reproduce? Would you women rather reproduce with a wino or concert pianist? See, all this music listening is good, and if we can make it easier with fewer barriers, the better for the race.

If you are rolling your eyes, just think back to the early days

when the man with the keenest hunting aim was exalted and honored with the tribe's most desirable female(s). Today, we hunt with our heart, to elevate our existence. The culture we live in offers survival safety-nets of food, shelter and medicine, so

The Legend L-2 preamp is of reference quality and deserves my highest recommendation.

> our needs become wants and our time and physical-plus-mental energy is spent elsewhere. It is with this thinking that we honor those who bring us happiness; the more happiness they bring, the more we honor them. I bow then to honor the simplicity of the Legend Triode monoblocks—simple in result, with more musical bounty, more

emotion, and greater happiness, which together equal higher sexual advantage and diminished selection of our adversaries. Damn good things to say about an amplifier before stooping to the usual pap audiophile jargon....

> Jargon, what is it? Nonsensical or incoherent utterance or the specialized or technical language of a group or profession. With audio, it's usually more of the former masquerading as science and hence allowing

the participants an exclusionary club to exercise their ignorance.

So let me say, and I do so with the utmost of ignorance, that the Legend Triodes offer the best continuous musical presentation possible this side of singled-end triodes. That's right, continuous, a stupid word, created by a stupid collective to describe the level of musical



At upper left is the incredible Speaker Enacom. It smooths out loudspeaker response so much you'll wonder why there isn't one in every speaker.

At right is the AC Enacom. Plug it into an outlet next to your system, listen for a while. Then remove it...and wonder how you ever listened without it.



10524 Lexington Drive, Suite 300, KNOXVILLE, TN 37932 Tel.: (423)966-8844 (800)554-4517 FAX: (423)966-8833 www.mayaudio.com involvement and how long it is sustained. This Legend hammers you with emotion, not letting up until the conductor finishes the sermon. Yes, this is the most involving and musical amplifier of this genre I have yet to describe. Low-powered pushpull is better than high-powered push-pull minus notch distortion. So by simple reasoning, the Legend Triode will let the music in better than any higher powered tube amplifier. If you buy my reasoning, the Legend Triode mono blocks far surpass the \$89K Jadis 800 due to fewer signal reassembles. But, but-you must have somewhat sensitive speakers to get this musical allowance. I suspect any speaker rated over 88-dB SPL efficiency, with higher than a four-ohm minimum load, will open the door to the Legend's excellence.

Oh, I cannot forget to say, the Legend has an immense soundspace and captures the full



Legend LM-Triode Monoblock Amplifiers and LAD-L2 Line Stage Preamplifier, \$5495 per pair and \$4494 each, respectively. Legend Audio Design, 2430 Fifth St., Units G&H, Berkeley, CA 94710; phone 510/843-2288, fax 510/843-3298, website www.legendaudio.com.

recorded acoustic from a warm natural perspective. but Character-wise, yes it's warm, but never annoyingly so. If you take the plunge from solid-state gear to tube, this is the amplifier of choice to deliver what tubes are best at-sound space rendition, capturing trailing harmonics, and three-dimensional imaging. Downsides? They'll take time away from other activities because you will be belted into your listening chair for far longer sessions. And, yes, if you like your bass tight, dry and artificial, you'll be disappointed. But then, go back to the Spectrals or Krell or Adcom or whatever and see how long you listen.

#### Legend LAD-L2 Preamplifier

First off, this is not a preamplifer, it's a line stage. I borrowed the EAR phono stage, and hot-rodded the Convergent Audio Technology (CAT) preamp to listen to "music." Wow, this is a one great line stage, one that equals or surpasses the CAT Mk III in musicality and plain old "I'd rather use this" for music listening. Whatever pace



is, this guy has it (I still hate the word pace, it means nothing to me but to "put all together"). Rich, big and real; those are only three words but they are the best three I could find to describe the Legend. I mated it to over a dozen of the finest single-ended amplifiers, and it opened the door to more music that the CAT, a little blurry in the lower octaves and not as crystalline as the CAT's upper reaches, but nonetheless, the Legend never interfered with the music. Its warm character was more preferred to the cool CAT for every day listening. And let me say, the Legend's look and silky feel humiliated the CAT's cold, clickity and notchy controls. I love the bronzy gold volume control-it's smooth and rich and simply bespeaks luxury.

The LAD-L2 is a two-chassis unit and will need additional shelf space. The power supply is connected by detachable umbil-

ical cord unlike the CAT and has the same refined look as the control unit. This is one sexy package and the only line stage I have ever hesitated about sending back to the maker. If I had more space and if it had a phono stage, I would have bought it. Attributes for audiophiles include the deepest soundstage yet offered in my new listening room. There's a chesty and wholesome lower midrange, thick with life, and teeming with emotion, no thinness whatsoever. It easily handles explosive dynamics and riveting micro transients (there is no such thing as micro dynamics, dynamics are dynamics---do not let the neologisms in vogue in other magazines blind you to musical realities). Instrumental timbres are true and easily identified through a very fine grain lens. Overall character is dark, but very pleasing, and to this listener desirable for everyday

playback material. If all you do is play audiophile CDs and LPs, go get yourself a cool and overly analytical linestage to pinpoint subway sounds and wall material. If you're a music lover, mate this LAD-L2 to your solid-state behemoth and you will listen to more music in a week than you previously did in a month with that SS preamp you now have for sale in an e-bay auction.

The Legend L2 is of music reference quality and is deserving of my highest recommendation. It is warm and honorable to the music without loosing attention grabbing detail. In this lofty price range, the Legend offers exceptional ergonomics, Lexuslike sonic refinement, and the highest level of musical involvement. Mate this preamp to the Legend LM-Triode monos, and you'll have a blockbuster combo that will give you years of satisfaction and bring pangs of envy from your solid-state buddies.



### Ríchard Gray's Power Company Power Enhancer and Surge Suppressor

**Bill Wells** 

**Do who is Richard Gray any**way? And what is his Power Company?

Gray is a licensed electronics technician who has spent many years dealing with problems associated with the poor quality of the a.c. line feed into people's homes and their cherished audio and video systems. According to Richard, his unit, named Richard Gray's Power Company, "effectively places your components closer to the power source so that they can be provided higher current on demand than is ordinarily available for a normal home system." He does not consider his product to be anything like a conventional power line conditioner, though it does provide some of those benefits.

Gray states that "his units, unlike line conditioners, are wired in parallel, not in series, to the source of power and therefore introduce no current limiting into the circuit." Also because of the parallel connection, says Gray, "the unit provides very effective surge protection as well as squelching noise on the a.c. line."

After installing the Richard Gray Power Company (RGPC) unit into my system, my initial reaction was quite favorable. My usual pattern with a totally new piece of equipment is that I find with continued listening certain sonic anomalies; this time the overall sonic benefits actually became even more evident as time went on.

Being of a somewhat cautious and questioning nature, I pulled the unit out of my system and went back to the original reference gear configuration. Interestingly, that did not satisfy me for very long and I could hardly wait to get the RGPC unit back into my system. Once I did that, I knew I was onto something special.





D

Since I will be concentrating more on the sonic effects of the RGPC units rather than doing a detailed technical description, I suggest going to their website (http://www.audiolinesource.co m) and pulling down data if you're a technically curious sort.

plugged my line stage and CD

player into a single RGPC, using

the stock a.c. cables supplied

with the overall sonic changes

in this single application, I

added an additional RGPC on

each of my monoblock ampli-

fiers. After becoming familiar

with the RGPCs throughout my

system, I replaced the stock a.c.

cords for an alternative cable by

Thunder. These cables seemed

to provide additional guieting

over the stock a.c. cables and I

used them through to the com-

pletion of my review. In the end,

they became an essential part of

tional RGPC units in a star-clus-

ter configuration. Although these

additional units made noticeably

subtle improvements, I'm con-

centrating my comments on the

basic idea of putting a single

gestion, I also tried one of these

RGPC units with my older RCA

27-inch television. Immediately,

improvements in flesh tones,

much better contrast and

improved detail, became evi-

dent. My oldest son also inserted

Interestingly, based on a sug-

Toward the end, I tried addi-

my reference system.

unit into a system.

called

Blue

Once I had become familiar

For the record, 1 introduced this product into my system by starting with one single unit at the front, that is I

with the unit.

Straightwire

#### I feel use of the **Power Company in** my audio system to be a no-brainer.

other handles his high-power stereo amplifier. He's had very good results overall.

> My first reaction

to the RGPC units in my reference system was that their overall sonic benefits were so obvious that permanent installation of these units was a no-brainer. Not only did I hear significant benefits immediately, but as time progressed, I found even more improvements in the sound of my system than when they were first installed. Additionally, every person that had an opportunity to listen to my system, with and without the RGPCs in place, was able to guickly hear the difference.

one of these units in his home

digital-recording system and got

noticeable improvements. As a

result of this, he's put two units

into his system on a permanent

basis. One handles his preamp

and digital recorder, while the

I should add that prior to my inserting the RGPC units, I had been experimenting with various types of exotic a.c. power cables and had achieved very positive results. The particular cables used were noted for their ability to minimize noise from the a.c. line as well as shielding r.f.i. For the most part these cables improved the apparent noise floor and provided a clearer, more-detailed sound from my system. However, with the RGPC units installed, these improvements were taken to a higher level and subsequently became the preferred choice of weapon in the war on a.c. power line noise

Specifically, what I found most intriguing with the RGPC

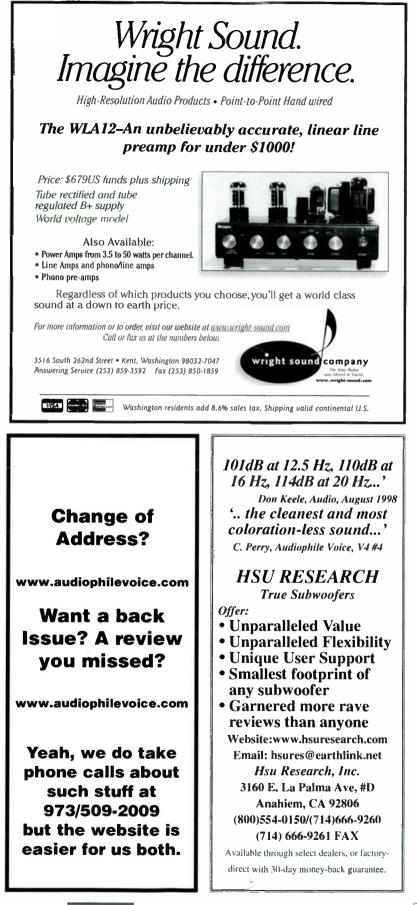
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units was that not only did they immediately and guite noticeably improve the noise floor, the overall system resolution, ease of dynamics, and effortless flow of music from my system became rather astonishing. Not only did dynamic contrasts become more convincing, the transient response and attack of individual notes was noticeably improved as well. In particular, the leading edge of musical sounds had more definition without apparent edginess. The trailing edges also became better defined. Musical reproduction through my system just seemed to have better control without as much extraneous noise floating around.

In addition, the bass tightened up, with a greater sense of articulation, air around individual notes, and a sense that there was more bass and, at the same time, that it was better controlled. Furthermore, because the noise floor was lowered, the individual bass notes had noticeably greater clarity and intelligibility. Not only could I hear the individual notes better, the intonation, harmonic structure and timbre of each note became more readily apparent.

Prior to the use of the RGPCs. my system's overall level of resolution and retrieval of inner detail was already at a pretty high level. With the RGPC units installed, the resolution was even more improved with a noticeably darker background and cleaner, clearer sonic window. Perhaps even more noticeable than the bass improvement was the enhancement of image purity over the broad midrange and throughout the upper frequencies. In particular, the mids were clearer and better fleshed out, while the highs became crystal clear, with great detail



and a sense of effortlessness extension.

Upon further listening, it became apparent that it wasn't so much that the highs were actually more extended as much as the removal of sonic hash allowed me to hear high frequency notes in a purer way without any garbage around them. This cleanli-

ness was a relief, as I also quickly found the typical high frequency CD sound to be not as evident or offensive as I had previously felt.

Essentially, with the RGPC units installed, the power level of my system seemed as if it had been stabilized. When my electronics called out for more a.c. juice, as on dynamic swings, the additional instantaneous current was simply there. Truly, the product name, Power Company, seems quite appropriate. With these units in my system, I felt I had my own personal power company rather than a simple line-conditioning product.

Now, while my system already operates on dedicated 20-amp circuits, the main a.c. feed into my home, from the outside terminal block, provides all the juice into the house. With these dedicated circuits, I basically avoid direct interference from other electrical devices on the circuit impacting the sound of my system due to their dumping crud back into the line or turning on or off. With the RGPC units in place, it seemed as though I had much more effectively isolated my components from a.c. line noise.

Bottomline, the RGPC units provide a cleaner, clearer path from the power source to your gear. Through them, my system had a more open sound, with new air and effortlessness of musical flow. The overall results were much in evidence, and once these babies go in your

For me, Richard Gray's Power Company provided a more stable power source and lower line noise.

> system, they are not likely to come out. Good is good, and these puppies are awfully good.

#### **Audition Power**

Good examples of how the music was treated by the RGPCs came through clearly when playing some of my favorite CDs. Perhaps the most immediate improvement I noticed was to voice and various instruments with lots of midrange musical content. Listening to various tracks on the Only Trust Your Heart CD by Diana Krall demonstrated how effective the RGPC is as it helped provide a great sense of realism to her voice, which seemed to be right in the room with me along with her piano. With the RGPCs, the sound became more alive and I felt to be much more within the musical performance.

This "live" feeling did not, however, give the impression that the music was being shifted forward. Rather, the RGPCs simply seemed to help my system more fully carry out its inherent good capabilities. Not only were the vocal and piano performances enhanced, Christian McBride's acoustic bass playing became an even greater joy. With the RGPC units in place, this instrument offered an even richer harmonic portrayal along with better control and articulation. The total musical expression with the RGPC units in

place simply made the reproduced music sound more authentic.

> Another example of the improvements provided by the RGPC unit was Milt Jackson's superb playing of the vibes on his CD titled *Mostly Duke*. This is a live recording, and with the RGPC unit, the apparent nature of the

live acoustical environment became more noticeable. There was an improvement in the sensation of being in the same space as the performance. With the stripping away of extraneous line noise, the recording's inherent qualities were able to reveal themselves that much more. Better rendition of audience hand clapping and conversation made this recording sound much closer to the "live" thing.

The real glory of the RGPC unit came through, however, when listening to Milt's performance playing the vibes. His style of playing this instrument is to allow it to vibrate and pulsate in a way that creates a unique ebb and flow of the music. At times it can be rather enchanting; however, sometimes the subtleties of his style are buried in the noise of the recording. With the RGPC unit in place, I was able to more clearly discern the various nuances of his playing style as well as being able to better make out his instrument within the recording.

Other recordings revealed further attributes of the RGPC units. Cymbals had a sheen and shimmer that was clearer and cleaner than before. Subtle percussive sounds such as brushwork, tingling bells or the tapping of drumsticks on the drum rim became clearly evident. All of this occurred without a change in the overall tonal bal-

the audiophile voice

ance or stage perspective. The RGPC simply have opened up a larger and cleaner window to the music.

On Gene Harris' CD titled Brotherhood, the RGPC unit clarifies the reproduction of piano to allow the listener to better hear the nuances of Harris' playing style and more clearly follow his intricate fingerwork. Along with this, the acoustic bass on this CD is reproduced with more authority and control, while drums and cymbals explode in a more realistic manner, much clearer with the RGPC units in the system.

According to Dick McCarthy, the marketing guru at RGPC, Richard Gray has employed proprietary choke technology such that the device is in parallel to the a.c. line, rather than being in series. It is not a current-limiting device nor is it an isolation transformer. It does, however, squelch a.c. line noise and internal crosstalk generated by various audio and video components plugged into the RGPCs, and prevent the noise from entering back into the a.c. line causing further contamination elsewhere on the circuit.

The RGPC units are also said to provide a short term supply of high-current power. In my use of the RGPCs, I believe this effect brought about a more stable a.c. power supply, allowing my components to provide effortless musical reproduction without incurring any apparent dynamic constriction. With the RGPCs in place, an improved sense of dynamic pace, ease and openness was immediately apparent.

Overall, I have found the RGPC unit to be a most effective improvement to the sound of my already fine-sounding high-end system. Although I cannot state definitively that these exact same results will occur in every audio system, what with the cleanliness of power varying from place to place, I am confident that this product will improve the sound for a large number of users. Its application and use are very simple and totally straightforward, while the benefits were significant and readily observable immediately upon installation in my system.

And as I said at the top of this review, I now consider use of the RGPC units as essential in my system, truly a no-brainer.



**Richard Gray's Power Company,** \$700.00. Audio Line Source, 2727 Prytania St., Suite 6, New Orleans, LA 70130; phone 800/880-3474 or 504/897-6688, fax 504/891-0102, website http://www.audiolinesource.com.

#### **Associated Equipment**

B.A.T. VK-50 SE line stage; B.A.T. VK-1000 monoblock amplifiers; B.A.T. VK 5 CD player; ESP Concert Grand speakers; ART a.c. power cable; Aural Symphonics a.c. power cord and distribution bus; NBS Monitor Zero interconnects speaker and power cables; Straightwire Blue Thunder a.c. power cords; ASC Tube Traps; Bedini Ultra Clarifier; Goldmund Cones; Solid Steel Equipment Stand, and Walker Valid Points and Discs.

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#### Flash

Three recently filed lawsuits, reports *Replication News' Media-line*, say that the hacking last November of the DVD encryption scheme was "the linchpin in a conspiracy to facilitate illegally pirated copies of DVD videos.... The defendants maintain that their interest in defeating the encryption [was to make] DVD compatible with the fledgling Linux computer operating system though a legal practice known as 'reverse engineering.'" The suits also allege that posting the decryption keys on websites basically was theft. **HE WINNER** of the "Fast Hair Loss" Contest was given an autographed photo of Paul W. Klipsch as a very small sideshow to the Big Occasion of the 95th Birthday of *Meister Speaker Engineer* Klipsch which was celebrated at the 2000 Winter Consumer Electronics Show. While PWK pointed out the shiny spots on the Chrome Dome of *TAV*'s editor, Arnie Balgalvis (immediate past president of metro-New York's Audiophile Society) chortled, confident that he will never suffer the public humiliation of looking like a human ball bearing.

ACK PAGE

Seriously, it was an honor and pleasure to be present for PWK's CES 95th Birthday Celebration. His famous and astonishingly efficient Klipschorn is still in production and still plays 104 dB SPL at one meter with one watt input. And I still have one of his yellow buttons up on my bulletin board-*The Editor*.



**CHUCK BRUCE**, of The Atlanta Audio Society, took these photos and is the winner of our bi-montly 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 can't return unused photos unless they are accompanied by a stamped selfaddressed envelope.

Send your pix to: The Editor, The Audiophile Voice, 215 Glenridge Ave., Lower Level, Montclair, NJ 07042.

Paulwillight

# See Bob Rock.

The new Sunfire True Subwoofer by Bob Carver has received reviews that are redefining the subwoofer industry. There has never been a subwoofer like it! There will never be a subwoofer like it!\*



"The True Subwoofer is an achievement on par with the space shuttle and the twinkie." -Al Griffin Home Theoler, Feb, 97

"Talk about floor shaking bass...turned up to maximum level, I don't think there was anything in the house that wasn't shaking, including the

concrete foundation!"

"Don't, I repeat, don't even think about purchasing another subwoofer without giving the Astonishing True subwoofer a listen." -Joseph M. Cierniak The Sensible Sound, Issue # 60



"The lowest, flattest, deepest bass I have EVER heard or measured." -Julian Hirsh Stereo Review, Dec. 96

\*Strictly speaking: for 20 years until patent expires. It's a small eleven inch square bass cube, and it shakes the walls and rattles the rafters. It has its own built-in two thousand, seven hundred watt amp!

> Trust Bob. It Rocks!

http://www.sunfirelabs.com

orion on Sunfire. tail or wille to Sunfire Corporation, PO Bax 1589, Snahamish, WA 98290 • (206) 335-4748 • Distributed in Canada by Karbon Trading. • Bab Carver is no langer affiliated with Carver Corporation. • Tech Notes: flat to 18 hz. Powered by 2700 watts

from bis mind

Sunfire

## Alpha-Core Micro Purl

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Developed and manufactured by Alpha-Core in Bridgeport, Connecticut, USA. Patents Pending.

#### Alpha-Core, Inc.

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