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Stereophile Guide to Home Theater Vol. 1 No. 2

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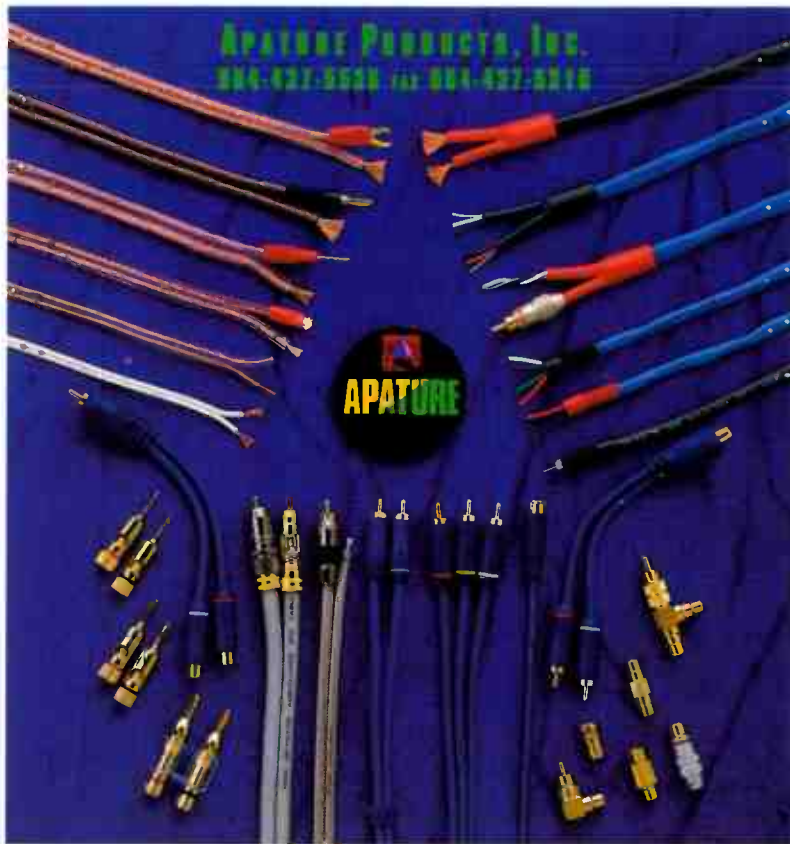
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Ed Foster, Audio; March, 1996



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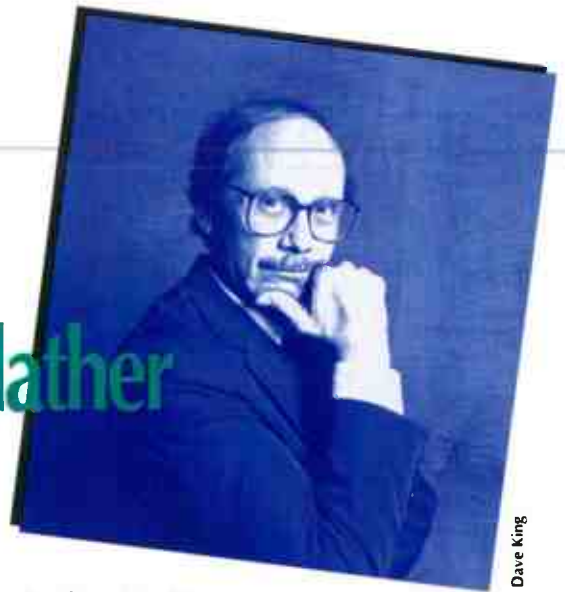
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World Radio History

This Month's Blather



Dave King

So far we have received few letters from subscribers concerning the renewal of *The Audiophile Voice*, but I hasten to say that we welcome those few that have come our way and will print those which seem of general interest.

One came from Mr. Yip Mang-Meng, who lives in Singapore. He offers several suggestions about what he will find good to include in future issues. I hope to prompt more such requests by publishing herewith most of his letter, along with my response:

1. Best wishes to you on your new venture and adventure.

2. Concentrate on loudspeaker reviews—it's the most important item in the audio chain, besides the recordings and the room. There are over 3,000 loudspeakers out there to pick to review.

3. Give more useful tips to set-up (e.g. room treatment, etc.), so that readers can maximize their investment. My experience is that the reason most audiophiles upgrade is they are dissatisfied with the sound, because of sub-optimal set-up, which they incorrectly attribute to the equipment. Sad but true.

4. Get experts to write features—Jung, Crabbe, Audio Engineering Society contributors, Keele, professional engineers, et al. I don't quite trust audiophile reviewers.

5. If possible, put some vital graphs for speaker reviews and a table of measurements, as in *Hi-Fi News & Record Review*.

6. Do lots of recordings, and sound and performance are to be mentioned. Put in pictures of covers. Do 50 recordings per issue at least.

7. Publish in a larger format, say *American Record Guide* size.

8. Binding is all important. Readers hate loose sheets all over the place after the first reading, e.g. some issues of [other magazines].

Once again, best wishes. I have always liked your plain talking and sincerity."

I wrote back to Mr. Yip:

Thank you for your good wishes for *The Audiophile Voice*. They are much appreciated. I also appreciate having your advice on what to include, how to include it, and who should write it.

Some of the things are, however, going to be difficult and potentially not possible in quite the way you suggest. I like your idea that TAV ought to concentrate on speaker reviews, as I think that changing from one speaker system to another makes, by far, the most difference in the resulting sound. If this difference is measured in miles, then the differences between pieces of equipment in any of the other categories can usually be measured with a yardstick or sometimes a micrometer. (Now that's going to rub some people's fur the wrong way, so let me say right now, this space is open to different views on the subject.)

But let me push this a bit further. It is my experience that we editors and most of the writers too often forget about the relativity of these contributions, and when we do remember, we go too far in minimizing the smallness of the contributions of the subsidiary parts of the system. It isn't that, say, speaker wires cannot or do not play a part in the system, or that the differences between amps, to cite another example, should be ignored. Indeed, if an audiophile is working at optimizing his system, he ought to pay attention to these things. However, for me, I can get the most resulting change in my system when I change speakers; others may be different, but in my 25 years of professional experience in this industry, changing speakers is the biggest thing for most other people, too. But, one shouldn't forego part of the fun of high-end audio by ignoring the details of fine tuning with new speaker cables or

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Bascom King, Audio, August 1995

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installing an isolation platform beneath the turntable or the use of other such items. I have always liked doing such things myself.

I like your idea of including more tips for set-up of speakers—and anything else we review—and I intend to try to get more room treatment items reviewed. And I agree with you that sub-optimum set-up is too often attributed to the equipment, particularly with speakers. One should spend lots of time positioning new speakers when they are first brought home, and one should not assume that because a system sounded great in the store that it will sound just as great in the home listening room. There is a lot of interaction in this area, much of which is non-intuitive.

Your items 4 and 5, getting experts to write features—Jung, Crabbe, AES contributors, Keele, et al.—and possibly including some “vital graphs” and a table of measurements are examples of the “difficult” things I mentioned above. Don Keele, for example, “belongs” to **Audio** magazine, from whence I came, and a complete changeover to the graph and measurement orientation would, I think, kill this publication at this time. Further, I have an obligation or debt to The Audiophile Society (and its writers) who have given me this opportunity, and they desire to write in and read the more accessible, non-

technical style that has been TAV’s trademark characteristic.

Both sound and performance will be mentioned in our reviews of recordings, as has been generally done so far, and photos of covers and/or artists will appear. Insofar as doing reviews of at least 50 recordings per issue goes, well, that’s ambitious. While TAV is still a labor of love, as when it was produced by the Society, my family and I need to make a living from these efforts, so that some of the decisions will need to be seen as having a strong economic component.

As you will have noticed, this issue of TAV is in a larger format, and this is done provide a better “canvas” for both editorial and advertiser graphics and because over the past few years advertising units have increasingly tended to come in full magazine sizes, rather than the sizes dictated by the former “digest” size. I agree that binding is important, which is why TAV retains its book-like perfect binding. I similarly think that the covers are important tools in telling potential readers who we are, so I intend to retain the services of cover artist George Angellini, who did the last few covers, and to keep using the UV laminate to give that nice “feel” to the cover.

Again, thanks for the nice words; some days they are hard to come by. I hope that you like what we are doing well enough to become a subscriber.

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Loss and Found

David Nemzer

It is quite normal for me to be at a loss for what to write about. Last time I mourned the loss of record shopping and record safari trips. But then I had a stereo to listen to, not to mention a house to have a stereo in.

Now, as I write this article, I'm stereoless and homeless as well. Let me explain. Like most audiophiles I personally know, we all suffer from the classic audio problem:

SPEAKERTOOBIGIS FOR-ROOMIS.

Most of my friends and also my audio acquaintances have these pillars big enough to hold up a bridge in rooms too small even for mini monitors. Almost all of us, and I include myself, still have egos too weak to have a realistically sized speaker in our systems. We spend millions of dollars on the most aesthetically offensive room treatments known to women (as well as most men if they would only have the strength to acknowledge it). Sure, traps and Room Tunes don't look that bad. It's just that most of us need 25 traps and 56 Room Tunes to make that

room sound really good. The fact that with them the room looks like a freezer full of hot dogs and rolls seems to escape most audio men. This fact never seems to get past our "Can't you get rid of those WIRES, dear?" partners. I live in a 135-year-old row house in the oldest section of the city, with rooms

sized for people who were probably much shorter than I am. There were a total of FIVE duplex receptacles in the eight rooms (I mean, this house was built before electricity), and which has a listening room (sorry, parlor) "L" shaped with two legs 18 feet long but only 10 feet wide. My audio buddies, this is audio hell, and you can be sure that every one of my friends tell me this every time they come over.

Well, I finally decided they were right, so after a great deal of moving, and packing of 46 U-Haul boxes full of records (you would never think that 12 feet of vertical shelves could hold so many horizontal boxes of records), I broke down the stereo, and then broke down the house! Out went the walls, the floors, the beams, the wiring, and my bankbook, God bless refinancing! And how are things sounding now, you may ask? Well, you know those answering

machine messages like "you better call the builder right away," well, I'm into week number 10, and I still haven't gotten back in yet. Who knows when. I've had a few of my audio friends over to see the shell, still unfinished. They look at my 650 square feet of new, oak-floored living room and say "CARPETING!!!" or "You know, you really should have torn out that 6-foot marble fireplace with that 16-square foot mirror. Bad for sound." And more of the same. Then I have to deal with my partner who would like nothing better than to fill the room with floral prints on overstuffed furniture. "What do you

mean? I can't put ANY furniture in your AUDIO SALON!" Thank God that my ceiling height in the basement is lower than my head height, otherwise I'd be down there like so many of my audio friends.

To make up for the loss of my stereo and my music, I've resorted to actually going out to hear live perfor-



Sharon Pitts

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— excerpts from *Audio Magazine*, by Anthony H. Cordesman



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mances of a musical obscura nature—that of hearing singers in intimate settings. To hell with concerts in Avery Fisher Hall or Radio City Music Hall. I want to hear someone who is singing to me. I go to cabarets or, more specifically, to those small music clubs that put on performances for small audiences of focused, attentive listeners. No noisy bars, no loud hand-waving pot-heads, screaming at a screened, over-miked, rock concert. I want a personal connection with the performer, with the sound of their voice, and with a minimum of electronic interference.

My first task was to eliminate all the tourist traps, the overpriced phony supper clubs, and look for that small setting that features the best sound I could find. For my ears, the best sound I've heard is a small club called Eighty Eight's (228 W. 10th St., New York, N.Y.; 212/924-0088). It's often written about as "a secret or unknown club" and compared to all those better-known, higher priced spreads, but what is never mentioned is how it sounds, how a performer is presented to its audience. I can't promise you 100 percent acoustical purity, but the production values are so high that you'd wish live recordings were sourced there. I spoke with Jaye Lee, Eighty Eight's sound and light engineer, to try to understand why most live venues were so poorly produced and this place so good. What our conversation boiled down to was the club's belief in a natural presentation of the live experience with the minimum interference of electronics. If only recordings of this type of performance were as considerate.

In addition to the attention to sound, great care is evident in the construction of the room, which has padded walls, banquets, and chairs, as well as baffled ceilings. There even is a passageway with a double thermal-pane door between the room and the rest of the club to further keep the room as quiet as possible.

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I can tell you that my last night at this club was to hear a remarkable singer named Natalie Douglas, who I chanced upon at the last National Cabaret Convention singing but two short and wonderfully expressive and moving songs. Normally, a cabaret performer even of this high talent level would be lost but for a club like Eighty Eight's. Does she have any recordings available? Probably not. Is she better than most of the pop singers out there with recordings? Unquestionably. Will you hear her live? Not if you don't go to a club.

I'd like to suggest two excellent resources for experiences and recordings; The Mabel Mercer Foundation (230 E. 49th St., New York, N.Y. 10017; 212/980-3026) supports and promotes cabaret and cabaret performers. For the past five years, they have presented the Cabaret Convention in the Big Apple. If you are lucky enough to get a ticket to any of the seven dif-



Sharon Pitts

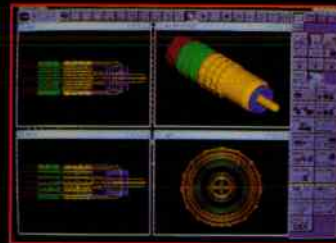
ferent evenings (at \$10.00 a ticket!), you will hear 15 or 20 different performers each night, all good, and some great. Odds are that out of 100 performers you're likely to have never heard of any of them, but after hearing them, you will begin to search them out. If you hear someone on the radio or read about them in the paper and can't locate their recordings or to find out if they even have one, call or contact The Cabaret Connection at 275 W. 96th St., Ste. 32D, New York, N.Y. 10017; 212/961-1106.

So, now you want to go back to audio? You want to know what obscure recordings to listen to? I'm not going to give you much to choose from this time because I've had little opportunity to listen to anything these last 10 WEEKS! I do

want to tell you about a great lost recording from 1995 and a CD as well (well, only 'cause it's not out on a vinyl disc). Richard Thompson with Danny Thompson, Live At Crawley, 1993 is a private issue CD from Flypaper, the

Richard Thompson Fan Club. It's not an "official release by Thompson" because he records for Capitol Records now, and they don't see that this is a great recording of Thompson at his acoustic best. No, they probably want a good antiseptic, sterile recording, devoid of live-performance emotion that shows the true genius of Thompson. So the Thompson freaks put this out on their own. It's a great live recording, filled with the instrumental virtuosity, great humor and wit, and great Thompson songs. For details about this excellent CD, contact FLYPAPER, c/o Kornelussen, P.O. Box 391, Wainscott, N. Y. 11975.

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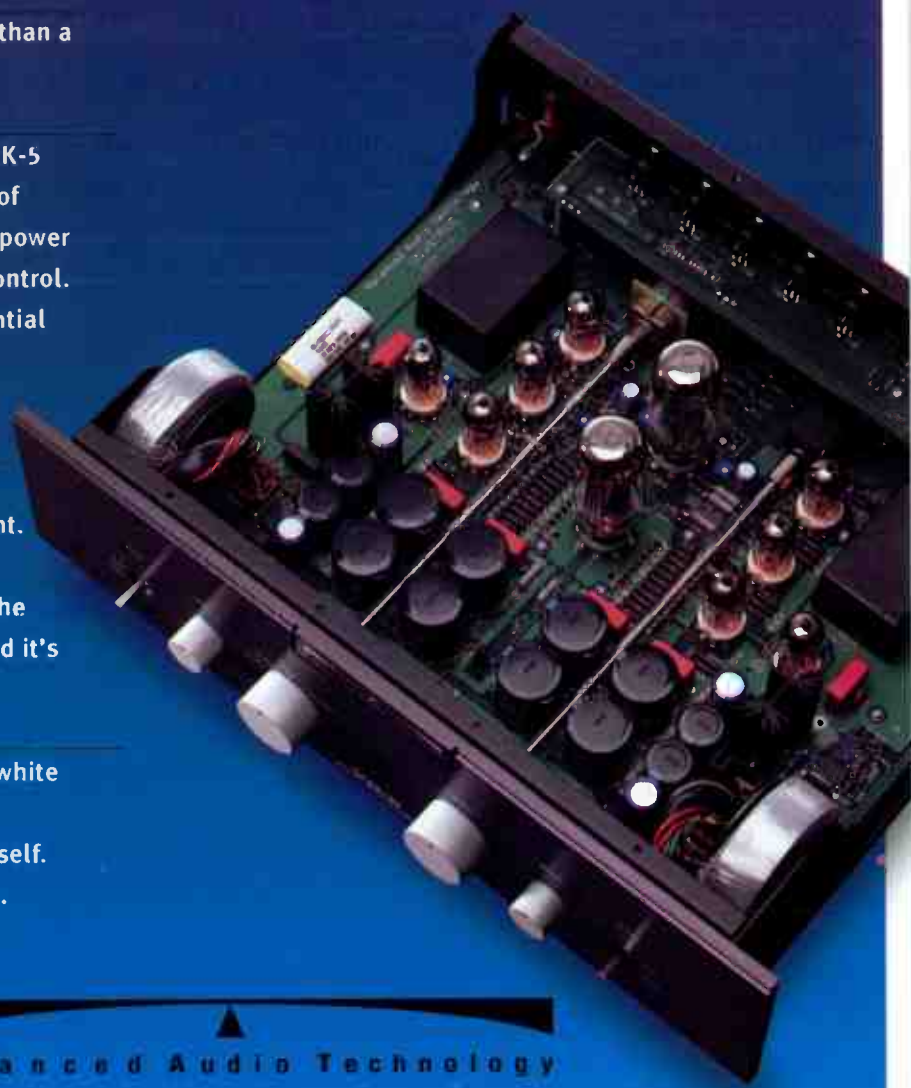
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LETTERS

Dear Editor:

Just a quick note to thank Mark Block for his kindness and being a man of his word in sending a free copy of Vol. 2, No. 2 of the revived **Audiophile Voice**. I was extremely disenchanted when publication ceased demanded a refund, with a complimentary issue to eventually be sent when available, to make up for my many phone calls in the matter.

"Of course, you must know that when an "underground" journal such as yours goes dormant for more than a year (or was it almost two?), the reader base can be only so patient and loyal, while simultaneously other magazines spring up to fill the void. My **Stereophile** subscription just ended, and I'm still taking **The Inner Ear Report** and **Audio Adventure**. Oh, **Sensible Sound** just lapsed too. If I commit to a new hi-fi subscription soon, likely it will be to **Andrew Marshall's Audio Ideas Guide** or to **Fi**. However, I'll entertain the idea of coming back to yours IF AND ONLY IF I see evidence it is really coming out as a quarterly (give or take a month) and grows in content and variety.

Certainly, I'm greatly enthused that the periodical has Eugene Pitts III now at the helm. He's one of the "grand old men" of audio editing and a stellar find. I am concerned for all of you of The Audiophile Society, though. Since the magazine was sold to Mr. Pitts, it can't really be viewed as the "mouthpiece" of your club anymore. Do you honestly expect

that your Audiophile Society will still have an autonomous identity and important role under the aegis of G&EG Publishing?

The "second inaugural" issue Block just sent is quite a bit smaller than the last one, and I was disappointed at the far fewer equipment reviews, especially under the "Bang for the Buck" area. Equipment reviews are the number one reason I read a stereo publication by far, followed by industry updates, and new equipment surveys. Of course I can understand that I must, at this time, be patient as the magazine "warms up and burns in," so to speak. Therefore, I would like to sample one more issue; I can understand that I might have to pay for it. So, please be kind enough to let me know when your next issue is available, and how much I'll need to send.

May I make a couple of suggestions on content? Please keep a focus on budget equipment. Perhaps Society members or subscribers could receive special mail-order discounts from participating, authorized high-end dealers. That would be a unique selling point for subscriptions, if that could be done.

Speakers are a special fondness of mine. B & W has a hot, new "P" speaker series that isn't getting much press in the U.S. Meadowlark Audio has a new \$995 floor-standing speaker that's evidently promising. PSB has a new Model 1000 at \$1,000. Boston Acoustics has valid designs in their budget "VR" series. Clements Audio and Gershman

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**The Magnificent
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Hyperion Knight, Piano. A pianist of great diversity, Hyperion has recorded works ranging from Beethoven to Stravinsky. Selections

on this album include Strauss, Tchaikovsky, Rossini and Rachmaninoff. Program notes by Charles Berigan.



**Crossover
Cello** GSCD025

Featuring Jazz/Classical Cellist Terry Perez, John Whitney Jazz Trio, and The All Star Percussion Ensemble. Terry Perez, Cellist, has been the recipient of many awards,

including the prestigious Fullbright Award. This album demonstrates the range of her abilities: wonderful sound, great technical ability, and a wide musical range, classical as well as jazz.

**All Percussion
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Mozart Piano Concerto K467/Liszt Piano Concerto No. 1

These concerti are performed within a completely different sound spectrum. Every note and every rhythm in both

concerti are fully accounted for, and the sound sources are fresh and original. Todd Crow, Piano, with The All Star Percussion Ensemble.



**Teresa Teng
Forever** GSCD030

This is a special album produced as a tribute to one of the most famous Pacific Rim singers of the century. Since her vocals are uniquely hers and no singer could re-

create her songs, this instrumental selection of her personal favorites was innovatively arranged by Jeremy Montiero so as to offer fresh insight into the music, while recreating the memory of Teresa Teng. Featuring David Packer, Harmonica, and Hsin Hsiao-Hung, Erhu.

**John Whitney
Trio
In a Classical
Groove** GSCD028

Fusing Classical Music with Jazz, John Whitney's arrangements are harmonically inventive while always maintaining

the melodic flavor of the composer. His piano artistry is straightforward and swinging. Also featuring Dave Samuels, Vibraphone, John Beals, Bass, and Ronnie Zito, Drums. All arrangements by John Whitney.



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(Canada) should be explored. I'd like to see a survey of amps priced under \$1,300. B&K, Acurus, PSE (Minnesota), Sonagraphe, Bryston, and Classé come to mind.

I do hope that **The Audiophile Voice** devotes itself primarily to conventional, traditional two-channel home stereo systems, not audio/video as nearly everyone else is doing. And, as regards loudspeakers, some effort should be made to scour the market for the elusive, but available, full-bodied, floor-standing tower speaker, preferably ones priced under \$1,300 and ideally ones priced under \$1,000. I'd like to see reviews of ones that do a decent job of recreating the illusion of "live" without subwoofers, which can have a limited "wife acceptance factor" and can greatly increase the cost of the system. I'd like to see an emphasis on stand-alone speakers with remarkable value.

Likewise, probably many of us DO believe that interconnects and speaker cables DO have a sonic signature, but we CAN'T afford stratospheric prices. When children are starving in this country, let alone around the world, is it morally right to spend \$1,500 on wires? Thus, I suggest a round-up of interconnects under \$125 and speaker cables with 10-foot pairs under \$250.

Thanks again for treating me ethically and also for just remembering me. I am impressed with this and thus will consider resubscribing. Please keep me posted on developments in the magazine.

**Name and Address
withheld by Reader Request**

Dear Editor:

Just dropping you this note to say how delightful it was to see you again at the Winter Consumer Electronics Show in Las Vegas this past January. It came as quite a surprise to me that you are buying **The Audiophile Voice**, but I am pleased. The years of insight and integrity you exhibited as Editor in Chief of Audio will now be part of an organization you are in charge of.

I wish to thank you for the copy of your magazine, which you gave me a WCES. Of special interest was the "Obscura" column by David Nemzer, in which he mentioned how to cover production scratches on amplifiers. I passed this tip on to a very appreciative amplifier manufacturer. Also, I appreciated Larry Greenhill's and Ken Kessler's articles on **The Audiophile Society**. In the music section, John Hellow's "Ear Candy" reviews and Martim Milgram's very informative reviews of the Blue Note reissues were excellent. Also, reviews of the Sentec phono preamp and the Amherst Audio amplifier acquainted me with products I didn't know were available.

All in all, I believe you have the basis of a fine magazine, and I am looking forward to future issues. I am sending my subscription to you under separate cover.

Steven A. Zimmer
Vice President, Engineering
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NEW PRODUCTS

Three distinct variations in bass alignment of this speaker system can be achieved by use of the supplied acoustic foam plugs. This three-way, floor-standing, monitor-type speaker uses a 7-inch Kevlar midrange driver housed in its own sub-enclosure and a pair of 7-inch Cobex bass drivers tuned to different frequencies. The tweeter is a 1-inch aluminum dome, using magnetic-fluid cooling. \$1,600/pair. Data: B & W, 800/370-3740.



The B&W DM604

The Conrad Johnson Premier 14

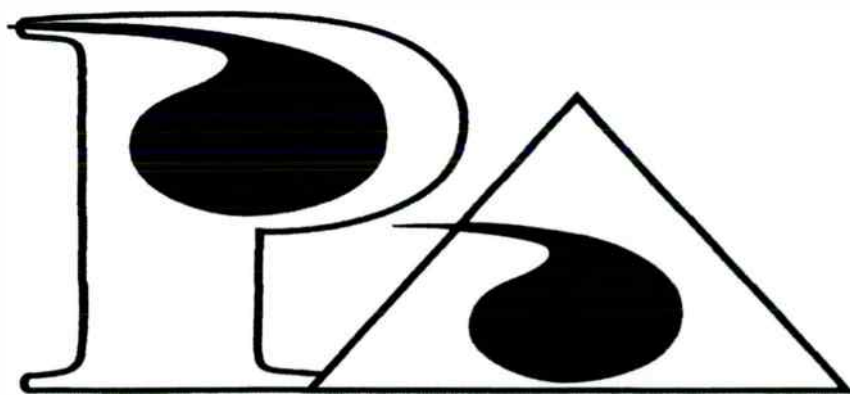


This all-tube line-stage preamp emphasizes c-j's traditionally excellent sonics together with a high level of flexibility. Features include seven line-level inputs with two processor/tape loops and two pairs of outputs. A hand-held infrared remote handles ALL functions, not just level. Level and balance are microprocessor controlled in 100 steps of about 2/3rds dB per step, using laser-trimmed, metal-foil resistors, while the audio circuit uses two 6GK5 miniature triodes. \$3,995. Data: conrad-johnson, 703/698-8581.

The Rotel RSP 980

THX certified, this surround sound processor offers extraordinarily high quality design and parts in its audio signal processing. There is full video switching, a data port for formats such as Dolby Surround AC-3 or DTS, standard outputs plus "Zone 2" sound output, and an on-screen, remote-controlled display to aid set-up. \$1,299. Data: Rotel, 800/370-3741.





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NEW PRODUCTS



The Audio Research D400B MKII

Using high-current Multiple-Emitter Transistors, this amp has the natural sweetness and musicality often associated with MOS-FET designs. Flexible in operation, inputs are XLR-balanced, dual single-ended balanced or standard single-ended, while output can be bridged mono. Power output is 200 watts per channel into 8 ohms, 400 watts into 4 ohms. Other specs are similarly impressive. \$5,995. Data: Audio Research, 612/939-0600

The Soundwave Metronome

These bookshelf-sized speakers are designed to produce excellent sound in smaller standard stereo systems or as the back channels in home theater systems. Features include bi-wireable/bi-ampable connections, a phase-coherent crossover network, sloped trapezoidal-shape baffle to eliminate internal standing waves, and elegant pyramidal shape. Claimed response is 65 Hz to 20 kHz, with 100 watts as suggested power handling. \$550/pair. Data: Vero Research, 800/318-6731



The McCormack TLC-1



This preamp from McCormack's Line Drive series has a very high-quality motorized, conductive-plastic potentiometer to help preserve the unit's outstanding transparency, while offering the convenience of remote volume adjustment and muting. Outputs are either buffered or passive. \$1,495. Data: 619/930-9550



THE ULTIMATE TIMEPIECE.

Keeping time, in the musical sense, is imperative to the flow and rhythm of a piece of music. The same holds true in the retrieving and handling of digital data from your CDs. The new Sonic Frontiers SFT-1 Transport excels in these areas, accurately retrieving the digital information and delivering data with extremely low word clock jitter - making it the ultimate timepiece.

Delivering data with extremely low jitter requires meticulous electrical design, component selection and circuit layout. Unfortunately, many transports suffer

from poor jitter performance because they fail to satisfy the digital interface standards. The digital output signals from these transports may have the wrong output impedance, improper voltage levels, or may simply be contaminated due to crosstalk caused by poor circuit layout. In some cases, the limited bandwidth of isolation transformers used in the AES/EBU interface causes added jitter.*

The Sonic Frontiers SFT-1 optimally satisfies the industry standard specifications for the various digital interfaces including the Sony/Philips Digital Interface Format (S/PDIF) and the Audio Engineering Society/European Broadcast Union (AES/EBU).

Basic clock function is performed by a 16.9344 MHz crystal oscillator designed for extremely low jitter - approximately 2 picoseconds (from 100 Hz to 40 kHz). This master clock is

used to generate the S/PDIF and AES/EBU digital outputs that are provided on Hewlett Packard ST optical, BNC coaxial, RCA coaxial and XLR connectors. When the digital signals reach the outputs, the jitter typically measures an incredibly low 10 picoseconds; independently verified with UltraAnalog's latest Jitter Analyzer.

Another outstanding feature of the SFT-1 is the drive mechanism. The Sonic Frontiers SFT-1 utilizes the all new Philips CDM12.4 mechanism which far surpasses the performance of the popular CDM9 Pro. The CDM12.4 uses high-efficiency, long life motors for disc rotation and radial positioning. The integrated circuits and filters provide a very low power requirement with no adjustments, ensuring long term calibration.

The Sonic Frontiers SFT-1 offers an exceptional level of performance for this price range. Its low jitter performance and outstanding reading mechanism make the SFT-1 Transport the clock to beat. Call, write or fax for more information on Sonic Frontiers' complete line of products.



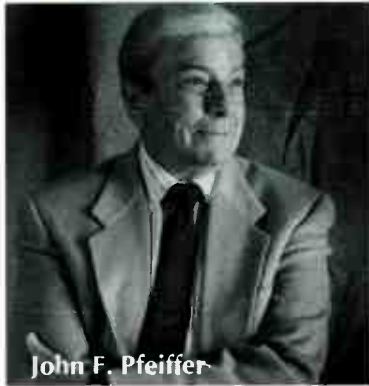
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*See Stereophile, Vol. 16 No. 10 "Jitter & The Digital Interface" by Remy Fourré, V.P. Engineering of UltraAnalog, Inc.

G RACE NOTES



John F. Pfeiffer

Timothy Johnson

John F. "Jack" Pfeiffer, widely regarded as one of the best recording producers in the "golden age" of recorded music, died in his office in February after returning from the Winter Consumer Electronics Show. While in Las Vegas he had delivered a talk, available on the Internet, to writers as a courtesy to

Classic Records which had built up a business partially out of issuing high-quality pressings of his RCA Red Seal recordings. He had been Executive Producer for RCA Records for many years, holding the same post for BMG Classics since 1968.

During his tenure at RCA, Pfeiffer was involved in many innovations, including the development of stereo and quadraphonic recording techniques and Dynagroove LP records. Later, he helped coordinate the introduction of digital recordings

Pfeiffer's recordings have received many Grammy Awards, France's Grand Prix du Disque, and "Record of the Year" awards from Stereo Review and High Fidelity. An EMMY came his way for his efforts in producing for television. His work included such shows as "Live at Lincoln Center," "Live at the Met," "Heifetz on Television," and "Horowitz Live." He was a Fellow of the Audio Engineering Society, had received a Producer's Award in 1990 from the National Academy of Recording Arts and Sciences (NARAS) which had also given him their President's Merit award for his "outstanding contribution to The Complete Toscanini Collection."

During his 47-year career, wrote Allan Kozinn in The New York Times, Pfeiffer was "a genial man with an encyclopedic command of the history of recording and of the performing world, past and present. A producer who cared deeply about capturing a performance with realistic sonic perspective, he also developed the diplomatic skills necessary to coax great performances from famous and sometimes temperamental artists who were not always comfortable before microphones.

In a 1992 Audio magazine interview, Pfeiffer noted that "digital was just a high-quality transmission line" but that "just having digital recording does not guarantee that it's going to sound good. Microphone placement, the acoustical environment, and the judgments you make in your original recording are still the determining factors...."

The March 1996 issue of **Stereophile** magazine carries an obituary of Peter W. Mitchell, well-known hi-fi writer, written by E. Brad Meyer; the following is adopted from the piece.

Last December 30 Peter W. Mitchell died. He had recently taken over **Stereo Review's** high-end column from the late Ralph Hodges and was the original mainstay of the "Industry Update" column in **Stereophile**. His groundbreaking work combined measurements with subjective reporting had also been included in **Car Sound** and **Electronics** for the past two years.

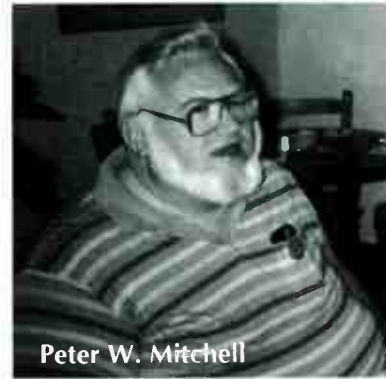
A long-time member of the Audio Engineering Society, Mitchell presented papers on amplifier power ratings and digital decoding, co-chairing workshops on CD player sound and classical recording techniques, as well as serving on a working group of the Digital Standards Committee.

Mitchell was born in 1942 in Quincy, Mass., and grew up in Canaan, NH. He graduated from Vermont Academy in 1960 and attended Boston Univ., from which he received a B.A. in physics and astronomy in 1966. He worked for Avco Corp., studying nose-cone materials and evaluating data on the moon's surface in preparation for the Apollo landings.

Mitchell's interest in audio grew from hobby to profession in the late 1960s when he helped found the Boston Audio Society, serving as its first president and as editor of its newsletter, **The BAS Speaker**. During the 1970s, on his weekly "Shop Talk" program broadcast on Boston radio station WBUR-FM, with co-host Richard Goldwater, Mitchell did interviews, discussed topics on interest to audiophiles, and took live, undelayed phone calls from listeners. Over the last quarter century, Mitchell wrote hundreds of articles for publications such as **Stereo Review**, **High Fidelity**, **The Boston Phoenix**, **Atlantic Monthly**, and **db** magazine.

Meyer remembers Mitchell as "a dedicated scientist who believed in and practiced the most rigorous methods, but who was never overly patient with stupidity and who had little time for the heated and repetitive arguments that sometimes divide the audio industry. He was very skeptical of subjectivism, but he was also skeptical of objectivism. Most of all, he had no time for the cultivation of enemies, and he left behind not one that I know of."

Donations in Peter Mitchell's memory may be sent to Vermont Academy, P.O. Box 500, Saxtons River, VT 05154.



Peter W. Mitchell

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Visiting Las Vegas

Arnis Balgalvis

Here I am, having done only my third trip to Las Vegas for a Winter Consumer Electronics Show, but I've just about had it. Don't get me wrong. I like going to shows. Once there I'm fine. It's just that every trip has been a disaster. Two years ago it took me more than 12 hours to make it from Newark to Vegas. Last year Bill Brassington and I traveled by train, plane, and automobile to get home because someone closed down Newark airport. This year I was one of the many east-bound travelers who was delayed by the Blizzard of '96. I used the two days to take in the Great Basin National Park; with WCES done there was no way I was going to hang out in Las Vegas.

But that's just a little sour grapes on my part. Trade shows are fun not only for the equipment, but for social reasons. It's great to revisit a lot of wonderful people, and meet up with some of the other writers even though you see them maybe twice a year.

Sad to say, but the '96 WCES aroused some bittersweet feelings in me. There were a lot of wonderful exhibits, with a few of them managing to wow many with exceptional sonics, despite show conditions. However, I could not avoid the feeling that the "we" atmosphere or camaraderie of say four years ago was turning into a "me" motif. To be sure, disparaging remarks were heard now and then in the past, but this year the frequency and emphasis had grown to disconcerting levels. Not that everybody was just out for themselves. The majority of the nice people could still be counted on to be congenial and kind. But a very strong selfish and arrogant streak was too evident. Some people still think they are not subject to the laws of physics. Others decree that every design introduced by certain individuals is inventive and innovative, based solely on the personality behind the product. Worst of all, there was more personality- and product-bashing than I recall from previous years. I hope we've seen the worst of it by now; this cantankerous climate can use some global warming.

The WCES has plenty of good news for lovers of tube gear.

Enough of the bitter, now for the sweet. For one thing, it was sweet to see a very positive response for the publication side of the business. Of course, it was gratifying to hear a lot of support expressed for the reappearance of **The Audiophile Voice**, as well as seeing that several of the other small publications were on the receiving end of praise. But the big news was FI, the new music and equipment

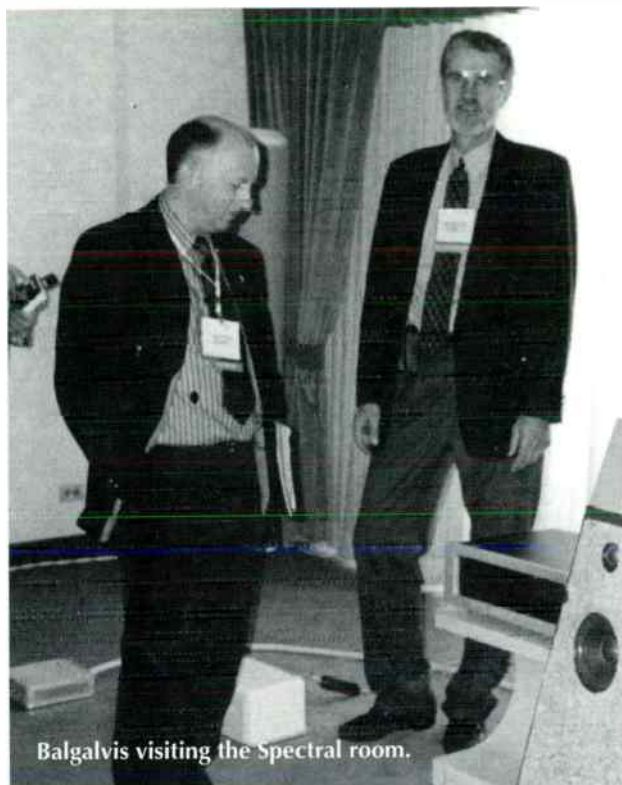
magazine, which did not act like a newcomer nor were they received like one. It helped that many on their staff were well-known writers and that some serious money was behind this venture. I got the distinct impression that the emergence of this new era of audio-oriented publications was something that many in the industry were thirsting for.

And DVD was sweet. This new format was everywhere, with just about every big name involved in the promotion: Toshiba, Sony, Pioneer, et al. DVD stands for Digital Versatile Disc, although if you were to ask the average knowledgeable man in the street the response would be Digital Video Disc. Anyway, these disks are capable of storing a zillions of bits, using two layers on a disc the same size as the current CD. It will be used first for video and a little later for our audio pleasure. While the video standard is pretty much in place, the audio standard is materializing as in a "work in progress." And the progress here is what we all would endorse. I share the feelings of a vast majority of the industry that the DVD just could be a very worthwhile sonic storage medium. Suddenly, the possibilities of a 96-kHz sampling rate or a 20-bit word length are no longer the stuff of dreams. And the diehards who hope that Home Theater will somehow disappear from the face of the earth better get used to the reality that the likelihood of that happening is now absolutely zero. DVD will make sure of that on the video front.

Other good news abounded for our friendly tube contingent. The increase of tube equipment was significant and appeared in greater numbers than I

recall seeing at any show before this. Is that sweet or what?

Time to get specific. But before that a disclaimer. While it is true that a "PRESS" badge has its advantages, at least many in the audio section are sure to give you the time of day, four days is not enough time to cover hundreds of exhibits. The best I can do is to reminisce about those rooms and products that tickled my fancy sonically or aesthetically. Do not pay any mind to the order of appearance; there



is no implied performance ranking. Fortunately, a number of exhibits had sonics that were absolutely haunting, sound so good it still rings in my ears.

An exhibit with exhilarating sonics was found in the Sahara Tower suite shared by Audio Artistry, Cardas, Jeff Rowland Design Group and Audio Power Industries. Here, Audio Artistry unveiled their new Beethoven speaker system, listing at a cool \$25,000, which was driven by four sets of Jeff Rowland Model 6 power amps with battery packs, Jeff's Coherence preamp, with Cardas Golden Cross

cables everywhere. The sound, in a word, superb. It also passed the "listening in the next room" test, where my admiration of Jeff's new drop-dead gorgeous Synergy preamp was interrupted time and time again by the remarkably good sounds emanating from the next room. This was Jeff's smaller preamp is a scaled down version of the \$12,800 Coherence function-wise only, retaining practically everything in the execution of the circuitry. The Synergy has fewer inputs and outputs and does not have the battery power supply. I think it outdoes the big brother in one respect: it provides a numerical display of the volume control setting in 0.5 dB increments. Yet the price of the Synergy is much lower, at \$4800.

I, for one, find it amazing that the Jeff Rowland equipment has made such limited inroads in the U.S. market. Sonically, you have to search high and low to find something that maybe exceeds its sonic performance, while aesthetically, functionally, and construction-wise, he is in a leadership position. Who else uses absolutely no sheet metal parts and machines every piece out of a solid aluminum block? 'Tis a puzzlement!

Another mesmerizing performance was put on by none other than Victor Goldstein from Faniare International. This is the second time that Victor has been a part of a group that ended up dazzling me. Some years ago in Chicago the team of Jadis, XLO, Altis, and Avalon played for a hushed room full of editors. This year every piece of equipment was different except for Altis, whose new Pro Reference DAC teamed up with Fanfare's new Vaic VV52B \$13,000, 30-watt, single-ended, triode tube monoblocks; Siltech cables, and a Plinius preamp, to drive a Paragon Jubilee and JEM minimonitor/woofer combination into ecstasy. I sure thought so. What made this experience even more remarkable was the location, a regular lowly bi-level room.

Nowhere was the "we" attitude more evident, as it has been for the last few years, than in the Acarian suite. Here, the whole Marchisotto family, that's Carl himself, his wife

Marilyn and as many of their daughters as possible, was in attendance making sure everybody was comfortable. I sure was, listening to the sound coming from Carl's all-out effort, the \$20,000 Phalanx speaker system, along with the VTL tube gear and a VPI turntable.

One other display that impressed me with its immensely compelling sonics was the joint effort of Timbre, ESP, ASC, Manley, Esoteric Audio USA, Tiff and Nagra described in more detail by Mark.

I'd be remiss if I did not single out the Gershman Acoustics's Avant Garde loudspeaker used with a CD transport, a DAC and tube electronics from Copeland. This was one of the few places that I revisited several times to take in their wonderful sonics.

A "Press" badge may be classy but you do have to work for it.

Detail without hardness, great imaging, very pleasing spectral balance along with credible impact and tonality made the time spent there very worthwhile and enjoyable. The Gershman speakers, of course, did the playing, but it was the well-executed Copeland electronics that did the rest.

I missed out on hearing extensively for myself what the Avalon Radian HC, Spectral CD playback and amplification equipment, and MIT cabling and power-conditioning system (otherwise known as the 2C3D system) sounded like. I can tell you that every single piece of this assemblage appeared immaculately honed and stood out with its singularly elegant presence. Every time I stopped in, Keith Johnson was busy with a distributor type, so I heard only wisps of this system, however, I have no doubts whatsoever that this system is first rate.

Of course, Jim Aud of Purist Audio Design dazzled everyone by finding yet another unique approach to improve his products. His new top-of-

-the-line cables now "utilize a layer of light to reduce external interference effects." No excuse now to trip over cables in the dark because Jim's cables give off a distinct, though muted, translucent glow. No, the heavy water technique, which Jim says "protects from mechanical and a portion of the spectrum from certain other interferences," has not been abandoned. But to expand on the bandwidth protected from possible interference, a sheath of light right around the conductor is incorporated in addition to the fluid. Of course, the price is right along with this unique approach, way out there. Don't ask me how they sounded; for my comments, these cables will have to be in a better environment than CES.

As a group, the sound of loudspeakers that dared to abandon the conventional box enclosure incorporating wood-derivative materials, sounded very much to my liking due to a very remarkable lack of conventional colorations. I'm referring to the speakers from mbl, Gallo Acoustics, and Wilson Benesh. They all relied on materials other than wood and produced sounds very open, detailed and startlingly clean. The mbl 111 and the Gallo are omnis in the high frequencies and completely avoid any enclosure whatsoever. For the mids and below, Gallo places the driver in a spherical enclosure, constructed of a high-loss polyethylene. They claim to eliminate internal standing waves, keep the external baffle diffraction to a minimum, and drastically lower the effects of energy storage. Not only do the Gallo speakers sound timbrally true, but they also put up a soundstage of huge proportions. Very impressive.

The Wilson Benesh A.C.T. One Composite loudspeaker design is more conventional in appearance, but don't go judging this book by its cover. They, too, attempt to avoid internal standing waves by creating non-parallel walls. Additionally, aluminum is used for the speaker baffle and a large area of the enclosure is covered with carbon fiber sheets. The system's sound wasn't hurt by the use of their own turntable, arm and the Carbon One cartridge, each with lots of car-

bon fiber and the pristine FM Acoustics electronics. The resulting sound was fast, stable, taut, and startlingly free of bothersome sonic artifacts. I would certainly add this to the sounds that still reverberate in my memory in a most favorable way.

While on the subject of box-less speakers, the Sound Lab Pristines left me with a good impression. Driven by Fourier Component's Sans Pareil amps, I heard a transparency and immediacy from these speakers that was memorable.

Don't think that speakers have to shed a box and avoid wood to get my attention. Take Paragon for example. I think I conveyed how I felt about the sound Paragon produced in the Fanfare room. Well, Paragon also had their own room in the Sahara Tower where they displayed the Jubilee/JEM combo powered by a Muse 1900 power amp and wired them up with the soon to be released Cardas Golden Cross wire. Vinyl could be heard on the Townsend \$1,600 turntable and the corresponding arm also priced \$1,600. My note at the time, "very good sound."

Gradient's Jorma Salmi very graciously guided me through a tour of their products. As a former ESL-63 lover, I have this nagging feeling of wanting to return to these speakers but now incorporate the woofers that Gradient made famous. Gradient products have received a lot of good press, which is no surprise really, since they appear to be one of the few speaker companies who take room acoustics very seriously.

Certainly Speaker Art's Clef system can't be left unmentioned. Priced at \$1,195, you get a very solidly built, sonically impressive speaker. Weighing in at 48 pounds, 22fi-inches high, by 10fi-inches wide, by 13fi-inches deep, it seemed to outperform its relatively modest price point by bringing attention to itself in a very positive sense. They sure got my ears perked up.

TARA Lab's Matthew Bond was proudly showing off his new Decade series of interconnects and speaker cable. Without a doubt, this is his best effort by far from the looks of this

superbly executed product. If his previous performance gains are any indications at all, we can look forward to some really revealing sonic thrills. Joel Shumer (see his review in the last issue) and I have been very impressed by Matthew's RSC Generation 2 interconnects and speaker cable.

Dr. Urs Wagner and his wife Ann represent to me what European charm and courtesy is made out to be. Urs has always demoed at least one CD that I immediately covet since his selections are sonically first rate...very much like their Ensemble equipment.

Getting to any exhibits outside the Sahara is tough.

This year, they introduced the Evocca, a remote-controlled, integrated amplifier. It's a hybrid design using two 12AT7s in the gain stage, directly coupled to a bipolar solid-state output stage. Rated at 110 wpc, this amp is priced to sell for \$6,995.

Dennis Had of Carey Audio introduced me to a new SE triode amp, the SE-811. Using the Svetlana 811-3 triode and priced at \$2,295, it will be distributed by his new Audio Electronics division which he formed to concentrate on production of entry-level product.

At the closing moments of the show, Herb Wolfe and I stopped in to once again enjoy the exquisite munchies and micro brewery beer that Kevin Hayes of VAC and Mike Malony of Scientific Fidelity serve up to close out the show in a congenial matter. Lo and behold, we found a system still in one piece in a back room where we were treated to scaled-down version of the VAC and Sci-Fi components that have dazzled me on a number of previous occasions. Even though all VAC electronics were used, featuring the 140/140, with the Crown Joule/Substrate Combo making the music, this back room was very much smaller than the display I'm accus-

tomed to, but the presentation was as good as ever. Herb and I were mesmerized by the delicate details and credible timbre.

It should be mentioned that Charlie Hansen of Ayre and Paul Hales of Hales Design had teamed up for this show. Hansen introduced his new Ayre K-1 preamp, and I want to say that the sound heard there was certainly noteworthy. Located in a Tower suite, their room was filled with sonics that pleased and impressed with their musicality. Those who didn't come to Ayre's K-1 show missed a very vivid presentation.

One of my pet peeves at these shows are the exhibits away from the Sahara. This year, however, the one day I spent away from the Sahara it was well worth it. A demonstration of DTS surround sound and Circle Surround sound at the Hilton was one of the more interesting experiences of the show. Equipment for the press conference featured Apogee Ribbon Monitors, a/d/s powered subwoofers, and Ed Meitner's BIDAT and power amplifiers along with DMP software. This was a special occasion that brought together two luminaries, Jason Bloom of Apogee and Tom Jung of DMP. DTS is an alternative multi-channel or surround technique with a far milder compression algorithm than AC-3, oops, I mean Dolby Digital, and it is considered by many to be the kinder and gentler of the two. Circle Surround encodes surround information on a two-channel CD for decoding later. It is compatible with standard playback equipment, and many feel it enhances two-channel stereo reproduction.

I can't say that sonically I got more than just a gist of the DTS and Circle Surround demonstration, but that was due to the overcrowded room where I arrived too late for any chance at a choice seat. This was rectified some weeks after the show when Bill Brassington and I were treated by Tom Jung to a private demo where we heard significantly more than what was presented at the show. Here we were the beneficiaries of Tom's hospitality, doing our listening in the dmp studio, where we could enjoy every-

thing without disruptions and CES time constraints. This system is about surround sound for music. It has home theater applications to be sure, but the music comes first. From what I heard, I can only suggest you stay tuned. Obviously, all surround sound is not created equal. I will keep you posted.

Encouraged by the Hilton visit, I ventured to the Mirage Casino where I was able spend quality time. At Krell I had the good fortune to talk with Dean

Romanis and Steve Portocarero, after which I was treated to something that rarely happens at a show, a one-on-one interview with Dan D'Agastino. He proudly showed off his new line of power amps, the Full Power Balanced Amplifiers, completely revamped from topology to cosmetics. Featuring current gain technology, the new series will be comprised of three stereo models rated at 150, 300, and 600 watts per channel into 8 ohms, with the typical Krell doubling of power for each halving of the load all the way down to 1 ohm. The 300-wpc model will go for \$8,500 and the 600-wpc unit for \$11,500. The price of the 150 watter is not been set. Platteau biasing remains in place to provide Class-A biasing in response to the dynamic demands of the playback signal level. The look, this time around, has a sleek, rounded-off demeanor departing from the angular robustness, familiar to Krell fans.

Returning to the real world from the cloud nine trip to Krell, at Rotel and Audio Alchemy I saw products that were obtainable by people of more ordinary means. For the makers, it's a matter of shooting for a particular market niche. While Rotel and Audio Alchemy were hard at work bringing to market equipment that tries to



Dennis Had of Cary Audio with his new amp, the SE-811 which lists at \$2,295.

achieve the best bang for the buck, Krell, along with a small number of other manufacturers, clearly strive to provide the best performance, period. Keith Alsop of Audio Alchemy recorded some of the tracks from my favorite CDs on CD-R after subjecting the digital data stream to an elaborate set of data enhancement procedures. In another room they dazzled me with a demo of their Virtual Reality Engine v1.0. This resolution enhancer really works and you don't have to spend a ton of money for it. The price I heard was considerably under \$1,000!

To begin with, Krell's new amp series will have three models.

As usual there were also exhibits at the Golden Nugget Casino. This year I had two opportunities to hit the Golden Nugget where Theta, Classe, Magnepan, and Wadia were displaying. The norm had been to get there for a few hours on the day of the Stereophile party, make the rounds, put on a party hat and mingle with the who's who in high-end audio. This

party would usually occur on the evening before the last day of a CES.

Looks like FI magazine will make our busy schedules busier yet, since they also threw a party, at the Golden Nugget, in the same ballroom, but one night earlier than the Stereophile affair. I think this is great. Now there are two opportunities to mingle with the audio movers and shakers.

Mark Block, Herb Wolfe, and I left the FI party early to go to the Monster Cable Dealer Awards program at the Mirage. The magnitude of this affair was a very good gauge of what Noel Lee has accomplished, not only for Monster Cable and the cable industry in general, but for the industry as a whole. With hundreds of people in attendance, mostly his dealers of course, on stage was none other than blues legend B.B. King himself with his band, treating everyone to an all-out performance that only a legend of his stature is capable of delivering. This was one hell of a Monster party.

Before all the good times got rolling, I had visited Classe Audio where Glen Grue and Mike Viglas were busy tending to their distributors. Glen did manage to find some time between appointments to show off his incredibly well-built and great-looking power amps, preamps, a CD transport, and



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their DAC. Even without sound in the room, a Classe tradition at the WCES for the past few years, this line impressed me with its prominent presence and superb build quality. Yes, they did increase the prices recently, but that still does not deter me from asking how on earth Classe can give you a 400-wpc stereo power amp of that quality for \$5,500? Pretty remark-

able, eh? And the rest of the line has similar modest prices.

On my visit to Magnepan, I found myself immersed in an immense soundfield with extremely comfortable proportions—during a Home Theater demo, no less. The sonics on display here managed to avoid the aggressive character that is the norm for far too many Home Theater show-and-tells.

And playing just your ordinary, everyday two-channel stereo (yes, I checked the center channel was off) produced an involving presentation. You want to know what the two front speakers were? A pair of Magneplan MGLR-1s. And the cost? All of \$900!

Theta had a Home Theater display as well, to introduce their surround sound processor, The Cassablanca. They also introduced the Chroma 396, a new DAC priced at \$749, or \$829 with HDCD, making it the lowest priced complete HDCD converter. Do Cobalt and Theta ring a bell? Well, the Chroma is an improved version of the

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The exhibits at the Golden Nugget are always special.

Cobalt, but carries a name because they discovered "Cobalt" had been used by someone else first, or something like that. The Chroma 396 has a 17-inch chassis, making it physically more substantial than the Cobalt. Although I had a nice chat with Ed Dietemeier, time constraints during this part of my Vegas visit were light so that I got only a brief presentation, but I still came away with a very good impression of the system.

Wadia had a static display showcasing their mouthwatering goodies. Having enjoyed their Models 7 and 9 up close and personal, I was reminded of the many splendored sonics these units offer. Peter Bohacek, now the representative of Wadia, told me that they now offer a completely reworked upgrade for the Wadia 2000 DAC. Ah the 2000, that was some component, setting the stage for what was to come.

To all those who I did not visit, and to all those I did meet but did not mention in this WCES write-up, my apologies. Blame it on those commodities called time and space; there's only so much of them around for each of us.

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World Radio History

Day of the Triodes

Mark Block

Remember the old '60s sci-fi movie *Day of the Triffids*? A meteor shower blinds all who watch and creates a giant, man-eating plant mutation. It came to me as I pondered the proliferation of low-powered tube amps at the '96 WCES. Instead of a meteor display, we have the eerie glow of ancient 300B vacuum tubes, and rather than making us blind, they are making us deaf. How else to explain the execrable sound that some audiophiles are deeming "magical." In that light, it won't surprise me at all to hear of someone being swallowed alive by an immense horn speaker come to life, perhaps while playing the *Little Shop of Horrors* soundtrack. (An X-Files script is in the works.)

Why is high-end audio advancing to the rear with a front line of little single-ended (SE) triode troops? Cool retro looks? Nostalgia for a bygone era? A newly fashionable Luddite distrust of progress. Or could it be the "magical SE midrange" we've heard so much about? All these factor in, but the way I see it, just as Mars needs women, audiophiles need distortion. Without distortion, we'd have no hobby. Without distortion, the high-end would completely degenerate into an audio clinic dispensing expensive placebos to neurotic equipment nerds. Hell, without audible distortion in our components, we'd have to deal with something that really matters—like room acoustics, god forbid! SE triodes bring back the distortion we've been missing. (Excuse me for not shouting "Hooray.")

High-end audio has always been a game of "pick your coloration," but colorations have lately become so pale—due in large part to better CD players, more rigid speaker cabinets, improved driver technology, the proliferation of "audiophile grade" passive

components, and more concern for component matching—that the hi-fi game was becoming boring. It's not boring anymore: colorations are back in spades.

The typical demo at the WCES this year went something like this: You put on a CD, the music starts up and you think, "Not bad for 8 watts." Then the music gets louder and you think, "Kinda fuzzy and grainy, but it is only 8 watts." Then the music really gets cooking, and at the onset of audible clipping the manufacturer yells, "Hey, not bad for 8 watts!" Wrong. It's bad. Period. [Mark, *I don't know about "bad" but it is poor sounding.*—Gene]

The worst example of this kind of "three-way" sound (pleasant during quiet passages, nasty when the level picks up, and positively offensive during climaxes) occurred during the Classic Records press conference, the first part of which featured Jack Pfeiffer, who sadly passed away less than a month later. Mr. Pfeiffer's lecture was accompanied by musical selections from his career as producer at RCA, and the high-end system thrown together for this event let him down. A small, stereo tube amp (I don't think it was an SE triode) attempted to energize a pair of Hales speakers in the largish Sahara Hotel conference room. Unhappily for all in attendance, it was driven into hard clipping at every fortissimo. Mercifully for Mr. Pfeiffer, he was standing behind and to the side of the speakers, so he probably didn't hear the harm this amp was doing to his treasured recordings. (By the way, he mentioned that during the recording of *Gaite Parisienne*, LSC-1817, the stereo mikes were set up only as a test, and the stereo feed was never monitored. That perhaps explains the poor stereo focus on this unjustly revered LP.)

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I don't mean to knock the Classic Records people; from what I've seen, they are all terrific people trying to do a good job. What I'm knocking is horrible sound that everyone seems to turn a deaf ear to (while nit-picking components that for the most part let the signal pass through un-doctored). And so, in spite of the arid Vegas environment, low-powered tube amplifiers (often outrageously priced) seemed to sprout like mushrooms on the dark, dank carpets of the Sahara Hotel.

Not coincidentally, as the single-ended versus push-pull wars heat up, the LP versus CD battle seems to be over. Is there someone besides Michael Fremer who gets steamed about it anymore? Yes, you could still hear good vinyl at the show (see John Hellow's accompanying report), but it's a tiny niche within the tiny niche known as "high-end." CD playback, meanwhile, has been so beautifully fine-tuned over the last two years that even die-hard digiphobes are hard pressed to criticize it. Yet with a new, potentially higher quality medium being talked about now—audio-only DVDs—current CD playback systems may be about to enter lame duck status, so I had trouble working up enthusiasm for the "hot" new DACs with HDCD.

As I said earlier, some audiophiles apparently need distortion; LPs have gobs of it, CDs virtually none, and DVDs perhaps literally none. With CDs now finally the preferred high-end source, we need to find our distortions elsewhere, i.e. single-ended triode amplifiers.

I don't think I have to waste my time and yours covering all the products that didn't sound good, because there was quite a lot of excellent gear more deserving our close attention. My coverage for **The Audiophile Voice** does not pretend to be encyclopedic. We're not **Stereophile**, and we didn't assign writers to cover specific areas of the CES. You know how that goes: The tube guy does his report; another guy does the solid-state

report; then there's the analog report, the digital report, the speaker report, the cable report, the reports on moving Shun Mook pucks around while sacrificing chickens, report, etc. That's great, but that's not us.

This was my fifth CES—one in Chicago and four in Vegas—and for me the show is as much about people as about products. I used to go into the rooms with no agenda other than hearing new stuff. Look, listen, leave. Now that I recognize more and more of the faces behind the products, I go into the rooms with kind of a "good ta see ya" attitude. I don't get to hit as many rooms that way, but it's much more interesting. Make no mistake: The CES is serious business for manufacturers; they are there to make a living, not schmooze people like me. But I'm learning that there are an awful lot of nice people behind the neat products.

Finally, the LP versus CD war appears to be over, and not a minute too soon.

The CES is also about gossip. Typically, a bunch of writers sit around and play a game called "Who's the Biggest A-hole." Almost all the really big ones are fellow writers [Mark—Don't forget editors. Gene], with a smattering of dealers and distributors thrown in. (I wonder: Do I make the list when the rat pack plays the game without me?) Manufacturers come in for relatively little abuse. Like I said, they're pretty nice people. Writers only need to have opinions, and you know what opinions are like: Everybody has one. Manufacturers are opinionated, too, but they put their livelihoods on the line for their opinions. Ya gotta respect that.

Then there are the parties. The big debate in the high end this year centered on whether Fi or Stereophile had

the bigger one. Party, that is. Fi had the better food, Stereophile the better wine, but Fi gets extra kudos for the live band. So there. Interestingly enough, last year Shannon Dickson, who was writing for **The Audiophile Voice** at the time, had to be rushed from the Stereophile party to the hospital with a sudden bout of influenza. My conspiracy theory is that Shannon got food poisoning from an appetizer intended for Michael Fremer, then writing for **The Absolute Sound**. Larry Archibald later felt so guilty, he hired them both.

GOOD TUBE GUYS

Since I've bashed the bejeesus out of single-ended triodes, let me admit that I was taken with many tube amplifiers, at least one of them of the SE triode persuasion, the Vaic Valve Models 52B and 36/96. Until now Vaic Valve was known only for its tubes; the amps are a new wrinkle. Sonic Frontiers' Parts Connection describes the Vaic Valve VV30B tube as "the first all-new, directly heated, audio output tube in decades." Designed by Alesa Vaic (pronounced Vysh), handmade in the Prague and originally marketed as a higher output replacement for the old 300B, the tubes are quite expensive at \$760 per pair. The 30-wpc 52B mono amps are commensurately priced at \$13,000 the set. There is hope for us wage-earning slobs, however. A "budget" stereo amp, Model 36/96 is, according to Vaic, being made available at "an extremely interesting price, so that many more people can have the latest in high fidelity." How interesting? Distributor Victor Goldstein guesses about \$3,500 to \$3,700. That is interesting.

The stereo pair of VV30B output tubes in the 36/96 supposedly puts out 17 watts (and 2 amps) per channel, so decent sound levels and moderate efficiency speakers aren't out of the question. (The output meters on the Mesa Engineering Baron amp I've been using lately rarely go above 15 watts

on peaks, but I don't know how fast the ballistics are.) Victor told me to expect a tube life of 10,000 hours (!) due to the titanium plates within the tube, which will not pass gas into the vacuum (phew, I hate it when that happens). The 36/96 made beautiful sounds in Victor's room through his Reference 3A loudspeakers, a speaker that can be "ruthlessly revealing" under most circumstances.

At breakfast the morning after the show I was introduced to the owners of the Vaic company by high-end's own Don Rickles, Howie Mandel of Altis, who had nothing bad to say about anybody, for at least two minutes. (Howie, you're getting mellow in your old age.) The owners, a Mr. and Mrs. Kron, who are Italian, were in an ebullient mood, and happened to mention that their VV52B amp is quite special because, among other things, it has a transistor in it, so it isn't pure tube! I later learned they were referring to a logic chip in the power supply regulator, but I felt better anyway because my record for disliking all the SE triodes is apparently still unblemished, although now there's an asterisk. I haven't liked any "all tube" SE triodes. Re-reading the above sentence in the sober light of day, I realize it's a little harsh. Let me "soft-clip" it a bit: "It's not that I dislike all SE triodes, it's just that as a group they don't impress me; I don't hear the magic, I just hear tube distortion getting in the way of the recording."

Another asterisk is probably merited by the Audio Matiere Ultima amplifier. This 60-wpc, Class-A beast is single-ended, but uses a combination triode/pentode circuit. It certainly made my 10 best list with its gorgeous sound, but when I asked about the price I nearly choked, \$33,000. At least it's available in a push-pull version for \$8,475, and thankfully Audio Matiere makes a full line of amps, preamps and CD players in the \$2,000 to \$5,000 range.

The iconoclastic David Manley was busy having fun with our heads by creating a little mono amp, the Manley SE/PP 300B, that's switchable between single-ended and push-pull (18 walts single-ended, 36 push-pull)

for \$3,500 the pair. Just to further confuse things, the feedback is adjustable from 0 to 10 dB in 1-dB steps. I made Manley's day when, after listening for about five minutes, I pontificated that "I'm hearing your amp do things that I've never heard a single-ended amp do." (Like stay clean and transparent during complex passages.) Manley just snorted, "Of course; it's in push-pull. Here, I'll switch it to single-ended." In single-ended, it was OK, a little less lively, less detailed, more veiled, but not bad. Audiophiles want single-ended, so Manley gives it to them—but then he puts in a switchable circuit so they can also have it the right way when they come to their senses. The twists and turns of audiophile tastes can become quite Byzantine.

The interesting thing to me about this single-ended versus push-pull debate is that it has usurped the solid-state versus tube debate. From the evidence at the CES, if there were a high-end election, tubes would win in a landslide. The hard-nosed engineering-oriented types, such as the new editor of this magazine is reputed to be, must see this as further evidence (as if they needed any) that audiophiles are simply beyond rationality. Screw them and him. Let's talk some more about tubes!

I just don't hear the magic in single-ended triode circuits.

Jolida made quite a splash at the show with a bewildering array of beautiful integrated amps at truly affordable prices. How beautiful? If these amps were women, we'd be talking slo-mo stuffed bikinis on Baywatch (but not blond; there's always room for improvement). How affordable? Try \$550 for their 25-wpc SJ 101B, up to \$1,400 for the 70-watt stereo 801A or 802A (different tubes and cosmetics distinguish these two models). No preamp is necessary, so

just hook up the CD player to one of the four inputs and enjoy. On the outside, these amps do not look cheap, and they rate very high on the sound for dollar scale.

Ken Stevens finally seemed to have his Convergent Audio Technology JL1 triode monoblocks in truly finished, real production form, and they sounded terrific through the super-cool looking mbl 111 speakers. (At a price of \$13,000, the speaker incorporates the mid and high frequency omni-directional metal drivers from the more expensive 101, adding a ported dynamic woofer for the bottom end.) Ken allowed as how the amps would sound even better mated to the 101s, but I wasn't quibbling, about the sound, that is. The price is something else, almost \$19,000 for a pair of 100-watt amplifiers. Ken's six years of R&D on this amp obviously figures in here, as does the monstrous size of 200 pounds each (in a cardboard box).

(As an aside, I have a bone to pick with Ken and several others who set up those Shun Mook discs on wooden poles about a foot away from the tweeters. Unlike most Shun Mook products, these will audibly alter the sound, but why would anyone choose to degrade high frequency smoothness and louse up image focus with this contraption? It just shows you that even brilliant engineers like Ken can have their weird sides.)

And speaking of weird, let's talk about the people from Sonic Frontiers. JUST KIDDING! Chris Johnson and Chris Jensen are two of the most level-headed, well-adjusted, downright normal gents you could meet. (OK you guys, don't do anything to make me look stupid now.) And they seem to be good businessmen, too, given the number of products in the Sonic Frontiers line (with still more on the horizon) and the buttoned-up thoroughness of the retailer information kit available at the show.

At the low end of the high-end, the Sonic Frontiersmen are entering uncharted territory with a new budget line called Anthem. These all-tube designs include a preamp for \$1495 and an integrated amp (25-wpc) for \$1,295 with a \$200 phono stage

option. A power amp and CD player are in the works.

At the ridiculously high end of the high-end, they have a 211 Reference Monoblock for a cool \$25,000. I smell big profits in the Far East. (You know, Audio Research treats tube pins with Cramolin to prevent oxidation; Sonic Frontiers should treat the pins on the 211 with sesame oil; the Hong Kong market will go wild.) For us dollar-huggin' Americans, including peso-pinching Mexicans, the good news is that their regular power amp line has been completely redesigned. Although the updated styling is rather blah compared to their old amps, the circuitry represents an all-out attack on typical tube amp distortions. On the test bench, the new amps are said to look more like the solid-state competition. As Chris Johnson jokingly put it, "Our designers made a lot of circuit changes to lower the distortion ... and some of the changes even made the amps sound better!" Prices are \$2,495 for the 55-wpc Power 1, \$4,495 for the 110-watt Power 2, and \$8,995 for the 220-watt Power 3 monoblocks.

On the preamp front, remote control is coming in the Line-1 and Line-2 models, at \$1,995 and \$2,995 respectively, which replace the SFL-1 and SFL-1 Signature. The remotes are unusual and neat, looking sort of like smushed hockey pucks. The new preamps incorporate much of the technology of the reference SFL-2, which remains as is until probably next year.

Another tube amp manufacturer with designs that compete head on with their solid-state rivals in terms of clean current and voltage delivery into real-world speaker loads is Melos. The Gold Series Triode 402 mono and Triode 202 Stereo feature "unique zero-gain drive circuitry" said to greatly improve frequency response and damping factor, allowing their use with difficult speaker impedances. The 400-wpc 402 lists at \$7,795 per pair, and the 180-watt 202 at a more wallet-friendly \$3,895. That's a lot of bang for buck, even more so if you opt for the non-balanced 202 Basic at \$2995. Also high on the bang/buck scale is the SHA/Gold Balanced remote preamp, with six inputs, tape

monitor, balance control, choice of standard or passive outputs, and, last but not least, the famed Porzilli Phontentiometer, all for only \$1,995. The rest of the reasonably priced Melos line is too extensive to go into here, but anyone in the market for great tube gear ought to seek out a Melos dealer.

Another perennial "good tube guy" is Mike Sanders of Quicksilver. Although not as show-offy as the Jolida integrated amps, the Quicksilver line covers a full range of excellent amps and preamps at fair prices. My favorite is the GLA (Great Little Amp), a 40-wpc stereo cutie (weighing a hefty 48 pounds) for only \$1,195.

My sincere, abject apologies to all the brave tube tribesmen I'm skipping, but now I think I'll segue into solid-state amplification with a quirky

The Melos 402 and 202 offer a lot of bang for the buck.

hybrid product from newcomer Blue Circle. Their BC2 mono hybrid power amp features a 6SN7 tube in the pre-driver circuit, with a class-A bipolar output. The amp employs only three simple stages, no circuit boards, and multiple small-value filter caps. The styling is even more unusual than the circuitry, as the amps stand vertically (like some computers), with heat sinks at the top and wood panels on the sides. Cosmetically, I like the concept better than the execution (the devil is in the details), but at least these guys out of Innerkip, Ontario have come up with something which is truly out of the ordinary.

The amp produces only 75 watts and costs \$5,100 per pair, while a matching preamp runs \$3,100, so there are no price breakthroughs here—but that's what you get with hard-wiring, hand assembly and limited production runs. What I heard at the show was good, but the Blue Circle guys kept such a tight reign on the volume control, so I really did-

n't hear this amplifier get much of a workout.

And now to complete my segue to solid state, let's talk about some tube guys who are now going (a little) transistor. This is a manufacturer who knocked me out (BAM! SPLAT!) last year with a remarkable dynamic duo, a tube amp and preamp that were innovative in design, finished in execution, and absolutely ready for prime time. I'm talking, of course, about the BAT men of Balanced Audio Technology.

Still full of ideas even after his last breathtaking departure in tube amp design—a 60-watt stereo amp for \$4,500 featuring wide-bandwidth toroidal output transformers; paper in oil capacitors; automatic biasing of each output tube, and a high-current, zero-feedback, fully balanced, differential circuit, reputedly neither single-ended nor push-pull—designer (and not-so-boyish wonder) Victor Khomenko retreated to his BAT cave and came up with the VK-500 Transcendental power amp. Let's spotlight the features: Only two gain stages, both N-channel MOS-FETs with no global feedback; separate 1,000 VA potted toroidal transformers; fully dual-mono construction; expandable energy storage with BAT-PAK capacitor packs; 250 wpc into 8 ohms (450 into 4); 3 Hz to 350 kHz bandwidth, and just \$5,000 retail. (KAPOWIE!!!) Victor and his partner Steve Bednarski are still takin' care of tubes, however, with a new, more cost-effective tube preamp, the VK-3 for \$2,500. Containing six tubes (versus 10 in their pricier pre), and only one transformer, the VK-3 appears to be an good, cost-effective option.

NO GLOW

OK, now some more solid-state! Must I? Ya got your Krell, Levinson, Classe, Spectral, Rowland, Threshold, and newcomer Sutherland. They're all great. They all sound . . . great. What more can I say? Maybe one thing: Thank you, Glen Grue of Classe, for keeping the watts up and the prices

down. And thank you, Lew Johnson of conrad-johnson, for doing the same with your solid-state designs while continuing to come up with impressive tube gear. And thank you, Nelson Pass of Pass Labs, for your unconventional single-ended, class-A MOS-FETS that sound so pure and musical (now just get those prices down).

Charlie Hansen of Ayre previewed an innovative preamp to partner his highly regarded V-3 power amp. You've heard of belt drive turntables? Hansen calls the Ayre K-1 "the first belt-drive preamp." In an all-out effort to minimize the signal path, Ayre put their whole kit and caboodle—including connectors and volume control—on a single circuit board mounted vertically in line with the back panel of the chassis. The "caboodle" part is a system of toothed belts and pulleys that operate Shallco stepped attenuators in 1-dB increments. According to Ayre, "Surface mount technology allows for miniaturization of the circuit layout. The net result is that all that circuitry is, from input to output, is contained within six inches." Balanced and unbalanced ins and outs are standard, while a remote control and phono stage are options. The preamp should be available by the time you read this, but the price is yet to be determined as we go to press; figure around \$4,500 for the basic unit, with the remote adding \$350 and the phono a grand.

I'll single out one more solid-state electronics manufacturer for praise here, PS Audio. I'm singing their praises for two reasons: 1, They make

incredibly good products for reasonable prices, and 2, PR contact Mark Fisher gave me a Macintosh floppy disk with all their press info on it, so there were no papers to misplace, which is what happens to half the fliers I pick up at the show. [Mark—Haven't you realized yet that it's the editors who steal them? Gene Pitts] What particularly caught my eye and ear was the Model 9.0 direct-coupled line preamp for \$995. For your grand, you get high-quality sealed switches, a bypass setting, a straight-wire passive setting, an Alps volume pot with a motorized remote, and balanced ins and out. What more do you want? On the digital side, their popular Lambda transport is now the Lambda Two, with redesigned circuitry and mechanical damping; \$1,995 or \$2,295 with ST optical. (A DL Three DAC with HDCD is in the works.)

There wasn't a whole lot of solid-state BIG NEWS at the show, and the tube wars definitely captured my imagination. Let's face it: I love tube gear. It's sexy and it sounds nice. But like most things sexy, it's often a high-maintenance pain in the butt. My heart whispers "tubes," but my head tells me something else. The common sense thing for consumers is to pick your speakers first, then find an amp to match. Speakers are still the trickiest component in a system. The sound is more variable than with electronics, and the style and size more difficult to match with your taste and your room. Find a speaker you can live with (and afford), and let that narrow down your choice of amplifier. If the speaker you

like is a high-sensitivity, moderate impedance pussycat, you can safely choose from almost any amp on the market. The likelihood, however, is that the speakers you choose will sound their best with a good solid-state amp.

Many people were going around the show trying to find a good sounding speaker that would work with single-ended triodes. Like the mythical quest for the Holy Grail, it's probably a fruitless search, but I'll keep an open mind and remain agnostic. It strikes me as odd, however, that even those with a soft spot for SE triodes readily admit that there are few (or no) speakers on the market that really do the amps justice. If there aren't any great high efficiency speakers out there, how can they know that the SE triode sound is as incredible as they say? The two go hand in hand.

The traditional solution to the SE triode dilemma is horns, but I have a problem with horns. There were quite a few at the show, none making sounds I would want in my listening room. They don't do depth; they don't do focus; they don't do the disappearing act I'm used to in a good speaker; and they don't even do driver integration until you get waaaaaaay back from them—which means room reflections dominate the sound too much, unless you have \$100 grand to spend on a custom listening room. They *do* do dynamics, but that isn't the only thing that makes high-end listening magical. Creating the illusion of being transported to the recording space is magical to me, and in that

respect horns are a joke. As a magic act, a horn speaker is a stand-up comedian. But real magic can be had—and for under four grand. Just look to speakers from Platinum, Amrita, Totem, ProAc, Von Schweikert, Gallo and Gershman.

I'll cover the Canadian company Gershman first, because they are a newcomer to me, and they were a revelation. I heard the floor-standing, three-way, lacquer-finished Avant Garde in two different rooms. One featured Celeste (also from Canada)



Threshold's new Audiostatic division showed two U.S.-made speakers, the ESH100 and the ESH 50.

solid-state electronics, and the other had Copland tube stuff (from Sweden). Both systems sounded superb, among the top rooms at the Sahara Bi-level. The Avant Garde is handsomely styled, beautifully finished, and costs only \$3,689. Gershman also sells other speakers, priced from \$1,700 to \$6,395, as well as reasonably priced room-treatment panels. I hope they picked up many U.S. dealers.

Another Canadian company, Totem, was featuring a new speaker called Tabu, which, at \$2,995, fits between the Model One and the Mani-2 in the Totem range of mini-monitors. The Tabu looks like a Mani-2, but uses a different tweeter and doesn't employ Isobarik loading of the woofers. Perhaps not as ballsy in the bass as a Mani-2, it definitely sounded like a full range speaker in spite of the small size, and the music it reproduced was both sweet and detailed.

Similar in size, price and performance to the Totem, the classic ProAc Response Two has been totally revamped, and is now known as the Response Two 'S' (\$3,200). Looking pretty much like the Response Two, the 'S' has a new bass driver, heavier damping within the enclosure, cabinet walls of varying thickness, and a "radically reworked crossover." The result? That same jaw-dropping resolution and soundstage of the Response Two, but with more weight and richness.

Platinum is a name that may be new to you, but their speakers have become quite a favorite of The Audiophile Society here in New York. The product line is a little complicated, but all the speakers are built around two Phil Jones-designed drivers: A one-inch aluminum tweeter that I think is one of the smoothest around, and a 4.5-inch aluminum mid/woofer that sets new standards in midrange resolution and bass extension. Confession: I bought a pair of Duos (\$3,995). Review in the works.

Most audiophiles with normal-sized rooms never understand they'd be better off with small speakers since big speakers just cause placement and standing-wave problems. The small speakers from Totem, ProAc and Platinum are as good as they get.

Now if you're looking for the unusual, look no further than the Nucleus from Gallo Acoustics. The basic Gallo building block is a 12-inch diameter, bowling ball-looking enclosure with a 6.5-inch Dynaudio woofer mounted on the front. Although it looks like a Lady Brunswick, it's far from it, weighing in at only seven pounds. The enclosure itself is actually only a pound and a half; Gallo claims the structure is inherently stiff and self-damped. On top, a cylindrical tweeter has a radiation pattern of 330 degrees.

The speaker is wired internally with 14-gauge, solid-core silver, and there is no crossover per se. An elastomeric dustcap rolls off the woofer mechanically, and the tweeter behaves as a capacitor, naturally rolling off below 3

Best Sound of the Show? Ya' gotta read the article.

kHz. An external filter attached to the binding posts pads the tweeter down somewhat to match the sensitivity of the woofer, and the tweeter level is easily adjustable to suit one's room and taste.

New for this year is a Spaceframe stand, which holds the main speaker and an optional Bassball woofer (which extends the bass response). The frame can be covered with a grille cloth sock to hide the speakers, for those who find the naked form just too unappealing. Optional wooden endcaps can make the whole affair positively traditional looking. The little Gallo globes are \$1,900 a pair, with the stands an additional \$399, and two Bassballs adding \$1,200. Clever stuff. Clever and weird. Clever and good sounding.

I'd be remiss in not mentioning Dr. John Andre's Amrita speakers. John was displaying his five-way AMRIT-Jovian Pillars, the best sounding BIG loudspeakers I heard for anywhere near the price, \$2,995 per pair. It's a

tall tower that doesn't take up much floor space, so it could squeeze into a normal room. If I was in the market for something impressive for not a lot of money, I'd give these a serious listen (along with something from Dunlavy).

AND THE WINNER IS...

I can't very well do a show report without some mention of best sound. The Rowland/Audio Artistry room had its adherents, and the Audio Research room with the big Genesis loudspeakers also made impressive noises. When I mentioned that I'd never heard Genesis speakers sound this good before—particularly in their own demo rooms—someone mumbled, "That's Arnie" (referring to Genesis Pres. Arnie Nudell). "He really likes to turn up the woofers and tweeters." Seems when you put all those level controls on speakers, even the designer himself can't help but do a little knob tweaking.

Then there was the Spectral/Avalon room, which did certain things spectacularly, although a standing-wave problem resulted in most of the deep bass ending up out the back door. It's nice to know that even truly brilliant audio brains like Keith Johnson—who was so gracious, informative and honest while running his demos in this Alexandria Tower suite—can, in the end, fail like the rest of us mortals in trying to overcome certain acoustical headaches.

But I'm going to be different and give my winner's trophy to a less-expensive system than either of the three mentioned above. Built around ESP Concert Grands, it featured a Timbre Technology DAC front end, Manley amplifiers, Esoteric Audio cables, and (just as important) ASC room treatment.

ASC products were used in many of the better-sounding rooms at the show, and I believe audiophiles must start wising up to the fact that room acoustics determine the quality of their hi-fi systems much more than the

equipment itself. A few months ago I walked into a new dealer's showroom planning to buy a few sound absorbent and diffusing panels to fool around with; I wanted to support a local dealer and spend a few bucks on something important. I asked what kinds of room treatment they sold. The answer, none. So dealers have to wise up too. High-end should be about great sound, not simply expensive equipment. ASC is doing something about it by launching an extensive program that aims to get dealers "to use ASC as their acoustic expert in a referral relationship." I hope these guys succeed.

Ultimately, even good room treatment can take you only so far—as shown by the low frequency irregularities in the Spectral/Avalon room—but there is a solution on the horizon, digital-domain room correction, and it will be revolutionary. Some day soon, the high-end may be having another analog versus digital debate, but it won't be over LPs and CD players, because the time is coming when it will be possible to eliminate all analog signals in the record/playback chain—from the microphone at the recording session to the speaker cones in your living room.

THE FINAL FRONTIER

That revolution seems to be temporarily on hold right now, for reasons I don't understand. In the last few years, prototype speakers from Meitner and Snell, along with actual production models from Audile, produced remarkable sound with adjustable digital crossovers that compensated for both driver non-linearities and low frequency room nodes. [And don't forget Nelson Pass's effort while he was at Threshold. Gene Pitts] The '96 WCES was notable for a lack of progress in this area. I'm told that Dunlavy was playing such a system "off site," but by the last day of the show, when I was ready to pay them a visit, they'd packed up and

gone home. Audio Physic has a digital crossover in production now, as does Meridian, but where are the rest? Let me whet your appetite with an experience from last year's show.

Ed Meitner of Museatex, now owned by a/d/s, gave Arnie Balgalvis, Bill Brassington and me a private demo of a new system he's fooling around with. He took a little 4-inch mid/woofer, stuck it in a tiny aluminum case with a dome tweeter and no crossover, and got it to produce awesome, totally boxless sound. He figures the speakers would sell for about \$400 the pair. And where was the crossover? In a computer-controlled DSP processor, fed by the output of Ed's CD transport. A BIDAT did the final conversion into the analog domain.

The sound was big, full, and stunning in its ability to reproduce detail and harmonic bloom. But then I noticed the pair of Museatex subwoofers: A ha! The jig was up! No wonder the sound was so big and expansive and clean; the little minimonitors were obviously crossed over very high. I asked Meitner about the low frequency crossover point. "60 Hz," said Meitner. No way, you say? Way.

The sound was so incomparable and Meitner's suite so sumptuous we didn't want to leave. Bill explored the bathroom and came back some time later with reports of a toilet area unmatched in opulence since the fall of the Roman Empire. I tried it myself, was suitably dazzled, and emerged

Digital signal processing, a la Ed Meitner, is mind-boggling.

sputtering: "The marble. The wood. The brass. The mirrors. The hot tub. And did you see that bidet?" Brassington then got off the best line of the afternoon, "I bet you haven't felt so clean in your life." [Mark, don't forget your ears!--Gene]

Feeling his oats, the Brass Ear decided to get bold and nit-picky with Meitner's system: "Ed, I think there may be a touch of glare on the strings." Mr. Ed smiled (uttering nary a "Wilbur"), tapped a few keys on his computer, and the sound was immediately transformed. Meitner had, of course, changed the crossover in the digital domain in such a way as to suit our tastes. With control over both frequency and time, digital crossover corrections potentially will do far less damage to the signal, while maintaining better phase and amplitude responses.

Then Mr. Ed gave us the kicker: He is working on an all-digital amplifier/speaker combo that will let the speaker driver itself do the conversion from digital to analog! Say what? The horseshoe print was visible on my forehead for weeks.

THE OTHER TUBE

The merger of audio and video into that entity known as "Home Theater" was still much in evidence at the WCES, and many high-end companies were featuring home theater products, but the excitement on the audio front seems to have died down somewhat. The NTSC picture basically sucks, even with a \$20,000 Faroudja line quadrupler hiding the scan lines, so five-channel sound has been a big selling point to the public. But with heavily compressed Dolby AC-3 as the "sound of the future," and greatly improved picture quality coming soon with DVD and a high-definition standard, audio may no longer be in the driver's seat of the home theater bus. Still, just think of all those speakers to be sold: Left, center, right, surrounds, and subwoofer. Speaker makers must be swooning.

The electronics are a tougher sell: Who's gonna spend ten grand on fancy amps and control units when the Wiz will sell you a Japanese A/V receiver with five amp channels for \$500? The potential silver lining is that home theater has a broad, "family"

interest. If dad wants his fancy high-end toys, at least mom and the kids might be willing to play along if those toys come wrapped in a "home theater" package.

EAD, with its TheaterMaster line, is really going after this market. Here's stuff that has all the video doo-dads you could want, along with really top-notch sound for plain old music. (The fact is, however, almost no one outside of the few who read this and other high-end magazines actually listens to music actively—that is, not as a background to some other activity.) The good news here is that Laserdisc-based AC-3 can sound pretty good, at least that was what I thought about it in its EAD TheaterMaster implementation—probably better than you'll hear in even the best of the first-run movie theaters.

One other high-end company, Audio Alchemy, is attacking the home theater market in a different way, and I've saved them for last because, frankly, they have so many products happening all at once that I get dizzy looking over their press kit. In any

case, the interesting news is that they've created the Alchemy Video Products group, whose first product is the VRE v1.0 Visual Reality Engine. This device takes your video signal and uses 16x processing at 10-bit resolution (higher quality than the original video at the broadcast studio) to create an S-video output with none of the buzzing and chroma smear of tra-

The sound from Laserdiscs with AC-3 can be pretty good.

ditional comb filters. In other words, it's a color resolution enhancer, and it really works. The picture I saw on a consumer television monitor in the Audio Alchemy room had better sharpness than the sharpness on any \$10,000+ professional studio monitor I've seen.

As is usual with Audio Alchemy, there will be upgrades to follow: first, a ghost cancellation system, then an honest-to-god time base corrector. A "3-D" comb filter and a line doubler are also in the works. As a professional film and video editor in my day job, I think I'm in a position to recognize that Audio Alchemy is light years ahead of everybody else (including the big Japanese firms) in offering these kinds of products to the general public—and at typical Alchemy bargain prices. This is what high-end video could be about, and I have no doubt that even when an improved video standard finally comes into being, I'm willing to bet Audio Alchemy will be right there to take it to even higher heights.

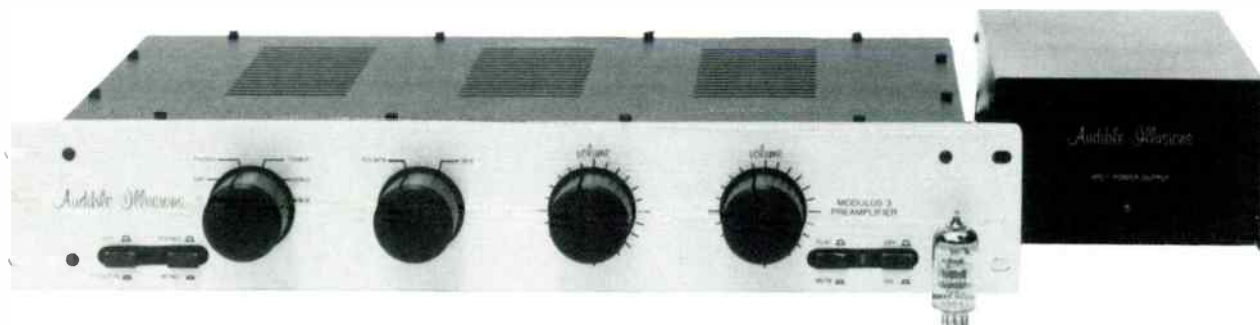
My apologies to everyone I didn't mention. Catch ya next year! For those readers who wish to learn more about some of the products I did mention, or who want to find out what's going on with manufacturers that I missed, I have three words for you: World Wide Web. Most manufacturers have a home page.

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Vinyl Ventures in Vegas: Mission Impossible?

John Hellow

(The Fantasy)

The package arrived by courier. It was very small. I had not received such a package in almost a year, the date of my last assignment. I opened the package and removed the 1x2-inch tape with some trepidation. I placed it in the small machine and began to listen:

Agent Hellow, your mission, should you choose to accept it, will require the following: You will arrive at Los Angeles International Airport at 5:30 a.m. on January 5, 1996. Collect your tickets and proceed via 6:30 a.m. flight to Las Vegas. Upon arrival, you will immediately proceed to The Las Vegas Convention Center and register. You will ignore all the truly fascinating electronic gadgetry on display at the Convention Center and immediately proceed to the Sahara Hotel for the execution of your mission. You will locate the agents of ANALOG and ascertain and report on the status of their activities. Ensure that the agents of BINARY are not alerted to your presence and do not consort with the agents of ADULT SOFTWARE that also frequently occupy the Sahara.

You should principally concern yourself with agents of the vinyl-clad variety (not to be confused with the similarly clad agents of ADULT SOFTWARE); however, you should also determine the status of agents that provide hardware support to ANALOG.

Because of California Air Quality Management District laws, this tape will not self-destruct. However, to ensure that it does not fall into the hands of S-MAG, you should place it next to the 12-lb. magnet structures of your ATC midrange units.

Finally, pursuant to local California ordinance, you are required to recycle this tape.

I was mystified by the voice on the tape. It was unfamiliar, it was unknown, it was not the voice of President Arnie. I was soon to learn that the Society had sold us out.

**ANALOG'S SUPPORTING CAST:
HARDWARE**

(Reality)

It was clear once again that the preponderance of my efforts would take place at the Sahara Hotel which, for the last time, was host to high-end audio at the Winter CES. The dilemmas facing those of us that rely on vinyl as our principal source of recorded music include the diminishing number of pre-amps that include built-in phono stages (a conspiracy, I'm convinced, perpetrated by interconnect manufacturers), the relative lack of continued development of external phono stages, the dearth of new phono cartridges, either moving coil or moving magnet, and the extremely high price of state of the art efforts. Consequently, I focused on developments in all of those hardware areas for purposes of this report.

Concerning phono stages, I am pleased to report as follows. Pass Laboratory's Nelson Pass and Joe Sammut indicate that company will be releasing a new phono stage at a cost of approximately \$2,000 in April or May of this year. If that phono stage

can live up to the expectations engendered by the company's recent amplifier and pre-amplifier efforts, we should finally have a state-of-the-art phono stage for a reasonable price. I have it on extremely good authority that Sony's audiophile-oriented M-series speakers were developed around Pass electronics. In fact, with a relatively unlimited budget in procuring electronics for the development of those speakers, Sony passed up their own megabuck pure Class-A amplifiers and pre-amplifier, currently only available in Japan, in favor of the Pass electronics.

In the Audio Artistry/Rowland Research room, Jeff Rowland was using the Kuzma turntable and arm and premiering his new phono stage, the Cadence (about \$2,800), which will operate either off of the battery power supply of his megabuck Coherence pre-amp or the solid state power supply of his new \$4,500 Synergy pre-amp (also premiered at the Show). I spent more time than I should have in this room listening to this system with four-battery operated Model 6 power amps driving the new Audio Artistry Beethoven speakers. That system represented for me some of the best sound available at the Show.

When I entered the room on Friday morning, they were through using digital as the source. I asked that they play "Matilda" from Classic Records' reissue of Belafonte at Carnegie Hall, and on this system, it was truly an awesome experience (though there was a degree of bloating in the bottom end of the system that I attribute to room interaction problems). In many respects, listening to this reissue through this system surpassed listening to the master tape of this recording at Bernie Grundman's studio. The Belafonte at Carnegie Hall from Classic Records should be included in anyone's Top 12 list for both the music and the quality of reproduction. In rooms demonstrating phono playback, this was definitely the record most often played.

I next visited the Wilson Benesch/Black Diamond Racing room.

Wilson Benesch fabricates turntables, tonearms and cartridges out of carbon fiber. They were using the Act Two arm and table (the combination selling for \$6,295) with their new Carbon 1 cartridge (retail \$2,800) which uses a Benz Ruby motor with 20 degrees of VTA (rather than the 23 degrees of VTA used in the Benz cartridge which required tilting that cartridge back to achieve proper VTA on most records), and 0.3mv of output in a single-piece, carbon-fiber body. (Benesch is also

Diamond Racing custom carbon-fiber equipment racks, The Shelf, and the new Shelf For The Source. I am using both The Shelf and the Shelf For The Source as equipment supports in my home system, in some instances with pneumatic suspensions. Nothing else seems to come close in terms of resonance control and isolation. (I have not had at home Mike Slaminski's Cornerstone platforms from Ultra Resolution Systems, but I understand they are under review by Bill Wells of this magazine.) I unfortunately did not have time to do any extensive listening in this room, but hopefully will have an opportunity to report on the Benesch turntable, arm and cartridges in a future article.

FM Acoustics, the Swiss high-end electronics company, was also demonstrating their analog equipment, in particular, both their single-ended phono stage and their balanced phono stage. The balanced phono stage has been around for several years and retails for \$10,000. The more modestly priced single-ended phono stage, while still expensive at \$5,000, is a recent addition to the line. I have requested the single-ended phono stage for review, but it is in such demand

at this point that it is unlikely to be available in the near future. Sound in this room was stunningly fast, detailed, and holographic.

Thiel was demonstrating their new CS-7 speaker with Krell KSA-1 amplifiers, a KRC pre-amp with KPE phono stage, and an SME-20 turntable with SME-V arm. Sound was very live and dynamic, and timbre was quite accurate. I did note a lack of dimensionality which surprised me, given the other good reports about these speakers from people whose ears I trust. Again, it is next to impossible to judge the sound of a component at a show because of both room and power problems.

Joe de Phillips of Discovery Cable, who is also the distributor in the U.S. of the Clearaudio cartridges, turntable and arm, was exhibiting all of the same at the Show, along with some



Don MacInnis of RTI with Mike Hobson of Classic Records.

marketing the Hybrid at \$1,700 and Matrix at \$1,100, cartridges that are designed around a similar modification to the Carbon 1 Benz cartridges, except that they use the Benz Reference motor and less sophisticated body structures. These two car-

Plenty of new phono gear showed up at this year's WCES.

tridges are available in either 0.6-mV or 1.9-mV outputs. You will note that they each retail for less than the cost of a Benz Reference.) In a marriage made in heaven, equipment supports in the room included the Black

interesting sounds from Clearaudio Records. These records included Best Seller Classic No. 1, LP-070591, a stunningly dynamic recording of short classical works for piano, violin, and guitar, with the Slovak Chamber Orchestra and the Slovak Philharmonic Orchestra; Clearaudio Best Seller No. 1, LP-070990, a collection of popular jazz, fusion, and pop recordings, some of which are very, very good, and NColor, LP-220391, a jazz group whose recording I have yet to listen to. Joe was demonstrating the TNT turntable and the Clearaudio Insider cartridge. Few of us have an opportunity to listen to any \$7,500 phono cartridge, let alone own one. He exhibited Clearaudio's new turntable, which is massive (110 lbs.) and will retail at \$6,500. Joe's system at the CES sounded just great.

Amazingly, to me at least, the Forsell room on the first day presented a dry display. Forsell now manufactures everything from front-end electronics through speakers, including cabling, yet nothing was hooked up or being demonstrated.

I had an opportunity to talk to John Grado, Joe Grado's nephew and now the CEO of Grado Electronics, who was demonstrating their new Reference Series 1 headphones. I have had a brief chance to A/B these against the now discontinued HP-2 headphones. I greatly prefer the new mahogany framed RS-1s which should retail for about the same price as the older HP-1s. They present a more open sound with better low bass extension and airier highs. Perhaps more importantly, Grado has been selling a new line of phono cartridges overseas which may see their way into the U.S. this year.

Audible Illusions was demonstrating their new Modulus-3a pre-amp, with built-in John Curl phono stage. This pre-amp with phono stage sets the standard in phono reproduction below the stratospheric level, that is, less than an investment of \$6,000 in pre-amp and phono stage. It is currently priced under \$2,300.

Finally, concerning equipment at the Show, Marantz held a press conference Saturday morning to

announce the reissuance of the Marantz Models 7, 8B, and 9. This reissue series is truly something special. Kevin Hayes of VAC conducted the feasibility study for the project and will supervise production. Kevin was at the Show and available to answer questions on behalf of Marantz. Virtually all of the internal components in the reissue series are from the original component manufacturers and are of the same design and material composition. For example, the company that manufactured the Marantz transformers is still in business and had the original transformer dies, as well as sealed 55-gallon drums of the potting wax used for the original transformers. Obviously, because of the possibility of PCB contamination, the capacitors will differ slightly from what was originally available. We had an opportunity to view preproduction units and they are virtually indistinguishable from the original components, but for the new detachable power cords.

There is mixed news regarding the survival of the vinyl disc.

For those of us of the analog persuasion, please remember that the Marantz 7 included a phono stage with both the old and current RIAA curves as well as an RIAA curve for 78s. I owned a Model 7 until about eight years ago, and I can assure you that the accuracy of its phono stage would not be embarrassed by current competition. In fact, gain was sufficient such that a Koetsu Black Gold Line straight in did not present distracting noise problems. The Marantz 7 and 8B will retail for approximately \$3,500 each. A pair of Model 9s will set you back about \$8,400. While mint original 7s and 8s will cost you less than the reissues, a pair of vintage Model 9s is considerably more expensive than the reissues. Additionally, Marantz is making replacement parts

available for owners of vintage equipment. Marantz really has done this the right way, but given the demand for these products in Japan, that should not be too surprising.

Finally, a week before the CES, I telephoned Stan Klyne at Klyne Audio Arts to find out whether he would be demonstrating at the Show. Unfortunately, once again, Stan chose not to exhibit his excellent phono stage designs. (I did hear, however, that he was spotted at the Show checking out the competition).

DE-VINYL

Concerning the survival of the vinyl medium, there is both good and bad news; the bad news first. Chesky Records has discontinued the production of vinyl. David Chesky indicates that sales are not sufficient to issue their own recordings on vinyl and the licensing costs for reissues such as the RCAs require significant volume. This is very sad news, because the last group of Chesky/RCAs were truly wonderful efforts, on a par with the Classic Record re-issue series, but possessing a different truth.

Reference Recordings has discontinued its Master Cut re-issue project and, while analog masters of new sessions will continue as long as tape and machine hold out, they will not issue these on vinyl unless and until demand for new classical and jazz performance materializes. They do indicate the company may issue limited editions LPs of some sessions, but no promises.

Finally, Wilson Audio's "independent" record division died an early death. This is truly unfortunate. As of the 1995 *Stereophile* Show, the company had completed remastering five more EMI recordings, but they couldn't get their record jacket problems worked out. These failures point out how tenuous the continued availability of vinyl may be. However, as noted below, the companies that are still issuing vinyl appear to be doing quite well.

For analog addicts at this Show, the big news was the expansion of the Classic Records empire. I do not jest when I tell you that only three years ago, Ying Tan was selling somebody else's records out of a small apartment in a marginal neighborhood in Los Angeles and Mike Hobson had an appointment-only audio dealership in New York. They now command three-hour press conferences at international electronics shows. The press conference this year consisted of a program by the late Jack Pfeiffer of RCA in a 100-person auditorium. Jack addressed the beginnings of stereo, and presented some special out-takes from RCA's early experimental stereo recording sessions of Stokowski, Reiner and Munch. If you have Internet access, I suggest you check out the Classic Records web page at <http://www.classicrecs.com> where you can find a transcript of Jack's program and even sound bytes of the audio excerpts of that program. Jack died on February 8, 1996. I consider myself truly fortunate to have finally met the man responsible for the introduction of commercial stereo recordings in the United States, with the extraordinary foresight to record sessions in stereo five years before equipment become available to produce stereo LPs.

After Jack's program, Mike Hobson announced changes to the company's structure and product line. The product line now includes reissues from the RCA classical and popular catalogs (both in LP and CD format), the Verve and Columbia jazz catalogs (in LP format), the London (CD format), and Decca/RCA (LP and CD formats) classical catalogs. These projects will appear under the Classic Records and Classic Compact Disc divisions. Classic Compact Discs is issuing selected titles from both the RCA classical and pop series and from the Decca and London Blueback catalog, from 20-bit analogue-to-digital transfers from original master tapes on a gold CDs. Michael Grantham, formerly of Mobile Fidelity, has joined Classic Records to head the Classic Compact Discs division. All London Blueback titles will be transferred by

Tony Hawkins at Decca Studios in London, using Decca's 20-bit, ultra high-fidelity digital system. All Decca/RCA titles will be transferred by Bernie Grundman from original master tapes using Apogee 20-bit A-to-D converters and a new redithering and jitter reduction system designed by the folks from Audio Alchemy.

Another LP-based label added to Classic Records is Jazz Planet, which will dedicate itself to new, contemporary releases, the first of which is Art Davis: A Time Remembered with Ravi

Classic Records' three-hour press conference was worth the time.

Coltrane, Herbie Hancock and Marvin "Smitty" Smith. The other new Classic Records label is Rock The House Records, which in the last year offered vinyl releases from the Zoo, Caroline, Razor and Tie and Rocket labels. These releases have included Matthew Sweet, Elton John, Brian Eno, and Little Feat, whose new album is being reviewed by Mark Block. Rock The House Records has also issued its first original recording, Love Jones Live in Hollywood, which is a 10-inch LP that is exclusive to vinyl.

Finally, Classic Records, in conjunction with Record Technologies International (RTI), has developed a new formulation for vinyl. Our press kit included Reiner's Also Sprach Zarathustra and Johnny Hodges Blues A-Plenty on the old and new vinyl formulation at 33 and 45 rpm. Yes, that's right, Classic Records is issuing a very limited edition 45-rpm series. I have listened to both titles in all three formulations. (I have made several significant changes to my system in the year. My equipment now sits on Black Diamond Racing's The Shelf, carbon fiber clad composite boards of extreme stiffness and density. The turntable, a Goldmund Studio, has been modified by replacing the particle board base with a carbon fiber

base and subplinth from Black Diamond Racing. The 68-pound plinth assembly now sits on three Newport Corporation active pneumatic feet. I have used true 75 ohm wiring for the internal BNC run inside the Pioneer PDS-95 CD transport, which also sits on a pneumatically suspended extra heavy version of The Shelf for the Source. Cabling between the preamp and amp is Magnan Signature instead of Magnan Vi, as is the cabling between the D/A converter and preamp. Each change has improved system resolution and imaging precision. The turntable modification also increased lower octave extension and solidity.)

The new vinyl formulation considerably improves signal-to-noise ratio and, consequently, low level resolution almost to a distracting degree. High frequencies seem less edgy, where in the abstract they did not seem edgy in the old formulation. For example, in the Also Sprach Zarathustra, pages turning, movement of orchestral members and the like become readily more apparent, as does a better sense of the recording venue. On the Hodges recording, his post-riff breathing is almost asthmatic, where before you could only hear a slight wheeze.

The 45-rpm version of both recordings expands on the new vinyl's strengths, while also providing considerably more bass detail and impact. While image localization of the tympani at the beginning of Also Sprach Zarathustra are diffuse on both 33-rpm versions, on the 45-rpm version, specific position of the tympani is exceptional. It's almost as if the tympani were previously being heard in mono and on the 45 are being heard in stereo for the first time. There also seems to be a slight improvement in sound stage specificity over the rest of the frequency spectrum, although it does not seem to be as dramatic as in the bottom end.

High frequency definition also is improved. In particular, the harmonics of cymbals in the Johnny Hodges piece, the decay of the saxophone, seem to extend for a considerably longer period of time than on the 33-

rpm versions. One thing that does concern me about the comparison is that both 33s were mastered using the standard three-step plating process, whereas the 45-rpm release provided to us was cut using the one-step plating process. At least at the time of this writing, the 45-rpm reissue series was

DCC's reissue of Korngold film music is on my must-have list.

intended to be mastered using the one-step plating process.

New vinyl is already being used on current releases and Classic Records is offering existing customers an upgrade program for copies of the records they purchased on the old vinyl formulation. The limited-edition 45-rpm series, which because of the one-step plating process will have to be limited to 1,000 copies, will commence in March of 1996, and the first releases will likely include the first five RCA reissues by Classic Records. One thing to remember concerning 45s is that the sides are much shorter than are possible with 33 rpm. I personally believe that the format is more conducive to popular and jazz music than to classical music. I am concerned about how longer classical pieces will be distributed from side to side so that the continuity is not disturbed.

There are some great things coming from Classic Records, including *Bob and Ray Throw a Stereo Spectacular*, *Belafonte Returns to Carnegie Hall*, *Sonny Rollins: The Bridge*, and Prokofiev's *Seventh*, as well as music from the Columbia catalog, including Ellington's *Jazz Party In Stereo*, Brubeck's *Time Out* (an exceptional reissue), and Dick Schory's *Music for Bang, Baaroom and Harp*. These reissues will all be covered in future articles. There was a lot to digest from this label at the Show, which never seem to cease pushing the envelope.

DCC Compact Classics is aggressively pursuing a vinyl reissue pro-

gram. New titles include an extended soundtrack from *Raiders of the Lost Ark*, *Elton John—Greatest Hits and Ray Charles—Greatest Country and Western Hits*. I have had an opportunity since the Show to listen to DCC's Stokowski reissue of Shostakovich Symphony No. 5 in D-Major, Opus 47, LPZ-2016. The string tone on this recording is exquisite, better than the vast majority of RCAs I have heard. The recording has great depth and Shostakovich's music, while lyrical, nonetheless is very dark and intriguing. This particular recording was cut from 3-track magnetic tape, not from 35mm film. As in the prior Stokowski reissues from DCC, this is the New York Philharmonic in their summer session at the Manhattan Center Ballroom. One of the amazing aspects of this recording is the precise positioning of the piano and the way it plumbs the lower frequencies.

DCC has also reissued Warner Bros. No. 1438, DCC LPZ-2017, *Music by Eric Wolfgang Korngold*. This film music collection was conducted by Lionel Newman and the recording is from the original 1961 two-track tapes. These tapes were not used for the original issue of this recording on vinyl in 1962. The recording includes music from "King's Row," "Anthony Adverse," "The Private Lives of Elizabeth and Essex," "The Sea Hawk," "The Prince and the Pauper," "The Constant Nymph," and "The Adventures of Robin Hood." The second side of the recording includes the Errol Flynn films. It's interesting to listen to these recordings and note that it's doubtful that Errol Flynn could have become Robin Hood without Korngold's music. He would have been just another guy in green tights. The recording and production of this remaster are very good, and this particular recording is definitely one of my must-haves.

Mobile Fidelity Sound Labs is reissuing vinyl at a prodigious rate. These 200-gm vinyls are mastered through the Gain System, designed by Nelson Pass who used a minimalist approach to the mastering-board and cutter-head amplifiers. I only wish that Mobile Fidelity would be more dis-

criminatory in the titles that it chooses to reissue, and focus on LPs that derive from extremely good recordings, such as the *Muddy Waters Folk Singer* and *The Fantasy Film World of Bernard Hermann*. Please don't misunderstand, these are not bad recordings; it's just that some others leave you scratching your head and wondering why bother. Their mastering facilities are so good now that you almost don't want them wasting their time on mediocre tape. I hope to survey some of their work in the next several issues.

Cisco Music is importing the reissue works of King Records of Japan. Up until now, that reissue series has focused principally on the London catalog. However, at the CES, Cisco Music premiered reissues from the Three Blind Mice Japanese jazz catalog. I purchased *Misty--Tsuyoshi Yamamoto Trio*, TBM-30, at the show and its better than the original I own. The music from this catalog is variable with some very good (this recording) to very uninspired performances. The recordings, however, are exceptionally good. Also, Mahler's Second from London on the King reissue KIJC 9139/40 is very, very good.

Chad Kassam of Acoustic Sounds,

There is enough new vinyl out that we can pick and choose.

now with the Analogue Productions label, like Ying Tan, also began selling records out of his apartment. His label now seems to issue a new record every other week. Some very good recent work includes the vinyl issue of Janis Ian—*Breaking Silence*, a definite must have, and the reissue of The Don Ewell Quartet—*Yellow Dog Blues* from the E.D. Nunn Audiophile label.

There is enough new vinyl out again we can finally afford to be choosy about what we buy, and that's the best news of all. Mission possible and I'll leave the next one for Tom Cruise. I'll get back to you about the sell-out.

Accuracy in Performance - Elegance in Appearance
Bryston's BP-20 Preamplifier



Bryston's new BP-20 line level preamplifier offers a significant step forward in capturing the subtleties, nuances and emotions of recorded music.

Redesigned inside and out to reflect the improvements in the entire Bryston line, the BP-20 is a perfect match to the new NRB series of amplifiers. All aspects of the signal flow are much improved, with lower noise and distortion figures, and higher overload levels.

You will find the noise floor has been significantly improved, reducing background hash to far below audibility. Input-to-input crosstalk is essentially nonexistent to eliminate signal bleed-through from one source to another. Channel-to-channel interaction has been improved, reducing any possibility of component crosstalk.

Signal switching and audio connections utilize heavy gold plating to provide long-term trouble-free connections. Two pair of XLR balanced inputs and one pair of balanced XLR output connectors are standard as well as five pair of unbalanced inputs, 2 pairs of paralleled unbalanced outputs and one processor loop. This provides total flexibility for integrating other balanced or unbalanced audio equipment into your system.

The power transformer is mounted externally to eliminate power-supply noise and interference. The BP-20 is housed in a steel cabinet for shielding to reduce electromagnetic interference effects. Buffered inputs provide for lower distortion and improved linearity from source components. A ground plane has been incorporated in this new design to further reduce crosstalk and noise throughout the internal circuitry.

Our feeling is that Bryston's BP-20 is one of those fortunate circumstances when the long hours and extended listening pay off. The sense of transcending the recording medium and experiencing the original performance is captured with exceptional realism.

Nothing but a listening test will convey the feeling of musical perfection available in the Bryston BP-20. We invite you to audition one today.



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DVD: Is There a Future For Multi-Channel, High-Resolution Digital Audio?

Dick Moore

Imagine having a digital audio medium with flat frequency response from d.c. to over 40 kHz and a dynamic range exceeding 130 dB for your stereo playback system, with plenty of playing time, to boot. These goals are not now completely realizable, at least within the bounds of most audiophiles' budgets. However, the new Digital Video Disc (DVD) format, recently agreed upon by all of the major corporate interested parties, has the huge digital storage capacity to make them possible. While many industry people and consumers will view DVD only as a means for movie delivery, its capabilities go far beyond digital video.

Achieving the audiophile performance goals of wide bandwidth and all-encompassing dynamic range requires analog-to-digital converters (ADCs) and digital-to-analog converters (DACs) with 22- or 24-bit resolution and 96kHz sampling rates, available at affordable prices. Even using currently-available 20-bit converters running at the professional audio

and broadcast sampling rate standard of 48 kHz, DVD makes possible dynamic range beyond 120 dB and audio bandwidth to 22kHz. The higher resolution afforded by 20 bit recording/storage/playback, plus the more than 20 dB dynamic range improvement over the CD, means far better low-level detail, great reduction (perhaps even elimination) of "grain," and more faithful reproduction of ambient and hall sound. Is DVD beginning to sound a wee bit interesting?

Now, imagine this kind of resolution applied to multiple channels, so that not only is the music more faithfully recorded, but so is the acoustic of the hall, or club, or room. Imagine listening to a playback system in which front row, center, is still the best seat, but where the best seat is large enough for friends to listen along with you, hearing what you hear, just as though you were seated together in Symphony Hall. This is the promise of discrete multi-channel reproduction: Faithful acoustic re-creation and a fully shared experience.

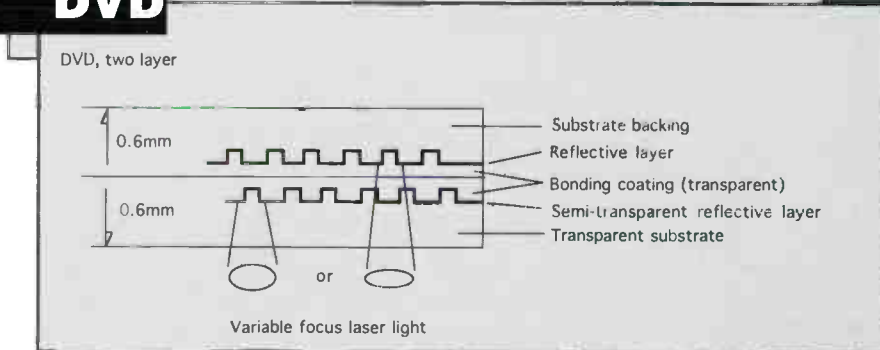
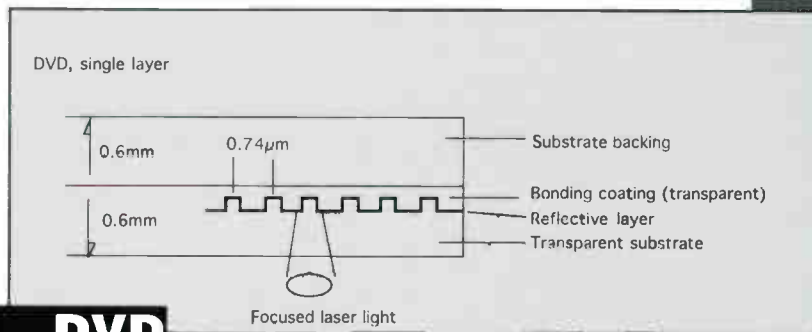
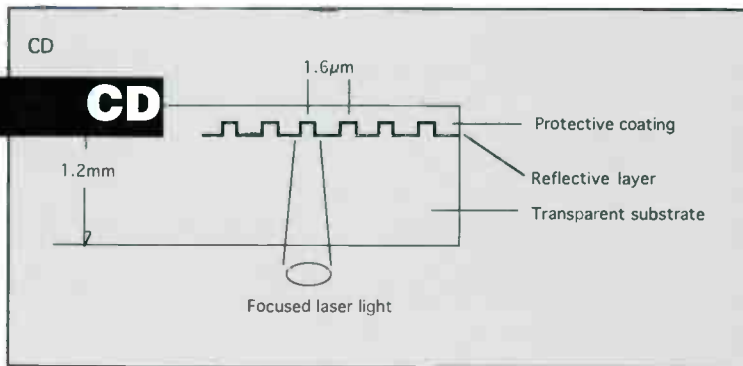
Unfortunately, you may not get the opportunity to have this dramatically improved performance;

it's an open question whether multi-channel audio quality beyond — or even as high as — the current two-channel CD standard will be included in DVD. While everyone agrees that digital technology will substantially increase the quality of video reproduction in the home, there is no general industry agreement that improved audio quality is needed or wanted, except by a very small group of high-end twee...er, consumers. To much of the industry, current CDs are either unqualifiedly good or else are "good enough." The real audio need, so the conventional wisdom goes, is for multi-channel surround sound for home theater; unfortunately, home theater sound system sales figures compared to those for pure audio equipment readily support this constricted view. If the need for high-resolution audio is in doubt, so much more is the need for high-resolution multi-channel audio.

WHAT ABOUT AC-3?

The default audio format for the DVD (at least in countries using

COMPARISON OF CD AND DVD PHYSICAL CONSTRUCTIONS



the U.S. NTSC video standard) is to be Dolby Laboratories' AC-3 system. AC-3 encodes six discrete channels of audio information in an incredibly small amount of data, in order to fit digital audio information onto film for theater playback, and onto LaserDiscs and DVD for home playback. AC-3 transmits six channels at a total data rate of 384 kbits per second; this is about one-eighth the data rate for two-channel audio CD playback. How do

they do it? They throw "unnecessary" information away, in a process of "lossy" compression. How do they know what's unnecessary? They use complex psychoacoustic models of human hearing to decide what information is audible and what isn't. Does it work? You bet. Is it high fidelity, in the sense that these words are used by the high-end audio community? In a word: No.

No one who has recently seen and heard LaserDisc

DVD technology is important for audio only because it has huge storage capacity — 4.7 Gigabytes in one layer (and the provision for up to 3.8 Gb in a second layer) on a CD-size disc — for just one layer, this is about seven times the capacity of a CD or CD-ROM disc. This enormous capacity has equally huge implications for any kind of digital data storage, regardless of the actual content of the information. The same DVD discs and players potentially can be used for audio, video, text, still images, graphics, or all of the above at the same time, and all with truly useful playing times. DVD actually delivers the capabilities envisioned for CD when it was first introduced—musical scores to accompany the sound, texts of librettos with the operas, etc. Note that most of these parallel applications have always implied integrated audio and video systems.

DVD obtains its capacity through both hardware and software techniques. Its laser pickup uses red (visible) light to achieve a much smaller spot size than that of CD's infrared laser. This in turn means much narrower and shorter data pits/lands, making possible narrower track-pitch spacing, thus providing approximately 4.5X more data than CD per unit area of the disc. Additional data space comes from more efficient (and yet, more robust) data coding and error-correction. For even higher storage, a clever technique of using two stacked data layers, which can be read from the same

side of the disc by changing the laser focus, nearly doubles the data area. On top of this improvement in physical density, software data compression techniques with both video and audio data are used to further increase data storage density far beyond the physical capacity.

The end result is a disc the same size and thickness as a CD, that in only one layer contains up to 133 minutes of high-resolution, full-motion video, six channels of sound in the Dolby AC-3 coding format for each of three separate audio data streams, and numerous subtitle text channels, all running at the same time. DVD players will provide playback of current audio CDs and computer CD-ROMs in addition to the new video discs. Forget LaserDisc. Forget CD-ROM. Forget CD + G. Forget CDI. And, forget CD.

movies with AC-3 sound would argue that the sound is poor; in fact, it's really very, very good, in part because looking at the pictures uses so much brain power for image processing rather than for sound processing. With movies, AC-3 is spectacularly successful. However, as a pure audio medium for music reproduction, AC-3 (and the other "perceptual coding" systems) leave a lot to be desired. AC-3 simply does not have the resolution or audio bandwidth required for transparent reproduction. Of course, this begs the question of what kind of specs are needed to make the audio window truly transparent; audiophiles agree that the CD window is more than a bit hazy.

The high-end audio community and those in professional audio who care about sound quality have long chafed against the resolution restrictions of the CD format. Some have come up with elaborate ways to overcome CD's limitations within the existing CD data structure. All argue that the 16-bit, 44.1 kHz CD format provides too little resolution for true high fidelity reproduction. Many recordings already are made with 20-bit ADCs and digital recorders, and some are being made with 24-bit gear. This is not an engineering treatise, but consider that 24-bit

precision results in a signal amplitude resolution of 1 part in 16.77 million; this is high resolution regardless of what you're measuring! What if these 24-bit recordings could be heard by anyone, with this level of resolution intact?

When plans for a new high-density optical disc format for video began to surface, audiophile designers could see high-resolution light on the horizon. Note that video has to be the driving force behind a new disc format because all of the market forces, path development, and installed-base surrounding audio CDs simply won't allow a new, non-recordable optical disc format, designed solely for audio, to succeed; the tepid US consumer response to both DCC and MD have shown how hard it can be to change the direction of such a mass, even at the fringes.

ENTER ARA

A group of industry advocates for multi-channel high-resolution audio has gathered together to promote an audio-only standard for DVD. This group calls itself Acoustic Renaissance for Audio (ARA). Founded in the UK by

Hirokazu Negishi, of Canon, ARA has many British audio notables in its membership. Hiro Negishi sees in DVD the possibility for implementing a "third paradigm" for audio (the first being mono and the second, stereo), one that finally brings true "spherical" audio playback to reality through multi-channel reproduction. While low-bit-rate, "perceptually-coded" AC-3 may prove to be adequate for many listeners, DVD opens the door for a new audio standard that will provide, in the home, faithful three-dimensional re-creations of acoustic performances with resolution to the limits of human hearing and/or background noise. What a shame if this once-in-a-generation (or at least once-in-a-decade) opportunity should be missed!

ARA's chairman is Bob Stuart, of Meridian Audio, who is well-known as an audiophile and as a designer of outstanding high-end equipment. Also involved are Malcolm Hawksford, Professor at the University of Essex, who has done a great deal of theoretical work in digital audio, particularly in noise-shaping and converter design; Tony Griffiths, formerly the Technical Director of Decca Records and a noted recording engineer; David Meares, the Audio & Acoustics R&D Manager

APPROX. PLAY TIME (min)	NUMBER CHANNELS	RESOLUTION (bits)	SAMPLING RATE (kHz)	ADDITIONAL DATA
105	8	20	48	AC-3 +subcode
83	8	24	48	AC-3 +subcode
99	7.1#	24	48	AC-3 +subcode
298	2	24	48	192kbit/s* +subcode
76	8	18	96	AC-3 +subcode
71	7.1#	20	96	AC-3 +subcode
181	2	24	96	192kbit/s* +subcode

#Effects channel limited to bass only

*substituting AC-3 at 384kbit/s, I estimate that playing time would be reduced by less than 8%.

at the BBC Research and Development Department; Michael Gerzon, a mathematician and the originator of the Ambisonics matrix process for acoustic spatial recording and reproduction; Francis Rumsey, of the University of Guildford; Ross Walker, Managing Director of Quad Electroacoustics; Alan Shaw of Harbeth Acoustics, and Stan Curtis of Wharfedale, to name only some of ARA's advisors and members.

ARA formed a Technical Subcommittee early in 1995 that has proposed a High Quality Audio Disc (HQAD) format for the DVD system. ARA and the subcommittee are actively lobbying DVD developers to include HQAD in the system standards. They argue that an HQAD format could easily be included in the reading and decoding capabilities of DVD machines, without significantly raising their cost. In entry-level machines, an HQAD digital output to other equipment for decoding, processing and conversion will hold down player costs, yet offer audiophiles flexibility to pursue various multi-channel options. More advanced (and costly) DVD players might well include more processing capabilities internally.

Strangely enough, it has been reported that many Japanese consumer electronics executives and researchers are totally committed to limiting any new audio standard to two channels only, in effect preserving the "second paradigm" and limiting performance to the constraints of the "stereo-only" high-end audio market. This would essentially eliminate the potential for having spatially-accurate reproduction via true multi-channel sound. Perhaps it's the long, sad memories of SQ, QS and

CD-4, or perhaps the movies have tainted multi-channel sound, making it inappropriate for the chastity of audio-only playback....

THE ARA HQAD PROPOSAL

ARA's well-thought-out HQAD proposal explores the arcanae of bit budgets, audio and video compatibility, data density versus resolution trade-offs, and analysis of the competing (and sometimes complementary) needs of record producers, recording engineers, hardware makers, and consumers. Stripped down to its barest audiophile essentials, ARA's HQAD proposal recommends data and disc formats with the following characteristics:

NUMBER OF CHANNELS

In the HQAD format, there will be from two to eight independent, full-bandwidth channels. The recommended channel assignments are Left total (Lt), Right total (Rt), Left, Right, Center, Left surround (Ls), Right surround (Rs), and Effects (E). Where fewer channels are wanted or needed, the freed-up data space can be used to extend playing time.

The number of channels used and their actual assignments would be at the discretion of the producer, except that the Lt and Rt channels always would have to be present. Providing the Lt and Rt channels assures maximum-quality stereo playback

regardless of other equipment or the lack of it, and also simplifies archival storage for record companies. Playback of these two channels would be required in all DVD players (even budget "movie machines") to assure all DVD users access to high-resolution stereo audio and to maintain full compatibility with existing and future audio and a/v systems.

The HQAD Effects channel represents an unusual case. In AC-3, the Low Frequency Effects (LFE) channel has an upper frequency limit of 200 Hz, which has led Dolby and others to dub the AC-3 system a "5.1-channel" system, rather than a six-channel system. As I read the HQAD proposal, ARA argues that music recorded for and played with a mono sub-

How come some CDs have more total playing time available than others?

One answer is that CD players have gotten much better at tracking the spiral of data pits and lands, thanks to higher performance tracking-servo design. Even though the CD standard mandates a tight specification for track pitch (how close adjacent tracks of the data spiral can be spaced), the CD specification allows for some "play."

CD mastering plants have improved their equipment and have learned to squeeze the pitch to near the CD specification's minimum value. This adds 10-12 percent to the playing time, but can also make CDs unplayable on machines with marginal tracking capability. That test discs like those from Pierre Verany can actually be made to check a CD player's sensitivity to track pitch variation is a testament to the precision of the CD mastering process.

GENERAL COMPARISON

CD

DVD

Disc overall diameter	120mm/4.72"	120mm/4.72"
Disc overall thickness	1.2mm/0.047"	1.2mm/0.047"
Track pitch	1.6µm	0.74µm
Smallest length of data pit or land	0.83µm	0.4µm
Laser light wavelength	780nm Infrared (IR)	635 or 650nm Visible (red)
Construction	Single-side one layer	Single-side one or two layer
Total storage (gigabytes)	0.68	8.5 [layer1 4.7; layer2 3.8]

DATA COMPRESSION

All HQAD channels are to have full resolution to the equivalent of at least 21.5 bits per channel. Depending on the basic sampling rate, this means recording with a minimum of 20-bit precision at a sampling rate of 48kHz, or 16-bit at 96kHz. The 96 kHz sampling rate yields the full

resolution from fewer bits because it has twice as many data samples per second and, with the careful use of the techniques of dither and noise-shaping, this additional data on the disc can be used to reconstruct a higher resolution final signal. The HQAD proposal recognizes that 24-bit precision at 96kHz is desirable and the proposal provides for this level of data precision.

The minimum acceptable sampling rate is to be the current professional audio/broadcast standard of 48kHz. The HQAD proposal argues persuasively that 48kHz and 96kHz be the two standard rates. This permits both rates to be used simultaneously to meet various audio signal processing and data storage goals, without creating digital trouble like audible clock beating or increased jitter from such digital side effects.

There currently is a great deal of professional audio interest in 24-bit precision and a 96kHz sampling rate. With or without lossless data compression, DVD can provide usable recording/playback time for this level of data for two channels; lossless compression makes possible additional channels or longer playing time. HQAD's flexibility in channel structure, data precision and sam-

woofer has sound that is inferior, in terms of spaciousness and dynamics, to recordings with bass in two or more channels; the recommendation is that the user's equipment should extract any wanted bass-only signals from the main channels. This proposal certainly makes sense to me from a pure audio point of view; I'm sure that I'm not the only one who prefers the improved bass sound quality of full-range left and right speakers compared to a single subwoofer and dual satellite system, regardless of the other performance characteristics. Numerous observers over the years have commented on the extra weight and warmth of the reproduced bass sound in multi-channel playback.

In the HQAD proposal, the LFE channel becomes simply the Effects channel, and it has full frequency bandwidth and resolution. This channel could easily be used to carry the height (Z axis) information which would be necessary for a fully spherical (i.e. three-dimensional) playback system, such as the Z channel in the Ambisonics system's four-channel configuration.

All HQAD channels are to have linear Pulse Code Modulation (PCM) encoding (the same type of data used for the CD). There is to

be no use in the eight main channels of "lossy" compression schemes, such as the various "perceptual coding" systems used in AC-3, MPEG-audio, MD (ADSP), and DCC (PASC). While these schemes do indeed result in tremendous data efficiency, they inevitably also "lose something in the translation," and that something is absolute sound quality. Once it's gone, it can't be gotten back, so why lose it in the first place?

ARA proposes instead a new data structure that employs "lossless" compression, which works like the compression and extraction utilities used to improve the speed of modem communications and the storage capacity of computer disks. These lossless packing schemes result in significant compression without losing any of the data and, in the view of Malcolm Hawksford, they offer up to 2:1 packing densities, meaning that, on average, you can put 2 bytes of data in each byte of storage space. This is rather like putting people on a diet—when they lose weight, they are certainly still fully and completely "themselves" even though there is less of "them" there; and at any time, the lost "them" can be regained (only too easily) without any change in their quality of "themness."

pling rate means that record producers can trade-off data-precision and/or the number of channels to get longer playing time, and vice-versa. This is always the trade-off in audio recording and playback, whether analog or digital—more playing time and less information, or more information and less playing time.

Playing time estimates depend heavily on estimates of lossless compression packing efficiency. The HQAD proposal offers some estimates based on saving 6 bits/sample at 48 kHz and 8 bits/sample at 96 kHz; this means packing efficiencies of 25-40%. While the proposal gives estimates which are based on the proposed Philips/Sony MMCD format's (one of the two precursors to the final DVD spec) capacity of 3.7 Gb, they are easily translated to DVD's 4.7 Gb, which I have done below. Some of the more interesting combinations are shown; all examples include a 176 kbit/s subcode channel and either a 384 kbit/s AC-3 (or MUSI-CAM, in Europe) channel or a 192 kbit/s low-rate MUSI-CAM channel, and all are for a single data layer.

The HQAD proposal suggests that the dual-layer capability of the DVD be used to provide HQAD in one layer and conventional CD information in the other layer of audio-only discs, making such discs fully compatible with all CD and DVD players. During the time that CD players are the dominant audio mechanisms, this strategy will assure full compatibility. Ultimately, the second layer will be used to increase the playing time of multi-channel, high-resolution recordings; this idea would be especially valuable for long pieces that now do not fit on one CD, such as operas and long symphonies, not to mention various music collections, artist retrospectives, etc.

By the same token, it's obvious that, in addition to its high-resolution channels, an HQAD disc could have a companion stream of AC-3 encoded data which would allow users who only have multi-channel capability through an AC-3 decoder to enjoy true multi-channel sound, albeit at a loss in overall quality. This is possible by AC-3's very low bitrate.

SINGLE-INVENTORY DISCS

The playing times shown in the table indicate the versatility of the DVD and HQAD formats and their almost universal improvement in playing time over the Compact Disc format.

AMBISONICS

The Ambisonics recording and playback process delivers spectacular results by using four recorded channels to deliver complete three-dimensional sound-

Lossless data compression is one of those technical subjects that seems almost unapproachable. Perhaps a simple example of a hypothetical fax machine will show how it works. A fax machine scans a document in tiny pieces called pixels (short for picture elements), with about 200 pixels per horizontal page inch along the scanning line, and about 100 scanning lines per vertical page inch. Because ordinary faxing is black & white only, each scanned pixel is a digital bit that's on or off, 1 or 0, depending on whether there's an image or white space at the scanning point. Let's say that the pixel bit is 1 where there's a black image and 0 where there's white space.

Along any scan line, the pixels will tend to run in strings of all-white or all-black. For example, where there is no image on the page, the whole scan line will be 0s. Rather than transmit 1600 (200/in. X 8") individual 0 bits, the fax machine simply transmits a code that says something like "1600 0s." This takes only 12 bits of data to exactly replicate the original 1600 bits. The same would be true for all-black, except the data would be 1s instead of 0s. If you look at a capital "O," you can see that scanning across its middle will result in a few black pixels, then a whole bunch of white pixels, and then a few black pixels. This is a case where compression can save a lot of data. Most text is like this — alternating chunks of all-white or all-black data, and this kind of data is highly compressible. Even though audio signals are smoothly varying, continuous signals, after they are digitized, they become full of chunks of all-on or all-off data bits and so are compressible.

Many different compression schemes have been invented. One of the most efficient for compressing continuous data like audio simply encodes only the change from one data sample block to the next block. As long as you have a complete starting block, then just a few bits can store the change from one block to the next. This kind of compression is extremely efficient, but it is not at all sturdy — any interruption in the data stream that causes the loss of the starting block (or more than a few subsequent blocks) loses the "frame of reference" and destroys information. Many compression schemes are like this — very efficient but not robust. To make them fail-proof requires giving up some efficiency, by using data redundancy or by error-correction coding. These more robust schemes add to the total bit count, and therefore reduce efficiency. However, getting even 25% more data in the same space without losing any information is an important savings.

field reconstruction on playback. The four channels are Mono (W), Left-Right Velocity (X), Front-Rear Velocity (Y), and Up-Down Velocity (Z). The HQAD's multi-channel configuration offers producers the opportunity to give users full stereo through the Lt and Rt channels while simultaneously providing Ambisonics information in four of the other channels. The necessary decoding would be accomplished externally to the DVD player, just as AC-3 is external to LaserDisc players. This case illustrates the flexibility of the HQAD multi-channel format.

OTHER FEATURES

Sub-code information could be used in the HQAD format to provide users a means for high-quality control over total dynamic range, in order to achieve best sound quality in noisy conditions or whenever full dynamic range may not be needed or wanted, such as transfers to cassette tape or playback on less than optimum equipment.

Sub-code data could also provide an absolute sound pressure level calibration, so that the advanced, calibrated playback systems could accurately set their gains to reproduce a recording at the original recorded level.

This kind of data also could direct advanced multi-channel playback systems to automatically configure themselves for the correct channel assignments or could tell the user the channel configuration or special recording mode used on a specific selection. These ingenious possibilities are quite as enormous as DVD's storage capacity.

OPEN QUESTIONS

The biggest is, "How good is good enough?" There simply is no answer to this question. Philips and Sony seriously pushed the limits of the digital audio technology envelope with the introduction of the CD. Now it's widely seen as inadequate, especially by those who make their living by recording high-quality sound. I doubt that anyone ever again will say "perfect sound, forever," but there obviously are diminishing returns along any development path.

- Today, affordable converters for 24-bit sampling at a 96 kHz rate do not exist; in 10 years they'll probably sell for a few dollars, just as 18-bit units do today. Doesn't that mean that the DVD medium should be designed to handle up to 24 bits, even if that range is not used at first?

- The ARA HQAD proposal says that "the main body of psychoacoustics literature" shows that 1% of young people can hear to 25 kHz, but that the mean result for youngsters is 18 kHz. The proposal also suggests anecdotal evidence that harmonics beyond the nominal audible range affect the perceived sound quality. If this truly is the case, then shouldn't the >40 kHz bandwidth afforded by 96kHz sampling be allowed in the standard, even if most producers choose not to use it?

- Is a given amount of clock jitter more or less audible at higher resolutions and higher sampling rates, or is there no differential effect?

- Dynamic range and amplitude resolution are related in equipment but not in music. We definitely need more amplitude resolution, but do we need more dynamic range? Given the con-

straints imposed by environmental noise, spouses and neighbors, most listeners will not use the dynamic range of 120 dB potentially afforded by 20-bit conversion, and microphones, preamps, and power amps today strain to actually achieve this range. The HQAD proposal for offering users high fidelity control over musical dynamic range makes a great deal of sense. Shouldn't it be put to use?

WHAT WILL HAPPEN?

By the time this reaches print, you will probably already know the outcome of the attempt to craft a high-resolution, multi-channel audio-only standard for DVD. I personally hope that ARA is successful in making its case to the industry standard-setters. Even if their proposal gets locked out of the first DVD machines to come to market, these machines are likely to be units aimed squarely at movie playback.

ARA posits that providing a data separator and a digital output on each player to deliver high-quality audio to an external decoder is essentially cost-free to the makers. If that's so, then perhaps the audio-only standard-setting can be forestalled to allow the audiophile and professional audio communities to be heard from. I, for one, look forward with great delight to the multi-channel audio future that lies ahead — I fervently hope, for music's sake, that it will be a high-resolution future.

Comments may be addressed to **J.R. Stuart** at jrs@meridian.co.uk

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The Saint-Saens Organ Symphony

Wally Chinitz

At the dawn of the hi-fi era, say 1950–52, sonic blockbusters were much prized. After all, one needed such pieces to demonstrate the capabilities of one's fancy new system, and what better than a piece certain to drive your friends and acquaintances through the back wall? Hence, the popularity of the 1812 Overture (the Dorati/Mercury version was preferred since it was the first to sport a cannon) and Bolero (the Paray-Mercury was the choice here). It's interesting to note that we old timers were on the Mercury bandwagon long before there were journals like this to tell us about the great sound.

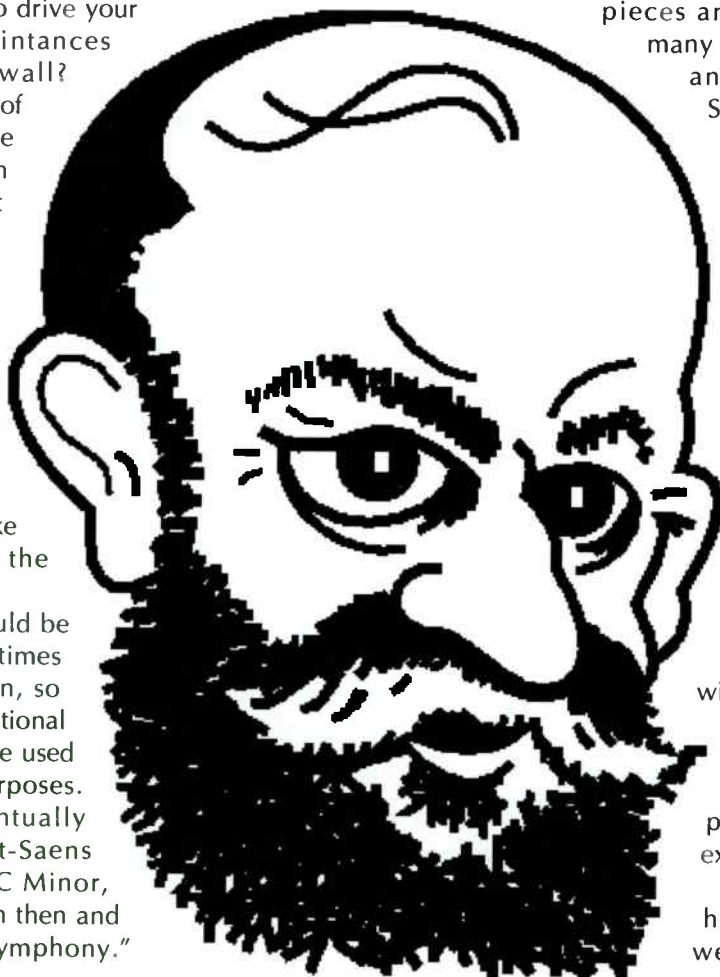
These potboilers could be played only so many times before boredom set in, so the need arose for additional sonic spectaculars to be used for demonstration purposes. One of those to eventually appear was the Saint-Saens Symphony No. 3 in C Minor, Opus 78, better known then and now as the "Organ Symphony."

With the advent of stereo, the piece retained its popularity, with the result that some of the finest recordings of the "Golden Age" were of this work.

Camille Saint-Saens was born in Paris on October 9, 1835 and died in Algiers on December 16, 1921. He was extraordinarily prolific, his opus numbers running up to about 170. Many of these are substantial pieces and include 13 operas, many still-popular concertos, and five symphonies.

Saint-Saens was enormously popular in both his native France as well as in England. Berlioz, for example, declared him to be "one of the greatest musicians of our epoch." When one considers that he was something more than a dilettante in the fields of archaeology, anthropology, astronomy, and mathematics, and that he published a book of poetry, essays on a wide variety of subjects, a number of short plays and scientific papers, his compositional output seems even more extraordinary.

Of course, Saint-Saens had his detractors as well. Among those was



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one J. F. Runciman who, writing in the *Saturday Review of London* in 1896, opined, "Saint-Saens has, I suppose, written as much music as any composer ever did; he has certainly written more rubbish than anyone I can think of. It is the worst, most rubbishy kind of rubbish." (Lexicon of Musical Invective compiled by Nicolas Slonimsky, Second Edition, Coleman-Ross Co., Inc., New York, 1965.) However, a more balanced view, I feel, is that of Charles O'Connell who, writing in the *Victor Book of the Symphony* in 1935 states that the composer "is distinguished by the formal and technical finish of his work, and his extraordinary talent for orchestration. He is seldom profound, but he is never obscure; and the occasional lack of depth in his music is more than compensated for by its grace and frequently acute, although kindly, sense of humor." (Simon and Schuster, New York, 1935.)

To this, I would add that Saint-Saens did compose at least two near-masterpieces, the *Second Piano Concerto in G Minor* (at least the first two movements of same) and the work under consideration, the "Organ Symphony." One need hardly mention this composer's contributions to the "light" classical literature: *Danse Macabre* and the *Carnival of the Animals*, featuring the ubiquitous "The Swan."

The form of the *Third Symphony* is one of the composer's more ingenuous creations. Seemingly a two-movement work, each movement clearly comprises two move-

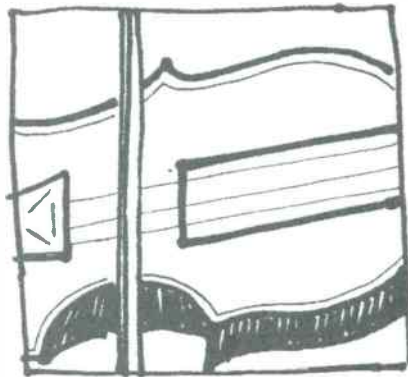
ments, resulting in the standard four-movement symphonic form: First Movement Allegro, connected to a slow Second Movement Scherzo; Third Movement connected to a Maestoso Finale. In addition, the piece is held together by a motto theme, which undergoes a transformation in each movement. It is interesting to note that the symphony is dedicated to Franz Liszt, whose ideas of thematic transformation and cyclic unity were obviously in Saint-Saens mind during the composition of this piece. The organ plays a prominent role in both the slow movement and in the Finale. Indeed, it ushers in the last

movement with one of the very most monumental explosions in all of the symphonic literature; this moment is cherished by those of us who are still addicted to sonic spectacle.

I am going to cover five ver-

sions of the symphony, only four of which date to the Golden Age: Paray and the Detroit Symphony Orchestra (Mercury Living Presence SR90012), Munch and the Boston Symphony Orchestra (RCA Living Stereo LSC- 2341), Ansermet and the L'Orchestre de la Suisse Romande (I have it on open-reel tape LCK 80105, but a Blue Back version exists on vinyl, CS 6331), and Georges Pretre with the Paris Conservatory Orchestra (Angel 35924). The odd-man out is the Jean Martinon/Orchestre National de la ORTF on both EMI ESD 1731911 and on Angel S-37122.

The Paray/Mercury performance seems to me to be middle-of-the-road. The First Movement moves at a good pace, but does not generate



Synergy? Locking-In? Enhancement? Compensation?

How many inappropriate and ineffective ways to "fix" an audio system have you been subjected to?

Sorry to be so negative, but understanding an audio or video system requires first acknowledging that there is no positive side to the process -- it is entirely a matter of reducing negatives. Perfection is zero -- zero change.

Upgrading a particular component will improve overall system performance. However, this does not mean that the signal was "improved". Believing claims that components can cause a positive improvement to the signal leads to many false fixes.

Terms such as "synergy" and "locking-in" are often used to try to describe an "unexplainably" large improvement resulting from a particular equipment substitution. Employing these terms implies something akin to $1+1=3$. $3-1=1$ might not make much more sense, but at least it acknowledges that system improvement comes from reducing negatives, not chasing illusory positives.

If one's understanding of a system's cumulative nature is inadequate, certain changes can seem almost magical. However, being greater than expected or understood does not make them magical or incomprehensible. If something is farther away than we can see, that does not mean the distance in between is infinite.

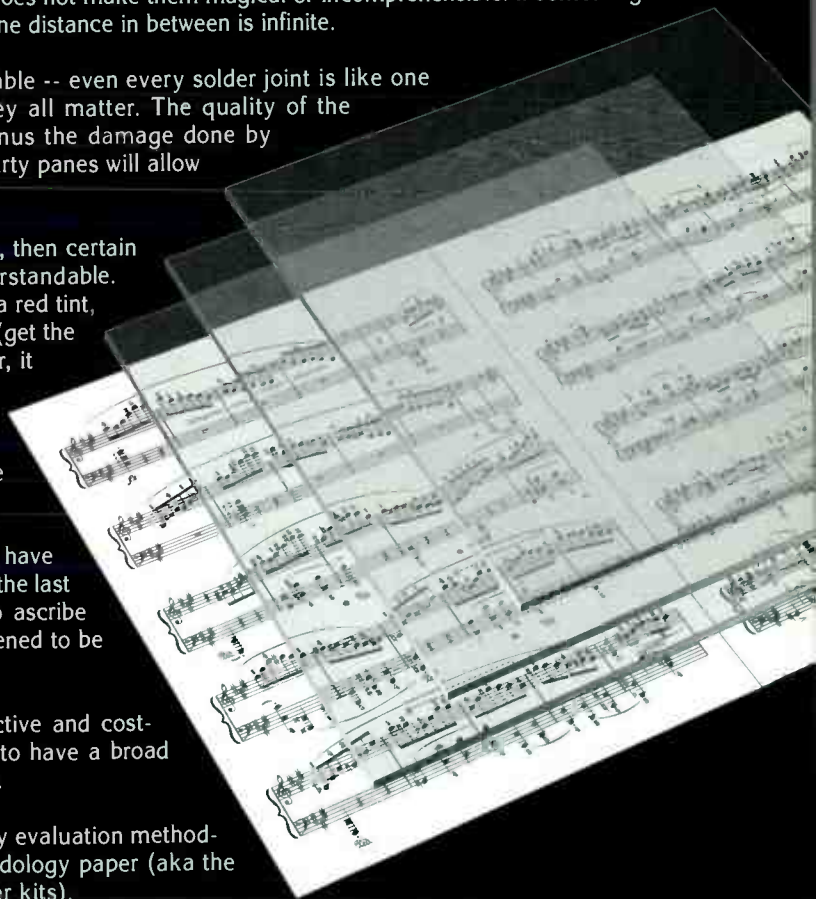
Every "component" matters. Every amp, speaker, cable -- even every solder joint is like one of the dirty panes of glass in this illustration. They all matter. The quality of the final performance is the quality of the original minus the damage done by all the pieces in between. Cleaning any one of the dirty panes will allow a clearer view of the music.

If one recognizes the negative nature of our challenge, then certain greater than expected improvements become understandable. If each of the panes are not only dirty, but also have a red tint, then as each individual pane is cleaned and Murined (get the red out), the view of the music will improve. However, it is only after the last red pane is de-tinted that the red will be completely gone. This last change will assume greater significance than the previous changes because we are more sensitive to the presence of a phenomenon (the red) than to the quantity.

This "synergistic" aspect of this improvement would have been true no matter which of the offending panes was the last to be "fixed". It would be inappropriate and false to ascribe special properties to the component which just happened to be the last one changed.

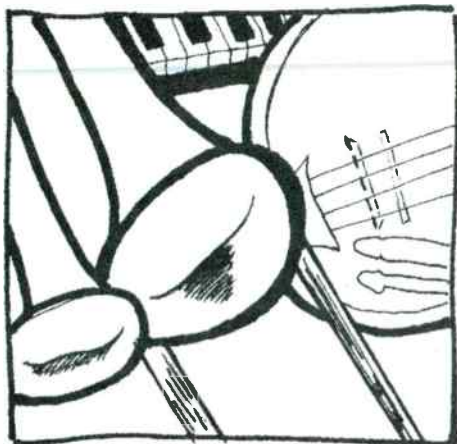
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much excitement. Paray employs large-scale dynamic and tempo contrasts that, for some reason, still fail to create the drama he was obviously seeking. The slow movement is, to these ears, the finest of the four. It is sensuously rendered and the lower strings, in particular, sound quite lovely. The Scherzo is played relatively fast, which leads to some out-of-sync exchanges among various sections of the orchestra in contrapuntal passages. The organ's entrance leading to the last movement is impressive, yet could not be characterized as overwhelming (in the sonic spectacular sense). The sound is clear enough even in tutti passages so that everything going on can be heard. (More about the sonics shortly.) Here again, however, a pervasive lack of excitement exists which, despite an acceleration at the movement's end, never gets the blood boiling as I think it should.

Anyone reading the previous paragraph juxtaposed with Jonathan Valin's comments in *The RCA Bible* (Second Edition, The Music Lovers Press, Cincinnati, Ohio, 1994) will wonder if he and I are talking about the same performance. In fact, I wonder the same thing myself. Valin talks of Paray's version as "compact and fiery," and quotes the composer

himself in referring to this version as "restless, diabolical." Here is yet another instance wherein two people, bringing different values and sensibilities to the listening experience, come away with totally different impressions.

The sonics are among Mercury's worst: thick, congested, without much sense of the hall. Violins are steely much of the time and the bass, while plentiful, is generally tubby in quality. There is good center fill, but the orchestra is not spread very wide laterally. Organ pedal notes are deep and solid. Anyone suspecting that my pressing may be at fault is advised that I have three copies of this disc so, unless they are all uniquely afflicted, I have to conclude that this is not one of Mercury's best efforts.

The Munch/RCA performance, described by Valin as "sweetly paced" and "lofty," is, in this listener's opinion, urgent, energetic and blazing in conception and execution. The first movement is enormously exciting, and the playing by the troops is remarkable for its razor-sharp attacks. The Adagio introduction to the movement is played more slowly than in the Paray version, which may mislead some listeners into thinking this performance will be "sweeter." In addition, the slow movement is also played more slowly and the lushness and tonal beauty of the strings may add to the impression.

On the other hand, the last two movements should have dispelled any such conclusions. Once again, the Scherzo is played with great brio and *fuoco*, and the orchestral precision must be heard to be believed. The organ entrance opening the last movement makes a huge impact, and everything is clear even in the most densely scored passages. The sound in general is warm and beautifully

ambient while the stage is wide and deep. In short, this disk is one of the triumphs of the Golden Age.

Now, with all that said, it must be noted that the version I listened to is a "White Dog" (also called a "Plain Dog") disc. I began by comparing my "Shaded Dog" to the "White Dog" and discovered that the latter blew away the former. Here's a way to save money: Go after the "White Dog;" fortune hunters will be spending megabucks on second-rate sound and you can do better for only a few bucks.

As an addendum to my remarks just above, I also listened to an open-reel tape version of the Munch performance and rediscovered for the umpteenth time that a well-made open-reel tape will obliterate even the best sounding vinyl disc, CD, digital tape or audio cassette. The orchestral weight is palpable; bass is firmer and deeper; orchestral spread and depth are remarkable; organ pedal notes and kettledrum crashes are frightening in their impact. I have pointed out in *TAV* and elsewhere that open-reel analog tape constituted the supreme medium for recording music. Everything that has occurred in the nearly 40 years since this tape was released merely serves to reinforce this.

(It is perhaps worth mentioning parenthetically that I am anything but an anti-technologist. I am, in fact, a Professor of Mechanical Engineering at a college consistently ranked near the top in the various surveys that proliferate on newsstands and book shops, and serve as a consultant in the aero/space industry. Readers of this journal don't need me to tell them that "new" does not automatically imply "better.")

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Robert Moon and Michael Gray dismiss the Ansermet/London recording as having "excellent sound" but a dull performance. I've spent two columns lavishing praise on Ansermet—praise that is long overdue. Unfortunately, in this instance I must agree with Messrs. Moon and Gray. The first movement is too measured and lackadaisical; the second movement, as a result, does not contrast sufficiently with the first. Also, violins and violas are not always together. The Scherzo is again too slackly played and the piano, which should be at the rear of the orchestra, is egregiously spotlighted. Only at the very end of the last movement does Ansermet whip up some froth, and by then, of course, it is much too late.

The sound on the open-reel tape I listened to is excellent. Tonalities are completely true, violins sound sweet even in fortes, dynamics in general are extremely wide, and the brass come across sensationally in the last movement. I can only conclude that Ansermet had very little sympathy for this music, resulting in this disappointing, desultory performance.

The Pretre/Paris recording is no throwaway. Pretre was an outstanding conductor, despite the fact that he achieved no renown in this country. This Angel disk dates from the period prior to EMI's doctoring of sonics to produce recordings they believed more suited to American sensibilities; hence, it is quite good. Only a slightly nasal quality to the sound, made apparent by comparison with other

recordings, mars the sonic attributes of this disk. The performance is very fine, featuring good propulsion, exciting tempo contrasts and fine playing. Should you come across this disk at a garage sale, it is well worth acquiring.

The Martinon/ORTF recording dates from the mid 1970s and, as a result, should fall outside the purview of this column. It is, however, a remarkably fine account from one of the finest musicians of this century. The excitement and drama generated by the Munch performance are recalled here, and some passages (the closing pages of the opening movement and parts of

the final movement) are rendered even more dramatically. The sound on the Angel disk is not good, dating from the time of EMI doctoring. The EMI ESD is an

HMV Greensleeve version

to which two more pieces have been grafted. Hence, groove compression is apparent in the hard-sounding violins and shrill high brass. Deep bass is also missing. I'd be willing to bet that the original EMI release has sensational sonics, but I've not been able to verify that. In any version, the Martinon should be in the collection of everyone admiring this work.

In sum, the version to live with is that of Charles Munch leading a Boston Symphony Orchestra near the zenith of its Koussevitsky-endowed powers. Look for the "White Dog" version. Those who value the ultimate in sonics will seek out the 4-track open-reel tape. Then sit back and be prepared to be blown through the back wall.




Illustrations: Sharon Pitts

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Joel Shumer

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This fine recording, along with a nice *Brahms Fourth* and a *Rachmaninoff Second Piano Concerto*, are the three initial releases by Chesky Records inaugurating a series of high-quality transfers from analog to gold-plated Compact Disc. Although not as extravagantly praised as the *Sibelius*, each of these latter recordings has had its champions among the reviewing press for both performance and sound over a period that now spans more than 30 years.

All three of these newly remastered CDs had their origins as part of a Book of the Month Club venture dating back to the early 1960s, and were recorded with the Royal Philharmonic Orchestra in London’s Walthamstow Town Hall. All benefited from the legendary engineering of K. E. Wilkinson and were pro-

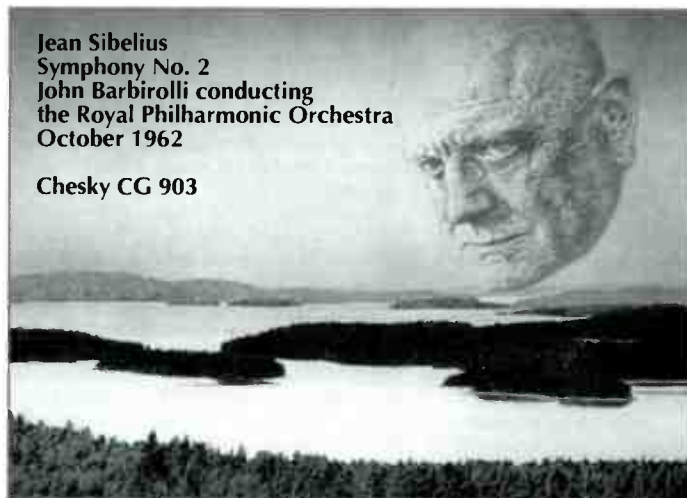
duced by Charles Gerhardt. In the mid ‘70s, both the *Sibelius* (PMC 7005) and the *Rachmaninoff* (PMC 7006) were released on Quintessence, while the *Brahms Fourth* was remastered and issued by RCA (AGL-1-1961). Some 10 years later, David and Norman Chesky obtained the rights to release these

works on their own label in both LP and CD formats; thus, they became part of the Cheskys’ early efforts to convince the audio-ophile world that there was sonic gold in recordings that were then more than a quarter century old.

Working with the original master tapes, a rebuilt vintage Ampex tape deck, and custom designed tube electronics,

Sibelius

the two Chesky brothers produced heavyweight, 150-gram vinyl discs (now available in 180-gram versions) which truly far surpassed the much-admired Quintessence reissues. Although I have not heard the Book of the Month pressings, the Quintessence recordings, which on their own are quite good, seem muffled and closed in when compared directly with



Jean Sibelius
Symphony No. 2
John Barbirolli conducting
the Royal Philharmonic Orchestra
October 1962

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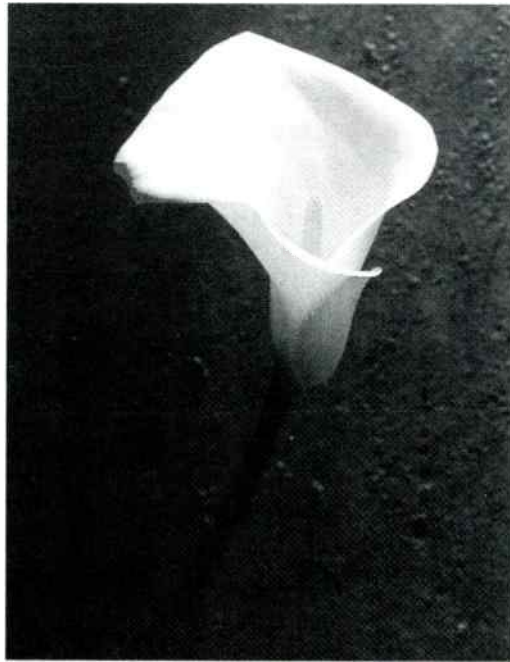
the Chesky LPs. Technology, of course, does not stand still, and Chesky has made some notable improvements in their analog to digital conversion techniques. Using a "High Resolution" 128-times over-sampling system, transfer and remastering engineer Miguel Kertsman has produced gold-plated CDs which are clearly superior to the CDs that accompanied the LPs released in 1986.

When listening to the Cheskys' earlier CD (CD-3) of the Sibelius, one becomes aware of a string tone that at times (movement No. 1, 5:38–6:06) approaches shrillness. Even when using a laid-back, smooth-sounding transport and DAC, such as Linn's Karik/Numerik, strings occasionally have an unnatural hardness to them. With the new gold CD, this slight stridency is replaced with a heightened sense of openness and air. Where there had been some harshness, there is a greater sense of liquidity in the new issue.

A few minutes later (movement No. 1, 8:49–9:01), there is a short pizzicato passage. In switching from the old to the new CD, there is an increase in hall ambiance and reverberation. Perhaps improved low-level resolution is providing spatial cues that just aren't there on the 1986 release. Seconds later (movement No. 1, 9:33), a loud double forte passage, recorded at slightly higher levels on the new CD, is noticeably less congested on the gold release. There is a clarity and a lack of strain that cannot be quite managed by the 1986 disc.

I am not a big fan of Reiner's Brahms interpretations. He seems to reign in the orchestra and miss the sweeping lines seen by a Bruno Walter. Nonetheless, there is much to be said for Reiner's taut, concise approach to the Fourth; here again, the gold CD proves its superiority. Throughout the recording, strings take on a sheen, shedding a bit of the slightly metallic dryness associated with the earlier release. Walthamstow Town Hall becomes more reverberant, and the apparent size of the orchestra gains in both width and depth. Nowhere is this difference between the 1986 and the new CD more clearly demonstrated than when listening to first plucked upper strings and then lower strings near the beginning of the first movement (1:24, 1:58).

The opening 60 seconds of the fourth movement is another good place to hear Chesky's improved technology. Brass as a choir, and then the French horns alone, have substantially more bite. Oboe and flute solos are more accurate in timbre. When massed strings enter, they are smoother, surrounded by more air, and seem to occupy a greater space. In sum, this disc takes us closer to the real thing.



Johannes Brahms
Symphony No. 4
Fritz Reiner conducting
the Royal Philharmonic
Orchestra
October 1962

Chesky CG 906

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Earl Wild and Jascha Horenstein recorded the four Rachmaninoff concertos along with the *Isle of the Dead* and *Rhapsody on a Theme of Paganini* for the Book of the Month Club three years later in 1965. In addition to the Quintessence LP release and Chesky's release of the *Second*, Chandos released all four concertos in a two CD set in 1987 (Chandos 8521/2). *High Fidelity* in February 1988 described the engineering of the Chandos set with great enthusiasm. "Sonically, these recordings are magnificent, with big, bold piano and big, bold orchestra; I have not encountered another piano-orchestra recording that sounds better."

Hi-Fi News & Record Review of August 1987 was also impressed, stating that the Chandos CD ". . . compares more than favourably with the Chesky dmm pressing of [concerto] number two . . ." But this is not the case with Chesky's new CD release of the *Rachmaninoff Second*. The Chandos sonics are clearly inferior. The top octaves are slightly rolled off and closed in. There is a lack of air and space. The initial attack when each piano note is struck is a bit less distinct, suggesting a blurring of transients. As with the other two releases, the Chesky CD provides more low-level detail, which helps to create a better sense of the space around the instruments and the reverberation of the hall.

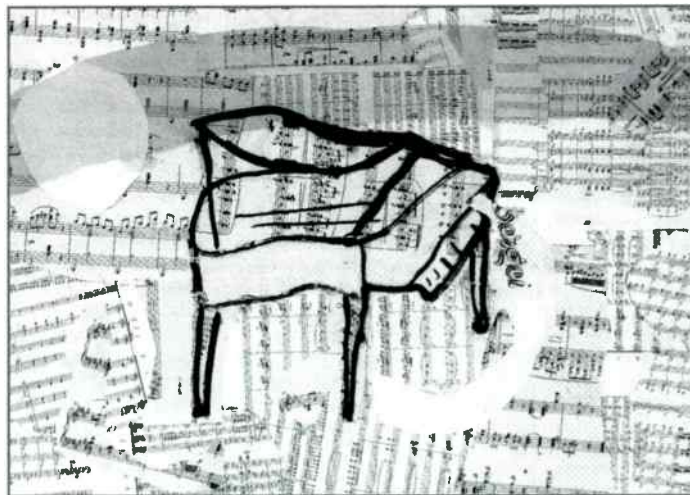
I could have lived quite happily with the Chandos recording had I not heard the newly mastered Chesky. Simply put, the Chesky offers more of everything that sonically matters—but much more importantly, Chesky has improved the quality of low-level resolution, taking the CD a step closer to the sound of high-quality analog. The opening of the second movement is a case in point. When Earl Wild makes his entrance in a soft pianissimo, there is a delicate clarity on the new Chesky CD that is mixed into layers of grunge on the Chandos release.

There is another nice touch in the gold series from Chesky. The earlier CDs suppressed tape hiss between movements. Chesky's intentions were fine but the sudden plunge into silence jerked the listener out of the performance. The new CDs keep the tape hiss, which is really not intrusive, throughout the recording thus maintaining a sense of aural continuity from beginning to end.

These releases deserve to be enormously successful. They probably represent the state of the art in the transfer of high-quality analog tape to CD. Let us wish Chesky well and hope this is the beginning of a new and lengthy section in their ever growing catalog of fine CDs.

Sergei Rachmaninoff
Piano Concerto No. 2
Isle of the Dead, Symphonic Poem
Jascha Horenstein conducting
the Royal Philharmonic Orchestra
with piano soloist Earl Wild
May 1965

Chesky CG 903



Rachmaninoff



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R E C O R D I N G S

Earle Stevens

Igor Stravinsky, though a student of Nikolai Rimsky-Korsakov, seemed to burst forth at the dawn of the Twentieth Century as a full-voiced original. *The Firebird*, his first collaboration with the great dance impresario Sergey Diaghilev, premiered in 1910 and created an instant sensation. This was followed one year later by *Petrushka*, which was another success. This acceptance of this pair of works would have probably guaranteed Stravinsky a strong place in musical history even if he had not gone on to become, along with Schoenberg, one of the two lighting rods of modern musical thought.

Petrushka is a ballet about a fairground puppet show. In a nutshell, we have a homely, ragged puppet who comes to life, is rejected by the beautiful ballerina doll, and then killed by her lover.

This 35-minute score is just a natural for the LP format, and Ansermet had a very successful early monaural outing with this on Decca. With the advent of stereo, it was only natural that Decca wanted to do it again, so in 1958 SXL2017 was released. The same performance was also issued on London CS6009, and later it appeared on a number of bud-

Igor Stravinsky *Petrushka*
L'Orchestre de la Suisse Romande Ernest Ansermet

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get labels. It thus managed to remain in the catalog for a long while. This performance is considered to be among the finest by many audiophiles and connoisseurs, myself included.

Among the various *Petrushkas* resident in my racks, this one stands alone in its sensitivity and poignancy, as it maintains the necessary sense of

impending tragedy and making that musical tension strong enough to transform this ballet into a remarkable concert piece. The 1911 *Petrushka* score represents a real musical challenge to a contemporary orchestra and the Suisse Romande group displays a facility of musicianship while retaining the true essence of ballet.

The Decca original became an instant "stereo



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John Atkinson, Editor of Stereophile magazine, August 1995, Volume 18, No.8

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demonstration disc," sort of an audiophile disc before we knew what an audiophile was. It was a time when quality of sonics and quality of content were not considered strangers when they appeared on the same record. The dynamic range is

heavier vinyl, favors this aspect of the sound in an LP.

The low-frequency extension is strong and tight, going where many speakers dare not. It must be noted that the artifacts are also apparent on the original Decca, indicating that Athena is serious about keeping the baby while heating up the bath water. The midrange does not require comment; this is a Golden Age recording where the sheen has not diminished with maturity.

The upper frequencies are the only area that disappoint in comparison with the original material, but it must be remembered that the tapes were 35 years old at the time the new lacquers were mastered. That such a transfer could be made so well really is miraculous, and what remains is by any standard very good indeed. This is a disc that will spin again on my turntable and I, for one, am grateful to Athena for the love and craft that went into this release.

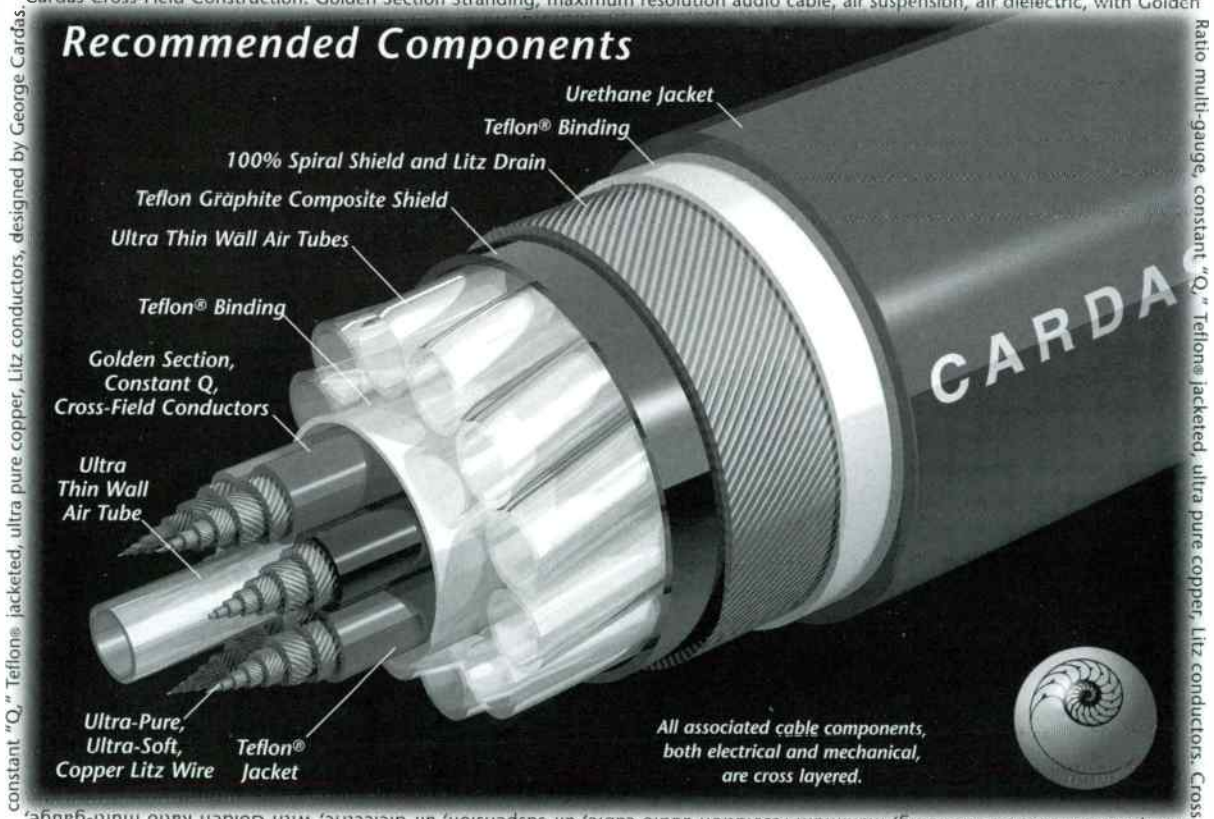
Athena is to be
congratulated
for this fine
reissue.



still of demonstration quality and easily surpasses my RCA ARL1-2615 with James Levine and the Chicago Symphony Orchestra. The comparison to Chesky Records CR42 with Oscar Danon and the Royal Philharmonic Orchestra is more problematic as the Chesky, with its

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RECORDINGS

Christopher Greenleaf

The glory of the marketplace for recordings has often been the pioneering small labels, but the healthier among them have long since redefined this term "small." The Hyperion catalog, now well into its second decade, embraces a sheer wealth and breadth of Western classical music, virtually all in performance from U.K. artists, that have signaled to both the buying public and the larger record labels just how ludicrous the policy of recording only hits has become.

If you think that 16th-century motets and sequences from a Portuguese university city are bound to be pretty inaccessible stuff, you have plentiful company, of course, but Hyperion's Ted Perry, owner and executive producer, has thrust other formerly obscure repertoire into the world's CD bins and seen individual albums, even sizable series, done the enviable mantle of stardom. "A feather on the breath of God," introducing many to the insidious charm of the 12th-century music of mystic Hildegard von Bingen and to singer Emma Kirkby, shot near the top of the charts. So did the Schubert and Liszt traversals as they came out, and countless incomparable anthologies of early, Romantic, and near-contemporary English music, both secular and churchy.

And now comes this new release by Owen Rees and his A Capella Portvgvesa (as they insist it be written). All but one of the works appear as world premieres and yet, to anyone who knows the a cappella music of the Catholic Lowlands—Lassus, Clemens non Papa, et alia—the idiom is so familiar as to appear something of a homecoming, even on first hearing of the disc.



Music
from
Renaissance
Coimbra

A CAPELLA
PORTUGUESA

OWEN REES

hyperion

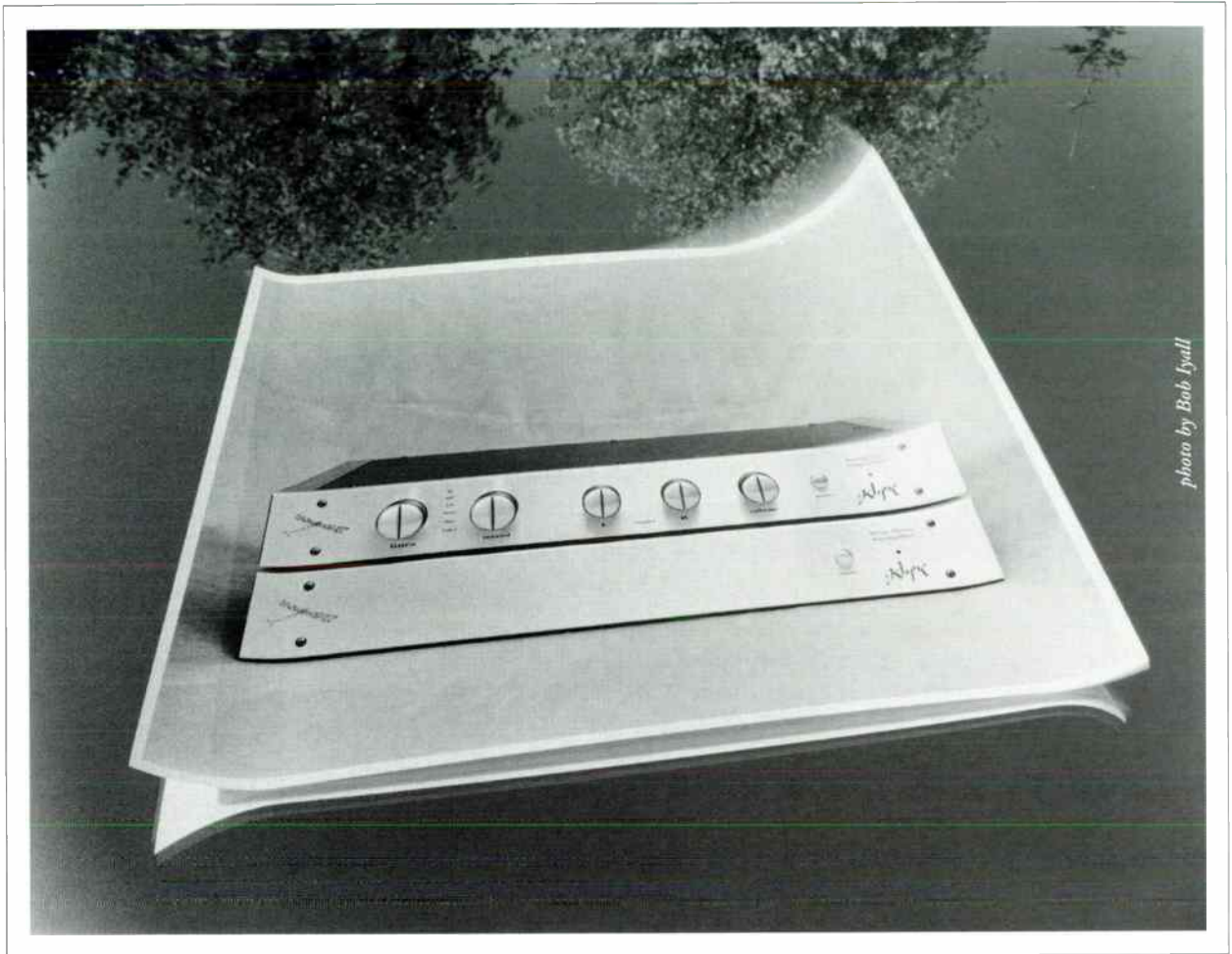
**Music from Renaissance Coimbra:
16th Century Portuguese A Cappella Music**

A Cappella Portvgvsa Owen Rees
Hyperion CDA66735
71:57 CD, DDD
Recording Engineer Tony Faulkner
Recorded in Oxford, England

February 4-6, 1994

Aires Fernandez, Rodrigo de Ceballo, Pedro de Cristo (the least known of the bunch), and Heliodoro de Paiva will never challenge the inches of catalog space and offerings on the 'net now dedicated to Monteverdi, to Schutz, or to that other Iberia, Victoria. That's no tragedy, for there is still far too much out there awaiting first recordings to justify re-recording repertoire the broader public has yet to be fully aware of. And after after listening to the performances offered by this remarkable ensemble, stunningly captured in this recording by engineer Tony Faulkner, it'd be hard to make an argument for a competing release by another clutch of singers, even the Tallis Scholars or The Sixteen.

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- Ken Kessler, Hi-Fi News & Record Review, June '95.

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The music is sweet, at times sweepingly passionate, and wholly without the anguish or darkness of Spanish music of the times. If Portugal embraced the Renaissance (and, later, the Baroque) long after the revolutionary Italian, Austrian, and French cultural changes, that sunny Iberian country was no more out of step with the new trends in leading cultural capitals than were London, Brussels, or the regional Spanish courts distant from Madrid. However, when they got around to the matter of adopting Renaissance aesthetics, the Portuguese masters did so in their own quite engaging ways.

Singing and musical literacy in pre-Baroque Lisbon, Evora, Braga, and Coimbra must have been of a high order. This music is not so much technically challenging, though there are intricate moments, as it is demanding of great musical intelligence and judgment.

Aided by the exceptionally warm, clear, resonant sound Tony Faulkner caught at St. John the Evangelist, Oxford, England, Owen Rees's exceptional singers serve up a bit over 70 minutes of extremely

pleasurable listening. Since much of the thematic and textural material in a cappella music derives from New Testament texts and Medieval chant, it is fitting that there is a small salting of chant among the motets, psalms, and versicles comprising most of the album. (If you were bitten by the chant bug when a certain over-hyped EMI CD splattered across the music marketplace, but have since found your ears glazing over, have a listen to this. It's better singing and, besides, is more interesting material.)

Whether you are a North Dakota Lutheran, a Conservative Jew in Lexington, a graduate of a Jesuit school in Baltimore, or a garden-variety agnostic from Santa Barbara, you will find this music and A Capella Portugvesa's powerful performance of it worthwhile. The sheer sound is stunning, especially when played at higher listening levels, and the motional power of this treasure trove from coastal Portugal will pleasantly surprise even those many listeners unconvinced that they like unaccompanied sacred music. I recommend this new Hyperion gem without reservation.

I recommend
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Cindy Kates

In *In the House of Stone and Light*, the newest release from the hot British composer/musician Martin Page, skillfully synthesizes disparate musical styles into a coherent artistic statement. Both recorded and engineered in his garage, Page demonstrates that it is possible to release an album of emotion and musical ingenuity into the pop-music mainstream. It warrants the position of Best Pop/Rock Album of 1994.

The title track refers to the Indian name for the Grand Canyon. It opens the album with a unique blend of Indian/African rhythms coupled with vibrant, heavenly vocals. The lyrics depict Page's journey towards self-discovery with beautifully vivid images of mountains, canyons and the sun. The introduction resembles Peter Gabriel's "Secret World" (from *US*), but as it unfolds Page transforms it into something unidentifiable. Most striking is Page's use of the chorus, recurring twice between the three verses, which is indicated by an Indian flute (similar in tone to that of the Japanese Shakuhachi flute) and followed by a contrapuntal round of heavenly voices, rich in texture and melody. This "B" section is completely alien to the character of the verses, which are much more traditional in melody and rhythm. The track is clearly a musical triumph, as Page has created and communicated the image of the "house" existing within, embodying shelter, strength and weakness. Various artists such as Robbie Robertson (guitar), Geoffrey Oryema and Brenda Russell (background vocals) make nice contributions to the track.

The second song, "Shape the Invisible," is hymnal in nature and quite simply constructed. Page tells us of the deadly turmoil in Belfast, and the listener is constantly brought back to the dramatic roots of the song through the usage of bagpipes in the background.

For those audiophiles who find the work of Sting to be fascinating in its harmonies and chordal progres-



sions, "I Was Made For You," with its free flowing melody and musical effects, proves that Page has a similar knack for the romantic ballad. Page's uncanny ability to bring in the perfect talent for the various tracks is demonstrated by his choice of Phil Collins on drums. Collins performs a constant beat/ostinato, propelling the listener into a most unique middle section. Page's picturesque lyrics and thinning textures are brilliant as he leads into "We'll walk along the hill/So high above the city/And count the rooftops down below/Lay on the grass/Dream out loud/Catch runaway trains/Dance in the rain/Someday you'll take my name." At this moment, one can't help but be suspended in a romantic moment between Page and the woman he longs for. This is clearly a most beautiful musical event.

Page's collaboration with various artists on the album works wonderfully on "Keeper of The Flame," Page's newest US hit single. Geoffrey Oryema from Uganda (best known for his work with Peter Gabriel on Real World Records) brings this reggae track to life with his powerful bass vocals, making it one of the most celebratory cuts on the album. Incidentally, this track is the second smash from *In the House of Stone and Light*. The title track has already enjoyed several weeks at #1.

"In My Room" exposes Page's vulnerability as it depicts the chilling experience of a woman being beaten by her husband while her child listens in his

room. It is with songs like this that Page demonstrates his ability to communicate a painstakingly true situation through vivid lyrics and minimal, subtle instrumentation. The remaining five tracks each deserve a thorough listening, as they are masterpieces in their own right, both musically and technically.

Harmonically, Page's music breaks free of boundaries, each piece flowing logically and freely through a puzzle of suspensions, dissonances, leading tones and modulations. Most importantly, Page has created an album that transcends the confines set by pop-rock artists today both in structure and instrumentation, while never quite swaying from his basic, yet greatly influential, hymnal roots. He has proven that although references can be made between his music and his numerous artistic sources,

his compositions are pure and unprecedented. Page's *In the House of Stone and Light* is truly a quite extraordinary accomplishment, with the power to restore any critical listener's faith in pop/rock music while simultaneously lifting the spirit and soothing the soul.

Born in England, Martin Page grew up as a great fan of songs, listening to the music of Elton John and the Beatles, but as reflected through his compositions, his influences are many, both in artists and styles. Traces of musical forms such as traditional hymns, medieval, choral, African, R&B and folk music manifest themselves in his work, just as tastes of Marvin Gaye, the Brothers Johnson and Grand Central Station are apparent. At first listen, Page's voice and music resemble that of Peter Gabriel and Sting, with African rhythms, vocals,



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instruments, varying textures, suspensions and rich harmonies prevailing. However, Page asserts that the striking similarities are not intentional. He points out that since Gabriel's musical roots also stem from Britain, it is not surprising both have drawn upon hymns and various British bands in developing the architecture and character of their music. Putting all of these interesting similarities aside, one listen to Page's music proves that it has a style all its own.

For the last twenty years, he has been fortunate enough to work with some of the biggest names in the music business: Barbara Streisand, Earth Wind and Fire, The Commodores, Neil Diamond, Kim Carnes, David Foster, Phil Collins, Bernie Taupin, Blue Nile and Robbie Robertson, among others. Although he started writing songs at 14, Page's main instrument is the bass guitar. His songwriting skill have taken him far—eventually bringing him to compose #1 hits for Heart ("These Dreams"), Starship ("We Built This City") and Go-West ("Faithful; King of Wishful Thinking"). However, he admits his greatest achievement is *In the House of Stone and Light*. It is with this record album that Page shines brightly as a composer, vocalist, musician and producer.

One year in the making, *In the House of Stone and Light* is a collection of exhilarating tracks. The music is pure, and likewise his inspiration and motives are non-monetary. Page explained, "I didn't do it for the money, but because I had something to say." However, Page doesn't object to the album crossing over into the pop chart mainstream. More importantly, Page is pleased that his music is being responded to for its "heart" and not simply because of its great engineering.

During the arduous process of composing and recording the album, each track on *In the House of Stone and Light* was written quite simply and recorded organically. Initially, each song was a "demo." With the demos, Page went to great lengths in choosing words for the lyrics, even experimenting with sounds phonetically. He explained that this gave each cut a very "raw" feeling while in the developmental stages. In addition, unlike most pop music today, the harmonies and words were not pre-conceived, because he did not want the songs to be limited by structure. He preferred that each song follow its own course, or as Page explained, "The music was structured from a paintbrush as it flowed from my mind." These are the words of a true artist.

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R**ECORDINGS**

Rock Block Jr.

Mark Block

Now that I have a toddler around the house, I find myself listening more to the kid's music than to my own. As parents everywhere have learned, you can go a little crazy on a steady diet of "I Love You, Barney" blather—but that's what the kids want, so who am I to deprive my kid? Well, fatherphiles, I'm here to report that the picture is not all deep purple vacuity. Kids can enjoy a much wider range of musical styles than you'd think.

I first learned this lesson when the baby was little more than six months old. We were playing Little Richard's kiddie CD, *Shake It All About* (Disney 60849-2), and the baby laughed out loud at the awful knock-knock jokes in "Ya Keep a Knockin' But You Can't Come In." Sample: "Knock, knock. Who's there? Yucky. Yucky who? Yuh keep a knockin' but you can't come in." That's the last of six or eight bad jokes in the song, but the kid laughed at every one. At first I thought it was a fluke, but he laughed again the next time I played it, and now that he's almost a year and a half old, he still laughs every time! This is the only CD guaranteed to calm him down when he's in a bad mood.

The music is vintage rock 'n' Richard, with good natured nods to Ike and Tina, Bo Diddley, Fats Domino, Chuck Berry and others. If you can imagine Little Richard fronting the Ike Turner review on "Proud Mary," but singing "Hokey Pokey" and "Old MacDonald" instead, you have an idea of the music here. That the sound quality is excellent is an unexpected bonus—too much synth, perhaps, but a clean, punchy, dynamic recording nonetheless.

Another nice CD, though a bit more challenging for very small fry, is Taj Mahal's *Shake Sugaree* (Music for Little People MLP D272). In addition to the title song, Taj revives the classic "Fishin' Blues," then fills the rest of the album up with (apparently) original songs in a variety of genres. (I say apparently because

I couldn't find song writing credits.) Some of the blues numbers here are too adult musically (not lyrically), evoking quite complex emotional moods, and Taj's between-song patter is too soft and unfocused to amuse my toddler, but the little one nevertheless seems to enjoy most of Taj's music as much as I do. Sonics are very mixed, some cuts sounding hard and electronic, other sweet and transparent. In any case, it's a welcome relief from most of kiddie CDs.

Now we come to the music that my son just can't get enough of, and it'll surprise you. We made this musical discovery when my wife and I took the little pride'n'you-know-what on a long joy ride upstate with some friends, whom I'll call Doug and Anne Marie (because those are their real names). After many hours in their car our little angel (less than a year old at that time) morphed into a 20-pound scream machine. When bottles of milk, pacifiers, kisses and silly faces stopped working, Anne Marie came up with the solution for our baby-fried nerves: "Doug, play a CD. Loud!" They had a copy of the four-year-old *Carreras, Domingo, and Pavarotti in Concert* (London 430 433-2) already loaded in the multi CD changer, so out spilled Puccini from Volvo's audio system.

It was as if the baby had been shot with a tranquilizer dart. He stopped crying immediately. And more—he sat there in rapt attention. How bizarre: The offspring of Mr. Rock Block likes opera? Where did he get those genes? I'm certainly not the kind of elitist, yuppie-scum father who would force opera on a year-old baby. I am still rebellious enough to try Pete Seeger and other commie-pinko folk singers—but opera? Sid Marks joked that if everything has a purpose in life, then my son's purpose is to teach me to listen to classical music. (Sid, I do listen to classical music—in Carnegie Hall, where it sounds good; not on a stereo system.)

Illustration: Sharon Pitts

In any case, that 1990 recording made at the Roman ruins of Caracalla, along with the new *The 3 Tenors in Concert 1994* (Atlantic 82614-2), recorded on the eve of the World Cup championship match at Dodger Stadium, has become a listening staple in the car. At home, I say, "Let's go to the videotapes" (or LaserDiscs, if you prefer). Intellectually, I know it's wrong, but I admit to using the VCR for the purpose of baby sitting. I taped the 3 Tenors concert on PBS this summer, and discovered that the baby would sit still for up to a half hour when the tape was playing. When he picked up a kitchen wisk and started conducting along with Mehta, I knew something really weird was going on. Nothing else short of his Sesame Street 25th Anniversary Collector's Edition would keep him from careening around the house from one trouble spot to another. I soon bought a tape of the earlier concert, and then bought the new one when it was finally released in the video stores.

The advantage of owning the "official" (as opposed to broadcast) version is that you don't have to listen to extra minutes of ovation accompanied by Itzak Perlman's "more is less" commentary ("Applause, applause, applause. . . . The audience is going nuts. This is just fabulous. . . . How can tomorrow's World Cup equal this?") Even worse, Itzak frequently introduces a "PBS colleague" named Willow who oozes nervous enthusiasm from every pore. I'm sure she's a nice lady, and I'm sure someone coached her to act this way on camera (because no one is this insufferably ecstatic by nature), so it was probably not her fault, but . . . every time she appears you want someone to put her out of her terrible and miserable happiness.

By the way, PBS sometimes re-broadcasts a Willow-less version, but there are other advantages to the more heavily edited video store release. For example, the part where Frank Sinatra almost falls over when he stands to acknowledge the applause after "My Way" is trimmed out of the final release. Despite a loathing for Frank Sinatra (the man, not The Voice), it's not a fun moment to watch. By the way, for those into celeb watching, the LA concert is a real eye popping "Hey there" event: "Hey, there's Arnold

and Maria . . . George and Barbara . . . Tom and Nicole . . . Bob and Delores . . . Henry K, Peter U. Is that Jean Paul Belmondo? No, Louis Jordan, but I'm getting breathless anyway."

The VHS tapes and Laser discs are of the complete concerts; the CDs are edited down to sixty-plus minutes. In a way, I wish Tibor Rudas and company had gotten more greedy and released a two-CD package; some of the stuff they left off the CD is quite good. For me, the most grievous omission is the "Candide



Overture," which started off the Dodger Stadium concert. What a wonderful piece of music! Light and whimsical enough for kids—what do you expect from the host of Young People's Concerts?—yet complex and stirring enough for adults. And the passage of time has now erased the Dick Cavett Show association, thank god. That such music was created in the latter half of the 20th century makes me a little sad—sad that so many modern composers wasted their time and (perhaps) talent on sterile, academic exercises that didn't so much challenge audiences as brutalize them. I'll get off my soapbox now.

What of the singing? As every critic has pointed out, Carreras' voice has been in steady decline. In Rome four years ago he was OK, with a few flashes of a strong, stirring voice; in Los Angeles his voice was little more than a shout with vibrato added. No range, no beauty. He tries several pop numbers asso-

ciated with the troubled motion picture star Mario Lanza, but it's clear to me (after watching a documentary on Lanza recently) that Carreras is no longer in Lanza's league. Carreras has been through a lot, so it's not pleasant to watch him struggle.

Domingo, looking ever more fat and jowly, with dark, sunken, searching eyes, scares the baby sometimes. His voice is impressive—somewhat limited in range, perhaps, yet always powerful and thrilling—but his haunted facial expressions during "Vesti la giubba" make it clear that he's too good an actor for young children; the little one went through a period (several weeks) of crying hysterically during this song. Pagliacci meets The Wolfman. I was forced to fast

forward, which became a bad precedent. The baby learned that if he's the least bit unhappy with something, he can hand me the remote and I'll make it all better. It's the "Zap It" philosophy of life.

The wife and kid like Pavarotti best. He's big and happy—the Barney/Big Bird of the opera stage. I like him too, although the 1994 Pav has developed an annoying tick: He frequently flicks his tongue around his mouth as if making sure that his new dental work is still in place. The accent is also a little too thick for comfort on the English language pop numbers, turning "Moon River" into "Moon-a Ree-v-a." His accent is actually too thick even for Italian; the last word of "Nessun dorma" is not vin-a-cero.

Speaking of that famous aria from Turandot, it gets sung twice in 1990 and twice in 1994. It's my favorite, the baby's favorite, and obviously the three tenors' favorite. The popularity of the piece makes me wonder: Aren't there any other songs they can think of? In the whole history of opera, is this it as far as good tenor arias go? Hell, in rock I'd be hard pressed to narrow down to 20 the great songs from 1968 alone. [But Mark, it's opera!—Gene]

In my admittedly limited exposure to opera, even I can think of terrific numbers that are missing from these two concerts: "Che gelida manina" from La

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Disney 60849-2

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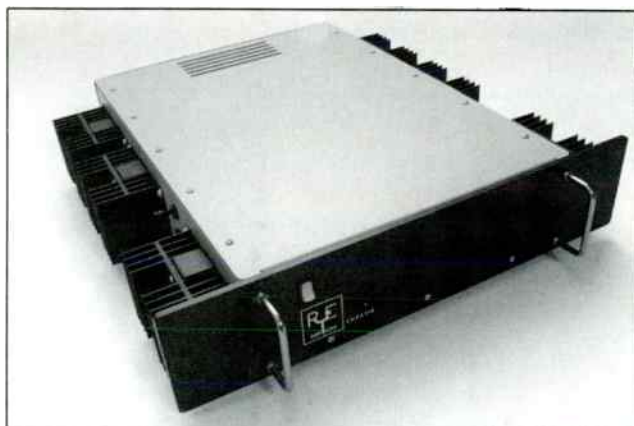
JUST 10 MIN. FROM
MID-TOWN MANHATTAN

Boheme, for instance. But help me out opera buffs: Why do these guys sing the same things over and over? Pavarotti said in a televised interview with Peter Ustinov that the three giants of opera are Verdi, Monteverdi and Puccini. Judging by the selections here, Puccini stands head and shoulders above all others, and Monteverdi is a no-show. Andrew Lloyd Weber and Henry Mancini are, apparently, more important composers than our classical forebears.

The structure/schtick of a 3 Tenors concert is probably familiar to most of you by now: Start with a rousing orchestral number; bring each singer out individually to do an operatic war-horse; go around again with a more personal piece (typically a Zarzuela or Neapolitan song); have all three come out together to do a pop medley; break for intermission; repeat first half; do a loose, show-offy encore; end with "Nessun dorma." No argument—it's a crowd pleasing format. As a media event, the 3Ts Dodger Stadium gig has surely been viewed by more people worldwide than O.J.'s low speed chase in the white Bronco. The 3Ts even have their own fancy logo—just like a large corporation, a blockbuster movie, a TV talk show or a heavily covered news event (Dessert Storm, Super Bowl, O.J.). Hey, these guys are hot!

Even though the music is light on pure opera and heavy on schmaltz, there are stirring pieces here: Pavarotti's "Rondine al nido" from 1990, Domingo's Zarzuela favorites, and many, many others. The concerts, being a mixture of great music and shameless sentimentality, may make aficionados cringe, but these tapes are not for opera buffs. (And if sonic truth be told, they're not for audiophiles, either.) They're for children and "unwashed" rock blockheads like me. As children's fare, the 3 Tenors videotapes and CDs are more than good baby sitters: They're wonderful tools for instilling a love of orchestral and operatic music. We tried them out on other toddlers during a "threesome" group baby-sitting session, and we found that all the kids were perfectly happy watching the 3Ts.

The anecdotal, clinical trial conclusion: An innocent, instinctive response to this music is much more universal than I at first suspected. I think a lot of this tenor aria stuff is fundamentally simple and unsophisticated—passionate and gripping, yes, but really quite approachable. It was once a popular art form. A fascination with operatic music is not so much a matter of my baby's genes, but rather a matter of human genes; it hits a deep, almost primal nerve. Try it on your own tots. They'll like it. Vincero, baby!



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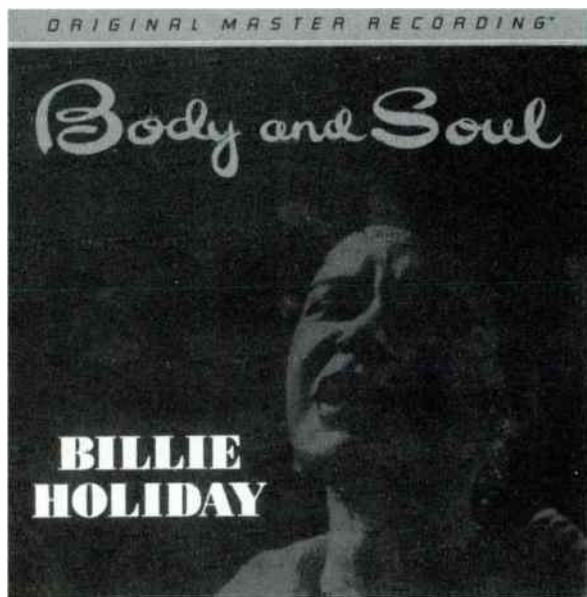
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John T. Valauri

Body and Soul is a reissue of eight superior jazz vocals done by Billie Holiday in 1957 for Norman Granz and Verve Records. She is backed here by the cream of jazz accompanists. The most notable solos are performed by her longtime associates, Ben Webster on tenor sax and Harry "Sweets" Edison on trumpet..

Now, these are recordings from her later period (less than three years prior to her death in July 1959 at the age of 44), and that fact directly injects this review into the ongoing debate as to whether her later sides from the 1950s are up to the standard of her early 1930s jazz classics. I side with those who say that

they are. The contrast between the recordings from the three phases of her career (swing song classics of the thirties, cabaret sides of the forties, and life-as-legend sides of the fifties) has to do with her decreasing vocal power, but increasing interpretive skill, as time went on. Where one stands in this debate is largely determined by what mix of these elements one prefers.

It is beyond contradiction that the recording conditions of these Verve tracks complement Billie's later vocal style well. Her singing in the later years is intimate, spare, and emotionally searing. Granz's ambient recording sound is well suited to conveying this mood. The "air" (i.e., spaces, pauses, and hesitations, so necessary for the creation of this feeling) is not lost in the recording. I also concur in Mobil Fidelity's apparent decision to put up with some slight tape hiss (although they were recorded in Capitol Studios in Los Angeles, these monaural tapes are almost 40 years old) as the price of preserving the lifelike sound and clarity of the music.

Of the music, let me say this. The variety here is emotional as well as musical. For by this time in her life, Billie was the prisoner of the doomed genius legend of her autobiography, "Lady Sings the Blues." Some of the sides here, most notably the title track and "Comes Love," embrace the romantic fatalism of the legend in both their lyrics ("Comes love, nothing can be done.") and in their world-weary delivery.

Yet Holiday also plays off the legend, singing against type in several up-tempo and humorous standard numbers. The best examples are the two Gershwin songs, "Let's Call the Whole Thing Off" and "Embraceable You." She gives these tunes a swing that recalls her swing





All Photos: Frank Driggs Collection

songs of the thirties. Yet, she also invests them with an emotional depth they rarely have in popular performance. Billie finds resonances in the lyrics of yearning and loss that are usually hidden right in plain sight.

Emotional impact here is achieved through idiosyncratic emphasis and timing. Sometimes she is behind the beat, sometimes ahead. She pauses or speeds up at points you do not expect. This catches your attention and makes you really listen to the lyrics and hear the pain that lurks beneath the carefree exterior.

I cannot finish without at least a mention of the first-rate sympathetic accompaniment Billie receives from the seven musicians here (bassist Red Mitchell plays, too, but is not credited in the liner notes). Like her singing, their playing is spare and emotionally true, never overstated or routine. My only request would be for more. The CD is barely 40 minutes long; would there were more.



R**ECORDINGS****Jack Skowron**

Jazz clarinet is back. It was prominently featured in jazz's early days, interweaving melody and counterpoint with the trumpet, while a tailgating trombone and two-beat tuba supplied the foundation. Swing era big and small bands still had clarinet stars, with some, like Benny Goodman and Artie Shaw, being pop stars too. Few clarinetists joined the bebop revolution of the '40s, for reasons never completely understood. (Theories include it being too difficult an instrument for bebop's rapid-fire lines and tempos, or that its tone is too light next to the sax, too heavy next to flute.) Only a few staunch souls (Buddy DeFranco and Jimmy Giuffre among them) kept the licorice stick active in modern jazz—until recently, when interest has rekindled. Alvin Batiste and Don Byron play only clarinet, while Ken Peplowski and Marty Ehrlich feature it along with other reeds. Eddie Daniels is of this latter school.

This CD is dedicated to the Thad Jones-Mel Lewis Orchestra, which has been playing at New York's Village Vanguard every Monday night from the early '60s until the present (even after the passing of Jones and Lewis). Mr. Daniels was a charter member of "The Band," and two tunes are dedicated to it ("Thad's Lament" and "Farrel").

The audio mags' ever-present "wife acceptance factor" has a different meaning in my home. Since I've been a record collector for 25 years (my collection has about 3,500 LPs and 900 CDs of varied musical styles, with an emphasis on jazz, historical to current), and an audio-neurotic for about seven years, the living room of our apartment is dominat-

Eddie Daniels

CHESKY RECORDS

**Eddie Daniels Real Time****Eddie Daniels clarinet, tenor sax****Chuch Loeb guitar****Ned Mann bass****Adam Nussbaum drums****Producer David Chesky****Recording Engineer Bob Katz****Chesky JD118**

ed by things audio. The software lines a wall, while the speakers (Thiel 3.6s, affectionately known here as "the Twin Towers") are away from the wall in an obtrusive, audiophile-approved manner. The rest of the system consists of the Linn LP12/Lingo/K18 for

vinyl; Proceed PCD for digital; Krell KSL (with phono) and KSA 150; Magnum Dynalab FT101A tuner; VPI 16.5 record cleaner; assorted interconnects from Krell (Cogelco Black), Purist (Maximus), and the MIT 330E speaker cables (which are as thick as my 10-month-old daughter's arm; truly a presence in the room).

My wife actually bought me the Thiels and the KSA 150 as engagement and birthday presents. [What a woman!—Mark] The next upgrade will be to totally Sonex the walls (just kidding, honey dearest). All is not heaven-on-earth, however, as the issue here is the type of music played. My collection features most of the jazz giants, from Louis Armstrong to Ornette Coleman, and while the former is in unanimous favor, the latter is not. Avant-garde jazz often tends to push the boundaries of harmony and rhythm (read: dissonance and cacophony) and, while I enjoy hearing adventurous recordings, they drive my wife into the bedroom to the protection of the TV, phone, and white noise machine (often these sessions are usually held after bedtime so as to avoid problems).

Getting back to Real Life, the WAF of Real Time is high (though, of course, never as high as a vocalist would be, particularly Ella or one of those nauseating female vocalists—Ronstadt, et al). The band plays swinging, tasteful jazz in a mainstream and bop tradition. Mr. Daniels handles clarinet on six tunes and tenor sax on five, but the clarinet seems to dominate the set (without counting, I would have guessed that the clarinet played more). The tenor playing is fine, technically excellent, and did catch my ear more as I continued listening to the CD, but on the licorice stick Mr. Daniels finds his own voice. His playing is more adventurous in many ways, with more variety of tone, texture, dynamics, and rhythm. Ironically, while he plays with a post-bop sensibility (harmonically), some of this increased variety comes by way of pre-bop approach to phrasing, with more spaces between notes and phrases, more play with tonality, less of the "sheets of sound" rapid chording that he does on tenor.

Take "Sweet Lorraine" as an example. On the head, he employs a woody, polite sound, then he swirls around the rhythm during the first solo chorus. In the second, he starts with a bluesy cry in the upper register and dances his way through the rest of the chorus with melismatic bends and off-kilter runs. Chuck Loeb's solo makes nice use of chord-melody

technique, and after the melody reprise there is a guitar-clarinet coda of a descending blues run that's nicely conceived. The tenor playing on a track like "Love Walked In," while certainly not boring, doesn't leave as many spaces and is more tied to the beat. The tone is reminiscent of a softer-sounding Wayne Shorter, especially the leaps to the upper register, and it also is more unchanging than the clarinet.

In keeping with this "older is newer" dichotomy, the tunes that feature clarinet tend to be older '20s and '30s tunes, while the tenor plays Daniels originals. The material and execution are fine; only the original "Blue Bolero" drags (this is where I go get a snack). As for the rest of the band, Chuck Loeb shares solo duties. He has a nice conception, fine technique, and an ear for when to play and when to leave space. The rest of the rhythm section does a fine, though unobtrusive job. While no new ground is broken here (new ground tends to have a low WAF), this is an enjoyable CD to listen to, casually or attentively.

Of course, a Chesky recording is about sound as well as music, and the CD booklet lets you know it—128X oversampled, with UltraAnalog modules, and vacuum tube equipment built by George Kaye. The sound is indeed very good compared to most commercially released jazz CDs. It is very open sounding and imaging is excellent, with instrument placement firm and nicely spread around the soundstage. The width of the stage is excellent, while depth is somewhat shortened compared to good analog (of course, my CD playback resolution is not up to my analog system; I'd love to hear this on the LP version). Instrumental timbre is exceptionally well rendered (for CD), with the overtone-rich clarinet well captured, and the bass sounding appropriately woody. The tenor maybe loses a wee bit of its richness, but it's hard to tell, not having heard him live.

However, two other new Chesky releases (Fred Hersch and Johnny Frigo) are both much better sounding than this Eddie Daniels CD—more depth, more flesh on the instruments and more air around them. The rhythm section, particularly, is dramatically different sounding, making the drums on this CD sound flat and subdued.

To sum up, this is an entertaining CD of fine modern jazz on a not-too-common (though increasingly more so) instrument, which by its nature puts a slightly different spin on familiar sounds. Recommended.



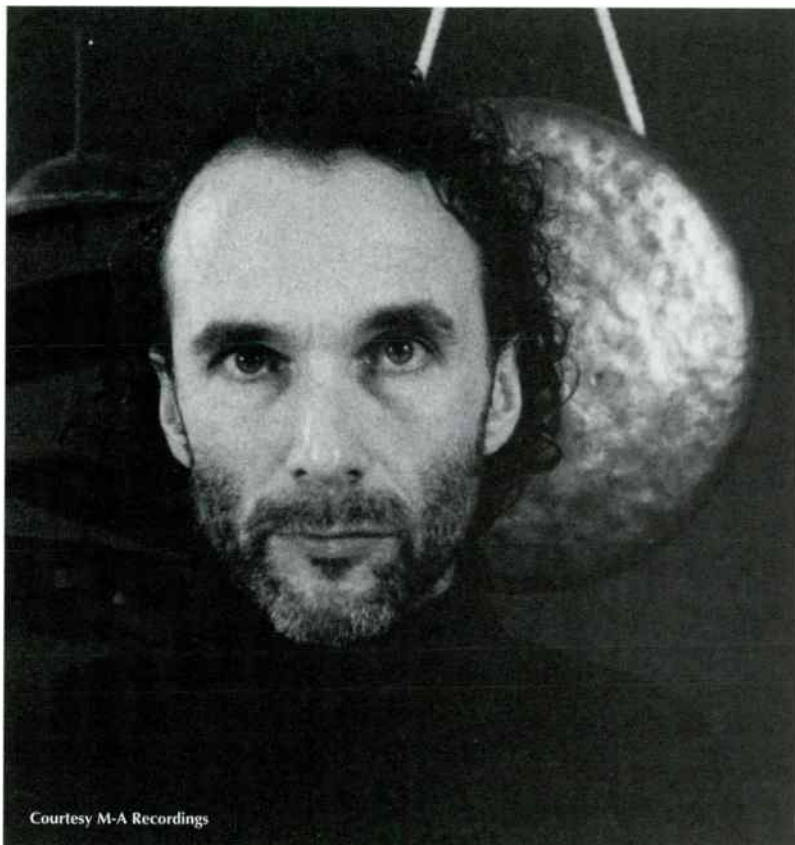
John Diliberto

While some percussionists, like Mickey Hart, get all the glory for bringing a world of rhythm music together, artists like Mark Nauseef have been toiling in the fields, committing themselves to a true percussion music. Nauseef is a journeyman player who has performed with Jack Bruce, Lou Harrison, L. Shankar, Rabih Abou-Khalil, Edward Vesala and many others. His own recordings are usually collaborative efforts slashing at the outer edges of jazz fusion and world music.

With *Space in Mind*, however, is a completely solo effort on which Nauseef mixes a range of exotic percussion instruments and plays off the resonances of Harmony Hall in Matsumoto, Japan. Eschewing the percussion orchestra work-out and virtuoso rhythm-talist approach, Nauseef instead enters a more meditative space, letting instruments ring out in reverberation, mixing tonicolors of Chinese drums, Thai gongs, Moroccan bendir, and chime bars.

On nine tone poems, Nauseef creates a modern ritual music, from the ringing Chinese temple bells that are the lone instruments on "Arrows from Arjuna" to the trance groove of "A Slug on the Rug." It would be easy to call *With Space In Mind* a world music percussion album, but Nauseef has really made a more classical recording of percussion chamber music.

It's an often dark and mysterious music. Nauseef drives the dynamics down low with chime bars that reach into sub-contra bass frequencies that are sure



to give the low-end of your system a work out. Recorded direct to two-track digital with a stereo pair, *With Space In Mind* has a wide-ranging sound stage, especially evident on "Soul Singing," on which gongs scraped with a superball acoustically pan through the stereo spectrum. Mark Nauseef skillfully places his space, in our minds.

Mark Nauseef **With Space In Mind**
Producer **Todd Garfinkle**
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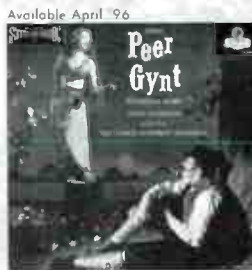
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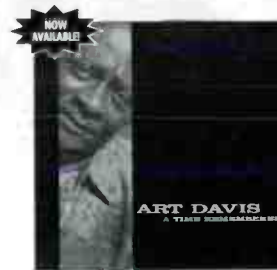
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Bill Wells

Nothing seems sacred anymore! Noting strange twists and turns, from various high-end audio manufacturers these days, I am less and less surprised when I see any one of them step outside their "normal" turf. For example, consider the divergent product development activities of several high-end audio cable manufacturers. Who would have suspected that they would go to the end of the chain and start producing Compact Discs?

In particular, off in the Texas hotlands, we have mild-mannered Jim Aud (head dude at the Purist Audio Design ranch), who has developed a product dubbed The System Enhancer (SE). It's a Compact Disc which is loaded with software-derived sounds that are not music to these ears, but it does wonders for waking up my system. *[Bill, how 'bout these sounds in an audikophile's alarm clock?--Gene]* Skipping over to the cooler climes of the northern California coast, we have Roger Skoff of XLO fame. Skoff has teamed up with the engineering folks at Sheffield Labs to also develop a CD-based product similar in concept to Aud's but different in design and implementation. Nonetheless, I understand that this product is likewise quite useful in conditioning your stereo rig much in the same way that Aud's product does.

Yet in another part of the country, we have Walter Fields of NBS Audio Cables venturing into the CD production business. However, Field's efforts have led him to laying down tracks of "real" music as opposed to system-conditioning sounds like the two previously mentioned efforts. Perhaps the presence of such notable local recording artists as Prince, with his



highly regarded Paisley Park recording studio, big-time Rhythm & Blues producers Jimmy Jam and Terry Lewis, pianists Bobby Lyle, Gepff Keezer and a host of others have inspired Fields to move in this direction. Regardless of the reason, Fields has put together a rather interesting selection of musical treats on this album. (In this regard, Field's approach is not unlike that of other notable high-end cable gurus—Bill Lowe of Audioquest and Ed Woods, now of Clarity Recordings).

Fields currently resides in the beautiful Land o' Lakes (Minnesota, to be exact). His recently released debut CD features local Twin Cities jazz vocalist Shirley Witherspoon. Also, appearing on this CD is the highly regarded and oft-recorded organ master Captain Jack McDuff (of Hammond B-3 fame), who currently resides in the Twin Cities as well. Both he and Shirley appear at various night spots around town on a fairly regular basis.

Musically speaking, this CD is pretty much a straight-ahead R&B-infused jazz. Throughout much of it, Witherspoon is backed by an instrumental jazz

quartet. However, in several spots there are also background vocals or violins which accompany her. On a number of selections, Witherspoon's voice is somewhat reminiscent of the late Dinah Washington. On the opening selection, Witherspoon puts forth an interesting remake of Billie Holiday's "Strange Fruit." The terrible, haunting reality of the lyrics comes across extremely forcefully in Witherspoon's interpretation.

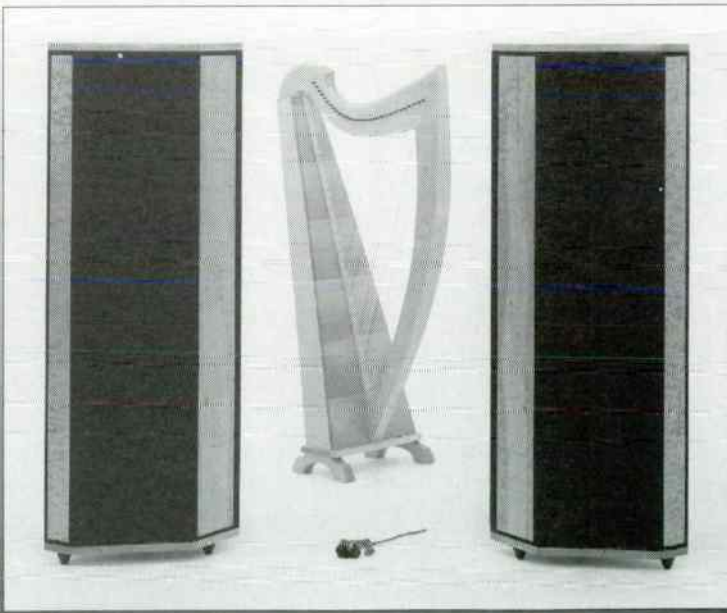
Witherspoon then changes moods with the R&B classic "Please Send Me Someone To Love." Throughout the remainder of the album, there is an interesting blend of ballads and up-tempo selections that should address most listener's musical wants. Personally, I was hoping to get just a bit more of Jack McDuff's melodious Hammond B-3, but there's a great deal of it on the disc to savor.

Sonically, the Compact Disc is pretty clean sounding. Most interesting is how each of the tracks accurately retains the distinct character of each of the various local recording venues used throughout the

production. Additionally, the CD captures Witherspoon's performance much in the manner in which she normally presents herself when performing live. Although this recording was not done in a live audience setting, Fields says that he was interested in attempting to produce an effect similar to a live environment by recording away from the studio at locations where Witherspoon might perform.

Also, according to Fields, the CD was mixed direct to DAT, with no over-dubbing or studio trickery. Fields has chosen to go with the more expensive gold disc plating for this CD. Upon first listen, I felt the sound a bit hot, as it seemed to have considerable sibilance. However, subsequent close listening caused me to realize that Witherspoon's singing style is what actually produces this very sibilance—it's not a recording artifact.

Currently, the Compact Disc is available through various record stores throughout the U.S. (including Tower Records), NBS dealers, or direct from NBS at 612/332-2973 or fax 612/339-8750.



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The Audio Research D-400 MKII

Bill Wells

Recent events in the research and development of solid-state amplifiers have stirred a great deal of excitement. Not only do many of the newer offerings divulge significant promise sonically, in some ways challenging their fabled tube counterparts, but a number of them are reasonably priced to boot, bearing in mind their designers intent to create true high-end contenders. Those of you who have read previous issues of TAV may recall that I first mentioned the amplifier here under review in my earlier report on the ESP Concert Grand loudspeaker. At that time, I felt that this amp literally transformed the overall performance of those very fine loudspeakers. Quite frankly, I had hoped to have this report available much sooner. But, as they say, s**t happens!

In my years of involvement in high-end audio I've had various adventures with different types of amplifiers. Throughout, I've largely been a dyed-in-the-wool tube aficionado; most of my truly memorable in-home audio experiences having been provided by glowing glass bottles. However, on numerous occasions their solid-state

brethren have yielded to me very rewarding musical experiences as well. At times my involvement with tube amplifiers has been something of a love/hate affair: LOVE—those many moments of pure sonic delight and musical ecstasy; HATE—those heart-stopping moments when that all-too-recognizable blue flash occurs (along with the pungent odor of toasted insulation), signaling the death of one (or more) of my cherished and very expensive output tubes. Fortunately, this has not happened often; once it does, however, it tends to stay ever on your mind. Despite these occasional problems, I have carried on in true masochistic, high-end audiophile tradition. My personal dilemma is that, despite loving the sound of tubes, I abhor the certainty that my system's sound will deteriorate over time as the valves slowly age, and I shudder at the ever-present chance of a catastrophic meltdown of those precious glowing bottles.

So what is a hard-core, tube-lovin' audiophile to do? Should I cash in my chips, sell my favorite tube amp, and quest for a more reliable solid-state unit? Sounds

simple enough, but for me the decision just ain't all that easy! With continuing research and development, the sonic improvements realized in today's breed of solid-state units seem to make them a viable alternative for even the die-hard tube amplifier lover. But . . . in my opinion tube amplifiers simply provide a sound that is more "musical" overall, based on my own long-term experience with many different amplifiers. Typically, tube amps have provided more of that often indescribable "magic" than the solid-state units have.

Yet these same experiences have taught me that solid-state amplifiers have numerous positive attributes: greater power; enhanced control and drive capability, particularly into low impedance loads; better bass; more extended highs; lower noise; greater overall reliability—and the list goes on. What I long for is the best of both worlds: Magic and Muscle. Sounds like a prescription for audio ecstasy, don't you think?

Well, a few new solid-state amplifiers do attempt to fill that prescription. Luckily, I have been able to secure one of these new-

wave solid-state units to hear for myself, the Audio Research Corporation's D-400 MK II. Having extensively auditioned this amp, I can say with assurance that it displays signs of solid state progress, providing a high degree of musical satisfaction and advancing toward the elusive goal of tube musicality. I feel that this amp is a significant achievement, easily worth considering if you're in the market for a high-powered, high quality, superb sounding solid-state amplifier.

In the past, ARC's flagship amplifiers have typically been tube powered. Through the years, however, ARC has committed its resources to designing solid-state units as well. It was ARC's earlier solid-state effort, the D-240, which set the stage for the D-400. The D-240 was ARC's first new solid-state stereo amp since the D-120, a ten year old design. According to Terry Dorn, ARC's Vice President for Marketing & Sales, the decision to develop the D-400 was made a year after the introduction of the D-240. Dorn says that the D-240 was designed to a price point. ARC wanted to offer as much product as possible for a reasonable amount of money, making the amp accessible to a wider range of audiophiles (the D-240, rated at 120 watts per channel, originally retailed for \$2995). The impetus behind development of the D-400 was to meet customer needs for a product that yielded considerably more power with greater drive capability. The D-400 was designed to provide full power output into a one ohm

load, enabling it to be used with a greater number of loudspeakers.

The D-400 MK II is a one-chassis stereo amp rated at 200 watts RMS per channel into 8 ohms. The overall dimensions place the unit in the "somewhat largish" category, and the weight—approximately 95 lbs—may induce hernias. Nonetheless, the packaging is quite neat for a unit of this size and weight. It operates in class AB, which effectively doubles the output to 400 watts per channel into 4 ohms, and has been designed to deliver prodigious amounts of current for enhanced control and dynamic realism. The output is configured for either single-ended (unbalanced) or fully balanced operation [see Sidebar for technical details].

My exposure to the original D-400 occurred some time ago, during a visit to the ARC factory, when it was still in the pre-production prototype stage. My first real opportunity to hear the final production version came at the 1992 WCES. ARC was using the D-400 to power Thiel's flagship CS 5 loudspeakers in their suite at the Golden Nugget. The general consensus was quite favorable, many listeners agreeing that the

sound was very impressive and quite musical. What was immediately noticeable to me was the sweeping sense of power. The amp also rendered a high level of detail, yet with a sound possessed of smoothness and finesse. The soundstage was very wide, with considerable depth. Images were tightly focused and well-illuminated throughout the stage. Most impressive was the bass, which had a remarkable sense of power and an appropriate rendering of weight and control, a combination which resulted in a stunning presentation of the music. It was obvious that both speakers and amplifier were working extremely well together.

I was fortunate enough to audition the original D-400 in my home prior to taking delivery of the revised MK II, and the revised unit is a definite improvement over the original. The MK II is simply superb sounding—a musically satisfying amplifier offering big full sound with bloom, a quality too often lacking in solid-state designs. There is plenty of available power, coupled with outstanding dynamics and control. The sound is quite linear and very smooth throughout, although not so smooth that it

NOTES

ARC D-400 MK II, \$5,995. The Audio Research Corporation, 5740 Green Circle Drive, Minnetonka, MN 55343-4424. Phone 612-939-0600, fax 612-939-0604.

Associated equipment: Electronics: Convergent Audio Technologies (CAT) Signature preamp; ARC LS 5 MK II line stage & PH 2 Phono stage; ARC Classic 120 mono block amps (w/ KT88 & 90 output tubes); ARC D-400 amplifier (original version); ARC BL 1 phase inverter (used with the CAT preamp only). Front-ends: Well Tempered Reference Turntable; Cardas Heart & Blue Oasis moving coil cartridges; Sonic Frontiers SFD-2 DAC; Audio Research CDT-1, P S Audio Lambda, Theta Data Basic & Vimak DT 1000 CD transports; California Audio Labs Tercet MK IV CD Player. Speakers: ESP Concert Grands; Paragon Regents & Jubilees; Audio Physics Steps. Cables: Transparent Ultra interconnects (balanced) & speaker cables; NBS Signature interconnects, speaker cables & NBS Master speaker cables; Omega Mikro interconnects & Planar speaker cables; Ichor speaker cables (w/Step loudspeakers only); Audio Research Litz-Link phono cable (balanced RCA to XLR); Transparent Ultra phono cable (balanced w/o networks); NBS Pro AES/EBU digital cable; ARC AES/EBU digital cable; Ultra Resolution Technologies ST-type optical cable; Omega Mikro coaxial digital cable. Accessories: Solid Steel equipment stand; ASC Tube Traps; Goldmund Cones; VPI HW-17 Record cleaner; VPI Bricks; A.R.T. Q Dampers; Sumiko CD Micro damper; Harmonix CD tuning sheets; Purist Audio Design System Enhancer (CD); Ultra Resolution Technologies Cornerstone vibration control platform; Coherent Systems ElectraClear EAU-1 line conditioners.

In discussions with various ARC technical personnel, I learned that additional considerations in the design of the D-400 included high performance, modular design and intelligent (read: efficient) build quality. Cosmetic costs were to be reduced; as a result, the appearance is neat and tidy, lacking overly elaborate heat sinking or costly front panel design work. Tom Repucci, ARC's lead design engineer on the D-400 project (including the MK II revision), stated that the D-400 has a much cleaner internal layout than the earlier D-240. For example, there is a minimum use of internal wiring on the circuit board (all wiring is 14 gauge Litz). All output jacks are proprietary devices soldered directly to the boards, which avoids degradations introduced by mechanical connections. Repucci says these changes provide better signal transmission and current delivery, resulting in minimized low-level grunge and improved inter-note silence.

Further improvements are found in both the input and driver stages, including different resistor values, wiring changes to the grounding path, independent regulators and separate dedicated power supply for the input and driver circuitry with a separate dedicated power supply and transformer for the output stage. During development of the D-400, ARC switched to Multiple Emitter Transistors (METs) instead of Ring Emitter Transistors (RETs) for the output stages. METs are said to be incredibly reliable and put out a ton of current; at the same time, they remain highly musical. These changes, Repucci says, result in a lowered noise floor, significant improvement in dynamic headroom, and a more open and natural sound.

The revised D-400 MK II also includes lowered feedback impedances, revised power supply grounding and additional bypassing. This has brought about an improvement in high frequency response—now more open and dynamic. Diminished

fails to surrender a very high level of detail and inner resolution.

However, in direct comparison to my previous reference amplifiers (ARC Classic 120 monoblocks sporting either KT88 or KT90 output tubes), I felt the MK II to be ever so slightly dry through the midrange. Yet the MK II thoroughly outclasses its tube counterparts in bass reproduction, authority, control and the ability to drive just about any load. Regretfully, to my ears the MK II still seems to lack that last degree of sparkle and harmonic richness to which I have grown so accustomed over the years with tubes. That's just my bias. In its favor, I found the MK II to be quite the antithesis of the thin, bleached sound that typifies many solid-state amplifier designs. I observed no leaniness in any portion of the frequency spectrum. The MK II reproduces sound very naturally, greatly adding to the unit's ability to offer musically satisfying sound with a wide range of recordings.

One of its many strengths is its resolving power. Details at both the macro and micro level are rendered quite well. In particular, subtle, inner details are clear, articulate and well separated from other, potentially overriding, sounds. This feat is accomplished without any apparent brightness, which is often mistaken for added detail. The high level of resolving power and very low noise floor allows you to listen much deeper into the music without any strain; this quality occurs at relatively low and/or moderate listening levels as well. The superb rendering of detail, along with the MK II's outstanding dynamic presentation, is a real joy.

My attempts to describe the MK II's presentation led me on a fascinating musical journey. I discovered new recordings, and rediscovered many of my previous favorites, mainly on vinyl. Most of my auditioning and evaluation of the MK II was performed using analog as the primary source, but I also had on hand a good number of sonically superior CD releases from a variety of specialty recording companies—as well as the exceptional Sonic Frontiers SFD-2 DAC—which allowed me to critically evaluate the amp while enjoying various digital recordings.

With orchestral music, the MK II sounds big, powerful, smooth, open, relaxed, and dynamic. Take a listen, for example, to Clarity Recordings' production of the Redwood Symphony performing Igor Stravinsky's *Petrushka*. This album provides a number of orchestral passages having considerable dynamic swing; the MK II remained totally in control of the music and the speakers throughout, a feat particularly striking at higher volume settings.

A switch to more contemporary music, such as *The Spin* by The Yellowjackets (MCA Records LP 6304) was also a good test for the MK II. This LP has lots of heavy-duty action throughout; with the MK II calling the shots, the music remained tight, well controlled and dynamic. Another long-time favorite useful in observing the areas of detail and dynamics is Weather Report's early 1970s recording, *Sweetnighter*. This LP contains hard-charging, explosive jazz fusion; listen, for example, to "Boogie Woogie Waltz" for full tilt, dynamically challenging music. The earlier version of the D-400 played this piece well; the newer MK II controlled the speakers even better, and provided a higher degree of dynamic realism. This allowed me to more thoroughly enjoy this fairly bombastic, hard-driving musical selection much the way it was intended (if you have ever had the opportunity to see Weather Report live, you definitely know what I mean).

The D-400 MK II does an excellent job when it comes to speed. Musical notes start and stop quickly, incisively. During my evaluation I used the CAT Signature preamp, and I was impressed with how well the ARC and the CAT mated, joining together to offer a very snappy presentation. Transients were handled naturally; the leading edge of notes took on a sharp, quick and well defined character. As notes ended there was an appropriate degree of decay, without audible overhang or ringing. Switching to the ARC LS 5 all tube line stage with the companion PH 2 phono stage further allowed the MK II to strut its stuff in the speed category. The LS 5/PH 2 combo, optimized for balanced operation, enhanced the MK II's performance by significantly reducing spurious noise. Transients were now even cleaner, clearer, quicker, and more precise. While the CAT did a very good job, I believe that the LS 5/PH 2 and D-400 MK II together create synergy—they are, after all, made by the same manufacturer.

In other areas, such as soundstaging, the D-400 MK II was equally satisfying: Width and depth are reproduced outstandingly, with superb layering of images. Listen to the stunning soundtrack from the movie *Glory*. Depth portrayal of voices and distant drums can be hauntingly realistic; the stage is immense, and instrumental size is conveyed proportionately in a very realistic manner. The image focus of individual performers is very specific, tight and rock solid with no wandering. The D-400 MK II simply gets it right.

On acoustic jazz, the tight image focus of the D-400 helps the music to come through intimately, in a very appealing way; having the instruments presented in their proper stage perspective, particularly on quartet or trio jazz, is very rewarding. On the superb Clarity Recordings LP *Fine and Mellow*, Mary Stalling's vocalizings are palpably present in center stage, while each instrument

low-level grunge, enhanced clarity and a lower noise floor have resulted in an improvement in musicality and a noticeably better flow to the music. Due to electrical/mechanical considerations, a new, thicker front panel has been supplied. To prevent the occasional damage that occurred to the original on/off switch, a new rocker type switch has been incorporated into the MK II.<D>

In dealing with the controversial issue of whether to develop single-ended or balanced electronics, Dorn says that ARC has taken a rather firm approach in designing balanced mode operation into many of their newer products. The D-400 is no exception. However, it is designed flexibly, to be operated in either single-ended or balanced configuration. I learned from talking to several ARC engineers that they are committed to providing balanced drive capability in response to emerging industry trends. By incorporating balanced mode, customers will have the ability to use considerably longer runs of interconnect cables in their systems without the typical degradations associated with long runs of single-ended cables.

Additionally, balanced mode addresses various other problems occurring in our environment today—dirty a.c. in particular, which is often blamed for various sonic anomalies in home audio systems. Unfortunately, sometimes the cure for dirty power can be worse than the problem. Radio frequency interference (r.f.i.) has also become a growing problem as a consequence of the proliferation of personal computers, CD players, microwave ovens, cordless/cellular phones and a host of other transmitting devices [Like nursery room monitors for my two babies.—Mark]

Fully balanced operation (i.e., both input and output stages) is only one of the ways that Audio Research has set out to confront these conditions.

occupies its own respective place on the stage: sax just to her right, piano to her left, and percussion behind her and slightly to the side. Through the MK II, this recording presents each musical layer of the stage as a vivid, observable event.

Another engaging example of solid soundstaging can be found on Mobile Fidelity's reissue of the Modern Jazz Quartet's *Blues At Carnegie Hall* (UDCD 596; with the Gain system). Milt Jackson's vibes are cast waaaaay to the right, while the piano is conspicuously left. Bass is back a bit and slightly off center. Drums are placed considerably rear stage, slightly to the right. The miking technique presents the MJQ very much the way I heard them live not too long ago at the sonically exceptional Guthrie Theater here in my new home town (the Twin Cities of Minnesota), despite the almost thirty years separating this album's recording date from my recent encounter. The MK II does a very credible job of both capturing each performer's position on the stage and revealing the overall ambiance of the recording space.

Earlier in this review I mentioned how well the bass was rendered by the original D-400. The MK II carries on that heritage—low frequency timbre, power and control are truly notable strengths. Reproduction of lower piano notes and acoustic string bass, in particular, can be quite lifelike provided the recording is up to par. On Charlie Haden's LP *Quartet West* (Verve), the MK II provides superb timbral accuracy in reproducing Haden's upright acoustic bass, along with a fine rendering of his big, looming tonality. The amp portrays the performance naturally, with solid impact and a wonderful, deeply resonant quality. It's easy to hear all of Haden's finger-

ing, his double chording and slides up and down the strings. There is no congestion throughout his performance—the sound remains clear and articulate.

As much as I was impressed with the Haden LP, one listen to the intriguing Bell CD of Ray Brown & Laurindo Almeida titled *Moonlight Serenade* (BLR 84 007) convinced me that this amp not

**The D-400 MKII
amp carries on
ARC's tradition
of wonderful
resonance in the
bass end.**

only had gusto (particularly in the lower registers) but also delicacy and finesse. This recording presents a most interesting interplay of solos and duets, combining Brown's big warm, powerful bass and Almeida's lyrical approach and soft touch. The MK II was at once outstandingly accurate and authentically musical. Listen to "Mondscheinsonate/Round About Midnight," the opening number, and you'll hear what I mean. Approximately 2:40 into this piece Brown provokes his bass into a deep, powerful growling roar, while Almeida softly, almost serenely, strums his guitar. The MK II is capable of clearly delineating the individual instruments throughout this passage, despite their dynamic disparity.

In tackling the ever tricky piano, I used Gonzalo Rubalcaba's exquisite recording, *The Blessing* (Verve), which has an arresting interplay of robust piano and acoustic bass, with some delicately delicate percussion work, including nicely rendered cymbals

and brushes. When the artist jumps into a run of strong, hard-struck notes, the MK II provides the sense of power you would expect, while at the same time allowing you to easily follow the other instruments. This amp delivers these all sounds with power, dynamics, and a high degree of finesse, articulation and control.

Given the MK II's superb bass performance, I was curious to find out just how good it was in the midrange and upper frequencies. Switching to vocal recordings, I found to my delight these areas were reproduced surprisingly well. The midrange is very smooth, relaxed, highly articulate and open, while remaining quite neutral, lacking the somewhat euphonic and frequently seductive sonic quality of tubes. I found myself at first missing that little extra sparkle and harmonic richness often obtained with tubes. However, in my extensive sessions with this unit, I can't ever recall hearing any singers portrayed with the kind of sterile solid-state character noted in other amps.

Vocals were very clean, with a good sense of body and dimensionality. For example, on the late Sarah Vaughn's LP *Crazy and Mixed Up* (Pablo LP 2312-137-2), as Sarah's voice traverses the vocal spectrum the MK II reveals every little nuance associated with her unique (and sumptuous) singing style. On strong peaks the MK II really delivers with gusto; when Sarah gently whispers or purrs softly, caressing each note tenderly, the MK II transports her voice with passing delicacy. This level of performance is also evident when listening to the debut album from the sensational a cappella group Take Six (Reprise LP 9-25670-2). These performers deliver a fascinating mix of vocal

gymnastics, at times really belting, at other times singing ever so sweetly and gently. The voices have body, and the overall tonality seems right on. The MK II readily allows you to hear each individual performer's acoustic space and the varying dynamic contrasts among the singers.

I further evaluated the midrange using the Mapleshade recording *Portraits In Ivory and Brass* (Mapleshade 02032), a minimalist recording of piano, trumpet and string bass. The piano sound is clear and articulate, with a genuine sense of palpability and dynamics. The sound is smooth and full, with each note having proper tonality, allowing the distinctive sound of the Steinway used by Larry Willis to come through very clearly.

Going further up the scale, high frequencies are extended, open and airy. In the earlier D-400 the

extreme highs were somewhat soft and polite (albeit primarily while operating the amp in single-ended mode). I don't hear these previously noted deficiencies in the MK II. While I wouldn't describe the highs as sweet and luscious (vide, some of the highly touted tubed amps), they are smooth and delicate rather than hard or etched. Cymbals possess proper character, extension, air and an appropriate sense of decay, with a very nice shimmer and ring. Not bad for solid-state. Not bad at all.

With the D-400 MK II in place I found myself far more interested in simply listening to my favorite albums rather than critically assessing and analyzing my hardware. For the most part, the MK II gets out of the way of the music, allowing it to flow in a very effortless and relaxed manner—yet it can also generate the kind of dynamic realism that allows you

to enjoy the music. In a number of very important ways, the ARC D-400 MK II has effectively transformed the performance of my reference speakers, allowing me to enjoy them all the more.

For those of you still hungering for the next great tube amplifier, I cannot proclaim that you will find the ARC D-400 MK II to be the answer to all your needs. However, the MK II is capable of bestowing convincing musical reproduction upon its listeners; I have been able to use this amplifier on a long-term basis without continually longing for thermionic satisfaction. Without hesitation, I can say that the D-400 MK II is a highly refined, very musical sounding amp. If I could somehow induce ARC to loan me their flagship VT 150 monoblocks, I would really be able to tell you if my "tube jones" has completely gone away! Terry, are you listening?

"I can't think of a single electronic high-end component available today that provides more value for money than the Creek 4240SE."

"bass was clean, tight and natural...revealed details I hadn't noticed before...vocals were particularly captivating" — Robert J. Reina
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The Paragon Regent Loudspeaker

Amis Balgalvis

Whenever a new speaker company appears I can't help but be totally amazed at the gumption of these adventurers. Let's face it, if ever there was a saturated field, its loudspeakers.

Just what is it that a new company thinks it has to offer to distinguish itself from the rest of the pack? Hasn't everything been tried by now? No matter, they just keep coming.

By now we all know that no new transducer inventions have appeared for eons. At the same time we are getting better and better speakers. What's going on? Well, it's refinement at its best. A little bit here and a little bit there goes a long way. The only problem is to find just exactly where that "here and there" is. Designers are hard at work refining existing design principles and in the process are getting closer to being able to extract everything that is possible under the existing circumstances.

Notice I didn't say tweaking. To me that's something that is associated with a haphazard approach and relies too much on hope and luck. No, I'm talking about a rigorous reexamination of prevailing problem areas and then diligently

proceeding to resolve them. Or at least some of the problems.

Paragon is just one such company. Except for the shape of the Regent there's nothing outwardly obvious to suggest that they have "reinvented the wheel." Nor do they claim to have done so. What they did however

was to focus their attention on as many details as possible and, in the process, fashion a design they can be proud of.

Having had the opportunity to live with this product for a while I can tell you that they have succeeded in creating one of the best speakers that has been my plea-



sure to hear in quite some time. And when the \$3,495 price is considered then we're talking a real bargain.

Here are some of the "attention to detail" items that Paragon implemented to get it all together in a speaker they christened the Regent. Please appreciate the reality that no singular parameter or component can be considered as the most important. Several considerations have to be juggled

Paragon took great care in the design of the Regent.

judiciously with respect to each other in the search for a balanced design. Let's start with the drivers.

The drivers Paragon selected had to excel in the following major properties: Rise time, pulse response, power handling, linearity, dynamics and frequency response. Arranged in a D'Appolito coincident array, Paragon uses two 6.5 inch PHA cone drivers and one 3/4 inch fabric dome tweeter sourced from Dynaudio. PHA stands for Phase Homogenous Area and refers to the specific cone geometry chosen to minimize aberrant phase effects. This driver is unusual because the voice coil has a 3-inch diameter, even though it is a 6.5-inch diameter driver. Combined with a mineral loaded polypropylene cone material this driver has excellent power handling capability.

The tweeter was selected because it has an extremely smooth response all the way to 40kHz. Unlike metal domes this tweeter does not exhibit any resonant peaks.

Associated Components: Museatex Melior CD-D, and G&D Transforms CD Transports supported by a Seismic Sink. XLO, Illuminati digital coax cables. Various fiber optic cables. Museatex BIDAT and Theta Gen V processors. Jeff Rowland's Consummate preamp. Krell KSA-200S and Jeff Rowland Model 8 power amps. Tara Labs RSC "Master" Generation 2, Monster MS2 Sigma, and Purist Audio Colossus speaker cables. Tara Labs RSC "Master" Generation 2, Monster MS2K interconnects. RPG abusers, ASC Tube Traps, and Sonex panels. Audio Power Industries Power Wedge.

For the most part, thanks to the Museatex BIDAT with its integral remote volume control, a very simple system was used: EAD T-1000 transport, the Museatex BIDAT, Rowland Model 8 power amp, and Generation 2 cables by TARA Labs.

The D'Appolito array exhibits a number of desirable properties, such as reducing vertical lobing problems and improving imaging capability over a wide listening area, for example. In order to take advantage of these inherent advantages, the phase characteristics of the crossover are carefully integrated with the drivers. On the surface the crossover appears very run-of-the-mill: Linkwitz-Riley, 12 dB/octave slopes, crossing over at 2.6kHz.

But inside, if you could get past the resin casting, you would find Solen capacitors and unique copper foil air core inductors. Hansoo Kim, the designer, explained that this inductor design approaches ideal inductor characteristics and is invaluable in converting a computer design into real-world applications. Using Cardas conductors everywhere the crossover uses point-to-point wiring and is resin casted. To isolate the components from the speaker cabinet the crossover assembly is mounted to the enclosure with an elastomeric adhesive. Two pairs of wrench tightenable Cadras rhodium binding posts are provided for bi-wired speaker cable terminations.

In a conversation with Hansoo, I brought up the subject of using felt or similar damping materials for treating diffraction hills. He explained to me that the matter is more sophisticated than common

sense would indicate. Because designing a speaker at Paragon is holistic process, any attempt to jump in with an individual "solution" is likely to be detrimental. In the case of the Regent the choice of the baffle layout, the drivers and the crossover resulted in a design that would have to be altered drastically in order to accommodate something like a felt surround for the tweeter.

The Paragon designers have gone to great lengths to make the Regent cabinet extremely rigid. Using poly laminate MDF they use a 1 inch thickness for the side walls, 2 inches for the rear wall, and 2-1/2 inches for the front wall. The drivers are mounted on a baffle that is separated from the rest of the enclosure by an isolation gasket along the periphery of the baffle. This creates a 1/32 inch air

Cabinet rigidity was high on the Paragon list of important items.

space and minimizes mechanical energy transmissions.

The inside surface of the cabinet is covered with a 1/4 inch layer of a dense and inert damping compound as well as judiciously located 1/8 inch thick lead plates. This,

along with internal bracing is intended to produce an inert environment for the drivers. It should not come as a surprise that each of the speakers ends up weighing a sturdy 145 pounds. The finished cabinet is 47 inches tall, 10 wide, and 15 inches deep.

The Regent is available in several veneers that are hand-rubbed and protected with a layer of catalyzed lacquer. This results in an extremely hard and scratch-resistant finish.

The Regent also happens to be user friendly. At 91 dB, it is sensitive. With a nominal impedance of 4 ohms, and never dipping below 3.2 ohms, the Regent is an easy load. And it is rugged, any speaker that can handle 100 watts RMS, 200 watts of music power, and will take 1000 watts for 20 milliseconds is good for keeping overload concerns to a minimum.

Bear in mind that the pinched waist design has nothing to do with styling. Rather it is a deliberate design feature intended to minimize the surface area nearest the tweeter in order to keep the diffraction effects as low as possible. Any cosmetic benefits as well structural rigidity gains are byproducts of the original intentions. The Regent is designed to be supported by four very sharp spikes. A spike sits under each corner and, I was happy to see, each can be snugly tightened with a nut against the bottom of the enclosure.

I always feel slightly uncomfortable describing wonderful results in speaker performance that were obtained under conditions without any resemblance to real world living/playroom conditions. At the heart of the matter is the fact that whatever results are being described that is what has been heard. I believe that a component

such as a loudspeaker has to sound good only once for it to be declared a successful product.

THE SYSTEM

I see speaker evaluations as the most difficult a reviewer is called to do. As the final component in the playback chain, it converts everything before it for us to hear. As such it is the final arbiter. Set the speaker up right and you're home free; don't, and the system as a whole is suspect.

How do you know you have it right? How do you know you're getting the most out of your speaker? Despite what we think we know, these remain very hard questions that could be considered rhetorical by many.

My take on the situation is that each person has an inner reference or sound. This is the sound that comes from within, having been established by experience and intuition; the norm we call on our ultimate reference. Those who developed the most viable reference, and then are able to come closest to replicating this standard, are the people who consistently come up with the best-sounding systems.

That does not mean that the road to success is not full of the usual bumps, potholes, and curves. It does mean that the people with this intuitive sense can see the end more clearly and negotiate the road more successfully. Unfortunately the guidelines for achieving good sound are very few and far between, so that we remain beholden to a lot of hard work.

The Regents were no exception in this regard. A lot of effort was



expended to get them to sound great. By no means does this imply them to be a difficult product; all I'm saying that hard work is the norm in speaker evaluations. Component and cable changes, placement and positioning all play an important part in getting the most out of the product. All of this effort applies not only to the reviewer but the consumer as well. The reviewer is driven by an obligation to the readers, while the consumer is only driven to please himself.

ADMONITIONS AND ADVICE

Do not for a moment think that a pair of loudspeakers can be brought home, plunked down just anywhere and that great sonics will fill the room. Far from it. Like it or not, a close encounter of the acoustic kind is a fact of life; room acoustics will come into play first, always and forever. Despite the incontrovertible nature of this situation room acoustics is and remains the singularly most neglected subject in high end.

What does receive the most attention are individual components. They are brought up in

GETTING STARTED

great numbers regularly with each being discussed in minutiae ad infinitum. The only problem is that however great the components feeding the speaker may be, and however great the loudspeaker may be, it all for naught if the speakers are not in tune with the room.

The reverse situation is much better. A mediocre system, with properly placed speakers in a properly prepared room, is a far more favorable scenario for sonic excellence.

This is precisely why it is so sad to see compulsive component changing as the recourse for improving your system when greater gains are within your grasp by simply repositioning your loudspeakers. And at the right price to boot. The real tragedy of this situation is that acoustic treatments are far more cost effective than any component changes I can easily think of.

Despite the popularity of the single-ended approach these days, my advice is to stick with the push-pull method: Just push the speakers this way and then pull them that way! Do the same with a tube trap, a room tune or a diffuser or two, and I promise you the result will be something very close to sonic nirvana. The trick is to shove, listen, shove and listen.

In closing, a time-saving tip: Take notes. That's right, make like a scientist and document what you do. List your components, musical selections, measure speaker placement, acoustic materials used, writing down where, when, and how. Spending time to write it down saves time? Yes. You'll avoid going in circles and repeat things tried before. You may also detect a trend and zero in a good situation, or avoid a bad one. Best of luck!

There is one more thing you can't skip with a brand-new loudspeaker and that's break-in. So I went and blasted them for a good 100 hours with the Purist Audio Burn-In CD. How'd I stand the noise? I did the classic procedure of facing the speakers off very close to each other, reversed the polarity of the speaker wires to ONE of the speakers, covered the whole thing with a thick blanket, and let it rip!

Next came the placement in the room, finding that spot where the speaker could be at its best. And here's where previous experience helped. My starting points were the "magic" spots, the places where the Avalon Eclipses produced almost pure ecstasy. The Regents ended up fairly close to that position in the room, but not right on. At the same time the

Get the Regents positioned right, and they will reward you.

positioning of the speaker was worked on. Starting with the speakers toed-in and pointing right at the listener, I angled the speakers out in small increments. After many hours of repositioning and jostling they ended up 57 inches from the back wall, with the inner front corners being 107 inches apart, and the inner rear corners being 118 inches apart. In this position the nearest side wall is 70 inches away giving the speakers ample breathing room. My head at the listening position is 110 inches from each speaker. The good news is that this is what works great in

my room, the bad news is that in your room, you'll have to start from scratch using some of the suggested methods like the rule of thirds.

I can, however, help you in one regard: I did find that the Regents needed to be pointed in the right direction. Toe them in too much and they get bright and brittle with an attendant loss in staging. Point them out too far and they again lose out in staging, as well as taking on a somewhat dulled demeanor. But get them right and they will stage and image with the best of them. It's well worth the effort, believe me.

There is one more thing you have to remember about the Regents: they like to be exercised regularly. I found out the hard way that after about a week of no play the Regents tend to sound a little slow, a little thick, and laden. Give them a swift kick in the armature by playing them hard for about half an hour or so and they'll get back to normal. Hansoo explained that the speaker, very much like a number of other dynamic driver types, needs to have a mini break-in after sitting idle for more than a week. Believe me it can be disconcerting if you are not aware of this situation and expect the speaker to sound its normal great only to have the first notes be anything but that.

The wall behind the speakers is covered with 2-inch thick Sonex panels (That's an area 7 feet high by 12 feet wide) with an RPG Abfuser placed vertically, and centered between the speakers right in front of the wall of Sonex. Two other RPG Abfusers are placed about 18 inches outside each Regent in a position to absorb the first reflections. Art Noxon's ASC Tube Traps reside in each of the far corners behind the speakers.

It is safe to say that most speakers end up in positions that are compromises. Best bass performance does not necessarily go hand in hand with best imaging or a smooth response. The position I use for most of my listening does not unfortunately yield good results at low frequencies. But I know this and for me the many positive performance aspects of this placement far outweigh the slightly compromised low end extension.

But I did need to explore the Regent's capability at the low end of the spectrum. So I reshuffled everything and played the speakers into the long dimension of the room. After some more shoving and pushing, I did get some prodigious, solid, growling bass, along with very good depth, but the rest of the performance left quite a bit to be desired. Imaging and staging suffered significantly and no

**The Regent is
some speaker--
smooth, fast,
transparent, and
extended.**

amount of effort could get me back to what I had with lots of space to either side of the speakers.

Back to the original sweet spot they went. Except for a slight compromise in the very low bass this was the right position, this is where the Regents came into their own.

I thought I had heard enough material to have firmed up my impression of the Regents when a new Sheffield Labs CD arrived in the mail. It was "Sonic Detour" by the group Freeway Philharmonic

done with Sheffield's Ultra Matrix Processing (Sheffield Lab 10050-2-F). Oh well, I thought, why not throw it in the player and hear what this is all about. Oh WOW! is more like it. What a recording! My apologies to Sheffield for not paying attention to their latest developments.

Transparency and neutrality are at a zenith here. It is also incisive and dynamic and very reminiscent of the very lively and authentic sounding tone captured on the S-9 Direct-to-Disk LP that put Sheffield Labs on the map. This CD also captures the natural timbres and fast attacks very successfully.

Having listened to this CD on the Regents I now have newfound respect for this speaker. All of the natural splendor, the raw energy and the great variety of instrumental colors have been captured on the CD as revealed so stunningly by the Regents. Up to this point, I had not realized how truly balanced and neutral the Regents really are.

If you want to experience a huge soundfield, listen to John Rutter's "Requiem" (Reference Recordings RR-57CD). The Regents manage very spectacularly to fill out the whole space between and well behind the speakers with a multitude of voices and countless spatial cues to create an expanse that seems aglow with sonic presence. It seems to have occupied every possible space leaving no perceptible void. Yet the voices remain individualized and distinct within the context of this large-scale presentation.

Make no mistake about it, this is some speaker! It's smooth, extended, transparent, fast, dynamic, articulate and discriminating. It is a very revealing system while at

the same time it does not overwhelm you with detail to the point of distraction. Nuances are delineated and revealed superbly by their detail, harmonics or ambient cues.

All this happens in a very smooth manner. The Regents did not display any serious response aberrations or deficiencies producing instead a very well balanced response. Coupled with a crisp transient response, the resulting performance of this loudspeaker was very engaging and very pleasing to me.

In the soundstaging department the Regents have me completely won over. And that's from someone who finds staging and imaging to be very important performance aspects of a loudspeaker. I found their ability to float a very credible image between and behind the speakers to be mesmerizing. It was that way when I first heard the Regents at the 1994 Summer CES and it is even better in my listening room.

The exceptionally well focused performers and instruments appear suspended in space between the speakers. They have no apparent lineage, they merely float in space taking up firmly established positions. To pull off this magic trick, the speaker has to disappear and the Regents practically dissolve: They pull off the vanishing act so very convincingly that their physical presence becomes superfluous, the images being that detached and disassociated from their true origin.

If you get the impression that I really like the Paragon Regents, you are right . . . so much so that I bought the review pair. Be certain to give these speakers a close listen, you might just wind up liking them as much as I do.

The Purist Audio Quartessence Speaker: A Room With Another View

Bill (The Brass Ear) Brassington

Well, I'm back! The Brass Ear has had his head returned from the cleaner and is up for serious listening.

"So, OK Bill, what is it this time? . . . How long have you had it . . . and when will it be for sale? Were you listening to it from the bathroom where you make most of your informed judgments? Did you listen from the sweet spot with your hands cupped behind your ears or were you on your knees popping back and forth like Lars Fredell?"

Well, I did all of the above plus a good deal more. And I ended up buying Jim Aud's new loudspeaker system!

Jim Aud is founder and chief design engineer of Purist Audio Design, manufacturer of the famous "water cables" I reviewed a couple of years ago. Jim developed his water cable theory while working as a test engineer for a nuclear power company in Texas. During a time his company was conducting seismic studies, explosions kept vibrating his sensor wires and distorting data. To solve the problem, Jim and the other engineers designed fluid-insulated cables that performed well under

stress. Mr. Aud's cable theory was born!

Jim has a diverse background that includes a stint in the Air Force, degrees in electrical engineering and computer science, and advance studies in material modeling. He has worked at power plants for many years in all phases of instrument control, testing and supervision—but his first love has always been audio. In 1987, after fourteen years of research and extensive modeling on a super-computer, Jim finally released his cables to the public.

The introduction of the Quartessence in 1994 marked the first speaker design from Purist Audio.

at a time; it just doesn't work. Now, if you want the largest pair of headphones in the world in your small room, go ahead. I've heard that kind of sound in many homes. I'd rather have my Stax, AKG and Grado headphones for that kind of listening. On the other hand, the small Purist speakers can provide concert hall sound in large rooms or small.

With the modest woofers and the satellites placed in the ideal acoustic location, these speakers have the ability to throw a sound-stage deep, wide and palpable like

THE BRASS FACTS

If you have a very small room you shouldn't use a pair of large speakers, no matter what the manufacturer says. I've tried it. I've tweaked for months



no other system I've heard. I find the speakers hard to fault because they're just so damn flexible. And if for some reason you don't like the reproduction, disconnect the rear tweeter, move the woofers so they face sideways, and you have a whole different ball game. You can't do that with dipoles! Mr. Aud understands that each room is different, which is why he has designed the system to adjust to any room.

We all know how hard it can be to please everyone in the house when you get new speakers. My wife, who has not only put up with me for 25 years but also my eight foot Acoustats, Apogee Divas, Martin Logan Monoliths, B&W 801s and KLH Model 9s, said to me recently that the Quartessence speakers weren't really that bad. "How long will you keep these? I like them and I think they sound better than all those other monsters you've had."

THE SOUND

Jim used one of the most sophisticated spectrum analyzers I've ever seen—lasers and all—to make sure we had the speakers set up correctly. We got the in-room response within a range of plus or minus 1 dB from 20 to 20 k. [Many listeners find that flat response at the listening position results in a thin, bright sound. Either a gentle rise in the bottom few octaves or a slight roll-off at the top generally produces a subjectively more natural sound. This all depends on how the "in-room" measurements were taken.—Mark] Very impressive, but . . .

How does it sound? Better than anything I've heard. As a reviewer

and a hobbyist for the past thirty-five years (and at one time manager of the old Liberty Music Shop on Madison Avenue in New York City), my hi-fi equipment has always been the "best-of-the-best." Right now, the "best-of-the-best" for me is this tiny, little, four-piece speaker system that sounds like some of the largest speaker systems I've heard. That includes the IRS and the Watt/Puppies.

One of my closest audiophile friends—a Watt/Puppy owner—has a pair of Quartessence speakers set up to within an inch of their lives, and I'd say his is the finest system I've heard to date. Several manufacturers and engineers have visited his home and have come back simply stunned at what they've heard. One recording engineer stayed five hours even though he wasn't offered any food or drink. [Typical audiophile thoughtlessness? Or was it just that he couldn't get rid of the guy?—Mark] He later told me it was worth the trip. I've also had the chance to go to two other homes with this system and have been equally impressed.

Does it sound like live music? Almost. A professional saxophonist and recording engineer recently moved into a first floor apartment in my building. One day I walked into the lobby and heard this great sax playing. At first, I thought, Wow, what a great stereo system! There's another audiophile nut in the building! Now the other tenants can complain about him along with me. As I continued to listen, it occurred to me that the sound was too good and must be the real thing. It was just too loud and too clear and too harmonically correct to be anything else.

Theta Data II Transport (Single Mode); Theta Basic Transport (Coax, AES/EBU, Optical); Theta Gen V Processor; Sonic Frontiers SFD-2 Processor; Anodyne Processor; Classe 6L MK II Remote Preamp; Lamm Audio 200 Watt Mono Amps; Purist Colossus interconnect & speaker cable; HDI Interconnect; Purist Active Crossover; ASC Tube Traps; Microscan Anti-Vibration Platforms; Townshend Seismic Sink platforms; Bryston 8B four-channel amplifier; Velodyne Model 15 Subwoofer; Power Wedge 116 & Enhancer; Audible Illusion Modulus III; Alpha-Core Goertz M1 Speaker Cable (copper & silver).

Three weeks later, while sunning myself on the terrace, this guy sat next to me and I noticed he was reading some sheet music. Ah ha, I said to myself, this must be the guy with the sax. I introduced myself and said, "I do some reviewing for an audio magazine and I couldn't help hearing you the other day." To my surprise he said, "Oh, you're the Brass Ear my friend talks about. He subscribes to that magazine *Stereophile*. I don't bother with that stuff. It's too expensive and I don't have the time." We became good friends.

How does it sound? Better than anything I've heard.

One day I asked if he would come up with his sax and do a comparison. He laughed and said, "Sure, why not. I did that at my friend's house. He's got a big system. But I've got to tell you Bill, there's no comparison between live and reproduced sound." I said, "Would you mind if we first listen from outside the door. I'll play my favorite sax cut, Sonny Rollins on Verve." I cranked up

the volume to where I thought it might sound live, then asked him what he thought. "What have you got in there?" he replied. We walked in, sat down and listened for about three hours.

As he was leaving, he remarked, "It's not live Bill, but its the best reproduction of a sax I've ever heard—and that goes for the rest of the music, too. How much does this stuff cost?" I replied, "A lot less than your recording studio." Since then three other musicians and one composer have gotten a chance to give their opinion. All concurred. My new sax friend said, "Can I come up again with some of the members of my band? I don't think they've heard anything like this before from a home system." That's all I really needed to hear to realize how good these speakers are. This guy has no axe to grind. Three reviewers from different magazines who came to hear the system had the same opinion: state of the art; sounds like music; best we've ever heard.

My old editor wants me to describe the sound. Here goes:

- Seamless; no discontinuities.
- No exaggeration of sibilance.
- Spacious; a broad panorama of ambiance wider than the distance between the speakers.
- Transparent; you listening through the system and into the music, as with an electrostatic.
- Superb weight without overstating the bass reproduction.
- Detail is accurate, crisp, delicate, and focused.
- There is a rich sounding smoothness; a quality of outstanding high frequency ease.
- The entire range is airy, alive, accurate, balanced, extended, flat, neutral, smooth and uncolored.
- Midrange is alive, full and natural sounding, NOT forward in any manner.

- Low to mid treble is smooth, natural and neutral, NOT bright, brittle, etched glassy, hard, metallic, screechy, shrill, steely or strident.

- Extreme treble is airy, extended, delicate and open, NOT hot, sizzly, spitty, tipped up, tizzy, top-pish, wiry or zippy.

- Resolution is sharp yet delicate, NOT closed-in, congested, or dif-fuse; no hangover, smear, veiling or fog.

- Bass reproduction is NOT boomy, dark, fat, heavy, syrupy, thick, tubby or warm; nor is it cold, constricted, cool, lean, over-damped, pinched, sparse or thin.

- Depth is wonderful, with three dimensional layering, NOT distant, flat, forward, laid back, polite or recessed.

- Timber is accurate and uncolored, NOT hooty, nasal, steely, chesty or thin.

- Transients have terrific attack, yet are controlled and delicate; NOT dull, smeared or sluggish.

- Texture is liquid, NOT dry, chalky, grainy, gritty, harsh, husky or rough.

Now, do you know what the speakers sound like? The answer is, No, but maybe you have an idea. And are you going to rush out and buy them because the Brass Ear used a lot of fancy, audiophile-approved words? Don't listen to me; listen for yourself. I for one have been disappointed many times because I trusted Mr. Know-it-all in a stereo magazine. I would be very careful before spending my hard-earned money. [This thing of listening for yourself is as big a tip as I can give anyone. Just because someone else has a call to the printed page,...Gene]

For me, my hard-earned money was spent on the Purist Audio Quartessence speakers, and I'm not disappointed.

Take Two:

Lewis Lanese

Bill Brassington and I share one thing in common: We do not have the means to dedicate a space exclusively to music. The living room is the listening room. The degree to which I can adjust the acoustic treatment of the room is limited by esthetic considerations. The most I have been able to get away with is a pair of three-foot tube traps. Fortunately, the room is acoustically excellent. Its dimensions are roughly 25 by 15 with a cathedral ceiling peaking at over nine feet. The ends of the ceiling are less than six feet from the floor. Typically, speakers aim into the long end of the room, with the listening position (the sofa) at the opposite wall. The listener faces a grand piano at the other end of the room. (The grand piano has played havoc with stereo imaging when speakers are placed a few feet from the back wall.) With a lot of bare floor exposed and not much absorbent furniture, the room is acoustically "live."

Over the years I have had a number of different speaker systems: a transmission-line design I built from a construction article by Arthur Hadley in a 1966 issue of *Wireless World*; Quad 63s; Acoustat 2+2s; Apogee Stages; and Unity Signature Pyramids. Each one has presented placement problems. Dynamic systems located near the back wall for proper bass reinforcement lost focus and imaging, while electrostatic/ribbon systems, placed well into the room, left much to be desired aesthetically. Dipole systems were more successful, providing good balance top to bottom without los-

ing the bass line. Over the years, Bill, Tom Gillet and other audiophile friends were fond of reminding me how much they liked the sound of dipole systems in my living room.

Enter Purist Audio Design's Quartessence system. What makes this system somewhat unique is the degree to which you can vary the setup. Jim Aud's first entry into the speaker sweepstakes is a brilliant approach to the difficulty of coping with the acoustic environment.

THE DESIGN

The Quartessence Speaker System retails for \$12,480 and includes two woofers, two satellites, stands and a scheduled visit from Jim Aud, who makes final adjustments, advises on placement, and measures and analyzes the system.

Each woofer cabinet houses two 9" Vifa drivers, measures 16" x 11.25" x 12.75" and weighs 60 pounds. The satellites, weighing 40 pounds, are roughly 12.5" x 8.5" x 9", and house a 1" tweeter, a 5" midrange and a 1" rear-mounted tweeter. The speaker cabinet material is Fountainhead (Corian). The stands, designed by Purist Audio Design, are taller than normal so as to place the drivers at the proper height from the floor. Purist recommends the addition of three 25-lb. bags of lead shot vertically stacked inside each stand, and one or two 25 pound bags loaded at the top and inside of each woofer cabinet. (The lead can be supplied by your dealer.) The weight of satellite and stand with lead is 175 pounds; woofer weight with lead is 110 pounds!

The stands are dressed in an attractive cloth surround—which hides all those bags of lead shot. Each satellite speaker sits on three ball bearings, and is secured to its stand with two hex bolts. Carpet-piercing spikes are also provided to insure stability, but I prefer not to damage my wood floors. Jim Aud has a neat solution: More ball bearings are fitted where the spikes would ordinarily be screwed.

Now to the connections on the cabinets. (This is where the fun begins!) The satellite has two sets of connectors, one above the other. The bottom set (to which the cables from the amp are fitted) connects the midrange and the tweeter, crossing over at 5 kHz. The second set of connectors is for the rear firing tweeter and is crossed over at 8 kHz. Copper straps from Cardas connect the top and bottom terminals, allowing disconnection of the rear firing tweeter should you so choose. In place of the strap, you may also pad down the rear firing tweeter with the appropriate resistor across the connectors.

The woofers too have multiple connectors: One set connects the speaker cables at the 100 Hz crossover; a diagonal connection across the two sets changes the crossover point to 125 Hz; and the other set makes the connection directly to the drivers, allowing the insertion of an active crossover and second amplifier.

THE SETUP

This system was made for my room! Here is the potential for solving some of the nagging prob-

lems without disturbing the room's esthetics. Locating the right spot for the satellites was relatively easy. They are 11 feet from the rear wall, nine feet apart and angled toward the listening position about 12 feet away. The grand piano is no longer a factor and, with the satellites in the (relatively) near field, the reflections are well under control.

The woofers were another matter. Yes, I could place them near the rear wall for the necessary bass reinforcement, but achieving the correct top-to-bottom balance relative to the satellites required

The satellites
were easier to
place than the
woofers.

hours of moving, listening, moving, and confirming with a Radio Shack SPL meter. Not only do the woofers interact with the satellites, they interact with each other: Moving the woofers just six inches eliminated a serious peak at 80 Hz. The final position has both woofers three inches from the rear wall, one woofer 40" from the right corner and the other 20"



from the left corner. The crossover is at 100 Hz and connected out-of-phase.

Jim Aud arrived several weeks later laden with test equipment. His analysis, much to my delight, confirmed that all speakers were ideally placed for the smoothest and most extended response! Jim made some minor adjustments with the help of his laser flashlights placed on top of each satellite; adjustments to toe-in and azimuth were made until the two beams of light converged on the wall above the listening position.

Jim's final in-room loudspeaker measurements show a very smooth frequency response: plus or minus 2.5 dB from 31 Hz to 13.5 kHz. There is a gentle 2.5 dB rise in response from 150 Hz to 1 kHz, a near flat response from 1 kHz to 5 kHz, and a 3.5 dB down point at 25 Hz. Jim's measurements were taken with pink noise monitored with a microphone placed at the listening position. The signal was fed into a laptop computer loaded with special software (modified by Jim) to record the response at over 3000 points!

My musical tastes favor opera and classical music, but I also enjoy listening to jazz, pop singers, musicals and, occasionally, some contemporary music. With such convenient control over the rear-firing tweeters, there's an opportunity to affect the nature and character of the sound. With the rear tweeters out, the sound in my room becomes more intimate and decidedly more focused, albeit more forward. The title cut

The Purist Audio Quartessence has impeccable tonality.

from Mary Black's LP *No Frontiers*, (GRAPELP 005) is a case in point. Mary's voice benefits from the forwardness, focus and intimacy. Sibilance is well controlled. Tonality and transparency are impeccable: Listen to the delicacy of some of the percussion instruments. Don't expect the same qualities on the CD; although the mastering is quite good, it is not up to the LP.

The *Marian McPartland Plays the Benny Carter Songbook* CD (Concord Jazz, CCD-4412) is another example of a small jazz group that benefits from an intimate, focused presentation when the rear tweeters are out. Listen particularly to "When Lights Are Low" and "Only Trust Your Heart." The piano, sax, bass and drums are perfectly balanced and dynamic. Each instrument is clearly delineated in the soundstage. With the rear tweeter in, the soundstage opens up, the imaging is less focused, the room seemingly becomes larger, and the plane of sound recedes slightly toward

the rear. This quality can be varied by changing the value of the resistor as previously indicated.

Depending on the ambiance in the recording, this is the approach I usually use when playing classical music with full orchestra. The sound is more akin to the live sound in a concert hall. The Coriolan overture from the complete six CD set of Beethoven Symphonies on Chandos (CHAN 8717) demonstrates this effect. The size of the room seems to enlarge and the orchestra with it. The ambiance is augmented. All the instruments in the orchestra are in perfect balance. The definition, transient response, dynamics and liveliness add an element of excitement to the sound.

So there you have it, a speaker system with all the flexibility you will ever need; a system that begs to be tweaked by the audiophile who relishes the opportunity to take the next turn on the way to Nirvana; a system that, in spite of the room, will potentially provide you with the means of attaining extraordinary focus, imaging, transparency and definition while achieving the most natural balance and tonality—altogether a system to reckon with.

THE SOUND

With the Croft OTL amps all fired up and new speaker cables burned in—a new Purist cable designed relatively flat to make it easier to hide—I was ready for some serious listening. The Crofts are a good choice because the Quintessence system is fairly efficient—rated at over 90 dB at one watt—and presents an easy load for most amplifiers since its impedance varying between 6 and 15 ohms.

NOTES

Quartessence Speaker System, \$12,480. Purist Audio Design, 845 West Plantation, Clute, TX 77566. Phone: 409/265-5114.

Reference System: Croft OTL monoblock amplifiers; Croft Dual-Mono preamp; Linn-Sondek LP 12, Lingo, Ittok tonearm; Lyra Clavis cartridge Krell CD-1 as transport; Krell SBP-32X Studio digital processor w/1994 upgrade; Revox B77 Tape Recorder, reel to reel; Kenwood KT-917 Stereo Tuner; Nakamichi 582 Stereo Cassette; Purist Audio Design Colossus speaker Digital Link, unnamed new flat design speaker cables; Maximus and HDI interconnects, Discovery interconnects.

The Linn Karik/Numerik CD Player

Joel Shumer

Like Linn's classic Sondek LP 12 turntable, the company's Karik/Numerik CD system remains current with today's technology through a series of improvements which are retrofitable to the earliest units. Since its introduction in 1991, mechanical switching has been replaced with microprocessors, a bitstream DAC has been added to the transport, the original chip set has been replaced with a Burr-Brown 20-bit PCM 1702 DAC, programming functions have been incorporated, and most recently, Linn has changed to a switch-mode power supply (SPS). What has not changed in the past five years is the Karik/Numerik's

physical size, appearance, operational controls, and most importantly, its reputation for making CDs sound like good analogue.

In the January, 1992, issue of *Stereophile*, Robert Harley concluded his review ". . . the Linn Karik/Numerik CD player has earned a Class A recommendation in *Stereophile's* Recommended Components. Analog-leaning music lovers who have been putting off buying a digital front end: the Linn Karik/Numerik was worth the wait."

Writing an unusually detailed and thorough update on the current Karik/Numerik in *Stereophile*, October 1994, Robert Harley

found there had been ". . . a huge improvement over what was already an outstanding product. The improvement in soundstage, transparency, depth, spatial resolution, and clarity catapulted the Numerik into a different league. Consequently, the Numerik easily retains its Class A rating . . ."

Lawrence B. Johnson used the Karik/Numerik as his "benchmark" in a New York Times article of April 9, 1995 in which he compared the sonics of a group of CD players costing less than \$1500. In his conclusion, Johnson rhetorically asks, "As for the Karik/Numerik, does its margin of superiority justify its added thousands in cost? No question. First, that margin is not slight. Second, the splendid Linn is cheaper than a sports car." Sure, the Linn is much more expensive than the CD players Johnson was evaluating, but what I find of particular interest is Johnson's choice of the Karik/Numerik as being representative of ". . . the best system on the market."

While the vast majority of transports and DACs introduced in 1991 are no longer being made, the much-revised current Karik/Numerik remains just that—

NOTES

Linn Karik CD Player/Transport, \$3,595. Numerik Digital Processor, \$2,595. Audiophile Systems, Ltd., 8709 Castle Park Dr., Indianapolis, IN 46256. Phone:317/849-7103.

ASSOCIATED EQUIPMENT

Digital: PS Audio Lambda Transport, McIntosh MCD 7007 player, Audio Research CD 1 Transport/Player, Audio Research DAC 2. Preamp: Audio Research LS 2B MK II Amplifiers: McIntosh MC2125, Audio Research V 70 and D240 MK 11, Quicksilver Silver 90, Sonic Frontiers SFS-80. Speakers: Quad PRO-63/Gradient SW-63, Rogers LS3/5a, Wilson Watt/ Puppy System V, Totem One. Interconnects: Linn, Audio Research, Straight Wire, M.I.T. Speaker Cables: Tara Labs, MIT, Cardas, Straight Wire. Miscellaneous: Tice Power Block, Bob Young Line Filters, ASC Tube Traps, Goldmund Cones, McCormack Soft Shoes, V.P.I. Bricks, Target Speaker and Equipment Stands. Test Equipment: Loftech TS-1 Audio Test Set used with Pierre Verany Digital Test CD PV 788031.

current—and they should be considered competitive with the best high-end CD transports and DACs available today.

DESCRIPTION AND USE

Although Linn refers to the Karik as both "CD Transport" and as a "Stand-alone CD Player," most audiophiles will use it as the front half of a Karik/Numerik system. It is hard to imagine anyone wanting to use the Karik with a different DAC or the Numerik with a different transport.

First, there is the matter of aesthetics. Both Karik and Numerik are housed in all but identical 12.5-inch square cases cast in nonferrous metal. Each is finished in textured charcoal black with its Linn logo and product title imprinted in a soft, low contrast gray. Designed to be stacked, the combined Karik/Numerik takes on the appearance of a single component a scant 6.25 inches in height.

Second, the Numerik houses the master clock. When connected to

the Karik via an RCA type interconnect, the transport becomes locked to the processor. Only the Karik and Numerik, when thus linked, are able to function in this symbiotic, jitter reducing manner.

Third, and of greatest importance, they sound better together than when paired with other transports or DACs. I substituted a PS Audio Lambda and an Audio Research transport for the Karik, and then an Audio Research DAC II for the Numerik. In each case the substitutions degraded the Karik/Numerik sonics, a conclusion borne out by other reviewers.

Packed with the Numerik is a one meter BNC to BNC digital interconnect, a single one-meter run of RCA/RCA interconnect to synchronize the Karik with the Numerik's clock, and a stereo set of RCA/RCA analog interconnects to be used with either pair of stereo output jacks. Both Karik and Numerik have a second set of sockets for an additional digital and clock sync connection, but gone are the ports for optical cable found on earlier models.

The Karik is also packed with a one-meter pair of RCA intercon-

nects, presumably to be used with one of the pair of stereo output jacks fed by its onboard DAC. At the request of Audiophile Systems, Linn's U.S. distributor, I used the Linn supplied interconnects on the Karik/Numerik throughout my evaluation, and when comparisons were made, I was favorably impressed with the Linn cable. This is all the nicer for this reviewer, since there is no charge for their inclusion.

A rather large, 3x8-inch remote is also packed with the Karik. It controls a number of other Linn products including all of Linn's preamps, tuners, a lower-priced CD player, an integrated amp, and multiroom systems. At first, I was dismayed by its array of 48 buttons, but it is so easy and logical to use, it soon became my remote of choice, not only with the Karik/Numerik but also with the PS Audio Lambda transport and Audio Research CD 1. I even used it to change volume settings and mute my Audio Research LS 2B preamp.

A small door on the Karik's faceplate swings down to reveal 10 buttons which duplicate all but the



key pad functions on the remote. There is an additional "Repeat" button enabling anything from a few seconds to an entire CD to be repeated indefinitely and a "Digital" button letting the user choose between two digital sources going to the Numerik.

**Linn's
Karik/Numerik is
very easy to set
up and use.**

With the door closed three large buttons remain in view: "Play," "Open," and a push "On/off" power switch that is not duplicated on the remote. Touch "open" on either the Karik or the remote and what has to be "the quickest drawer in the West" (perhaps the World) quietly slides into view. Touch "open" again and the drawer closes. The display shows the total length of the CD for a second or two and then the number of tracks on the CD. If "Play" had been pushed, the drawer would have closed and play would have begun with track 1. Or, had a number on the remote's key pad been depressed, the drawer would have shut and play commenced with the corresponding track's number.

In addition to the usual "skip," "search," and "pause" functions, one can skip forward or back using index numbers, a feature I found particularly useful in listening to many opera recordings when individual arias have index codes. The current Karik is also fully programmable but I find this feature of so little interest that it was not reviewed.

The display has five modes with track and index numbers automat-

ically shown during play. The remaining modes are time into track, time remaining on track, time into CD, and time remaining on CD. Unlike most CD players, track numbers are not shown concurrently with timing information, and one must scroll through all four time modes to get back to track and index numbers.

Like other Linn products, the Karik and Numerik were designed and manufactured in Scotland. One person is given all the responsibility of assembling and testing a particular unit. When satisfied, the assembler fixes his or her name to the bottom of the chassis, and the unit is packed for shipment.

In sum, the Karik/Numerik is easy to set up and use, occupies very little space, and its display is easily read from a 10-foot distance, even with my tired eyes. During more than six months of use, both units were totally reliable and I experienced no tracking errors or glitches of any kind.

LISTENING PART J: Karik/Numerik vs. Karik/Numerik

I had found the previous Karik/Numerik to be the most natural sounding CD player I had ever had in my system. A bit laid-back, relaxed and with a tonal balance that reminded me more of live music than any other CD player I had heard. When I was told that Linn had designed an entirely new power supply which significantly improved the unit's sonics, I was skeptical. What Linn had been using was working just fine, but I jumped at the opportunity to have a lengthy, side by side comparison. For more than three months, I had both the current as well as the previous

Karik/Numerik versions in my systems. I was able to listen to a wide variety of CDs using several combinations of preamps, amplifiers, and speakers in two quite different listening rooms.

Without doubt, the switch-mode power supply does improve the sound. The most easily heard difference is spatial. The new Karik/Numerik provides a much greater sense of depth. The width of the soundstage remains pretty much unchanged, but the back wall has receded, allowing instruments and voices to stand out in greater relief. This increase in clarity heightens one's ability to separate one instrument from another and to hear individual voices in a group. There's no point in just citing examples. The phenomenon was true in comparison after comparison. Orchestra, string quartet, folk singer with guitar, big band, jazz trio, opera, rock, pop, electronic, acoustic; it didn't matter. If the CD provided a sense of depth with the earlier Karik/Numerik, it was deeper with the new units. In addition, there was a greater ability to locate performers and a greater awareness of the space and walls surrounding the musicians.

Of secondary importance, the switch-mode versions provide a little more bass and treble extension. Listening to the opening track of Enya's *Watermark* (Reprise 9 26774), the bass line is deeper and has greater solidity. The solo piano is slightly brighter and more open on top. These differences were apparent in recording after recording. Changing electronics had little effect, but the differences were less obvious when monitored through the Quad/Gradient speakers than with the Watt/Puppy Vs, although even using the Rogers LS

3/5a, the Karik/Numerik with SPS could demonstrate its superiority.

I suspected that Linn had given an upward tilt to both bass and treble in the new Numerik. Not so. Previous and current Numeriks test within 0.1 dB of each other from 20 Hz to 20 kHz. Perhaps what I hear as greater extension is really greater transparency and articulation in the deep bass and treble notes. Nonetheless, the per-

Compared to other units, the Karik/Numerik do very well.

ception of improved extension remains.

In sum, by adding a switch-mode power supply to their sonic bag of tricks, Linn has moved the Karik/Numerik a big step forward. The stage is deeper, instrumental locations and the surrounding air more clearly defined, bass has gained solidity, and the treble is more open and airy. And all of this has been done with no compromise of the marvelous tonal balance and timbral accuracy which have been hallmarks of the Karik/Numerik's midrange since it was first released. It will be interesting to see if switch mode power supplies become an industrial standard.

LISTENING PART II: Karik/Numerik vs. Audio Research CD1/DAC2

The ARC CD 1 and recently discontinued DAC 2 are only slightly more expensive than the Karik/Numerik and like the Karik, the CD 1 was first designed as a

transport but had an onboard bit-stream DAC added later. (ARC continues to produce a lower-priced transport-only version.) Physically, the ARC units are much bigger, provide for a wide variety of transport to DAC interconnections and offer RCA and balanced analog outputs on both the CD 1 and DAC 2. The CD 1's drawer mechanism is comparatively slow and noisy, but the display has the advantage of retaining track numbers while one rotates through its four time modes.

In operation, I found the Linn remote easier to use than the one supplied by ARC so I used it in all of my comparisons.

First, the bottom line: There is no decisive winner when it comes to comparing sonic qualities, but differences abound. ARC's DAC 2 uses an Ultra-Analog 20-bit chip set, which many reviewers have found rich in detail but slightly laid-back when used by other designers and manufacturers. However, if the CD 1/DAC 2 and the Karik/Numerik are compared, it is the Linn unit that projects a recessive sonic image. If the Audio Research units place the listener slightly forward of the center of the hall, then the Linn would seat him two-thirds of the way back. Moved to this location, there is a slight loss of detail but a gain in tonal richness and warmth.

The imaging of both CD players is excellent, with a soundstage that is evenly distributed between but does not extend beyond the speakers. The Linn, however, does provide greater depth and a better feeling of hall ambiance.

Bass with the ARC is tighter and better controlled, but it is not as big or as supportive as with the Linn. A plucked double bass also has a better sense of rhythmic integrity with the Linn, but can, at

times, be too big—as in the cases of *Salamander Pie* on DMP and *Duets* on MCA. The ARC units provide the needed bass control to these unusually well-recorded CDs, but in the majority of jazz, pop, and rock CDs, the Linn player holds the edge.

In the midrange, the CD 1/DAC 2 supplies a bit more resolution. Transients are faster and you can hear more of what's going on in the piece. However, the tonal balance, color, and timbre are more lifelike with the Linn. ARC's midrange is excellent, and it is only in a side-by-side comparison that Linn wins on naturalness.

Upper frequencies of both units are anything but harsh, and neither is likely to give offense. ARC is slightly brighter, more open, and better able to catch the breathy quality of a woodwind player. The Linn is smoother, rounder and better able to deal with upper-frequency digital stridency that is all too prevalent on most CDs.

Depending on taste, the CD, associated equipment, and the listening environment, either player can be best. In general, ARC's CD 1/DAC 2 is more revealing, its resolving capabilities are higher, and it gives an excellent idea of how well the rest of the system is working. When teamed up with Audio Research's LS 2B MK 11 preamp and V 70 amplifier feeding Watt/Puppy System V speakers, it is easy for a listener to become enthralled with a world of musical detail, and the goosebump factor is high. Where Linn's Karik/Numerik excels is in its ability to reproduce the midrange naturalness of the human voice and acoustic instruments. It then goes a step further by doing a better job of providing the ambient cues which help us transform our listening room into a concert hall or a

recording venue. These two CD players present us with a very curious dichotomy. The Research units provide more information and can be quite exciting. Though less spectacular, Linn's Karik/Numerik sounds a bit more like the real thing—live music. Ultimately, it's the Linn that comes closer to giving the listener a concert hall experience.

CONCLUSIONS AND RECOMMENDATIONS

The Karik/Numerik pair has consistently been a pleasure to use, totally reliable, and unfailingly musical in a variety of systems. Now in its third generation, the earliest units can be updated to present standards, a design philosophy that bodes well for those who would rather incorporate a new technology than trade in the old for the new.

I would hesitate to recommend the Karik/Numerik to anyone who thinks of his system as recessive, gets great joy out of its resolving capacity, and tends to play a small number of audiophile CDs over and over. But to the person who listens to a large CD collection, who is often annoyed with an artificial tonality whose upper mids and highs border on harshness or even stridency, the Karik/Numerik is likely to enhance the listening experience and move it much closer to the naturalness of live music.

There is nothing about the Linn CD system that calls attention to itself physically, mechanically, or, most importantly, sonically. It truly seems to be without a signature of its own, letting the music through with an absolute minimum of artifice and affectation. Were I to be stuck on the proverbial desert isle with several thousand CDs, would I choose to take along a Karik/Numerik as my CD player? You bet I would! The desert island part of the scenario may be pure fantasy, and my wife and I have some disagreement as to whether I have the requisite number of CDs, but there's one certainty: I'm equipped with the Karik/Numerik because I eagerly bought the review sample.

LISTENING PART. III: Karik/Numerik vs. Karik with Onboard DAC

There's no contest. Even though Linn uses the highly respected CS4328 1-bit DAC from Crystal, and it has the benefit of the Karik's fine transport system, it is no match for the combined Karik/Numerik. As a stand-alone CD player, the Karik is never harsh, and its response curve is ruler flat—even flatter than the Numerik's—but switch from the Numerik to the Karik's DAC and the sound stage flattens, airy upper frequencies become closed-in, the bass weakens and loses some of its dynamic punch, and a slight haze settles over the midrange. As a CD player, the Karik is rather expensive, and there are a number of single box units, including one from Linn, that may not sound better but do offer better value.

There are, however, advantages to the Karik's onboard DAC. A prospective purchaser could buy the Karik first, and when additional funds become available, add the Numerik. It could also serve as a comparative diagnostic toolkit, should the Numerik's performance be suspect. And were the Numerik to require repair or be returned for an updating, the 1-bit DAC could keep the system going until the Numerik was back in place.

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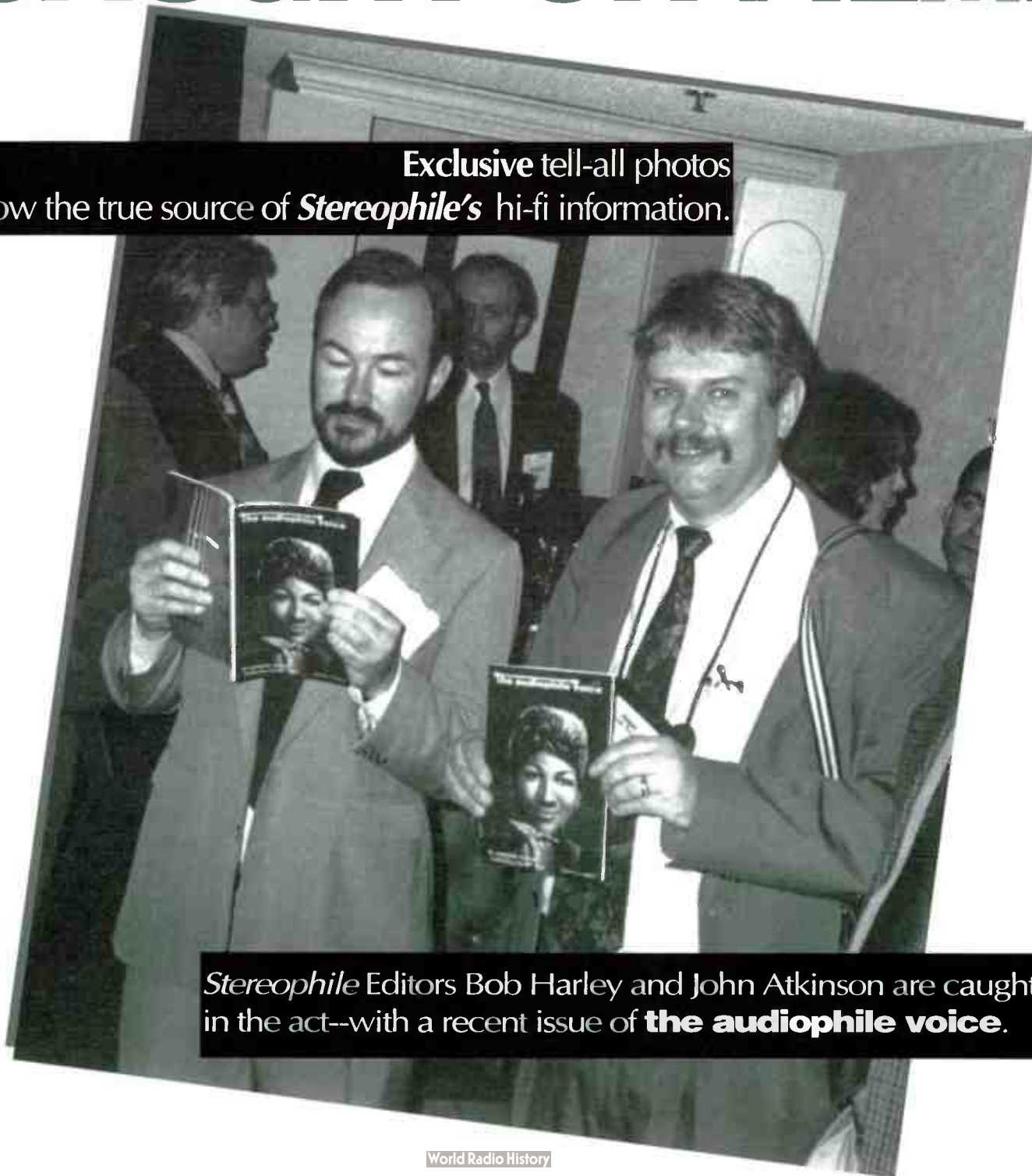
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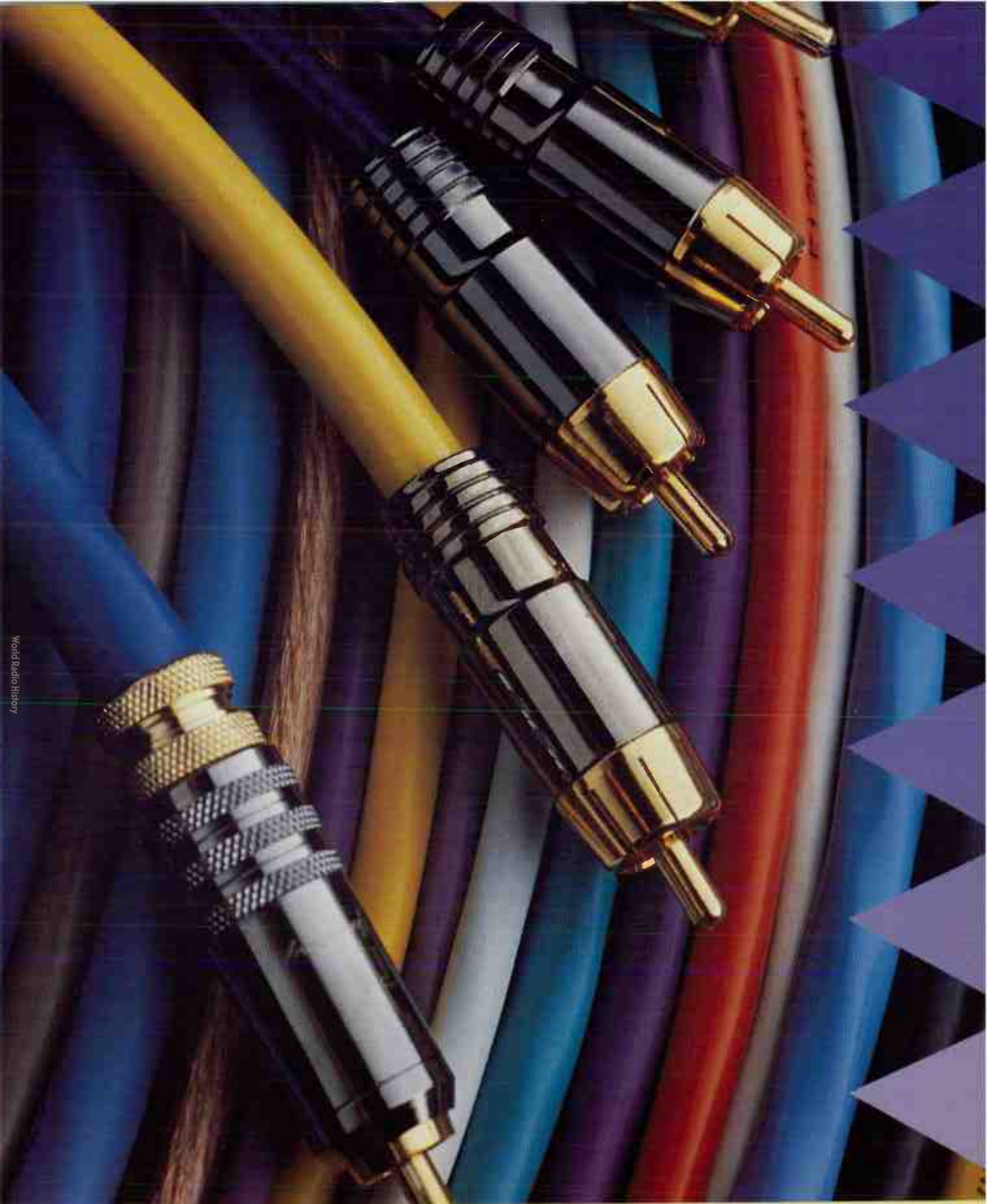
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