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AUDIOPHILIA HAS A 500-LB DEAD ELEPHANT LYING IN THE CENTER OF OUR HOBBY: WE LIKE BEING EXCLUSIVE. WE LIKE BEING DISPUTATIVE.

Back on April 13, Stephen Mejias posted the following thought on his “Elements of Our Enthusiasm” blog (http://blog.stereophile.com/stephenmejias/041307happyness): “Is it possible to listen to music and listen to the hi-fi? Or are they two entirely different activities, incomparable and incompatible? Right now, for me, they seem to have nothing in common, whatsoever.”

Oh Stephen, Stephen, Stephen, I thought, What a simple question. How easy it is to answer. Until you actually attempt to do so.

Is audiophilia about the gear or the music? All audiophiles think they know the answer—just as all non-audiophiles are convinced they know the answer. I think the bigger question is, why do we have to have an answer?

Three days later (http://blog.stereophile.com/stephenmejias/041607listening), Stephen came up with the definitive answer to his own question: “Listening to music on the hi-fi is: 1. Listening to music. 2. On the hi-fi.”

I like that answer. It seems to encompass all the fake divisions that Balkanize our hobby. It makes no distinction between formats or design philosophies or camps. As a result, I imagine it will be completely unacceptable to anyone who—unlike Stephen—actually considers himself an audiophile.

Because audiophilia has a 500-lb dead elephant lying in the center of our hobby: We like being exclusive. We like being disputative. We just love our arguments.

How else can you explain the putdown—without mentioning the bigger question—is, why do we have to have an answer?

Of all the audiophile putdowns I dislike, I dislike most intensely the one implied in Are you a gear lover or a music lover? How come? Well, it’s two slams in one. First, it implies a hierarchy that I think does not exist. Well, maybe it exists a little—surely there are folks who purchase an expensive hi-fi just to prove they can, but I don’t really count them as audiophiles unless they really hew to the “listening to music” part of Stephen’s loan.

Yes, we audiophiles care about the equipment. Whether we fetishize it or merely tolerate it, it is necessary to our doing what we like to do: Listen to music. On the hi-fi.

The second thing I dislike about this putdown is that it implies that there’s something purer about listening to music than about caring about how that music sounds. Musicians care about how their instruments sound; producers care about how their recordings sound (well, some of them do); and most recording artists want their records to sound like them. It seems to me they’d appreciate that I care, too.

I used to correspond with someone whose e-mail tagline read: “Listening to music ennobles the soul.” What I remember most about that correspondence was his contempt for audiophiles who didn’t hew to his party line. Perhaps his hi-fi wasn’t good enough—or perhaps he wasn’t listening to it enough.

I’m sorry—that was catty and uncalled for. I think it’s time for me to do what makes me an audiophile: Listen to music. On the hi-fi.

—Wes Phillips

Home Entertainment 2007

This issue of Stereophile is being put together in the days following Home Entertainment 2007, which took place May 11–13 at Manhattan’s Grand Hyatt Hotel. You can find our live blog coverage at http://blog.stereophile.com/he2007, while Michael Fremer (p.27), Art Dudley (p.37), and John Marks (p.47) all offer their thoughts on the Show in this issue. And artist Jeff Wong (pp.55–57) does a superb job of capturing the atmosphere at the Show.

Having read many articles over the past two years about how two-channel audio is in the doldrums, I came away from HE2007 changed by the enthusiasm of both exhibitors and attendees. I had lent my Ayre C-5xe universal player to Bob Cordell, Peter Smith, and Daren Kuzma to use as a source for their amplifier and speaker workshops—see http://blog.stereophile.com/he2007/05 1507works—and when I went back up to their room toward the end of the final day to get it back, not only their room but all the exhibitors’ rooms were still jumping. As Wes Phillips wrote in his wrap on the blog: “HE2007 recharged me with its energy, upbeat vibe, and the plethora of products aimed smack dab at my sweet spot—and judging from the crowds at the Hyatt, I wasn’t alone.” Amen to that sentiment, Wes.

—John Atkinson
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Editor John Atkinson
Music Editor Robert Baird
Managing Editor Elizabeth Donovan
Production Manager Sherrie Corsun
Senior Contributing Editors Sam Tellig, Martin Colloms, Michael Fremer, Wes Phillips
Editor At Large Art Dudley
Web Producer Jon Iversen
Assistant Editor Stephen Mejias

CONTRIBUTING EDITORS (AUDIO)
Jim Aselin, Paul Bolin, Lonnie Brownell, Peter Breuninger, Brian Damkroger, Robert Deutsch, Shannon Dickson, Larry Greenhill, Keith Howard, Jon Iversen, Fred Kaplan, Ken Keslar, David Landers, John Marks, Paul Messenger, Robert J. Reins, Kalman Rubinison, Markus Sauer, Jason Victor Serinus, Peter van Willisen
Test & Measurement Consultant Paul Miller

CONTRIBUTING EDITORS (MUSIC)
Larry Bimbaum, Daniel Buckley, Jason Cohen, Thomas Conrad, Daniel Durstholz, Ben Fineane, Matthew Frith, Bob Gulla, Robert Levine, Fred Mills, Dan Ouellette, Leland Rucker, Scott Schinder, David Sol, David Patrick Stearns, John Swenson

Graphic Design Natalie Brown Baca, Elizabeth Donovan
Cover Photo Eric Swanson

ADVERTISING SALES
Associate Publisher Keith Pray
(212) 915-4157 • fax (212) 915-4164 • e-mail: Keith.Pray@primedia.com

Advertising Manager Ed DiBenedetto
(212) 915-4153 • fax (212) 915-4164 • e-mail: Ed.DiBenedetto@primedia.com

Advertising Manager Laura J. LeVechio • LeVechio Associates, Central, West Coast Mfg, & National Retailers
(718) 745-5025 • fax (718) 745-5076 • e-mail: Laura.Levchiov@bbcglobal.net

Sales Coordinator Rosemarie Torcivia
(212) 915-4160 • fax (212) 915-4167 • email: Rosemarie.Torcivia@primedia.com

Classified Manager Helene Stoner
(505) 473-4156 • fax (505) 473-1641 • email: hstoner@man.com

Music Manager Ilke Nechev
(212) 490-2079 • email: ilke@mitchelladgroup.com

VP Marketing Peter Carell
Marketing Director Shawn Higgins
Creative Services Director Peter Cooper
Research Director Jessica Szafrasky
Marketing Coordinator Heather Stein

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John Atkinson • John.Atkinson@Primedia.com
Robert Baird • Robert.Baird@Primedia.com
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“Awe-inspiring sonic performance”

“MOON W-8 review, Issue #75”

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Hope
Editor:
My 18-year-old son stopped listening to the rhythmic recitation of bad poetry known as hip-hop once he and his buddies began to mine my collection of the rock music that I grew up with. Curiosity about jazz, bluegrass, world music, etc. will hopefully follow as his tastes develop.

About two years ago, he started giving me lists of CDs he wanted as birthday or holiday gifts. Puzzled by such requests from a dedicated iPod user, I asked him why. He responded, “Dad, they sound so much better!” I believe that there is hope for the digital generation! Name withheld

Fascinating HE2007
Editor:
Thanks for another fascinating show… looking forward to Home Entertainment 2008.

— L.J. Phillips
ljphillips@shaw.ca

Wow!
Editor:
I attended HE2007. Wow! People, people, elevators, elevators. I wonder if another location can be found for this Show. I also realize how expensive and difficult this can be in NYC. I think this Show set new attendance records.

James Barlow
jcb035@yahoo.com

You can find coverage of HE2007 online at blogs.stereophile.com/HE2007, and in this issue starting on pp. 27, 37, 47, and 55. — Ed.

Only in America
Editor:
Only in America can one issue [May 2007] of an audio magazine contain a review of a $13,495 piece of gear (the Nagra CDP) and a $149 universal disc player (the Oppo DV-970HD). No doubt the Nagra is a beautiful player, both well-made and great-sounding. But I would be curious as to how many units are sold in one year. Wes Phillips’ review does bring up the “value” issue, which is something 99% of your readers will also question. Almost makes me feel that the Nagra falls into the “I’ve-got-one-and-you-don’t” category.

I do appreciate your presenting all equipment, from the sublime to the ridiculous, since I would otherwise never see them here in rural Central Pennsylvania.

— Barry Gault
Aloona, PA
begaunt@aol.com

Hey Jude
Editor:
Regarding the “Hey Jude” controversy between Art Dudley and Brian Mooney in the June “Letters”: I think it is Paul singing the fade at 6:48.

— Bruce Edwards
Jefferson City, MO
b2mace@msn.com

Hey Dude, it’s Paul
Editor:
I can confirm that it is clearly Paul singing the fade on “Hey Jude” at 6:48. This is unmistakable and obvious, even on my iPod.

— David F. Toone
Tucson, AZ
dftesq@aol.com

Hey Paul
Editor:
I am proud to say that all six staff members of my dental practice are required to know the difference between the singing voices of John and Paul (Beatles, not popes), as a requirement of their continued employment. And I will not hire anyone who cannot so distinguish, or who is not willing at least to learn this skill within a few days on the job.

So I feel that I am qualified to say, with reasonable assurance, that it is Paul, not John, still singing as “Hey Jude” fades out (IPS Labs review, April, p.177). Can it be that Art Dudley is the victim of the infamous “Lowther shout?”

— Tony Biancardi
DDS
Pittsboro, NC
thiancar@juno.com

With so many people challenging my belief that the singer was John—and no one taking my side—I should just admit I was wrong and beg forgiveness. Then again, it couldn’t have been Paul, because, as everyone knows, Paul is dead.
— Art Dudley

Ken Kessler is God?
Editor:

— Rick Lee
Newark, NJ
rickre@optonline.net

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now hear this.
UK: SOUTHEND-ON-SEA
Paul Messenger

In my description of the Living Voice battery-based power supply in “Industry Update” in June 2006, I mentioned a tubed in-car power amp. Now Genesis’ Project 15 in-car amplifier has graduated from an idea to full production, and Genesis proprietor Gordon Taylor brought over an early sample for me to listen to.

Improvements in original equipment packages have made life a bit tough for the in-car aftermarket in recent years, but Taylor—a native of New Zealand who decades ago cut his hi-fi teeth on the Lynx brand—has kept the Genesis in-car brand growing steadily for the past 15 years, along the way building a reputation for superior sound.

While solid-state electronics remain the core of the Genesis operation, Taylor believes that there’s enough demand for the extra warmth that tubes offer to justify a $7000 stereo amplifier for the car. The difficulty is that tube amps tend to be low-power devices, whereas the noisy auto environment inevitably soaks up lots of power. The Project 15 is therefore a hybrid design: four all-triode tubes in a class-A line stage feed a solid-state output section, the latter operating in class-A+G, to give 30W of true class-A. An extra rail boosts this to 200W when required.

Hand-built at the Genesis factory some 40 miles east of London, the Project 15 uses rugged Russian mil-spec tubes to cope with the considerable vibration of the car environment. A 6N1 tube converts balanced to single-ended operation; a 6H30 tube, combined with a 6C45 voltage follower in a Beta follower circuit for improved linearity, provides a class-A amplifying stage; an OA3 adds voltage regulation. The Project 15 is dual-mono throughout, and has three cooling fans.

Flashy bits (car-audio fans love a bit of bling) include purple LEDs illuminating the base of each tube, CNC-milled side louvers acting as heatsinks, and an edge-illuminated Perspex cover that bears the Genesis logo and the serial number. The tube heaters are powered by a separate supply that’s wired to come on early, with the interior light when the car door is opened.

Besides looking good, the Project 15 did just what one might expect sonically. Driving my regular home hi-fi with the help of a 12V DC transformer, the amp delivered sound that was sweet, mellifluous, and a bit softer and gentler than the typical solid-state amplifier—too much so for the hip-hop generation, perhaps, but likely to be welcomed by those who favor acoustic instruments and a more relaxed sound. Purists might complain that true neutrality should be an amplifier designer’s only goal, but Taylor argues that deliberately introducing the “character” of tube amplification is justified: It’s what some enthusiasts want, and it’s a demand that has hitherto remained unsatisfied for car sound.

GERMANY: MUNICH
Markus Sauer

Another Munich show, another record attendance. This event just keeps on growing and growing, and with good reason—the sheer professionalism of its organizers puts the High End show ahead of all other audio shows on the European circuit. High End 2007 was particularly upbeat; every exhibitor I spoke to seemed happy about the flow of interested visitors and the business done with dealers and distributors.

Some of the demos were a bit hard to swallow. One loudspeaker manufacturer (who shall remain nameless) had enlisted the help of a recording engineer, who sang the praises of that company’s gear for how well it performed in recording studios. The salesperson present used that as evidence that his company’s consumer models—with much smaller cabinets, different drive-units, passive instead of active operation, etc.—therefore also had to be very good. He then linked the pretty-good sound of those consumer models to a specific technical aspect of their design, and made claims about that design aspect that were simply wrong. It would have been impolite to interrupt the sales patter, but the episode served to show that marketing bullshit is still alive and well, and that Stereophile’s policy to explain technical features and examine whether they live up to the makers’ claims is as necessary today as it has ever been.

One excellent demo was from Audio Physic, who premiered their...
new, all-metal-driver Virgo V ($6800). (All prices in this report are exclusive of German VAT; all speaker prices are per pair.) The main difference from the earlier Virgo IV is the Hyper Holographic Cone Midrange, a completely new 5.25" drive-unit that has several interesting features that would take too long to explain here. The Virgo V also features a version of the cone tweeter premiered in Audio Physic's Avanti. Meanwhile, AP's Yara line has been revamped and has gained a new top model, the Yara II Superior ($2300), which looks a lot like a mini-Virgo.

Speaking of cone tweeters, I think the time may be near when the humble dome tweeter—now under attack from any number of alternative HF cone types—may have to be placed on the list of endangered audio species. French manufacturer Davis's new cone tweeter gave a good account of itself in a demo of the upcoming Sisley speakers ($3500), and will soon be available to other manufacturers as well. Some new wide-bandwidth cones serve as both midrange and tweeter; German speaker stalwart audiiodata premiered their new Pierrot stand-mount speaker (from $3000), and got an award for Best Value Exhibit at the show (along with amp manufacturer ASR and turntable and equipment supports brand West Forest Audio Labs). And there were planar tweeters of various kinds: ribbon, planar magnetic, and various incarnations of the Heil air-motion transformer.

The most outrageous use of air-motion transformers came from Adam Audio, who premiered their new OSS Olympus Sound System ($250,000). This comprises a tower using two 18" drivers for the low bass, another tower using sixteen 6.5" drivers for the mid bass, twelve air-motion transformers for the midrange, and eight more smaller ones for the high frequencies. The system is active, six channels of ICEpower class-D amps providing 3000Wpc. Both the crossover filters (typically eighth-order, 48dB/octave) and overall phase and frequency equalization are handled by a 27-bit DSP-based signal processor. Three different dispersion characteristics, selectable in the crossover, are intended to allow integration with just about any reasonable room.

Sonics by Joachim Gerhard showed a new speaker in prototype form, the Spirit. With a ribbon tweeter and expected to cost “in the vicinity of” $23,000, the Spirit builds on the modular design Gerhard introduced with the Allegria. England's Abbingdon Music Research showed production versions of their AM-77 integrated amp and CD-77 CD player, which created a stir at the Consumer Electronics Show in January, while Gryphon showed a prototype of a new speaker, the Atlantis ($25,000). Said to be phase-coherent from top to bottom, this three-way, five-driver speaker sounded very good to these ears. German tube-amp company Octave had a new version of their HP 300 preamp ($6900) and a new integrated amp, the V80 ($6800).

These big electronics were sounding good on a new version of the Isophon Arabba speaker, which has a room-adaptable crossover with expensive, carefully selected components and a full complement of Accuton ceramic drivers. Ayon introduced a new loudspeaker, the Dragon-S ($21,500), a 95dB-efficient three-way using a modified Supravox midrange driver to good effect. Both Burmester and Clearaudio are celebrating their 30th birthdays this year and are going strong.
In the final stages of a new loudspeaker design, Dave Wilson sits alone in a specially built sound room, fine tuning the crossover by ear. You may notice, however, that the loudspeaker in the photograph isn’t new. It’s the X-1 Grand SLAMM, Wilson’s previous flagship model, no longer in production. Nevertheless, there are more than 600 pairs of X-1s out there in the world, and Wilson Audio feels a loyalty to the owners who’ve invested considerable sums of money in them. So, as our ongoing research yields breakthroughs, we strive to make those sonic upgrades available to past products, like the X-1 (Level 5) and current speakers like the MAXX (now Series 2.)

From his listening position, Dave can make real time comparisons of crossover slope, level, and time domain settings. Despite employing a cadre of first rate engineers and skilled listeners, Dave Wilson knows that every loudspeaker that leaves the factory bears his name. That’s why the design of every loudspeaker—whether the newest model or the latest refinement of one nearly fifteen years old—isn’t done till it meets the approval of two final authorities: the ones on either side of his head.

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...the Tyr has taken up residence in my system, the only non-Valhalla piece if cable I use, an impressive endorsement of both its performance and the coherence and continuity of Nordost’s approach.  Roy Gregory  hi-fi+

Find a dealer near you, and hear for yourself.
introduced a new flagship CD player, the 069 (from $34,000), while the gigantic Clearaudio stand hosted a number of new turntables and tonearms that will keep Mikey Fremer busy.

Speaking of busy, Lindemann has obviously not been resting on their laurels: their acclaimed top SACD/CD player has been revised and is now called the 820S ($11,300)—and it has a new little brother, the 822 ($7700), as does their preamp, in the form of the smaller 832 ($5500). Lindemann also introduced a pair of new dual-mono power amps, the 852 (200Wpc, $6700) and the 855 (400Wpc, $10,000). All these models are said to benefit from very close attention paid to the power supply, plus novel circuit designs. At the more affordable end, T+A have a complete new series, the E (as in Entry, presumably). The components are called simply the CD-Player ($1800), the Music-Player ($2300; can also play data from a network, a USB data carrier, an iPod, and external sources like DAB or Internet radio), and the Power Plant (1800; a 125Wpc, two-channel integrated amp).

While many German manufacturers have for some time survived—and in some cases thrived—on foreign sales, the home market for two-channel audio finally seems to be picking up. With the current weakness of the dollar, US manufacturers are also once again doing healthy business in Europe. Things are looking good.

**GERMANY: MUNICH**

**Paul Messenger**

The German High End Society’s annual High End show, held in 2007 in Munich for the fourth consecutive year (after some two decades in Frankfurt), is now Europe’s largest and most important hi-fi show. Because it always begins on Ascension Day (a movable feast), it sometimes coincides with Stereophile’s own annual Home Entertainment Show. This year, however, a week separated the events, which is why I found Mikey Fremer sitting a few rows back from me on the bus to the Munich Operations Center, and why I will try to avoid treading too heavily on his analog toes.

Germany is very much the heartland of Europe’s vinyl revival, and two established British brands, Revolver and Creek, used High End 2007 to introduce smart new turntables. Revolver simply thought it about time that a brand that had started out making turntables added one to its current portfolio. The Replay (£1500/$3000) has a marble plinth, a Japan-built tonearm, and a main bearing made in Cornwall.

My photo of the more costly Creek came out much better, but many details of this turntable are still being finalized; its price (without tonearm) could end up anywhere between £1500 and £2000, depending on the spec, and a synthesizer power supply could add another £700. Among several interesting features being considered is a low-friction, magnetic-repulsion bearing.

Key British speaker launches in Munich included KEF’s monstrously magnificent Muon (described last month, p.11), which looks even more intimidating in reality than its photographs suggest. Its curved, mirror-finish surfaces reflect the immediate environment in a strange way—it would look great outdoors, in a garden.

Increasingly rebranding itself Bowers & Wilkins—in part to avoid confusion with BMW, now that the speaker manufacturer has begun working with Jaguar—B&W’s main launch was the latest update of its budget 600 series. The newbies feature several instances of technology trickled down from the 800 series, such as—in the three-way 683—first-order tweeter crossover filters, and a surroundless FST midrange drive-unit. Also new was a very elegant two-way, the B&W Signature Diamond, whose elliptical shape was created by Kenneth Grange, its acoustic design by John Dibb. The nacelle housing the top-mounted tweeter is made of marble.

Mordaunt-Short showed the first two models of a new line that sits upmarket from its budget Avant line. The line’s key features include curved enclosure sides, to increase stiffness and prevent standing waves, and a tweeter that sits half proud of the cabinet top, allowing for M-S’s differential rear tube loading.

Lyngdorf Audio has at last developed appropriate speakers for its unique time-aligned satellite-subwoofer approach, with a compact sub designed to be placed in a corner or against a wall, in conjunction with a slim, open-baffle dipole satellite speaker.

Munich is always full of entertaining nooks and crannies. I
"I found a true, clear and warm sound.
Something that I’ve never found before."

Rick Rosas,
Bassist, Neil Young Band
was delighted to find a beautiful collection of German-made facsimiles of Wurlitzer jukeboxes from the 1940s and 1950s. More than 40,000 "One More Time" copies, mostly CD-based, of the classic Wurlitzer Model 1015, from 1946, have been made and sold since 1986; many end up in American dens.

Facsimiles of vintage jukeboxes aren't any more high-end than the Meridian-Ferrari desktop CD receiver reported on in June (p.15), but both exemplify the importance of creative packaging in today's hi-fi gear. The German distributor of the ever-imaginative Tivoli products has added a new brand, the Swiss firm Geneva Lab, who make what look like chunky loudspeakers in sizes small, medium, and large. But they aren't just speakers: each Geneva Sound System has three drivers, comprising an (admittedly rather narrow) stereo sat/sub combo, along with an amplifier, a radio, a CD transport, and, on the top, an iPod docking station. Another oddball component from another Swiss firm was the Reson iBag from Karlev-Audio AG, a clutch handbag about the size of a cosmetics bag, fitted with a pair of Gallo spherical speakers behind perforated sections, plus a rechargeable, battery-powered amp: just add iPod for a brilliant picnic sound system.

While Arcam is busy extending its Solo one-box stereo system into 5.1-channel DVD-land, others are hoping to share the Solo's success. Music Hall's Roy Hall showed me the new and very sharply priced Trio CD player with AM/FM receiver. Unison Research showed a rather more costly prototype, the Unico Sistema, a chunky little number that includes CD and radio sources, a hybrid tube amp, and a clever iPod interface.

Rise, an Italian company, deserves some sort of award for the most dramatic-looking display at the show. Each component was floating, suspended by grips of bright red elastic and hooked up with bright red cables—and the teardrop-shaped, carbon-fiber–enclosed speakers were making good sounds.

Looking altogether more conventional but still discreetly stylish, a new Danish operation, Tempel Audio Systems, showed its first components: the Ariadne preamplifier and the Ampinion 200W PWM power amp (a matching, top-loading Arethusa CD player is imminent). Tempel's principal

was doing some damage to the event's reputation, as the show was still the biggest and most important in Europe, and the post-show statistics—space up 10.7%, exhibitors up 4.8% to 220, attendance up 6.9% to 12,902 over the Show's four days—confirm that the event continues to strengthen its position as Europe's most important annual hi-fi show.

"One More Time"...the mighty Wurlitzer clones at Munich.

"One More Time"...the mighty Wurlitzer clones at Munich.
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How long before Chinese hi-fi rules the world? Some say ten years. Others say five.

A few say—never—that high-quality hi-fi products made in North America or Europe will always rule. (Ironically, a number of Western hi-fi firms survive mainly on sales to Asia, including mainland China.)

Five years ago, Chinese hi-fi was nowhere on the map in terms of fit, finish, and reliability. Consider where it is today: on the cusp of becoming some of the best in the world. Indeed, some Chinese-made hi-fi is already the best on the planet—Quad ESL-2805 or ESL-2905 electrostatic speakers, for instance. Is anyone nostalgic for when they were shoddily made in the UK? My colleague, Ken Kessler, and I concur that the quality of the latest Quad electrostatic speakers, the 2805 and 2905 ESL models, surpasses that of any Quad models ever made in England. In part, it's the machining. In another part, it's the aspiration to build beyond Western—or at least British—production standards. Quad: Brilliant in design, crappy in execution. Owners of British-made cars will know what I mean.


Cambridge Audio hit on a plan. (Cambridge Audio and Mordaunt-Short are owned by the Audio Partnership, Ltd.) They design stuff in London (as I saw for myself when I visited this beehive of activity two years ago), and it's made in AP's own factories in China, under close supervision. Fit and finish have improved steadily—to the point where the quality may now surpass that which could be attained in Britain.

Quad, Wharfedale, and Mission are owned by the International Audio Group (IAG), whose owners, the brothers Chang, hail from Hong Kong. The factories are in Shenzhen. Models are designed in the UK (Quad has an R&D facility in Huntingdon, Cambridgeshire, not far from the former Quad factory, which now houses a company producing toys) and built in Shenzhen to Western standards.

Antony Michaelson, of Musical Fidelity, saw what was coming nearly five years ago, when he told me he was moving most of his company’s production to Taiwan. Arguably, manufacturing standards are still higher in Taiwan than in mainland China.

Meanwhile, Linn Products has laid off an unspecified but sizable chunk of its Scottish workforce—they’ve been kanned, so to speak. Ivor Tiefenbrun, Linn's founder, thundered that the Labour government had “done more damage to British industry than the Luftwaffe.” Regulations, red tape, taxes, an overvalued pound—yeah, that’s a formula for success. Linn’s own incompetence might have contributed.

US manufacturers have enjoyed a reprieve because of the sorry dollar. Sales of US hi-fi products have been surging, like Bush in Iraq, from Stuttgart to Singapore. The French, Italians, rich Russians (ie, thugs) are all buying. But for how long? The dollar, like the country, will not remain forever bushed.

Until now, the best Chinese hi-fi has come from companies like Quad, Cambridge Audio, Vincent (designed, or at least specified, in Germany), and Melody Audio (Australia)—in other words, stuff made under watchful Western eyes, some of them Chinese (see below). You’ll hear about Cambridge, Vincent, and Melody in future columns. (I hope to catch up with some hi-fi made in South Korea and India, too.)

Ken Kessler sized up the situation in May, at the Stereophile “Ask the Editors” panel at Home Entertainment 2007 (see http://blog.stereophile.com/he2007/051507roast). According to Ken, Chinese workers lack the decades-long tradition of making goods to Western standards. It’s not that they aren’t good workers; they’re just new to the game.

Such a diplomat. Others have expressed things differently. As one importer of Chinese equipment told me just today, off the record: when the Chinese can skimp, they do. One can hardly blame Chinese manufacturers for crumbling under pressure to cut costs to the bone. As another importer told me, the Chinese are agreeable to a fault—sometimes too much so for their own good. If you really want it at such a price, we’ll give it to you at that price.

All of this is changing fast, as Chinese workers catch on and catch up to Western manufacturing standards, and Chinese manufacturers learn how to say no: too cheap is too cheap, and benefits no one.

Meanwhile, the Chinese may no longer need to be colonized by the Audio Partnership or even IAG. They’ll design and manufacture world-class hi-fi gear on their own initiative, with their own passions and talents. This is already starting to happen. One company in the forefront is Cayin (officially known as Zhuhai Spark).

Cayin’s official US importer is VAS Industries, Inc., which also has Cayin make some products, in China, under the VAS marque. VAS is Steve Leung, a native of China and now a resident of Hazlet, New Jersey, where he and his wife are raising their family. Steve tells me the kids are growing up American and don’t want to talk Chinese. I tell him that the same is true with my wife, Marina’s, nieces and nephews: they’re 100% Amer-EE-kann and don’t want to speak Russian whenever possible.

Steve’s first name is actually Sze, pronounced (roughly) Sezz, which I like rather more than Steve. Sezz is a friend of Wezz (Wez Phillips). I can just imagine the phone calls. Sezz, this is Wezz (which is what The Chief, John Atkinson, calls WP).

You can call Steve and talk with him—he’s in Jersey, not Shenzhen. He offers factory-authorized warranty service. (Some gray-goods Cayin products have found their way to the US through unauthorized channels, including New York City’s Chinatown. Don’t expect Steve to fix ‘em.)

**Cayin H-80A integrated amplifier**

As you probably know from the December 2005 and June 2006 installments of this column, Cayin was spun off from China’s government-owned CATIC group, which mainly produces...
Sound so pure,
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The CPM 2600 is Chord's most affordable, integrated amplifier. For a mere $6,495, you'll receive the same Chord family sound, quality and reliability that made Chord Electronics the choice of leading studios including: Abbey Road, Skywalker Sound, Sony, Decca, BBC, EMI and Dolby Labs.

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just saved you $3000.

The Cayin H-80A is BIG. This is no itty-bitty British or fancy-sehmanacy European integrated with small build and no balls. It measures 17" wide by 8" high by 19" deep and weighs 80 lbs. It's difficult, almost impossible, for one person to lift. In other words, the H-80A is about twice as big and weighs about twice as much as your typical $3000 integrated amp.

This is exactly the kind of product that will prove devastating to North American and European hi-fi electronics manufacturers. (Speaker manufacturers may have a little more time before the noose tightens.) JA won't print any of this. Meanwhile, I can hardly contain my glee as I write, and laugh out loud.

The H-80A's styling is quasi-retro, tasteful and exquisite, reminiscent of some of the finest hi-fi gear of 20 or 30 years ago. Think high-end Denon, Onkyo, Luxman, or Accuphase. The twin VU meters are backlit blue on black, and drop-dead beautiful in the dark. The fit and finish of the casework is impeccable, surpassing that offered by most manufacturers in the West, who may be getting their casework from China anyway (from Cayin?). Most of the chassis functions as a heatsink.

There's one pair of XLR balanced inputs, and four pairs of gold-plated RCA inputs. Plus a tape loop. No preamp out. No home-theater bypass. But there is a way to connect a preamp or line stage and use the H-80A as a power amp. This is a product for a two-channel perfectionist. There's a remote control, of course—machined from aluminum, no plastic crap. (This is not British hi-fi.) The height of each foot can be adjusted independently. No need for expensive aftermarket footstools or isolation devices.

The H-80A is rated to deliver 80Wpc into 8 ohms or 150Wpc into 4 ohms. Not so much power, it seems, from so massive an amplifier, but the H-80A is claimed to operate in pure class-A. The claim might be contentious—the amplifier runs very cool. Is it biased all the way to 80W in pure class-A or just some of the way? Sze sez all the way, and that the H-80A runs cool because of its massive heatsinks and the fact that the output transistors are used to only 25% of their capacity.

I dunno. I remember, years ago, having a Krell KSA-80 power amp that was class-A and ran hotter than Hades. A swell-sounding Krell it was, too. If the H-80A is class-A all the way, why didn't it raise the temperature in my listening room, in summer, any more than a few degrees? You gotta give off the heat somehow.

None of this matters—it's the sound that counts. I'm not sure I'd want a space heater like the KSA-80 in my listening room, anyway.

The H-80A is a hybrid amp. The initial gain stage includes two i2A72 input tubes. The output stage employs six pairs of NPN MOSFET transistors per channel—carefully tested and matched, sez Sze. Needless to say, there was no trace of MOSFET mist, so infamous in years of yore. There was no bipolar disorder, either, because there are no bipolar transistors. No switching-amp sterility, either—this is not a switching amp. This could be the recipe for sonic success: tubes for their ace voltage-amplification abilities, MOSFETs heavily biased (if not all the way) into class-A for their current drive, and a massive power supply of 120,000µF per channel.

The H-80A's power consumption is given as 280W, which again leaves me wondering about that class-A claim all the way up to full rated power. Steve sez the H-80A is fully balanced from input to speaker outputs, assuming you use its single pair of balanced inputs.

I hooked up the H-80A to Cayin's CDT-23 tubed CD player (read on). The results were so gratifying that I felt little need to substitute anything else, regardless of price (evil laugh, encore). For speakers, I used the Harbeth Compact 7 ES3, Triangle Comete Anniversaire, and BC Acoustique AC 3 floorstander. Most of my listening was with the BC Acoustiques.

In terms of making sounds that sound like real music, flea-watt, single-ended-triode amplifiers (Cayin makes some) can do things that no other kinds of amps can do. That caveat aside, the H-80A fulfilled its promise of delivering the best of tubes and the best of solid-state. The sound was sweet, smooth, and exquisitely extended in the treble, with nary a trace of hardness or harshness. Nor was there any lopping-off of the top end; it sparked. (Bipolar output devices may sparkle a little more—for a price.)

Most impressive was the H-80A's harmonic presentation—what the French hi-fi scribbs call la restitution sonore. With classical or with jazz, it
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Solid Perfect-Surface Silver (PSS)
Noise-Dissipation System
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www.audioquest.com
was right on. Richard Eggar’s fortepiano on his Mozart recital disc, Fantasias and Rondos (CD, Harmonia Mundi HMU 907387), was ravishing—just the right side of clangy. The Cayin nailed it.

The H-80A wasn’t sterile or thin; there was meat on its bones. Its sound was plump, tender, and juicy. I could almost go around to the rear and, like a Russian male, squeeze or even bite its ass. Figuratively speaking. The H-80A was especially good at resolving ambiences preserved on recordings—the air that’s there, the space between performers. It was stunning in this regard, and the opposite of the sterility I’ve heard so far from so-called digital switching amplifiers.

For a $3000 integrated amplifier, this kind of performance is phenomenal. If you’d blindfolded me and asked how much the H-80A cost, I’d have guessed at least $6000. I wonder what would happen if you blindfolded JA. Or Mikey.

But MOSFETs aren’t known for providing the ultimate testicular drive, and the H-80A was a little lacking in balls-to-the-wall bass: that ability to grab a loudspeaker by the cojones and lift it into the air, to discipline it, to teach it how to obey. It could be MOSFETs, it could be the 80W limit.

I’m not suggesting that the bass was soft or poorly defined, but the H-80A’s real strengths were in the midrange and treble. Harmonic textures. Truth of timbre. Palpable presence—assisted by that phenomenal way of delivering ambient information. Air there meant there there. These things made the H-80A great—rather like a fine tube amp of the push-pull persuasion.

I received the first H-80A to make it to the US—the very sample Sze/Steve had demonstrated at the Consumer Electronics Show in January. There were two early-production quirks that I assume the factory has since corrected. The first was that the unit would not stay turned on—until I’d turned it off, then on a second time. Turns out there’s a built-in warmup period, to avoid tube-popping. Then the amp is supposed to click itself on. It took two tries, every time. And every time, the second try did the trick.

The other quirk was the motorized volume control. When I used the remote in cold weather, the volume control got stuck. In warm weather, no problem. I keep the house at about 55° in winter—even less overnight. I suspect that this is a matter of choosing the right lubricant. Or maybe it was a matter of machining.

Put the Cayin H-80A up against anything. With any speakers.

**Cayin CDT-23 CD player**

The Cayin CDT-23 CD player is understated. It has one Electro Harmonix 6922 tube per channel, but the tubes reside inside the chassis. There’s no blue light show. The Sony transport and laser mechanism is a conventional front-loading model that operates with exceptional smoothness.

There are no balanced outputs—a pity, considering that the Cayin H-80A integrated amp has balanced inputs. (Balanced outputs from dual-differential DACs might be more than you’d expect for $1495.) There are coaxial and TosLink digital outputs, though I question why anyone would want to use an external DAC when the player’s own performance is so exceptional. The CDT-23 uses a Burr-Brown PCM 1792 DAC and a Burr-Brown SRC 4192 upsampling chip to achieve 24 bits (some of them phantom) and 192kHz. The idea is to achieve something close to full 16-bit resolution, through whatever manipulation or digital prestidigitation. I would have had more information, but I’m illiterate when it comes to Mandarin.

For $1495, this is a lovely CD player. I dragged it into the living room, hooked it up to my McIntosh MC275 Mk.3 amp and Verity Audio Rienze loudspeakers, and confirmed what I’d heard with the H-80A amplifier and the BC Acoustique A3 speakers. The CDT-23 resolved low-level detail very well and preserved ambient information. Tubes make the harmonic presentation more natural, Is it possible that they actually filter out, or cancel, some digital nasties?

The Cayin CDT-23 does not run balanced. When I tried the Cary CDP1 ($1995), which does have balanced outputs, and also has the upsampling magic bullet, I noticed slightly more low-level rez and more ambient information, along with somewhat greater dynamic range.

But in its own right, the CDT-23 is a very fine CD player—the best I’ve heard to date for $1495, and magnificently made for that reasonable price. Meanwhile, Cayin’s H-80A integrated is exceptional, and so resolving that it could use the best digital source there is—something balanced, at least.

**Cambridge SoundWorks Radio 820HD**

With, at last count, some 1307 stations in the US, HD Radio has finally arrived—if not the radios or the audiences.

HD Radio is a trademark of Ibiquity Digital Corporation and stands for “hybrid digital,” not high definition. For the moment, Ibiquity is the only company making chips for such radios. The company also makes the equipment that HD broadcasters use to broadcast.

The situation is strange. More than 1300 stations broadcasting, yet almost no one is listening in HD, at home, office, or in the car. Something is askew. There should be scads of HD radios by now. Why not? Licensing fees? Or that the current Ibiquity chip draws so much current that battery power, and hence portable radios, aren’t possible? Expect changes soon, and maybe chips from other sources.
Rediscover Paradise
The issue with HD Radio is reception. It’s not so hot if a major New York City station can’t reach Norwalk, Connecticut, or Nutley, New Jersey—or if a Boston FM or AM station can’t push its way into Providence, Rhode Island. What will happen with HD Radio in the car? On the parkways? Under overpasses?

Meanwhile, if you can receive at your home or office HD Radio signals that you want to listen to, the Cambridge SoundWorks 820HD works just fine. I could hear the FM sound improve as it locked on to HD Radio: greater clarity, more dynamic range. This assumes that a station isn’t compressing its signal.

All in all, the 820HD is a splendid little FM radio. It could play surprisingly loud, and was surprisingly good at pulling in weak analog FM signals—at my place I could get WBGO, which is broadcast from Newark, New Jersey some 70 miles away, with local stations on either side.

The 820HD has its learning curve, as radios with many features tend to. Some features are very welcome—such as the ability to set the alarm to go off Monday through Friday, but not on weekends. The basic operation is more or less intuitive. When a station broadcasts two or more HD channels, you just switch the tuning knob. Cool, when reception works—which, when it doesn’t, is not Cambridge SoundWorks’ fault. (I wish I knew how to set the alarm to wake me to a station’s HD2 signal, but when it comes to programming electronics, I’m a dummy.)

I got pretty good sound when I plugged my Sony D-EJ 1000 CD player into the 820HD’s Aux input. But you’d better turn that Aux input back to FM if you want the radio to wake you in the morning.

If you live in an area with lots of HD Radio broadcasts (and are close enough to the transmitter), it seems dumbish to buy a high-end receiver without HD Radio. And the Cambridge SoundWorks 820HD is a very fine FM table radio in its own right, with or without HD Radio.

I’ll let you know more about close-in reception when I try the 820HD in Brooklyn. It would be nice to have extended-range, static-free AM reception. But WCBS AM, in New York, is really strong. How close do you have to get before HD Radio kicks in? And is it really practical for the car?

I have no sound issues with HD Radio, only issues of reception.

(whatever that is). Xtreme Hip-Hop (hip-hop isn’t extreme enough?). Fusion Hispanic & Anglo Rock (mixed marriage?). Neo-Soul (beats neo-conservative!). As a former radio announcer, I have my own format, if anyone is interested: Neo-Fart, for those who can recall what popular music used to be.

On the other hand, thanks to HD radio, I now have a steady stream of NPR news and talk (without having to fiddle with Internet radio), plus a country-music station that broadcasts only on HD2. I wish there were more classical and jazz programming, but they’re there, in some places. Meanwhile, there’s WFUV, better in HD than in regular FM.

The Cambridge SoundWorks Radio 820HD sells for $299.99. As I scribble this column, the company, which sells direct online, was offering a $40 rebate, lowering the price to $259.99, with “free” shipping. That’s still pricey, but why spend $150 or more for a high-end table radio that doesn’t have HD Radio, if HDR offers stuff you want to hear and you can, in fact, receive it?

I want HD Radio to succeed—just as I want many “terrestrial” US broadcasters to succeed—if only so that I’ll have more choices of radio programming. In my neck of the woods, there are about a half dozen or so stations that broadcast HD signals that I can receive. (I live on a hill, in a very good reception area.)

Even so, using an exterior, omnidirectional FM antenna, I can’t do better than 40 miles as the crow flies. I can just manage to get HD to lock on to WFUV (a good thing, too), which broadcasts from the Bronx. Stations located atop the Empire State Building, in Manhattan, tease by almost but not quite pulling in. No AM stations come in in HD at my place, which leads me to wonder about one promise of HD Radio: superior, static-free AM. Nice work if you can get it.

Like other HD-equipped radios, the Cambridge SoundWorks 820AD senses that a station, FM or AM, is broadcasting in HD. It then tries to lock on to the HD signal. If it can’t, it defaults to regular analog reception. Usually. At my place, most notably, the 820HD was so verminmed in trying to lock on to the HD feed of WCBS (880 AM) that it sometimes muted the station’s analog signal as well. Nor was the 820HD’s analog AM reception anything to write home about; it wasn’t very good, and was especially prone to interference.
Stereophile, April 2007 – Wes Phillips
"...its sole purpose appears to be to praise music and to glorify it."
"...full-bodied, liquid, and three-dimensional..."
"...one of the most remarkable performers at any price."

Stereo Sound, Winter 2006 – Takahito Miura
"...a radiant, supple musical quality, with incredibly spacious sound."
"The life-sized soundstage was so vivid it gave me goosebumps."
"...a magical transparency that illuminates the individuality of each performance from within."

Hi-Fi+, June 2007 – Roy Gregory
"...these amps rewrite the rulebook on power."
"...when it comes to musical enjoyment, the effect is smack you in the face obvious."
"...the Ayres establish a benchmark for all round excellence."
The month of May saw me looking for vinyl playback gear at Primedia's Home Entertainment 2007 in New York (sponsored in part by this magazine) and High End 2007, held in Munich, Germany.

Attendees at Home Entertainment 2007 found Manhattan's Grand Hyatt Hotel either cozy or cramped. With its narrow corridors, small rooms, and limited convention facilities, it made a less than ideal choice for a home entertainment show, as did the date: Mother's Day Weekend. Yet while the new venue made it difficult to compare estimates of attendance with those of previous years, based on the consistently crowded rooms, and comments from paying customers and exhibitors alike, HE2007 was very well attended, even on Mommy Day.

This veteran collector of post-Show exhibitor gripes heard almost none—save for a truly low moment on Saturday morning, when the software vendors, already ghettoed in a ballroom on a floor separate from the rest of the Show, were informed that they'd have to close up shop in the early afternoon— their traditional peak buying time— and remove all of their LPs and CDs, to make room for a wedding booked for that evening, then move it all back in the next morning. Apparently the hotel had double-booked the ballroom, and didn't inform the show's promoter until the event was underway. Nice.

Local retailer participation was limited, Sound by Singer being the most conspicuously present, along with Audio Connection from New Jersey. Lyric Hi-Fi, Innovative Audio, and Audio Exchange were absent, as were the other larger Metropolitan area audio stores.

Nothing was more conspicuous by its absence than home theater. Not a single display manufacturer participat-
venue of a live Neil Young recording before I could, and was rewarded with a test pressing of Neil Young and Crazy Horse’s Live at the Fillmore East, one of three Young albums Classic will soon release on 200gm vinyl. Young’s recent Live at Massey Hall solo album will also see vinyl, as will a reissue of Young’s protest album, Living With War—this time without the first issue’s gospel-choir augmentation.

Hobson also announced that the label’s reissue of the Who catalog continues with the imminent release of the epic Quadrophenia, the artwork for which Hobson said was extremely difficult to properly reproduce.

Classic will also issue more than 28 of the most-sought classical titles from EMI, as well as a series of highly desired recordings of André Previn conducting the London Symphony Orchestra, produced by Christopher Bishop and engineered by Christopher Parker—a legendary English team analogous to RCA Living Stereo’s Richard Mohr and Lewis Layton. Classic has released more than 650 titles in the past 13 years, but none rarer than the original version of Bob Dylan’s second album, The Freewheelin’ Bob Dylan, containing “Talkin’ John Birch Society Blues” as well as some other tracks Columbia Records deleted only after metal parts had been struck with the original set of tracks. So far, collectors have found two mono and three stereo copies containing the original tracks, but with the revised version’s label. According to Hobson, a copy of this rarity recently sold for $30,000.

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after Sony unexpectedly declined to license the stereo mixes. The highly recommended mono mixes are available through Sundazed Records.

Hobson didn’t mention Classic’s recent quality-control problems. The high return rates on their latest Diana Krall and Norah Jones releases have been damaging to the label’s reputation. While warps of single-sided 45rpm discs and noisy first tracks plagued the label’s early 200gm flat-profile LPs, more recent releases had been much better—until the Krall and Jones titles, which also had razor-sharp edges not found on earlier 200gm pressings. Hobson promised a press release explaining the situation shortly after HE2007. As I write this, the release has not yet materialized—though I have learned that the noise and warp problems were caused by the absence of the usual “groove guard” lip, which allowed molten vinyl to flow beyond the edge of the metal part. New 200gm pressings will still feature the exclusive flat profile, but will include a raised lip that Classic claims will solve the pressing issues. The copy I received at HE2007 of a new edition of Jethro Tull’s Aqualung was physically and sonically perfect, and the best-sounding version of the album I’ve heard. (I also have original UK and American Chrysalis, French “pink label” Island, Mobile Fidelity, and DCC Compact Classic pressings.)

Musical Surroundings’ Jim Alexander showed me the handsome new Clearaudio Performance turntable, whose MDF plinth is sandwiched between two layers of synthetic marble and wrapped in an aluminum band. The 40mm-thick acrylic platter, driven by an outboard AC synchronous motor, rotates, magnetically levitated on a ceramic sleeve bearing. The package, including a Satisfy carbon-fiber tonearm with three-point ruby jewel bearings, is available in black or white for $2500. Alexander also showed me the production version of a handy electronic cartridge-setup tool introduced...
as a prototype at the 2007 Consumer Electronics Show. At $2500, the device targets wealthy analog fans and reviewers—mutually exclusive demographics.

Roy Hall introduced the new Music Hall MMF-9.1 turntable, which comes with the all-carbon-fiber tonearm found on top-of-the-line Pro-Ject turntables, and Simaudio was showing the finished version of their new LP3 budget moving-magnet/coil phono preamp ($499), based on the outstanding LP 5.3 ($1400). (I should have put the latter in Class B of the last “Recommended Components,” but instead mistakenly downgraded it a notch. The rating will be corrected in the October list.) The ModWright Instruments SWP 9.0SE tube phono stage ($2995), featuring a tube-rectified power supply and up to 68dB of gain, also caught my eye. When my equipment stand has a vacancy, I’ll try to get one to review. •

Otherwise, there were the usual turntables from Brinkmann, Redpoint, Oracle, VPI, and T-W Acoustic, and tonearms from SME, Tri-Planar, Graham, and Dynavector. I hope I didn’t leave any out. Once again, Soundsmith’s Peter Ledermann spun vinyl using his strain-gauge cartridge (with blue LED) and phono preamp. Once again, I asked for a review sample.

Much of my time was taken up being the show’s official spokesperson, including a report with www.msnbc.com’s Gary Krakow (http://video.msn.com/v/us/msnbc.htm?f=00&g=3b2584a4-0bb8-41c8-d21-c9b942f9ad811&p=hotvideo_m_edpicks&t=c27&rf=http://www.msnbc.msn.com/id/3032118/ &fg=). Despite the Grand Hyatt’s double-booked ballroom, vinyl vendors Acoustic Sounds, Elusive Disc, and Music Direct said sales were strong.

In short, HE2007 was a good showing for analog, but small spaetzle compared to what I encountered a few days later in Munich, Germany.

High End 2007
The High End show, held since 2004 at the spacious, modern Munich Operations Center, is an outgrowth of a much smaller event once held at the Kempinski Hotel Gravenbruch, Frankfurt. The Kempinski show had the feel of Stereophile’s Home Entertainment shows or the more hobbyist-oriented and thoroughly enjoyable Rocky Mountain Audio Festival. The Munich event feels more like a Consumer Electronics Show, but one actually produced for consumers. Since moving to the MOC, the High End show has grown in stature as well as size.

I paid my own way to the show, to promote the just-released German-language edition of my turntable-setup DVD, produced by German audio and music journalist Anke Bronner—who, I discovered at a recital one evening during the show, is a talented violinist as well.

The four-day event began with a crowded, trade-only Thursday. The High End show is predominantly about audio, and the 2007 edition had an exuberant, sophisticated vibe that made me feel as if high-performance audio is still a vital, important industry—something I rarely feel in the US. The crowds on Friday and Saturday were huge, the average age relatively young. Total attendance, not counting trade or press, was around 12,000, about 30% greater than Home Entertainment 2007.
Europe, which might explain why the turntable can play at both 33% and 45rpm. It was an outboard motor controller, and row of tall, rectangular pedestals on which were placed turntables, tonearms, cartridges, and record-cleaning machines. In one corner sat the big, floor-standing Statement turntable. I'm skeptical about this turntable, but I'd sure like to hear it through a revealing system in the right room.

UK-based Revolver Audio, who once made a popular, inexpensive turntable that Music Hall also imported, has changed hands a few times and in 2002 began marketing a line of loudspeakers. In Munich, Revolver announced its return to the turntable business with the debut of the Replay, a far more ambitious and well-finished design than the budget-priced original. The Replay has an elastomer isolated bearing platter assembly and a granite-like base. The display sample was fitted with a familiar, generic Japanese tonearm. The UK price will be £1500; if the Replay comes to the US, it will probably cost about $3000.

The vast, black curtain encircling the Clearaudio exhibit gave it an appearance that wavered between the elegant and the funereal, looking like a cross between Pictures at an Exhibition and the set of The Addams Family. The curtains, adorned with iridescent paintings in faux gold on black velvet, surrounded a darkened space that included a performance stage, a glass accessory counter, and rows of tall, rectangular pedestals on which were placed turntables, tonearms, cartridges, and record-cleaning machines. In one corner sat the big, floor-standing Statement turntable. I'm skeptical about this turntable, but I'd sure like to hear it through a revealing system in the right room.

Clearaudio's Robert Suchy lent me a dummy of the new Talismann cartridge, which I used for the four turntable setups I did at the Audio International booth, right next door. (AI imports and distributes EMT's new tube-based phono preamp, which looks even more spectacular than the prototype.)

It was a kick to finally see the Thales arm in action. Micha Huber is a young Swiss watchmaker by profession, and his invention will remind you of a large, precision Swiss watch movement, especially the two intricately constructed, gold-plated devices, fitted with "jewel toe" bearings, which provide the complex motions required for a pivoted, tangential-tracking arm. The front pivot, where the tonearm meets the movement arm, is controlled by a frictionless, backlash-free head bearing containing 25 individual parts weighing a total of only 1.62gm. Who but a watchmaker would attempt such a thing? The upside is zero tracking error without having to move a large mass horizontally by air or by wheels. The downside? Aside from the $10,000 price, I don't know of any, though the smaller, thinner, longer horizontal arm, made of magnesium, which pivots just behind the magnesium headshell, gives me pause. I hope I can arrange for a review of this intriguing arm.

I spent some quality time with Ortofon's Chief Officer of Acoustics and Technology, Leif Johannsen, who recently replaced veteran cartridge designer Per Windfeld. Before retiring, Windfeld had worked for 30 years at Ortofon, where he was responsible for such classic cartridges as the MC 20, Concorde, Rohmann, Jubilee, and, most recently, the Kontrapunkts.
Johannsen's first design will be a state-of-the-art tribute to his predecessor, the MC Windfeld. Johannsen's run-through of the design for me would take far more space than I have left here, so I'll save it for a review of the MC Windfeld, due this fall (ca $5000).

Pro-Ject's Heinz Lichtenegger has been busy and productive. His new Phono Box 2 phono preamplifier includes 24-bit/96kHz A/D converters and USB digital and RCA analog outputs. A less expensive version without the analog outputs will also be available as part of a long line of new, ultracompact, low-cost Box products, including a two-source preamp and the 30Wx2 digital Ampbox. (A 40W Ampbox monoblock will also be available.) Later, Pro-Ject will offer an iPod docking station and a switcher with multiple inputs. American importer Sumiko will soon announce prices.

There are two new versions of the Phono Box and tubed Phono Box SE phono preamps, priced at $299 and $549. The Pro-Ject Debut III turntable will now offer an optional acrylic platter ($60) to replace the standard one of steel, allowing users to switch to moving-coil cartridges. The Expression II turntable has gotten a serious upgrade, including RCA out jacks, a high-gloss finish, a 5.5-lb acrylic platter, the motor used in the more expensive RM 9 and 10, better bearings, and a more sophisticated foot. Pro-Ject is also introducing a brand-new turntable with an S-shaped tonearm, but more about that another time.

In the US, the names of Pro-Ject turntables are prefixed with "RM" instead of "RPM," in deference to talented American designer Allen Perkins' line of Inmedia RPM 'tables. Perkins demoed a production edition of his compact yet complex Spiral Groove SG-1 turntable, fitted with a Schröder tonearm. The elegant, compact 'table's fits and finish are stunning, and the visible machining is of the highest order. Perkins showed me a review in Japan's Stereo Times that I couldn't read, but he said the review was a "rave," and that many writers for that journal are planning to buy an SG-1. When Perkins is ready for a review here, I will be too.

Dr. Christian Feickert, designer and maker of the Dr. Feickert Analogue Alignment Tool, the excellent tonearm-and-cartridge setup gauge, also makes an interesting turntable. The Twin has an outboard, microprocessor-controlled Pabst motor whose electronics are built into its base. And, of course, there's the German company Transrotor, which has so many models it needed an entire room to show them all off in. Also on display, the blingly Hannl record-cleaning machines, now blingier than ever thanks to a new kind of processing for acrylic that gives it a dramatic pattern. Also made of the same material were some new Scheu turntables from Germany. The company began making a pink turntable (for girls) after Anke Bronner had one made for her and others began asking for it. I also spied a new, simpler, one-plinth Nordic Concept 6000 turntable with arm, from Swedish firm Audio Concept. Audio Concept currently has no US distribution, nor did any of the German turntable makers whose products I saw at High End 2007.

I saw a carbon-fiber arm from China and a new 'table from the same designer. US distributor Axiss Audio has a European counterpart. I found Axiss's Art Manzano at the booth and he ran me through the new Shelter and Phase-Tech lines, and showed me Air Tight's new PC-1 mono cartridge ($6000) and some neat new Air Tight accessories.

Continuum Audio Labs designer Mark Doehrmann was on hand to spin LPs on his new Criterion turntable with Copperhead tonearm, but, as at Home Entertainment 2007 in Manhattan only days before, an unfortunate mismatch of equipment that included WAVAC front-end electronics and SH-833 power amps and some big Karma speakers—great products that I don't feel belong together—didn't give the Continuum combo a chance to shine.

I made a side trip to a Munich audio dealer, where I played CD-Rs I'd made from the Continuum Caliburn on a system comprising Einstein electronics and Märtén Audio speakers. This system did reveal the Caliburn's astonishing sound quality, but until the Continuum folks make more of an effort to assemble a world-class system in a well-treated room, snipers, cynics, and those drooling for but unable to get review samples will continue to take silly shots.

I could go on for pages and still not cover all of the analog I saw at High End 2007 and beyond, including a trip to the Bavarian countryside to visit a vinyl-mastering facility and analog recording studio—and, soon, a manual record press—but I'm out of space.
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had been this good.

**Most exciting new product:** Dan D’Agostino, whose Krell KSA-50 is among the ten greatest amplifiers ever made (see my column in the September 2004 *Stereophile*), surprised everyone at the show with Krell’s least expensive product ever: the Krell KID ($1200), whose name is an acronym for Krell iPod Dock. It features true balanced outputs (alongside the unbalanced ones), plus bass and treble tilt controls. Bravo!

**Most attractive new product:** I couldn’t help falling in love with the RED Standard CD player ($15,900), made by Chord Electronics, Ltd. and distributed by Bluebird Music. The RED Standard uses a variation of the same oversampling technology found in Chord’s well-received DAC64 [see WP’s review elsewhere in this issue—Ed.], and adds a switchable RAM buffer, along with ball-bearing pushbuttons and a fluid-damped transport door. The styling is überBauhaus and drop-dead gorgeous. Forget WAF: The only thing that kept me from writing a check on the spot was LOAF (Loan Officer Acceptance Factor).

**Least expected new product:** Roy Hall’s import company, Music Hall—which most of us associate with affordable audio products from the UK—has begun to distribute a line of ultra-high-quality vacuum tubes from Eastern Europe. The new ECC803S from Euro Audio Team is a hand-selected dual triode (a substitute for the nearly ubiquitous 12AX7/ECC83) with gold pins and an integral Cool Valve damper/heatsink. Also on the way from EAT are a ceramic-based 300B and an especially nice-looking KT88. Cool, indeed!

**Best new Lowther application:** Jacob George of Rethm Acoustics took advantage of the Show to introduce his first new speaker design in years: the Rethm Saadhana ($7995). Its horn-loaded Lowther DX55 driver operates down to 70Hz, below which two 6" cloth-surround bass drivers in an Iso-barik loading scheme take over. The performance was beguiling: not only did the Saadhana sound clean, open, and dramatic, it followed melodies just as a clingy knit dress follows other sorts of lines. A review pair has been offered for later this year, so please stay tuned.

**Most innovative demonstration:** While most of us complain that hotel sound is bad sound—true enough—Richard Bird of Rives Audio saw an opportunity: He took advantage of the fact that most hotel rooms are exactly alike, and staged a before-and-after demonstration of his company’s acoustical engineering products and services, with two separate installations of the same musically effective system: Wadia 581i CD player ($9450), various SRA isolation products, the gorgeous VAC Alpha integrated amplifier ($10,000), Talon Thunderhawk loudspeakers ($25,000), and various XLO cables. Also used in the After room were the Variscreen ($700) and Modex ($1000) acoustical treatment panels from RPG, and Rives’ own Sub-PARC ‘equalizer-crossover ($4500). The difference was remarkable, and a pleasant surprise for anyone who might think that an acoustically treated space has to sound overdamped and lifeless.

**Most convincing music:** Unsurprisingly, this happened in the suite shared by Lamm Industries (preamps and power amps), Metronome Technologie (digital source components), Kubala-Sosna Research (cables), and Critical Mass Systems (isolation platforms). A system comprising the current best components from those companies was driving a Wilson Audio Specialties WATT/Puppy 8 loudspeaker system and playing one nice selection after another, when I was surprised to hear it get even better: a baritone I didn’t recognize2 singing an aria from Verdi’s *Rigoletto*. That decades-old mono recording was captivating—and, through that system, the silences between the notes, the presence of the voice, and, above all, the organic, note-to-note flow of the melody were superb, all towering above anything else I heard that weekend.

2I don’t mean to imply that that’s unusual: I’m hardly an expert.

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LISTENING

Audio Space's Reference 2 ($9900), billed as the world's first 300B-based preamplifier.

Records' Lebendige Vergangenheit series (89585). I thought: We need more of all of these things.

**Most frustrating demonstration:** Outlaw Audio's new multichannel amplifier, the 300Wx7 Model 7900 ($3499), was demonstrated using a clip from an action film that appeared to be about a team of angry, mountain-climbing supermodels: a promising enough formula. But when the first of many painfully loud explosions prompted me to drop my bag on the floor so I could use both hands to cover my ears, I looked up and saw a third of the audience doing the same thing. The barrage continued unattenuated, and some folks left before the end. Hey, not every audio demonstration has to be a white-wine-and-cheese party with harpsichord music and powdered wigs—but what's the point of this?

**Biggest disappointment:** I wanted to hear the high-tech HSP3W10 horn loudspeakers ($50,000) and other products by Haniwa Audio, whose promotional material suggests a refreshing approach to system design. Unfortunately, when I stopped by his room at the start of the day, designer Tetsuo Kubo was busy adjusting the system, my request for a demonstration was declined, and, sadly, I never made it back. Haniwa's literature is recommended reading nonetheless, for its genuinely thought-provoking ideas as well as for introducing the words bing and boyoon to the audio reviewer's lexicon.

**Best trend:** Throughout HE2007, I heard less audiophile junk and more real music than at any show in memory. The folks in the Audio Connection room were playing Puccini's Turandot from a 1973 LP, and when I entered the VAC-Magico room I was greeted by the supple twang of flat-picker extraordinaire Tony Rice. Zu Audio was playing the cool Jacques Loussier arrangement for jazz trio of the Allegretto from Beethoven's Symphony 7. And in the Hyperion room they were spinning a selection of real classical music: Deutsche Grammophons, Columbias, and other labels sure to get them in trouble with the guardians of The Great Hind End. Blessed relief!

**Best-sounding horn:** Jeffrey Catalano of High Water Sound always brings a lot of interesting, well-chosen gear to the Show, and this one was no exception. The Model HL1 horn loudspeakers, from England's Aspara Acoustics ($25,000), had better scale and drama than anything else I heard at the Hyatt. The HL1s played the Move's "It Wasn’t My Idea to Dance" with wonderful impact and bass depth, but they were sufficiently clear and uncolored that I could make sense of everything else, too.

**Best news:** Michael Hobson of Classic Records announced the forthcoming re-releases of Neil Young's two most recent albums—Live at the Fillmore East (with Crazy Horse, featuring the late Danny Whitten), and Live at Massey Hall—on high-quality vinyl, along with dozens of titles from EMI's catalog of great classical recordings. My favorite

MICHAEL HOBSON OF CLASSIC RECORDS ANNOUNCED THE FORTHCOMING RE-RELEASE OF NEIL YOUNG'S TWO MOST RECENT ALBUMS...
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The CDP-300 features 1080P (1080 lines of progressive scan video)
from the latter: Sir Adrian Boult and the London Philharmonic performing Elgar’s Symphony 2 (EMI ASD3266). If Classic’s recent work is any indication, these will be more than worth the (difficult) wait.

Briefest answer to a question from the press: During a demonstration of the new Proclaim DMT-100 loudspeaker, whose molded, spherical driver enclosures are set off from one another by the sort of articulated hardware one usually sees during a visit to the dentist, Wes Phillips asked designer Daniel Harrington, “What’s the frequency response of these speakers?” Harrington’s response: “Very good.”

Best budget system along with Best performance by a trance band and Biggest cognitive disconnect between speaker size and bass extension: The system demonstrated by the North American retail/distribution company Štěn Hifi—built around a pair of Guru QM-10p loudspeakers ($1850)—sounded amazing. Ingvar Ohman designed the two-way QM-10p in Sweden over 20 years ago, and it’s been a cult favorite ever since. No wonder: In addition to its uncanny bass extension, the diminutive Gurus had great timing, a real sense of flow and momentum, and reproduced the spatial element of music with a sense of image height that one seldom hears from any speaker at any price. As a bonus, Ohman turned me on to the music of the Israeli duo Infected Mushroom, as well as the recordings of viola player Erik Ring, who also happens to work for Guru. A memorably impressive demo from a very nice, enthusiastic bunch of people.

Best customer service: I was on my way out of the May Audio exhib-

it—I’d already said my good-byes to the people who ran it, and they must have thought I was gone—when I overheard a customer com-plain that a record clamp he’d bought from them was no longer working as it should. Clearly distressed, the owner of May Audio, Nizar Akhrass, apologized and asked him to mail the clamp to him as soon as possible, so that he could send him a new one free of charge. He didn’t even ask how long ago it had been pur-

Best instrument-
tal timbre: This is a tie between two exhibitors—both of them, remarkably enough, from Canada:

Newfoundland’s Aurum Acoustics brought a new systems approach to the Show: an active three-way loudspeaker whose midrange and treble drivers are powered by dedicated single-ended-triode amplifiers. The Integris Active 300B powered speakers ($30,000) sounded wonderful driven by Aurum’s own Integris CDP CD player-preamplifier ($12,000) in a room acoustically treated by Marc Philip Design of Quebec.

Speaking of which: Quebec-based importer Pierre Gabriel, an audio designer in his own right, demonstrated the new Jadis DA-50 integrated amplifier ($7995), which made a nicely textured and uncolored sound driving a pair of ProAc 3.8 loudspeakers ($7500). The hand-wired Jadis amp uses four hand-selected KT88s in tandem with a full (active) line stage—complete with balance control!—and the company’s own proprietary output trannies. A
stunning product from a company with a remarkable history.

**Best pizza in New York:** Call it a failure of imagination if you disagree, but I can't imagine a better pizza than the coal-oven-baked Napoletana I enjoyed at *Luzzo's*, on First Avenue in the East Village. Nice people, too. Steve Bishoe (of *In Living Stereo*), Jonathan

More blue lights: George Kaye of Moscode shows off the forthcoming 402P amplifier (which sounded great on one of my Tony Rice CDs).

Halpern (of ILS and Tone Imports), Wes Phillips and Jeff Wong (*Stereophile*), and Larry Borden (Dagogo) taunting the hall monitor.

The day after the show, just after 9am, my wife and daughter and I went for a walk in the pretty spring sunshine. We visited a shop called *Sephora*, where daughter Julia bought some chocolate-scented lip gloss, and I coaxed a sample of expensive cologne from a nice salesgirl named Carmen—which is silly, because there isn't much cologne-wearing to be done up here in Cherry Valley. Then we went back and checked out of the Grand Hyatt, dragged our suitcases through Grand Central Terminal, and boarded a train for home. I didn't stop to kiss any loved ones: They were all with me.

Last night I dreamed about talking animals. Again.
“Making everything irrelevant but the music.”

MONTANA XPS Signature
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by "Musical Cultural Literacy for Americans" write-in competition seems to have been a smashing success. I received 65 entries, and only a very few missed the mark. A few more were obvious, so-so, or lacking in passion. Many were good. But a score of more were of enviably high quality. Choosing the top 12 was tough. At the end, who won a prize and who did not was entirely my own subjective decision. The winning entries are posted in full on Stereophile's website as an appendix to my April column (www.stereophile.com/thefifthelement/407fifth). Here are the points I made online in announcing the results:

"Here's an idea: instead of spending $100 on new pucks, cones, mats, wires, or tubes, how about spending $100 on randomly selected recordings from these lists that are unfamiliar to you? You might be able to pick up quite a few on eBay for comparative peanuts.

"Worst case, you may decide you will never listen to something again. If that happens, you can donate it to your local public library and claim a charitable deduction. (If spending $100 is not within your comfort zone, just borrow recordings two or three at a time from your public library, listen intently, and add titles to your wish list.)"

Now that the dust has settled, perhaps a few more words about cultural literacy are in order. One of the foundational notions of cultural literacy is that it constitute familiarity with the body of knowledge and works of art that today's "content creators" (I hate academic jargon, but sometimes it's the only thing that does the job) will assume their audience is familiar with. Of course, there is an element of circularity in that definition.

To give a silly example, in one episode of The Simpsons, some organized-crime types shoot at Homer Simpson from behind a picket fence. As they flee the scene, one says to the other, "I told you we should have brought more than three bullets." Obviously, the person who wrote that episode assumed that his audience would be familiar not only with the assassination of John F. Kennedy, but also with conspiracy theories that regard the official Warren Commission report as a cover-up, or the product of dupes.1

In much the same way, when rappers Lord Tariq and Peter Gunz borrowed the bass line (and a synth lick) from Steely Dan's "Black Cow" (from Aja), Tariq and Gunz doubtless assumed that at least their peers (if perhaps not their audience) would get the reference.2 (Extra-credit essay question: Is the bass line to "Rikki Don't Lose That Number" Becker and Fagen's homage to A Love Supreme's "Acknowledgement"?)

So, in separating the great lists from the good lists, I tended to favor the body of works that today's content creators will assume familiarity with, rather than works by today's content creators. A few specifics: I considered and ultimately rejected including some brass or military band music (such as John Philip Sousa's) in my own list. While brass-band music was extremely popular in the 19th century (at the turn of the 19th to 20th centuries), there were perhaps as many as 30,000 brass bands in the US). I am unpersuaded that today's content creators assume familiarity with the genre. But I may be wrong. Quite a few respondents felt passionately about the issue, so I let them have their say.

"I was flabbergasted by that Simpsons episode. The only conclusions I could come to were either that the producers of that program were incapable of holding anything sacred, or that younger generations having gotten a little tired of how old folks mythologize people, places, and things, regard JFK as just another faceless politician, remarkable not for anything he did in office but only for having bonked Marilyn Monroe. And I'm not sure that that is entirely a bad thing for the Republic."

American Idol

As long as I'm tying up loose ends, I'll comment on the mind-boggling fact that Melinda Doolittle was thrown off American Idol while Blake Lewis remained. (Of course, by now, we all know that effervescent, personable, and precocious Jordin Sparks is the new Idol. Don't we? Criminy, I sure hope so!)

I have seen it asserted that there is fine print extant in which the producers of the show note that they are guided but not bound by the vote totals, although I hasten to add that I have not seen this myself. So either the producers thought that having an African-American woman and a biracial woman (both of whom deserved to win) face off in the final round would
MARC MICKELSON, Editor-in-Chief, SoundStage.com

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Home Entertainment 2007

The Home Entertainment 2007 Show had quite a few high points for me. Craig Whitney of the New York Times agreed to meet me Friday afternoon and see however much of the Show he could fit in. Whitney, you may recall, is the author of the wonderful book All the Stops, which details the history of organ making and playing in America from the late 19th century to today.

We started in the Room of Wilson Audio Specialties and BAT, where gracious host Peter McGrath allowed me to play some of my own organ recordings. He in turn played for us a wonderful Reineee Fleming selection, one of Richard Strauss’s Four Last Songs, a live concert recording he’d made just the weekend before. Wonderful playback, of course, especially directly from Peter’s Sound Devices hard-disk recorder.

The next stop was the Verity Audio/Nagra room, where John Quick managed to produce what might have been the tightest, fastest, punchiest bass I heard at the Show. I liked the treble not as much as the bass, but that might have been an issue of break-in or cables or something else.

Until then, I hadn’t known how much really good, solid, deep bass was on my recording of James Busby playing Herbert Howells’ Master Tallis’s Testament on the 1917 Austin organ at the Church of S. Stephen in Providence, Rhode Island. Seeing as colleague Larry Greenhill had already requested a clone of that track after hearing it in Sound By Singer’s Escalante/VTL room, I almost developed modest ambitions that the recording, when released June 24 by the Rhode Island Chapter of the American Guild of Organists, might find some success.

Next stop was the mbl room, where very large mbl omnidirectional speakers, fed by a host of gleamingly black, gold-accented mbl electronic gear, made the most satisfying “big system” sound I heard at the Show. The bass was not quite as under control as in the much less expensive (and smaller) Verity/Nagra room, but that could have been a room or setup issue. (I believe the suites on nbl’s level were separated by movable dividers, not solid walls.)

The big mbl room’s sound had a beguiling combination of tactility and warmth, a huge soundstage, and excellent dynamic capabilities. In the course of several visits over the weekend I heard all manner of tracks, from pipe organ through small choral groups to Thom Enright’s “Love to Watch U When U Go” (see my column in the October 2006 issue).

An mbl staffer whose business card I can’t put my hands on at this moment begged for a copy of Enright’s unrehearsed, unplugged, and slightly out of tune microphone test, and, as I had an extra copy, I obliged. Another track, or rather set of tracks, that attracted a lot of attention and requests was operatic tenor Brian Cheney’s mock comparisons with “Che Gelida Manina,” from La Boheme.

Blue Coast Records producer and engineer (and EQ Magazine writer) Cookie Mareno, with whom I’d earlier swapped e-mails about under-appreciated French monitor speakers, to whom I was pleased to meet serendipitously in person, was particularly energized by the numerous but oh-so-hard-to-put-a-finger-on differences between the RFT and Cardas mikes. As those tracks should by now be up on Stereophile’s website for free MP3 downloading, you can ponder as well.

My last stop with Craig Whitney was Classic Records’ press party, where I was delighted to introduce him not only to Mike Hobson but also to John Atkinson, Wes Phillips, and Art Dudley. It was also a treat to see Scot Markwell, formerly of The Absolute Sound, now of Classic’s affiliated hardware division, Elite AV. Hobson had arranged for a selection of mouth-filling Italian wines from www.de-vino.com, for which the assembled ink-stained wretches were grateful.

Hobson announced a swarm of EMI reissues, including the epochal Adrian Boult recording of Elgar’s Symphony 2. Why it should be that recordings from that era are so highly prized today was a subject we kept coming back to in what might have been the most thought-provoking and wide-ranging “Ask the Editors” panel discussion in memory.

Other Standout Rooms: As previously mentioned, and as recommended by several other participants on Stereophile’s “Ask the Editors” panel discussion, Merlin Music Systems Room, with the Ars-Sonum Filarmonia integrated amp, was shocking good, given the seemingly modest gear on offer: a two-way loudspeaker (Merlin’s VSM MXE, $10,500/pair), a 30Wpc integrated amp (Ars-Sonum, $4000), a one-box SACD player (Audio Aero’s Prestige, $14,000), and Cardas Gold Reference cables, the only tweaks in view being Equi-Tech balanced-power line conditioners.

This room simply sang—especially when I played some choice choral cuts. Setup was perfect, but then again, that wasn’t Bobby Palkovic’s first rodeo. Ars-Sonum’s Ricardo Hernández seems cut from the same modest, unassuming, extremely competent bolt of cloth as Bobby. Take this system home,
That is, if you believe that a laptop computer is an audiophile-quality source. We certainly do. We’re compelled to. We’re compelled by the convenience, compelled by the instant access, compelled by our overwhelming love of MUSIC. While our analog audiophile roots may want to rebel, our simple desire for the pleasures of great music forces us to want, nay need, the unmatched versatility of a computerized, portable, and comprehensive music library ready at our fingertips.

And it’s not just us: in January’s “As We See It,” Jon Iverson---a die hard audiophile and music lover---took a full-body leap across the digital divide and proclaimed that after his experiences with computer-centric music players, “This is the richest high-end opportunity we’ve had in years---decades, even.” His personal take on the situation: “...if I had the cash today, my disc player would be toast.”

Well, don’t throw away your high-end rig yet, but DO take another look at your laptop as a superb way to take your own slice of aural bliss anywhere you roam. Dedicate 50 gig of your hard drive to uncompressed music, and you’ll have about 80 hours of pure listening pleasure; take a small hit in sound quality with 320kbs, Lame-encoded MP3 files, and you’ll have more than 300 hours of music.

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all for around $30,000 (or less, with a more affordable digital source), and get off the merry-go-round.

Another exceptional-sounding room with relatively affordable equipment was the one shared by **Eggleston Works**, **Rogue Audio**, and **Echo Busters**, in which Eggleston Works' new Model 9 speakers ($13,000/pair) made smoothly compelling cases for a wide range of tracks, from Andrew Galuska's organ level-setting snippet, which I saved and brought with me because of the "found sound" coincidence of my having started the level check right at 6pm, when the church's carillon was just starting up outside, through Brian Cheney's opera arias, and choral tracks by Morten Lauridsen and Eric Whitacre. This was one of those rooms where, with the permission of the proprietors (and I never pushed the issue), I not only selected tracks to play, I told the attendees what they were about to hear and what to listen for. That seemed to go over well.

A ca $45,000 one-brand system from **Aurum Acoustics** was firmly in the top tier. That system consisted of a power combination of amplifier and loudspeaker, as the speaker uses an active external crossover found in the amplifier's chassis. The flip side of that coin is that the power amp can work with only that speaker. Aurum's speakers are largish, and benefit from sealed-box bass loading for more uniform bass response and less group delay.

The only other box in the Aurum system was a proprietary combination CD player and preamplifier. An elegant stand made from the same metals and veneers as the rest of the system is a $3000 option. Meticulous attention to setup, as well as handsome wooden acoustical treatments from Marc Philip (www.inovaudio.com/en), resulted in a very involving, nonfatiguing sound. Aurum Acoustics' room was the place Cookie Marenco and I decided to go to hear each other's tracks.

The **Sfőjín** Guru OM10 loudspeakers ($1850/pair), designed to work with rather than avoid corner and floor reinforcement effects, were barely credible on my organ recordings, to the point where I engaged in a fruitless search for a hidden subwoofer. But I expect that you'll be hearing a lot about them from everyone else.

**Salagar Sonics'** handsomely made, curvaceously designed (somewhat guitar-like), biamplified, self-powered S210 Synphonic monitor speaker prototypes also had robust bass, but theirs was under much better control than that of the room-dependent Sfőjín's Salagar uses B&O IC/Epower modules for internal amplification. A soft-dome tweeter feeds incorporating Trifield center-channel synthesis to three powered, medium-size, Meridian DSP speakers arrayed across the front, plus an inconspicuous subwoofer. This was the system (apart from the sui generis Sfőjín) that had the largest sound out of the smallest bunch of smallish boxes, and very high-quality sound at that. I remember exclaiming in surprise. Most impressive, by any measure.

Another very impressive one-brand system came from Swiss digital maker **Weiss**, who are branching out into power amplifiers, loudspeakers, and cable products. An unfortunately brief listen nonetheless indicated great promise.

At the other end of the price scale, **Sound by Singer's** room, combining **Focal** 836V speakers at $3000/pair with a **Cambridge Audio** CD player and integrated amplifier at $1500 each (system total $6000), set a price/performance benchmark. As did **DCM**, whose $1500 speakers were the anchor of a $2500 system.

A brief listen to KEFs new **Reference 207/2** speakers ($24,000/pair), powered by Chord electronics, was quite impressive.

A special honorable mention goes to the noncommercial **Ambiphonics** demonstration room, where my organ and carillon level-setting snippet...
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sounded eerily like the inside of the church it was recorded in, right down to the echo signature of the transept sidewalls. Huge Sound-Lab Majestic to the echo signature of the transept church it was recorded in, right down to the inside of the Ralph Glassgal's dream were all related to three round experience.

**Peak Experiences:**
The live music from pianists Dan Knight and Robert Silverman, and the John Atkinson Trio, was, as usual, even better than I expected. However, the most intense listening experiences came in several exhibition rooms, and were all related to three recordings, which I will note in ascending order of emotional engagement and intensity.

The first is the previously mentioned performance of James Busby's *Master Tallis's Testament* on a 1917 Austin organ. I don't usually go on about my Master Tallis's Testament on a 1917 Austin organ. I don't usually go on about my own work, but it was very gratifying to see the impressive performers (there's something about audiphiles and pipe-organ recordings). It really made my Sunday afternoon when, after playing it for JA courtesy the mbf folks and their room-filling system, he told me that the piece is one of his all-time favorite organ pieces.

The next is from one of my 2007 "Records To Die For," Morten Lauridsen's *Nocturnes* (CD, Hyperion CDA67580). The specific track is the English chamber choir Polyphony's nearly perfect rendering of the delicate pastel shades of Lauridsen's setting of Rainer Maria Rilke's French love poem "Contre Qui, Rose." Time and again I would play this track, and time and again people wouldumble to write down the information. It made me wonder whether people read the "R2D4" issue! So, let me hit you on the head again: If you want to hear how unimaginably pure in pitch, and together in attack, phrasing, and dynamics a vocal group can sing, you simply must buy *Nocturnes* and intently listen to "Contre Qui, Rose." The track has two advantages: it is comparatively brief (3:18), and, despite its tone of mourning lost or impossible love, is quite easy on the ears. However, the one track that I think that describes King David's reaction on learning of the death of his beloved but rebellious son Absalom. Despite Absalom's treachery (and his public coupling with his father's concubines after David had fled his palace), David had insisted that Absalom be taken alive and not harmed. But one of David's generals, in a spirit of realpolitik, disregarded that order, and ran Absalom through with a javelin while Absalom's hair was entangled in an overhanging tree branch.3

The verse describing David's grief is only 37 words long, but Whitacre explores the landscape of grief—any grief—in music and sound to such a depth that 13 minutes pass before you know it. After the first climax, Whitacre's choral writing literally lets you hear the voices inside David's head. And then, strangely, comes a kind of peace, a shift of tonal structure that more closely recalls the sound-world of Palestrina or Allegri, but the respite is brief. The intensity builds again, and this time the grief is sovereign. The highest soprano's wailing line seems to echo the top line from Allegri's *Miserere*, while the basses dig in for the words "would God I had died for thee!"

The dynamic force of the singing and the intensity of the music have to be experienced to be believed. The music climaxes, then silence, followed by a return of the beginning of the first section, but with what appear to be subtly different harmonies (I will have to get the score). Two quiet hummed chords end the piece. I finally managed to get JA immobilized for long enough in a good-sounding room (mbf again) and got him to listen to the entirety of *When David Heard*, and the obvious intensity of his engagement with a piece of music totally new to him was probably the high point of my week. At the end, he could say only "Wow, you're really missing out, and I think JA agrees with me. Your mileage may vary, in which case you can give the CD to the library.

**THE LIVE MUSIC FROM PIANISTS DAN KNIGHT AND ROBERT SILVERMAN, AND THE JOHN ATKINSON TRIO, WAS, AS USUAL, EVEN BETTER THAN I EXPECTED.**

3 Perhaps as the general did so, he muttered the ancient Hebrew equivalent of "Bubbling don't make trouble."
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Audiophile artist Jeff Wong walked HE 2007 with Wes Phillips. Here are his impressions...

Music Hall's Roy Hall welcomes visitors with a wee dram.

Bob Silverman's Mozart scintillated.

Why is this man smirking? Mike Hobson has just announced the release of the "original" *The Freewheelin' Bob Dylan*, considered the rarest of all rock LPs.

Nagra electronics and the Parsifal Ovations pin a listener to his seat in the Verity Audio room.
Why is this man laughing? Jonathan Scull is chuffed that the Usher/Oracle/JPS room is SRO.

Bel Canto's John Stanczer talks about taking digital distribution to the whole-house level.

Richard Vandersteen sits in darkness at the rear of the Audio Connection room, which boasts Clearaudio, Audio Research, Vandersteen ('natch), Audioquest, and some of the best sound of the show.

Crowds queue for the free concerts.

The gang's all here! Ask the Editors: (left to right) Bob Reina, Kal Rubinson, John Marks, Ken Kessler, Michael Fremer, Bob Deutsch, Larry Greenhill, Sam Tellig, Wes Phillips, Art Dudley, and moderator John Atkinson.
The concert audiences hang on every note (that’s Sam Tellig and long-suffering wife, Marina, at the end of the row).

The Proclaim DMT-100s set designer Daniel Herrington’s feet a’tappin’.

VTL’s Luke Manley cues up All the Roadrunning on the Brinkmann turntable in one of Sound by Singer’s rooms.

Word of mouth guaranteed that Bob Silverman’s Saturday Chopin program was packed.
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Tord Gustavsen is the kind of player whose music defies condensation into words, and makes even veteran critics strain for expression. In the choice snatches above, all gleaned from TordGustavsen.com, you can almost hear the intellectual grunting and groaning as overawed writers try to find the words to praise, or even just describe, Gustavsen’s elegant, rarefied art. Stump a critic and you’ve won a battle. Confound them en masse, as Gustavsen often has, and you’ve won the war, and most likely made some form of singular art in the process.

Rather than add more blatherage to the steaming mound of fawning that now surrounds the young Norwegian pianist’s ethereal music, let’s begin by determining what it’s not. His trio—completed by double-bassist Harald Johnson and drummer Jarle Vespestad—is surely not afraid of space (silence), a necessary ingredient of much classical music, and of Gustavsen’s own cerebral float through his distinctly jazz-like idiom.

“[Space]—it’s one of the key things, to remember, to cherish, and to...It’s about falling in love with the sound, and when you try to take that seriously, space and the time to process what has just been said is fundamental to joining a listener with the music,” Gustavsen says from his home in Oslo on a spring day. “The key challenge is to try to play for yourself as a listener rather than playing to yourself as someone who is out there—not to prove how much you can do, how fast you can play, how advanced you’ve become on your instrument. It’s a matter of making all these things subordinate to music as a reality that’s out there to be experienced as sound.”

A well-known musical presence for many years in his native Norway, Gustavsen, now 37, has found wider fame...
thanks to the three records he’s made with the record business’s reigning genius, producer-Svengali Manfred Eicher, owner and founder of ECM. (My efforts to get the famously reclusive and self-absorbed Eicher to speak about his Norwegian prodigy and how he found him were, not surprisingly, unsuccessful.)

Gustavsen’s trio of records for ECM, Changing Places (2003), The Ground (2005), and Being There (2007)—all three bearing the kind of vague titles and blue-gray cover art that fairly scream “Scandinavia”—are among the most evocative piano-jazz records ever released. Think the Bill Evans Trio on hallucinogens. Think: absolutely breathtaking, in a hushed, never-before-encountered unfolding. Like most ECM acts, Gustavsen’s music is an acquired taste. But for those enamored of it, it’s exquisite, sexy and sad; and so unusual that another thing his music may not be—certainly to those with hard and fast definitions—is jazz.

Gustavsen is unruffled by the question, but as he speaks, he tightens just a bit. As his thoughts unwind, it’s clear that he’s taken a few hits from that righteous gaggle who fancy themselves guardians of the pure jazz flame, a group collectively known in publication circles as the “jazz police.”

“Our music is unthinkable without jazz being there as part of our frame of reference, and certainly our music is linked to the history of jazz, but in a number of definitions of jazz our music will not fit. Like in there being expressivity in the music, in the wilder sense of the word. There are so many conflicting definitions of jazz, too, that most jazz will fall outside of one or two definitions, but certainly we have a somewhat different notion of swing and groove than many people. Our notion is a bit more subtle—or not necessarily introspective, but still open to the smaller nuances rather than being outgoing, funny, being hard swing. In a broad and globally situated definition of jazz, I think we are that. But it’s not a fundamental issue for me. It’s about staying true to the imperative of honesty, rather than any imperative of expectations from a stylistic subculture.”

Stylistic subculture? Ouch. The jazz gendarmes will be strapping on their night sticks for the next Gustavsen gig. Somehow, though, in Gustavsen’s impeccable English, often spoken in monotone, that criticism doesn’t quite sound like the side-swope that it is. He is nothing if not logical, well spoken, and extremely serious, in that very Scandinavian way. In 1999, to fulfill the requirements for an advanced degree in musicology at the University of Oslo, he wrote a presumably exhaustive thesis titled “The Dialectical Eroticism of Improvisation.” An abstract of this impressively argued scholarly work retains such key phrases as “improvisation is still primarily a mis-en-scene of personality, intuition and self-esteem” (sic) (italics in original) and “the favorite metaphor of many jazz musicians and critics alike is no doubt ‘story-telling,’” which provide a window on the intellectual underpinnings of Gustavsen’s music.

Yet neither he nor his music is formulaic or eggheaded. A piano player since childhood, Gustavsen draws on a number of connections when he sits down to compose.

“What I’m hoping that we manage is to try and have the different sources merge or melt into something that’s larger than each trace of influence by itself. The church music that I played a lot when I was very young, the spirituals and the Lutheran hymns, they will be there, so to speak, wherever I go as a musician. And then the fact that I worked with jazz standards for a number of years, practicing them and playing them live, will always be a part of my frame of reference. The fact that I played Debussy, Ravel, Shostakovich, will also be a part of my playing and composing. Also, there’s Scandinavian folk music, which is a major part of the cultural climate here, especially the lullabies, as well as various dance forms of rural Norwegian music. All those things will always be there, somehow.”

Like all musicians, Gustavsen likes to speak about how, when playing in concert, he
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Tord Gustavsen expands his music, makes it new every night. In reality, when playing live, he and his trio mates began by sticking very close to their recordings. They “played the record,” so to speak. Since Changing Places, though, they’ve begun to range further and improvise more in concert. Their three records, however—the “trilogy” that Gustavsen speaks of often and in proud tones—do sound similar in approach and tone, and it’s easy to see why the trio’s music is occasionally tagged as having a certain sameness.

Big surprise: Gustavsen doesn’t agree. “I think it’s been immensely fruitful for us to resist those temptations [to change directions before the trilogy was completed], because there is still so much to explore inside our musical universe. There are so many dynamics to explore inside a framework of mostly slow—[quickly catches himself, then resumes]—basic tempos, because so many things happen, in terms of double and triple meters and in terms of gradual dynamic processes in the music, that [the music] would never have gotten so intense, or we’d have never been able to go as far as we have [musically], if we’d have gone for the more standard way of introducing a fourth instrument in record number three, or introducing more uptempo pieces out of fear of boring people.

“But having said that, also, I feel definitely that there is a special development from one CD to the next, and now to the third one. In terms of dynamics and the way the slow—[again the catch]—basic tempos are treated. It’s a very meaningful relationship to me between the three CDs, in terms of small but yet very significant steps of musical development.”

Bewitching and tranquilly remarkable, the trio’s music is so subtle that spotting developments is harder than it is in most other music. What, Tord, would be a specific example of the band’s development?

“On the third CD there are a couple of pieces that also include a higher basic tempo, like the tune ‘Where We Went,’ and a tune called ‘Blessed Feet.’ They’re both groovy and more uptempo in the basic starting points of the music. But more importantly, the textures of the other tunes are a bit more... more things are happening under the surface, and the role of the drums is more to the front in this CD, I think. These are all things we have been doing in concert for a few years now, and it’s interesting to bring more of it into the studio.”

What will next come out of the studio with Tord Gustavsen’s name on it is, at the moment, up in the air. His music sometimes has the eerie, slightly maddening quality of being a jazz standard that you can’t quite place. Much of it sounds like half-speed Gershwin. And the way he weaves in Tin Pan Alley quotes, to name just one classic songbook, is extraordinary. It would be fascinating to see what his intricate piano technique would do for standards.

“It’s not totally unthinkable, because I love the songbook of jazz standards, and I’ve been working with these songs for a number of years.”

While Gustavsen seems to have no interest in adding another instrumentalist—say, a horn player—the human instrument is another matter. Given his long history of working with Norwegian singers such as Silje Nergaard, Siri Gjære, Kristin Asbjørnsen, and Live Maria Roggen, Gustavsen could easily decide to make a solo or trio record with some kind of vocals.

“It [the next recording] could be a project with a trio of singers that we’ll be performing with this summer in Norway. It’s with another ECM recording group, actually, called the Trio Medixval. I’ve been fortunate to work with them now for a few rehearsals, and to develop a repertoire of miniatures that I’ve written for them in relationship with piano and drums, and a few tunes with both trios fully sounding together. That’s something I’m really looking forward to going further with.”
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World Radio History
EQUIPMENT REPORT

Chord
Choral Blu & DAC64

CD TRANSPORT & DIGITAL AUDIO CONVERTER

Wes Phillips

was stumbling through the Denver Convention Center at CEDIA 2006 when I spotted John Franks, of Chord Electronics, and Jay Rein, of Chord's US importer, Bluebird Music, stranded in the basement purgatory for "niche" products. I couldn't resist asking, "What sin relegated you guys to this little hell?"

"Practicing two-channel without a license," riposted Rein, before going on to describe Chord's new 6TB Media Engine music server (see http://blog.stereophile.com/cedia2006/091606chord/). "But we didn't bring it. We brought—dui."

He'd been blocking my view of Chord's table. Now he moved aside and made a flourish toward the Blu, the DAC64, and the 2HIGH, all gleaming there seductively. My eyes widened. My nostrils flared. I did everything short of snort, paw the ground, and run my trembling hands along these products' well-formed flanks. Gosh, what sexy beasts.

"How... how... how...," I stammered.

"How much?" Jay asked. "All three components total $17,500."

"No— I mean, how... how... how..." I felt like a teenager asking for the keys to dad's Healy Sprite.

"How do you get to audition one? All you have to do is ask."

What the heck did he think I was trying to do?

I've heard there was a secret chord

The Choral Blu and DAC64 are a wee bit different from other transport-DAC combinations. As part of Chord's Choral series of components, each is a lozenge milled from a solid billet of aluminum and measuring a compact 13.1" W by 4.1" (105mm) H by 6.6" (170mm) D. My audition samples came anodized in a deep, lustrous black (15% upcharge).

The top-loading Choral Blu ($10,400) has a large, spring-loaded clamshell disc cover dominating its right third, and an illuminated display set above 25 buttons to its left. Mirroring the Blu's look, the Choral DAC64 ($5000) has a "porthole" lens over one of its circuit boards. To the porthole's left, two arcs of six holes each are bored into the chassis like open parentheses. The Choral 2HIGH rack ($2100) holds the Blu and DAC64 stacked, um, two high—and canted at a 30° angle.

As striking as all this is, it's what's inside that's really fancy. The transport is a Philips CD2 powered by a switch-mode power supply that has its own AC filter. The Blu can upsample digital signals to 88.2kHz or 176.4kHz before sending them to a Watts Transient Aligned (WTA) filter. Chord says it has taken them 20 years to develop the WTA filter—and to figure out why higher sampling rates sound better. "It's not ultrasonic information," said John Franks. "If it was that, then 768kHz recordings could not sound better than 384kHz recordings—there's no information above 200kHz that could even be captured by our recording equipment."

There's a problem with upsampling to 176kHz, however: the S/PDIF pipeline can't accommodate a datastream that dense. Chord solves this by outputting each channel on its own BNC-terminated S/PDIF link. There are also AES/EBU and optical outputs. You can set dither to 16 or 24 bits, and there is a word-clock option, should you happen to have one in your system. (I don't either, but Chord sells a lot of gear to recording studios, so it's there if they need it.) The DAC64 can accept digital signals at 44.1kHz, 88.2kHz, or 176.4kHz. (I reviewed an earlier version of the DAC64 in July 2002.)

So what are the benefit of high sample rates?

"What we're hearing is better resolution of transient information, which is some-
thing that human beings have evolved to being very good at detecting," said Franks.

"A sampling rate of 1MHz would be ideal for capturing this, but it can be done at 44.1kHz with digital filtering—as long as you have sufficiently long tap lengths."

"Reconstruction filters generally have short tap lengths—the longest manufactured is only about 256 taps. We've constructed field-programmable gate-arrays (FPGA) that are 1024 taps long, which suggested that infinite tap length would produce 'indistinguishably perfect' sound quality. More practically, we developed a WTA filter with a 64-bit DSP core."

"But wait, isn't there a WTA filter in the Blu, too? Yup—they built it, they're gonna use it. The DAC64 then sends the signal to a pulse-array DAC, which applies 64-bit seventh-order noise shaping and 2048x oversampling with "improved pulse-width modulation elements."

"We were reeling at all the information I was downloading from Franks—my mind needs a bigger buffer."

"We'll get to the buffer, but first I need to expand upon that 64-bit DAC environment," Franks said. "A 16-bit input multiplied by a 16-bit coefficient gives you a 32-bit output. By using a 64-bit filter and architecture we avoid having to throw away information by truncating the output—something that becomes important if a digital volume control is used."

"Now we get to that buffer. Because we use all-digital data extraction, we can employ a RAM buffer to sequentially accept all the data, re-time it, and then output it. It gives us a jitter-free local clock, without requiring us to send a clock signal back to the source device. All of this takes place in Xilinx Spartan FPGAs, which offer 200,000 gates per device."

**Measurements**

Chord's Choral Blu offers a surprisingly large number of output options for a CD transport. To examine what it did, I connected its data output to the digital input of the RME soundcard fitted to my PC and looked at the data in the digital domain using Adobe Audition and RME's DIGICheck program (see www.stereophile.com/computeraudio/299/index4.html). Fig.1 shows the statistics of the Blu's output data while it was set to upsample those data to 88.2kHz and increase the word length to 24 bits. The test signal was 16-bit "digital black" on a test CD. DIGICheck indicates that bits 1-16 are indeed permanent zero, shown by the "0" on a blue background for each bit. But bits 17-24 are active and changing, indicated by the asterisk on a green background for each bit, with an RMS level of −98.1dB. The sample rate is indicated as "88.2kHz". Fig.2, derived by digital-domain FFT analysis of a 10-second sample using Adobe Audition, indicates that the spectrum of the signal in those eight LSBs is random noise, extending up to 44.1kHz, half the new sample rate, and with a slight rise in level at very low frequencies. I am confident in saying that this noise will not be audible, though it is possible that the downstream DAC might behave in a more linear manner with these bits active.

The upsampling and increase in bit depth don't add information to the signal, as is shown in Figs. 3 and 4. Fig.3 is a digital-domain spectral analysis of the 1kHz, 0dBFS test tone on the CBS Test CD. Some spurious tones can be seen; these are encoded on the disc but are all at or below −120dBFS. Fig.4 shows the spectrum of the same signal after it has been upsampled to 88.2kHz and 24 bits by the Choral Blu. Careful inspection reveals that, other than the introduction of the wideband random dither noted earlier, the spectrum is identical to that of Fig.3.

The Blu's error correction was excellent, if not quite to the standard set by players that use DVD transport mechanisms. It offered slight glitches at the starts of tracks 31 and 32 on the Pierre Verany test CD, which respectively feature 1mm and 1.25mm gaps in the data spiral, but didn't mute momentarily on every revolution of the disc until the missing data reached 2mm in length. Usually, the error flag in the output data word was not triggered when the player couldn't correct or conceal the missing data.

Turning to the Choral Chord DAC64, I reviewed two samples of an earlier version of this processor, serial numbers US0013 and US0015, in the July 2002 Stereophile, and my measurements reviewed some problems, particularly with the first sample (see www.stereophile.com/digitalprocessors/624/index6.html). But as you will read, this new sample, serial number 9934, performed very much better, and in some ways approached the state of the art.

From its unbalanced jacks, the Choral DAC64's maximum output level at 1kHz was 3.086V, 3.8dB above the CD standard's 2V RMS. This doubled as expected from the introduction of the wideband random dither noted earlier, the spectrum is identical to that of Fig.3.

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From its unbalanced jacks, the Choral DAC64's maximum output level at 1kHz was 3.086V, 3.8dB above the CD standard's 2V RMS. This doubled as expected from the balanced jacks. Both sets of outputs inverted absolute polarity, suggesting that the XLRs are wired with pin 3 hot rather than the usual pin 2. The DAC64's source impedance was 131 ohms balanced and 66.5 ohms unbalanced at low and midrange frequencies, these figures rising inconsequentially to 216 and 105 ohms, respectively.

The DAC64's frequency response rolled off very slightly at the top of the passband with both 44.1kHz and 96kHz data (Fig.5, top pairs of traces). With pre-emphasized data..."
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I must have looked puzzled. Franks had delivered all of this before my second cup of coffee of the day.

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Franks is British. He couldn't have been teasing me by quoting the opening to The Six Million Dollar Man.

It goes like this: the fourth, the fifth

Setting up the Choral Blu-DAC64 combo isn't exactly rocket science, but you do have to take care of a few housekeeping matters—once, and then they're done with. The 2HIGH rack comes in three pieces, which are secured to one another with six bolts. The slots that the Blu and DAC64 slide into are lined with felt; the fit is snug, but there's no metal-to-metal contact.

Because I wanted to use the 176.4kHz link from the transport, I set the Blu's three-position clock switch to the proper setting (down) and connected the transport to the DAC64 with two Van den Hul-supplied BNC-terminated S/PDIF cables. I set the DAC64 to receive data from its S/PDIF inputs and set the buffer to maximum (4-5 seconds). I did try the minimum setting (2-3 seconds) and off buffering settings, but felt the small improvement in solidity and three-dimensionality offered by the maximum buffer was worthwhile—so I went for it.

A note about the jet-black finish: It's gorgeous, but forget about reading the text engraved on all those tiny buttons. Fortunately, everything is recapitulated on the Blu's hefty remote, but even after weeks of use, I found it impossible to remember which button controlled what, other than play, stop, forward, and back.

I also never cottoned to the "disc interface," at least when it came to removing sourced from the Blu transport, the response suffered a 0.9dB negative error in the mid treble, which will make those rare pre-emphasized CDs sound a little laidback (fig.5, bottom traces). The original DAC64 did not behave in this manner. Channel separation (not shown) was superb in the L-R direction, at >120dB below 4kHz, but 20dB or so worse in the other direction. This is still excellent, however.

The 2002 samples of the DAC64 appeared to truncate 24-bit data when the RAM buffer was engaged, which to some extent rendered moot the enhanced resolution. But as revealed by fig.6, which shows ½-octave spectral analyses of the DAC64's output while it decoded 16-bit data representing a dithered 1kHz tone at —90dBFS and 24-bit data representing dithered 1kHz tones at —90dBFS and —120dBFS, with the RAM buffer set to its long setting, the increase in bit depth results in an 18dB lowering of the noise floor, suggesting a true resolution of close to 19 bits, which is excellent DAC performance. These traces are free...
Wilson Audio’s sanding crew uses a huge 70 pound hand-drawn sled to sand flat raw speaker cabinets. That’s the only sure way to get the enclosures flat enough to pass Joe Allan’s inspection. Using a calibrated stainless precision straight edge bar and a feeler tool, he looks for any anomalies. If the flat blade of the feeler tool—which is exactly 4/1000 of an inch thick—slides beneath the bar at any point, it indicates a deviation from flatness unacceptable to Wilson; the cabinet is rejected.

The reason for such extreme tolerances is simple. The enclosure receives its eight layers of WilsonGloss paint and clearcoat before it is wet sanded and buffed to a mirror-like finish. Any underlying bumps, divots, valleys or ridges would then be visible to the naked eye.

Wilson Audio’s highest priority is sonic perfection, but it just doesn’t seem right to house it in a cabinet built to a lesser standard.

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discs from the well. Putting discs on the spindle was pretty straightforward, but removing them required pressing down on the upmost part of the disc, which tilted it, allowing you to get a finger under its forward lip. It felt awkward, even if it wasn’t—and it punctured any fantasy about being pampered by the luxurious Chord kit. In other words, it felt like work. I wasn’t wild about the disc removal process with the Oppo DV-970 I reviewed. In other words, it felt like work.

Your faith was strong but you needed proof

Attention Screen’s Live at Merkin Hall (CD, Stereophile STPH018-2) got a major workout on the Choral system. John Atkinson was mastering it when I first received the Chord combo, and he sent several generations of that my way, as well as the final-production CD as the review period drew to a close. Attention Screen’s use of dynamics and tonal shading made it excellent audition material, but two elements kept me coming back for more: the phenomenal sense of space the Chord extracted from the discs, and the rock-solid physicality of the sounds of the instruments. “Blizzard Limbs” is perhaps the track most filled with silence on Live at Merkin Hall—there’s lots of “white space” between the notes—and the song illustrated one of the Chord’s best qualities. Musical tones don’t have a physical component, of course, but tones don’t exist by themselves, except on recordings. In the real world, tones aren’t just notes; they’re shaped by the vibrational qualities of the instruments that produce them and the

from spuriae at power-supply-related frequencies, even with 24-bit data, but a trace of second-harmonic distortion can be seen on the hi-rez analyses, this unmasked by the reduction of the noise. Extending the measurement bandwidth to 20kHz and feeding the DAC64 16-bit data representing a −1LSB DC offset (not shown) revealed a gentle rise in the noise above the audioband, with slight but still very-low-level peaks at 44.1kHz and 88.2kHz in the left channel. Again, and very commendably, no power-supply noise could be seen, and the noise floor overall is around 5dB lower than that of the 2002 samples.

Other than the tone at 1kHz, the top traces in fig.6 really show only the contribution of the recorded 16-bit dither noise. Similarly with fig.7, the actual DAC linearity error is less than the contribution of the dither. Repeating this test with 24-bit data resulted in negligible linearity error down to the −120dBFS limit of the analysis. As a result of the superb linearity and very low noise, the DAC64’s reproduction of undithered 16-bit data (fig.8) and 24-bit data (fig.9) representing a 1kHz tone at exactly −90.31dBFS were essentially perfect. In particular, the Gibbs Phenomenon “ringing” with the lower-rez data (fig.9) is clearly defined, as are the three DC voltage levels.

The DAC64 had very low levels of harmonic (fig.10) and intermodulation (fig.11) distortion, even into low impedances (both graphs were taken with 24-bit data). However, the output clipped at full scale into the admittedly punishing 600 ohm load.

Finally, I examined the DAC64’s rejection of word-clock jitter using the Miller Audio Research Analyzer. Even without the RAM buffer engaged, the jitter level was both very low, and lower than the better-performing second sample I measured in 2002 (see www.stereophile.com/digital processors/624/index7.html). Fed a 16-bit version of the analytic signal from my PC via a TosLink connection, without the RAM buffer in-circuit, the jitter level of the 2007 sample was 326 picoseconds peak–peak compared with 587ps p–p for the second 2002 sample. And while there

1 A high-level tone at 11.025kHz, with the LSB toggled on and off at 229.6875Hz. Because both signal frequencies are exact integer fractions of the sample rate, the signal is free from quantizing distortion, and any spuriae appearing in the analog output of the device under test will be due to the latter’s behavior—John Atkinson
spaces in which they're produced. You're not hearing that guitar string, or that snare-drum head, or that piano; what you're hearing are those things amplified by the drum body, or amplifier cabinet, or sounding board as well as the hall they were played in. So while the vibrations themselves don't have a body, they're so influenced by the physical elements that produced and contained them that they do have the presence of something solid.

The Chords got this better than just about any other "Red Book" player I've heard. "Blizzard Limbs" begins with drummer Mark Flynn's rock-solid beat, joined by Don Fiorino's crunchy guitar chords, and finally joined by Cluis Jones's Martian fretless bass guitar—all weaving in and out of the Merkin acoustic like threads passing over and under one another in a loom. Bob Reina's piano begins by adding just a little emphasis to phrase endings, before working its way through the warp and weft.

It wasn't reconstruction, however, it was re-creation. It was sonically convincing, not just in timbre and texture, but in its presence.

Oh yeah—and it flat-out rocked.

The title track of Ojos Negros by Dino Saluzzi and Anja Lechner (CD, ECM 1991), like Live at Merkin Hall, carves long swathes of melody out of silence, but here the dynamic range is less extreme. The notes are not so starkly drawn against the acoustic, but remain very close to its baseline. Many CD players seem to have more trouble delineating such minute dynamic shadings, but not the Blu-DAC64 combo. While clearly delivering the timbral similarities of Saluzzi's bandoneón and Lecluier's cello,
Balanced Audio Technology is pleased to introduce the VK-6200 multi-channel home theater and surround music amplifier. This stunningly beautiful design can be configured with two to six channels of amplification. Each channel is a true monoblock, zero-feedback circuit that features a dedicated power transformer. More importantly, the VK-6200 yields the open-free-breathing sound that has garnered BAT worldwide recognition. Outstanding for music! Superb for home theater! The VK-6200 is yet another masterpiece from Balanced Audio Technology.
it did an even better job of celebrating their differences. Because the two musicians delight in mimicking one another’s tone and completing each other’s phrases, this was especially welcome.

Welcomed? No, vital was more like it. And the Chord combo’s ability to deliver that life essence made a huge difference between my liking the music and my surrendering completely to its passion.

...yes and how he kissed me under the Moonish wall and I thought well as well as him as another and then I asked him with my eyes to ask again yes and then he asked me would I yes to say yes my mountain flower and first I put my arms around him yes and drew him down to me so he could feel my breasts all perfume yes and his heart was going like mad and yes I said yes I will Yes.

I think I need a cigarette.

Tierney Sutton’s “Sometimes I’m Happy,” from her On the Other Side (SACD, Telarc 63650), is far more closely nuanced than either of the other discs, but engineer Robert Friedrich still captures toms of room detail under Sutton’s sedily slurred vocals and Trey Henry’s power bass. It’s Ray Brinker’s crisply moving drums that really grabbed me, however. Such speed, such palpability, such U-R-U-there-itude! Once again, it wasn’t so much.

On “Ojos Negros,” however, I felt the Chords better delineated the line between being and nothingness. The sounds of Saluzzi’s and Lechner’s instruments emerged from the room acoustic more fully formed, more rounded, more three-dimensional.

My listening notes refer consistently to “breath.” It was only while attempting to reconcile the idea of “breath” with my impression of sonic palpability that I realized that breath may be only air, but it implies that there’s a body somewhere doing the breathing. Holograms don’t breathe; bodies do. So did the Chords.

That sense of bulk, heft, presence, or palpability captivated me with the Attention Screen disc as well. The Nagra left nothing out, but the Chord combo simply put more muscle on the skeleton—without sacrificing any suppleness.

The more I listened to the Blu and DAC64, the more they reminded me of something. While pondering On the Other Side and Live at Merkin Hall, I realized what it was: the sound of high-resolution digital, such as the Sutton SACD or the Attention Screen 24-bit/96kHz raw DVD mixes JA had burned for me. So I listened to those discs on my Ayre C-5xe. It might not be a completely fair comparison, but I did wonder how the higher-rez stuff would compare to the full Chord press.

It was impressively close. Through the Ayre, the Sutton disc might have had a

And even breath we drew was Hallelujah!

At $15,400 ($17,500 with stand), the Chord Choral Blu transport and Choral DAC64 digital processor don’t comprise the most expensive digital rig I’ve reviewed, but the price does make me gulp a bit. The fact that I can’t afford the Blu-DAC64, however, doesn’t make me think they’re unreasonably expensive. To see these components—and to discuss with John Franks the details of their construction—is to immediately understand that they are handmade to an exactly high standard.

You know if you’re one of those who can afford to buy the Chorals. The question is, should you? Only if you’ve been looking for a CD player that can justify the last two decades of recording technology. To my mind, the Choral Blu and DAC64 are, together, the CD player we music lovers have long prayed for.

Hallelujah!
"A $30,000 pair of speakers has to be more than good. It has to be exceptional. The Gershman Black Swans meet this standard, not only to my ears but also to those of some other very demanding critics. What is really striking about the Gershman Black Swans, therefore, is that they proved to be as much of a "music magnet" for my three cynics as they were for me. Each quickly ended up praising the Blacks Swans, and each went back to listen to his or her own music at length… perhaps the finest compliment to any speaker that I can think of."

"I found myself as caught up in the Black Swans as they did and I have biases of my own. Even in the best of times I don't get involve in a speaker all that easily."

"The Black Swan truly is an exceptional path to enjoying music…It gets the best out of all recordings."

"One key indication is its ability to accurately reproduce Bach, Vivaldi, and Teleman played with period instruments. When I listen to recorded music, I want a speaker that gets as close to what I hear from live music as possible, and with a wide range of recordings."

"Their musicality natural timbre and excellent upper-bass and lower-midrange performance show up the shortfalls of most competing designs."

The Absolute Sound / January 2007
–The Cutting Edge – Anthony H. Cordesman

"The Black Swans belong in the high-end, high-performance category where good sound is usually not good enough…has the capability to provide listeners with superb sound and the Gershmans qualify."

–The Inner Ear, Volume 16, No. 4, 2006

Product of the Year 2006

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Audiophile eyes usually roll when a manufacturer describes a loudspeaker as a "genuine musical instrument." Musical instruments have specific characteristics of pitch and timbre. Ideally, a loudspeaker should be a portal to the music: the speaker itself should be neutral in pitch and timbre—in other words, the opposite of a musical instrument. That the sound produced should be "musical" is a different argument.

When, in 1994, Sonus Faber introduced the limited-edition Guarneri Homage loudspeakers,1 to celebrate the 250th anniversary of the death of master violin maker Giuseppe Guarneri (del Gesù), the company embraced the musical-instrument analogy in the process of designing the speaker. Even the design of the enclosure relied more on techniques used to build musical instruments in the 18th century than on science-based, 21st-century loudspeaker technology.

While other manufacturers have since imitated the Guarneri’s lute-like contours, which in 1994 were unique (Sonus Faber has apparently chosen not to enforce the patent it holds on the shape), none that I know of has attempted to duplicate its expensive, time-consuming, old-world process of construction.

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1 Reviewed by Martin Colloms for Stereophile in July 1994, see www.stereophile.com/standloudspeakers/9407

—John Atkinson
The Guarneri’s cabinet consists of 21 staves of thick, solid, hand-selected maple, separated by thin wooden strips, dyed aniline black, that are aged for two years before being kiln-dried. The wood is then shaped, assembled by hand, and glued, using heat and pressure techniques similar to those used for centuries in the making of violins. The cabinet’s inner walls are lined with copper sheeting (lead used to be in there as well, but use of the toxic heavy metal is no longer permitted), to distribute and damp resonances and produce cabinet-to-cabinet uniformity.

After being sealed with albumin, the speaker’s exterior is dyed with a natural reddish or graphite stain before being painstakingly varnished with a blend of natural organic substances, including Venetian larch turpentine, linseed oil, propolis, wine alcohol, gamboges, copal gum, and oliban. The finish is then sanded multiple times, like a fine violin, to a rich, deep gloss in yet another time-consuming process that only a few artisans are capable of performing. Again as with a fine stringed instrument, the finish is claimed to have a “profound” effect on the sound.

Add the curvaceous rear piece of aniline-dyed limewood, containing the port and speaker terminals; the sculpted, leather-clad baffle, itself a major construction job; and Sonus Faber’s once-unique, now oft-copied “string” grille—and you’d better believe that the Guarneri Homage created quite a stir in 1994, even before anyone had actually listened to it. The speaker is still one of the most beautiful looking, gracefully shaped, and solid loudspeaker cabinets ever constructed.

But there’s functionality behind all that beauty. The cabinet’s nonparallel walls are said to inhibit the generation of unwanted standing waves, and to help “guide” the backwave to the port. More important, the original Guarneri Homage, fitted with a custom-designed 6" ScanSpeak woofer and custom Dynaudio Esotar tweeter, received rave reviews across the board for both its measured and its musical performance. But its high price ($9400/pair) and limited availability put it in the hands of only a lucky few around the world.

**The Guarneri memento**

Sonus Faber designer Franco Serblin followed the Guarneri Homage with the Amati Homage and then the spectacular Stradivari Homage, which he hoped would be—and many consider to be—his crowning loudspeaker achievement. Based on his experience designing the Stradivari, Serblin followed up
with a much-improved (particularly in its bass performance) version of the Amati, the anniversario. Now comes the "refreshed" Guarneri, which uses two new custom drivers: a 1" ScanSpeak ring-radiator tweeter, crossed over at 2.5kHz to a 6" Audio Technology polypropylene-cone woofer.

It's important to remember that while a drive-unit's façade may look familiar, what's behind it is usually custom-tailored to the end-user's needs. Like the resemblances between an airport rental version of a well-known automobile and the top-of-the-line edition, the similarities can be little more than superficial.

On the other hand, while the Guarneri memento's cabinet looks spectacular, it's still a 6" woofer and a familiar ScanSpeak ring-radiator tweeter in a box. A pair of these small speakers will set you back $15,000. The price includes the shapely Column stands to which the speakers are bolted, with stone wedge bases from a quarry near the Sonus Faber factory in Arcugnano, Italy.

**Setup**

Patrick Butler of Sumiko Audio, Sonus Faber's US distributor, paid me a visit to set up the Guarneris on their Column stands using the company's tried-and-true series of recordings, which includes Jennifer Warnes' "Ballad of the Runaway Horse," from Rob Wassermans' Duets CD. Squeezing every drop of performance—especially in terms of bass—from a small design such as the Guarneri memento requires skill, experience, and patience, something Sumiko insists that all its dealers possess before they can be awarded a Sonus Faber franchise. I left the room. When I returned, the Guarneris were sitting close to where virtually every other speaker has sounded best in my room.

The speaker's high-frequency performance was beyond reproach as long as I sat below the level of the tweeter and used the provided Columns, which angle the front baffles back. When I stood up, there was an obvious HF suckout.

A special loudspeaker, or an overpriced "lifestyle" looker? Any successful loudspeaker design is a careful blend of science and art. Measurements taken under anechoic and quasi-anechoic conditions don't necessarily translate well into actual listening rooms. Nonetheless, such measure-

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2 I reviewed the Amati anniversario for Stereophile in May 2006, see www.stereophile.com/floorloudspeakers/506af. —John Atkinson

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peak just above 1kHz. This was faintly audible with pink noise, but the fact that the port faces away from the listener will mitigate the problem. The woofer's minimum-motion notch, where the back pressure from the reflex-port resonance holds the cone still, occurs at 46Hz (fig.3, blue trace)—the frequency of the "saddle" between the twin peaks in the impedance-magnitude trace—but the port's output actually peaks a little lower in frequency. The upper-bass boost in the summed output of the port and woofer (fig.3, black trace), which results from the nearfield-measurement protocol, is relatively mild, suggesting that the Sonus Faber actually offers an anechoically flat response in the bass, with a -6dB point around 40Hz.

Higher in frequency in fig.3, the upper midrange is balanced a little forward compared with the regions above and below it, with a slight discontinuity apparent around 1.2kHz. This doesn't quite coincide with the frequency of the port resonance, so it may well be unrelated to it. The mid-treble is a little recessed, but not to the extent Keith Howard found in his measurements accompanying the review of this speaker in the March 2007 issue of British magazine Hi-Fi News (p.42). Overall, the Guarneri memento's top-octave response is smooth and extended. Fig.3 was taken with the grille removed; adding the grille produced the expected comb-filtering in the treble (fig.4), though this was modest in extent and will probably not be audible.

The Sonus Faber's lateral dispersion was wide and even up to 8kHz (fig.5), something that generally correlates with stable, accurate stereo imaging. But the ring-radiator tweeter's output falls quite rapidly to the side in the top audio octave and above, which will give a rather mellow balance in large rooms (though of course a small speaker such as the Guarneri is unlikely to be used in such a room). In the vertical plane (fig.6), a large crossover suck-out develops above the tweeter axis, as Michael mentions. Sit below the tweeter, however—as most listeners will...
ments are important—a lumpy response curve measured under controlled conditions is rarely flattened out by a typical living room.

Experienced speaker designers working from exemplary measurements made under controlled conditions can usually allow for low-frequency "room bump," off-axis absorptive energy loss (or additive reflective gain), and other predictable conditions typically found in the imperfect listening rooms of most audio enthusiasts, in the full knowledge that the speaker's anechoic and quasi-anechoic measurements will then no longer be accurate. And while the intelligent use of computers has made the measuring of speakers far more sophisticated and accurate, measurements still don't reflect all of the information your brain receives and processes while you're listening to music.

When you read about a "no-compromise" speaker design, rest assured that you're reading advertising copy and little more. Even in the absence of constraints of budget or size, every speaker design represents a series of technical and artistic compromises—and the smaller the speaker, the more compromises must be made, and the greater the reliance on the art of design. No matter how much science and money are thrown at a speaker prototype, the laws of physics will prevail: producing a truly deep, powerful, and tuneful low-frequency response requires the pressurization and movement of large volumes of air, and that has long required relatively large drivers and enclosures—though a generation or three of long-exursion woofers coupled with high-wattage amplifiers has changed things somewhat.

So it's easy to understand audiophiles' skepticism about spending $15,000 on a small, two-way speaker sitting atop a passive stand that, for the same money, could instead have been the large, ported woofer enclosure of a nearly full-range three-way system. In fact, the Guarneri memento's footprint and height (with Column stand) is close to that of the superbly measuring Focal Electra 1037 Be, which has a 1" tweeter, a 6" midrange, and three 7" woofers (see my review in the July issue). The Focal goes lower, plays louder, and is a full 5dB more sensitive, yet costs $4000/pair less than the Guarneri: $10,995.

Listening
I haven't heard the original Guarneri Homage, so I'm not in a position to compare, but it's no overstatement to write that, in my more than two months of listening, the Guarneri memento never produced a sour note, and never failed to astonish and surprise me by producing (among other things) remarkably deep, powerful, well-textured, and nimble bass free of midbass bloat and overhang—at least down to just below 40Hz, which is deep enough for most of the range of both acoustic and electric bass.

Acoustic Sounds' recent 45rpm reis-

when the Guarneri is used on its dedicated stand, which places the tweeter 43.5" from the floor and tilts the speaker back a little—and the lack of energy in the mid-treble fills in.

In Michael's room, the spatially averaged response taken in a grid centered on the position of the listener's head (fig.7) does indeed demonstrate superbly smooth behavior in the midrange and treble—no wonder he liked the Sonus Faber's sonic signature. However, even with the minimization of the effects of room modes provided by the spatial averaging, the fairly close placement to the room boundaries of the speakers in his room results in a boost between 40 and 70Hz and a lack of energy in the two octaves above that region. Certainly, while I was measuring the speaker in Mikey's room, I thought the midbass region sounded a little "ripe," though not unpleasantly so.

Turning to the time domain, the Guarneri's step

Fig.6 Sonus Faber Guarneri memento, vertical response family at 50°, normalized to response on tweeter axis, from back to front: differences in response 45°--5° above axis, reference response, differences in response 5°--45° below axis.

Fig.7 Sonus Faber Guarneri memento, spatially averaged, 9-octave response in MF's listening room.

IF YOUR MUSICAL MENU INCLUDES SOME ROCK, THE GUARNERI MEMENTOS, UNLIKELY AS IT MIGHT SEEM, WILL BOTH WHET AND SATISFY YOUR APPETITE.
SONUS FABER GUARNERI MEMENTO

sue of The Wes Montgomery Trio (2 LPs, Riverside RLP/AJAZ 1156) features Montgomery and a rhythm section of Melvin Rhyne on organ and Paul Parker on drums. The organ provides the bass line, and when it went low, the Guarneri memento followed it down, pressurizing my room without bloat or exaggeration. I didn't hear the speaker straining to produce the impression of "bass," as some small overachievers do. Instead, I could have sworn there was a subwoofer somewhere in the room.

Despite its heritage in the making of violins, the Guarneri memento could rock very well. From its opening deep drone, Peter Gabriel's "Red Rain," from Classic Records' reissue on 200gm vinyl of So (no catalog number on record or jacket), recorded in analog and mastered from the original analog tape (despite claims to the contrary by some), demonstrated the memento's unexpected bass power and grip. When the drums throbbed, the memento responded with surprising urgency.

While the pair of mementos couldn't produce ear-damaging SPLs, they did play remarkably loud without congestion, or noisy complaints from their ports. I clocked 98dB on an SPL meter with Nirvana's "Smells Like Teen Spirit," from Nevermind (LP), and was more than satisfied with the volume level, and especially the clarity and absence of distortion or compression.

When I turned the volume up to rock-concert levels, the Guarneri mementos protested with mild compression and a trace of distortion. But when I hit their loudness sweet spot, these little guys unleashed credible kick and snare drums while outlining the details of the splash cymbal with almost alarming precision, free of grain and glare.

This is not to suggest that hard rockers will be drawn to this speaker, or that Sonus Faber designed them with rock in mind. Just know that, if your musical menu includes some rock, the Guarneri mementos, unlikely as it might seem, will both whet and satisfy your appetite—just as they delivered symphonic music with satisfying scale, as long as I didn't expect the full weight of orchestral dynamics, or the spatial presentation that only a pair of large, full-range speakers can provide.

However, what the Guarneri memento couldn't deliver at the frequency and dynamic extremes was more than compensated for by its magic in the midrange and upper midrange. The speaker's excellence in the re-creation of small orchestral and vocal ensembles and solo performers—even in large venues. The recent 200gm, 45rpm reissue of Adios Noñino (Font 013J), with violinist Salvatore Accardo performing the solo part and conducting the Orchestra da Camera Italiana, and recorded in Pontificio Istituto di Musica Roma, is the kind of disc for which the memento was created. The recording's mid-hall perspective makes it sound most realistic with the volume appropriately lowered.

response on the tweeter axis (fig.8) reveals that the tweeter is connected in inverted acoustic polarity, the woofer in positive polarity. The tweeter's step smoothly hands over to the woofer's, but the slight discontinuity just before the 4ms mark ties in with the vertical dispersion graph's suggestion that the best frequency-domain integration between the two drive-unit outputs occurs below the tweeter axis. Finally, other than a slight amount of delayed energy at the frequency of the response anomaly in the upper midrange, the Guarneri's cumulative spectral-decay plot (fig.9) is superbly clean. As a result, this speaker should offer a grain-free, transparent treble.

In common with other recent-generation Sonus Faber speakers, such as the Amati anniversario, (which I reviewed in May 2006), the Guarneri memento offers excellent measured performance.

—John Atkinson
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Accardo's violin then soars sweetly, with good image focus, expressive texture, and harmonic completeness, while the hall's acoustic provides a subtle and surprisingly spacious backdrop. Turn the volume up and the sound gets excessively midrangey and shouty—a function of the recording's spacious perspective, not the speakers' sonic character.

The Guarneri mementos' midrange transparency and freedom from congestion or obvious tonal coloration got me as involved in the music as I could be—the subtlest musical and spatial details were revealed with pinpoint precision across and within a far larger, deeper, and stabler soundstage than such small boxes had any business producing. Solo vocalists were rendered with a complete absence of nasality, chestiness, or other obvious distractions, thanks both to the speaker's freedom from midbass bloat and its silky-smooth yet finely detailed top end.

If your musical taste runs toward solo or small-ensemble acoustic music or vocals, the Sonus Faber Guarneri memento will not disappoint. It reproduced every instrument in the orchestra—brass, woodwinds, strings, percussion—with a silky, satisfying purity of tone and texture. Here, the speakers arrived just in time to feed my recent and unlikely addiction to the sacred cantatas of J.S. Bach, thanks to three superbly recorded and pressed sets of LPs from Telefunken Das Alte Werk. Through the mementos, these performances by Nikolaus Harnoncourt and Concentus Musicus Wien never failed to produce a pleasing stупor as I sat entranced by soaring vocalists with natural clarity, free of grain and etch, and by strings and woodwinds with visceral textures and harmonic fullness, all set against the backdrop of the reflective hall. When the chorus chimed in, the individual voices arrayed across the stage were presented with solidity, weight, and the clarity of high-definition video. When the massed voices pronounced sibilants, they sounded as they do live, instead of locking together to form the large masses of mechanical-sounding esesses that some speakers produce.

Whether driven by the solid-state, 1000Wpc Musical Fidelity kW monoblocks or the 100Wpc Music Reference RM-200 tube amp, the Sonus Fabers performed the same delicate balancing act of detail, texture, transparency, and harmonic completeness.

While the Guarneri's in-room measurements may not be quite as flat and impressive as those of the Focal Electra 1037 Be, I predict that, within its more limited bandwidth, the memento's measurements will be more than credible and reasonably flat, with a top-end rolloff designed to compensate for the rolloff below 40Hz. If there turns out to be a mild midbass "bump" designed to increase the illusion of deep bass, it's extremely well hidden. I couldn't hear one when listening to music, though the impulse created by lowering the stylius into a record groove created a mild telltale honk.

The Guarneri memento's performance in the midbass and lower midrange—especially with well-recorded female vocals, which usually reveal any response "bump" with chestiness and discontinuity—was beyond reproach. The speaker delivered low-frequency power and produced enticing, utterly credible renderings of male and female vocals—a major accomplishment for such a small speaker.

Toward the end of the listening period, Sumikko's John Hunter stopped by and carefully dialed in an REL subwoofer (driven from the amplifier terminals), sent along as a low-frequency reality check. Yes, the sub opened up the soundstage when the recording venue was a big hall, and added weight and substance where appropriate without calling attention to itself, but despite being used to a reference speaker capable of going down to 20Hz, I didn't miss the additional bottom octave when listening to the Guarneri mementos.

### Conclusion

This loudspeaker is another stellar blend of art and science from the house of Serbini. You'll pay dearly for outstanding engineering, superb build quality, and off-the-chart appearance. You can get greater extension, increased dynamics, and somewhat more revealing and airy upper-octave performance elsewhere. And if you listen exclusively or mostly to rock, you'll be wasting your money. But for those whose tastes run to small-ensemble classical music or jazz, don't have room for larger speakers, but need whatever speakers they buy to complement an elegantly appointed room, a pair of Sonus Faber Guarneri mementos will surely satisfy.

While Sonus Faber's Guarneri memento won't play extremely loud, it played loud enough. While it doesn't go way down low, it went deep enough: just below 40Hz with conviction. And while it can't produce the dynamic slam of a bigger speaker, it provided a convincing spectrum of dynamics, particularly at the microdynamic end of the scale, where music lives and breathes.

But I easily and quickly forgot what the Guarneri memento couldn't deliver, because of the quality of what it could: transparency, delicacy, detail; a lack of mechanical artifacts such as dryness, edge, and etch; and a wide, surprisingly deep, ultrastable soundstage. In terms of pure musical pleasure and involvement, the Sonus Faber Guarneri mementos rank near the top in my listening experience, especially in the reproduction of small acoustic ensembles. I went in a skeptic and came out a believer.
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Audio Valve Eclipse

SUMMARY


DIMENSIONS 16.3" (420mm) W by 4.5" (130mm) H by 13" (320mm) D.

WEIGHT 44 lbs (20kg).

FINISHES black; add $400 for silver.

SERIAL NUMBER REVIEWED 110207US.

PRICE $4200. Approximate number of dealers: 8.

MANUFACTURER Audio Valve, Auf dem Streken 7, D-32689 Kalletal, Germany. Tel: (49) 5264-7799. Fax: (49) 5264-654477. Web: www.audiovalve.de. US distributor: Lombardi Sales, 390 Cheerful Court, Simi Valley, CA 93065. Tel./Fax: (805) 522-0989. Web: www.rayofsound.com.

I'm not sure what motivated me to read the owner's manual for the Audio Valve Eclipse, but I'm glad I did: As it turns out, this line-level preamplifier has at least one distinctive feature that I would have missed otherwise.

First, a few basics: Audio Valve was founded by Helmut Becker, a German guitarist and music enthusiast who began building amplifiers 40 years ago, at age 15, and who has spent the greater portion of his professional life building audio electronics and medical equipment. Herr Becker and his wife, Heike, operate Audio Valve in Kalletal, a municipality in the Lippe district of North Rhine-Westphalia, itself known for contributing a full 22% of Germany's gross domestic product. (Lippe is also famous for having remained independent during the Napoleonic era. Good for them!)

The Eclipse (known in most other markets as the Eclipse) uses four Electro-Harmonix 12AU7A tubes for voltage gain. In each of the two channels, both halves of the first dual-triode work together as a cathode-based gain amplifier, inverting the signal polarity. The second dual-triode restores the original polarity, and allows the introduction of a small amount of local feedback. According to Becker, global feedback is to be avoided at all costs. He also suggests that a line-level input signal is too fragile to survive the resistive elements of even the finest-quality potentiometer—
which is why Audio Valve takes the uncommon step of amplifying the signal before it's sent to the volume control and source-selector switch.

The Eclipse's power supply, which is dual-mono downstream from the power transformer, is an unremarkable design built to remarkable tolerances. The above-mentioned transformer is a slickly potted toroid that seems capable of powering all but the largest power amps, and the regulators for the filament voltages are fastened to heatsinks of respectable size. Red LEDs splash their light against those heatsinks, giving the inside of the Eclipse an exotic glow.

The interior aesthetics are easy to enjoy, thanks to Audio Valve's choice of a clear acrylic top plate, machined with a pair of rounded ventilation slots for the tubes. The rest of the chassis is crafted from laser-milled stainless steel—generously lacquered—which Becker uses simply because it sounds better. As you may recall, amplifier guru Ken Shindo uses steel, rather than aluminum, for the same reason; also like Shindo, Becker uses NOS carbon-composition resistors in some sonically critical parts of the Eclipse.

The transformer, tubes, regulators, heatsinks, carbon-comp resistors, and other supporting bits are all fastened to the sturdiest, cleanest circuit board I've ever seen: a copper-clad FR4 motherboard made of laminated fiberglass and epoxy resin, and bearing the highest density of copper—2oz per square foot—that's said to be available. The layout and construction quality of my sample were first-rate, with especially great care given to the juxtaposition of the signal and ground paths. (The Eclipse is not a star-ground design.) All component parts appeared to be more

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**Measurements**

I performed all my measurements using the CD1 input. I didn't measure the Audio Valve Eclipse from its XLR jacks, however. As explained in the manual, these are not true balanced outputs; instead, they are unbalanced, paralleling the output on the RCA jacks on pin 2, with pin 3 connected to ground. The preamplifier's maximum voltage gain from the CD1 input was a modest 7.15dB, with the unity-gain setting of the volume control at 4:00. The gains from the other inputs ranged from 5.15dB, CD2 to 15.9dB, tuner and tape. It looks as if the different input sensitivities are set by resistive divider ladders on the input jacks. I must say that this is suboptimal engineering, as it compromises the S/N ratio by the amount of gain reduction. The Eclipse was non-inverting; ie, it preserved absolute polarity.

The input impedance was 20k ohms across the audioband; the output impedance was 320 ohms at midrange and high frequencies, but rose to a very high 3090 ohms at 20Hz. As a result, the Eclipse's frequency response into low impedances will be prematurely rolled off in the bass (fig.1, bottom pair of traces below 1kHz). This preamplifier needs to be used with a power amplifier having an input impedance of at least 30k ohms in order for it to deliver a full measure of low frequencies. At the other end of the spectrum, the Eclipse didn't start rolling off until frequencies above 20kHz, reaching ~3dB at 115kHz. This was with the volume control set to its maximum; the bandwidth shrank at lower settings, to ~3dB at 75kHz at the unity gain setting, this resulting in the output being down 0.25dB at 20kHz.

Channel separation was good, at >80dB in both directions below 1.7kHz (not shown), though it did decrease at low frequencies, suggesting a higher-than-normal

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![Figure 1](https://www.stereophile.com/images/2007/aug/fig1.jpg)

**Fig.1** Audio Valve Eclipse, frequency response at 1V into 100k ohms (top below 1kHz) and 600 ohms (bottom below 1kHz) with volume control set to maximum (0.5dB/vertical div., right channel dashed).

![Figure 2](https://www.stereophile.com/images/2007/aug/fig2.jpg)

**Fig.2** Audio Valve Eclipse, distortion (%) vs 1kHz output level into (from top to bottom): 10k, 100k, 1k ohms.

![Figure 3](https://www.stereophile.com/images/2007/aug/fig3.jpg)

**Fig.3** Audio Valve Eclipse, THD+N (%) vs frequency at 1V into (from bottom to top): 10k, 100k, 5k, 1k ohms.
than adequate, and were beautifully dressed and hand-soldered: Quite possibly, the grandchildren of the men and women who buy an Eclipse in this day and age will come to appreciate that.

Installation and Setup

A front-panel switch activates the Eclipse's power supply, and defaults to standby mode; about one minute later, rail voltages are applied to the tubes, and the preamp is ready to play music. Standby mode can be returned to manually, if one wishes, using the Eclipse's output selector—which also has a Mute position, and which provides a choice between either or both of two pairs of unbalanced RCA output jacks on the rear panel. Also provided are XLR outputs, on which the same, unbalanced signal is always present.

While the Eclipse has a total of seven line-level inputs, including its buffered tape loop, only two of those inputs—for tuner and tape—have the same gain and high-frequency rolloff characteristics as each other. There are slight differences among all the rest, with gain ranging from 15 to 26dB, to allow the user to individually optimize the performance of each source component. Even the CD1 and CD2 inputs are a bit different from one another. Nice.

The Eclipse's source-selector knob has nine positions: 1–7 correspond to the inputs described above, and 8 allows remote source selection, using the infrared handset provided—a charmingly massive device that looks as if it might once have spent its evenings selecting from among such fare as Columbo and The Dick Cavett Show. (The remote handset can be used to mute the Eclipse and adjust the volume level at any time, regardless of power-supply impedance in the bass. Noise levels were slightly affected by some low-level 120Hz power-supply hum, which I couldn't completely eliminate by experimenting with grounding between the preamp and my Audio Precision test system. The unweighted, wideband signal/noise ratio (ref. 1V output, with the volume control at its maximum setting) was 76.8dB from the CD1 input, this improving to 87.5dB when A-weighted. Without the input attenuator, I would expect these figures to be around 9dB better.

The Eclipse could deliver very high output voltages with moderately low distortion. Fig.2 shows how the THD+noise percentage changes with output level into loads ranging from 1k ohm to 100k ohms. The downward slope of the traces below 1V or so in this graph results from the measurement being dominated by noise. The actual THD starts to rise out of the noise when the traces "bottom"; the fact that this occurs between 1V and 2V into the higher impedances—the highest voltage the preamp will be asked to deliver into a typical power amplifier—suggests that the Eclipse's gain architecture has been sensibly arranged. The preamp is obviously not comfortable driving the lowest impedance (top trace), but peculiarly, the Eclipse is most linear into 10k ohms (bottom) rather than the usual 100k ohms (middle).

Plotting the THD+N percentage at an output level of 1V into a range of load impedances gave the graph shown in fig.3. Again, the preamplifier is most linear into 10k ohms (bottom trace), but also again, the Eclipse is uncomfortable driving a load as low as 1k ohm (top trace). However, the THD+N into 5k ohms (second trace from top) is not much worse than that into 100k ohms (third trace from top), suggesting that the preamp will be well behaved with real-world power amplifiers.

As is usually the case with single-ended tube preamplifiers, the distortion spectrum consists predominantly of the subjectively benign second harmonic (fig.4), at levels of −68dB (left) and −70dB (right). However, the right channel has more third, fourth, and fifth harmonic evident (red trace), although still at a low level in absolute terms. Intermodulation distortion was also relatively low (fig.5), with the difference component resulting from an equal mix of 19 and 20kHz tones lying at −73dB (0.023%). This was into a fairly low impedance; into 100k ohms, the difference component rose to −62dB (0.076%), though this is still low.

Provided it is used with power amplifiers having an input impedance of at least 30k ohms, the Audio Valve Eclipse measures well for a tube design, with its performance optimized for real-world conditions. But I am not impressed by the way in which the different input sensitivities has been implemented.

—John Atkinson
XA200
XA160
XA100
XA60
XA30
X1000.5
X600.5
X350.5
X250.5
X150.5
X150
X5
X3
X0.2
X1
X2.5
X2.2
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Reference 40 Phono Preamplifier
the front-panel switch setting.) To move the input selector switch beyond position 8 is to get the measure of Helmut Becker's ingenuity: Position 9 activates an oscillator that's wired directly to all of the input and output relays on the rear panel, causing them to chatter like the wind-up novelty-store teeth that some people, like me, used to find so funny. The idea is to regularly clean and deoxidize the relays' contacts, thus maintaining their sonic purity. The user does this with the power amp switched off, of course; even then, the sound of 10 relays all snapping their jaws at once is like something out of Mahler's Symphony 2: a very distinctive sound.

The Eclipse worked well during its time in my music system, my only ergonomic complaint being that it lacked a mono switch—although it did have a useful front-panel Balance knob. As one might expect, the Eclipse operates in class-A, but my sample never became more than moderately warm to the touch. It had no trouble driving any of my amplifier choices—Fi 2A3 Stereo, Shindo Montille, and Quad II and Lamm ML2.1 monoblocks—through 4m-long interconnects, and it even responded well to my enduring favorite: a trio of Ayre Myrtle Blocks between it and the table.

Listening

For those who haven't seen a preamp review of mine in a while, or who have otherwise been spared my thoughts on the subject, a brief summary: While there may once have been a great disparity between the sonic personalities of even "the best" preamplifiers available for domestic use, it seems to me that the performance gap has been narrowed in recent years. I can't remember the last time I heard a preamp whose characteristic sound was flat-out objectionable, and while certain of them appeal to me more than others—most notably the Shindo Masseto, the EAR 912, the Cary SLP 05, and the classic Fi—I can't honestly say that any of those really embarrasses its more modestly priced competitors.

And it must be said: Whether or not you accept that one well-designed preamplifier can have a significant, audible influence on a system's musical performance, as compared with another well-designed preamp, there's no denying that the Audio Valve Eclipse was more well behaved—obviously, audibly quieter—than most others I've had in my home. Tube hiss was virtually nonexistent, and, as with the Shindo preamps I've tried so far, I couldn't get the Eclipse to hum: silent evidence that a lot of hard work went into its circuit layout.

Beyond that, the Eclipse impressed me with its clear and pleasantly forward sound and wider-than-average dynamic range.

The Eclipse impressed me with its clear and pleasantly forward sound and wider-than-average dynamic range—the latter possibly resulting from the user's being able to match various line-level sources with the most sympathetic of the seven inputs available. Whatever the cause, the effect was a musical presentation with plenty of drama, plus a very good sense of size and scale. Gilbert Kaplan's recording with the LSO of the aforementioned Mahler Symphony (Conifer Classic 75605 51277 or MCA Classics MCAD 2-11011) benefited from that: The carillon bells at the end sounded huge, as did the famous percussion crescendo much earlier in the movement.

Orchestral recordings weren't the only ones treated so well by the Eclipse: It added to my system's headroom—and floorroom, apparently—on music such as Elgar's String Quartet in E Minor, Op.83, performed by the Maggini String Quartet (CD, Naxos 8.553737): The Eclipse seemed to enhance the dynamic contrasts in that recording—in addition to which there was a greater-than-average sense of clarity and openness throughout the piece, with note attacks sounding especially clean and unambiguous. (Consequently, with upbeat music, timing distortions were nonexistent.) String textures were acceptably good, although I wouldn't have wanted a shade less of it; the more expensive Shindo Masseto, for its part, delivers a good deal more.

The Eclipse's tonal balance was neutral overall: I can't imagine anyone thinking it was too bright, too dark, too anything else. There were no range-specific colorations that I could hear in my system—no boom in the upper bass, no clang in the lower highs—and it didn't appear to add to the sound any artificial texture of its own. The Eclipse required relatively little time to sound its best for each listening session, and its sound changed remarkably little from its first day here to its last.

As to spatial performance: Given a decent enough mono recording, a good component will create a listening experience in which the musical message is honored above all else, so much so that the number of channels never becomes an issue—yet it should also play a stereophonic recording in such a way that the extra information is used to full advantage, to create a spatially more believable experience. The Eclipse not only succeeded in that regard: It was a singular success. It allowed Zino Francescatti and Dimitri Mitropoulos's recording of Prokofiev's Violin Concerto 2 (CD, Sony Classical MH2K 62339) to sound big...
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and real and exciting. On the other hand, it allowed the naturally good stereo effects in the Tony Rice Unit’s Unit of Measure (CD, Rounder 1161-0405-2) to shine through: The mandolin and fiddle were solid and “there,” and it was easier than usual to distinguish Tony Rice’s and Wyatt Rice’s guitars from one another, just by their physical locations.

That’s what the Audio Valve sounded like in and of itself. Compared with other preamps, the Eclipse’s limitations had to do with those performance aspects where real excellence is rare to begin with—and where expectations have yet to be raised in the minds of most hobbyists. (As another German of note, Johann Wolfgang von Goethe, put it, “Excellence is rarely found, more rarely valued.”) Clean and dramatic though the Eclipse certainly was, both the Shindo Aurieges ($3895) and Masse-to ($11,500) preamplifiers allowed melodic lines to sound more organic and less mechanical—or, if you will, more like music and less like mere sound. That was especially true of the way those preamps played back the human voice—such as tenor Ian Bostridge in Philippe Herreweghe’s masterful recording of J.S. Bach’s St. Matthew Passion (CD, Harmonia Mundi HMC 951676.78). Through the Eclipse, Bostridge’s Evangelist was tuneful, emotive, and present-sounding; through the Shindo Masseto, in particular, I could hear more clearly how Bostridge shaped such words as kreuzigten and Golgotha. In this comparison, at least, the more expensive product was also more artistically communicative and unambiguous.

Conclusions

For the past several weeks, the Audio Valve Eclipse has been a joy: fun to audition, fun to look at, even fun to deoxidize. Visitors have noticed its styling, too, and praised it for looking less dour than most: for looking both modern and retro in one neat stroke. The Eclipse competes in a tightly run race, but does so gamely: Other choices offer different combinations of strengths, some of which will suit you more than others, but the Eclipse isn’t shamed by any of them. In fact, to the listener who prizes musical drama above all else, the superbly crafted Eclipse could be seen as the only choice. Reasonably.

A lovely product, and a decent value for the money: The Eclipse has me wondering what Audio Valve’s power amplifiers sound like...
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Robert J. Reina

When I attend Stereophile's annual Home Entertainment show, I rarely sit and listen to music for very long. Instead, I try to hit every room, press the flesh, find out about new products, and play a little jazz.

But HE2006, in Los Angeles, was different. I must have spent three hours listening critically to the wonderful music and sound I heard in the three rooms occupied by the Audio Research Corporation, who'd hooked up their Reference line of electronics to speakers from Thiel, Vandersteen, and Wilson. The ARC gear included the Reference CD7 CD player, the Reference 3 line-stage preamp, and the Reference 610T and Reference 210 power amplifiers. In each of these rooms the delicacy, detail, air, and sense of ease were such that I returned again and again to listen to a wide range of music.¹

After my fifth listening session in the room containing Vandersteen speakers, ARC's Dave Gordon cornered me. "As you're a VT100 Mk.II owner, you should be aware we will be shipping shortly a half-power stereo version of the Reference ¹ I also returned many times to Continuum Audio Labs' room, to hear their Caliburn turntable and Cobra monaural. Mike is right—these products are extraordinary.

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210, the Reference 110, which replaces the VT100 Mk.III, which we discontinued a few months ago."

Naturally, I had to get a review sample of this new Reference component, to see how it would compare with the amp I've used as a main reference for over a decade now, in its Mk.I and Mk.II versions.

**Design**

I've been a fan of Audio Research products for many years, having owned several of their preamps and amplifiers. ARC doesn't hesitate to frequently update designs or experiment with new circuit topologies and tube types, to the point where some audiophiles have become frustrated with the company. Two things that don't change are the classic, conservative look of ARC products, and the company's commitment to customer service. ARC boasts that they will continue to service any product they've ever manufactured; their website currently promotes a new update for their SP3 preamplifier, which they stopped making in 1976.

As they sat next to each other in my listening room, the family resemblance between the Reference 110 ($9,995) and my VT100 Mk.II was strong. Aside from the 110's slightly deeper chassis and thicker faceplate, they were tough to tell apart. But a look inside at the circuit design showed the Ref 110 to be a completely different animal. This 110Wpc amplifier is based on a push-pull, fully balanced circuit using two matched pairs of 6550C output tubes per channel. The input stage, trickled down from ARC's flagship amp, the Reference 610T, uses direct-coupled JFETs with a driver stage based on 6H30 tubes, one for voltage gain and one used as a cathode-follower. Output tube biasing is accomplished by performing any measurements on the Audio Research Reference 110 amplifier, I checked the bias of each pair of tubes, something made easy by the convenient probe sockets adjacent to the tubes on each of the circuit boards. All bias readings were within 1mV of the target 63mV, and the "Check" readings were all in the center of the specified range.

The specified input impedance is very high, at 300k ohms, and my estimate was in this region. (Measuring high input impedances is not very precise with our usual voltage-drop method, because of the very small voltage changes involved.) The balanced inputs, each wired with pin 2 hot, preserve absolute polarity; ie, are non-inverting. The voltage gain from all transformer taps was lower than average; in addition, the channels didn't match very well, the left channel consistently offering a higher level than the right. With a 1kHz tone, the 4 ohm tap offered 21.2dB gain into 8 ohms, left, and 20.7dB, right; the 8 ohm tap, 23.9dB and 23.3dB, respectively; the 16 ohm tap, 26.4dB and 25.7dB, respectively.

As expected, the Reference 110's output impedance was significantly higher than that of a typical solid-state amplifier, and increased both at very high frequencies and with the nominal value of the output-transformer tap. The 4 ohm tap offered the lowest impedance, at 0.5 ohm at low and midrange frequencies, rising to 0.8 ohm at 20kHz. The 8 ohm tap's impedance was 0.87 ohm at low frequencies, 1.45 ohms at 20kHz; the 16 ohm tap, 1.43 ohms at low frequencies, 1.85 ohms at 20kHz. As a result, there will be a significant modification of the amplifier's frequency response due to the Ohm's Law interaction between its source impedance and the impedance modulus of the loudspeaker. With our standard simulated loudspeaker load, 8, 4, 2 ohms (1dB/vertical div., right channel dashed).
using trim pots and insulated test points on the left and right circuit boards. The output-stage coupling is a combination of ultralinear and ARC's "partially cathode-coupled" topology, which the company claims yields better sound than conventional triode or pentode operation.

ARC pays more attention than most firms to circuit-board layout and wire routing. The Ref 110's right- and left-channel boards are mounted horizontally and flank the transformers, which are mounted on a raised central channel running from front to back. A small LCD display indicating the number of hours the tubes have been run is mounted on the front of one board and is visible though the top panel. Every tube amp should have such a display. The speed of the two small fans mounted on the rear panel is controlled with a three-way switch. The input is balanced XLR only, and there are pairs of ARC's rugged, proprietary speaker binding posts for the 4, 8, and 16 ohm taps. Two 12V triggers (input and output) allow remote turn-on. The Reference 110 is the first power amplifier I've had in house with a 20A IEC power cord.

I installed the Reference 110 in my primary reference system, using my Audio Valve Eclipse and ARC's own Reference 3 line stages. However, as the Ref 110 provides only balanced inputs, I bought an MIT Magnum M3 interconnect to replace my single-ended MIT CVT-350 Twin Terminator, then spent quite a bit of time getting used to the sound of my new wire before doing any critical listening. In all four combinations of preamp and power amp I tried, I found the Magnum M3 more detailed, dynamic, and transparent than the older CVT-350, with more extended frequency extremes. Of course, I don't know

speaker (see www.stereophile.com/reference/60), the response variations from the 8 ohm tap, for example, reached ±0.9dB (fig.1, top trace at 2kHz), which will be audible. These variations were a little greater from the 16 ohm tap, a little smaller from the 4 ohm tap. The channel mismatch can also be seen in this graph, with the right-channel response into 8 ohms (top dotted trace) almost overlaying that of the left channel into 4 ohms (bottom solid trace). But note that though the response does droop a little in the treble, presumably due to the increasing source impedance, the amplifier's small signal bandwidth is actually quite wide, with the left channel's output not reaching ~3dB until 95kHz. As a result, a 10kHz squarewave was reproduced with short risetimes and a good square shape (fig.2). This graph was taken with the output-transformer tap nominally matched to the load; in this case, the 8 ohm tap driving 8 ohms. An overshoot develops when the load impedance is higher than the nominal tap value (fig.3), but this is both slight in degree and free from ringing.

Given the Reference 110's dual-mono construction, with each channel's audio circuitry carried on its own board, I was surprised to find that the channel separation at 1kHz was 85dB (L–R) and 96dB (R–L), decreasing by another 10dB at 50kHz. This is still very good, however. The wide-band, unweighted signal/noise ratio (ref. 2.83V into 8 ohms, 8 ohm tap) was good rather than great at 79.5dB. Switching an A-weighting filter into circuit improved the figure to 97.8dB, suggesting that it is noise at the frequency extremes that is affecting the unweighted result.

Figs. 4, 5, and 6 plot how the THD+noise percentage in the left channel changes with increasing power into loads
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how much of the improvement was due to the wire, and how much to running the electronics in balanced mode.

**Listening**

Over my many weeks of listening to the Reference 110, two things made it extremely special with all recordings. First, the 110 could unravel layers of inner detail. This, combined with its extraordinary ability to convey hall ambience and low-level dynamic inflections on a wide, deep soundstage, rendered all good recordings with startlingly lifelike realism. With every one of my very familiar reference discs, I noticed many subtle nuances for the first time. Listening to Timothy Seelig and the Turtle Creek Chorale's recording of John Rutter's *Requiem* (CD, Reference RR-57CD), it was easy to tell where the choirs were standing within the recording space. The wall reflections of the church were easily discernible, and the blend of voices and pipe organ had an incredible sense of bloom. I'm used to the male choir on individual vocal signature so distinctly that I almost felt I could write out each vocal line on a sheet of music paper. The 110's dead-neutral midrange certainly

**The Arc's Ability**

To render wide dynamic blasts on electronic recordings didn't hamper in any way its ability to render subtle details within these recordings.

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**Measurements, continued**

ranging from 4 to 16 ohms, from the 4, 8, and 16 ohm output-transformer taps, respectively. General points to note are: 1) the distortion is very low from all taps at levels of 1W or below; 2) the distortion doubles with each halving of the load impedance (ie, with each doubling of the output current); 3) the distortion rises linearly with increasing output power, suggesting a low overall level of loop negative feedback; 4) the amplifier gives its maximum power when the load impedance ranges from equal to half the nominal transformer tap value; and 5) under those conditions the amplifier meets its rated power of 120Wpc. The highest clipping powers measured (1% THD) were 130W, 16 ohm tap into 16 ohms (24.15dBW); 120W, 8 ohm tap into 8 ohms (20.8dBW); and 125W, 4 ohm tap into 2 ohms (15dBW).

These graphs indicate that the distortion products start to rise out of the noise floor at a level of 2.83V, so I plotted how the THD+N percentage changes with frequency at that level. The results for the 4, 8, and 16 ohm taps are shown in figs. 7, 8, and 9, respectively. General points to note are: 1) again, increases in output current from each tap result in corresponding increases in THD; 2) the distortion is very low in level when the load impedance is equal to or twice the output tap; 3) the distortion rises both at infrasonic and ultrasonic frequencies; and 4) the right channel is as good as the left at midrange frequencies.
helped. On Antal Dorati and the London Symphony’s recording of Stravinsky’s The Firebird (CD, Mercury Living Presence SR 90226), I noticed, buried way down in the mix toward the rear of the soundstage, delicate flute lines that were easy to follow no matter how complex or loud the surrounding orchestral passages.

The second of the 110’s remarkable strengths was its ability to render high frequencies with a clean, pristine, extended presentation totally devoid of electronic artifacts. This was also my reaction to the high frequencies of ARC’s Reference 3 line-stage preamplifier (see my “Follow-Up” in the June issue, p.139); in this region, clearly, these two designs were cut from the same sonic cloth. I tested the Reference 110 with both the Reference 3 and Audio Valve EKipse’s line stage, and the amp’s high-frequency strengths shone through both (although the effect was notably greater with the ARC preamp). Soloist Tom Chiu’s violin in David Chesky’s Violin Concerto, on Area 31 (SACD/CD, CD layer, Chesky SACD288), revealed natural but biting extended partials, and the instrument's vibrancy seemed to pop out of thin air. Similarly, Carol Wincenc’s flute, in Tomiko Kohjiba’s Transmigration of the Soul, from Festival (CD, Stereophile STPH007-2), was appropriately metallic, extended, and airy, with all subtle low-level dynamic inflections intact.

The Reference 110’s organic presentation of dynamics made it superb for jazz recordings. On “House Party Starting,” from Herbie Nichols’ The Complete Blue Note Recordings (CD, Blue Note CDP 8 50352 2), I fixated on the interplay of Max Roach’s snare and bass drum with Al McKibbon’s woody, warm, and vibrant walking bass line. I’d hoped that, during bombastic dynamic blasts, the Ref 110’s over-engineered power supply (520 joules of storage is unusually large for a 110W amp) would make it sound more powerful than it actually is, and the ARC did not disappoint. On John Atkinson’s recording of Robert Silverman’s performance of Beethoven’s 32 piano sonatas (CD, OrpheumMasters KSP830), I listened to the Largo of Sonata 2 in A, Op.2 No.2 (which is one of my favorite pieces to play as well). This delicate work from Beethoven’s early twenties has a surprise near the end, when a sudden ff passage bursts forth without warning, using the negative feedback, though I was bothered by the level mismatch between the channels and the differences in linearity.

—John Atkinson

from both the 4 and 8 ohm taps, but worse at high and low frequencies, and is also worse overall from the 16 ohm tap.

The spectral content of the distortion was predominantly the subjectively innocuous second harmonic at low output currents and at midrange frequencies (fig.10), joined by the third harmonic at higher currents and lower frequencies (fig.11). The decrease in circuit linearity at high frequencies seen in figs. 7–9 and at high powers seen in figs. 4–6 results in somewhat disappointing performance on the demanding high-frequency intermodulation test, when the amplifier under test is asked to drive an equal mix of 19 and 20kHz tones at a level close to visible clipping on an oscilloscope screen. With the 4 ohm tap driving 8 ohms, the 1kHz difference component lay at 0.2% (~54dB), which will probably be okay subjectively (fig.12).

As I have come to expect from Audio Research products, the Reference 110’s measured performance is respectable, especially considering the low level of loop negative feedback, though I was bothered by the level mismatch between the channels and the differences in linearity. —John Atkinson
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piano's entire ranges of frequency and dynamics. My listening notes read "thunder, drama, and no strain."

"Mansour's Gift," from my jazz quartet Attention Screen's Live at Merkin Hall (CD, Stereophile STPH018-2) includes huge dynamic swings. Drummer Mark Flynn coaxes a broad range of bombastic colors with soft mallets from his Korean pule drum, and near the end there's a tutti crescendo that tested the dynamic limits of the recording process. The Reference 110 rendered these dynamic swells as we'd rendered them on the Merkin's stage.

The ARC's ability to render wide dynamic blasts on electronic recordings didn't hamper in any way its ability to render subtle details within these recordings. In Kraftwerk's Minimum/Maximum (CD, EMI ASW 60611), the low- and high-frequency transients were startling, detailed, and lightning-fast without being harsh, even at extreme volume levels, while preserving subtle programming details that I hadn't noticed with other amplifiers. Similarly, Chris Jones' original electronic works, on Snowflake's Tea Lounge 6-04-06 (CD, private recording), blend powerful dynamic bass blasts with delicate kalimba samples—through the ARC 110, all were clear and pristine with no trace of mud or strain.

I had to look really hard to find any shortcomings in the Reference 110, and found only one very small one. With certain recordings, there was a touch of warmth or roundedness in the midbass region. This genuinely split hair—the music still sounded incredibly life-like was audible only when I compared the 110 with amplifiers that have an ultrafast, overlamped quality in this region. Ray Brown's bass solo on "I'm an Old Cowhand," on Sonny Rollins' Way Out West (CD, JVC VICJ 60088), was extremely natural, but a touch warm only near the bottom of the instrument's register. Similarly, the midbass synth lines on Sade's Love Deluxe (CD, Epic EK 53178) were natural but just a touch rounded.

Jerome Harris' arrangement of Duke Ellington's "The Mooche," on Editor's Choice (CD, Stereophile STPH016-2), put all of the 110's strengths together. The blend of alto sax and trombone was the silkiest I've ever heard from this track, and the musicians sounded as if they were in my room (or, more appropriately, as if I were in the recording venue, the recycled church sanctuary of Chad Kassem's Blue Heaven Studios). My notes: "this amp blooms like nothing I have ever heard; I want to listen longer and longer." I've never heard a male voice sound more natural than Hugh Masekela's through the Reference 110, in his rendition of "Stimela (The Coal Train)," on Hope (CD, Triloka KAT 2020-2). Moreover, the natural dynamics of the percussion on this live pop recording, and the bite and burnished brass of Masekela's trumpet, were startling.

**Comparisons**

I spent many days comparing the Reference 110 with ARCs own VT100 Mk.II. Both amps drove my Alón Circe speakers, and I listened to both with my Audio Valve Eklipse and ARCs Reference 3 line stages. I gave very favorable reviews in Stereophile to both the VT100 Mk.I (March 1997, Vol.20 No.3) and Mk.II (December 1998, Vol.21 No.12), and I still cherish this amplifier. It does everything I want an amp to do: a detailed, natural, dynamic performer with a broad range of recordings, it has exhibited no shortcomings, no colorations, and no flaws in the many years it's resided in my reference system. To exceed such performance would be a tall order.

The Reference 110 filled that order, and by a wide margin. It revealed far more inner detail than the VT100 Mk.II, and with more air, ambience, dimensionality, and a greater sense of organic drama and ease. The Ref 110 seemed to turn up the VT100 Mk.II's greatest strengths a notch or two. In the greatest difference between the two ARC amps, the Ref 110 highlighted a flaw in the VT100 that I'd never noticed before. The 110's high frequencies were so pure, so extended, and so detailed that, by comparison, the VT100's highs seemed surrounded by a slight electronic haze. In vocal recordings, sibilants were not as detailed or as pure through the VT100; and in well-recorded classical works, the balance of bow rosin and wood in violin passages seemed more skewed toward the rosin. The low- and high-level dynamic performances of both amps were exceptional. They sounded much more powerful than their ratings of 100W and 110W would indicate.

Only in one area did I feel that the VT100 Mk.II exceeded the performance of the Reference 110. The VT100 lacked that very slightly warm and rounded quality I heard in the Ref 110. By comparison, the VT100 had a tight, dynamic, kick-slam quality in the midbass that reminded me of a high-quality solid-state amp. But I'm splitting hairs again—both amps were exceptionally realistic in the bottom three octaves.

**Summing up**

The Audio Research Corporation's Reference 110 amplifier replicated, over many weeks of listening, the magic I'd experienced in those few hours of listening at Home Entertainment 2006. In certain areas the amplifier produced a level of realism startling enough to make me reluctant to turn the stereo off. I had this experience with all types of music, as well as with movies. Although the 110 was an excellent match for ARCs Reference 3 preamp, I didn't need an ARC preamp to hear its magic.

Those who've read my reviews for a while know that I rarely change reference components. In fact, at one point about 10 years ago, every piece of gear in my reference system had been discontinued. For me to even consider buying it, a new product must constitute a significant improvement over what I already own, as well as provide value for money. At the end of my listening sessions for the Reference 110, I put down my notebook and picked up my checkbook. This amplifier is not going back to ARC.
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Dimensions: 57" (1450mm) H by 24" (610mm) W by 4 7/8" (110mm) D.

Weight: 28 lbs (13kg).

FINISHES: black, wheat, gray, (off-white).

SERIAL NUMBERS OF UNITS REVIEWED: None noted.

PRICES
MondoTrap, $299.99; Corner MondoTrap, $349.99. Approximate number of dealers: factory-direct-
only. RealTraps ships to anywhere in the world.

MANUFACTURE: RealTraps, LLC, 34 Cedar Vale Drive, New Milford, CT 06776. Tel: (866) 732-5872, (860) 210-1870. Web: www.realtraps.com.

For a hobby based on science and technology, audiophilia has more than its share of unscientific elements. That's not necessarily a bad thing; not all of those elements are obvious snake oil, and there's more than science to creating—or re-creating—a musical experience. Still, for the more technical-minded it's a little disconcerting that even the most basic distinctions, such as why two CD players sound different from each other, are hard to explain using technical measurements and simple scientific concepts.

So it's reassuring to now and then review a product whose mechanism of action is easy to understand. Yes, there are plenty of “room-treatment” products out there—little pieces of foil, small jars of colorful rocks—that no known laws of physics can explain. For that, you need psychology. But some less esoteric room treatments—represented in this review by the MondoTrap, made by Ethan Winer's RealTraps company—work according to well-established scientific principles. And I do mean "work."

A little science
Science has two complementary foundations: the empirical and the theoretical. In order for something to count as science, it must be supported by rigorous, quantita-
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tive observations and—assuming it's not something new and paradigm-shifting, which happens far less often than tweak salesmen would have you believe—it must be consistent with existing theory. Let's start with the theory.

Sound waves emerging from a loudspeaker whiz by at more than a thousand feet per second. But when they bounce back and forth between parallel surfaces, they form standing waves, aka room modes: vibrational modes with points of maximum and minimum volume at fixed locations in a room.

Because the dimensions of most listening rooms correspond to the wavelengths of the lower audio frequencies (the wavelength is the speed of sound divided by the frequency), standing waves create the biggest problems in the bass frequencies. Play a recording of white noise—equal energy at all frequencies—through your speakers, and the energy-vs-frequency response you measure in the room will be anything but equal, especially in the bass. To further complicate things, the room’s response will depend on where you stand in it: one location will have too much midbass, but at another the midbass will vanish altogether—same for the low bass, but at different locations. Even if your audio system has a ruler-flat frequency response, the response of your untreated room will look more like the Himalayas. That's something even the most expensive preamp can't fix. An equalizer can help, but the results will sound good at only one location. But every room has walls, and walls reflect sound. What to do?

If you're building a dedicated listening room from scratch, plenty. For one thing, you can give the room the right shape: Make sure the walls aren't parallel, and that the room's height, width, and length aren't the same, or even simple multiples of each other. That'll spread out the standing waves over a wider range of frequencies and room locations. Another thing you can do, at least in principle, is to make the room big; room modes are less important in larger spaces because the modes are closely spaced (in the frequency domain). But big rooms have other problems, not the least of which is that they cost a lot to build. Besides, most of

us are stuck with the space we're stuck with. What to do then?

If standing waves are created by sound bouncing back and forth between the parallel walls of a normal sort of room, the best way to control them is to stop the sound from bouncing by absorbing it. Certain materials—such as the rigid fiberglass that constitutes the core of the MondoTrap—are capable of absorbing sound energy and dissipating it as heat. The more energy you absorb at the room boundaries, the less is left to bounce off the walls and form standing waves. Those jagged response peaks and valleys smooth out; the room's response becomes more uniform; you get a taste, if only a small one, of what a genuinely flat frequency response would sound like, and the full potential of your high-end equipment begins to become apparent, probably for the first time.

Not Metropolitan Home

Until about 18 months ago, I had a dedicated listening room. It wasn't ideal—a little too reflective—but acoustically it was pretty good, and my wife and I could shut the door and listen at pretty high levels without disturbing my son, who (we hoped) was sleeping 50' or 60' away.

I gave up that listening room, along with the rest of our large house in the country, for a small condo in town on a park with an ocean view. My old listening room isn't that much smaller than this entire condominium, into which I've stuffed a dog, a wife, and a nine-year-old boy. Some would say I was crazy. Some have said it.

But we get along well, and I like our new digs. I love the view, the good restaurants, the excellent bakery just down the street. But the stereo now occupies the apartment's main living space, which is adjacent to the single bedroom (our son sleeps there). This puts some restrictions on the stereo's use. I can't listen seriously while dinner is being prepared—too many clanking pots. I can't listen above minimal volumes late at night. And I can't fill the room—at least, not permanently—with eight objects that, in shape and scale, resemble those obelisk things floating around in 2001: A Space Odyssey.

I exaggerate. RealTraps MondoTraps aren't that big. In such a small apartment, however, they're... big. But this is Stereophile, not Metropolitan Home. What matters in these pages is not how beautiful a MondoTrap is, but how beautiful it makes the music sound.

Size matters

The RealTraps MondoTrap isn't ugly—it's quite unobjectionable, really. It's just big because it has to be. The thing doesn't work on your psyche, aura, or some mystical energy field, as some room-treatment products are claimed to do. They work on the low-frequency part of the soundfield, and if you want to absorb low frequencies, size matters. I begin to understand why magic rocks have a following. They're small.

The MondoTrap is a chunk of "double-density" rigid fiberglass covered in a sound-transparent fabric. RealTraps also incorporates a "limp-mass membrane" that they claim doubles the low-frequency absorption. A powder-coated steel frame makes the MondoDurable and easier to handle. Each MondoTrap is 57" tall by 24" wide and 4½" thick. Its 28-lb weight is light enough to handle easily, but heavy enough to require fairly serious hardware to attach it to a plaster wall. Each MondoTrap costs $299.99. The Corner MondoTrap, designed to snuggle unobtrusively into a corner of a room, costs $50 more.

All told, I was sent eight MondoTraps—$2400 worth of sound treatments. Considering what they did, the price was a bargain—many cables and power-treatment products cost more and accomplish far less—but $2400 is real money.

Empirical evidence

Earlier, I mentioned that science has two complementary foundations: theory and rigorous, quantitative observation. So far, I've mentioned only the theory part. If you want scientific proof that the MondoTrap does what RealTraps says it does, by all means trust your ears—but first, look at fig.1.

The first thing I did after receiving the eight MondoTraps and removing them from their eight large boxes was to stack three of them in a corner of the room. (The other five were in a different room, door closed, so they had

1 Tom Norton's essays on designing an optimally proportioned listening room can be found at www.stereophile.com/reference/31 and reference/58. In addition, a useful spreadsheet for calculating room modes can be found at www.ultimateavmag.com/news/10388.

2 Actually, it doesn't matter where you absorb the sound, whether at the wall or in the middle of the room. But walls and corners are where the sound pressure is highest for all frequencies and room modes, so that's where traps are most effective.

3 Technically, I haven't given it up yet. As of this writing, I still own it. But it's for sale, and I don't go there much.
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World Radio History
MondoTraps stacked in the corner, the dip went away. The effect was repeatable, easily measurable, and dramatic. Absorb more bass and you're left with more bass, at the frequencies where you need it most. It sounds weird, but it makes sense. The MondoTraps did what Ethan Winer claimed they would: They measurably evened out the bass response.

**Empirical evidence 2**

There's another kind of evidence that, if not exactly rigorous and scientific, is what most audiophiles rely on: the evidence provided by their ears. I lived with the MondoTraps, in various non-ideal configurations, for about 10 months, through two pairs of speakers, several integrated amplifiers, five phono cartridges, and three digital front-ends.

I knew right off that the MondoTraps wouldn't be staying—they're just too big for my small space—so I didn't deface my plaster walls with lag bolts or other mounting hardware. Consequently, my installation was less than ideal. I distributed the Traps throughout the room in various ways, keeping most of them near the floor but using various pieces of furniture—tables, chairs, dog crates, benches—to position some of them up near the ceiling. I used the spacers RealTraps provides to separate the MondoTraps from the wall by the prescribed couple of inches, which Winer says helps them trap more sound.

With the MondoTraps in place, bass instruments sounded fuller, clearer, more palpable. Kick drums had a more visceral, focused thump. The subjective effect of trapping bass frequencies is to put more bass into the room—not dull, distorted, low-rider bass, but the kind that makes you sit up and smile. That's what Ethan Winer had told me to expect, but there was another important effect that I can't quite explain.

In my years of listening to music, I've become accustomed to having to strain to hear into the music, to hear the inner voices that make music come to life, texturally and spatially. For me, being able to hear those inner voices is the difference between being enveloped in music and merely observing it analytically, as if at a distance. Often, however, it seems as if something—a glaze—is superimposed on the music that I have to listen through. The word glaze suggests a highish-frequency effect, and that's the way I've always heard it. Winer tells me that, in addition to absorbing the lows, the MondoTraps are designed to not absorb much energy at the mid- and high frequencies; he doesn't want his Traps to deaden a room. Still, the MondoTraps seemed to reduce the glaze in my room, making it easier for me to hear into the music and enjoy it more. Far from deadening the room, the MondoTraps made the music more involving. Go figure.

**My predicament**

I won't miss the mondo characteristics of the RealTraps MondoTraps: large objects piled in corners, leaning against walls, obscuring art, and occupying vast expanses of scarce living-room space. Of course, had I mounted them properly, they'd have looked neater and been less intrusive, but then I'd have big lag-bolt holes in my plaster walls—so I can't say I'm sorry I didn't drill.

What I will miss—and this is the conclusion I want you to take away from this review—is the mondo effect they had on the sound. The MondoTraps worked very well. Suffice it to say that my experience with them has caused me to reconsider my housing decision. Is a view of the ocean and a 10-minute walk to the best bread in New England worth giving up the best possible sound?

I refuse to choose. I will continue to seek a solution that integrates better into the design of my small room. But that's a personal aesthetic decision that has nothing to do with the MondoTrap's performance. In pure audio terms, the MondoTrap wins my highest praise. It does what RealTraps claims it does, does it well, and takes up no more space than it must to do the job. This ain't no "lifestyle" component.

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4 These measurements were made using FuzzMeasure from Smug Software (http://www.aupermegualtragroovy.com), an audio tool for the Mac that John Atkinson discussed in the January issue—see www.stereophile.com/80/magazine/01/index.html—and which is currently listed in Class K of Stereophile's Recommended Components.
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The pianist Lang Lang, now 25 years old, spent his fifth through sixteenth years winning competitions and giving remarkable recitals (the complete Chopin Études, for example) in Germany, Japan, and his native China. At 17, he dazzled the classical-music world by substituting at the last minute for André Watts at the Ravinia Festival's wildly publicized “Gala of the Century,” playing the Tchaikovsky Concerto 1 with the Chicago Symphony. In 2001 he made a spectacular Carnegie Hall debut, and since then has been ubiquitous on the concert stage and in the media—60 Minutes, Jay Leno, CBS's Sunday Morning, Newsnight with Aaron Brown, Time, Entertainment Weekly, the New York Times Magazine, in addition to being the subject of documentaries made in Germany, China, Japan, Korea, Austria, Switzerland, France, and the UK. In short, he's all over the place. His musical curiosity seems vast—he has made recordings of standard repertoire by Mendelssohn, Tchaikovsky, Liszt, Haydn, Chopin, Schumann, and Rachmaninoff, and his last CD was of music by Chinese composers. He dresses like a clown—see the awful plaid pants and Chinese-flag scarf on the cover of this album. Audiences love him as if he were a panda. He knows how to communicate, and exudes warmth and enthusiasm.

The backlash, if not already here by now, is at least looming. Because Lang Lang is so young and such a great technician, critics have already become impatient with him as an interpreter and downplayed him as a “showman”; one or two have referred to him as “insincere.” But, let's face it, had he been a deep thinker—a brooder, even—and been slightly less expert at sheer fingermanship, he probably would have been called “an unfinished artist,” one who “needs to perfect his craft” before being taken seriously, “no matter how deep his maturity for his tender age.” Sometimes, I think you just can't win.

This new CD is Lang's first recorded brush with Beethoven, and it is a success. I wouldn't want to surrender my recording of Concerto 4 as played by Wilhelm Kempff, but Lang plays it well: The first movement is given plenty of room, with the piano's opening solo handsomely played and a temperate attitude throughout. One admires his skill without his doing anything particularly flashy. The interchange between piano and strings in the middle movement (symbolic of Orpheus taming the Furies, claimed Franz Liszt) is excellent, but it is here that Lang could use a bit more of a meditative approach. The soft bridge to the finale is wonderfully easy on the ear but lacks suspense; the movement itself is spirited, carefree, and invigorating, with runs tossed off as if they were easy. Lang keeps the rhythmic line perfectly, again without showing off. At times in this concerto, he seems to be keeping his grand personality out of the music on purpose to avoid being criticized for the hated “showmanship.” I would have liked to hear more of him.

The First Concerto is more aggressively played, in a terrific performance. One of the most exciting things about Lang Lang is that when he plays softly and lyrically, he doesn't sound as if he's holding back; when he opts to stomp and yell, it sounds equally natural. Here he plays with lightness and bounce in the outer movements; the trills in the first movement are absolutely gorgeous, and the finale is filled with energy. The second movement is as tuneful as imaginable, and Lang clearly recognizes Beethoven's debts to Mozart and Haydn.

The recording itself is excellent, with the balance only slightly favoring Lang and utter clarity throughout. Conductor Christoph Eschenbach is a true partner in the proceedings, almost as if he were attempting to make us forget his own mediocre, long-ago recordings of Concerto 1, under both Karajan and Schmidt-Isserstedt. He gets beautiful, flavorful playing from the Orchestre de Paris, and leads them with the same sensitivity to dynamics that Lang brings to the piano part. In short, these are beautifully realized readings by a brilliant young pianist. Fans of Kempff or Murray Perahia will probably stick to their favorites, but only the grumpiest fan or critic could be displeased with what they hear here.
Brodrick, we are obviously as close to Oz as we can get—or in Puritan New England in the 1600s. Howard Hanson’s opera *Merry Mount* is based on a story by Nathaniel Hawthorne, that he, in turn, had adapted from an incident that took place in Plymouth, Massachusetts, in 1628. Religious fanaticism and abnegation are the orders of the day, but the sudden appearance in town of fun-loving Cavaliers, with their merry-making and Maypole dancing, throws the fragile socio-emotional balance into an amazing confusion.

Our “hero,” the preacher Bradford, is not only chock-full of lust for the already married Lady Marigold, he eventually signs a pact with the devil. Indians attempt a massacre, and there are visions of hell. At the end, Bradford immolates himself after he vainly tries to convert the heathens but gives in to evil himself, dragging the recently fainted Lady Marigold with him. It’s a grim little story, and with Bradford’s dreams of hell and damnation, the listener might have hoped for something along the lines of the Wolf’s Glen Scene in Weber’s *Der Freischütz*. No such luck.

This is the first modern recording of *Merry Mount*; a broadcast in terrible sound from the Metropolitan Opera (where it was premiered in 1934) and starring the legendary Lawrence Tibbett was available (on Naxos as well) in Europe, but this set makes it redundant. This recording, taken from two concert performances in 1996 at the Seattle Center Opera House, does the opera full justice; in fact, it does it more than full justice, since the
work itself isn't all that worthy.

One would like to report the rediscovery of a lost masterpiece, but this is nothing of the kind: Hanson's frequent drumbeat ostinato, rather than creating tension, quickly becomes annoying; the vocal writing lacks individual profile (you can't tell one character's writing from another's), and the melodies for the set pieces are flimsy at best. There are frequent fanfares announcing nothing, and the dance music and choral scenes are generic and bloated. Hanson's idiom is late-Romantic and very conservative; there's little of the "scary" 20th century here to worry about. Some of the instrumental pieces are appealing in and of themselves, but eventually, the music adds up to something vaguely cinematic, vaguely background.

There are some fine moments for solo singers, with Bradford and Lady Marigold given expressive set pieces, and, the value of the work itself aside, it's good to have such a high-quality recording of it. This performance stars baritone Richard Zeller as a passionate Bradford, coping more than well with the long role's purple passions, loony outbursts, and high tessitura; and the remarkable Lauren Flanigan as Lady Marigold, whose mixed emotions and seeming ambivalence do not quite add up to a complete character. As her husband, Sir Gower, tenor Walter MacNeil (son of Cornell MacNeil, the fine Met baritone of the 1960s and '70s), who has since retired from singing, is excellent as well. A fine cast of American singers under Gerald Schwarz does what it can to bring this emotionally fraught opera to life.

Merry Mount might have worked well on stage, but at this point it seems a bizarre pageant. It should be of interest to fans of American opera and those with an ear for what might, at one point, have been considered stylish and exciting. At its premiere at the Met 73 years ago, there were 50 curtain calls and a great sense of occasion, but it was never revived after that season, and further performances anywhere have been very rare. It's easy to figure out why, but this recording showcases the opera at its best. —Robert Levine

PETER CASE

**Let Us Now Praise Sleepy John**

Performance ****
Sonics ***

Peter Case's evolution from teenage street busker to powerpop/garage king to country-folk troubadour has proven satisfyingly cyclical. It's clear that, Case's 1970s-80s tenure fronting the Plimsouls aside, his true musical allegiances reside with the stark dustbowl narratives and vibrant country blues of an earlier generation, and he's often performed period covers of songs by the likes of Woody Guthrie, Jimmie Rodgers, Robert Johnson—and Sleepy John Estes, the legendary "crying bluesman" whose name graces Case's 10th solo album

*Let Us Now Praise Sleepy John* most closely resembles Case's *Sings Like Hell* (1993), which comprised acoustic readings of mostly traditional folk tunes. This time, though, apart from a lively adaptation of Robert Wilkins' "Get Away Blues," Case is chasing down his own muse. True to his influences, he's a big-hearted populist: he offers a study of a woman who has slipped between the economic cracks ("Underneath the Stars"); proposes that "the only life that's worth living is "the life we give" ("That Soul Twist," featuring pedal steel from Norm Hamlet of Merle Haggard's Strangers); and points out the striking class disparities between "the folks up on the hill" and "the others down below" ("Million Dollars Bail," about a prominent citizen—shades of Phil Spector—who puts a bullet in the head of a hat-check girl and spends only one night in jail).

Throughout, Case's musical instincts run pure, too. In the aforementioned Wilkins track, for example, his resonator-guitar picking lends the tune an appropriately haunting, sitar-like drone, while in "Every 24 Hours," guest Richard Thompson fires off supple fretboard leads that dart in and out of Case's sturdy strums, the summit suggesting a ballet for the blues, done up English folk style. Moving and mesmerizing, engaging and emotional, *Let Us Now Praise Sleepy John* will have you praising more than just its titular icon.

—Fred Mills

**THE DOORS**

*The 40th Anniversary Remixes*

The Doors
Performance **
Strange Days
Performance ****
Waiting for the Sun
Performance ***
The Soft Parade
Performance **
Morrison Hotel
Performance ****
L.A. Woman
Performance ****

All: CD. Paul A. Rothchild, prod.; Bruce Botnick, eng. (except L.A. Woman).
ADD.
Sonics ***

Is there any act in rock history more overrated—and underrated—than the Doors? Overrated, thanks to the mythology that's long surrounded frontman Jim Morrison's poetic bombast and premature demise, not to mention four decades' worth of radio overexposure and such dubious enterprises as Oliver Stone's hagiographic biopic, and guitarist Robby Krieger and keyboardist Ray Manzarek's preposterous faux-reunion tour.
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And underrated because the relentless overexposure tends to overshadow the salient qualities of the Doors' best work, which was genuinely original and unique. When his tendency toward junkheaded grandiosity and half-baked mysticism didn't get the best of him, Morrison could be a deeply compelling singer and lyricist, while the instrumental axis of Krieger, Manzarek, and drummer John Densmore was a distinctive, inventive unit capable of savage, sexually charged post-garage rock and boldly theatrical art-pop.

One's perspective on the Doors, and one's taste for revisionist monkeyshines in general, will determine one's response to Rhino's current batch of "40th Anniversary Mixes" of the Morrison-era Doors' six studio albums (originally collected last November in the boxed set Perception). Beyond their technically impressive 5.1-channel surround sound and a generous selection of bonus rarities, the series' main selling point seems to be new, substantially revised mixes, overseen by original engineer Bruce Botnick and the surviving band members, which incorporate instrumental and vocal elements omitted from the original albums.

Even if one doesn't view such posthumous tinkering as sonic sacrilege or another lame excuse to squeeze a few more dollars out of one of rock's most-repackaged catalogues, it's hard to see much point in such brazen tampering with history. The Doors' albums were among the best-produced rock LPs of their era, thanks to the technical chops and editorial judiciousness of Botnick and producer Paul Rothchild. So it seems a logical assumption that the parts in question were left off for good reason the first time around.

In its original form, the Doors' eponymous 1967 debut album was a landmark, offering a dark, disturbing response to the Aquarian era's utopian vibes. That sense of looming dread grew more pronounced on the sophomore Strange Days (also 1967), whose anti-Sgt. Pepper's atmosphere presages the nightmarish underside of the hippie dream. The subsequent Waiting for the Sun (1968) and The Soft Parade (1969) are spotter, mixing scattershot experimentation, catchy songcraft, and some of Morrison's most overripe conceptual excesses. Morrison Hotel (1970) is an uneven but often rousing return to the band's rocking roots, a direction that would manifest itself more strongly overripe conceptual excesses. Morrison Hotel (1970) is an uneven but often rousing return to the band's rocking roots, a direction that would manifest itself more strongly on the back-to-basics tour de force of L.A. Woman (1971). That final album found the Doors recapturing the bracing, unruly spark of their early work, but within two months of its release Morrison was dead.

The Doors gets the most substantial sonic makeover here, the new version having been speed-corrected to redress a longstanding mastering error. The retooled album now sounds brighter and clearer, though not necessarily better. Longtime devotees may catch a buzz from hearing Morrison sing the uncensored "She gets high" rather than the more familiar "She gets, she gets" on the new mix of the band's debut single, "Break On Through (To the Other Side)." But the change is no improvement, and the same holds true for most of the series' sonic alterations.

Far more satisfying are the individual discs' assortments of bonus outtakes and alternate versions, which offer some useful insights into the Doors' complementary contrasts. Waiting for the Sun, for instance, features the interesting classical mutation "Albinoni's Adagio in G Minor" and a 17-minute version of Morrison's fabled epic, "The Celebration of the Lizard," which manages to capture the singer at his most imaginative and his most boorish. Morrison Hotel, meanwhile, boasts multiple takes of "Roadhouse Blues" that underline the Doors' oft-neglected status as a brilliant rock'n'roll band.

While the longtime Doors fanatics who are this series' target audience may not mind the posthumous tinkering, the series' remixes are ultimately more a high-tech parlor game than sensible aesthetic choices, and add little of substance to the band's oeuvre. The Doors catalogue remains a fascinating, frustrating mass of contradictions, but this isn't the way to hear it.

--Scott Schinder

### Jazz

**JOEL FRAHM**

*We Used to Dance*

Joel Frahm, tenor saxophone; Kenny Barron, piano; Rufus Reid, bass; Victor Lewis, drums


Joel Frahm, prod.;

James Farber, eng.

DDD? Tr: 61:03

Performance ****

Sonic ****

*Ask any New York tenor player to name the best young tenor players in New York and Joel Frahm's name will be on the short list.*

Frahm looks like that nice boy who lived down the street, to whom your parents unfavorably compared you because he did all his chores. He lacks charisma. His music, which stays in the middle of the wide post-bop highway, lacks colorful quirks. He just plays his ass off.

I heard Frahm at the Umbria Jazz festival in Orvieto, Italy, last December. He played the midnight set every night, in a band with two other very good Italian tenor players, with whom he wiped the floor. Frahm can play hard and still develop fresh ideas with great clarity.

His new album proves this once again, although it does not present the Frahm I heard in Orvieto. He is mellow here. One reason may be his choice of sidemen. Kenny Barron, Rufus Reid, and Victor Lewis were Stan Getz's last rhythm section. They are all 20 to 25 years older than Frahm, and they are all masters of the modern mainstream idiom whom Frahm reveres. With no apparent effort, they surround his clarion saxophone sound with airy elegance and energy.

Frahm is on his best behavior. There are three concise, emotionally authentic ballads as flawless as anything he has ever recorded: "My Ideal," "Spring Can Really Hang You Up the Most," and the title track, a Frahm original. There are five other Frahm tunes. As a composer, he is competent. As an improviser, he is the real deal. A good example of how Frahm improves material is Kenny Barron's "Song for Abdullah," written for the great South

continued on p.118
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**MANUFACTURERS’ COMMENTS**

**darTZeel Audio NHB-18NS**

Editor:
We at darTZeel are simply delighted by the superb review Michael Fremer wrote [in June 2007]. Being considered among the top five preamps he ever listened to is quite an achievement for us! We will not enter into subjective consideration, since I find Michael covered everything about the topic. Very well done, Mikey!

As for measurements, Professor John Atkinson performed, as usual, accurate and very relevant ones, and I personally agree with most of them. Our primary goal was to offer the best possible music reproduction, and I believe we didn’t miss a lot here. As for the fourth Neumann pole we added in our phono stage, we found that it brings some air and naturalness to the sound, especially with very-high-end cartridges that do not exhibit a too-high HF ringing. While XLRs are not perfectly linear, the use of professional transformers was dictated by the fact that they are the only devices offering true galvanic isolation, a plus when you have to run very long runs in a critical, electrical environment.

Of course, if you need to run very long lengths and still have a flat response, you can always use our darT to Zeel 50-ohm links.

For all readers who would like to know more about the NHB-18NS, please do not hesitate to drop me an e-mail at relive@darTZeel.com, or visit www.darTZeel.com (soon to be refreshed).

All in all, thank you again, Stereophile, and as always—keep up the good work!

Hervé Delétraz
darTZeel Audio SA

**Promitheus Audio TVC**

Editor:
We at Promitheus would like to thank Stereophile and Sam Tellig for selecting our TVC for review [July 2007]. We appreciate the honest review, as we can learn from the experience. As a modest manufacturer dedicated to offering high-quality products for less, we are honored to be rated in such fine company. This is what your readers are looking for: quality and innovation for less.

It was unfortunate for you and us that the review unit failed after connecting the interconnects improperly. We are in the process of creating a customer-service distribution center in the US to be closer to our customer base. We feel strongly about customer service and personal attention. Our order-delivery time now has been reduced, as we have increased our manufacturing facility capabilities. However, each of our units is fully hand-built, from the transformer unit all the way to the point-to-point soldering. We take pride in that each of our product is a truly hand-built item.

Our manufacturing goal is to assemble each unit as if it is for a family member. So when you purchase a Promitheus product, you are family. You have a problem? Just ship it back and it’s done. Our meticulous and caring staff take pride in what they do and do well. We strive to produce the natural sound of music for the least amount of money. We have ensured that future TVCs will have identifying markings besides the written instructions, to avoid any confusion when connecting interconnects.

We concur with Sam’s positive findings, as described in the review. We recommend that the CDP have 1.5V minimum for best results. Interconnects can be up to 75m long with no ill effect.

The TVC offers impedance matching and that is why it sounds better. Because the impedance of the CDP/phono preamp is well-matched to your power amp via the TVC. The TVC can be viewed as a transducer. It converts one form of energy into another form of energy. Here it converts electrical voltage into current. In doing so, the TVC does not attenuate the signal, so there is very little signal loss. As we know, current is the important factor in audio. Because of this conversion of voltage to current, this results in a lower output impedance as well. Hence, the TVC allows the use of long cables, as the output impedance allows the driving of this extra cable length. The extra current gain due to the conversion can be used to drive the capacitance of the audio interconnect, which, if it is long, can have quite a high capacitance. This capacitance also requires current output from the previous stage—i.e., the CDP or preamp—to drive the signal through to the power amp. If the current is insufficient to drive the capacitance of the interconnect, the slew rate of the signal will be affected and will be less. Therefore, transients and dynamics are preserved, due to the TVC’s inherent advantage over passive resistive attenuators.

The main reason other resistive passive types have difficulty to match in a system or driving relatively long cables is because these resistor-based devices have high output impedance, which is set by the potentiometer value. So the output impedance is the value of the potentiometer.

Sant struck it really hot here when he said, “The transformers appear to do something—like transform the sound, taking the electronic edge off everything without dulling the sound.” Transformers allow for a more natural sound without losing the PRAT (Phase, Rhythm And Timing). Some may say transformers are bandwidth-limiting due to the fact above, but in fact it actually shows you the real naturalness of the music.

Another useful thing about transformers is that they are naturally devices used to isolate stuff. This isolation also works in the area of noise. The transformers help to isolate the ground noise. This in turns allows better microdynamics—the small nuances that are masked by noise, especially with digital sources.

As Sam has so nicely put it, “It happens. The lower the noise floor, the better the dynamics, both macro- and micro—, which is what I heard with the TVC.”

Thank you again, and we look forward to a Stereophile review of one of our forthcoming Statement series of amps, TVC, and Buffer/Preamp. Our future looks a bit brighter thanks to you and your positive review.

Nicholas Chua
Promitheus Audio

**Cayin H-80A and CDT-23A**

Editor:
Thank you, Sam, for your honest thoughts and considerations of the Cayin H-80A and CDT-23A. We at VAS Industries have been fortunate to have found a line of electronics that meet our requirements of quality, sonics, build, and serviceability. The plus side was that the Cayin gear exceeded our expectations in the way they actually sound. Your comments and review are appreciated, and state what we have been hearing from our customers for some time. Keep up the good work!

Simon Sez Sze Rules! Steve Leung
VAS Industries

**Audio Research Reference 110**

Editor:
On behalf of the Audio Research design team, I would like to thank Bob Reina for his glowing review of our Reference 110 power amplifier. We are gratified that Bob considers it a real value and will be purchasing it for his own reference system.

The only assertion with which we take issue is "ARC doesn’t hesitate to frequently update designs or experiment with new
African pianist and mystic, Abdullah Ibrahim. Barron's sweet melody, by itself, only approximates Ibrahim's spiritual depth. But Frahm’s extension of the song gives it cumulative power and resonance. He states the theme, repeats and subtly varies it, and again insists on it like an incantation, until he eventually breaks free into long, piercing calls in his horn's upper register. Then he folds everything back into form before the end.

The new Anzic label bears watching. They are doing other interesting stuff by such people as Anat Cohen and Manuel Valera, and their production values are solid.

—Thomas Conrad

Circuit technologies and tube types,” simply because these are practices we abandoned years ago. Tenured audiophiles will remember the many iterations of the SP6 series, for example, back in the late 1970s and early ’80s. Intervals between model changes have increased dramatically over the years, with current preamplifiers having replaced predecessors that were in production from four-plus to five-plus years, which we now expect to be the norm. As Bob wrote, he acquired his own VT100 over a decade ago, and the last version, the Mk.III, was discontinued after six years! Our circuit technologies do not change often because our products are meticulously designed at their inception to advance sonic benchmarks and provide reliable performance. As for tubes, we design with types in current production, so there is no need to worry about finding high-quality replacements down the road. After all, we expect our products to remain in use for decades, being passed down to successive generations of music lovers.

We cycle every product on and off during burn-in (amplifiers for 48 hours, everything else for 24 hours), then thoroughly bench-test each component twice to make sure it meets all published specifications. It is then evaluated in a reference system to make sure it passes sonic muster and fits within a very small sonic “window” to ensure uniformity. If a small difference between channels was measured after hundreds of hours (or more) of use, our engineers surmise that a tube has drifted slightly.

We hope that Bob will enjoy the Reference 110 in his system for many years, and we encourage others to audition this amplifier for themselves. After all of Bob's keen observations, many will appreciate its great ability to bring music to life even more when they hear it for themselves.

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S

ometimes, amid all the ver-

biage being expended on the

current ills of the music

business—kill the CD, don't kill

the CD, watermarking is the

answer, watermarking is the

Antichrist, etc., etc.—it's good to stop

reading the speculative bile, tear your-

self away from the flat-panel monitor,

and go down to the record store to see

what's actually happening.

That is, if you can find a store. These
days, if you live near a healthy inde-

pendent record shop or even a decent
chain survivor, consider yourself lucky.

Even in New York City, once home to
earth's best clump of record retailers,
the ranks have thinned considerably.

The ripples from the brutal demise of
Tower Records continue to spread and
destabilize everyone. DVDs—new or
rubbish about how cool it was to work
without cracking smile. “I was so angry
when they were busy.”

For some, the issue is sound—MP3s sound like crap. For oth-
erers, it’s a matter of tactility. If you ever
used an LP cover to sift seeds from a bag-
gieful. What's kept the used-CD market
a hard drive and want to dump the phys-
ical product. As often as not, the answer
is yes.

What may be most striking about
buying and selling used CDs on the
Internet is that it's allowed CDs to find
their own level of value. The day I inter-
viewed Mildred and Celerino was the
day Paul McCartney's new record, Mem-
ory Almost Full, was released at Starbucks
for $16.99. Within hours, used and new
copies were available on Amazon for
around eight bucks. The average for
most used CDs offered on Amazon,
eBay, and other sites is a couple of bucks.
Because the numbers of new and current
releases offered for sale are so large, the
profit margin for Internet sellers is negli-
gible. What's kept the used-CD market
viable is record labels' bizarre system of
taking recordings out of print. Mildred
and Celerino say that CDs by members
of the Marsalis family are much sought
these days, and a best-of CD from '60s
pop band The Left Banke goes for no
less than $75.

Watching the Detectives

“Boz Scaggs' Silk Degrees, one of the
biggest-selling records of all time, was out
of print for seven years on Sony,” Mildred
says. “They finally reissued it and remas-
tered it, but what was the point? Because
the audience is dwindling, they're thinking,
'Who really cares about this? We
should just put out a deluxe copy of the
Beyoncé record.' But then they'll baffle
you and put out The Essential Redbone.'

“It's a self-fulfilling prophecy, also,”
says Celerino. “If they take everything
out of print and there's nothing left for
people to buy when they're at a record
store, then they'll say, 'Well, nobody
wants CDs anymore.' ”

Next month: The view from the classical
and jazz sides of used music product.
Who’s pulling the strings.........?

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"I'm not sure you can escape from an audition without buying. You have been warned."
Sam Teilig, Stereophile, November 2005 - 1027 Be

"Highly recommended."
John Atkinson, Stereophile, June 2006 - 100? Be