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Although I was trying to earn a living playing in rock bands in the early 1970s, I occasionally used to drag my Fender bass over to a school canteen in the next town for an after-hours session with what used to be called a "rehearsal band." (I have no idea what the derivation of that name is, except that, with the exception of a couple of veterans of the Ted Heath Orchestra, we were certainly in need of all the rehearsal we could get.) I would set up my Marshall stack the other side of the drummer from the pianist and sit behind a set of trumpet players, a brace of trombonists, and a scrum of players of the common saxophone flavors — a couple of altos, three or four tenors, and a baritone wielded by a gentleman with the magnificently moniker of Albert Bags. We played through my pageboy-bobbed Aguilar combo in the course, and pedal unmiked sessions. 

Our second unit was the Stereophile, a copy of the jazz CD in 1998. To get adequate separation from the adjacent instruments, I had close-miked Art Baron's "bone with a B&K omnibeam," in front of the instrument's bell. I started out with a moderate amount of gain on the Nagra-D's preamp, but once Art started rocking out on his solos, the mic was putting out volts rather than the expected millivolts. I ended up having to use both 3dB attenuation on the recorder's level pot and a 10dB external pad to avoid clipping the A/D converter. Even then, I had to get Art to back away from the mic on occasion.

I hadn't thought of those 30-years-ago Thursday-night sessions in a long time, but just before this issue of the magazine was put to bed, my wife and I took her father to hear his idol Keely Smith perform in an uptown restaurant. Now 74 years old but with the breath control of a woman half her age, the pageboy-bobbed singer belted her way through a high-energy set backed by a nine-piece pickup band. Other than vocal mikes, a discreet Aguilar combo for the double bass, and, of course, an amp for the string synths — this is the 21st century — the band was acoustic. The highlight of Keely's set was some of her late husband Louis Prima's “jump'n jive." The two trumpets, two saxes, and trombone — some of the players from the new O'Brien house band — raised such a roar on "Just a Gigolo," the drums pushing the eight-to-the-bar pulse to the limit, that I flashed back to those '70s sessions. I had forgotten just how loud an unmiked big-band brass section with its pedal to the metal can be, just how explosively dynamic an unamplified drum kit really is — just how unnecessary so much modern sound reinforcement is.

Want to talk power? A typical moving-coil loudspeaker is around 1% efficient. When you're pinning back your ears with a 100Wpc amp running flat out, the speakers are putting out just two acoustic watts into your listening room. By contrast, a single trombone in full song pumps out as much as 35 acoustic watts! You'd need a 1750Wpc amp to energize the room to the same extent, assuming your speakers didn't go into terminal meltdown.

I experienced this raw power firsthand when I recorded Stereophile's Rendezvous jazz CD. To get adequate separation from the adjacent instruments, I had close-miked Art Baron's "bone with a B&K omnibeam," in front of the instrument's bell. I started out with a moderate amount of gain on the Nagra-D's preamp, but once Art started rocking out on his solos, the mic was putting out volts rather than the expected millivolts. I ended up having to use both 3dB attenuation on the recorder's level pot and a 10dB external pad to avoid clipping the A/D converter. Even then, I had to get Art to back away from the mic on occasion.

In these days of ubiquitous mixing of nonclassical music, even in small performing spaces, it's hard to see why acoustic instruments need amplification at all, given the sheer acoustic power they can deliver to their listeners. Don't get me wrong — I ain't no technophobe. The sound of a Gibson Les Paul or a Fender Stratocaster overdriving a vintage 100W Marshall is a thing of beauty. And my own instrument is just a mute plank of wood without electricity. But purists from J. Gordon Holt onward have urged audiophiles to judge the sound of a system by comparing it with the sound of live acoustic instruments. Yet with the rare exception of that Keely Smith gig, the live sound we're supposed to worship as the paradigm of all we're trying to achieve is almost always of mere mid-fi quality, just louder.

"But, but, but..." I hear you sputter. "The venerable JGH didn't really mean bebop or big band, and especially not no jump'n jive. Wasn't your magazine's founder talking about classical music? And classical music concerts are almost never amplified.

Right on both counts. But as I've written before in this space, classical concerts these days too often resemble AARP conventions. If serious music listeners are a minority of the population, classical music listeners are a minority of that minority. Which is why, with the lack of wisdom demonstrated by organizations that have lost sight of their mission, NPR radio stations are rushing to abandon daytime classical music programming in favor of the talk shows they believe will increase their ratings.

Wes Phillips touches on this subject on p.19, in his "Industry Update" piece on satellite radio. Like Wes, I have for many years been a loyal contributor to my various local NPR stations' coppers comeplede-drivetime. But I am considering my unhinging support, given that my individual contributions seem less important to the station than the anonymous listeners who comprise the "ratings." And now that NPR has decided to transform Performance Today, hitherto my main means of keeping up with the live classical music scene, into just another program of recorded music, it's ironic, indeed, as Wes points out, that Martin Goldsmith, for so many years the host of PT, is now in charge of the classical programming for new kid on the broadcasting block XM Radio.

In this issue's "Letters," Bob Bernstein wonders if classical music will once again become widely listened to. Not, apparently, if your local NPR station has anything to do with it, Mr. Bernstein.

Jonathan Scull
Stereophile's full-time Senior Editor for the past three years, Jonathan Scull, made his debut with the magazine as a freelance equipment reviewer with a report in the December 1993 issue on the American Hybrid Technologies phono preamplifier. Sadly, with his review of the HeadRoom BlockHead headphone amplifier in this issue (p.75), and after 48 editions of his monthly "Fine Tunes" column on tweaking, Jonathan bids us adieu. HeadRoom's Tyll Herterson pays tribute on p.117, in his "Manufacturers' Comments," but I'd like to add that Jonathan has the essential passion for music that drives a true audiophile. We wish him well in his future ventures.
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In a genre starving for talent, pianist Jason Moran is the genuine article. Dan Ouellette talks with this young lion of jazz about Earl Hines, Maria Callas, and keeping it fresh.

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Most of the ideas present in today's funk guitar playing styles were hatched in the fertile mind of jazzman Grant Green. John Swenson surveys the catalog of recordings left by this underrated genius.

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39 The Fifth Element
John Marks names the recordings (and readings) he would choose to have with him if stranded on a desert island; these pieces which would offer consolation and encouragement, not necessarily the heights of art or sonic perfection.

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John Svenson reviews the recorded oeuvre of jazz-funk guitar pioneer Grant Green.

101 Record Reviews
July's Recording of the Month is the colossal new reissue of The Band's monumental going away party, The Last Waltz. In classical music we have Lars St. John playing Bach and a new recording of Verdi's II Trovatore. In Rock/Pop we have six Johnny Cash reissues and two new projects by Tom Waits. In jazz Tom Conrad examines the legacy of producer Creed Taylor via a newly released batch of CTI reissues and there are also new discs by Stanton Moore and Tomesq Stamko.

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Stereophile, July 2002
The new RCS 2.2X combines a State-of-the-art, fully digital preamplifier with our world recognized Room Correction System.

- And it is now possible to integrate your subwoofer(s) perfectly with your stereo loudspeakers!

The advanced 4-channel correction system of the RCS 2.2X will time- and frequency-align your speakers, and custom configurable DSP-based crossovers with slopes up to 60dB/octave will create a seamless blend between main speakers and subwoofers. Like all other TacT products, the RCS 2.2X is designed for easy software and hardware upgradability.

TacT RCS 2.2X is designed to take TacT Audio's room correction to new heights with four times the processing power of the famous TacT RCS 2.0 and even better AD and DA conversion combined with new features and a more user-friendly interface. In terms of performance and sound quality, the RCS 2.2X is easily worth its price - even without room correction engaged, the sound quality is simply astounding.

No noise, extremely low distortion and utterly transparent, effortless, accurate sound. Every effort has been made to make this preamplifier the best that money can buy. Add to this the latest evolution of TacT Audio’s room correction technology and the result is absolutely staggering.

TacT room correction technology has already been praised by the press all around the world. Wholesale improvement in sound quality is a standard phrase for the reviews. Now we have taken the technology even further, not only in terms of processing power, but also in terms of the measurement and correction systems. The calibration process now employs triple pulses for each acquisition. This increases measurement resolution in both the time and frequency domains. Correction resolution is now four times higher than for the RCS 2.0.

Separate Subwoofer Control
One of the most exciting features of the RCS 2.2X is the separate output for subwoofers. When the RCS 2.2X is used with either one or (preferably) two subwoofers, the user selects a crossover frequency between 60 and 400 Hz and a crossover slope between 12 dB/octave and 60 dB/octave.

Then the correction software aligns the subwoofer(s) with the main speakers in the time domain and in the frequency domain, for completely seamless integration surpassing even the best single-box systems.

With the RCS 2.2X, you can add subwoofers to an existing High End speaker system for substantial sonic improvements. Preferably, the subwoofers should be placed in the corners behind the main speakers. Corner placement of the subwoofers will yield much higher efficiency with significantly reduced low-frequency distortion. But more importantly, the transfer of energy from the sub to the listening position will be much more direct, resulting in vastly improved impulse response.

The room correction system will easily compensate for the frequency response variations of the subs introduced by corner placement. It will delay the main speakers for perfect time alignment to within 1/8 of an inch.

The problem with single box solutions (no separate subwoofer) is that the ideal placement of the speaker for best frequency response will coincide with the placement that gives the greatest number of different pathways for the sound to arrive at the listening position. This again means that the best frequency response coincides with the worst possible time-smear.

The RCS 2.2X offers you the opportunity to add subwoofers to a system and improve transient response tremendously at the same time. This contrasts sharply with the normal result of adding subwoofers to a system: slow - undefined bass with lots of frequency and time behavior problems. If the separate subwoofer outputs are not used, then RCS 2.2X will use all the processing power on the main speakers.

It's time to stop listening to your room and finally find out what your music really sounds like. It's time to audition the TacT RCS 2.2X Room Correction Preamplifier.

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Most important, the good music being recorded is not available to most people. It's not on radio (or if it shows up, no one knows what it is). My current solution is a subscription service with Enusic. This site has mostly "non-top-40" music, but lots of music I like. You can download all the music you want and you can burn it to CD if you like. This is the music service for me!

Contrast this to the major labels' Internet efforts: limited downloads, no burning to CD, no transmission, and all this at high prices. I won't ever subscribe, and I predict these will be gone faster than any of the dot.coms!

In conclusion, I can say only that the record labels are in trouble precisely because of their own greedy actions and not because of college students stealing their music. They should have taken their cue from Napster and used this as a vehicle to promote their artists. This would have been a marketer's dream... free publicity and tons of exposure.

I will continue to buy music... but from whom remains to be determined.

Randy Nicolsi
randy.nicolosi@snnet.net

Annoyed
Editor:
Just had my very first experience with a copy-protected disc. Rinocerose's *Music Kills Me* does not play in my Meridian 588. It takes almost one minute trying to read the table of contents, then the display flashes through a track sequence, stopping at the last track. While this disc plays fine in all of my other players, it won't play in my Mac's CD-ROM drive. The disc, by the way, does not have any warning on its cover, and I can clearly see a "compact disc digital audio" logo in the upper-right and bottom-left corners of the CD tray.

I sent an e-mail to Everlasting Records but they did not reply. I know I can take the CD back to the store and probably will. What I want to know is if the incompatibility of some high-end CD players with copy-protected discs could be defeated by hardware manufacturers — in my case, a hopefully upcoming software or hardware upgrade — or if this tendency to copy-protect a growing number of CDs will render our players useless.

I just want to listen to the music I have paid for — not only with the players those greedy record companies think are appropriate, but also in my computer and, of course, through my high-end CD player.

Claudio Gonzalez Rodil
Madrid, Spain
claudio@rodilchauz.com

Confused
Editor:
I have a brother with a Ph.D. in Physics from Cornell. He's taken a number of courses in electrical engineering and circuitry during his studies, and he's trying to convince me that any low-priced CD player will produce the identical sound to an expensive CD player if both are used as transports connected to the same D/A processor. To paraphrase what he says, the sound will be identical because the very nature of digital is perfection (either there is a signal or there isn't, since the signal is not represented by an analog wave that can easily be compromised). He tells me that this is the whole reason why digital took off: You can have ultimate consistency, and the sound of a $200 player will be identical to a $2000 player.

Is this true? He said that he's written e-mails before asking if there was a measured difference in the result, but the reply was that while there were no measured differences, the music just "sounded different." As you can imagine, this answer didn't please a scientist whose life is based on actual measurable evidence. If there is a perceived difference in the music, then it certainly can be measured. Otherwise it would just be a case of "the Emperor's new clothes."

Michael Weilmeier
mkrey@silk.net

There are indeed measurable differences in the analog output of a DAC driven by different CD transports, due to different levels and spectra of word-clock jitter. This was examined in "A Transport of Delight" in the November 1993 *Stereophile*, available on-line at www.stereophile.com/showarchives.cgi?368 — John Atkinson

Peace of mind
Editor:
In May's issue, John McCarty makes his point about buying over the Internet. This is a risky thing to do, if service or anything after the sale is needed.

I've upgraded many times, each time getting full trade-in on new equipment. I've also had to have equipment serviced and rely on the dealer to get it done. They have provided loaner equipment while mine is repaired, and also paid shipping. (The factory pays return.) Yes, I expect a great deal from the dealer, but they always provide for my needs above or beyond my expectations.

The best thing about building a strong "friendship" with your dealer is trusting their ability to take care of your problems, if and when needed. When spending thousands on components, I want the peace of mind of knowing that, if needed, service on my gear will be done with little or no effort on my part.

Bruce White
Putaskola, OH

Pushing buttons
Editor:
John Marks pushed some buttons and shot down some circuits in his March "As We See It." As the owner of a retail furniture business, not only do I face 800-number competition but, frequently, local competition for the same brands. More important, however, in audio as in home furnishings, there are so many brands, and so many models within a given brand; consumers never have local access to the full range of products.

For the curious, the obsessed, or the discerning consumer, the horizons are broadened by product reviews and advertising in the audio press, e-zines, and manufacturers' websites. The consumer has the option of traveling in person, by phone, or by Web. The Home Entertainment Show, the Montreal Festival du Son et Image, and dealer-hosted clinics are other great windows of opportunity. The market is wide and the information is available for enthusiasts willing to do their homework. I don't quibble with exploring these various alternatives.

The critical tilt in the retail playing field, as I see it, comes not only from "no-service/drop-ship" retailers, but from tax avoidance as well. Like Hans Hinzer in Austria ("Letters," March 2002), I have customers who have used my services, then come back to me with price quotes from out-of-state drop-shippers and ask me to meet the price. While I will sometimes bend on the price of the product, I never bend on the 8% tax difference. Instead, they stand through my sermon on the goods and services they derive from paying their taxes to the state and community that serve them (a variation of what John Marks described as "The Tragedy of the Commons"). Sometimes I get the sale; sometimes they walk out with their tail between their legs. Sometimes I worry about keeping the business alive, but always I try to stand tall with my integrity intact. And yes, John, we still donate to charities and sponsor a soccer team (I played the game in college).

The Tragedy of the Tax Tilt if it can be corrected. In this computerized information age, there is no technological reason why interstate and Internet sales cannot be taxed, and taxes sent to the appropriate states and communities. Even my humble little bricks-and-mortar store can tell you to the penny how much sales were generated in each ZIP code we service. We run these numbers quarterly to pay our taxes, just like everybody else. In fact, there is an entire industry around the science of demographic marketing that is far more sophisticated than what leveling the tax tilt would require. L.L. Bean, Land's End, Cabellas, and other mail-order companies thrive on this kind of data, as well as benefit from the tax tilt.

The forces opposed to leveling the playing field are both political and psychological. Politically, it means change, paying the tax, and perhaps a Constitutional amendment — all large and unpopular ideas, unless you take heed of the common good. Overcoming the tax tilt faces stiff opposition from the political lobbying of special-interest groups such as the mail-order industry.
WHERE'S NAGRA?
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If you're into exotic high-end audio you know Nagra from their award-winning VPA & MPA power amplifiers and PL-P and PL-L preamplifiers. However, the rest of the world knows Nagra as a multi-billion dollar Swiss high-tech satellite communications and pro-audio company.

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The psychological hurdles are just as high. Men like to brag and show off. The house, the car, the home theater—whatever! From this mentality we get “He who dies with the most (or most expensive) toys wins!” Another variation of this bravo, as witnessed by Hans Hirner, is the proclamation “I got the amp/sofa/car for the lowest price on the entire continent!” It all comes from the same lobe of jelly in the brain. Nor do men want to give up this lowball game. Predictably, it is my customers who cry for the lowest possible price who complain about the smallest imperfections and demand the most service when they abuse their furniture.

John’s essay hits an oil slick and skids when he associates buying used equipment on the Net with catering to no-service channels. As an advocate of buying “fully depreciated used Mercedes-Benzes” in his John Marks Recommends newsletter, he should be flogged for hypocrisy with pure-silver tonearm cables.

Buying used equipment lowers the cost of entry to our hobby and allows easier access for people who might not otherwise make the plunge. I still remember my apprehension over buying my first preamp. It cost more than the entire mid-fi system I was beginning to replace.

Selling used equipment allows for upward mobility as big spenders move higher up the food chain. Whether sales of used equipment happen through private transaction, through a dealer, from magazine want ads, or over the Net, is less important than the opportunity or necessity they create for the seller to buy something new—unless, of course, he is exiting the hobby. As many of us know, upgrading one component often leads to upgrading others. The person who buys used probably cannot afford to buy new, or, like John, is smart and buys his Benz significantly depreciated, or both; the person buying used equipment is not going to have a state-of-the-art system, but will very likely enhance his enjoyment of music.

The more likely tragedy of used equipment is that so much of it sits around idle in second and third systems—or, worse, under the bed. Would it be better to give it away, thereby planting another high-end seed? As we make the slow paradigm shift from stereo to surround sound, the demand for used stereo equipment seems to be dwindling. My Gen-X relatives seem more interested in DVD movies, video games, and computers than in quality musical experiences. Throw in equipment for a couple of different sports and the discretionary dollar becomes mighty thin. Throw in a new baby and you can pretty much throw in the towel. At the other end of the demographic spectrum, older enthusiasts are facing skyrocketing medical expenses and increasing costs of retirement. Perhaps www.stereophile.com could take a survey to shed more light on the buying habits of audiophiles, and reveal where all the used equipment is hiding.

Like John Marks, I try to live by the golden rule, and as a retailer I stand shoulder to shoulder with him in urging audiophiles to be forthright with people they deal with. It is the surest route to a win-win situation.

Rick Becker
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I regret that Rick Becker seems to have misunderstood what I find ethically questionable about the way some people buy high-end gear via the Internet.

I have no problem with a robust market for used high-end equipment, or cars, for that matter. What I have a problem with is people using a local audio dealer’s demonstration-facility investment and weekday time to decide what it is they want to buy, and then shopping for it online and used. That is using people’s business resources—and emotional resources and personal reliance— in a bad faith.

A person who walks into a high-end store and asks to audition a specific piece of expensive equipment will engage a good salesperson’s attention, energy, and efforts, and hopes and expectations as well. For the person to fail to disclose that he intends to buy elsewhere is deplorable. Perhaps dozens or hundreds of such small betrayals are what have made some audio salespeople abrupt and cynical.

Being a good salesperson is hard work. Many good salespeople—who of audio, automobiles, boats, or anything else—are avuncular with teenage enthusiasts as their time permits them to be, either from sheer good will or shrewd good sense. The good salesperson remembers that all mighty oak trees were once little nuts. That needy fact-finder kid might be the one a parent will trust to give disinterested advice upon a major purchase. But the adult—especially a member of the “professional classes”—who ties up a knowledgeable salesperson for hours and then uses the knowledge he has gained to shop elsewhere, has taken one more thwack at turning a community of enthusiasts into a model of Hobbes’ primal jungle, with “owmes in bellum contra omnia.” Count me out.

—John Marks

**Letters**

**Surprise**

Editor:

Regarding John Marks’ “The Fifth Element” column for May 2002: Why didn’t he put together a sub-$1000 system for Rebecca Romijn-Stamos? Doesn’t she need a system for her on-location trailer? Certainly she can do better than a boom box, but she should not have to move her main system from location to location.

Seriously, I think Stereophile can do more good (and separate themselves from their competition) by publishing recommendations for $1000 systems than for yet more high-dollar recommendations. What is interesting is that when Stereophile publishes a review of an inexpensive component, the tone is always one of surprise—surprise that such a low cost can offer such great performance. To me, this tone is indicative of a lack of exposure to low-cost components. Yet I would wager that low cost is of extreme interest to a majority of the readers.

Ross Lipman
rl1856@yahoo.com

I will always think of Rebecca Romijn-Stamos as a model. As Ronald Reagan’s nominee for Ambassador to Mexico said at his Senate confirmation hearing, when the charge was laid that the Republic of Mexico would be insulted by our sending an actor as Ambassador: “I made 20 movies, and everyone who has seen even one knows I am not an actor.” (Perhaps I am being hasty; perhaps Rebecca just hasn’t had the right script.) James DePaiva, star of the soap opera One Life to Live, does have a Reva-Canyon ProAxe vinyl playback system in his dressing room. So it does happen! But that is a $7500 system, not a sub-$1000 system.

My lowest-priced system recommendation was $2500, and even then, there were huge limitations in bass and soundstaging. I did request components from the same companies in order to try to put together a $1000 system, but I did not receive any interest. Yes, there are some decent $300 speakers, and the JMofada amp at $750 is nice, but you are now over $1000 and still don’t have a source. And if you put on Brahms’ German Requiem, where’s the organ?

*Stereophile*, July 2002
Extreme high-end

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My experience is that ultra-low-cost is of some interest to a plurality, though the average Stereophile reader has about $11,800 in his two-channel system, as of a couple of years ago. (I answered the phone yesterday and it was a chap from Germany asking if the $25,000 halo amplifiers were "really that good.")

For a future column, I am trying to get a Jolida hybrid amp and KEF Crossa speakers — and competitors to both — and find out indeed what can be done for under $1000. But as the old lady in Newport said, the Rolls is the cheapest car you can own because you are motivated to take care of it; if you take care of it, it lasts forever; it never goes out of style; and when you die, it is worth substantial money. Similarly, someone who bought Duntech Sovereigns, Jeff Rowland electronics, and a Well Tempered Turntable 20 years ago and promptly got off the equipment-upgrade merry-go-round is far, far, far ahead of someone who kept losing half his stake on every incremental trade-in/upgrade.

— John Marks

Social justice

Editor:
Was it the same John Marks who wrote about "social justice" in a response to a reader who recommended in his column a pair of speaker wires that cost more than $5000?

Bhargupt Kallam
bkallam@pol.net

The answer, of course, is "Yes," Mr. Kallam. And while you do, however indirectly, raise a valid question, I fear that you already have an answer firmly in mind, and indeed may think that it is the only answer, and that is self-evident. I respectfully disagree, while acknowledging that each of us is accountable for our stewardship.

It is not social justice to impose ills of poverty on the unwilling. As the Polish proverb states: Under capitalism, man exploits man; under socialism, the reverse is true. Social justice requires equality of opportunity but cannot guarantee equality of results.

To give an example, Dr. Czodrowski-Rice is perhaps more intelligent than I am, is certainly more focused and energetic, and is reputedly far ahead of me as an amateur chamber musician as well. She is entitled to the fruits of her labor, and she is about to decide to buy a Bosendorfer apartment great for her flat, I don't see that as objectionable. If she were to spend the same amount of money on a wonderful stereo system, I would not find that objectionable either.

Our society rewards second-tier film actors far more handsomely than it rewards virtuosos of the first rank. Were Rebecca Romijn-Stamos to spend $90,000 on an automobile, many would applaud that as a display of restraint. In the context of the amount of discretionary income some people have, spending $90,000 on a stereo is not unheard of. It is also a matter of priorities. The car I drive is 29 years old and is assessed at about $3600 cash value. I prefer to drive a beater and have a few nice woodblock prints on the walls and an okay stereo. But people as a rule don't get bent out of shape when someone spends $40,000 on an Audi, although a Toyota Echo also can get you from Point A to Point B.

I chose the systems I wrote about in my May column carefully. I did not medeistically apply certain cost ratios to certain product categories. I recommended the WineWorld Gold Eclipse III+ biwire speaker cables not because they cost $6600/pair, but because with them in that system, for the first time I was able to hear as a separate event the slight puff of air before the bodidran began to "speak" on Milladoiro's "Castellum Honesti." I am not saying that that necessarily is worth the incremental expense over Nordost Blue Heaven. Without question, the return steeply diminishes; but equally without question, there is a marginal improvement. But as I have stated countless times, the same amount of money spent on room acoustics yields far greater sonic benefits than spending it on wires.

The question your letter implies is a very old one: "Boots or Shakespeare?" The experience of the past hundred years or so has been that when you close or burn down live theaters in the name of ending elitism, you end up making ugly boots that fall apart.

Life is not a zero-sum game. As my friend Kari Alexander's ongoing answering-machine message says, we live in a universe of infinitely expanding possibilities. One large enough, I might add, to have a place within it for $6600 cables.

— John Marks

Throw out the soundcard

Editor:
I use my computer for playing DVDs occasionally, and the sound from the soundcard really leaves something to be desired. Are there any high-end (or even midrange) D/A converters that will accept a USB or FireWire input? I would like to use my computer as a digital source and just throw out my soundcard. I'm at the point where I would pay outrageous amounts of money for this ability.

— John Marks

The easiest solution is to use a sound card with a high-quality 24-bit/96kHz D/A converter. I use the RME Digis96/8 Pro and Digital Audio Labs CardDex with great success. (You can read my reviews at www.stereophile.com/showarchives.cgi?299 and cgi?280, respectively.) The Yamaha @PET RP-U100 receiver, which Shawn Dickerson and I reviewed for Stereophile (www.stereophile.com/showarchives.cgi?191), has a USB audio data input, as does the tubed 12ax7/E from Sutherland, which Michael Fremer will be reviewing in the near future.

— John Atkinson

Noise problems

Editor:
I have been looking for a product like the DAL CardDex, and recently stumbled upon your September 2000 review in your website archives (www.stereophile.com/showarchives.cgi?280). It was extremely informative, but what do you do about eliminating the noise from your PC? The fan and drive noises from even the quietest PCs that I have tested are in excess of 40dB. It is a totally inappropriate level of ambient noise for doing quality audio work. How do you deal with it?

Ian St. Martin
Vancouver, BC, Canada
ianstn@home.com

I am fortunate in being able to put the noisy PC and external hard drives in an adjacent room, connected by a 50' AES/EBU datalink to the Mark Levinson DAC in my listening room. But yes, the noise can be a problem. Some companies serving the pro-audio and IT markets offer sound-isolating enclosures. I have also found that some "computer amperes" offer excellent sound absorption.

— John Atkinson

Management problems

Editor:
I am still fighting the MP3 takeover. However, I love MP3s for portable applications, and I have ripped a portion of my CD collection to MP3 files. Partway through the process I read your December 2001 review of the Linn Knekt Kivor music server (www.stereophile.com/showarchives.cgi?497). Since that time I have been searching for a software solution that would let me rip CDs to an uncompressed file format. I can, of course, do this by creating a WAV file, but I have not been able to find a suitable file-management program for WAV files.

Chris Monache
CMonache@Empirix.com

Exact Audio Copy (www.exactaudio copy.de) rips CDs to uncompressed WAV files, though I have found AudioCatalyst (www.xingtech.com/ mpg3/audioanalyst) is also bit-perfect if you make sure the Normalization and MP3 compression radio-buttons are unchecked. For WAV-file management, both WinAmp (www.winamp.com) and the Windows Media Player serve my admittedly limited purposes.

— John Atkinson

Drive-space problems

Editor:
I've been searching the Web for an answer, but I can't find out if there is a lossless compression program that would enable me to put all my CDs onto a computer's hard drive. Without compression, a 40-gig hard drive would hold only about 100 CDs. Is there any way to fit twice as many without loss of data?

Kenney Chan
kchan@watcom.com

There are three shareware programs of which I am aware that will compress WAV files to 40-50% of their original size without losing any information: Monkey Audio 3.96 (www.monkeyaudio.com), Shorten (www.softsound.com/ shorten.html), and FLAC (http://flac.sourceforge.net). (My thanks to reader Mark McMillan, monill@uwflext.com, for the link to www.firstprog.com.au/audiocomp/lossless, a website devoted to listing and testing lossless audio-compression algorithms.

— John Atkinson
"Let me put this as plainly as possible. The Valhalla system from Nordost is the least colored and most neutral cabling ever to hit the marketplace."

"A triumph, pure and simple"

Harry Pearson
The Absolute Sound Issue 127.
Quote used with permission of The Absolute Sound.

"It was as though we had opened the flood gates of a dam, but instead of water, we realized music unhindered and more of it."

The Inner Ear Report
**CANADA/CALIFORNIA**

**Jon Iverson**

Like the companies in most high-tech industries, audio businesses are a volatile lot — startups, mergers, acquisitions, and the occasional bankruptcy or flame-out are not uncommon. In that tradition, at the 2002 Consumer Electronics Show in Las Vegas, Ultralink Products announced on January 7 its intention to purchase the assets of cable manufacturer XLO Electric.

In April Ultralink, which itself manufactures audio and home-theater cables and interconnects, revealed that it has finalized its operating plans in light of its purchase of the assets of XLO Electric. Ultralink says it has now acquired the worldwide usage rights to the XLO brand, along with assets including inventory and intellectual property. To allow for this expansion, Ultralink says, it has obtained additional manufacturing space adjacent to its facilities in Southern California.

As part of the deal, the companies say, XLO’s founder and chief designer, Roger Skoff, will continue to design the brand’s products and supervise its assembly craftspeople from the combined facility. According to Ultralink’s Allen L. Sung, “Roger Skoff and his team of craftsmen have led the pursuit for perfection in audio and video imaging for over a decade. His proprietary treatments, passion, and knowledge should prove to be a valuable asset for years to come. Ultralink will provide a strong foundation for XLO and its clients to continue this pursuit.”

As further evidence of its investment in XLO, Ultralink points to two new lines soon to be available: Unlimited and Signature 2. The company says that the Unlimited line is best described as having most of the performance of XLO’s top Limited Edition line, at roughly half the price. Signature 2 is an update of XLO’s 1992 Signature line, which Ultralink claims is used extensively by designers of speakers and audio components around the world.

Along with current custom and specialist distribution, XLO’s current product lines — Limited Edition, Reference 2, Ultra, VDO/PRO, and CDA — will stay in place. Ultralink says its own Platinum, Advanced Performance, Matrix, and Challenger lines have been unaffected by the acquisition and will continue to be manufactured in Canada.

**UNITED KINGDOM**

**Paul Messenger**

Big changes are under way at speaker manufacturer Tannoy. Its publicly traded parent company, TGI Group plc, was purchased by Danish pro-audio company TC Electronic A/S at the end of 2001, and the subsequent management changes are now getting under way.

TGI comprised several brands, including GLL (Goodmans Loudspeakers Ltd., an OEM in-car speaker specialist), and public-address system maker Martin Audio. But Tannoy, with its high level of brand recognition and its feet planted firmly in both the domestic hi-fi and pro-audio camps, is unquestionably the jewel in the crown, and was the main attraction for TC Electronic. Based in Risskov, Denmark, and founded in 1976, TCE has particular expertise in applying digital software techniques to pro-audio products.

The Tannoy people I spoke to all seemed very positive about the changes. More than one expressed the view that working under private ownership was much better than being part of a shareholder-dominated public company, because it allowed management to adopt longer-term development strategies.

Specifically, Anders Fauerskov, CEO of TCE, took over as Tannoy’s managing director on May 1, and has decided to base all key management personnel, including himself, near the Tannoy factory in Coatbridge, Scotland. Tannoy’s previous MD, Henny Groenendijk, will return to Holland to take over the company’s European distribution network. Other changes are anticipated, though no formal announcements had been made at the time of writing (May).

**US: NEW YORK CITY**

**Wes Phillips**

XM Satellite Radio held a press conference in New York City on Thursday, April 18. The event was heralded with...
great secrecy—attendees were enticed with the promise of "major news," but no one leaked details beforehand. The press arrived expecting something juicy indeed. Whether or not XM delivered on its promise depends on whom you talk to. XM executive vice president Steve Gavenas began the meeting with a passing reference to the company’s latest round of financing, a public offering that resulted in gross proceeds of $154 million—more than enough, he assured attendees, to last into 2003. Gavenas went on to announce “XM…succeeds because of its superior digital sound technology, unparalleled signal coverage, proven chipset technology, and outstanding programming. The technologies that define XM Satellite Radio sound quality have been auditioned and endorsed by leading audio experts from around the world.”

The linchpin of those technologies, he explained, is CT-aacPlus, a third-generation audio encoding technology developed by Coding Technologies. CT-aacPlus combines Advanced Audio Coding (AAC), a standardized compression technology also used by Sirius Satellite Radio, with Coding Technologies’ proprietary Spectral Band Replication (SBR™) technology, which increases bit-rate efficiency. XM claims the improvement makes its codec “30% more efficient than AAC alone.”

The XM sound, Gavenas added, is further optimized by software from Neural Audio, a Seattle-based research lab specializing in the use of advanced neural-network computing to simulate the brain’s perception of sound. Neural Audio has developed proprietary pre-processing software that enhances CT-aacPlus by optimizing timing and spatial elements before the encoding stage. The result, Gavenas claimed, is improved soundstage clarity and increased intelligibility. In addition, Neural Audio’s Stereo Transcoder algorithm does not alter the imaging and spatial characteristics of stereo or surround-sound content—which means that XM customers with matrix-style surround-sound equipment, such as Dolby Pro Logic, can derive surround sound from the broadcast signal.

XM’s delivery package includes two Boeing 702 satellites, Rock and Roll, which produce “more than twice the total satellite power of any other satellite service,” augmented by XM’s nationwide network of more than 800 repeaters in more than 70 cities. The satellites are parked in geostationary orbits aligned with the US’s east and west coasts, and each delivers the full 100-channel service to all of XM’s receivers across the country. “Twice the power,” said Gavenas, “combined with our repeater network, means consistent coverage coast to coast with only two satellites.”

When Gavenas surrendered the floor to the press, the first question was, "You’ve been broadcasting since fall. Why are you holding a press conference now?"

"We’ve been busy," Gavenas responded, "and we wanted to announce our technology edge."

"Will you go into details?"

"No—not at this time."

This set the tone for the rest of the press conference. Members of the press, specifically Sound & Vision’s David Ranada, were fierce in their pursuit of specifics, and the company was just as determined not to surrender them. At one point, Ranada growled in frustration, “You’re just forcing us to do patent searches for information we will get.”

The question that I felt defined the biggest stumbling block to satellite radio’s acceptance seemed to come as a surprise to Gavenas and his business partners. I asked if consumers had displayed greater resistance to paying for the privilege of listening to radio than the company had anticipated, or if subscriptions were selling faster than expected.

Gavenas: "It never occurred to us that there’d be ‘resistance.’ Cable and satellite TV have conditioned customers to expect to pay for quality programming. Of course you can get free broadcasting, but the sound quality and programming are inferior. Over 76,000 subscribers have already decided we offer a service worth paying for, and we anticipate over 550,000 will have made that decision by the end of the first year of service.”

After the conference, XM escorted several of us to the street level, where it had several XM-equipped automobiles on display. I listened to one of the systems briefly and was impressed. The factory-installed, Bose-badged system sounded pretty good for a stock car system—reception was clear, with no birdies or other extraneous noises, despite our proximity to the concrete canyons of Midtown. CD-quality sound? Hard to say, given the unfamiliar vehicle and the brevity of the audition. But the sound was clear, certainly, and full-bodied beyond a doubt.

The big surprise was how impressive XM’s breadth of programming was. The company may not have been forthcoming with technical details, but it was practically hiding its major news under a bushel. With 100 channels—31 of them commercial-free—XM offers the disenfranchised radio listener real choices. XM groups the stations into “neighborhoods,” each of which is divided into categories, or individual channels. Country, for example, offers five channels: Nashville, progressive, traditional, bluegrass, and nonstop country. Jazz & blues has six channels, categorized as trauma-GSBAS holds regular meetings every other month in Southern California. The GSBAS is dedicated to seeking out systems that get as close to reproducing the original event as possible. For details of upcoming meetings and membership information, call Steve Huber at (562) 422-1615 or e-mail GSBAS@yahoo.com.

- Silent Lucidity is proud to announce that it has been selected as the exclusive San Francisco area dealer for JMlab loudspeakers. A factory-sponsored seminar will be held in September and will highlight the exciting new Electra series, as well as other models from the Utopia, Cobalt, and Chorus ranges. Silent Lucidity offers in-home setup and acoustical consulting services, in addition to the very best from Electrocompaniet, Innersound, Silverline, Manley Labs, JA Michell, Graham, Benz, Koetsu, Shunyata, Magman, and Analysis Plus. Additional lines will be arriving soon. For information on any of the above or to schedule a private audition, please call (415) 928-2990.

- Saturday, June 22, 1-6pm: The Bay Area unveiling of the new Dynaudio Confidence loudspeaker series. Al Filippelli and Mike Manousellis of Dynaudio North America will be at San Francisco Stereo & Theater Systems (2478 W. El Camino Real, Mountain View) to give demos and answer questions. RSVP at (650) 917-1099.

- Saturday, June 29, 3-6pm: San Francisco Stereo & Theater Systems (921 University Ave., Berkeley) presents
ditional jazz, contemporary jazz, modern jazz, great vocals/standards, blues, and Latin jazz. Classical is divided into four categories: traditional, classical/eclectic, opera/vocal, and classical hits. Other Neighborhoods include decades (popular songs from the '40s, '50s, '60s, etc.), hits, urban, rock, world music, kids, news, sports, comedy, and variety—each Neighborhood has at least three channels, some as many as 12.

XM runs the only 24-hour NASCAR radio channel in the country as part of its sports Neighborhood, and includes the BBC World Service as a 'round-the-clock option among its news channels. The traditional classical station's programming is chosen by Martin Goldsmith, late of NPR, which seems to be slouching relentlessly into mediocrity—and that's when it hit me.

When I'd asked Steve Gavenas about listener resentment, I'd asked the wrong question. I'm still smarting from my local NPR station's preemptive decision to abandon classical programming during daytime hours in favor of the cheaper-to-produce talk shows favored by broadcast consultants. I'd already been paying close to $10 per month to support a station that didn't care what I wanted to listen to—why would I resist paying the same amount to a company that gave me not one, but four (or more) choices in each of 15 categories?

Gavenas is almost certainly correct in his assessment that listeners are tired of cookie-cutter radio formats and the less-than-optimal sound quality of most commercial radio stations. If XM Radio and competitor Sirius Satellite Radio are offering clear alternatives to that wasteland, we should all celebrate at having a choice at all.

I, for one, will be intensely interested in hearing more from both satellite providers on their commitments to sound quality and to quality (and alternative) programming. XM's April 18 press conference was a start. Let's hope we hear a lot more in the near future.

**JAPAN**

**Barry Willis**

As normally conceived, a loudspeaker uses electrodynamic forces to control the movements of its diaphragm, which in turn moves air. Matsushita Electric Industrial Co., Ltd. has come up with an interesting twist on this principle in which air pressure itself ("aerodynamic-drive technology") is used to control the diaphragm. The result is a transparent panel speaker called the Sound Window, announced by the Japanese industrial giant March 27.

The technology is intended to mate acoustic radiating surfaces with video displays, enabling the launch of sound and image from the same surface—or, at least, from two closely spaced surfaces—thereby eliminating the need for the deep cavities required to house traditional moving-coil drivers. The goal is maximum performance with minimal energy expenditure from an integrated audio-video source of shallow depth—in other words, a television-like device that can be hung on a wall like a framed picture.

Sound Windows employ a lightweight transparent panel suspended a fraction of an inch from another surface, such as a video screen. The sound pressure from a small conventional cone driver acoustically vibrates the transparent panel, which can be greater in diaphragm area by a factor of 10 or more. The aerodynamic-drive technology is said to ensure sound-pressure transmission to the entire panel surface. Matsushita claims this "acoustic leverage technology" enables the Sound Window to operate on as little as 4% of the power a conventional driver would require. Panel shape isn't critical, the manufacturer states.

Other manufacturers have experimented with flat-panel speakers, with varying degrees of success. Matsushita claims that the Sound Window is the industry's first speaker "that reproduces sound by pneumatically vibrating a transparent panel using aerodynamic-drive technology." The device appears to offer the most promise for use in small communications products, such as cell phones, personal digital assistants, and laptop computers. The Sound Window's extremely low power consumption would appear to make it ideal for such applications. Matsushita plans to ship the first Sound Window products to industrial customers later this year.

Matsushita doesn't specify the Sound Window's frequency response, distortion level, or output capability. Presumably, none of these specifications is of audiophile grade, but the ingenious device proves that new designs for sound generation are possible for inventors who think outside the box.

**UNITED KINGDOM**

**Paul Messenger**

The nivistor is dead. Long live the trivistor! Musical Fidelity's Antony Michaelson pulled quite a rabbit out of his hat when he came up with the idea

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**Industry Update**

**CALENDAR**

**CONNECTICUT**

- For information about the Connecticut Audio Society, visit www.the-atom.com/cas or call Carl Richard at (860) 745-5937.

**GEORGIA**

- Sunday, June 23, 1–3pm: Audio Alternative (Atlanta) will host the Atlanta Audio Society meeting, featuring Pat McGinty of Meadowlark Audio. Pat will present several of his speaker designs, and attendees will have an opportunity to

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**Stereophile, July 2002**
"Output power was impressive even with all channels driven simultaneously."
— David Ranada, October Issue, Sound & Vision

Succumb to the seduction of pure, unadulterated power. Concert hall performance delivered by an impressive 840 Watts. Exclusive to JVC, each of the 7.1 channels has its own power supply for the cleanest output in its class. 

> Discover true cinematic realism with THX® Surround EX — decoded by a Dual DSP chip system that can process 300 million instructions per second. 
> Advanced features include an RF multi-band remote with backlit LCD display, and multi-room/multi-source capability — allowing you to access multiple A/V sources simultaneously throughout your home.

Get the full technical specs and read what the critics are saying about JVC's RX-DP10 ultimate receiver at www.JVC.com.
US: NEW YORK CITY  
Wes Phillips  
It is with regret that we belatedly note the passing of Joanna Nickrenz, one of the most respected American producers of classical recordings, on February 9. Within the small world of those who passionately care about the sound of recorded music, Nickrenz and her partner, Marc J. Aubort, were legends. Many audiophiles—including Stereophile's editors—considered the names Nickrenz and Aubort on a project a guarantee of natural, dynamic, accurate sound.

Yet Nickrenz's death was not even reported by her hometown newspaper, the New York Times, and to our chagrin, we remained unaware of it until reader Dan Castro wrote in to comment, "Many of my favorite recordings are the result of her collaboration with engineer Marc Aubort. Her name and [that of] Elite Recordings on an LP or CD liner meant quality sound."

Nickrenz, a lifelong smoker, died in her home of complications from lung cancer. She had been quite ill for the preceding year, but continued to work conscientiously until her final hospitalization in November. Her last recording session was in October 2001, a date in Germany with klezmer clarinetist Gioria Feldman, with whom Nickrenz and Aubort had collaborated on more than 30 recordings. Nickrenz was released from the hospital on Christmas day and remained at home until her death.

This year, as in many others, Nickrenz was nominated for a Grammy Award as Best Classical Producer (for the Angeles String Quartet's Complete Haydn String Quartets on Philips). Although she did not win this year, Nickrenz had already won three Grammys: for Best Classical Album of 1996 for her recording of Corigliano's Symphony 1 and Of Rage and Remembrance; with Leonard Slatkin and the National Symphony Orchestra; Classical Producer of the Year, for the same recording; and a shared award with Marc Aubort for Classical Producer of the Year (1983).

Born Joanna Dale Volz on May 25, 1936, Nickrenz spent her early years in Seattle, where she studied to become a concert pianist. She was a member of the Pittsburgh Symphony under William Steinberg and performed actively in several chamber music ensembles, among them the New Chamber

Nickrenz's death was not even reported by her hometown newspaper.

The team also recorded a now-legendary series of Joan Morris/William Bolcom projects for Nonesuch, including the popular After the Ball, a collection of Victorian songs. They also recorded the Seattle Symphony for Delos and the Dallas Symphony for EMI, among many others. "We did about 20 projects a year," Aubort said.

Eric Dolphy said, "When you hear music, after it's over—it's gone, into the air. You can never capture it again." Joanna Nickrenz spent a lifetime proving that that didn't have to be the case. Her remarkable legacy attests to her talent and judgment, and will remain vital for as long as listeners value the true sound of music played in a real space. We mourn her passing as we celebrate her life's work.

US: MOUNTAIN VIEW, CA

Barry Willis  
John Robinson Pierce, a wide-ranging engineer, inventor, writer, and psychoacoustics researcher, died April 2 at El Camino Hospital in Mountain View, California. The cause of death was complications from pneumonia. Pierce was 92.

A native of Des Moines, Iowa, Pierce earned his B.S., M.S., and Ph.D. from the California Institute of Technology. In 1936, the year he left Cal Tech, he joined Bell Telephone Laboratories in Murray Hill, New Jersey, an institution that harbored some of the most creative minds of the mid-20th century, and that originated many of the technologies that have become woven into the fabric of modern life.

TENNESSEE

- Saturday, July 20, 3–5pm: Audio Revolutions by Michael Green will sponsor a clinic, "How Close Are You to Your Music?" There will be comparisons of live and recorded acoustic instruments, and Michael Green, creator of the tunable technique, will conduct personal demos. The workshop will take place during the 2002 National Association of Music Merchants Show (NAMM) in Nashville. RSVP at (888) 766-6886 or e-mail ivy@tunecilla.com.

VIRGINIA

- June 20–22: Hi Fi Farm, Inc. is celebrating its 22nd anniversary with an unveiling ceremony at their new facilities in Wirtz, Virginia. The Smith Mountain Lake "Business After Hours" monthly gathering, with food, drinks, and lots of great music, will take place Thursday evening. Friday will be an informative day, with numerous manufacturers and reps on hand to discuss their equipment. Featured will be products from Piaga, Aloya, Goldmund, and more. For info, call (800) 752-4018 or e-mail info@hififarm.com.

Stereophile, July 2002  
Audio Tekne, Spendor, AVM, and  
Calendar
Pierce became director of electronics research at Bell Labs in 1952 and research director of communications principles in 1958. Among his many contributions was a design for an unmanned communications satellite that was incorporated in the Echo I, launched in 1960. The satellite enabled the relay of signals from Cal Tech's Jet Propulsion Laboratory on the West Coast to a Bell Labs station in New Jersey. The success of that experiment led to the construction and 1962 launch of Telstar I, the first commercial communications satellite and the first to transmit live television signals across the Atlantic. The network of communications satellites that rings the earth today is a direct result of Pierce's work.

He was widely credited with coining the term "transistor" (likely a conflation of "transit" and "resistor") for the revolutionary device invented by William Shockley and his Bell Labs colleagues in the late 1940s. Pierce was a tireless inventor and investigator, according to John Sanford of the Stanford Report: "As executive director of Bell Labs' Communication Sciences Division, Pierce oversaw work on mathematics, statistics, speech, hearing, behavioral science, electronics, radio waves, and guided waves. He was inventor of the Pierce Gun, a vacuum tube that transmits electrons and is used in satellites and, among other things, the klystrons that power the Stanford Linear Accelerator." Pierce Guns are used today in all linear-beam microwave tubes, according to Glenn Scheitrum, an engineering physicist at the Stanford Linear Accelerator Center.

On retiring from Bell Labs in 1971, John Pierce returned to Cal Tech as an engineering professor. From 1979 to 1982 he was chief technologist at the Jet Propulsion Laboratory. In the early 1980s, he moved to Northern California, where he joined Stanford University's Center for Computer Research in Music and Acoustics (CCRMA), working under the title of "visiting professor of music, emeritus." Financially secure, he worked without asking for a salary. His 12-year tenure at Stanford brought intellectual credibility and financial support to the CCRMA, according to its founding director, Prof. John Chowning.

While at Stanford, Pierce wrote The Science of Musical Sound (Scientific American Library, 1983), with the assistance of, among others, electrical engineering professor, former Audio Engineering Society president, and occasional Stereophile contributor Elizabeth Cohen. The book, which recently went out of print, is still "the best beginner's book on psychoacoustics I know of," said Stereophile editor John Atkinson. Pierce was particularly interested in the perception of pitch, but studied all aspects of psychoacoustics — how sound is generated, transmitted through the air, received by the ear, and processed by the brain. CCRMA director and professor of music Chris Chafe said Pierce was "part of a tradition trying to understand better the intricacies of the whole chain."

Pierce was a prolific author, writing or co-writing some 20 books and more than 300 research papers. He also wrote science fiction; his first story appeared in the March 1930 issue of Science Wonder Stories, when he was a 19-year-old student. His short stories were published in Fantasy and Science Fiction, Poularhouse, and other publications. Pierce was a friend of some of the greats of the genre, among them Isaac Asimov, Ray Bradbury, and Arthur C. Clarke. (Geosynchronous satellites orbit in the "Clarke Belt," named for the author who formulated the concept.)

As an engineer and inventor, John Pierce was granted approximately 90 patents. He received many honorary degrees and awards, among them the 1985 Japan Prize. In recognition of his work with communications satellites, he was a co-winner, with collaborator Harold Rosen, of the 1995 Charles Stark Draper Prize.

John Robinson Pierce is survived by his wife, Brenda Woodard-Pierce, of Palo Alto; a son, John Jeremy Pierce, of Bloomfield, New Jersey; and a daughter, Elizabeth Anne Pierce, of Summit, New Jersey.

US: A SCHOOL NEAR YOU
Barry Willis

Where Pogs and Pokémon once ruled, HitClips have taken over. HitClips are so hot that Hasbro Inc.'s Tiger Electronics division has sold more than 20 million of them at $3.99 each. That's $80 million gross on a single product, a figure that probably no high-end audio company has ever reached.

Tiger Electronics has also sold truckloads of HitClips players at just under $20 each. But unless you happen to have kids under the age of 12, you've probably never heard of the format — and for good reason. HitClips are so far below the high-end radar that audiophiles would never notice them.

Resembling the CompactFlash solid-state memory cards used in digital cameras, HitClips contain ultra-lo-fi, mono, one-minute special mixes of pop songs by the likes of Britney Spears and 'N Sync. They don't even contain entire songs, which doesn't seem to bother the kids who buy them. HitClips chips can be carried in bandoliers, played in clip-on players, and traded like grade-school currency.

HitClips were first distributed through a promotional tie-in with fast-food chain McDonald's, but have become so popular that they are now part of many artists' marketing plans. As low-cost promotional items, HitClips can boost CD sales by generating interest in artists that kids may not have heard before. The clips are tightly bunched in frequently churned displays that create "buzz by association" for little-known artists.

"When record labels and artists saw the momentum, they were all ready to jump on board," Tiger Electronics music-division president Dave Capper told Chris Marlowe of the Hollywood Reporter. "Now we have more interested artists than we can fit in the line."

HitClips are also a revenue stream for participating artists, according to entertainment attorney Ken Herzt. "Records are poorly marketed to a wide constituency," he told Marlowe. "My people don't make money off records... They don't generate a lot of revenue."

HitClips can do a lot to change that picture, Capper agreed. "For the right artists," he explained, "we've become an invaluable part of the marketing mix."

UNITED KINGDOM
Paul Messenger

At the Annual General Meeting of the British Federation of Audio (BFA) in April, chairman Steve Harris addressed a number of issues facing the industry.

On a positive note, it now seems very unlikely that switch-mode power supplies will become the mandatory technology for power amplifiers sold in Europe. For some years, hi-fi people had worried that this might be an unavoidable consequence of European electromagnetic compatibility (EMC) legislation. But it now appears that reason and pressure groups have prevailed, and it has been accepted that low-volume producers will no longer have to shoulder the expense of developing switch-mode technology. Although the switch-mode approach has its benefits, and has been successfully exploited by brands such as Linn Products and Chord Electronics, many audiophiles have long expressed a preference for conventional transformer supplies, and will welcome this rare example of Europragmatism.
Sanity might have prevailed on that issue, but a new Eurocracy coming out of Brussels, known as the WEE, is all about making consumer-electronics manufacturers responsible for the ultimate disposal and recycling of the products they sell.

Any environmentally aware person will acknowledge that the "polluter pays" principle has considerable cogency, especially in view of the high levels of noxious poisons contained in many consumer-electronics products. Most BFA members therefore seemed resigned to the fact that some sort of recycling charge is reasonable and inevitable. The BFA seems to favor Philips' proposal for a "visible fee": a modest levy itemized at the point of sale to pay for the end-of-life disposal of a specific product.

However, there's real anger and resentment over the Eurocrats' apparent intention to apply these charges retroactively. This could mean not only tomorrow's profits being used to finance the disposal of products made and sold long before the idea of recycling had been contemplated (never mind contemplated as a manufacturing cost), but it's also been suggested that currently active manufacturers be forced to contribute toward the recycling of products made or sold by companies long since defunct. If anyone wondered why we Brits tend to be reluctant Europeans...

Among its various tasks, the BFA assists members in getting government financial support for the consumer-electronics shows in Las Vegas and Frankfurt, while also trying to get Moscow and Shanghai added to the list. It also collects and collates sales statistics applicable to the UK hi-fi business, which are probably the most accurate around for the specialist sector.

These statistics are surprisingly positive. A comparison of the figures for 2001 and 2000 shows a pronounced boost in A/V and multichannel components, and a mild decline in sales of two-channel gear. For example, DVD players jumped 110%, to 1.6 million units, while CD players declined just 8%, to 238,000. Likewise, stereo speaker pairs were down 20%, to 210,000, while A/V speaker packages were up 50%, to 206,000.

On a lighter note, BFA chairman Steve Harris is now working toward an MBA, and has talked the BFA into supporting his final dissertation, "Critical Success Factors for British Specialist Audio Companies Exporting to the USA." It should make interesting reading, and might well be published, possibly before the end of the year.
I am reminded of my favorite restaurant:
The quantities aren't
great, but the quality is
tops, and so is the service.
The finest and freshest
ingredients are prepared to
perfection. No splitting
appetizers, though —
you'll go away hungry.

Hi-fi is like that.
Quantity — especially
power — is often the foe of quality.
If you want quantity and quality,
be prepared to fork over big bucks.
Or Euros.

You know about Sam's Law, right? The lower an amp's power,
the better it sounds, to the point
where almost no power — from a
flea-sized 2W or 3W single-ended
triode (SET) amp — sounds best of
all. With solid-state, too, it's easier
and far cheaper to produce a great-
sounding small amp than it is to
manufacture a 200–300W behemoth.
Of course, it might be easier to
sell that expensive 200–300W beast...

This leads to Sam's Corollary: You
can have great amplifier sound for a
reasonable sum of money, but you can't
have a lot of it.

Think small. Save big. Maybe buy a
Cairn 4808 class-A integrated for
$1595, with “only” 30W of power.
(Cairn products are distributed in
the US by VMAX Services.)

What's with that model number?
Why 4808 and not 4807 or 4809? Well,
Gilles Belot, managing director of
Cairn, is a mountain climber and 4808
is the height (in meters) of Mont Blanc,
which Gilles has climbed four times via
four different approaches.

When the Cairn 4808 arrived, several
months ago, I was auditioning the
Triangle Célius speakers. Probably a good
match, I thought. Both products are
manufactured in the same industrial park, just
outside Soissons, in Northern France.
Gilles got his start in the hi-fi business
working for Renaud de Vergnette, of
Triangle, when that company also made
electronics. (They no longer do.)

I grooved on the Soissons sound:
Cairn and Triangle. It was clean, open,
airy, fast, detailed, dynamic. All with
30Wpc. In my small, squarish listening
room, I had plenty of power to drive the
Celluses. I could even crank the
volume. Bruckner, Mahler.

Gilles could have goosed more juice
from the pair of MOSFET output
devices he uses per channel. (All the other
transistors are bipolar.) He could have
gotten 60, even 70Wpc. But he biases
the 4808 heavily into class-A — up to
about 10W, he told me. Above that, the
amp slips into class-A/B operation and
a less elevated sound.

"Ten watts are enough for most listen-
ing," said Gilles, "and limiting the class-A
operation this way keeps the amp from
turning into a musical radiator."

It also makes the amp last longer;
intense heat can cause premature fail-
ure. The Cairn 4808 has a very large inter-
nal heatsink. The chassis barely got
warm, but I'd be careful to give the amp
enough ventilation. No closed cabinets.

The Cairn 4808 has
ginger as well as eye
appeal. Fit and finish are
what I might expect from
a $3000 product, not an
integrated amp that sells
for about half that price.
The faceplate is beautifully
machined, with rounded
corners. The casework
is exemplary, inside and out, in a way
that makes some of the competition
look crude. Parts quality appears
to be first-rate. And by all means,
consider the silver version over the
black. If you don't want to look at it,
why would you want to listen to it?
Very French. Or Italian.

Gilles pointed out that the circuit
board is double-layered. The poten-
tiometer is an array of 0.5dB precision
resistors placed directly on the circuit
board to reduce the signal path.
There are 96 positions, meaning that very
small increments of gain can be chosen,
either from the volume-control knob or
from the remote.

Ergonomically, the Cairn 4808 took
some getting used to. It is French, after
all, and they're not going to copy the
English, Americans, or Japanese. But
after familiarizing myself with the
controls, I found the 4808 easy and
intuitive to use. I didn't have to search
for the instruction manual, which
was fortunate — I didn't get one. (It's
now available.)

Approaching the 4808 for the first
time, you might experience a certain aura
of mystery. The volume-control knob,
on the right, adjusts gain when you turn
it, and turns the unit on or off when you
press it. The other knob, at left, is a jack
of all trades. To change function, just
press, then twirl. This knob controls in-
put selection, output selection (speakers
or headphones), and balance. The chosen
function appears in the liquid-crystal dis-
play in the center of the faceplate. The
LCD is sky-blue — mountain-climbing,
remember. The headphone jack is on the
back — awkward to access, perhaps, but
you avoid scratching that beautifully
machined faceplate.

Sam's Law: the lower an
amp's power, the better
it sounds.
Sam’s Space

The Cairn 4808 has an active preamp section. Headphones, however, connect to the power-amp stage—suitably stepped down in power. I thought the sound was superb with my Semihisler HD600 headphones, which are what Gilles uses. If you buy the Cairn, you probably won’t be in the market for an outboard headphone amp.

There are five line-level RCA inputs, a tape loop, and a single balanced input. An optional, internal phono stage will be offered later, and will take the place of one of the line-level inputs. A single pair of speaker output terminals is provided. Interestingly, there are no pairs of RCA preamplifier outputs. Blamping, anyone? Triamping? There are no tone controls, of course. Quod homour!

For a compact unit—17” wide 4” high by 12” deep—the Cairn 4808 is fairly heavy: 27 lbs. The main reason is its dual-monoo design, with two 200VA toroidal transformers; in other words, a separate power supply for each channel. Gilles said that such beefy transformers would normally be used in a higher-wattage design. A third 10VA transformer handles everything that’s not audio-related, including the digital display and switching functions.

The 4808 breezed in before the Cairn Fog CD player, which I reviewed last month. That gave me plenty of time to use the amp in my two systems with different loudspeakers. CD players included the Musical Fidelity A3.2 (see below) and Rega Jupiter. Speakers included the aforementioned Triangle Celius, the Quad ESL-989, and the JMLab Electra 926. The Cairn 4808 got on famously with the Quads.

As you’d expect, the Cairn 4808 and Cairn Fog clicked as a combo—they were made for each other, after all, with styling to match. I noted a small but significant improvement in the sound of the combination when I substituted a balanced cable, supplied by Cairn, for a single-ended RCA run. The Fog is a fully balanced design, while the 4808 is not. Still, you reap the benefits of noise-cancellation at the amplifier’s inputs. Compared to an unbalanced connection, I heard wider dynamics and a quieter noise floor—not a dramatic difference, but definitely worthwhile. Run balanced, if you can.

Overall, the 4808’s sound complemented the Fog’s: clear, clean, quick, perhaps slightly lean (the French don’t like fat sound), but never austere. The upper midrange and treble were superbly delineated—delicate and sweet, without the slightest hint of hardness or grain.

I especially liked the Cairn combination with la musique de chambre—string quartets in particular. Unless a recording was poor, violins were exquisitely rendered, never turning thin, wiry, or edgy. I credit some of the sound to the Fog’s upsampling to 24 bits/192kHz. But the 4808 was clearly doing its part.

The Cairn gear had, with jazz, the kind of toe-tapping, let-go-of-the-notes sound that might appeal to the beer-drinking Brits.

The Cairn does make more powerful amplifiers, including the Mea monoblocks. At $1590/pair, the Mea is no budget-breaker. And remember, the 4808 has two pair of preamp outputs—you could use a 4808 on top and two Meas on the bottom, and your bill for amplification would come to just over $3000. Very reasonable, considering the sound and build quality. (I heard the Meas last year in Soissons.)

But maybe you should consider the purist, minimalist, European approach and “make do” with 30W. If you have a smallish listening room and reasonably sensitive speakers, the Cairn 4808 alone is likely to do the trick, and you can spend the rest of your money where you should: at the restaurant, with your wine merchant. I’m not sure you’ll find a better-sounding integrated amp, overall, for under $2k.

Which is not to say there aren’t other contenders.

The Creek 5350SE probably packs more power, more punch. If you get a chance to compare the Creek with the Cairn at a dealer, by all means do so. Musical Fidelity has a new integrated amplifier for under $2k—the A3.2, successor to their A3. I should receive a review sample soon.

One of my favorite integrated reamins the LFD Mistral SE, for $1495. It lacks a remote, and it may not have quite the resolution of the Creek or the Cairn, but it has a beguiling harmonic presentation. (French hi-fi critics flipped over it.) The Mistral SE might be listed in Class B of this rag’s “Recommended Components,” but it’s Class A in my book.

The Cairn gear had, with jazz, the kind of toe-tapping, let-go-of-the-notes sound that might appeal to the beer-drinking Brits.

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VMAX Services, P.O. Box 570, Chazy, NY 12921. Tel: (800) 771-8279, (514) 932-7786. Fax: (514) 931-8891. Web: www.vmax-services.com. E-mail: info@vmax-services.com.

Stereophile, July 2002
This uncompromising full-range loudspeaker is designed to let you hear every pure note and every subtle nuance of the live musical performance captured by the recording.

The Komri five-way loudspeaker utilises newly developed loudspeaker technology for the sub-bass, bass, midrange, high-frequency and super high-frequency drivers. Two completely independent servo controlled bass drivers incorporating Linn's Class-V Active Servo Bass technology drive the lowest frequency range. The four upper range drivers have been mounted closely together in an optimised acoustic array.

To find your nearest Linn specialist where you can experience the Komri for yourself visit www.linninc.com or call 888-671-LINN.
Meanwhile, the Cairn 4808 is Class A in more ways than one. Within its power capabilities, this is among the finest solid-state integrated amplifiers I’ve heard, regardless of price. And it doesn’t make you feel like a second-class dork because you cannot — or, like me, will not — spend a silly amount of money on hi-fi.

Gilles hasn’t forgotten build quality, styling, and ergonomics — all of which contribute to that intangible thing known as “pride of ownership.” He probably considers his 4808 the Mont Blanc of integrated amplifiers. I prefer to call it the Champus of integrated amplifiers. It’s bracing, it’s bubbly, it’s French.

Cheers.

Musical Fidelity A3.2 CD player
I like it when hi-fi manufacturers have other interests and passions. It makes for better hi-fi. Would Cairn products be so good if Gilles weren’t always climbing? Maybe not.

Same with Antony Michaelson, of Musical Fidelity. Antony doesn’t climb mountains, but he’s very, very serious about the clarinet. Like a mountain-climber, he’s always trying to surpass what he’s done before.

Complacency has sunk more than one British hi-fi firm, but it’s not Antony’s thing. His Musical Fidelity A3 CD player has been in production for three years, has continued to sell well, and probably could have marched on for another year or two. He didn’t have to replace it now.

But Antony became dissatisfied before his customers did — a good idea if you want to stay in business. He knew he could improve significantly on the A3’s performance with upsampling, which wasn’t available when he introduced the A3. So he’s replaced the A3 with the A3.2. At $1495, the A3.2 costs $300 more than the A3, but it has upsampling and costs less than a third the price of Musical Fidelity’s flagship Nu-Vista 3D player ($4995, if you can find one).

“How much have you invested in compact discs?” asks Antony at Musical Fidelity’s website. “Would you like them to sound as good as SACDs?” Then buy a Nu-Vista 3D CD player.

Does the Nu-Vista 3D make regular CDs sound as good as SACDs? I’d say almost as good, which is good enough for me, considering the sorry state of SACD software. I snapped one of the 500 3Ds Antony is making. Mikey Fremer — Mister Analog — was right to rave about the 3D when he reviewed it last October. Go re-read his review.

In my system, the Nu-Vista 3D has given me sound I’ve never heard from CD before: harmonically rich, immediate, spacious — and powerful. I’d never heard a piano sound like this with CD: the impact, the harmonic structure of each note, the ambience, the natural decay. Part of the 3D’s superb performance comes from its choke-regulated power supply, no doubt — and from the nuvistor tubes in the analog output stage, which smooth and round out any digital artifacts that might have remained.

Paradoxically, upsampling seems to lower the noise floor so that music appears to emerge from “a black background.”

But according to Antony, the main thing with the Nu-Vista 3D is upsampling. It just sounds different from oversampling. Now, in the A3.2, Antony offers upsampling for less than a third the price of the Nu-Vista 3D.

“With oversampling, it doesn’t matter whether you do it two times, four times, eight times, whatever, it all sounds the same,” Antony told me. “It’s like a hard lump in the middle of your throat — a most peculiar sound compared to upsampling.”

My friend Walt has complained about digital from day one. He talks about CD’s robbing music of its energy, compared to analog. Digital — or CD, anyway — tends to diminish and shrink the sound, he says, and make it smaller than life.

Antony noted much the same thing when he referred to congestion. But upsampling doesn’t appear to be the magic bullet. It seems to decongest and decompres the sound, making standard CD sound more like analog. Michael Fremer (no early fan of CD!) bought his Nu-Vista 3D review sample. Robert Baird, our esteemed music editor, snagged one, too.

Want to dismiss upsampling because the measurements are wrong or it’s not good for you? No one seems sure why upsampling works — including experts I’ve read or talked with. Unfortunately, this column is not the place, nor am I the person, to sort out the technical bits, as it were. But upsampling is controversial in some quarters — some designers and journalists don’t much like it, maybe because they haven’t yet come to terms with it.

Turnmoil. I love it. I also love it when something sounds great but measures “wrong.” Not that I’m saying that upsampling measures wrong.

On the Internet’s Audio Asylum a while back (www.audioasylum.com), an “immate” named Phil declared that “Upsampling... is simply asynchronous sampling-rate conversion and adds a coloration to interpolation errors, and as such makes the sound less transparent, though some people might prefer the sound distortion that it adds.”

Take your medicine and enjoy it.

A standard “Red Book” CD has 16 bits of information sampled 44,100 times per second. Upsampling or oversampling can’t change that. One of the things that upsampling does (and oversampling doesn’t) is “extend” the word length to 24 bits by adding eight bits of random dither, aka noise. One might argue that this fuzzes up the sound, compromising clarity. Perhaps it does, but there are other things gained by upsampling that might be more important than sheer clarity. Paradoxically — maybe even conversely — upsampling seems to lower the noise floor so that music appears to emerge from “a black background,” to borrow a phrase from Antony.

“Upsampling has audible effects where you shouldn’t expect them,” Antony opined. “You would have
thought that it all has to do with a lower noise threshold—now I’ve got -100dB of noise compared to -90dB. But it doesn’t seem that way, to my ear. It sounds like you have more dynamic range. The microdynamics—and by that I mean that if you have a piano and a single note is hit, you seem to have more impact—are enhanced. This phenomenon is definitely not happening at -90dB or -100dB.

"If what I think is happening is true," Anthony continued, "then standard 44.1kHz, no matter how many times oversampled, masks a huge amount of midrange detail from about 200Hz to 2kHz. This is where all the fundamental notes are—from an octave below middle C to an octave and a half or so above."

The aim of upsampling (and oversampling) is to push the sampling frequency high enough and far enough beyond the range of audible frequencies that kinder, gentler filters can be used.

"True upsampling removes digital artifacts, errors, and nonlinearities from the audio domain," Anthony declared. "They remain only at inaudible frequencies, above 30kHz." According to Anthony, upsampling allows him to extend the frequency response of his players out to 22kHz. Why this greater bandwidth should matter is something of a mystery.

"I know that I can’t hear anything above 14kHz. So having an extended frequency response half an octave beyond what I can hear should have no effect. But it does. It’s peculiar. There must be effects in our audible range even though we can’t hear the high frequencies. There are influences, or artifacts, down to 1kHz, 2kHz, 3kHz."

Certainly, to my ears, upsampling seems kinder to many instruments than oversampling—violins, for instance, seem sweeter, less hard. Upsampling is particularly welcome with chamber music. And it’s not just strings. With non-oversampled CD playback, certain instruments—trumpet, for instance, or oboe—can take on a hard, pinched quality.

"Being a clarinetist, I think this is the worst-affected instrument, because it has odd-numbered harmonics, not even-order harmonics. This peculiar harmonic mix makes the clarinet very hard to reproduce. You have partials going back up the tube reacting with partials going back down the tube. It is very easy for a clarinet to sound bright and edgy. Upsampling is far more sympathetic than oversampling to what a clarinet does, the sound that it makes."

So great is Antony’s enthusiasm for upsampling that he no longer wanted to make a player that didn’t offer it—even though the A3 was still selling well.

"I reckon that the A3.2 has 85% or more of the sound of the Nu-Vista 3D at less than a third the price. This isn’t surprising, since the A3.2 has the same mechanism, laser, control electronics, DAC, and filter as the Nu-Vista 3D."

I love it when tech guys can’t explain what the ear hears. Or why their measurements don’t rule.

Since I had the Nu-Vista 3D, I decided to put it and the A3.2 to a listening test, using my Musical Fidelity X-Cans v2 headphone amp and Sennheiser HD600 headphones.

I quickly heard that the Nu-Vista 3D was the better player. It had more power, dynamic authority, and harmonic presence—a richness of sound that the A3.2 CD could not quite equal. The 3D’s choke-regulated power supply, the nuvistor tubes in the analog output stage—all these things matter. And, unfortunately, all these things cost.

There’s another way to go. Keep your present player and add the Musical Fidelity A3 24-bit oversampling DAC I reviewed in April, possibly with a Monarchy Audio DIP 24/96 interface. Since I still had the DAC, I compared it to the A3.2, using the player as a transport.

The A3 24-bit got me closer yet to the sound of the Nu-Vista 3D—perhaps 90% of the way there instead of 85%. I heard a more dynamic, more authoritative sound. More ambient information, too. If I owned a player I really liked, or if I wanted to use a CD changer, I might consider the A3 24-bit for $1195. It has the same choke-regulated power supply as the Nu-Vista 3D.

And yes, to close the circle, there is the Cairn Fog, which we met last month—another serious contender at $1595 (with upsampling card).

I compared the Fog with the new Musical Fidelity and thought that its sound quality was on a par with the A3.2’s—maybe a little more delicately detailed in the treble, perhaps a little leaner in the bass and lower midrange. However, I’ve just learned that Gilles beefed up the Fog’s power supply before his first big production run. So perhaps the Fog now gets a tighter, more extended grip on the bottom end. I kept thinking of my friend Walt’s beef that regular CD tends to rob music of its energy. I recalled too, a conversation with a musician friend some years ago. He thought the Chicago Symphony was tops, even though he played for one of the other Big Five US orchestras.

"If you hear the Chicago, they sound louder than other orchestras," he said. "Yes, I know what you mean. Why is that?"

"I think it has to do with timing. They are a superior ensemble. They play more together. That accounts for the strength of the sound and the fantastic tonal color."

Timing. Could it be that CD, without upsampling, tends to smear the harmonics ever so slightly? Could this phenomenon be akin to what happens with a single-ended vs a push-pull amplifier, or with a class-A vs a class-A/B transistor amp?

I love it when tech guys—some of whom really are all-a-dither (pun intended) about upsampling—can’t explain what the ear hears. Or why their measurements don’t rule.
B99 a new way of hearing music

The B99 ranks as the flagship among our loudspeakers. It was our goal to design an acoustically ideal speaker system so beautiful in appearance that it would easily fit into any living environment.

www.burmester.de
Sign of the times: My local Compact Disc World store in Paramus, New Jersey, now has a vinyl section—a good one. The LPs are selling well enough that some folks I know shop there often so they don’t miss out. Nationwide, compact disc’s numbers are declining, but vinyl sales are on the rise. Of course, CD sales still tower over vinyl’s, but the trend is in the right direction. Who would have thought?

Even Burger King is in on the action. If the artwork on its new soft-drink cup is any indication, the fast-food franchise has transferred its familiar “Have it your way” slogan from hamburgers to music carriers (see photo).

A few weeks ago, while in Los Angeles, I visited the new Amoeba records on Sunset Boulevard, near Vine. Not since Tower Records in the analog heyday of the late 1970s has the town seen a store like it. The huge space is packed with new and used vinyl, with separate sections for jazz, classical, world music, and rock. Of course, CDs still dominate, but the sheer volume of new vinyl, especially in the alternative rock section, was mind-boggling—thousands of new titles from groups I’d never heard of. These LPs were not aimed at baby boomers.

I bought Giant Sand’s cover magazine (Thril Jockey 104) because I knew the group and appreciated its droll sense of humor. The album has a guest appearance by PJ Harvey and great sound. I took a chance on Spoon’s Girls Can Tell (Merge MRG195) because of the spinning-record cover art; on Death Cab for Cutie’s The Photo Album (Barsuk Bark 21LP), which turned out to have been cut by Stan Ricker; and Incubus’s nicely packaged two-LP set, Morning View (Immortal/Epic E2 85227). Worthwhile chances, as it turned out.

Graham Engineering 2.2 tonearm: the final upgrade?

As reported in April in this column, upgrading to Graham Engineering’s new 2.2 bearing cap brings a major improvement to the overall sound of their 2.0 tonearm, but especially in the low frequencies. Bob Graham wanted me to compare an all-new 2.2 with an upgraded 2.0, and once he’d caught up with production, he sent me one. As you can see in the photo, there’s been a change to the base plate, from two- to one-piece construction. The internal armwand wiring has also been changed.

Comparing the 2.2 and the upgraded 2.0 was easy: I put the Helikon SL cartridge on the new armwand and listened to assorted reference tracks, then installed the 2.2 and listened again. Aside from the hardware, the only variable was Graham’s new blue silicone damping oil.

I used Hovland’s Music Groove phono cable (Graham also has a new 1C-70 cable for the 2.2, which I didn’t audition). The phono section was the $29,000 Boulder 2008 (see review elsewhere in this issue).

Some might be skeptical that the change in baseplate yields significant audible differences, thinking that there’s no reason for it. However, a spectacularly tiny groove excursion can release an enormous amount of vibrational energy. That’s why I think it’s critical for a tonearm to be rigidly mounted—the more directly, the better—to its plinth, so that energy can be quickly and effectively evacuated. That’s also why the fanatical attention to tight bearing tolerances Rega has paid in their upgraded RB-900 tonearm has paid such obvious sonic dividends—though the arm, for all intents and purposes, looks like any old Rega arm. But more about that in a future review of Rega’s upgraded P9 turntable.

The sonic differences between the upgraded 2.0 and the all-new 2.2 arms were easy to hear. The 2.2 had slightly more solidity and weight on bottom, and greater richness and harmonic development in the midrange. The more solid bass was clearly evident on such roomshakers as “Baby You’re a Rich Man,” from a German pressing of the Beatles’ Magical Mystery Tour, and the title track of Davey Spillane’s Atlantic Bridge.

Critics of Graham arms point to their “analytical” and underdeveloped midband. That criticism didn’t apply to the upgraded 2.0, and even less to the new 2.2. You might not like what either tells you about the record you’re playing, but don’t blame the messenger.

Should you trade in your old 2.0 for an all-new 2.2, or just upgrade the bearing cap? I’d upgrade; the differences were not major. I think Bob Graham has refined his design about as far as he can, and has kicked the fit’n’finish, already high, up another notch. To surpass what he’s accomplished with the 2.2, he’ll have to start with a blank piece of paper.
((Freedom))

Forget the bulk. Eliminate the rack. Think work of art. JVC's beautifully elegant TH-V70 gives you the freedom to be creative. Hang it on the wall, stand it upright, or lay it down. The new TH-V70 home theater system is the perfect compliment to today's digital televisions and flat panel displays.

From movies to music, the digital direct progressive scan TH-V70 offers realism and advanced performance that belies its graceful lines. Featuring 5 matched satellites, a 140 watt powered subwoofer, 10-bit Video DAC, and 24-bit Audio DAC.

Freedom never looked (or sounded) this good.
I can’t say with absolute authority what is the “best-sounding tonearm in the world,” but the Graham 2.2 is among the handful of contenders. Factor in its build quality, case of setup, versatility, and convenience, and it’s hard to beat. And if $3200 is too much for you, you can start with the 2.1 arm ($1995), which is the same basic design fitted with a smaller, lighter bearing cap of aluminum, brass side weights (instead of the 2.2’s tungsten), and an aluminum (instead of ceramic) armwand. No setup jig is supplied. You can order a jig at extra cost, or get a Wally Tractor (more accurate, but not as convenient). Then, one at a time, you can upgrade the parts until you’ve got a full-blown 2.2, and you won’t have spent any more than if you’d bought an all-new 2.2 to begin with.

Transfiguration Spirit Mk.3 phono cartridge

In my original review of the Transfiguration Spirit in the May 2000 Stereophile (Vol.23 No.5), I referred to the low-output (0.4mV) moving-coil cartridge’s top-end performance as “spirit-ed.” It wasn’t bright or etched, just “spotlit,” and loading it down didn’t seem to help. Still, given its sharp focus, overall cleanliness and clarity, and detailed, tight, fast bottom end, the $1500 Spirit was a nice cartridge when used with warm-sounding electronics or lush speakers. But what could have been one of the most coherent and “together” cartridges at the price—one that shared many of the attributes of the far more expensive and superb-sounding Transfiguration Temper Supreme—still had that one little top-end problem...

I still had the original Spirit on hand when I received the Mk.3 version. (Immutable Music’s Transfiguration cartridge line is now imported by Discovery’s Joe DePhillips.) I did my comparing using two VPI JMW 12.5 tonearm assemblies on VPI’s Aries Extended “hotrod” turntable (reviewed in the March 2002 “Analog Corner”), which permitted almost instantaneous comparisons. I determined that the Mk.3 retained all of the Spirit’s best aspects while doing away with what I found somewhat objectionable on top.

Designer Seiji Yoshioka has managed to tame what I now think was some kind of HF resonance—the Mk.3 was neither rolled-off nor softened on top, nor was there less detail or transient snap. But the spotlighting was gone. The Mk.3 more closely resembled the tonality of the far more expensive Transfiguration Temper Supreme, one of the finest cartridges I’ve ever heard. The Supreme is no razzle-dazzle cartridge, but one of the most neutral, no-nonsense transducers currently available—which is what made the original Spirit’s “spirited” top-end performance so surprising.

The Spirit Mk.3 retained the original’s clarity, focus, dynamic authority, and superb tracking capabilities (at 2gm) while adding a higher level of frequency neutrality. While it didn’t possess the Supreme’s harmonic subtlety and inner detail, it did offer top-tier rhythmic organization, musical drive, and coherence. You’ll have a difficult time identifying any “character” to its sound, which is as it should be.

With its yokeless dual-ring magnet construction, boron cantilever, PA solid-diamond stylus, and body of milled aluminum with integral threaded mounting holes, the Spirit Mk.3 is a mighty attractive package for $1500, and its ability to organize and present focused images in space is one of its strongest suits. If you prefer clarity, focus, and spatial “neatness,” the Spirit Mk.3 should appeal to you.

But if you’re willing to give up some of the Spirit Mk.3’s rhythmic thrust, impressive clarity, and tonal neutrality, you can get more robust bass, a somewhat richer harmonic palette, and a more relaxed overall presentation from Sumiko’s Celebration ($1500). But I don’t think you’ll get as accurate a picture of what’s in the grooves—not that every audiophile wants that!

Dynavector XX-2 phono cartridge

Another cartridge in the same price range as the Spirit Mk.3 is Dynavector’s new XX-2 ($1650), which seems to be based on the guts of the XX-1 but boasts a new, semi-open body of cast aluminum instead of some sort of plastic. Highlights of the design include an alnico-5 magnet instead of the usual ferrite or rare earth, a patented Magnetic Flux Damper, a solid-boron cantilever, a Pathfinder line-contact stylus, and PCOCC (Pure Copper Ohno Continuous Casting) coil wire. In other words, the XX-2 is a high-tech piece of machinery.

The XX-2’s output voltage is low at 0.23mV, its recommended tracking force is 1.8—2.2gm, and the recommended load is down there at 30 ohms. Weighing 8gm, the XX-2 shaves a third off the XX-1’s 12gm, making it more suitable for medium-mass arms. (Although I always check the resonant frequency of any combination of cartridge and tonearm—mostly the Graham 2.2 and Innmedia RPM-2 arms—I don’t mention the number unless it’s out of the ideal range (around 10Hz). I haven’t mentioned any numbers in this column in quite some time, so you can assume that they’ve all been in the ballpark. That includes the XX-2’s resonant frequency of about 9Hz in the Innmedia arm.)

Dynavector claims that its Magnetic Flux Damper and Softened Magnetism processes and the alnico-5 magnet reject magnetic fluctuations and help create stable output voltages, among other claimed advantages. Every manufacturer’s got a story; the real one is what a cartridge delivers from the grooves.

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1 Wally Malewicz, WAM Engineering, Tel./Fax: (763) 478-6685, E-mail: www.malewicz.com, Web: www.campusblack.com, click on “Wally’s Vinyl Corner.”
Mounted on the Immedia RPM-2 or the Graham 2.2, the Dynavector proved a superb tracker, yielding the “deep, powerful” bass promised by the instruction sheet. Not a bass line as prodigious as the Celebration’s, but a rich and supple one more appropriate to the rest of the picture, and one emphasizing tonality and weight over attack. In fact, the XX-2 seemed to emphasize the aftermath of the musical event—the result of the transient—rather than the event itself. Cartridges that emphasize the transient can sound fast, lean, and exciting—like the van den Hul Black Beauty Colibri, which I reviewed in August 2000. Some people love that sound; others hate it.

Ideally, you’d want something that balanced the event and the musical aftermath, but any cartridge ever delivered that? All the cartridges I’ve auditioned have leaned one way or the other to differing degrees. The early Koetsu Rosewood was rich and warm, the old Dynavector Ruby fast and lean. Most of today’s cartridges display far less “personality,” and that’s a good thing. The XX-2 leaned ever so slightly toward “rich,” with a strong, lithe bass line and a sweet yet extended top end, but never sounded soft, clogged, or boring.

But if you prefer a really stiff ride in which you feel all the bumps in the musical road, the XX-2 might not be the cartridge for you. That’s not to say it made cymbals sound like airbrakes, if you know that sound. There was a nice, crisp ring to cymbals, and snares cracked smartly, but I’ve heard sharper attacks, and more air and space. If you want to count the rivets in a cymbal, you might look elsewhere—unless your system needs a few notches of taming.

**Mounted on the Immedia RPM-2 or the Graham 2.2, the Dynavector proved a superb tracker.**

As Dynavector claims, the XX-2’s trouble was “both clear and lively, possessing none of the harshness found in many moving-coil designs.” Slightly edgy recordings really sounded swell through the XX-2, but sweet ones could sound a bit soft and lacking in rhythmic drive. Of course, the opposite is true of cartridges that lean toward the fast and “etchy.” They can sound great on lush, liquid recordings, and positively car-shattering on edgy ones. Count both varieties in your LP collection before you buy any cartridge, but don’t think the XX-2 is better for one genre of music than another. The XX-2 could rock with the best of them. It’s more a matter of how the music was recorded.

Tonal balance is key to a transducer’s personality or (hopelessly) lack thereof, and while the XX-2 tilted slightly one way, it was subtly done and didn’t interfere with rhythmic thrust, image solidity, or the perception of neutrality. All of that is accomplished in part by the solid, extremely well-controlled bass. An XX-2 with the Celebration’s copious bass would be a disaster, given the XX-2’s slightly polite top end. But the Celebration adds a bit of sparkle on top to balance its bottom, and that ingredient makes it work.

Overall, the XX-2 is a very sophisticated, full-bodied cartridge that delivered authoritative macrodynamics and excelled at portraying harmonic nuance, especially in the midband. If you prefer the resonant, sonorous, woody call of strings, the reedy element of a saxophone, the piano’s sounding board, or a singer’s chest cavity, you’ll dig the XX-2. If you’d rather the emphasis was on the bow dragging across the strings, the sax’s bell, hammers hitting piano strings, or the singer’s throat, the XX-2 won’t be for you. If you want both, you’ll have to fiddle with some other part of your system or play with loading (I tried 100 and 1000 ohms and settled on 1000, though Dynavector suggests 30 ohms). I prefer a bit more spit’n’polish on top than the XX-2 delivered, but that’s my taste. I think the XX-2’s performance and build quality would have cost you much more just a few years ago.

**ZYX R100FS phono cartridge**

The ZYX R100FS phono cartridge ($1995) is being touted as a “Helikon killer” by some, including its US distributor, Bertrand Audio. But I’m not swallow- ing that hype any more than I paid attention to this, from the instructions: “It gives you extremely even sound balance at both channels and extremely symmetrical sound that is just like symmetrical Fuji Mountain.” Oh-kay…

I hadn’t heard of ZYX, but when I asked around, a number of people suggested the company had supplied Montreal with its Alpha Genesis cartridge, though the R100FS looks nothing like that veteran transducer. However, I found a model RS-10-H on a German website that did resemble the Alphas.

Whatever the source, its body of transparent plastic makes the R100FS a unique-looking cartridge. It’s a featherweight 4.2gm—when I ran it with the Immedia RPM-2 tonearm, I had to add a blob of Blu-Tack to the headshell to track at the recommended 2gm (1.7-2.5gm is the range suggested). With the Graham arm, I merely had to remove the extra counterweight. Mounting the R100FS was a pain in the old-fashioned way: it requires nuts to be slipped into cramped spaces under U-flanges on either side of the body. A minor annoyance in the big picture, but you’ve been warned. Once you’ve gotten used to the convenience of threaded holes, it’s hard to go back. The R100FS’s output is 0.24mV; the recommended loading is 100 ohms or less.

The designer calls his generator system “Real Stereo,” and claims it’s the only one that pays attention to 15 vital points necessary to address in order to eliminate “time distortion.” I wish I had the space here to deal with all of his interesting and provocative claims. A particularly intriguing one had to do with mechanical vs electrical symmetry and different ways of winding coils.

The “FS” model uses American-made five-nines silver wire; the standard R-100 uses six-nines copper. Both versions incorporate a Microridge stylus with a 3μm by 6μm contact area, the edges of
the diamond Shank set parallel to the cantilever's sides. This is claimed to make the hardest axis of the crystal the point of groove contact, and to result in "stable and smooth tracing and...a very refined sound."

I found that sonic claim to be 100% true. The R100FS had a relaxed feel about its sound that was "smooth as water flowing." On one level, the R100FS delivered the least mechanical sound I've heard from a cartridge—absent was any sense of a stylus coursing through a vinyl groove. Part of that impression was due to the almost magical background silence. For reasons I don't understand, the R100FS seemed to make pops, clicks, and other extraneous groove noises disappear. Yet its high-frequency performance was extended and revealing. Perhaps it had something to do with the contact profile, with the stylus touching only unworn parts of the groove. Whatever it was, the ZYX R100FS was more tolerant of chewed-up LPs than any stereo cartridge I've ever auditioned, and was one of the quietest.

So much for what wasn't there. What was was very well-balanced, and as far as the lean side of neutral as the Dynavector XX-2 was on the rich. In some ways, the R100FS matched the "feel" of open-reel tape, minus the hiss, which is about as great a compliment as one can pay a cartridge. It had an open, extended, and smooth overall sound that masked any apparent tonal coloration over the short haul, though it presented a forward soundstage that was almost in my lap, and its harmonic development was somewhat stunted.

Over the long haul, however, I found the R100FS's sound curiously bland, and lacking in excitement and involvement. The ZYX excelled at delivering the event (though transients were somewhat smoothed-over even as the picture was somewhat forward), but it fell short on the follow-through. It tended to dry up ambiance and flatten both image and soundstage depth. To save space this month, I've avoided specific musical references, but here's an example of what I noticed.

I played Ian and Sylvia's dramatic and romantic Northern Journey (Vanguard VSD 79154, black Stereolab label) through the R100FS and the Dynavector XX-2. (I listen to this duo and wonder how they could possibly have broken up the act or their marriage.) On most tracks, only a modest amount of reverb with a very fast decay time has been added behind the instruments and vocals. Through the XX-2 this translated into image roundness, stage depth, and a slight bit of warmth, but all of this was barely discernible through the R100FS, which pushed the images forward and flattened them, resulting in a less than appealing picture.

After my first extended listening period, which went on for a number of weeks, I took a break and then came back to the ZYX. All of its appealing qualities were immediately apparent, but so was its dryness and its less than complex delivery of harmonics. Switching back to the XX-2 was almost like adding color and dynamic shading to a two-dimensional black-and-white picture, though I exaggerate for the sake of illumination. I hesitate to open the "copper vs silver wiring" debate, but damn if, in hindsight, that's just what I'm describing. Silver naysayers claim "bright but overly smoothed-over transients," and that's what I heard.

Sluggish- or warn-sounding systems will probably benefit from the ZYX R100FS, but I don't recommend it for systems that trend toward the opposite end of the sonic spectrum. Still, the R100FS had many appealing qualities, and, as always, your mileage may vary. I look forward to hate mail from fans of this cartridge.

Wrap-Up

To my ears, the best-balanced of these three cartridges and the most organized, soundstage-wise, was the Transfiguration Spirit Mk.3. It exhibited a clarity, transparency, tonal neutrality, and soundstage focus that were enticing and compelling. However, for overall musical richness and stunning, forceful, extremely well-controlled bass, you can't go wrong with the Dynavector XX-2, which also excelled at providing musical nuances you expect to get only from far more expensive cartridges. As for the ZYX R100FS, its overall quiet, its groove-friendly rejection of noise and wear, and its tape-like smoothness were high points. The less appealing aspects of its sound could be system-dependent, so if what stuck in my craw was exactly what your system needs, further inquiries are in order. Who sez I'm not diplomatic?

I used the battery-powered Aesthetix Benz MC Demagnetizer throughout these listening sessions. Like other well-designed demagnetizing devices, the MC ramps up, holds, and then ramps down a low-distortion, high-frequency sinewave. It costs a very reasonable $199 and seems to work as well as more expensive models.

**Coming Attractions**

In the works are reviews of the Groove and Lanum LP-2 phono stages, the Audio-Technica AT-OC9ML/II and Grado Statement Reference cartridges, the Sutherland 12dAX7 USB-based D/A converter, and Acoustic Energy's AEGO2 5.1-channel surround-sound loudspeaker system. I leave you with part of a phone conversation between U2's Bono and Captain Beefheart (aka Don Van Vliet), which appeared in the April 2002 issue of Mojo:

**Captain Beefheart:** Can I play you a tune?

**Bono:** That would be a treat.

**Beefheart:** Allow me to turn this on. [plays Duke Ellington's "Take the A Train" and Sonny Boy Williamson II's "I Don't Know"]

**Bono:** Wow, who was that?

**Beefheart:** That was Sonny Boy.

**Bono:** Oh my God, it sounds so fresh, like the paint isn't overworked. That's an original recording, right?

**Beefheart:** He plays horrible harp. Uh-huh!

**Bono:** Yeah, extraordinary. Did you play that on CD or vinyl?

**Beefheart:** Vinyl.

**Bono:** Even across the phone, you can kind of feel the groove of it. Are you suspicious of all the digitalizing of everything?

**Beefheart:** I hate it, you hear me. Goddamn sons of bitches.

**Bono:** I know. There's something about the physical thing of the needle in the groove, it's like sex and it's a contact sport.

**Beefheart:** Right. [laughing]

**Bono:** I think the digital recordings have a personality but it's the personality of Formica. Some music can sound good on it, some hip hop, because they've got lower end; but I agree with you, vinyl is a solution...
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Introducing the AX-7 Integrated Amplifier. The first in a new series of unprecedented, high performance, high value products from Ayre.
I don’t know who originated the idea of “desert island” recordings. I do know that for many years there was a BBC radio program in the UK that asked celebrities to list their choices. While reading quite a few of those lists, I had the sneaking suspicion that the respondents either hadn’t entered fully into the spirit of the task, or were tailoring their choices with a view to what the radio or reading audience would think.

Interior monologue: “I am an anorak-wearing viola da gamba player. Hmm. Birth of the Cool had better be on my list. London Calling, too, just to be safe.”

If you really are on a desert island, you’re alone there.1 If you give the matter serious as well as holistic thought, you may conclude (as I have) that the kind of recordings you would choose to listen to during a time of enforced solitude will be different from those you use to evaluate equipment, or those you revere as having advanced the musical arts. And let us leave aside for the moment the question of how long your battery-powered music system would keep playing.2

In previous columns I have discussed many of the recordings I regularly use to evaluate equipment. In the future, I may make recommendations of recordings I think are the most artistically or culturally significant. But for now, I want to tell you about the recordings I would bring with me to that deserted place. What is called for is a combination of consolation and encouragement.

Each of these recordings thoroughly deserves your investigation and, in some cases, the expenditure of time and effort to meet the music halfway. As always, your local public library is the place to begin exploring — unless, of course, you actually are on a desert island. In that case, perhaps blackberry.net, amazon.com, and FedEx can help.

Despite the fact that I have spent most of my life involved with classical music for strings, my first choice features jazz trumpeter Clifford Brown. But we split the difference, because the album is Clifford Brown with Strings. Brown phrased ballads and torch songs the way David Oistrakh phrased Shostakovich’s most soul-baring utterances. No higher praise is possible from me.

I want to tell you about the recordings I would bring with me to that deserted place.

What is called for is a combination of consolation and encouragement.

Almost as bittersweet — but definitely moving uptempo — is Miles Davis’ Porgy and Bess collaboration with orchestrator Gil Evans. That Porgy and Bess has always been a distant also-ran to Davis’ two or three household-word (and, dare I say, a bit overrated?) albums remains a bafflement. Trivia buffs note: The Porgy and Bess horn section includes the young Gunther Schuller.

Super-nelllow jazz-guitar great Jim Hall’s legendary Concierto has been reissued in luscious sound with generous alternate takes and additional tunes. As far as I know, Concierto was Hall’s only collaboration with trumpet and sax icons Chet Baker and Paul Desmond, and their contributions are, predictably, treasurable memorable. Burn me at the stake if you must, but I prefer Jim Hall & Co.’s take on the tune from Rodrigo’s guitar concerto to the one on Miles Davis’ Sketches of Spain.

Speaking of guitarists, the fruitless-to-attempt-to-categorize Bill Frisell’s cornucopia of Americana, Have a Little Faith, is a must-have, particularly for its Mex-Tex/surf-music cover of Stephen Foster’s “Little Jenny Dow.” Crank it up!

The Tallis Scholars’ Heinrich Isaac: Missa de Aparitis would be my choice for a polyphonic Mass — though you can’t go wrong with any of the Scholars’ Byrd, White, Tallis, or Palestrina discs. Lou Harrison’s La Koro Suto is on almost the same spiritual plane. As a present for yourself or your family, why not obtain La Koro Suto and a few Tallis Scholars’ discs? The contrasts will be illuminating.

To get myself over the inevitable low spots, The King’s Singers’ massively silly Gilbert & Sullivan program, Here’s a Houndy-Do, is just what the doctor ordered. And if that doesn’t work, there’s always Monty Python’s Contractual Obligation Album and Matching Tie and Handkerchief. Franconette, Scarletta, if you’re stuck alone in the middle of nowhere, Monty Python might save your sanity if Clifford and Miles can’t…

Just thinking about anything — symphonic, solo, or chamber — of Elgar, Vaughan Williams, or Delius, conducted by Boult or Barbirolli, would be welcome. Mahler’s nearly unrelentingly tragic Symphony 6, in the Glenn Cortese—led Jerry Bruck recording (Stereophile’s “Recording of the Month” for August 2000) would be good for the occasional wallow, as would the Joe Wheeler completion of Mahler’s unfinished Symphony 10, with Robert Olson and the Colorado Mahler Festival Orchestra (www.mahlerfest.org). And as long as I’m wallowing, there’s always Elvis Costello’s smolderingly angry All This Useless Beauty.

I would not want to be without Morten Lauridsen’s heartfelt Lux Aeterna or its template, Brahms’ Ein deutsches Requiem. There is only one recording of Mortenson’s masterwork; of the many great Brahms Requiem recordings I’d want Robert Shaw’s and Sergiu Celibidache’s. Richard Strauss’s Four Last Songs in the incomparable Lucia Popp/Klaus Tennstedt version offer a ray of hope. The otherworldly confidence of Dante’s sacred cosmology pervades Elgar’s Dream of Gerontius; I’d want every available recording and several that are not available, the better to make an in-depth study.

1 Desert in this sense refers to the island’s being deserted, no matter how lush and green it might be. When I visualize a desert island, it is always Nikumaroro, in the South Pacific. The International Group for Historical Aircraft Recovery (www.ighar.org) has made a compelling circumstantial case that Amelia Earhart and her navigator, Fred Noonan, perished there of thirst after running out of fuel and surviving a crash landing. Requiem aeternam dona eis, Domine.

2 Contra de Ponte’s gripping adventure memoir, Kaboana, tells of his having been the last white man to meet Eskimos who had never before met a white man. One of the most haunting images in the book is of an encampment de Ponte passed on his way North, where a retarded Eskimo youth amused himself all day with a wind-up Victrola, but only one record.
For Beethoven's Violin Concerto, my believe-it-or-not Desert Island choice is Josef Suk. David Oistrakh's luminous Brahms Violin Concerto with George Szell and the Cleveland Orchestra may have made it to CD by the time of my marooning; if not, Oistrakh's earlier stereo recording with Otto Klemperer will have to do, with the Yehudi Menuhin/Wilhelm Furtwängler mono Lucerne effort packed along for Menuhin's divine frenzy in the Kreisler cadenza. Pinchas Zukerman's earlier Elgar concerto, with Daniel Barenboim, strikes the perfect balance of emotional intensity in feeling but reserve in expression, and is plainly superior to his remake. Ruggiero Ricci's Glazunov concerto is a time-warp high-calorie virtuoso treat, while Michael Rabin's Wieniawski Concerto 2 is by turns poignant and thrilling.

Classical elegance is epitomized by Mozart's Sinfonia Concertante for violin and viola, ably served by Iona Brown and Josef Suk. Yehudi Menuhin and Stephane Grappelli's *Hits from the 1930s*, featuring "Jalousie," defines swinging nonchalance. And until I get around to recording Arturo Delmonti's interpolation, Jascha Heifetz' "Vitali" Chaconne (the version with organ) will serve as a reminder of what the best violin playing can be.

Singer-songwriter Michael Franks' jazz-tinged *Sleeping Gypsy* would have me pondering the hopes and foibles of erotic love as, otherwise, only Ella Fitzgerald can; the spacer and less soigné Jesse Colin Young's *Light Shine* leads a tranquil perspective. Jackson Browne's nearly perfect self-titled first album (usually known by its cover legend, "Saturation Before Using") and Dan Fogelberg's *Home Free* both combine intelligent lyrics with rewardingly acoustic production values.

*A Little Touch of Schmilson in the Night*, Harry Nilsson's lamentably underappreciated set of Great American Songbook standards such as "Makin' Whoopee" and "As Time Goes By," with orchestra conducted by Gordon Jenkins, is a musical celebration of uncommon refinement. Gordon Lightfoot's *If You Could Read My Mind* and *Endless Wire* overcome their occasional moments of whininess and blaming and remain fresh and involving. James Taylor's *Mud Slide Slim and the Blue Horizon* is, in comparison, a much more sophisticated affair, with the added attraction of his duet with Joni Mitchell, *Her Court and Spark*, *Boz Scaggs' Silk Degrees*, *Roxy Music's Avalon*, and *Wham!'s Make It Big* are just the things to listen to while driving a convertible toward the setting sun, so I'm sure they'll cast the same spell if one is sitting on a beach with a boom box.

Anticipating having a lot of time on my hands, I should have a complete Beethoven string quartet series or three (the Emerson, Quartetto Italiano, and Guarneri sets will do for starters). Ravel's and Debussy's quartets are evergreens — in addition to the earlier Juilliard Quartet effort, I would want to study during my leisure those of the Quartetto Italiano and Quartetto Nuovo.

If you have never experienced the surprisingly visceral impact of an acoustical phonograph, the best thing would be to locate a hospitable collector willing to give a demonstration.

Brahms' late piano pieces, in particular Op.118 No.2, embody for me consolation and acceptance as no other music can. Ivan Moravec owns those pieces, but I'd hedge my bets with Brahms' Piano Quintet with Artur Rubinstein and the Guarneri Quartet, and his Violin Sonata 1 with Arturo Delmonti and Yuri Funahashi.

It were to be a long stay, I'd want John Rutter and the Cambridge Singers' *Christmas Night*, and my own *Rejoice! A String Quartet Christmas, Volume Two*. Oh... if I really were going to be alone, I'd want some recordings of my wife reading to my children, and of my children reading aloud.

**Elemental Reading**

Before recommending Leo Beranek's *Concert and Opera Halls: How They Sound* in the May 2001 issue, I confirmed that it was available. However, the few remaining copies quickly sold out. Do not lose heart: an updated edition is in the works. The publisher is the Acoustical Society of America, whose website, http://asa.aip.org, lists quite a few volumes of interest.

Although I hesitate to recommend a book that is out of print, John Culshaw's *Ring Reawakening* is worth tracking down or borrowing from the library. Culshaw produced the first complete studio recording of Wagner's *Ring* cycle, originally released on LPs. His unique memoir is a fascinating behind-the-scenes view of the early days of the synergy between LP recording and classical music performance as international big business. Culshaw's life was tragically cut short by an unnecessary re-immunization: The batch of vaccine was bad, and he died of anthrax.

An engrossing history of the earliest years of acoustical recording is Jerroll Northrop Moore's *Sound Revolutions: A Biography of Fred Gaisberg, Founding Father of Commercial Sound Recording*. Not to be missed. And if you — like many people — have never experienced the surprisingly visceral impact of an acoustical phonograph, the best thing would be to locate a hospitable collector willing to give a demonstration. The next best thing is to get one of Nimbus' fastidiously produced *Prima Voci* CD remasterings, which are modern stereo recordings of acoustically recorded 78rpm discs being played back on a state-of-the-art phonograph from the 1920s. Two of my favorites are *Amelita Galli-Curci* (NIM 7806) and *John McCormack* (NIM 7806), either of which might lead you to reassess what is important in reproducing music. (Despite Nimbus' sad demise, I expect that copies are still floating around.)

Unless you just tuned in, you know by now that one of the first five recordings I reach for in order to evaluate a new component is Robert Shaw's Atlanta recording of Brahms' *Ein deutsches Requiem*. For placing the *Requiem* in its complete historical and social contexts, Jan Swafford's controversial *Brahms: A Biography* has my vote. It may be the best biography of a musician I have ever read. Most highly recommended.

One of the best books for putting Gustav Mahler in his wider cultural and social context, and just plain enjoyable to read as well, is Frederic Morton's engrossing and gossipy history of one year in Vienna, *A Nervous Splendor: Vienna, 1888—1889*. Just as Mahler realized that the classical symphony had reached an endpoint, one can argue that in Vienna in 1889, the European tradition of progressive liberalism intuited (without fully realizing) its failure and futility as a means of shaping a coherent, stable society. For most of the 20th century, the resulting gulf was filled by ethnic and class warfare and various flavors of totalitarianism. We are still grappling with the resulting mess.

Every time I see a news report from Bosnia, I can't help but recall that what started World War I was not the assas-
nation of Archduke Franz Ferdinand, but Austria's demand that its forces could cross borders to apprehend the responsible Serb terrorists. That Franz Ferdinand was deemed worth trying to kill was an accident of fate. The man who had been closer in line to the Austro-Hungarian throne was his cousin, the progressive and widely admired Crown Prince Rudolph. Neither the first nor the last powerful man to throw it all away over a flighty young woman less than half his age (she was 16), Rudolph also hid a deep streak of melancholy. At the royal hunting lodge at Mayerling, where they had tried, he shot her, then himself. (Memo to Monica: Count your blessings.)

In A Nervous Splendor,
Morton weaves art, culture, politics, and human drama into a compulsively readable whole.

There is no precise way to measure such impacts, but one could argue that the murder-succide at Mayerling had more fundamental and far-reaching consequences for the world than the assassination of President Kennedy. Certainly the self-confidence of Europe's largest yet most diverse political unit was shattered, never to return. And that shattered—but fundamentally in denial—milieu was the hothouse in which Gustav Mahler's art came into bloom.

Morton weaves art, culture, politics, and human drama into a compulsively readable whole—perhaps not the last word in scholarship or analysis, but more respectable than the tabloids and the supermarket checkout counter, and almost as much fun! And when you've finished A Nervous Splendor, you may have a deeper insight into Mahler's works than a musical analysis alone could provide.

On the much lighter side, K.K. Beck's We Interrupt This Broadcast is a tongue-in-cheek murder mystery set in a dilapidated vinyl-only (9) classical AM radio station. Beck really must have done her homework—her odd assortment of grooming-challenged classical radio characters rings laugh-out-loudly true. My guess about the central plot motivation was wrong, but I bet you, too, will jump to the same conclusion. (Think of all those Shaded Dogs?)

Questions? Comments? Haikus? jnrrds@jnrrds.com

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Inside the abstract-art booklet that accompanies Jason Moran's latest CD, Black Stars (Blue Note CDP 32922), there's a photo of the jazz pianist's grimacing face. He looks pained but exhilarated. A smear of black ink erupting from the top of his head makes him look as if he's exploding. It's the perfect image of Moran's propulsive music—a charged mix of intellect and romance, thrills and joy.

At a recent duo performance at Lincoln Center's Kaplan Playhouse, Moran and alto saxophonist Greg Osby displayed the beauty of jazz telepathy, engaging in a jaunty game of word tag as if one were completing the other's sentences. Clad in a dapper black shirt, dress slacks, and a dark fedora, Moran scrambled, tumbled, and rushed across the entire range of the keyboard, then settled into thoughtful passages of quiet lyricism before launching into another round of roller-coaster dynamics with his mentor.

Watching Moran, you sense that he's constantly surprising himself as he stretches—and he's thoroughly absorbed in the frolic. "I listened to records by guys like Jaki Byard, Earl Hines, and Thelonious Monk, and they made it seem like it was just fun," says Moran, who, at 27, is one of jazz's brightest young stars. "And, you know, that's what it's supposed to be—fun. That's what performing and recording is all about. I want to play music that I enjoy and hope that other people will enjoy it as well."

While his résumé boasts three Blue Note albums as a leader, the New York-based Moran is still only a jazz fledgling. Yet he's gained the confidence and wisdom of an elder, already learning a survival technique to ensure his creative longevity: maintaining a joie de vivre while striving to master the mystery of improvisation. Moran plays the piano with a sense of glee,
JASON MORAN 88 KEYS TO THE CASTLE

cressing the keys at one moment, fracturing chords the next, then speeding with splayed fingers into a chorus.

A one-time video-game junkie, Moran says he and Osby call their improvisational excursions “Jedi mind tricks.” “It’s like Star Wars, when Luke had Yoda and Obi-Wan Kenobi in his eyes,” he says, sitting in the living room of his Harlem apartment, along the Hudson River. “It’s deeper than ESP.”

Moran is a hip-hop aficionado and a student well-versed in the jazz tradition. He began on the piano early, reluctantly practicing under his mother’s watchful eye while his friends played outside. Those after-school lessons laid the foundation for his first steps into the New York jazz scene, one of which was an invaluable association with master jazz pianist Jaki Byard. Moran also credits the nurturing of alto saxophonists and bandleaders Osby and Steve Coleman, in whose bands he had the freedom to discover his voice. “Greg and Steve introduced me to a lot of people that I now have a genuine relationship with,” he says. “I see guys like Andrew Hill and Richard Muhar Abrams, and I’m amazed: Here are the artists that I used to worship. Now they’re friends. It’s very heavy.”

Moran grew up in Houston, Texas, where his parents filled the house with jazz, pop, R&B, and classical music from their record collections. (His own current listening patterns reflect his parents’ eclectic tastes: early-’70s Stevie Wonder, Monk, Maria Callas, Messiaen.) While still in the midst of resenting his piano lessons, Moran experienced a sudden conversion, thanks to his love of hip-hop. “Groups like De La Soul in the late ’80s were using break-beat samples by people like Horace Silver and Monk. So I’d go break hunting, looking on the back of a rap CD to see who got the credit. Sometimes a song would be named, so I’d search for the original version. It became like a treasure hunt, or like finding gold at the end of the rainbow. When I tracked down the original, I dissected it.”

Moran then began taking a more active curiosity in the music by learning some jazz standards. “I started digging through my father’s albums to find as many different versions of a song as I could,” he says. “For example, I’d learn ‘All the Things You Are,’ then find a Jim Hall record with that song. Listening to and studying records was my jazz ed. I think it’s the best way, rather than having a teacher tell you what’s best to listen to. I was using my intuition to discover what was genuine.”

While in high school, Moran discovered Thelonious Monk. “I never heard anything like him. He did everything so different from the way a pianist is supposed to play, like the way he hit notes—Bling—and the way his left hand was like dignified ghetto: boom boom! He showed me what everybody wasn’t doing, how they weren’t composing rhythmically.”

Moran listened to every Monk record he could get his hands on, and copied as much as he could in his own playing. “Unless you’re a freak, you’re not going to have your own voice when you’re 17 or 18. So my philosophy was to copy, to learn solos verbatim, to pick up comping styles, to listen and internalize.”

He went from Monk to McCoy Tyner, Phineas Newborn, Horace Silver, Herbie Hancock, Bill Evans, Bud Powell, and Andrew Hill. “It was the best groundwork. I took it all in, threw it into a bag, and now it’s starting to form into something.”

Jazz watchers have been noticing, including Village Voice writer Gary Giddens, who says Moran “is good news for jazz’s future,” and New York Times critic Ben Ratliff, who applauds Moran’s “new manifesto” music as “some of the best live jazz around now.”

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The pianist shies away from the praise. “Oh, yeah, the bushes have been cleared.” He pauses for effect, then adds, “Right, like maybe 10 feet.” He laughs. “But in the last four or five years, things have snowballed way beyond what I ever expected.”

Even fellow musicians are listening and hearing something different. Osby called him a “godsend,” a player the polar opposite of his piano peers, who, in Osby’s opinion, were “like maynah birds making perfect copies of what they hear.”

After joining Osby’s band in 1997 and performing as a sideman on projects headed by Cassandra Wilson and Steve Coleman, Moran burst onto the scene as a leader in 1999 with Soundtrack to Human Motion (Blue Note CDP 97431), an auspicious debut of artful expression. Joining him were Osby (who produced the album), bassist Tarus Mateen, and drummer Nasheet Waits.

Equally captivating in its compositional complexity and exuberance of performance was Moran’s second album, Facing Left (Blue Note CDP 23884), a trio date with the same rhythm section, minus Osby (who again produced). In his notes for the recording, Moran said, “We’re freely expressive and not rigid... We don’t quite know where we’re going, but we’re facing left and headedin the right direction.” Stylistically, Facing Left ranged far, from a compelling piece inspired by the Schillinger System of Musical Composition to a hip cover of “Joga,” by Icelandic pop singer Björk. Moran also took on two rarely played Duke Ellington compositions, “Later” and “Wig Wise,” and rendered a couple of

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movie themes with his distinctive flavor, including a rap-tinged take on "Murder of Don Fanucci," from The Godfather Part II. Moran likes switching gears and changing pace: "I don't want any of my records to sound like one style throughout," he says, noting that Facing Left is a fusion of all his influences. "That's why I choose different grooves and songs, tunes that are sensitive and slow as well as pieces that are abstract and fast."

Facing Left closes with the jaunty "Twelve," a composition by the late Jaki Byard, Moran's first piano teacher in New York. The high school grad moved to the city in 1993 to study with Byard at the Manhattan School of Music. "The first time I saw Jaki perform was shortly before school started," Moran recalls. "He was playing at the club Trumpets in New Jersey and he had this big band. During the show he was having fun and blowing whistles. I thought, 'Man, this guy is out.' I loved his sense of humor. I have this image of him: He's wearing a tie with planets on it, his hair is in complete disarray, and he's peering through his glasses at all this music on the piano. It's perfect Jaki.'"

Moran laughs, then adds, "He was a very genuine cat. The first time I played with him in a lesson, he interrupted me and taught me something important. He said, 'You play too goddamn loud. What do you think this is, a Chick Corea–Herbie Hancock record?' Moran says that he often came in for his lesson and just asked Jaki questions. "He gave me so much. He taught me about the old-school guys and always stressed that the new comes through the old."

Moran later studied with veteran pianists Muhal Richard Abrams and Andrew Hill. But, to date, his most significant collaboration with a jazz sage came last year, when he asked legendary saxophonist Sam Rivers to join him on Black Stars. "I finally got the guts to call him," says Moran, "and Sam got on the phone and said, 'Hey, I just read something about you a couple of weeks ago in the paper.' That was bizarre. So we talked, and I told him I worked with Greg and Steve, and that got the door open. Sam has respect for them. Then I told him I studied with Jaki, and that sealed it. They lived together in Boston and were like brothers. They learned about composition together and appeared on each other's records. So I began thinking of Sam as the uncle of my music, like Jaki is the father."

A quartet date with Mateen and Waits (and produced by Osby), Black Stars is satisfying journey music that surges, churns, bumps, blasts, rollicks, reflects, yearns. There are gentle ballads, lyrical dramas, slowly drawn mysteries. But the music also pops—including a churning trio sprint through Ellington's "Kinda Dukish," which the saxophonist sits out. The dance-like interplay of Moran and Rivers is characterized by grace and drive, buoyancy and brawn.

On the energetic and slightly whimsical leadoff tune, "Foot Under Foot," Rivers takes an extended run as Moran pounces on the keys alongside, propping him up and tossing new ideas his way. Then Moran dashes, splintering the melody as he flies ahead to meet Rivers in the head at the end. On Rivers' "Earth Song," what begins as a launching pad for the saxophonist develops into a speedway for Moran, as both go full throttle. And the pair cruises with bouncy swing through the frisky "Skitter In." The last track is a duet with Rivers at the piano, opening with a kaleidoscope of Cecil Taylor-like notes. Then Moran takes over the keys as Rivers soars overhead on flute. At the end of the recording, Rivers shouts, "Got that?" to the engineer, obviously pleased at the magic he and Moran have conjured.

"No one plays like Sam," says Moran. "Beforehand, I couldn't gauge what direction Black Stars was going to take in the studio as a result. He's so serious as a musician, so individual, and he plays with such a totally different language than what I'm used to. You have to react in different ways compared behind him. It's so easy to sound so totally wrong playing with him. So I was constantly computing information while I was playing, shifting it around, trying to keep it fresh."

Moran's next challenge is a solo album, tentatively scheduled to be released this fall. Shortly before heading into the studio to record it, he's still musing on the possibilities. "The things I do in a group context are far different than what I do on my own. There's no one egging me on." He plans to not only explore some of the rich solo-piano history, but also document his family history. "My father's side came from northern Louisiana and my mother's side was from North Texas. They both migrated to Houston. I've written a piece about that already. I also want to look at the changes of solo piano chronologically, perhaps using a piece from the 1800s, up to a

"I NEED TO REALLY GET INTO WHO I AM, BECAUSE IT'S JUST GOING TO BE ME AND MY INSTRUMENT."

James P. Johnson number from the 1930s. I have a ragtime number in mind which I hope I can play on some old raggedy, clunky upright." Also in the early song selection are Moran renditions of a classical piece by Schumann as well as "Planet Rock," the popular early-'80s break-dancing tune.

"Of course, none of this may make it onto the final recording," Moran hastens to add. "It's always been that way when I've gone into the studio. It's totally unpredictable. So, we'll see how it goes." He sounds assured that his journey will find its own way, but then he expresses a little apprehension: "I need to really get into who I am, because it's just going to be me and my instrument."

But Jason Moran is not one to shy away from an adventure. He mentions a PBS documentary he's recently seen: "It was about classical pianists, who discussed their music. Watching this made me proud to be a pianist." He smiles and laughs. "There was Glenn Gould, dressed in his bathrobe and sitting down on this raggedy chair. He crossed his legs, put his tea down, then banged out Bach. Wow! It was powerful. I just might take this video into the studio with me and watch it between takes to keep inspired."
Of the small number of times I have been totally swept away by listening to recorded music, a significant proportion have involved loudspeakers from Wilson Audio Specialties. It was my experience of their X-1/Grand SLAMM in the listening rooms of reviewer Martin Colloms, then-retailer Peter McGrath, designer Dan D’Agostino of Krell, and manufacturer Madrigal Audio Labs, that led me to name it my “Editor’s Choice” for 1995 and join my vote with those of the Stereophile scribes to make it the magazine’s “Loudspeaker of the Year.” I wrote in my December 2001 “As We See It” about how a cross-country road trip had begun with a listen to the Canus CI on the Wilson WAMMs in their designer’s Utah listening room. And, as I wrote in my April column, auditioning Peter McGrath’s 24-bit Nagra master tapes on Wilson MAXXes in the Halcro room was, for me, the highlight of the 2002 CES.

But yes, all three of these speaker systems are very expensive, ranging from $38,900/pair (the MAXX) through $70,000/pair (the X-1) to over a quarter-million bucks (the ultimate WAMM). As much as I appreciate and desire the attainments of speakers like these, my own music-making, like almost all Stereophile readers, has to be based in the real world of mortgages, car payments, and school and college fees.

So when I laid eyes and ears on Wilson’s Sophia, priced to sell at a relatively affordable $11,700/pair, at the 2001 CEDIA Expo last September, I began salivating about how they would work in my room and my budget.

Sophisticated
In its general appearance, the Sophia looks like a single-box cousin of Wilson’s WATT/Puppy (last reviewed in its System 5 incarnation in November 1995). And its 41"-high, floorstanding, three-way design concept reminds me of the now-discontinued WITT (reviewed in our January and July 1996 and January 1998 issues). But the Sophia is all new, from its handcrafted enclosure to its custom-built drive-units.

I usually begin my description of a speaker with its active parts: the drive-units and crossover. But having witnessed the labor-intensive craftsmanship that goes into each Wilson speaker, I’ll start with the Sophia’s intricate cabinet.

This is mainly crafted from what Wilson terms “M” material. According to Vern Credille, the company’s R&D director, this composite material consists of a matrix of cellulose fibers bound together with phenolic resin to form basic sheets. These are then laminated together to make the Sophia’s enclosure panels. For the speaker’s front baffle for the woofer section, and for the base, Wilson’s even more rigid “X” material is used, which is a high-density, mineral-loaded, methacrylate-based composite. The Sophia’s assembled enclosure is spray-coated with automotive paints and clear coats, and rubbed down between each application, to produce an immaculate, high-gloss finish.

All this attention to detail is to ensure that the enclosure doesn’t emit sound, thus providing an optimal environment for the components that do. Handling the highest frequencies is the same version of Focal’s inverted-dome tweeter used in Wilson’s home-theater speakers, its titanium diaphragm coated with dark-gray “tioxid.” This crosses over to a 7" midrange unit sourced from Scan-Speak. The paper cone has a radiating diameter of approximately 5", and cone and dustcap are scored in a radiating pattern, the score marks filled with damping material. The long-throw woofer is a 10" aluminum-cone unit, reflex-loaded by a 3"-diameter aluminum port on the rear panel. The midrange unit is also reflex-loaded with a 1" port, again on the rear panel, presumably to increase its dynamic range at the bottom of its passband.

The crossover is said to use high-quality parts and is encapsulated to minimize vibrational effects. Electrical connection is via a single pair of brass binding posts. Finishing the speaker off are four multi-part spikes, which both set the correct listening height and couple the speaker optimally to the floor.

Setup
Peter McGrath, now with Wilson Audio Specialties, set the Sophias up in my listening room. If you’re concerned that this means a reviewer is being given special treatment, I’m told that the dealer from whom you purchase a pair of Sophias will provide this service as a matter of course.

Before we did any listening, Peter marked off a grid in the probable speaker positions with masking tape and, standing in the center of each grid and crouching so his mouth was at the approximate height of the Sophia’s midrange unit, began the setup procedure by speaking evenly. He and I were listening for the position where the coloration added to the sound of his voice by the room acoustics was minimized. This would be the starting point for deciding on the optimal placement of each speaker.

Description: Three-way, floorstanding, reflex-loaded loudspeaker. Drive-units: 1" (25mm) inverted titanium-dome tweeter, 7" (178mm) paper-cone midrange unit, 10" (254mm) aluminum-cone woofer. Frequency response: 29Hz–22.5kHz, +0/-3dB. Sensitivity: 89dB/2.83V/m. Impedance: 4 ohms nominal, 3 ohms minimum. Recommended power: >12Wpc.

Dimensions: 41" (1042mm) H by 12" (305mm) W by 18" (457mm) D. Weight: 160 lbs (72.7kg) each.

Finishes: High-gloss automotive paint.

Serial numbers of units reviewed: 0073 & 0074.

Price: $11,700/pair. Approximate number of dealers: 41.

On Audio Specialties Sophia loudspeaker

Once we had found those positions, we experimented moving the speaker ½" at a time in both horizontal planes, noting whether the midrange tonal balance became less or more even. (Half an inch may not sound like much, considering the wavelengths of sound in the midrange, but it can produce a surprisingly large change in the perceived balance.) At the end of this iterative procedure, the speakers ended up 56" out from the wall behind them—a little closer to the room boundaries than the Revel Performa M20s, which had preceded them. The spikes were then fitted, effectively locking the 160-lb Sophias to the floor.

Sound
I've mentioned the phenomenon before in these pages: Loudspeakers tend to
affect your choice of music to listen to. Even though the small Revel M20s had excellent low-frequency extension in my room, I found that I was playing a lot of vocal and chamber music with them. Yes, this was to great musical effect, but it wasn’t until I played back a hard-drive copy of Peter McGrath’s 24-bit live recording of “Der Abschied,” from Mahler’s Das Lied von der Erde, on the Sophias that I realized how little orchestral music I had been putting on the player. Without a speaker that can reproduce the wide dynamic sweep of a symphony orchestra in full measure, the musical sense becomes diminished. But over the Sophias, as conductor James Judd—in one of his last performances with the Florida Philharmonic, the orchestra he had bullied, cajoled, and persuaded in the past decade or so to become a truly world-class ensemble—I felt there were no dynamic limits, that there was almost nothing between me and the event captured by Peter’s microphones.

One of the major strikes against small speakers when it comes to reproducing the symphonic repertoire, of course, is their lack of low bass. This has always been one of the first things I will sacrifice in favor of natural midrange tonality, accurate imaging, and stable soundstaging. But that doesn’t mean I don’t value true 20Hz extension when I can get it in addition to those more important (to me) aspects of sound quality.

In many of his scores, British composer Edward Elgar indicates a part for organ marked ad libitum. You’d think that this gives them free rein, but I’m always surprised by how discreet organists are, adding only enough of the instrument’s majesty to flesh out the sound when appropriate. But when the organ pedals are used to underpin a work’s foundation, a speaker like the Sophia gives the bass fundamentals full measure. Our June 1998 “Recording of the Month” was a CD of the Bournemouth Symphony Orchestra performing Elgar under veteran conductor George Hurst (Naxos 8.553564). The main work on the disc is the popular Enigma Variations, and the organ is held back until the final, epon-

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**Measurements**

Other than impedance, for which I used an Audio Precision System One, all acoustic measurements were made with the DRA Labs MLSSA system and a calibrated B&K 4006 microphone. To minimize reflections from the test setup, the measuring microphone is flush-mounted inside the end of a long tube. Reflections of the speaker sound from the mike stand and its hardware will be sufficiently delayed not to affect the measurement.

My estimate of the Sophia’s voltage sensitivity came in a little below the specified figure, at 88.3dB(V)/2.83V/m, but the difference is negligible. The speaker’s impedance drops to a minimum value of 3.26 ohms at 220Hz (fig.1), but the electrical phase angle is very low at the same frequency, meaning that a good 4-ohm-rated amplifier will have no problem driving the speaker. The phase angle does reach a fairly high value of 45°, capacitive, in the midbass, but the impedance is high enough in the same region to ameliorate any drive difficulty.

Other than a wrinkle at the tweeter’s ultrasonic resonance frequency, the traces in fig.1 are free from the glitches that would indicate the presence of mechanical resonances in the enclosure. I investigated the panels’ vibrational behavior with a plastic-tape accelerometer and found little that could be considered sonically significant. As shown by fig.2, a waterfall plot calculated from the accelerometer’s output when it was attached to the back panel, there were two modes present, at 360Hz and 539Hz, but these are low enough in level and high enough in frequency to be not worth worrying about.

The saddle centered at 26Hz in the magnitude trace indicates the tuning frequency of the big, rear-facing port, which in turn implies good low-fre-

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Fig.1 Wilson Sophia, electrical impedance (solid) and phase (dashed). (2 ohms/vertical div.)

Fig.2 Wilson Sophia, cumulative spectral-decay plot calculated from the output of an accelerometer fastened to the cabinet’s rear panel level with the midrange/woofer transition. (MLS driving voltage to speaker, 7.55V; measurement bandwidth, 2kHz.)

Fig.3 Wilson Sophia, anechoic response on-axes at 50°, averaged across 30° horizontal window and corrected for microphone response, with the complex sum of the nearfield woofer and port responses (black), the nearfield midrange response (blue), the nearfield woofer response (red), and the nearfield port response (green) plotted below 300Hz, 500Hz, 1kHz, and 500Hz, respectively.
famous “E.D.U.” variation, where it thunders out a descending bass line under the final climactic reiterations of the tune and reinforces the final cadence. The Sophias’ wide dynamic range and extended lows allowed this music to be presented in as realistic a manner as I have experienced, particularly when I drove them with the Australian Halcro amplifiers. It was only when the last chord died away and I heard the phone ringing that I realized how loud I had been playing this CD.

But it was not so much the quantity of the Wilson speaker’s high frequencies as their quality. In real life, where acoustic music comprises many different sound sources, those sources are perceived as discrete entities. By contrast, with reproduced music, the acoustic objects tend to blur into one another. Think of a thin rubber sheet pulled down over a series of physical objects. The objects are now perceived as projections thrust up out of the rubber matrix; they may appear discrete when viewed from certain angles, but they are actually connected at an underlying level. This is exactly analogous to the creation and perception of acoustic objects in a stereo recording, with the rubber replaced by all the artifacts and grunge added by the recording and playback processes. The worse the audio equipment, the higher the level of grunge, the less differentiation there is between the perceived objects, and the harder it is to make sense of the music.

I love the Enigma Variations, but the highlight for me of the Naxos Elgar disc is a stunning interpretation of the In the South overture, where the contrasts in mood—that between the contemplative viola section and the bombastic, Imperial Rome passage that precedes it, for example—finally made musical sense. Elgar’s dense, rich orchestration depends on the uniqueness of all the various instrumental tone colors being preserved. If the grunge level rises too high, then the meaning of the music is diluted. (This is what I believe was meant by the Linn mantra of 15 years ago, following pronouncements made by the Scottish company’s founder, Ivor Tiefenbrun.

frequency extension. The colored traces in Fig.3 show the nearfield responses of the lower port (green), the woofer (red), and the midrange unit (blue). (I haven’t shown the response of the upper port, as it appeared to be a clone of the midrange unit’s output but lower in level.) The minimum-motion point in the woofer’s output is a little higher in frequency than I expected from the impedance graph, and, most unusually, the midrange unit has a notch in its output at almost the same frequency. (This is well down in level, however, due to the action of the crossover.) The port itself covers the bandpass between 18Hz and 70Hz, but its output is a little suppressed compared with the woofer, which peaks up sharply between 50Hz and 100Hz.

Because of this peakiness, the Sophia’s overall output in the bass (Fig.3, black trace below 300Hz) is boosted somewhat in this midbass octave. This woofer tuning will lead to problems in some rooms—Martin Colloms noted a problem with it in his review of the Sophia in the May 2002 issue of Hi-Fi News—but it was not an issue in my room, which has a general lack of energy in the 63Hz band. Fig.3 also looks a little worse than it should because of the 3dB boost given low frequencies by the nearfield measuring environment compared with a true anechoic measurement.

The acoustic crossover frequency between the midrange unit and the woofer appears to be set at around 150Hz. The inverted-dome tweeter has a small rise apparent above 15kHz, but rolls off sharply above the audio-band, while the speaker’s overall response in the midrange and treble is basically flat, though broken up by small peaks and dips. As these tend to be equally spaced, with peaks balanced by dips, the perceived balance will tend to be neutral.

Aiding this is the fact that dips tend to fill in and the peaks become suppressed to the speaker’s sides (Fig.4). In typical rooms, therefore, the Sophia will tend to sound evenly balanced in the highs. In the vertical plane (not shown), the speaker’s balance doesn’t change much as long as the listener sits with his or her ears below the top of the enclosure. Stand, however, and a large suckout appears at the upper crossover frequency, which appears to be just under 2kHz.

In-room, the Sophia’s spatially averaged response (Fig.5) is impressively smooth and flat, though a slight excess of presence-region energy is apparent at the bottom of the tweeter.

| Wilson Audio Sophia |

Fig.4 Wilson Sophia, lateral response family at 50°, normalized to response on tweeter axis, from back to front: differences in response 90°-5° off-axis, reference response, differences in response 5°-90° off-axis.

Fig.5 Wilson Sophia, spatially averaged, 1/2-octave, freefield response in JA’s listening room.

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that so many components didn't allow the listener to "follow the tune." Via the Sophias, the way the themes are handed around among similar-sounding instruments—from trombones to horns, for example—never descended into undifferentiated mush.

Don't let the fact that I kept returning to orchestral recordings in my listening sessions leave you with the impression that the Sophia was a one-trick pony, optimized for just one kind of music. In fact, its high frequencies were delicate enough, its midrange neutral enough, that chamber works were reproduced in a manner to rival the finest minimonitor. Though the Sophia's high frequencies were smooth and grain-free, there was perhaps not as much top-octave air as the similarly priced Revel Ultima Studio. When I mixed the master for Mosaic, my recently issued CD of the Brahms and Mozart clarinet quintets (Stereophile STPH015-2), choosing the correct top-octave balance for the final mix was an arduous task. For the main pickup, I had used half-omni mikes with acoustic equalizers over their capsules to boost the on-axis response in the top octave. By applying a complementary cut above 10kHz in the mix, I would suppress any HF grain by the same amount. However, for the secondary pickup I used tubed Neumann cardioids with 1" capsules, which roll off above 15kHz or so. So choosing the exact amount of top-octave rolloff to apply was a subjective decision that depended both on the balance between the two pairs of mikes and the speakers used. When I auditioned Mosaic on the Sophias, the balance that had sounded correct on the Revel Studios made me wish I had gone for just a little more energy above 10kHz in the mix.

In fact, my only real criticism of the Sophia, and one that is relatively minor, concerned an octave or so below 10kHz: the speaker's tonal balance was slightly forward in this region. This was not nearly enough to add any hardness to the sound, but the sense of clarity into the perceived soundstage was aided by this forward balance was offset by a soundstage that was not as deep as I have experienced from the Meridian DSP8000s (reviewed in November 2001, Vol.24 No.11), for example, or my venerable B&W Silver Signatures.

As I am a bass guitarist, it should come as no surprise that one of the things I am most fussy about is how loudspeakers reproduce my own instrument. In fact, this is partly why I am so prepared to sacrifice low bass: In their attempts to reach down as low in frequency as possible, so many speakers destroy the leading edges of the sound, turning recorded bass guitar into a "puddyngy"-sounding instrument instead of one that is struck and strummed percussively. But, like the Sony SS-M9ED, which I reviewed last August (Vol.24 No.8), the Sophia is one of the few speakers that gets right the sound of the 1964 (pre-CB5) Fender Precision Bass that I had used to prepare the channel identification and speaker phasing tracks on Stereophile's Test CD 2 (STPH004-2).

When he had set up the speakers in my room, Peter McGrath had brought with him a recording that I have been unsuccessfully trying to get hold of for years, by bassist Brian Bromberg, brother of guitarist Dave. On the solo cut "My Bass," Bromberg offers a com-

**Measurements**

er's passband. I suspect that this contributes both to the speaker's clarity and to its impatience with less-than-stellar recorded balances. The slightly sweet top octave I noted in my auditioning is probably associated with the tweeter's limited dispersion above 12kHz. Note that this graph reveals the Sophia to offer superb extension in my room, which does offer good support in the lowest audio octave, and that the nearfield excess in the Wilson's midbass is not apparent.

In the time domain, the Sophia's step response (fig.6) reveals that its tweeter and woofer are connected in positive acoustic polarity, the midrange in inverted polarity—which is what is needed, in conjunction with the phase shift provided by the crossover, to ensure that the outputs of the drive-units add to give a flat response in the farfield in the crossover regions.

The cumulative spectral-decay plot (fig.7) is generally clean. Though some delayed energy is apparent through the presence region, it doesn't appear as the ridges typical of resonant behavior, which suggests that it might instead be due to reflections.

All in all, this is excellent measured performance for which no apologies need be made, though the woofer alignment suggests that the Sophia will work better in some rooms than others. —John Atkinson

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**Fig.6** Wilson Sophia, on-axis step response at 50° (5ms time window, 30kHz bandwidth).

**Fig.7** Wilson Sophia, cumulative spectral-decay plot at 50° (0.15m risetime).
A very different bass player from Bromberg, but just as talented, is Jerome Harris, who is featured on Stereophile's Rendezvous CD (STPH013-2). In trying to explain the depth of Jerome's talent to a colleague, it struck me that it isn't just that Jerome has great chops—with sufficient practice, I might be able to play the lines Jerome laid down on Rendezvous. What matters is whether or not I can play the notes, but that Jerome comes up with notes I can't even imagine. This is amply demonstrated at the start of "Hand By Hand" on Rendezvous, where Jerome plays what is ostensibly a simple walking bass line, yet one that, while outlining the song's chordal structure, also hints at other songs and other moods. The clean leading edges of the Wilson speaker's bass region laid bare every little inflection of Jerome's phrasing, yet without the sound of his instrument becoming too lean.

I finished my listening sessions with another bass player, the inimitable Marcus Miller, on Miles Davis' We Want Miles (Columbia 469402 2). The two iterations of "Jean-Pierre" state the simplest motif you can imagine, a child's tune, and take it for a ramble. I have owned this album on LP pretty much since it came out, and had been put off by the CD reissue, which had always sounded bright, hard, and messy. But on the Sophias, the CD started making sense. The music-making on this live album is all about the spaces left between the notes by the musicians, and on ordinary speakers those spaces are diminished by grunge. Via the Sophias, even when drummer Al Foster is riding a splash cymbal that would otherwise fill in all the gaps on lesser speakers, the individual acoustic objects are sufficiently well-differentiated that the music continues to communicate. Just as it does in real life.

Conclusion
At $11,700/pair, the Sophia is the best value for money speaker to come from Wilson Audio, but there will probably be shocked intakes of breath at Wilson's Utah HQ when David Wilson and his team read that I think the Sophia might well be Wilson's best speaker to date. "Best," not in the sense that the Sophia exceeds all their other models in every area—it clearly doesn't—but "best" when considered as an integrated package at its price, where its performance in each area optimally balances those in other areas. In that sense the Sophia raises the bar for the almost twice-the-price WATT/Puppy, which is probably why that system was scheduled to be relaunched in its "version 7" reincarnation at House Entertainment 2002, still two weeks away as I write this review.

I enjoyed my time with the Sophias immensely and was sorry to see them leave my listening room.

Associated Equipment

Digital sources: Mark Levinson No.31.5 CD transport; Mark Levinson No.30.6, Chord DAC64 D/A processors; dCS 972 upsampler; Meridian 800 DVD-V/CD/CD-R player; Technics DVD-A10 DVD-A player; Musical Fidelity Nu-Vista 3D CD player.

Preamplification: Mark Levinson No.380S, Z-Systems rdp-1 digital control center (updated to handle 96kHz sources).

Power amplifiers: Mark Levinson No.33H, Theta Citadel, Halcro sm58 monoblocks.


Accessories: PS Audio Power Plant 300 at 90Hz (preamps only), Audio Power Industries 116 Mk.II and PE-1 AC line conditioners (not power amps), ASC Tube Traps, RPG Absfusors.

— John Atkinson
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But the audacity of charging $29,000 for a phono stage got the best of me. I own one that retails for $7000, and that strikes me as ridiculous—even though I think it’s worth the money. Could the 2008 be 22,000 dollars’ worth better? Was it better at all?
I had to find out.

Boulder 2008 balanced phono preamplifier

Look but Don’t Listen: Not many days after I’d contacted him, Bruce Van Allen showed up at my door with some boxes. His attitude as he unpacked them was reminiscent of a dealer in illicit substances who just knows that what he’s about to lay out on the table will leave an impression. All I was getting this visit was a visual and a backgrounder—Van Allen was on a road trip, and the 2008 and the 2010 were on their way to Goodwin’s High End in Waltham, MA. The plan was for the store to ship them down to me at the beginning of April so that I could listen for a month.

For reasons I eventually came to understand, when the end of March came ‘round, Goodwin’s High End didn’t want to let go of the Boulder units. But eventually they relented, and the cartons showed up at my garage door. I ignored the preamp and headed directly for the phono section and its outboard power supply. The weight of the surprisingly heavy power supply (actually, three entirely independent supplies in one chassis) is skewed toward the front by three massive toroidal transformers, which makes it awkward to handle. Its luxuriously finished, satin-smooth, champagne-gold faceplate makes it clear that this is one power supply that’s meant to be seen. The preamp, with its row of mirror-smooth pushbuttons, was even more enticing.

The 2008 has two RCA jacks for a moving-coil-cartridge demagnetizer, which the unit can automatically inject at the push of a button. Other than those, there’s not an RCA in sight—the phono section and preamp are fully balanced designs. So before listening to $29,000 worth of phono section, I needed both in and out RCA-XLR adapters. I had a DIN-XLR set of Cardas Neutral Cross phono cables, which I used with the Graham 2.2 tonearm. I used a pair of adapters for the Immedia RPM-2 tonearm, and another pair to get the...
output to the single-ended Hovland HP-100 preamp.

For $29,000 you get tremendous convenience and flexibility. There are three balanced inputs. Associated with each input is a rear-mounted pull-out "personality card" with triple DIP switches. These allow you to choose between (and are labeled) MM or MC, Hi Gain or Lo Gain, and Demag or No Demag, depending on whether you’re using an MC or MM cartridge into that input. The default load into MM is the standard 47k ohms, and 1k ohm into MC. One input’s cards came with 100 ohm resistors soldered in.

There are three internal slots, one of which comes with a standard RIAA equalization card. The other two are for optional cards that Boulder can supply (for $1000/set) for alternate compensation curves such as those used by American Columbia, Decca/London ffr, and EMI in the early 1950s. The large, mirror-like, flush-mounted front-panel buttons let you choose inputs, EQ, Mono/Stereo, a low-cut filter at 5Hz, 10Hz, or 20Hz, Demag, Mute, and On/Off.

That’s outside. Inside is a very complex approach to phono-section design. While some designers try to rid their products of circuitry — like the ultra-pure-sounding “basic” Final Labs Music-4 phono section I covered in my January 2002 column — Boulder’s founder and designer Jeff Nelson uses brute force, packing the 2008’s dual-mono chassis with Boulder 993 gain-stage modules (for more detail, go to www.boulderamp.com/bldamp.993.html), scaled relays, and a busy design that’s the antithesis of the “simple, short signal path” advocated by some in the pursuit of analog purity and perfection.

A cynic might say, “If you’re going to charge $29,000 for a phono section, you’d better pack it with stuff, but that doesn’t necessarily have anything to do with good sound.” That cynic would be so wrong.

Listening: Rockport’s Antares speakers — 400 lbs each and $41,500/pair — had been in my system for about a month when I sat down for my first listen to the Boulder 2008, so I’d become accustomed to and quite familiar with their performance using my reference system. The Antares is an impressive,
full-range design. Driven by the Manley Steelhead phono stage, the Hovland HP-100 preamplifier, and the Musical Fidelity Nu-Vista 300 power amp, their sonic picture was big, full-bodied, and just plain tactile. No pain, but plenty of gain!

So it was with much skepticism that I substituted the 2008 for the Steelhead. I'll spare you a list of some of the well-known audio pros who've bought Steelheads. They hear what I hear: stupendous bass dynamics, transparency, purity, quiet, and on and on. It's a major accomplishment.

So is the Zanden 1200 ($15,000), which I previewed in my April 2002 column. A mono CD-R I made using the 1200 to record pre-RIAA mono LPs stopped some listeners in their tracks at CES 2002. The Zanden's midrange purity and resolution of harmonic structure couldn't be beat.

That's what I was thinking as I dropped the stylus in the groove for my first listen to the Boulder 2008. Would it be brighter, tighter, faster, "etchier," more transparent, better organized, more lush? I tried to imagine what the 2008 could possibly deliver to better the Steelhead and Zanden. One was more analytical, one was lusher, and both were incredibly accomplished — enough so that, between them, they seemed to cover all the sonic bases at the very highest level of analog reproduction. And the Pass Xono wasn't far behind, if at all, depending on your preferences.

Unfortunately, my imagination could not prepare me for what the 2008 delivered. I don't remember the first LP I played, but within a minute of listening I was no longer concerned with the sound of the music. What the 2008 delivered was the music's meaning. That's what you get for $29,000: communication — a direct connection to the intentions of the musicians. That may sound pretentious, but it's what I experienced in those first few hours of listening, with every genre of music.

Pulling out and spinning reference LPs, I was hit with all the familiar riffs — but now the musical lines made complete sense, as if they never had before. In many ways, they hadn't; despite repeated listening, the music had never been communicated to me like this: as musical lines carved in granite. What the Rockport turntable did mechanically the Boulder did electronically. This was an experience to be savored — there'd be plenty of time later to take it apart and analyze it. So I just listened and listened, muttering astonished exclamations as I went. It was a mind-expanding evening.

I put on a record I've heard hundreds of times: Gershvin's Rhapsody in Blue, performed by Earl Wild, Arthur Fiedler, and the Boston Symphony (RCA Living Stereo LSC-2367). The overall "rightness" of the presentation in time and space floored me. Yes, Wild's piano was out front and firmly focused, but I'd heard that before, if maybe not quite so well-developed. What really stood out for me was one festive interlude with a driving salsa feel — I'd never heard it sound so tropical before. I'm no musicologist, and I've never read an analysis of Rhapsody in Blue, but I'd be very surprised if the jazz Gershwin injected into that section wasn't Cuban. Maybe I should have known that — but until the Boulder hit me over the head with it, I hadn't. If the point of having a really fine sound system is to communicate the music over the sound, the 2008 was a complete success.

I dragged my wife downstairs and, without prepping her about what she might hear, played her the 180gm LP of Alison Krauss and Union Station's New Favorite (Divine DIVE001LP), recorded in DSD and cut from the DSD master. She'd never heard it before in any form, but she'd heard the system minus the Boulder. First came a few dozen "Wow!"s that first expressed shock at the fundamental newness of the experience, then confirmed what I'd heard: "It's as if every note is the most important note ever played by anyone."

Exactly. That's what this phono section did. It was like analog on acid. Every

Like the 2008, the 2010's circuit is superbly linear. Fig.6 shows the measured THD+noise percentage plotted against frequency at 1V output into both 100k ohms and 600 ohms. The distortion is actually lower in level into the lower impedance, though it does rise slightly at high frequencies. At no time, however, does it rise to a level that could be considered significant.

This can also be seen in fig.7, which shows the spectrum of a 50Hz sinewave driven at an extraordinarily high 10V into 600 ohms. Yes, some second harmonic can be seen at -103dB (0.0007%), as well as some higher harmonics around -100dB, but these are probably either mathematical artifacts of the FFT or residuals in the Audio Precision's output. The picture was similar when I examined high-frequency intermodulation, again at the very high level of 1V, which was just below clipping with this signal into the low, 600 ohm load: all you can really see in fig.8 is the distortion present in the output of the D/A processor used.

Finally, fig.9 plots the percentage of THD+noise present in the 2010's output against output voltage. Below 10V or so, the reading is dominated by what noise is present, and the actual distortion is at the limit of the Audio Precision's resolution, which is why there are some sawteeth present in the traces, due to the AP's gain switching. The actual clip points occur at 25V into 100k ohms and 21V into 600 ohms, both about 20dB above the typical maximum output voltage the 2010 will be called upon to deliver under real-world conditions.

Both of these Boulder preamplifiers have overall measured performance that reveals superb audio engineering skill on the part of their designer. In addition, as Michael Fremer mentions in his review, when I auditioned the 2008 and 2010 in his system, I was bowled over by the sound quality they produced with his Nu-Vista amplifier driving the Rockport speakers. —John Atkinson

![Fig.9 Boulder 2010, distortion (%) vs output voltage into 100k ohms (bottom and right) and 600 ohms (top and left).](image-url)
note, every musical gesture became the most important, most profound note ever struck — until the next one.

The closest I'd come to that feeling before was the first time I'd heard the original Connoisseur phono section, designed by Peter Mara. That model made the music "make sense" in a similar fashion, mostly due to its rhythmic control. The Boulder 2008 was even more intense and overwhelming, though that might have been due in part to improvements made since in the rest of my system.

Most listeners prefer a delivery in which moments in recorded musical time and space are presented like bubbles that drift off or pop, only to be replaced by new bubbles — or like clouds that appear to have substance and shape but whose appearance is transformed almost magically before your eyes. When that approach becomes too severe, music sounds softer than life, almost formless, and lacking in rhythmic drive or physical presence.

Some listeners prefer a more solid delivery; when that's overdone, music sounds grainy, mechanical, and "etchy" — almost compartmentalized, as if trapped in a series of boxes that are opened one at a time. It seems that when we try to reproduce live music electronically and mechanically we're bound to that continuum, and end up on one side or the other of it.

Take two very different people each speaking for five minutes each. One is a great public speaker who can suspend time — five minutes can be mesmerizing, all-encompassing, and seem to go by as if it were five seconds. The other makes five minutes empty, boring, and lasting an eternity. Instead of floating by in a series of meaningful images that we can grip and release, the words pile up and weigh us down.

Music — live or recorded — can be presented in those two ways as well. We've all heard live music that mesmerizes and live music that suffocates. We've heard it reproduced both ways as well. Well, the Boulder 2008 gripped, mesmerized, suspended time, and communicated profoundly. It didn't make stupid music profound. It made stupid music profoundly stupid.

How did it do that? It reproduced musical attack with just enough edge, and let it decay and dissolve with complete authority. Its sense of musical time was stupendous. Everything arrived on time and left the same way, as it does when you hear music live. And when the music was "there" it wasn't a bubble but a physical construction, a monument. But the 2008 managed to then send in a wrecking crew to remove the structure in time for the next one to be built in the same space. It built and razed one edifice after another in an explosion of musical and sonic images. I was left as overwhelmed as when I'm listening to the real thing. We've all had this listening experience as our systems improve. But compared to everything else I've ever heard, with the Boulder it was no incremental improvement but an enormous one.

I pulled out Count Basie's 88 Basie Street (Pablo 2310 901), an LP I'd never heard before but that's been lurking on a shelf for years. It features both big-band and small-combo tracks, and was recorded at Ocean Way in 1983 and engineered by Allen Sides. It's fairly closely miked, but demonstrated the 2008's stupendously rich tonal purity and harmonic integrity. The recording is explosive; when the Count digs into the lower keys, the 2008 pumped up the volume while maintaining perfect control of those hard-to-reproduce low-bass notes. The Boulder got the plunger-muted trumpet — also hard to get right — with just the right amount of hard grit in the transient without developing an unnatural edge. The result was round and piercing at the same time, as it is live. It just sounded right. And the 2008 not only did dynamics at both ends of the scale better than any piece of electronics I've ever heard, it managed to express small changes in dynamic structure on very familiar recordings in ways I'd never heard before.

The Boulder 2008 is, by far, the best-sounding and -performing phono preamplifier I've ever heard. It is also, by far, the most expensive. I have no complaints about the sound — it is absolutely stunning, spectacular, and, as far as I can tell, faultless in every area of performance: soundstaging, imaging, dynamics, harmonics, frequency extension, solidity, "bloom" (from transistors?) — you name it. If you have a chance to hear it, don't pass it up — you'll hear what I'm talking about in five minutes or less. What you'll hear above all else is the 2008's seamlessness: within a given recording, everything seemed cut from the same roll of continuous musical cloth. Among different recordings, the Boulder imparted less of its own personality than any other phono section I've heard. I found it impossible to discover any sonic constants among the records I auditioned that might yield a clue to its intrinsic sound.

I hate saying some of these things because I'm sure I've said them before, and probably in my review of the Manley Steelhead. The Steelhead is a wonderful phono preamp, does everything terribly well, and will keep me very happy until I win the lottery. But when I reinserted it in my system following my love affair with the Boulder, it sounded softer, more distant and

Associated Equipment

**ANALOG SOURCE**
Simon York turntable; Graham 2.2, Immedia RPM2 tonearms; Lyra Helikon SL, Helikon mono, Dynavector XX-2, ZYX R-100FS cartridges.

**DIGITAL SOURCE**
Musical Fidelity Nu-Vista 3D CD player, Accuphase DP-85 SACD player.

**PREAMP**
Hovland HP-100 preamp; Manley Steelhead, Zanden 1200 phono sections.

**POWER AMPLIFIERS**
Musical Fidelity Nu-Vista 300, RM Labs Music Reference 200.

**LOUDSPEAKERS**
Rockport Antares.

**CABLES**

**ACCESSORIES**
PS Audio Power Plant P300 and P600 AC regeneration; Sounds of Silence Vibration Active Isolation Platform; Symposium Acoustics Tungsten and Grade 3 Superball Rollerblocks, Ultra shelves; Grand Prix Audio Monaco amplifier stands; Audiodharma Cable Cooker 2.0; Walker motor drive, Valco Points; Finite Elemente Pagode equipment stands; ART Q dampers; ASC Tube Traps; Shakti Stones, On-Lines; RPG BAD, Abspuffor panels.

— Michael Fremer
slow, less dynamic, and less together. The Boulder was like being hit over the head in a nice way with a 2 by 4, the Steelhead like being flogged with a wet noodle.

That's gonna make EveAnna Manley unhappy, but the facts that the Steelhead is still one of the finest phono sections I've ever heard, the one I gladly bought, and one that costs about a quarter of what the Boulder costs, should take away some of the sting for both of us. No phono section I've ever heard comes anywhere near to matching the sonic performance of the Boulder 2008. As with the Rockport System III Sirius turntable, the 2008 belongs in Class A+ of "Recommended Components": a class by itself.

**Boulder 2010 preamplifier**

Once I'd gotten my ears around the 2008, I removed the Howland HP-100 and inserted the Boulder 2010 preamplifier and its power supply. The control unit is big and heavy, and looks simple but elegantly bold. Like the 2008, the remote-controlled 2010 is fully balanced, so I swapped out the adapters, ran balanced cables from the 2008, and operated the Accuphase DP-85 SACD player (also under review) in balanced mode.

The 2010 also uses Boulder's 993 gain-stage modules — 18 of them — and is built and performs as a luxury product should. The two amplification modules are isolated, physically and electrically, atop a single chassis containing some of the control elements. Two sets of seven mirrored, flush-mounted buttons flank the large, mirrored volume control, which is flywheel-weighted and oh, so light and silky to the touch. This is not a volume potentiometer but a controller for the solid-state attenuator. One set of mirrored buttons includes six nameable inputs plus Record; the other set controls Balance, Mute, left and right polarity inversion (which you can program for each input individually), display intensity (eight levels plus Off), programming, and power.

I won't describe all this functionality, nor can I tell you about the remote control — for a variety of reasons, I didn't get one. Let's just say that the 2010 is a luxury product that looks, feels, and performs like one. You can balance input levels so you don't have to raise or lower volume when you switch sources, you can program a variety of functions, and you're given a precise volume level in dB on a large mirrored readout above the pushbuttons. You can even choose the coarseness or fineness of the volume control's operation. When you've set it up to your liking, it will do your bidding — as any $36,000 preamp should!

Adding the preamp only intensified the sonic experience already established by the 2008: the 2010 provided a bit more of everything that was great about the phono stage. This was not surprising — the 2010 uses the same 993 building block as the 2008 — but the Howland HP-100 held its ground in most areas, it's that good. In fact, on less than stellar recordings, I preferred what the tubes did, but through the 2008/Howland combo I noticed no loss of impact or intensity when playing the best recordings. Whatever noise the Howland's tubes introduced didn't translate into anything audible, and the lower noise floor of the Boulder didn't seem to improve low-level resolution or macrodynamic drive.

I seem to like having tubes in the mix, so while it's going to be hard to live without the 2008 (I'll find a way somehow), I can more easily live without the 2010. But the 2010 is fabulously built and provides the luxurious accommodations well-heeled audiophiles demand and deserve when they spend $36,000 on a preamplifier. If I could afford both, I'd buy them and be done with it. Though I haven't had the experience some have had with electronics priced at this exalted level, I've heard plenty, and I've heard nothing better than what this combination provided. Its dynamic performance was cathedral-like. From the most subtle shifts to the most explosive, it followed the musical gradations like a race car. It was open, transparent, endlessly resolving harmonically, and free of grain, glare, or any other audible or fatigue-inducing detritus.

You want big? The 2010 will give it to you. It painted a picture that was big, solid, and three-dimensional. With appropriately muscular and full-bodied speakers, you'll feel as if you're hearing everything your favorite recordings could possibly deliver. You'll probably be correct.

**Conclusions**

I've auditioned some mighty fine phono sections, and more contenders are waiting to be inserted in my system, but it's hard to believe that, for some time to come, any of them will equal or surpass the monumental performance of Boulder's 2008. That's why it and the 2010 preamplifier have gotten the full-review treatment instead of being covered in "Analog Corner." When it came time to send the 2008 and 2010 to Stereophile to be measured and photographed, I insisted that John Atkinson come to my place to pick them up so that he could hear for himself what they and the Rockport Antares speakers delivered in my room. I played him Count Basie's **88 Basic Street**, and Simon and Garfunkel's "The Boxer" and "The Only Living Boy in New York," from Classic's 45rpm reissue of Bridge Over Troubled Water. From his wordless, sputtering response, I don't think he'll find my enthusiasm for Boulder's electronics over the top.

When I first spoke to Bruce Van Allen about getting a 2008 for review, I asked if Boulder planned to actually sell a $29,000 phono section, as opposed to merely proving they could build one. He told me that dealers at CES had bought 10 of them. I was skeptical. He later told me that while the unit was in Boston, a Boulder customer who had come into Goodwin's High End for a listen said, "I don't want to buy a $29,000 phono section." After listening to it, he bought one.

Having listened for myself, I now believe Van Allen on both counts.
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Theta Digital Intrepid 5-channel power amplifier

That makes a power amp?

That's what I wondered about those big, gleaming amps at Theta's home-theater-centered demo a CES or two back. Yes, they made a nice sound, but I know Theta as a premier producer of digital preamplifiers, digital disc players, DACs, and, more recently, multichannel preamplifier-processors. Naïvely, I assumed that these new power amps were actually OEM units wearing Theta badges.

Wrong. Theta's amps are originals endowed with some fairly innovative design ideas. The line includes the imposing Citadel 400W monoblock that Jonathan Scull reviewed in May, the heavyweight Dreadnaught with two to five 200W channels, and the 58-lb baby of the bunch, the five-channel, 100Wpc Intrepid.

All Theta amps share the brushed-silver styling of the company's other components and feature fully balanced, differential channels through the driver and output stages. Not surprisingly, they also feature balanced inputs and outputs. Inside, the amps are built of three discrete stages—input, driver, and output—with no global feedback linking them. The input stage is a complementary common-source differential amplifier constructed of matched pairs of JFETs. This voltage amplifier, with a gain of about 2.5, also provides a reasonably high input impedance. The second stage is similar in construction to the input stage, and it, too, functions primarily as a voltage amplifier, but with a gain of 19. The output stage is a fully balanced differential complementatory emitter-follower with eight high-power bipolar transistors per channel to provide the current needed to drive speakers. The total current capability of devices in this stage is 128 amps for each 100W channel! A DC servo, on the output stage only, eliminates manual trimming of output offset.

In the Intrepid, each channel is a physically independent assembly that, in parallel with the others, spans from the rear panel to a rack about 8" behind the front panel. While each amp has its own onboard capacitor bank, all channels share the control and regulation circuitry, the huge, 1100VA power transformer, and a large output-stage diode bridge located in the front of the chassis. This arrangement is distinct from more modular multichannel amps, in which each channel has its own transformer and power supply and shares only the chassis, power switch, and AC cord. Theta reasonably argues that, except on the test bench, the demand on the power supply is never simultaneously equal from all channels, and that the large common supply makes extra reserves available to the channels that need it. In any case, the Theta is specified for 100Wpc, all channels cooking.

The build quality and parts selection were impressive, fore and aft, inside and out; only the lack of latches on the XLR jacks surprised me.

Five Channels Minus Three...

As usual, I took an easy first shot and installed the Intrepid in the system that includes the Revel Studio loudspeakers. I used only two of the Theta's channels, fed via balanced lines from the preamp. The sound was sweet and smooth but seemed a bit lightweight, even though there was no overt tonal imbalance. There was no lack of bass extension if one listened for those special moments, but subjectively, the lows never demanded my attention.

Description: Five-channel solid-state power amplifier. Line-level inputs: 1 RCA plus 1 XLR per channel. Outputs: 1 pair multiway binding posts per channel. 5–12V signal input for remote power control. RS-232 (DB9 and RJ-45) for external control and monitor. Output power: 100Wx5 continuous into 8 ohms (20dBW), 200Wx5 continuous into 4 ohms (20dBW). Input sensitivity, full output: 1.5V RMS (RCA), 750mV RMS (XLR). Voltage gain: 25.5dB (RCA), 31.5dB (XLR). Input impedance: 50k ohms, RCA, XLR each phase. THD+noise: <2%. Frequency response: 0.9Hz–350kHz, +0/–0.3dB at full power. Signal/Noise Ratio: >100dB unweighted. Power consumption: 80W standby, 100W idle, 900W full power.

Dimensions: 17 ¾ "W by 6.25" H by 20.5" D. Weight: 58 lbs.

Serial number of unit reviewed: 024903.

Price: $3500. Approximate number of dealers: 85.


Stereophile, July 2002
even when I expected them to do so. The spatial representation was open and deep, and voices had an immediacy that few amps could rival. Midrange and highs were essentially pure and free of grain, benefiting the reproduction of upper strings and brass.

I confirmed these observations when I replaced the Revels with B&Ws even more critical and power-hungry Signature 800s that I reviewed in June. Strange, while there was more bass via the S800s (two 10" vs two 8" drivers per side), the lack of bottom-end authority was equally noticeable, especially in comparison to the Bel Canto eVo monoblocks. Had I the alchemy to do it, though, I'd love to have combined the eVo's bottom-end slam with the Intrepid's clarity and smoothness throughout the rest of the spectrum. And, while the Revels and B&Ws are not what this amp's 100W channels were designed to drive, the Intrepid successfully faced off the eVo and the McCormack 1DNA-1 Rev.A, and faced up to the Sonic Frontiers Power-3 monoblocks in everything but power output and sheer bass whomp.

**Two + Two = Four**

Well, if two 100W channels aren't quite enough, the Intrepid has more. Because the Sonic Frontiers Line-3 preamp has duplicate pairs of XLR and RCA outputs, I next undertook to biampify the speakers by using four of the Intrepid's five channels. I heard no significant changes in balance between XLR and RCA, but now, when a low-frequency surge came by, there was some left to it.

Running back through my torture discs, I confirmed that, while meeting the power requirements of the B&W

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**Measurements**

Following the usual one-hour pre-conditioning period at one-third power into 8 ohms with all channels driven, the Theta Intrepid's casework was very warm, but not so hot that I couldn't keep my hand on it. Its input impedance was a fairly high 54k ohms via the unbalanced input, slightly less than double this figure via the balanced XLR jack. Voltage gain into 8 ohms was a slightly low 24.6dB from either input—as with the Citadel, which was reviewed in the May *Stereophile*, I didn't find the balanced input to offer the usual 6dB increase in gain—and the amplifier preserved absolute polarity.

The source impedance was on the high side for a solid-state design, at 0.65 ohm. This resulted in ±0.5dB variations in frequency response with our standard simulated loudspeaker (fig.1, top dotted trace), and about a 0.6dB reduction in level each time the load impedance halved (fig.1, lower traces). A slight, 0.1dB imbalance can be seen between the two channels plotted in this graph. Fig.2 shows the responses of all five channels; the maximum imbalance is 0.25dB. These responses were all measured using the unbalanced inputs; no difference was seen from the balanced inputs. The Intrepid's ultrasonic output is rolled off by just 1.5dB at 200kHz, meaning that the waveform of a 1kHz squarewave (fig.3) shows very little slowdown of its risetime. There is also a slight hint of overshoot evident.

To look at channel separation, I drove the right-hand channel's input and measured the bleedthrough into each of the other four channel outputs (I shorted their inputs). To my surprise, given the increasing physical separation of each channel's circuitry, there was very little difference in the resultant crosstalk traces (fig.4). Each channel's output had a minimum level of around -107dB in the low treble. Above that region, the channel separation decreased at the 6dB/octave rate typical of capacitive coupling, but it also decreased at low frequencies. The channel separation is still good at the frequency extremes, but the increase in crosstalk at low frequencies is usually a sign that an amplifier's power supply, which in the Intrepid is shared by all five channels, has too high a source impedance.

The Theta's A-weighted signal/noise ratio was an excellent 91dB (ref. 1W into 8 ohms), but this worsened to 67dB when the weighting filter was removed and the measurement bandwidth was set to its wide, <10Hz-> 500kHz setting. As Kal found, the

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![Fig.1 Theta Intrepid, channel 1 frequency response at (from top to bottom at 2kHz): 2.83V into dummy loudspeaker load, 1W into 8 ohms, 2W into 4 ohms, 4W into 2 ohms (channel 2 dashed, 0.5dB/vertical div.).](image1)

![Fig.2 Theta Intrepid, channels 1 and 3 frequency responses at 1W into 8 ohms (channels 2, 4, and 5 dashed, 0.5dB/vertical div.).](image2)

![Fig.3 Theta Intrepid, small-signal 10kHz squarewave into 8 ohms.](image3)

![Fig.4 Theta Intrepid, crosstalk in channels 2, 3, 4, and 5 with channel 1 driven (10dB/vertical div.).](image4)
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The Intrepid offered sweet, clear, grain-free sound from the midrange up through the extreme treble.

S800s at full cry was simply asking too much of even a well-behaved 100Wpc amp, now, with biaxed Intrepid providing 200Wpc, power per se was no longer an issue. All of the lovely smoothness and transparency was preserved with the four Intrepid channels in operation, but now it was extended into the bass. Even so, the Intrepid couldn't get the S800s or the Studios to rock the room—as they did with Classe’s CAM-350 monster monoblocks, which continually goaded me to crank them higher.

Now, any good high-end amp — eg, any of the ones I've mentioned — has low distortion and a smooth measured response over the audible frequencies, and sufficient power reserves over that range so as not to be stressed at normal domestic listening levels. Nonetheless, each amp gives an immediate impres-
sion as the listener latches on to one or another aspect of its performance. In the Intrepid's case, it was the sweet, clear, grain-free sound from the midrange up through the extreme treble, which reveals human and instrumental voices with detectable precision and presence.

While at the 2002 CES I was given an advance pressing of the forthcoming Mobile Fidelity SACD release of Patricia Barber's Modern Cool. Its superiority over the regular CD (Premonition/Blue Note 5 21811 2), or the SACD's own CD layer, is remarkable. The accompanying instruments are even clearer, with greater kick, but it was the delineation of the female voice that fascinated.

The Intrepid definitely needs to be properly grounded. Small-signal distortion levels were respectably low (fig.5), but the THD+N/noise percentage can be seen to rise quite dramatically into 2 ohms, compared with the 4 and 8 ohm levels. The distortion spectrum was heavily third harmonic (fig.6), and as the output level increased, both the second harmonic and higher-order odd harmonics made appearances (fig.7).

Like Theta's Citadel monoblock, the Intrepid has no loop negative feedback, and correspondingly has increasing levels of harmonic distortion as the power increases. Fig.7, for example, was taken at 25W into 8 ohms, well below the specified output power, but still has 0.6% of third harmonic and 0.1% of second harmonic distortion. As a result, on the admittedly demanding high-frequency, high-power intermodulation test, the Intrepid produces noticeably high levels of higher-order products (fig.8), even though the 1kHz difference product remains at -60dB (0.1%).

As both positive and negative speaker terminals are actively driven, the Theta could not be tested with the Miller Audio Research Amplifier Profiler, which connects the negative terminal to ground. However, using the Audio Precision System One, which has floating inputs, I plotted the Intrepid's continuous output power into 8, 4, and 2 ohm resistive loads (fig.9). The increase in THD with increasing power can be clearly seen in this graph, as can the fact that the amplifier meets its specified 100W output into 8 ohms at 2% THD rather than the usual 1%. Into 4 ohms, the clipping point had to be further relaxed to 3% THD+N for the Intrepid to meet its 200W specification, even though just one channel was driven for this measurement.

The designer's decision not to use global negative feedback has resulted in an amplifier that produces rather more distortion at moderate power levels than I would like to have seen, even though this distortion is predominantly the subjectively fairly innocuous third harmonic.

— John Atkinson
With the $800s or the Studios, the Intrepid continually gripped me with its astonishingly natural reproduction of Barber's voice. Of the other amps on hand, good and pricey as they were, only the SFE Power-3 could equal this aspect of the Theta's performance.

However, through my extended and enjoyable listening sessions, I often wondered why I was not paying any attention to the rest of the music—in particular, the lower frequencies. The Intrepid could generate substantial bass and provide fullness in male voices and lower strings, but that seemed not to be its immediate and defining character; the lovely midrange and treble were. Is this analogous to being so infatuated by one aspect of a person that one ignores everything else? Was I simply smitten?

A Drive in the Country
Aside from the heavy lifting, I figured it would be a piece of cake to swap the Intrepid for the Bryston 9B-ST in my multichannel system, now that I had Harmonic Technology's nifty, color-coded, RCA-terminated cables. Well, the connections were easy, but all I got when I turned on the amp was a few seconds of loud buzz followed by a lot of hum. I assumed that the culprit was a ground loop from the cable-TV input, but the usually reliable Mondial Magic Splitter couldn't banish the noise.

I went back, read Theta's manual, and found multiple admonitions to provide the Intrepid with a good ground. Most of my country house was built more than a century ago, and the electrical outlets in the music room have lousy ground connections. A good one was 25' away, in our modern laundry room, newly plumbed and wired to code, so, with little thought to its effect on the decor, I did the rest of my listening with a bright yellow 20A cable laid across the carpet.

This was not quite enough for the Sony TA-P9000ES preamplifier. Even with the system now properly grounded, there were a few anxious moments.

The Intrepid gave the Paradigm Reference Studio/60s and Studio/20s all the low frequencies they could handle.

The Sony had always buzzed lightly for a few seconds at turn-on, even with the Bryston amp, but the only way I could get the hum to be bearable with the Theta was to disconnect everything from the Sony's pass-through inputs when using the active ones.

Who's at fault? Everyone. First of all, the Sony TA-P9000ES seems to be somewhat vulnerable to induced noise from sources inside the chassis and without (see sidebar). Second, the Intrepid has both XLR and RCA inputs, but lacks a switch or jumper for single-ended use. I suspect that the single-ended RCA cables are terminated across the differential inputs; while this would not be a problem with most sources, the Intrepid can amplify the hum and noise from those that are less well-behaved (like the Sony). Third, since the only decent ground is in the next room, I face the prospect of new wiring if, in the future, I desire to cast the first stone.

All Five Channels at Work
Having toiled to make this system work at all, I was glad that, when I finally got it running, it worked beautifully. With the five channels of the Intrepid driving five Paradigm speakers, the amp's clarity and resolution were easily appreciated. In contrast to my experiences with the big Revel and B&W speakers, the Intrepid gave the Paradigm Reference Studio/60s and Studio/20s all the low frequencies they could handle. Indeed, the Intrepid smoothed the integration of the low bass and midbass.

With stereo sources, the Intrepid drove the Studio/60s as well as had the Bryston, although there was a definite difference in spatial presentation. The Intrepid favored an enhanced stage width and height, but brought the instruments a bit forward compared to the Bryston's greater depth of image. Indeed, the bell-like and grassless treble noted with the big speakers was apparent with the Studio/60s, but now seemed balanced by an equally adept presentation and depth of bass.

I briefly tried biamping the Studio/60s with two channels of the Intrepid, but was at a loss to say whether there was great advantage to it. Certainly, there was no down side. The up side was an incremental increase in achievable power output, particularly in the midrange, but that was at levels way beyond those commensurate with domestic tranquility. If I were aiming to grow a multichannel system from a two-channel system based on the Intrepid, I wouldn't hesitate to biamp if the speakers were amenable.

With multichannel program material, the presentation was full and without any channel highlighting. It would, of course, be reasonable to expect that a five-channel amp was made for this application, and the Intrepid really impressed. Bass had excellent extension and weight, whether or not the self-powered Paradigm Reference Servo-15 subwoofer was called into assistance.

The DVD-Audio discs from Taec are a good test of a multichannel amp and system, and make creative use of the extra channels. (John Atkinson thinks they take too many liberties.) The players in the Mendelssohn Octet, Op.20 (the Auryn and Minguet String Quartets, Taec DVD 94) are distributed around the listener and, particularly in the Scherzo, the melodies whip around the room as they're passed from instru-

Sony TA-P9000ES multichannel preamplifier

As evidenced by postings I've seen on the Internet, my TA-P9000ES is neither unique nor the worst offender when it comes to noise pickup. In fact, I've corresponded with one reader who complained of severe noise problems with three different samples of that model. With a little sharp elbowing, I got an official response from Sony that addressed the problem: "Although the TA-P9000ES is compatible with most amplifiers, it may occasionally exhibit oscillation noise when used with certain products. If this occurs, Sony recommends taking the TA-P9000ES to an authorized dealer or service center, where this can be remedied by repositioning a wire located on the main board."

According to Sony, all new production of the TA-P9000ES will include this change. Of the several amps I've used with the TA-P9000ES, only with the Theta Intrepid was the problem severe enough to require that service. On the other hand, the Theta was perfectly well-behaved with the other preamps I tried.

Kalman Rubinson
ment to instrument—hardly a traditional arrangement, but never have I been so actively engaged in the interplay of the individual musicians. With careful attention to the sound (hard to maintain in the face of such infectious music), I realized that the five Intrepid channels endowed each violin—fore, aft, left, right—with equal authority and sweetness. The violas and cellos were interspersed among the fiddles and occupied the room corners, but all shared a common acoustic with equal presence. Perhaps it’s too intense and unnatural an arrangement, but what fun!

The Intrepid made every multichannel mix seem more alive, with more of a feeling of a real event. The exemplar of this was the marvelous SACD set The Coronation of King George II (Hyperion SACD A67286), which features Handel’s Coronation Anthems and simulates the entire event for which they were composed. From the sound of the bells of London coming from outside the cathedral and the hair-raising crescendo of the drum procession to the shouts of the assembly, the Intrepid seemed to add a frisson of liveliness to the entire proceeding. I used the trumpet fanfares at the beginning of disc 2 all over CES, and nowhere there did they have the immediacy and ambient context that the Intrepid gave them in my own system. In addition, the more traditional balance of the Anthems and other set pieces, with the performers up front and only the ambience from the rear, was equally good and not pushed forward at me.

Conclusion

Once I was asked to review a 7Wpc SET amplifier. I demurred, saying that I didn’t have any speakers that would be a fair match. Well, it doesn’t take great insight to appreciate that a five-channel power amplifier like the Theta Intrepid was not primarily designed for use in a two-channel system. Moreover, the Revel Studios and B&W Signature 800s are not fair matches for single 100W channels of the Intrepid. Nonetheless, they made lovely music together. When fortified by biamping with four Intrepid channels, they made music that was impressive as well.

What such a stress test revealed was that the Intrepid’s clarity and liquidity, particularly from the midrange up, are world-class. Matched to less power-hungry speakers in a more appropriate system, the Intrepid’s excellent tonal balance and dynamics were apparent as well. It is one of the most subtly transparent power amplifiers I have auditioned.

The Intrepid’s clarity and liquidity, particularly from the midrange up, are world-class.

Associated Equipment

Two-Channel System

**Analog source:** Heybrook TT2 turntable, SME III tonearm, Ortofon SME30H cartridge.

**Digital sources:** California Audio Labs CL-20 DVD player, Meridian 508-24 CD player, Sony XA-777ES multichannel SACD player, Mark Levinson No.360 DAC.

**Preamplification:** Sonic Frontiers Line-3 and Simaudio Moon P-5 preamplifiers, Audiolab 8000PPA phono stage, TaC RCS 2.0 Digital EQ/Room Correction system.

**Power amplifiers:** Bel Canto cVo 200.2 monoblocks, Sonic Frontiers Power-3, Classe CAM-350 monoblocks, McCormack DNA-1 Rev.A.

**Cables:** Balanced Interconnect: AudioQuest Anaconda and Python, JPS Super-Conductor 2. Speaker: AudioQuest Gibraltar. AC: PS Audio Lab Cables. **Loudspeakers:** Revel Ultima Studio, B&W Signature 800.

Multichannel System

**Digital sources:** Philips SACD1000 multichannel SACD/DVD player, Technics DVD-A10 DVD-Audio player, Technics SH-A500D DD/DTS/DPL processor.

**Preamplifier:** Sony TA-P9000ES.

**Power amplifier:** Bryston 9B-ST.

**Cables:** Interconnect: Harmonic Technology multichannel prototypes, Alpha-Core Goertz MicroPurl Copper. Speaker: Goertz M12 Veracity.

**Loudspeakers:** Paradigm Reference Studio/60, Studio/20, Studio/CC, Studio/20.

— Kalman Rubinson

Stereophile, July 2002

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With this review I conclude an audiophile’s progression through the price/performance ratios of three very musical solid-state integrated amplifiers: the NAD C370 ($699, reviewed in January 2002), the Arcam DiVA A85 ($1499, February 2002), and now the Simaudio Moon i-5 ($2595). In the process I was fascinated to hear how each amp recommended itself to its targeted price point. Likewise, it was most instructive to hear how they spread their compromises around. With a rough doubling of suggested retail price from the NAD to the Arcam, there was a degree of sonic refinement introduced. However, the leap in improved sound from the Arcam to the Simaudio was more significant. And in quantifying the benefits another $1000 worth of enhancements can confer, I discovered what constitute real high-end bona fides.

**Description: Remote-controlled solid-state integrated amplifier with J-FET input devices, BiPolar output devices, five line-level inputs (one audio input bypasses the gain stage), plus tape out and preamp out. Power output: 70Wpc into 8 ohms (18.5dBW), 110Wpc into 4 ohms (17.4dBW). Frequency response: 10Hz–70kHz, +0/-3dB. THD: 0.1% (20Hz–20kHz at 1W). Damping factor: >200. Voltage gain: 30dB. Dynamic headroom: 6dB. Maximum current: 16A peak, 9A continuous. Signal/noise (ref. full output): 97dB. Input impedance: 14k ohms. Input sensitivity: 300mV–3.0V RMS. Power consumption: 40W at idle. Dimensions: 17” W by 4” H by 15” D. Weight: 26 lbs. Finishes: Silver or black faceplate. Serial number of unit reviewed: B021521.**

**Price:** $2595. Approximate number of dealers: 50. Warranty: 10 years.

**Manufacturer:** Simaudio Ltd. Canada, 95 Chemin du Tremblay, Unit 3, Boucherville, Quebec, Canada J4B 7K4. US: Simaudio Ltd. U.S.A., 21 Lawrence Paquette Drive, Champlain, NY 12919. Tel: (877) 980-2400, (450) 449-2212 x201. Fax: (450) 449-9947. Web: www.simaudio.com.
Moon i-5 takes an inordinately long time to break in — and the absence of capacitors in its signal path meant that I heard each and every awkward aspect of that transformation. At first, the bass seemed a bit diffuse and unfocused, the highs too laid-back and lacking absolute detail and air, and the midrange lacking in coherence and depth. In a word, bland.

Then I remembered that certain fine wines need to be swirled around the glass a bit, to combine with the air before they can open up, bloom, and thus reveal their inner substance and defining characters. So I gave the i-5 substantial cook-in time — low-level music signals ‘round the clock for a few weeks — and repeated this process a number of times during the auditions that proceeded my final listening tests. I reckon that you’ve got to put at least 300–500 hours on this baby before you can form a balanced opinion about its sound. Because of this, the i-5 is meant to be powered up all the time; it has a rocker switch on its rear panel next to the IEC inlet, and a standby switch on the front — all accessible via the heavy-duty remote control of cast aluminum.

The Simaudio Moon i-5 takes an inordinately long time to break in.

The first thing I noticed about the i-5 was how smooth, quiet, and transparent it was. The amplifier had exceptional speed and drive, and projected a sense of ease and authority. I was quite taken by its clarity, coherence, and realism, the elemental purity and neutrality with which it conveyed the emotional experience of music. Its presentation was warm yet neutral and natural, faithful and nonfatiguing; it drew me into the experience, engaged me, and fleshed out a wealth of detail without hitting me over the head or italicizing any particular frequency range. The i-5 was all about the music — no more, no less.

I used two sets of two-way loudspeakers that are easy to drive: the stand-mounted Joseph RM7si Signatures and the floorstanding Meadowlark Shearwater Hot Rods. While the Josephs do like a bit of power to really open up, that didn’t represent a problem for the i-5, which always sounded as if it had something in reserve, and provided plenty of gain without grain or strain.

So while the i-5 puts out "only" 70Wpc into 8 ohms, it offers a full 6dB of dynamic headroom, which led me to suspect that for instantaneous bursts it probably behaves like a better-endowed amp. Once the initial break-in period was completed, the i-5 was able to reproduce big transients with utter conviction, portraying dynamics with vivid realism and steely coherence — even at lower volume levels — while maintaining its aura of grace and refinement.
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Don't think that the i-5 sounded prissy or polite, cold or analytical. It possessed levels of sonic liquidity and, for want of a better word, personality that set it apart from many of the solid-state designs I've auditioned. Though I wouldn't characterize it as having a "tube" sound, the i-5 didn't reflect conventional solid-state characteristics either. Its top end was smooth, sweet, and fulsomely detailed, while its control of bass frequencies was swift, sure, and solid, punchy and extended, with oodles of harmonic detail. Often it seemed to fill out the bottom of the Meadowlarks in such a taut, focused, linear manner that my brain was able to complete the low-frequency picture.

Such effortless focus and control translated into a gloriously layered, open, transparent midrange, superb soundstaging, and pinpoint depiction of complex images. I was impressed by the i-5's portrayal of energetic, multifaceted music as different in execution as the dense electronic polyphony of King Crimson on Vroom Vroom (Discipline Global Mobile DGM0105) and the percussion-inflected, polyrhythmic mélange and elaborate acoustic orchestrations of Elliot Carter's Symphonia and Clarinet Concerto (Michael Collins, clarinet; Oliver Knussen, London Sinfonia, BBC Symphony; Deutsche Grammophon 459 660-2). It had an ability to sort out and illuminate individual images amid a welter of instrumental details, metric changes, and colliding dissonances, helping to make sense of arranger Robert Fripp's opaque accretion of violent textures in King Crimson's "Conundrum," and able to maintain midrange clarity with extraordinary control of huge bass transients in the more or less ballad-styled "One Mind." The i-5 projected Adrian Belew's vocals in a realistic, compelling manner while conveying a thoroughgoing impression of the venue's ambience.

Likewise with Carter's Symphonia, in which a confluence of wildly contrasting musical events flits about like butterflies mating on a crisp summer night: The i-5 rendered the cinematic scope and scale of Carter's cuts, crossfades, superimpositions, and multiple images on a huge holographic soundstage. Better yet, for all the complexity of Carter's timbral palette, the i-5 let me experience each instrument both as a distinct entity and as an integral part of an immense orchestral canvas.

And when it came to vocals, it was almost surreal how effortlessly the i-5 floated life-like images, illuminating them without succumbing to the kind of colorations and exaggerations that frequency anomalies might otherwise elicit. On track after track of Tony Bennett's superbly recorded Playin' with My Friends: Bennett Sings the Blues (Columbia/RPM

Measurements

Small-signal distortion was very low in the midband, but did rise out of the noise floor at high and low frequencies (fig.4). It also rose as the load impedance dropped, reaching above 0.1% in the very low bass and top audio octave. However, as can be seen from the waveform of the distortion residual (fig.5), it is heavily second-harmonic, which, all things being equal, will tend to be subjectively benign. At higher levels, the third harmonic joins the second, though each remains at the -60dB level (0.1%), even into 4 ohms (fig.6). Intermodulation distortion (fig.7) was moderate in level; the 1kHz difference component produced from an equal mix of 19kHz and 20kHz tones driven a couple of dB below clipping into 4 ohms remained at -66dB (0.05%).

With both channels driven by continuous tones, the i-5 exceeded its specified power delivery into both 8 and 4 ohms, raising 82W (19.1 dBW) and 150W (18.75dBW), respectively, at our usual 1% THD+N clipping point (fig.8). With one channel driven, these figures increased to 90W and 165W, with 249W (17.9dBW) available into 2
Listening to a well-recorded rock album like Jeff Beck's ferociously variegated, Indian-flavored You Had It Coming (Epic EK 61625), I never felt as if the i-5 lacked for rhythm, pace, drive, focus, or speed. On “Left Hook,” with its wildly processed drum sounds and low-end descents, the transients had real snap, crackle, and pop, without ever becoming edgy and fatiguing. Yet on the ultra-bluesy “Rosebud” and the rarified flotation of “Nadia” and “Suspension,” the i-5 conveyed all the caustic, biting, romantic, sensual aspects of Beck’s complex guitar tone while rendering the big and small gestures of the mix with subtlety and power. Other amps can altogether miss this forest for its trees in giving you the boon’s rush.

Thinking of bigger full-range speakers and a larger room when your ship comes in? By isolating the power section from the front end (via the pre-out), the i-5 retained its high-end value as a dedicated, standalone preamp. Listening off-axis? The i-5’s balance control behaved in a subtle, non-invasive manner. However, for big, multi-driver, power-hungry speakers, you might indeed need to invest more money in separates, given how much more freedom there is to do things right with more robust, dedicated transformers and power supplies.

**Conclusions**

At $2595, Simaudio’s Moon i-5 is a competitively priced, no-compromise, audiophile integrated amplifier with a solid-state heart and a tube soul. It never sounded edgy or fatiguing, or ponderous and bass-heavy, like some comparably priced solid-state muscle amps I could name. The i-5’s sound was warm, quick, and focused, richly layered, smoothly nuanced, and naturally compelling in its portrayal of bass energy and dynamics. And while to some extent the i-5 suggested the midrange liquidity and top-end smoothness of tubes, its exceptional control of bass, localization of images, and scrupulous resolution put it on a par with the best solid-state integrated amps (and even some separates) I’ve heard in the last five years.

While the i-5’s midrange was nowhere near as juicy and detailed as my old standby, the Mesa Tigris tube integrated, and its presentation not quite as forward, it had the kind of honest, natural, realistic character to recreate an authentic sense of an acoustic event. The Tigris is tonally more forward and richly voiced, the i-5 more laid-back and...warm.

Perhaps the i-5 is a touch too laid-back and refined for some. Punchy? To be sure, but for sheer impact, you might consider tubes or separates. But for the money, you’ll be hard-pressed to find something that blows the Moon i-5 out of the water. To spread all of those compromises around yet retain a realistic sense of high-end scale and grandeur at what might be considered an entry-

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**Simaudio Moon i-5**

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**Fig.9 Simaudio Moon i-5, distortion (%) vs 1kHz burst output power into 16 ohms (red), 8 ohms (black), 4 ohms (blue), 2 ohms (green), 1 ohm (magenta).**

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*Stereophile, July 2002*
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level price...well, that's an achievement. The Simaudio Moon i-5 is worthy of auditioning with the most revealing speakers you can find.

Associated Equipment

Analog sources: Rega Planar 25 turntable, Rega RB600 tonearm, Grado Statement Master cartridge; Marantz PMD430 portable cassette recorder.


Preamplification: Musical Fidelity Nu-Vista, Blue Circle Galatea, VTL 5.5 preamplifiers; Blue Circle BC22 phono preamp.

Power amplifiers: Musical Fidelity Nu-Vista 300, Mesa Baron, VTL MB-450.

Integrated amplifiers: Mesa Tigris, Lim Classik, Musical Fidelity A3, NAD C370, Arcam DiVA 85.

Loudspeakers: Joseph Audio RM33si Signature and RM7si Signature, Meadowlark Hot Rod Shearwater.

Cables: Interconnect: Synergistic Research Kaleidoscope, Resolution Reference Mk.II, Designers’ Reference with Active Shielding; Monster Cable Sigma Retro; JPS Labs Superconductor 2. Speaker: Synergistic Research Resolution Reference Mk.II/Designers’ Reference biwire, Alpha Quad with Active Shielding; JPS Labs Superconductor 2; Monster Cable Sigma Retro. AC: JPS Labs Aluminata, Kapprover, Power AC Outlet Centers, Kapprover Outlet Center; Synergistic Research Designers’ Reference2 Master Couplers; Acoustic Zen Gargantua AC cord.

Accessories: Equi-Tech 2Q Balanced Power Transformer, Monster Cable AVS 2000 Automatic Voltage Stabilizer, PolyCrystal equipment racks and amp stand, Ringmat 330 and Signal Guard II Isolation Stand (turntable), Shakti Stones, PolyCrystal cones, Argent Room Lens, Echo Busters Bass Busters and Absorptive and Diffusive Panels.

—Chip Stern
With whom are you most intimate? Your wife? Husband? Your modern-times Significant Other? Your pet? Or, like a lot of audiophiles, is it your audio system? Do you nitpick and tweak it as if it were your pet?

I'll tell you what I'm most intimate with (after K-10, of course): my BlockHead. The HeadRoom BlockHead headphone amplifier, that is, the top-of-the-line, $3988 stepped-attenuator model. (A version with Nobel volume pots sells for a still mighty $3333.) I listen to headphones for hours at a stretch while writing my reviews. The equipment I listen to spoils me to death, and I need a headphone rig to match.

Rather amusingly, when Wes Phillips reviewed the single-chassis Max HeadRoom back in February 1997 (www.stereophile.com/fullarchives.cgi?261), Tyll Hertans, Head HeadRoomer, declared, "Frankly, my feeling is that if anyone should build a $2000-$3000 headphone amp, it should be Sonic Frontiers or Counterpoint—which are companies who have licensed the module from us—not us. I have no desire to go beyond the Max."

Heh-heh. He's gone beyond the Max, all right. Way beyond.

**Who you callin' a BlockHead?**

A picture is worth a thousand words, as copy editor Richard Lehnert likes to remind reviewers, and this one's worth a dictionary full. Take a good squint at the photo to savor the BlockHead's unusual turreted looks, which resemble two HeadRoom Maxes attached at their front and rear panels. That's exactly what the BlockHead is. Look at it from the top and you'll see that the two modules are truly separate dual-mono chassis held together by the almost ⅝" front and rear aluminum plates. The left and right sides are mirror-imaged, and the anodized aluminum, Swiss-made Alma detented volume controls at either end are a pleasure to use. They have a flat slice on the front so you can tell where you are, volume-wise.

Working in toward the center, there are four switches in nicely machined depressions. First is the three-position gain switch, which accommodates different headphones' power needs: Low is perfect for Grado headphones, permitting a wider range on the volume controls, while Medium and High are more appropriate for Sennheiser HD 580s or HD 600s. (At the moment, only these three phones take the special cable required for the dual-mono BlockHead.)

Next are the Process switches, which I'll come to presently. Then there are the Filter switches. These compensate for what HeadRoom calls the processor's "warming action." The center position means there's no filter in the circuit; generally, HeadRoom recommends this setting. But if the processor is putting out too much bass or blurring the central image, the filters can be engaged to provide a mild high-frequency boost. The Bright setting accentuates the highs at about 3kHz, and the Brighter setting begins its rise an octave below, thus affecting the upper mids. Basically, HeadRoom suggests you relax and set it to whatever sounds best to you.

Polarity-inverting switches are next in line. Then, either side of center, are the headphone jacks—Neutriks, which clamp down tightly for optimum signal transfer. They'll take a ¼" TRS plug as well as XLR connectors—although XLRs are the way to go with the BlockHead, for reasons that will become apparent. Oh, and the tiny red LEDs outboard of the volume controls simply indicate that the unit is on. (Whataya want? I'm a reviewer—spell it out for me!)

Around back (also mirror-imaged) are the IEC mains-in sockets and power switches with adjustable fuse

**Description:** Dual-mono, fully balanced, solid-state headphone amplifier. Inputs: 1 pair XLRs. Outputs: 1 pair Neutrik dual ¼" TRS/XLR connectors. The following measurements were taken with a 300 ohm load, equivalent to Sennheiser HD 600 headphones: Maximum voltage gain: 15.5dB. Frequency responses: 20Hz-30kHz, ±0.025dB; 10Hz-100kHz, ±0.2dB. Distortion at 1V RMS in, 2V RMS out (10Hz-22kHz measurement bandwidth): 0.0009% (<1.01dB). Crosstalk: <105dB, 20Hz-20kHz; <120dB at 1kHz. Noise: <132dB ref. 1.9V output. Input impedance at 1 kHz: >200k ohms. Output impedance: 0.06 ohm.

**Dimensions:** 14.5" W by 3.5" H by 14" D. Weight: 12½ lbs.

**Serial numbers:** Unit reviewed: none found. Unit measured: none found.

**Price:** $3888. Approximate number of dealers: sold direct. Warranty: 5 years, 30-day money-back guarantee.

**Manufacturer:** HeadRoom Corporation, 521 East Peach Street, Bozeman, MT 59715. Tel: (800) 828-8184, (406) 587-9466. Fax: (406) 587-9484. Web: www.headphone.com.
holders next to them. Line-in XLRs are next, with ground-lift switches next to each. For normal use (directly from a CD player), HeadRoom recommends lifting, or "floating," the ground. Hum problems? Unfloat your boat, as it were.

A pair each of cross-feed Out and In connectors, which allow the HeadRoom Process to do its stuff, sit inboard of the ground switches, and dedicated DiMarzio cables are supplied for the trivially easy (even for me) task of hooking up the male to female XLRs, which connect the two chassis for the processor to work.

Confused? HeadRoom is the very essence of a friendly, happy-go-lucky outfit, so call them at (800) 828-8184, or check the Reading Area at www.headphone.com. Hertsens & Co. just want you to be happy.

More technical mumbo-jumbo

The BlockHead, HeadRoom will have you know, is the world's first and only commercially available, fully balanced, "double dual-mono, monoblock headphone amplifier." As I've said, the BlockHead's machined aluminum front and rear panels hold together two enclosures that contain the separate left and right audio electronics. Each non-converted and inverted audio channel has completely separate electronics and power supplies, all the way back to separate Avel-Lindberg toroidal transformers. Four transformers, four power supplies, four audio channels —two of them inverted, of course.

"The amp comes standard with all sorts of sweet stuff," Mr. Hertsens informs readers of his website: such as high-performance Burr-Brown 627 audio op-amps,1 low-temperature-coefficient 0.1% metal-film resistors and matched polyphenoline-sulphide film capacitors in the signal path, Nobel or Swiss-made stepped Elma potentiometers, Neutrik connectors, three-step gain control, three-step filter controls, and the HeadRoom Audio Image Psychoacoustic Processor Circuit (whew, that's a mouthful).

"Yeah," enthused Hertsens, "the parts are very carefully matched, and surface-mount techniques have really come a long way in the last few years. We use NASA-spec Vishay resistors, and man, are they expensive. Usually you pay half a cent for a resistor, but these are 70 cents each in quantities of 1000! The stacked capacitors are surface-mount parts with materials that give them a very low equivalent series resistance (ESR). There's so little resistance, in fact, that they act almost perfectly—high speed with no resistance because of their low dielectric absorption. The only time they're in the signal path is when the processor is engaged. With the cross-feed processor off, the BlockHead is a pure-DC design.

**Measurements**

We covered the behavior of the HeadRoom Process in some depth in earlier reviews—see my review of the HeadRoom Supreme in January 1994 and Wes Phillips' review of the HeadRoom Max in February 1997, reprinted at www.stereophile.com/showarchives.cgi?530 and showarchives.cgi?261, respectively. Suffice it to say that this proprietary circuitry adds equalized and time-delayed crosstalk to make the experience of listening to normal amplitude-encoded stereo recordings on headphones less artificial. Fig.1, taken from my Supreme review, shows the Process's different frequency responses when the channels are in phase compared with when they are out of phase.

As the high frequencies can tend to sound a little recessed when the Process is engaged, the HeadRoom amplifiers feature switchable treble EQ, called "Filter." The BlockHead has a three-position Filter switch; the amplifier's responses with the two EQ positions selected are shown in fig.2. Both result in a moderate peak of +3.5dB in the treble, but the Brighter setting extends lower in frequency. Note the 0.6dB difference in level between the two channels in this graph, which was taken with the Gain switch in its centered, minimum position. As can be seen from fig.3, which shows the BlockHead's frequency response with the Filter and Process switches set to Off and the Gain switch in its three positions (4.04dB, 11.75dB, and 15.72dB, all into 100k ohms), this interchannel level imbalance decreases as the gain is increased. At the highest gain setting, the imbalance is just 0.1dB. The response didn't change when the test load was reduced from the unrealistically high 100k ohms to the 150 ohms more typical of moving-coil headphones, by the way.

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1 See the June 2001 Stereophile, Vol.24 No.6, for Ben Diment's thorough examination of high-performance audio op-amps. Hertsens, it seems, is a big fan of the 627 op-amp.

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![Fig.2 HeadRoom BlockHead, frequency response at 1V into 100k ohms with Filter set to Bright and Brighter positions (right channel dashed, 1dB/vertical div.).](image)

![Fig.1 HeadRoom Supreme, frequency response at 1V into 100k ohms with Process on and the two channels in phase (top trace at 100Hz) and out of phase (bottom at 100Hz). (Right channel dashed, 2dB/vertical div.)](image)

![Fig.3 HeadRoom BlockHead, frequency response into 600 ohms with Gain switch set to (from top to bottom at 200kHz): High, Medium, Low (right channel dashed, 0.5dB/vertical div.).](image)
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"You know," he continued, "it's the same electronics package we use in the Max, which runs about half the price. The only real difference is that, with the Max, you & we have that common return [explained below] that can put crosstalk into the headphones and lose some of the astonishing clarity and magic of the BlockHead when its special cable is used.

Another cool part we make ourselves is the stepped attenuator. We get the switch detents and wipers from Elma, a Swiss switch manufacturer. We make our own circuit boards for the attenuators with a lot of gold on 'em — three or four times the amount typically found on other stepped switches. You know the circuit boards the wiper contacts as it moves? Well, that's where the gold is thickest. And we use 2%-silver solder paste.

"Surface mount now is just as good as the old 'through-hole' soldering technique, but this way there are no wires! It's very cool. You squirt the solder paste, set the parts down, and put it in this device containing an inert gas vapor which is heated to 600°. You're essentially submerging the printed-circuit board into this inert gas so the solder melts in an atmosphere with no oxygen.

"And that's not all!" Here I inserted a Ginsu knife joke, but the peripatetic Hertsens barely slowed. "Within the solder is plastic, so when you reach the melting point, the plastic emerges, flows, and seals the joint! No oxygen, and sealed in plastic before it's pulled out! That's NASA quality, buddy-boy. And we use that technique with all our amps," he chortled.

Perhaps sensing that that was enough, Hertsens hurriedly said, "Hey, don't hang up yet, J-10. I wanna ground-plane ya." Uh-oh. "Yeah, you asked about the grounding earlier. Well, the internal audio reference ground plane inside the unit is shared — you need a very good ground reference. Danny Bartlett, our chief designer, does better than star-wired grounding in the BlockHead. He used to be an RF engineer. Anyway, the circuit board is one solid piece, but here's the trick: various cuts are made in the ground plane so that return current paths always flow in the region where any particular circuit is implemented, and that's the technique used over the entire board."

Another feature of the BlockHead is that it can double as a fully balanced line-level preamp. You've got to make sure the Processor and Filter switches are off when listening through speakers to "avoid goofing up your imaging and frequency response," as Happy Hertsens puts it.

Double your pleasure, double your fun...

Now to that special connection for the headphones. Normally, phones share a common connection on the non-driven side of the driver elements. Take a look at a standard ½" headphone plug: the left-channel connection is at the tip, the right-channel connection is the ring, and the common connection is the remainder of the lowest Gain setting, the output is a sensible -0.25dB at 20kHz. With the middle Gain setting selected, the -0.25dB frequency increases to 70kHz, but with the highest Gain setting, the response actually peaks slightly above 200kHz. This is reflected in the 10kHz squarewave responses in the highest and lowest Gain settings (figs. 4 and 5), the former showing a slight overshoot on the leading edges of the wave, the latter the expected slower risetime.

The BlockHead's input impedance was very high, which is good. It looked as if the input impedance was well over 200k ohms at 1kHz, and just below 200k ohms at the edges of the audioband. However, the change in output level as the Audio Precision's generator source impedance was changed from 600 to 50 ohms was just a couple of millivolts, which means that the experimental error in this figure is large. Nevertheless, the BlockHead will not load down the source component in any way. The unit appeared to be noninverting, with pin 2 of the XLR plugs connected as "hot." Front-panel switches can be used to invert polarity. The output impedance was less than 1 ohm across the band.

With the BlockHead's dual-mono construction, I wasn't surprised to find that channel separation was buried...
the plug shaft, called the sleeve. The problem for dual-mono operation is that the summed left- and right-channel return current develops a signal across the series resistance of the common return path, which, according to Tyll Hertsens, muddies headphone's stereo presentation with crosstalk. Therefore, he says, it's that pesky connector that's responsible for making it impossible to drive the return side of the headphone coils with the separate left and right inverted signals of a fully balanced amplifier. (I swear he banged his desk with his fist when he explained it!) Thus the need for a special cable with two entirely separate signal paths. The cables are shielded, of course, but connected only at the source, not at the 'phones.

Want to see more? Aim your browser at HeadRoom's website, have a look at "Product Stuff," then move down to "Related Products" and click on Swedish maker Clou's Red XLR headphone cable. Then back up a screen and click on "Complementary Products," which takes you to a page that covers headphones, specifically the Sennheiser HD 600s (of which I have a pair) and the Grado RS1s.

Don't pass out when you see that the Clou Red cables with XLRs for the BlockHead will set you back $350. Hertsens says the Clou Red and Sennheiser HD 600s are as good as it gets for the BlockHead. As this is a direct-sales operation, all other prices are listed on their website too.

The heart of the matter
The HeadRoom Audio Image Processor, according to Tyll Hertsens (and many of the boys at Stereophile), makes headphone listening more natural. As this is covered in WP's original review of the Max and John Atkinson's January 1994 review of the original Supreme — www.stereophile.com/showarchives.cgi ?S30 — I'll just go over the basics.

When listening to speakers in a room, you hear both the left and the right channels in each ear. Not so with headphones. When slapping a pair of cans directly on your ears, you lose the spatial or acoustic cues the brain needs to locate sounds in space. Like when that hungry saber-tooth tiger spots you hopping along, snapping your fingers to the latest Britney Spears recording. (You deserve to be eaten! Kidding, just kidding.)

Despite this, your brain attempts to laterally locate sounds. The results, says Hertsens, is a "troubling blobs-in-the-head sonic image. Your brain ends up frustrated and fatigued." I'll tell ya, mine's always like that!

The cross-feed processor solves this problem. Analog filters are used to strip an attenuated signal from each channel, delay it slightly, and feed it to the opposite ear. This is the acoustic info your brain needs to create a believable audio image within your head. The added information "eases the burden on your brain by spreading out the clumped image in your head. Ahh, sweet relief." Hertsens is nothing if not poetic.

He explained to me that the processor mimics the acoustic path taken by typical in-room speakers and your ears. Even though both ears hear the sounds from both speakers, one side's sound is delayed by the width of your head — that's the Inter-Aural Time Difference. The signal fed the opposite ear is attenuated about 10dB, with a delay of about 350 microseconds.

How's that blob in your head doing?
It takes an expensive system to create that special intimacy with the music that many audiophiles crave, and the BlockHead ain't exactly cheap. You'll need a good CD player to drive it, plus appropriate headphones and a special double-run cable. But that's still a lot less than you might spend on a full-blown audio system for a similarly sublime effect.

I had a fine playback system in the BAT VK-155SE CD player with short runs of AudioQuest Amazon balanced interconnects, Clou Reds, and all Powernakes Python AC cords into a PS Audio PowerPlant 300 running at "555." The Plant was connected to the wall by its own Lab Cable. Instant fine sound.

Auditioning headphones and headphone amps can be a wonderfully visceral experience. In our loft, if Kathleen starts talking at the other end of the loft, I usually hear her and drop the 'phones back off my head. It's not a question of volume — I just hear her through the music. But with the BlockHead/BAT combo, I became so lost and involved in a recent release, BooZoo Bajou's Satta (sd069), that when K-10 did speak, I heard...
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Chord Electronics DAC64 D/A processor

Such is the pace of development in digital technology these days that it is hard not to become convinced that digital playback is a solved problem. The measured performance aberrations are so low in absolute level—and, more important, so low compared with the typical threshold of human hearing—that it is difficult to see why digital components should sound different from one another.

Yet my experience and that of Stereophile’s reviewers has been that, yes, they still sound different. What has happened is that the cost of owning a state-of-the-art CD-playback component has dropped significantly, compared with only a few years back. So when British amplifier manufacturer Chord Electronics showed its first D/A processor at the 2001 Consumer Electronics Show, I was not at all surprised that this statement product was intended to sell not for $20,000 or $10,000 or $5000, but for $3040.

The DAC64 looks as if carved from a solid chunk of aluminum, the only visible highlights being a recess for the gold-plated logo and a convex glass window, through which the circuit board can be seen, illuminated by LEDs of various colors. In fact, these internal LEDs provide feedback to the user: When you turn the DAC64 on, blue LEDs light up. When the DAC64 locks to a data source, red LEDs add a purplish hue. When either of the RAM buffers is selected, yellow LEDs illuminate.

The rear panel features three digital inputs—TosLink optical, S/PDIF electrical via a BNC jack, and AES/EBU on the usual XLR—selected by a three-position toggle switch. Although the specification states that the DAC64 will accept 192kHz-sampled data, the necessary second AES/EBU jack doesn’t exist. A second toggle selects between no RAM buffer and either of the two RAM settings. Both single-ended (RCA) and balanced (XLR) outputs are provided.

64-bit processing

In its announcement of the DAC64, Chord fired a salvo in the numbers wars by talking about a “64-bit” DAC. This sounds like overkill, considering CD’s and DVD’s respective 16- and 24-bit limits. And, of course, 64-bit performance implies a dynamic range that might well allow the Big Bang itself to be captured in full fidelity. But what is actually meant, as Chord’s literature carefully explains, is that the digital reconstruction filter used in the DAC64 is realized using a 64-bit DSP core, and that the Pulse Array D/A chip uses seventh-order noise-shaping realized with 64-bit mathematical precision. Both mean that any mathematical error due to the filtering and noise-shaping calculations will be negligibly below the analog noise floor, and therefore inconsequential.

The digital filter used by Chord is of a type new to me. Called a WTA filter, for “Watts Transient Aligned,” it is said to minimize timing errors, therefore reducing the need for large numbers of filter taps to be used to achieve a given performance. Nevertheless, the DAC64’s filter uses 1024 taps, compared with the 256 typical of many commer-

Description: D/A processor with three digital inputs (XLR, AES/EBU; TosLink optical and BNC electrical, S/PDIF), RAM input buffer, and balanced and unbalanced analog outputs. Sample frequencies accepted: 32–192kHz. THD: <-98dB (1kHz, 24-bit data). S/N ratio: >110dB. Channel separation: >110dB at 1kHz, >100dB at 22.1kHz. Dynamic range: 120dB. Maximum output level: 6V RMS balanced, 3V RMS unbalanced. Output impedance: 75 ohms (short-circuit protected).

Dimensions: 13.3” (338mm) W by 2.4” (60mm) H by 5.7” (145mm) D. Weight: 15.4 lbs (7kg).

Serial numbers of units reviewed: USD013, USD015.


Manufacturer: Chord Electronics Ltd., The Pumphouse, Farleigh Bridge, Farleigh Lane, Maidstone, Kent ME16 9NB, England, UK. Tel: (44) (0)1622-721444. Fax: (44) (0)1622-721555. Web: www.chordelectronics.co.uk. US distributor: The Sound Organisation, 11140 Petal Street, Suite 350, Dallas, TX 75238. Tel: (972) 254-0182. Fax: (972) 234-0249. Web: www.soundorg.com.
special digital filters. The DAC64 doesn't offer HD/CD decoding, however.

I referred above to the RAM buffer. This is basically arranged as a FIFO (First-In, First-Out) store. In theory, the clock accuracy with which the data are clocked into the FIFO doesn't matter, as the data are clocked out with a high-precision local crystal, which in turn should reduce jitter to vanishingly low levels. In practice, there has to be some means of locking the local clock to the long-term-averaged clock of the incoming data, which will mean low-frequency jitter might still propagate to the DAC chip. But because Chord uses a very much larger FIFO than is usual, all jitter in the incoming data above a very low frequency should be rejected.

Speed bumps

In auditioning modern digital components, there are times when I begin to doubt whether there are any differences to be heard. This was not the case when I began auditioning the first sample of the Chord DAC64, using the Mark Levinson No.315 CD transport and with the Chord's RAM buffer switched out. Not only was the sound hard-edged and fatiguing, there was a noticeable sourness, as if the musicians were no longer playing in tune. Switching in the Chord's RAM buffer to its smaller size brought about a significant improvement in this respect, although the tonal balance remained bright. Peculiarly, when I set the RAM buffer to its larger setting the sound was, if anything, more fatiguing than with the smaller buffer — not less, as I'd expected.

I usually leave the measurements until after the auditioning, so my perceptions will not be affected by any expectations formed by the test results. But I couldn't believe the DAC64 was performing as its manufacturer intended, and so put it on the test bench to take a

**Measurements**

Unless indicated otherwise, the test results refer to the second sample. The maximum output levels were a high 3.097V RMS from the unbalanced jacks (this is 3.75dB higher than the CD standard's 2V) and 6.197V from the balanced. The unit inverted absolute polarity from the XLRs with pin 2 wired hot; it was non-inverting from the RCA jacks. Source impedance was a very low 67 ohms (unbalanced) and 135 ohms (balanced) across most of the audio bandwidth, these figures rising at 20kHz to a still low 99 ohms and 207 ohms, respectively.

The frequency response with CD data was flat from both sets of outputs (fig.1, top traces), and was not changed by the RAM buffer. The response error playing back pre-emphasized data was minimal (fig.1, bottom traces). Driving the DAC64 at 32kHz, 48kHz, and 96kHz sample rates with the RAM buffer engaged gave the responses in fig.2, all perfectly flat (other than the fact that I had to compromise for the buffer's time delay when I did the test). Channel separation (not shown) was superb, at better than 110dB in the midrange, though this did decrease to a still excellent 95dB at 20kHz due to capacitive coupling.

Fig.3 shows spectral analyses of the first sample's noise floor with the RAM buffer in-circuit, driven with 16- and 24-bit dithered data representing a 1kHz tone at -90dBFS. The traces are free from spurious, but the 8-bit increase in word length lowers the noise floor by only 6dB, or one bit's worth of dynamic range — poor performance by modern DAC standards. Repeating the spectral analyses on the second sample gave the traces shown in fig.4. Now the increase in word length drops the noise floor by 10dB across the band, implying almost 18-bit performance. While this is about one bit worse in the treble than the Musical Fidelity A34, the Chord maintains the improvement to the lowest frequencies, whereas the A34's noise floor is less good in the lower midrange and bass.

The RAM buffer was switched off for the measurements represented by figs.3 and 4. I was surprised to find that when I switched it in, it changed the result when it was set to its maximum size. The top two pairs of traces in fig.5 show spectral analyses of the DAC64's noise floor while it decoded a 24-bit dithered 1kHz tone at -90dBFS without the RAM buffer (same trace as the bottom trace in fig.4, if you allow for the different vertical scaling) and with the buffer set to its smaller setting: they overlay.

---

**Fig.2** Chord DAC64, frequency response at -12dBFS with (from left to right): 32kHz, 48kHz, and 96kHz sampling (right channel dashed, 1dB/vertical div.).

**Fig.3** Chord DAC64, sample 1, ½-octave spectrum of dithered 1kHz tone at -90dBFS, with noise and spurious (from top to bottom): 16-bit data, 24-bit data (right channel dashed).

**Fig.4** Chord DAC64, sample 2, ½-octave spectrum of dithered 1kHz tone at -90dBFS, with noise and spurious (from top to bottom): 16-bit data, 24-bit data (right channel dashed).
Chord DAC64

Fig. 5: Chord DAC64, sample 2, 1/2-octave spectrum of dithered 1kHz tone at -90dBFS, with noise and spuriae (from top to bottom): 24-bit data, small buffer, 24-bit data, large buffer (right channel dashed).

Fig. 6: Chord DAC64, 1/2-octave spectrum of "digital black," with noise and spuriae (from top to bottom): 24-bit data, 2-bit data (right channel dashed).

Fig. 7: Chord DAC64, departure from linearity, 16-bit data (right channel dashed, 2dB/vertical div.).

Fig. 8: Chord DAC64, waveform of undithered 1kHz sinewave at -90.31dBFS, 16-bit CD data.

Fig. 9: Chord DAC64, spectrum of 50Hz sinewave, DC-1kHz, at -1dBFS into 600 ohms (linear frequency scale).

Fig. 10: Chord DAC64, HF intermodulation spectrum, DC-25kHz, 19+20kHz at 0dBFS into 100k ohms (linear frequency scale).

look at what it was doing. As I report in the "Measurements" sidebar, the Chord's DAC was producing very high amounts of word-clock jitter without the RAM FIFO buffer and had a compromised dynamic range, but there was nothing to indicate that the unit was broken. I finished up my listening and had begun to write a negative review when I received an e-mail from Chord's John Franks, in the UK. Apparently, a manufacturing problem had affected some of the first batch of DAC64s, and Chord wanted to submit a second sample.

Franks had attached spectral analyses to his e-mail, showing the effect of jitter with and without the RAM buffer of both a faulty sample (with results identical to what I had obtained) and of a revised sample (with very much better results). I agreed, therefore, to put my review on hold while a new sample was shipped from the UK. The serial number of the first, substandard sample was USD013, that of the second sample was USD015.

Listening

Soundwise, the two samples were chalk and cheese. Whereas the first was unlistenable without its FIFO engaged, having that peculiar sourness to its sonic character, the second DAC64 sounded exactly. However, when the buffer was set to its maximum size, I got the bottom pair of traces in fig.5. The noise floor has dropped by around 10dB, and now there are some spurious harmonic tones apparent. It looks as if the dither noise has been removed, which would happen only if the RAM buffer was truncating the 24-bit data words by a couple of least-significant bits. A puzzle.

Fig.6 shows similar spectral plots but with the measurement bandwidth extended to 200kHz while the Chord decoded 16- and 24-bit data representing "digital black." The same across-the-audioband lowering of the noise floor by 10dB can be clearly seen. Linearity error (fig.7) was very low down to below -115dB, and as a result of this and the low noise, the DAC64's reproduction of an undithered 1kHz sinewave at -90.31dBFS was essentially perfect (fig.8), with the three discrete voltage levels readily apparent. Increasing the word length to 24 bits resulted in quite a good sinewave shape (not shown).

The first sample of the DAC64 clipped above -1dBFS into the demanding 600 ohm test load. This was not true of the second sample, which could drive a 6dBFS signal into this load without raising a sweat (fig.9). Intermodulation levels were also low (fig.10).

The first sample's compromised dynamic range when fed 24-bit data was the first clue I had that something might be wrong with it. The second was when I used the Miller Audio Research Jitter Analyzer to examine its rejection of word-clock jitter. The gray-out trace in fig.11 is a high-
from one to the other. But if I had to swear on it, I would say that the larger FIFO made recorded piano sound slightly more ‘fine of a piece,’ the image slightly more fleshed-out and the high frequencies more silky-smooth. The different characters of all the cymbals Billy Drummond uses on Rendezvous (Stereophile STPH013-2) were superbly differentiated.

Tonally, the Chord’s balance didn’t favor one frequency range over another. But again, if I had to swear to it, I would say that the low frequencies were a tad more boated than I’m used to in my system. The double-basses of the Rochester Philharmonic, as conducted by Christopher Scannar in Rachmaninoff’s Piano Concerto 3 (Harmonia Mundi USA HMU 9072866), sounded more gruff than I’d expected. But oh, how superbly real Jon Nakamatsu’s Steinway sounded. There was a dynamic sweep to the $3000 Chord’s presentation that was both addictive and not dissimilar to the way the $17,500 Mark Levinson No.3 presented the music’s contrasts. And the DAC64 definitely got right the characteric sound of brass instruments, with a raspy buzz to the leading edges that is too easily and incorrectly smoothed over by other components. But the nod would still have to go to the Levinson, for its better delineation of sonic objects within the image.

Comparisons

Given the pace of development in digital technology referred to earlier, making value judgments of the quality of a digital processor in isolation is impossible (provided it doesn’t drive you out of the room). I therefore set up comparisons with some of the components that have passed through my listening room in recent months. In each case but one, the transport used was the Mark Levinson No.315, connected with identical AudioQuest Cinemquest SV13-4 S/PDIF datalinks, and levels were matched at 1kHz to within 0.1dB using the Levinson No.3805 preamplifier’s level-offset function.

One operational glitch became apparent during these comparisons. The DAC64 muted if the digital source was disconnected or switched off, but wouldn’t unmute when the source was reconnected. I had to unplug the AC cable and let it sit unpowered for a few seconds, after which the mute would lift when the unit was powered up again.

First up was the Wadia 861 CD player ($7950), reviewed by Brian Damroth in March. Yes, this does have its own internal transport, but as I couldn’t get its digital output functional, I instead fed one of its digital inputs from the Levinson. When I listened to the excellent recording of Elgar’s In the South overture with the Bournemouth Symphony conducted by George Hurst (Naxos 8.553564, Stereophile’s “Recording of the Month” for June 1998), the Wadia, set to its Digimaster filter, made the violins sound a little “reedy” via the Chord, and the Britis DAC’s low frequencies were very slightly more woolly. The admittedly rather undamped kick drum on the Jerome Harris Quintet’s recording of Ellington’s “The Mooche” (Rendezvous, Stereophile

Measurements

resolution spectral analysis of the DAC64’s analog output while it decoded undithered 44.1kHz data representing a high-level tone at one quarter the sample rate, over which has been laid a low-frequency squarewave at the LSB level with the RAM buffer out of circuit. Not only is the analog noise floor a mess, with myriad spurious tones evident, spaced at 20Hz intervals, but the measured jitter level is a very high 6.32 nanoseconds! It’s no wonder I disliked the first sample’s sound quality without the RAM buffer engaged.

Switching in the buffer set to its small size reduced the jitter to a good 184 picoseconds, but setting the buffer to its maximum size increased the jitter, to 223ps, which was not what I was expecting. The increase was almost entirely due to a pair of sidebands at ±44Hz (each marked with a purple “2” in the foreground trace in fig.11), but the noise floor still looked dirty.

fig.12 shows the results obtained under identical test conditions for the second sample of the DAC64. Again, the grayed-out trace is without the RAM buffer. There are still a number of spurious tones visible, but now the main characteristic is a large rise in the random noise floor on either side of the spike representing the 11.025kHz tone. The measured jitter level was a moderately high 587ps. Switching in the RAM buffer set to its maximum size (black trace) reduced the jitter to an excellent 169ps and eliminated the noise-floor peak. Most of the jitter is due to data-related sidebands (red numeric markers).

Without a doubt, something was terribly wrong with the first sam-
STPI1013-2) came over as less well-defined. Overall, however, the two units were similarly lush, though the Wadia was slightly more laid-back.

Next up was Musical Fidelity’s limited-edition Nu-Vista 3D player ($4995), which so enthralled Mikey Fremer last October. For this set of A/B tests, I used the tubed Nu-Vista as the transport, again driving the Chord via the AudioQuest S/PDIF datalink and with levels matched at 1kHz.

This time, differentiating the two components was not quite as difficult as it had been with the Wadia. The Musical Fidelity player was slightly brighter, but was better both at presenting individual sound sources “of a piece” and at throwing a deep but well-defined soundstage. In the first appearance of the fanfare figure that appears throughout Rachmaninoff’s Piano Concerto 3, there is a sudden hush after each pedaled chord where the decay of the sound helps define the recording space for the listener. While this was still apparent through the Chord DAC, the reverberant decay seemed to connect with the image of the piano via the tubed CD player.

This difference was also apparent with multikinked recordings. Though there had been some studio leakage of Jerome Harris’ bass guitar in his solo introduction to “Hand By Hand” on Rendezvous, almost all the ambiences you hear surrounding his Taylor instrument was provided by a Lexicon PCM-90 reverberator. The Musical Fidelity both preserved the amount of reverber I had decided on and used it to place the bass guitar behind the plane of the speakers. Via the Chord, even with its RAM buffer engaged, the bass sounded a little drier and was more upfront in the balance as a result.

It is important not to blow this difference out of proportion — without a reference for comparison, it’s not something anyone would notice. But had I used the DAC64 for my monitoring when I mixed Rendezvous, I’d have gone for a slightly more “wet” sound for this passage. But if I were spending my own money, it would be this aspect of its performance that would make it go for the Nu-Vista.

The next comparison was with the Musical Fidelity A32 ($1200), which Sam Tellig reviewed in our April 2002 issue and I report on in a “Follow-Up” in this issue. Again, the differences were less subtle than with the Wadia, but unlike with the Nu-Vista 3D, there was no clear winner. The A32 sounds more forward in the upper midrange, with more top-octave air and ambient information apparent. The Chord had an overall more laid-back presentation and a greater degree of lower-midrange bloom. The bass was where the greatest differences could be perceived. The Chord’s bass was faster, with less-well-defined leading edges to bass guitar and double bass. Not only was the Musical Fidelity’s reproduction of low frequencies better-defined, it also seemed to have a snidgen greater bass extension.

Overall, I would find it hard to choose between the Chord and the Musical Fidelity; whichever I preferred would depend on the recording being played. It’s fair to point out that the Musical Fidelity is significantly less expensive than the Chord. It’s also fair to point out that the DAC64 glows like an internally illuminated jewel next to the utilitarian-looking A32.

**Conclusion**

While the Chord Electronics DAC64 is undoubtedly expensive, it is eye-poppingly gorgeous. And while it sounds best with its RAM buffer engaged, the associated time delay does take some getting used to. Even after several months, I was still bothered by the cognitive dissonance that happened when I pressed Next Track on the transport’s remote and saw the selected track start to play while I was still listening to the previous track.

But that’s trivial — what matters is the sound. In that regard, even while I expressed some small criticisms, the DAC64 should be ranked highly. While its soundstage was a little less dimensionally fleshed-out than those of the best CD playback systems I have auditioned, many listeners should find its silky-smooth highs seductive, as well as its slightly larger-than-life lows.

The DAC64 is up against stiff opposition, and its lack of HDCD decoding will be an issue for some audiophiles. But provided the faults with the first sample have been fully addressed in production (I am assured they have been), I can highly recommend the Chord DAC64.

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**Fig.12 Chord DAC64, sample 2, high-resolution jitter spectrum of analog output signal, 44.1kHz sampling, 5% Audio Lambda 2 transport via 6’ Aperature S/PDIF link (11.025kHz at ±6dBFS with LSB toggled at 229Hz). Center frequency of trace, 11.025kHz; frequency range, ±3.5kHz. Grayed-out trace is similar analysis without RAM buffer.**
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Simaudio Moon P-5 line-level preamplifier

I approach a Stereophile "Follow-Up" as a reality check, and the return of Simaudio's Moon P-5 preamplifier to my system was a big one. In re-reading my review of the Simaudio W-5 power amplifier and the P-5 in our March 1999 issue, I saw that I had found both to sound sleek and powerful, but ever so slightly velvety and dry at the top end compared to, say, the Sony Frontiers Line-2 with its more silky treble. Aside from that, I had found little to distinguish the sound of these two excellent preamps.

So, after many months of living with SF's Line-3, auditioning a few other preamps, and confirming that the updated W-5 was quite similar to its predecessor, I was anxious to hear the P-5 again. I used it with a number of amps, and with both the B&W Signature 800s and my resident Revel Ultima Studios. I also asked Simaudio's Lionel Goodfield to tell me what changes might have been made in the P-5 since my last review sample. His numbered replies are in italics below.

"1) The values of the resistor array ladder in the gain section were changed to 'even out' the progression of the selectable gain settings. Keep in mind that the audio signal passes through only one selected resistor in this array at any given time. As well, this change results in the virtual elimination of small 'popping' sounds when the gain level is changed."

These changes were transparent to me. The nonlinear spacing of the gain steps was acknowledged as a "feature" in the original, but it wasn't a problem then, and the changed spacing wasn't either. Over the usable range of settings (15–30 out of the total range of 1–50), I never lacked for just the right setting with either sample. Moreover, I had two P-5s for the full review, the second supposedly corrected to reduce the relay clicks by reducing input offsets. Well, the clicks associated with gain change were just noticeable and not annoying. They still are. If the spacing of the gain steps is more even, that's okay.

"2) Amount of overall gain was increased for added flexibility."

In my original review, I used volume settings below 30 with the Apogee Ductas, and now used similar settings with the 800s and Studios. Because the P-5 was still dead quiet, the extra gain cost me nothing, and might be useful in some systems.

"3) The amounts of current traveling through different stages of the P-5 were altered to improve sonics."

Ah-ha! Something vague but significant: a change in sound! Well, there was an audible difference between the old P-5 and the new, and I can say this even though I didn't have them side by side for a direct comparison. My audio memory isn't supernatural, but there's no way the new P-5 could have matched my description of the originals. Those units could be distinguished from the Sonic Frontiers preamps by their ever-so-slightly dry and closed-in treble. With more extraverted speakers and sources, they sounded more natural than the SFs. With others, the old P-5 could make voices sound recessed.

Well, the new P-5 was having none of that. Through the analytical 800s or the more self-effacing Studios, the new P-5 was absolutely grain-free, spacious, and open. Compared to the SF Line-3 or, indeed, a bypass, it was apparent that the new P-5's treble had shed its final veil. If anything, it seemed a bit more alive and forward than the SF, although whether one or the other was less colored in comparison to a bypass shifted by my selection of source components and recording.

"4) A new DC servo correction circuit was implemented for the purpose of maintaining a DC output level as close to 0V as possible. This circuit uses no coupling capacitors, which we believe add colorations to the sound."

I don't know how much of an effect this might be having because the original, if I recall correctly, abjured coupling capacitors as well. The small but significant improvement in the P-5's rendition of treble voices seems to have been accomplished without compromising any of its other outstanding performance features. The new P-5's midrange, bass, imaging, and soundstage remained state-of-the-art.

"5) In terms of physical changes—dimensions remain unchanged; the standard finish is a black facelase with a pewter-colored Moon logo. Alternatively, we offer an optional silver facelase with a gold-colored logo."

As I recall, the original units had a silver finish; whether one prefers the new black units is a matter of taste. I didn't care for the feel of the somewhat granular finish on the black volume-control knob. On the other hand, I tended to use the remote control almost exclusively, particularly since the new remote is an improvement over the original. The original was an impossibly large, straight extrusion with large buttons,
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Grant Green

I

n the liner note for *A Tribute to Grant Green*, critic Jim Ferguson quotes jazz guitarist Mark Whitfield as saying that he was “so preoccupied with learning Charlie Christian and Wes Montgomery that I overlooked Grant Green…. After that I spent months looking for as much stuff by him as possible.”

Whitfield’s comments pretty much define the nature of the neglect Green suffered at the hands of his peers, and even many jazz players of subsequent generations. Green was the house guitarist for what many consider the greatest jazz label in history, Blue Note Records, during the early 1960s, when that label achieved some of its most enduring successes. He made more than 90 recordings as a leader and sideman before his untimely death, in 1979, at the age of 47. Yet Green was undervalued in his day, and never achieved the notoriety he yearned for, although he was no doubt happy to see the popular rock band *The Atlanta Rhythm Section* record “Blues in Maude’s Flat” on their best-selling album *Third Annual Pipe Dream*.

Green’s guitar work defined the concept of improvisational groove, the radicalization of soul jazz, the quantum leap into funk and beyond, into a new realm where categories just don’t apply. At the height of his fame, in the 1960s and early 1970s, Green was too subtle for the pop world and too commercial for jazz fans, who saw any concession to the marketplace as betrayal. But Green’s wonderful tone, sleek but full-bodied, soared through the changes like a champion swimmer effortlessly winning an Olympic heat. He could burn with white-hot splendor, but he was also a master player of ballads, able to evoke blue moods and articulate melodies with celestial clarity and the light touch of dove’s wings. He could play any composition and turn it into his own statement.

Grant Green was born on June 6, 1935 in St. Louis, where he took up the guitar in grade school and began gigging in 1944, at the age of 13. “The first thing I played was boogie woogie,” he said. “Then I had to do a lot of rock’n’roll. It’s all the blues, anyhow. A musician should be able to play anything when the situation calls for it.”

Green applied this open-minded outlook to jazz bands, where he exercised his fascination with Charlie Christian–like single-note jazz solos; and R&B bands, where he was encouraged to play in a more extraverted fashion. He always claimed, though, that his biggest influence was alto saxophonist Charlie Parker, a legacy apparent in Green’s inherently blues-based, smooth-flowing melodic lines.

His exposure to hard 1940s and 1950s R&B and rock made Green unafraid to take a very direct approach in his playing when, in the late 1950s, he joined trumpeter Harry “Sweets” Edison’s band, which included tenor saxophonist Jimmy Forrest, pianist Harold Mabern, bassist Gene Ramey, and drummer Elvin Jones. Green’s aggressive attitude is already evident in his session work with Jimmy Forrest on the album *All the Gin is Gone*.

After being discovered by Lou Donaldson playing in a St. Louis bar, Green moved to New York in summer 1960 with Donaldson’s band and quickly caught on at Blue Note, where he would appear on albums by Hank Mobley, Herbie Hancock, and Lee Morgan, among other label artists. Between 1961 and 1964 he played on more Blue Note recordings than any other sideman. In 1962 Green was named top new artist of the year in the *Down Beat* “Critics’ Poll.”

Green’s recordings have gone in and out of print over the years, but a fairly good cross section of his work is currently available. One of his strengths was playing in organ combos; Green’s first session, *Grant’s First Stand*, is a 1961 trio date with organist Baby Face Willette and drummer Ben Dixon. Green would go on to record with organists Jack McDuff, Big John Patton, and Larry Young.

Green’s other 1961 sessions currently in print include *Reading Out*, originally cut under drummer Dave Bailey’s name, and *Sunday Mornin’*, which features Kenny Drew on piano. *Grantstand*, from the same year, is a far more important album and a true measure of Green’s abilities as a leader. His interchanges with Jack McDuff epitomize the era of organ–guitar soul–jazz grooves, with drummer Al Harewood well in hand and the bonus of flutist and tenor saxophonist Yusef Lateef. This is the album on which Green’s classic “Blues in Maude’s Flat” first appeared.

At the end of 1961 and the beginning of 1962 Green cut the excellent *Born to be Blue*, with a quintet featuring pianist Sonny Clark and tenor saxophonist Ike Quebec. The album showcases Green’s easy-swinging melodic grooves on ballads like “Someday My Prince Will Come.” Also in 1962, Grant recorded a great album of gospel material, *Feelin’ the Spirit*, with the young Herbie Hancock on piano. His version of “Nobody
Knows the Trouble I've Seen" is a knockout. The Latin Bit, another 1962 release, concentrates on Afro-Cuban rhythms with contributions from master percussionists Willie Bobo and Carlos "Potato" Valdez. His great Getin' West album from the same year has yet to be reissued. Green's sublime 1961-62 quartets with pianist Clark have been collected by both Blue Note The Complete Quarters (CDP 57194) and by Mosaic Records in the now out-of-print The Complete Blue Note Recordings of Grant Green with Sonny Clark (MID-133).

By 1963 Green had the style, substance, and panache of a jazz giant in full control of his destiny. That year he made one of his most essential records, the sublime Idle Moments, wherein he invokes twilight moods of blue-green dimensions in the company of vibraphonist Bobby Hutcherson, pianist Duke Pearson, and the magnificent tenor saxophonist Joe Henderson. The CD reissue includes a terrific alternate version of "Django" not included on the original release. In the same year, he also released Blues for Lou.

Green's capabilities in more challenging contexts is fully demonstrated on the brilliant 1965 release Matador, recorded with bassist Bob Cranshaw and John Coltrane's partners at the time: pianist McCoy Tyner and drummer Elvin Jones. This lineup takes on the Coltrane touchstone "My Favorite Things" with sure-handed élan. Green's clean, perfectly assured, easy-swinging soloing against Tyner's familiar block chords and Jones' surging rhythm is breathtaking. In several moments of sheer brilliance Green asserts his personality on the arrangement with ostinato sections that have Tyner and Jones sounding positively gleeful as theyoller along on a fresh take of an old favorite. If Coltrane remade this standard in his own image, Green showed that there was more depth within which the tune could be made into a personal statement than even Coltrane had plumbed. This unit also excels on Green's own "Matador," with its distinctive guitar riff in the head. The tune, which still sounds fresh and rings with clarity, is a favorite for young guitarists covering Green. Though his reputation is based on his work with organ combos, Green's playing here shows how versatile he was. The Matador rhythm section also played on Solid, with Joe Henderson on tenor and James Spaulding on alto, an outstanding 1964 session that, inexplicably, wasn't reissued until 1979.

Green went on to make a series of albums with one of the most creative organists in history, Larry Young, who took the basics of Hammond B-3 organ grooves from the Jimmy Smith mode into a new realm of sound, one influenced by the technical innovations introduced by Coltrane and looking forward to the proto-fusion of Tony Williams' prophetic Lifetime band. Street of Dreams is a terrific start for the Green/Young collaboration, with Bobby Hutcherson on vibes and Elvin Jones on drums. Talkin' About and I Want to Hold Your Hand offer more of this dynamic duo, but their last project

A Grant Green Discography

First Session, Blue Note CDP 27548, 1960/2001
Reaching Out, Black Lion BLCD 760129, 1961/1989
Standards, Blue Note CDP 21284, 1961/1998
Grant's First Stand, Blue Note CDP 21959, 1961/1999
Sunday Morning, Blue Note CDP 52434, 1961/1996
Grantsand, Blue Note CDP 46430, 1961/1987
Born to be Blue, Blue Note CDP 84432, 1962/1989
The Latin Bit, Blue Note CDP 37645, 1962/1996
Feelin' the Spirit, Blue Note CDP 46822, 1963/1987
Blues for Lou, Blue Note CDP 21438, 1963/1999
Solid, Blue Note CDP 83358, 1964/1995
Street of Dreams, Blue Note CDP 21290, 1964/1998
Talkin' About, Blue Note CDP 21958, 1964/1999
Matador, Blue Note CDP 84442, 1965/1990
I Want to Hold Your Hand, Blue Note CDP 59962, 1965/1997
His Majesty, King Funk, Verve 314 527 474, 1965/1995
Carryin' On, Blue Note CDP 83124, 1969/1995
Green is Beautiful, Blue Note CDP 82826, 1970/1994
Alive, Blue Note CDP 89793, 1970/1993
Live at the Lighthouse, Blue Note CDP 99381, 1972/1998
Best Of, Volume 1, Blue Note CDP 27312, 1993
A Tribute to Grant Green, Evidence ECD-22211, 1996
Best Of, Volume 2, Blue Note CDP 37741, 1996
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Stereophile, July 2002
THE BAND: The Last Waltz
Performance *****
Sonic ****½

Thanksgiving, 1976, and there they were: Robbie Robertson, Richard Manuel, Rick Danko, Garth Hudson, and Levon Helm, the eponymous band that had lasted through rock's most turbulent years, added much Americana to its lexicion in the process, and then had calmly decided to celebrate and film its own elaborate swan song.

Rock was then more of a brotherhood, and the guest list for this farewell would be long and distinguished. There was the great Muddy Waters howling out “Mannish Boy,” a girlish Emmylou Harris singing “Evangeline,” and artists like Neil Young, Bob Dylan, and Van Morrison all still in their primes. Even the promoter, Bill Graham, was a living legend.

Hardest of all to believe, in retrospect, is that rock music still had life back then, still had energy and something—if not intelligent, then at least sincere—to say. This emotional weight was carried by the now currently in decline art of songwriting. Despite the visual element provided by the film, it was and is the music of The Last Waltz, the greatest rock concert film of them all, that takes your breath away.

“Over the years, the Band has become identified with a set of songs in a manner that distinguishes them, for good or ill, from all other rock groups,” wrote Greil Marcus in a post-concert review in Rolling Stone, “they are less their mystique, or their faces, than they are ‘The Night They Drove Old Dixie Down’ and other tunes from Music From Big Pink and The Band.”

And what a collection of tunes it was. The original Last Waltz album’s first side (reproduced with additions on disc 1 here) was classic, stuffed full of the kind of Band tunes Marcus refers to above: “Up On Cripple Creek,” “The Weight,” and “The Night They Drove Old Dixie Down,” as well as performances by guests like Mac Rebenack doing his “Such a Night.”

Deeper into the album, as the guest stars’ connections to the Band became more tenuous, the quality of the performances fortunately stayed high: Joni Mitchell nailed “Coyote,” Neil Young crowned “Helpless,” and the film’s most incongruous element, Neil Diamond, slid through his collaboration with Robertson, “Dry Your Eyes.”

At the time of the film’s release it was clear that it and the accompanying three-LP soundtrack album represented only part of what had gone on that night. Both were mishmashes of the original event, mixing songs from the evening’s first and second sets. (Neither the new DVD-Video nor this boxed set of CDs makes any attempt to correct this problem.)

To the original LP set’s 30 tracks the reissue of The Last

Waltz adds 24 more, previously unreleased — what the press materials call “nearly all the original concert elements.” While director Martin Scorsese and the group made most of the right choices when it came to choosing among the two or three tunes each guest performed, a number of salient performances are added here, including: Muddy Waters, “Caledonia”; Bob Dylan, “Hazel”; Neil Young, “Four Strong Winds”; and Joni Mitchell, “Shadows and Light” and “Furry Sings the Blues.” The rehearsals on disc 4 are also priceless, with Van Morrison running through “Caravan” and Dr. John tinkering with “Such a Night.”

Unlike a lot of reissues that promise better sound thanks to “new” remastering, The Last Waltz — whose original sound never sparkled — is much improved thanks to a fresh remastering supervised by Robertson. An A/B session with the original LPs and the first CD version revealed that the soundstage has been infinitely widened and given extra depth. The bass response is deeper, and the high end, muddy in previous incarnations, is now resolved and unwavering. The DVD-V of the concert features a 5.1-channel surround mix that, judging from the screening I attended, is also an improvement.

According to Rhino Entertainment, there is also a single DVD-Audio disc available of the tracks from the original three-LP set, but using the new 5.1 mixes. (The 24 new tracks would have required a second disc, which MGM and Rhino did not want to do.) Even more confusing, although the DVD-V includes the original film intact, plus extra footage of performances, rehearsals, and Robertson and Scorsese discussing the film, the CD reissue contains music not on the DVD-V.

If you’re a serious fan, you’ll have to buy the DVD-V, the DVD-A, and these four CDs to get it all — but of course, it will be worth it.

And The Band thought they were saying goodbye…

— Robert Baird
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It's Time To Upgrade Your Power Cords...

Save up to 60% on Audioquest AC Cords

If AC power were water, your system would be drinking from the sewer! That's a fact. The quality of our AC power is worse than ever. And it continues to degrade as radio and cellular phone transmissions increase, and as we fill our homes with more and more digital appliances every day. The rapidly increasing number of computers and digital A/V components being used in your home and the homes around you are having sonically degrading effects on your system. Adding a high quality AC power filter is a good start in dealing with some of these AC related problems. And we recommend adding one to any quality system. But the single most overlooked component in most audio and video systems is the AC power cord. AudioQuest uses a helical array of multiple conductors to provide a high level of airborne RFI rejection. But to guarantee that nothing gets through, AudioQuest attacks the problem with brute force by using their specially tuned ferrite RFI filter on each cable. The thorough design of the AudioQuest cable not only eliminates the problems caused by stock cords, but it goes much further by dealing with the serious problems of RFI induced distortions. All in all, you get a well engineered product that yields a valuable improvement in sound and visual quality, for a fraction of the price demanded by other high end cable manufacturers.

Two models are available. The AC15-1.6 is a 15 AWG cable, suitable with all components except for extremely large power amplifiers. AC12-3.3 is a 12 AWG cable and is suitable with any component. Models with the "H" designation have the Hubbell 5965 AC Plug and molded IEC connector at the other end. Models with the "H/S" designation have the Hubbell 5965 AC Plug and the Schurter #0603 IEC connector at the other end. Visit our web site, or ask us about the extensive list of other plug upgrades also available. Everything from Hubbell Hospital grade connectors, to WattGate Audio Grade.

12 awg (3.3 sq. mm) each
Hots Neutrals Earth

18 awg solid LGC copper

AC12-3.3

Electrically and magnetically isolated conductors

AC15-1.6

15 awg (1.6 sq. mm) each
Earth Neutrals Hots

18 awg solid LGC copper

Electrically and magnetically isolated conductors
Let’s answer the most important question here first: Yes, Lara St. John is really that hot. Trust this Internet junkie, she is extremely easy on the eyes. One look at the foldout poster art on this CD, and she moved right up to No.1 on the list of violinists I would most like to hop in bed with. Please understand that this is precisely the effect she intends: Her most famous cover pose shows her wearing only her 1779 Guadagnini (or its body double). So salacious did the buyer for Tower Classical find this photo that that person refused to accept any more CDs from St. John. It is nice to know that the spirit of Incece Mather lives on.

Now for the serious bit. Apparently her perehant for showing her outer self has had real and unfortunate consequences for luminous Lara. Although (as we might expect) her live concerts apparently do very well, she has been forced to create her own label in order to market her recordings. This is a damn shame, because her playing is as hot as her own comely form. Unlike fellow violin babe Linda Brava, Lara St. John’s first musical love appears to be the classical repertoire. In fact, her list of favorite composers (posted, along with lots of pictures, at www.larasjoh.com) is positively staid and conventional.

Her playing, however, is anything but stodgy. It is true that almost everyone who graduates from a conservatory these days has the chops, but St. John has real style and flair. She and brother Scott give a splendid performance of the Doppelkonzert with beautiful pace and phrasing, even getting the difficult Largo non tanto marking exactly right. No, you will not forget Perlman and Zukerman on modern instruments, or Manze and Podger in Baroque disposition, but neither will you dismiss the St. John’s as a novelty act.

I suppose if you are that rarissima avis, the Classical Collector, you probably can skip this disc. Otherwise, even if you’re a heterosexual woman with a serious understanding of classical performance, you can certainly buy this for your only disc of Bach’s violin concerti. If you’re an avid reader of J.R.R. Tolkien, you will also approve of Ms. St. John’s choice of label name. For my part, I only hope the lady has the right marketing strategy. (No classical Svengali is "exploiting" her looks. The choice is her own.) It’s true enough that sex sells, but I’m not sure that it sells classical music CDs. After all, without massive marketing efforts, no one would have heard about Britney or Mariah, and they’re in a field where you don’t actually have to be any good. I’m rooting for Lara St. John, though — a twentysomething violinist with her elan deserves to be heard as well as seen.

—Les Berkley

VERDI

Il trovatore

Salvatore Licitra, Manrico; Barbara Frittoli, Leonora; Violetta Urmana, Azucena; Leo Nucci, Count di Luna; Giorgio Guadagnini, Ferrando; others; Orchestra & Chorus of Teatro alla Scala; Riccardo Muti


Performance ****½

Sonic ***½

Since there are more than two dozen recordings of Il trovatore available, of which a half dozen are more than good, one would not have guessed that the world needed another. But here, taken from a series of live performances at La Scala in December 2000, Riccardo Muti gives us a thrilling reading, filled with an energy one rarely encounters live, and even less often on disc. The score is presented complete, with all repeats and no optional high notes. Muti attempts to justify the omission of Manrico’s optional high C at the close of “Di quel-la pira” in the booklet: “he runs off to save this crazy old lady he is not even sure is his mother… This is someone who sings and holds high Cs? Where is the truth in that?” This is nonsense. But Leonora and Azucena add tiny but appealing embellishments (more like variations) to their vocal lines once or twice: How is that justified?

Never mind — Muti whips the orchestra into a fantastic frenzy during Manrico’s maniac caballete; elsewhere, it sighs with Leonora or accompanies ideally. Perhaps the most impressive thing about this set is its rhythmic thrust and accuracy; no singer is allowed to hold back the musical line, and with no star-turn nibati, the action remains vibrant. The Leonora-di Luna duet in Act IV moves along at a remarkable clip, almost breathlessly, reminiscent of Donizetti at his best. There is less of the oumph-in-the-orchestra effect audible in this performance than in any other of this work I can think of, and while the ghostly story unfolds well, it’s the peaceful, one-on-one moments that stay in the memory. Muti’s use of non-gigantic voices attests to his approach: This is a drama of personal sadnesses. (But even if he wanted to, where would be find gigantic Verdi voices nowadays?)

The singing is mostly of very high quality; each singer is made to articulate, to great effect, his or her staccati — of which there are many, and so much more noticeable on this recording than elsewhere. Frittoli is an elegant Leonora, singing with accuracy and dignity. The sound itself is not soft and caressing (nor is it yet what we refer to as a “Verdian” soprano sound; cf. like Milanov or Price), but she does nice things with words and dynamics. Licitra would appear to be a real “Italian” tenor, capable of nice morbidezza in “Ah sí, ben mio,” and in the soft scenes with Azucena; elsewhere, he’s generous of voice and exciting.

Violetta Urmana has a voice almost too beautiful for Azucena; we’ve all come to prefer a chesster, more aggressive sound (Cossotto, Bumbry, etc., but here she’s in keeping with the intimacy Muti’s after, and sings not only realistically but gorgeously. Leo Nucci is a bit long in the tooth to be a brute of a di Luna, and he wavers from pitch occasional-ly, but his innate musicality saves the day. Giuseppeppi’s Ferrando is properly moody and he spins a good yarn. The La Scala forces play and sing for Muti as if they feared for their lives; draw your own conclusions.

Stereophile, July 2002
folk rock epitomized by Bob Dylan. For Cash to embrace Dylan’s music so enthusiastically (“It Ain’t Me, Babe,” “Don’t Think Twice, It’s Alright,” “Mama, You’ve Been On My Mind”) in ways that would actually make a serious dent on the country chart (“It Ain’t Me, Babe” charted for 22 weeks and rose to No.4) was a fairly unprecedented embrace of the counterculture by an established star, and revealed yet another facet of Cash’s personality. The album also contains fan favorite “Long Black Veil” and the title song, and boasts standout instrumental performances throughout by harmonica great Charlie McCoy and “Yakety Sax” man Boots Randolph.

Carryin’ On with Johnny Cash & June Carter, now retitled Jackson after its Grammy-winning No.1 hit single, is by turns playful and poignant. Cash and Carter, who had yet to wed, are here declaring their love and, indeed, carryin’ on like a couple that has been together forever. Originally released in 1967 following some legal troubles for Cash and his disastrous novelty album, Everybody Loves a Nut (don’t look for that one to be reissued anytime soon), Jackson is fairly minor when compared to Orange Blossom Special. It’s interesting for its forays into R&B (Ray Charles “What’d I Say” and “I Got a Woman”), but hampered by other songs that are somewhat cheesy (“Long-Legged Guitar Pickin’ Man,” “Fast Boat to Sydney”) and its short running time.

These five discs reveal Cash in much of his mid-period glory, from his spiritual pursuits to his occasional penchant for mayhem to his taste for country mixed with folk, rock, and R&B. If you want all that in a single package, the way to go is the two-CD The Essential Johnny Cash. While not as definitive as the three-CD boxed set of the same name that was released a decade ago (Columbia/Legacy C3K 65557), the new collection boasts better sound and a healthy selection of Cash’s material from his years with Sun, Columbia, and even one track from his mostly disastrous stint with Mercury. As the pièce de résistance, the set includes U2’s “The Wanderer,” which Bono wrote for Cash and which describes the legend of the Man in Black almost better than he’s ever done himself.

Thanks to these reissues and those forthcoming (five more are due in this month) it looks as if the Johnny Cash section in your local record store is about to gain some much-needed balance. All of this may have come about because of Cash’s 70th birthday, but we’re the ones getting the gifts. – Dan Durchholz

WEBB PIERCE

Caught in the Webb: A Tribute to the Legendary Webb Pierce

Crystal Gayle, Emmylou Harris, George Jones, The Jordanaires, Willie Nelson, Charlie Pride, Pam Tillis, Dale Watson, Dwight Yoakam, others


Performance ***½

Sonicos ****

If you’re looking for a respite from the 21st century but without the crackles and pops of Eisenhower-era vinyl, this musical labor of love just might do the trick. Recorded last June at Curb Studios in Nashville, Caught in the Webb isn’t your ordinary paint-by-numbers tribute album, in which the tracks sound as if they were phoned in to fulfill contractual obligations. The two dozen artists here—an elite assemblage of legendary old-timers, recent hitmakers, and alt-country mavericks—all have at least one thing in common: a deep fondness for Webb Pierce, one of country music’s biggest stars during the 1950s.

Pierce was a nasal-toned, hard-country crooner who often sounded as if he just might break out into a yodel, and possessed a keen knack for conveying straight-from-the-heart happiness, lonely despair, and something we didn’t usually hear from the guys on Music Row: vulnerability. That, along with his ear for picking great songs, proved to be a potent combination: Between 1952 and 1958, Pierce racked up 37 consecutive Top 10 hits.

In her liner note, producer Gail Davies, who had a respectable chart run of her own in the early 1980s, writes, “Webb Pierce was to me, as well as all those who so eagerly volunteered to be a part of this album, the antithesis of modern country music. His vocals were brilliant, raw, untuned, untamed, and primitive, but always honest and from the heart.” In that spirit, artists from Charlie Pride and George Jones to Dwight Yoakam and Crystal Gayle interpret and reinvigorate the material. And don’t worry: the pedal steel (a fixture even on Pierce’s early hits) and lonesome fiddles abound, as do gorgeous harmonies courtesy of the Jordanaires.

One need only sample these songs to appreciate Pierce’s wide embrace. His first No.1 hit, 1952’s wistful “Wondering,” gets a delicate, breathy reading from Emmylou Harris, on a track worthy of inclusion on her great Wrecking Ball album. Then there’s Dale Watson’s pumped-up and boozy rockabilly version of “In the Jailhouse Now,” and the ubiquitous Willie Nelson lonely-waltzing his way through “That’s Me Without You.” The most inspired of the album’s many inspired tracks, “No Love Have I,” comes from Pam Tillis and the Jordanaires, who sound as if they’d arrived at the studio fresh from a session with Elvis. This version rocks as Tillis wrings every ounce of loneliness from the lyric. It’s fitting that her father, Mel, wrote the Top Five hit more than 40 years ago.

Pierce passed away 11 years ago, but his overdue induction into the Country Music Hall of Fame should prompt new interest in his catalog. He certainly deserves this loving tribute and the belated attention. Kudos to the artists and musicians who donated their services to this project; its proceeds will benefit the Country Music Hall of Fame and the Minnie Pearl Cancer Foundation.

—David Sokol

TOM WAITS

Blood Money & Alice

Blood Money


Performance ***½

Sonicos ****

Alice


Performance ****

Sonicos ****

With this pair of simultaneously released albums, the unpredictable singer-songwriter Tom Waits, whose recording career began in 1973, has become less surprising.
The victim of his own artistic ferocity and nimbleness—and the fact that these albums aren’t filled with his usual jarring artistic rebellions—Waits is now repeating himself.

Part of the problem is that, like 1993’s Black Rider, both of the new albums are scores for avant-garde operas produced by director Robert Wilson. Also like that earlier project, Blood Money and Alice are collaborations between Waits and his wife, playwright Kathleen Brennan. When writing for the stage, Waits is more apt to lean on the stock of now-familiar musical modes and stylistic directions he’s developed since his landmark 1983 album, Swordfishtrombones.

First, there’s the hoarse, noisy carnival Barker gone mad who first appeared on Swordfishtrombones. On Blood Money, that persona roars to life on “Misery is the River of the World” and “Starving in the Belly of a Whale,” titles that tell you most of what you need to know about the album’s prodigious dark side.


Other now-familiar accents include the calliope, an instrument Waits has been fascinated with since his early Island records, and which is again rolled out on Blood Money for the usual effects. The marching beat that dominated Bone Machine also returns for cameos on both discs, as does the plink-plunk bass-keyboard riff that made a memorable appearance in, among other places, Waits’ soundtrack to Jim Jarmusch’s Night On Earth. But without knockout songs to give these touches fresh life, it feels as if the former moving target has been in this groove too long.

The problem is even more severe on Alice. It’s widely known that this score was written in the early 1990s (the opera opened in 1992) and recorded soon after. When the work tapes were stolen from Waits’ vehicle, it became a famous bootleg. According to sources at Anti/Epitaph, this is a new recording of the score; this seems true, given differences between the two versions.

Whatever its recording date, Alice remains a snapshot of the Tom Waits of 10 years ago. Familiar songwriting modes and stylistic touches dominate: “Lost in the Harbor” is the sad, cracked-voiced Waits. “Watch Her Disappear” is one of his Asylum-era spoken-word, beat-poet monologues. The marching beat again returns in “Everything You Can Think,” and “Kommienzuspadt,” which features Waits’ voice run through a processor, is more shouted, tiresome Wimber blather à la Black Rider.

Not that all this means that there aren’t gems scattered in among the predictability. After all, this is Tom Waits. “Table Top Joe” (Alice) is a delightful bit of light-hearted cocktail jazz. “Flower’s Grave” (Alice) and “Lullaby” (Blood Money) are as delicate and sad as anything he’s written. And “I’m Still Here” (Alice) is destined to be remembered in the company of his very best work.

Then there’s that voice. Like Bob Dylan’s wizened instrument, Waits’ burled holler has become the instrument of choice for his craggier material. And while most of the songs on these two albums tread familiar ground, the match of singer to songwriter is still wondrous to hear.

As 1999’s Grammy-winning Mule Variations proved, Tom Waits, when motivated, remains both the ultimate acquired taste and, for those convinced, an oasis of angular originality and crafty songwriting in today’s oceanic wastes of musical mediocrity. But Blood Money and Alice only just hold those places for him; they’re artistic stasis best appreciated by fans.

— Robert Baird

short takes

THE SHAZAM: The Shazam
Performance ****
Sonic ***

Nashville trio The Shazam hews far closer to mid-’60s British Invasion pop and traditional American powerpop (Plimsoul, dB’s, etc.) than to any tune found on The Move’s Shazam, the great 1970 cabaret/progressive-rock album from which the band nicked its name. It’s an evocative moniker all the same, succinctly forecasting The Shazam’s jet-propelled beats, swaggering raveup guitars, and exuberantly yelping, yearning vocals. This reissue of their 1997 debut takes those attributes and galsops full-tilt into classic territory. To wit: Lennon, McCartney, and Tommy Keene (“Sleepy Horse”); Big Star channeling mid-period Who (“Megaphone”); early Cheap Trick (“Cynic”), etc.

All influences on sleeves duly noted, however, the album is sparkingly fresh. Their subsequent releases were Godspeed The Shazam, Rev 9, and Official Live Bootleg, but for a first album, The Shazam was a killer. Also included: four worthy bonus tracks not on the original release. — Fred Mills

WISHBONE ASH: Argus
Performance ****
Sonic ****

Never mind H.G. Wells. If you want
Your big rig simply isn't complete without a killer headphone system.

Twenty years ago, "Headphones suck!" was a belief held by most audiophiles—and they were basically right. Listen to a pair of Sennheiser 414 or Koss Pro 4AA today, and it's hard to believe that these headphones were the "state of the art" at the time.

About ten years ago, things started to change. Stax was kicking out some pretty good high-dollar stuff; Melos was making a sweet headphone amp (the SHA1); Aunt Corey was raving about the Grado SR60; and HeadRoom was letting you take the High End on the road with portable headphone amplification. Writers were writing about how headphones delivered great performance for the price; how great the Sennheiser HD580 was; and how if not downright pleasurable. Audiophiles, in and headphones were becoming an acceptable experience.

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Truth is, for the avid listener, today's headphone systems provide an otherwise unavailable avenue of sublime experience. Your big rig simply isn’t complete without a contemporary headphone setup. Call us for advice, and get hooked up with audio like you’ve never heard before.

Come listen for yourself! The World of Headphones Tour is currently underway. The largest collection of headphones, headphone amps, headphone accessories, headphone bags, headphone adaptors, headphone gadgets... sheesh!

We must be...

World of Headphones

Obsessed Headphone Geeks at Your Service.

www.headphone.com

Remember these? The Koss Pro 4AA's were all the rage back in 1982.
is a miraculous random event in CTI’s checkered history.

The production standards of this CTI series are not on a level with the great work that Legacy has performed with so many Columbia reissues. The sound quality of these recordings, all originally engineered by Rudy Van Gelder, is extremely disappointing; usually thin, and sometimes nastily bright. Liner notes and discographical documentation are unambitious, and Moon Gems even lists personnel for the wrong album.

Most CTI music offers more cheap thrills than depth. Yet the fact remains that Creed Taylor made many deserving musicians household names, and got them gigs for the rest of their lives. What was the harm in allowing an entire generation to believe in the illusion that they appreciated jazz?

— Thomas Conrad

**STANTON MOORE**

*Flyin’ the Koop*

Stanton Moore, drums; Karl Denson, saxes, flute; Skerik, saxes, Saxophonics; Brian Seeger, guitar; Chris Wood, basses, bass loops; Chris Lovejoy, percussion; Wild Magnolia Mardi Gras Indians, vocal samples


Performance ****½

Sonic ****

Jam bands can dish out terrific dancing-in-step music, but their magic doesn’t often translate onto disc primarily because of suspect musicianship. Most of their CDs sound as if it’s enough just to keep the beats cooking and let the kids get lost in the rhythms. New Orleans native Stanton Moore, whose day gig is drummer for the New Orleans funk-jazz band Galactic, has something else in mind on his latest solo project, *Flyin’ the Koop*. This jazz-drenched collection cuts across the lines of the diverse heritage of Big Easy music, from straight-down-the-pike jazz (the least interesting tracks here) to delicious greasy funk and horn-driven rock. On board for the rhythm variety show are collaborators Chris Wood on bass and saxophonists Karl Denson and Skerik, all veterans of dance-jazz explorations. The energy rarely flags, and the mosaic of sound textures, including Wood’s slippery-to-gritty arco bass lines, are a refreshing change from mainstream jazz instrumentation.

*Flyin’ the Koop* was born out of a jam at Tipitina’s, where Moore, Wood, and Denson, playing as a trio, caught fire. Moore, whose drum work here is exemplary and mixed way out front, enlisted Skerik for the two-horn front line, then set out to record drum loops representative of various shades of Crescent City music to serve as the launching pads for improvisation sessions.

The rhythm party opens promisingly with the upbeat, deep-grooved “Tang the Hump,” featuring Denson and Skerik’s bright harmony sax lines, then continues with “Fallin’ Off the Roof,” charged with a scampering beat and vocal samples from the Wild Magnolia Mardi Gras Indians. Guitarist Brian Seeger (who’s also in the drummer’s Moore & More group) contributes two numbers, including the rather tepid “Let’s Go,” which is funky but in a smooth-jazz manner. His “For the Record,” an R&B cooker, works much better.

Highlights include two rock-infused tracks, “Launched Diabolo” and “Things Fall Apart,” both of which feature Skerik playing his tenor sax through a Saxophonic pedal board for psychedelic guitar effects. The most melodic tune is Moore’s “Amy’s Lament,” its lyrical beauty highlighted by Wood’s scraping bass and Moore’s dirge-like drum march. It’s so good that Moore includes another take of it as one of two hidden tracks at the end of the album. There’s also the freaky closer, “Organized Chaos,” which has a catchy beat and a dirty sound. It’s followed by the first hidden track, a slab of phat R&B.

While Moore’s main gig with Galactic spins jams into outer space, the drummer is mostly tethered to the ground on *Flyin’ the Koop*. It’s jazz with a twist.

— Dan Ouellette

**TOMASZ STANKO QUARTET**

*Soul of Things*

Tomasz Stanko, trumpet; Marcin Wasilewski, piano; Slawomir Kurkiewicz, bass; Michal Miskevicz, drums


Performance ****½

Sonic ****½

Soul of Things is Tomasz Stanko’s third album for ECM since 1995. The first two, *Matka Joanna* (ECM 1544) and *From the Green Hill* (ECM 1680), are among the permanent jazz recordings of the 1990s. Both place Stanko’s fervent, dark, poetic trumpet in small ensembles containing some of the strongest jazz players in Europe, such as Bobo Stenson, Anders Jormin, and John Surman. *Soul of Things* features Stanko’s regular working quartet, with his young Polish
Spectral DMC-30 SL Reference Preamplifier.
A fresh sheet of paper; a new idea, and an advancement in technology. A fortuitous confluence that begat an ultra high-performance amplification unit: the Spectral High-speed Hybrid Amplifier. Densely packed with premium surface-mount components, the DMC-30 SL is truly a glimpse of real music. With a full 1 ampere output at 1 MHz, this remarkable preamplifier has an effortless, unbounded sense of dynamics and soundstage. Expanding on Spectral's trademark “you are there” sense of transparency, the DMC-30 SL recreates an acoustic event like no other preamplifier that we've heard.
Dynavector XX-2

Editor:
Thanks to Stereophile and Michael Fremer for continuing to cover the wonderful world of analog. Every day, more people are discovering (or rediscovering) the fun of playing records—they not only sound nice, they just plain “feel” right. Beyond merely reproducing the sound captured on a recording, a well-thought-out analog source can better convey the intentions and spirit of the music and musicians we care about.

Fin with Captain Beefheart and Neil Young, and agree that spinning vinyl is where it’s at.

Mike Prunke

Boulder 2008 & 2010

Editor:
All of us at Boulder offer our sincerest thanks to Michael Fremer and John Atkinson for their efforts in reviewing our new 2008 Phono Preampifier and 2010 Balanced Preampifier. The city of Boulder has indeed changed over the past 17 years. While some still wear plaid shirts and eat granola, a new vision has emerged of Boulder as a sophisticated, technologically advanced community. Boulder Amplifiers, too, has changed, with a solid sense of its leadership role in the audio community and a strong view of where it wants to lead. Our small group of dedicated engineers and craftsmen care deeply about each and every product we design and build. Those who own our products can take special pride in knowing that their handbuilt components will perform as designed throughout their lifetime.

The 2008 holds a special place in our hearts as a tribute to the analog era. Jeff Nelson, our president and head engineer, spares no effort to design 2000-series products that will inspire those who care about music in all of its manifestations. Never imposing his vision of what is musical, rather, his designs allow music lovers to experience their recordings without interpretation. Great effort went into making sure that the possessor of analog recordings of any era could experience their musical treasures for what they represent, capturing an event, a moment in time, a sublime feeling, with as much fidelity as current technology is able to provide.

The 2010 is the component that may best exemplify our philosophy: the strong, silent type. Some eight years ago, the 2010 launched us on our quest for perfection. It is the antithesis of mediocrity, and challenges all those who would be content with “good enough.” We are very pleased that it has received such a fine recommendation.

We are well aware that our products are only for the fortunate few. However, we would like it to be known that our efforts extend to all those who truly care about our musical heritage.

Bruce Van Allen
Boulder Amplifiers

Theta Intrepid

Editor:
Kalman Rubinson’s original request to review the Intrepid piqued our interest. We’ve always maintained that Theta brings to multichannel the same quality and attention to detail that we’ve always offered in our two-channel, for-music-only products. This review was the opportunity to put our beliefs to a real-world test.

And put it to the test he did — I must admit our hearts stopped beating for a few moments when we saw the world-class speakers the Intrepid was asked to drive and the herculean amplifiers it was asked to battle. We’re quite pleased that Kal felt that our little 100W channels were up to the challenge.

Thank you again for a thorough review — you’ve made us as proud of the baby in our family of amplifiers as we are of our Citadel monoblock.

Neil Sinclair
President, Theta Digital Corporation

HeadRoom BlockHead

Editor:
Geeeeeze! “Sublime…visceral…linear, taut, powerful…vivid…hugely transparent…terrific tuning…open, sweet, airy highs…fabulous, rich, textured midrange…hair-raising bass…total and absolute headphone reference quality…” Whatcha do, wear out your thesaurus writing the review?

I guess J-10 liked it. There’s actually a long story behind that: For a long (very long) time I’ve been trying to make an amp that Jonathan would really like. I knew that he was the “big-rig guy” at Stereophile, and I knew if we managed to produce an amp he really liked, we’d have made it to the most elevated levels of Audiophiledom. I kept trying, but somehow never quite managed to tickle Monsieur Scull’s nether regions.

Then we came up with this idea for a balanced headphone amp, so when we redesigned the product line last year we added the BlockHead. Now I’ve got to say that I think our new Max amp is damn good — ought to be Class A, I reckon — but when we turned on the BlockHead for the first time, we were shocked. The thing flat-out rocks! It’s like nothing I have ever heard on headphones. So, I sez to myself, “Scull’s gotta like this one.” Hallelujah, he does!

I really don’t think we deserve all the credit, though. The BlockHead is really just a weirdly wired pair of HeadRoom Max amps, but when you run a pair of headphones balanced, something magic happens. I think what it really boils down to is that the common-return connection on a pair of headphones imposes a limit on how good they sound — you cable them up special and drive them in balanced mode and it’s a whole ‘nother deal. The plain old physics of balanced plays a big part.

Also, this whole thing wouldn’t work if there weren’t a couple of great headphones out there to hook up. Semhheiser deserves big kudos for sticking to their guns and continuing to produce the amazing HD600 year after year. They easily could have caved in to the “bring out new products every year” method of consumer-electronics merchandizing, but they didn’t. They found a good thing and stuck with it. Thanks! And Grado continues to hold true to their commitment to lush sound, and has produced a custom-cabled version of their RS1 for the BlockHead. I like the HD600s as a first choice, but the Grados are so sweet and intimate, so different-sounding from the HD600s, that it’s wonderfully worth getting them as a second pair of cans for the BlockHead.

In addition to the headphone manufacturers, Clou, Stephan Audio Art, and Cardas (thanks, George) are now building aftermarket cables for the Semhheiser HD600. Being a manufacturer, I know what a pain in the butt it is to bring a new product to market, and I think these companies deserve a round of applause for developing new products that are not likely to sell in huge numbers. It seems to me that they did because they wanted to play roles in the state of the art of headphone audio. Sometimes you do things because you love high-end audio and believe you
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his being the first appearance of "Aural Robert" here in its exciting new home on the back page, I thought it might be a good time to articulate some sort of mission statement for Stereophile's music section. My colleague and I, plan editor John Atkinson, also thought this a good idea, in light of letters we've recently received questioning when, if, and who's intelligence guided the selection of what appears in our music pages.

My guiding principle in deciding what music to cover in Stereophile is simple: Mix it up.

In "Record Reviews," I try to pack the categories of "Classical," "Jazz," and "Rock/Pop" (and, when the need arises, "Etc.") into a very small space, mixing new releases with reissues and mainstream with obscure: Bach with Berio, bebop with Beiderbecke, Steve Earle with Zero Seven. Given the lack of available pages, I try to highlight what's best, although I'm not—and never will be—averse to running negative reviews.

I assign about half of what appears in the pages of this magazine, and my writers pitch me the rest. Freelance writers need money (now more than ever, in these disastrous times in publishing), and so become adept at pitching what they want to do and what they think I want. Sometimes there are traffic jams of three or four writers pitching the same record, in which case whichever spoke up first usually gets the nod. While there are a number of records that we almost have to review—jazz singer Norah Jones' recent debut is a good example—we generally try to flush out artists less well known and recordings not exhaustively covered.

In this month's "Letters," one reader gently wishes for more mainstream records to be reviewed. He may have a point. I often shy away from mainstream releases for a simple reason: every other music magazine on earth does not. If you've a hankering to read 14 Sheryl Crow reviews, well, they're out there, just about everywhere you look. One of the luxuries of being the music editor of Stereophile is that I'm not required to trail around in the music-rag pack, a mindless slave to release dates. Part of why that's true has to do with the fact that the music writers in this magazine are required to listen more carefully than is the case at most other publications that publish record reviews, where often a boom box will do. Here, sound matters.

If you've a hankering to read 14 Sheryl Crow reviews, well, they're out there, just about everywhere you look.

The other reason why I'm not tied exclusively to release dates and the mainstream has to do with our readers. If you care about gear and have a passionate interest in what recordings sound like, then you're probably also a music buyer-collector with lots of records. I've always assumed that such collectors venture out beyond the mainstream, in search of that rare Beethoven cycle, that long-out-of-print 1950s-era Blue Note LP, or that Holy-Grail single of New Orleans R&B. If I had a nickel for every e-mail I've received asking where to buy copies of the Furtwängler recordings that were smuggled out of Germany during WWII, or a Ryan Adams bootleg from a show that occurred two months ago, I'd own my block in Brooklyn. I once had a delicious letter from a reader who wrote that "the weirder" my choices of records to review, "the better." But this policy may be worth revisiting. Henceforth, I'll mix in more mainstream records in all categories.

As for the other reader in this month's "Letters" who thinks the music reviews "suck," (to be kind) (there are actually more 's and 's in the original letter)—you gotta give him his props for successfully injecting some vocal inflection in his writing. I have an entire career-spanning file of such letters. You gotta love it.

While I disagree with him that we're not relevant in any way, perhaps, as with the above suggestion about a more mainstream bent, I need to keep a sharper eye out for pertinence.

As for his fervent promotion of the progressive-rock genre—which, to my knowledge, had its relevant heyday in the mid-'70s—I don't think you'll be seeing a big push in that direction in these pages any time soon. In this issue, however, we do coincidentally have a review of the Wishbone Ash reissue he mentions. We also have more of Tom Waits' "ass-scratching," covered by yours truly. Sometimes the planets actually do align.

Most of all, in the pages I'm responsible for, I try to serve the Stereophile readership. As easy as it would be to turn the music section into my own bully pulpit/personal playground, and as much as my mouthy, music-zealot personality lends itself to that end, I try not to shove what I like down readers' throats. In fact, if I don't like it, it stands an equal chance just because it goes against my instincts. And while I can be wrong, almost 20 years in this business have given me a little money and a lot of instinct. In the end, instinct is the publishing skill I trust most.

So that's my manifesto such as it is. If you think I'm wrong (or right), please let me know via e-mail, pony express, or whatever method you're most comfortable with. In the end, Stereophile, like all publications, is not about the editors but the readers.

Aural Robert
Robert Baird

Stereophile, July 2002
The Spirit of Sound

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