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What if they gave a format war and nobody came?

It could have been so easy. There were hundreds of thousands of audiophiles ready to lead the charge into the wilderness of new high-resolution formats. After more than 10 years’ grumbling about the fractured sound of CD and the frustration of finding decent stocks of new LPs, we were primed to support the hi-rez audio future.

And then all format hell broke loose. A format war is never a pretty sight, and early adopters tend to be the bloodiest victims. Survey after survey conducted on www.stereophile.com reveals that Stereophile readers will wait out the battle, only buying in when players are “universal” enough that they no longer need to choose sides. Readers say they’re also planning to wait to see what happens with multichannel audio.

After polling a Home Entertainment 2002 audience, our own John Atkinson concluded that, while there’s a large market for multichannel home theater, and an even larger two-channel crowd — remember, attendees at HE2002 were overwhelmingly Stereophile readers — there appears to be no middle ground. In other words, so far there’s been little interest in hi-rez multichannel audio. Should we really add the multichannel-to-stereo struggle to the already debilitating war between SACD and DVD-Audio?

Proponents of both DVD-Audio and SACD are pushing multichannel as one of the primary ways forward, leaving the industry with the daunting task of growing a market where, apparently, there is none. This is a much tougher prospect than simply converting the existing two-channel crowd to a higher-resolution format, and, if such a market is ever actually established, only then trying to expand it into surround audio.

Back to the front lines. The SACD–DVD-Audio conflict (which, according to at least one of the factions, officially does not exist) took an interesting turn or two at last May’s HE2002. Both camps took advantage of the Show to inform the audiophile community about their respective benefits, but that’s where the similarities ended. The SACD seminar, supported by demonstrations in Sony’s demo room, was carefully scripted and lavishly produced. By contrast, the formal DVD-A presentation appeared slapped together, with demonstrations of DVD-A left to dealer/distributor Hi-Fi Farm/Sanibel Sound (see Kal Rubinson’s report on p.55). The DVD-A panel faced tough questions from the audience, and even some public rebuttals from an SACD advocate.

In addition, an article about SACD’s possible rosy future published on our website (www.stereophile.com/shownews.cgi?1353) around the time of HE2002 and our June issue report from the 2001 New York AES Convention (see “Letters,” August, p.11), prompted a nasty note to the magazine’s executive publisher from John Kellogg, one of the higher-ups at Dolly, proponents of DVD-A and the licensor of the Meridian Lossless Packing used by the DVD-A medium. Kellogg says he’s giving his favored format short shrift at our shows, in the magazine, and online. He accuses us of unfairly coddling SACD, to the detriment of DVD-A. Instead of carefully outlining the advantages of DVD-A to help us see the bigger picture, the tone of Kellogg’s words reflected someone who appears to be realizing that he’s fighting a losing battle.

I’ve previously gone on record in these pages to state that DVD-Audio probably had the edge in this battle, and predicted that it would prevail in the long run due to the fact that, by default, there would be so many DVD-Video players equipped with DVD-A showing up in consumer homes. Another factor that might favor DVD-A is that as DVD-A discs carry a Dolby Digital version of the multichannel program — see reader Bill Jerome’s comments in “Letters,” p.9 — they play on the existing base of DVD-V machines.

Now I’m starting to wonder. Part of the problem is that the new hi-rez audio formats, stereo or multichannel, are virtually invisible to the general media. Compared with the nonstop flood of PR we receive at Stereophile Guide to Home Theater about HDTV (which has had its own launching troubles) and the phenomenally successful DVD-Video, relevant news — even blantly puffery — about either audio-only format is virtually nonexistent. If the DVD-A camp wants us to run stories every week about what they’re up to, how great things are going, and their big plans for the future, we’re ready to go. Send ‘em to spnews@primedia.com.

I’m disgruntled about the current situation because I love the higher-resolution sounds of DVD-Audio and SACD, but I’m not holding my breath that either format will catch on anytime soon. Instead — and this will get a few folks hopping up and down again — the hi-rez audio movers and shakers have taken almost every opportunity to blow their once-ripe chance, and continue to do so. Watermarked discs to restrict how we use the recordings (and pollute DVD-A’s sound)? Still no uninhibited full-bandwidth digital outputs on players? Format wars? Stereo or multichannel? High-priced discs (at least until recently, see “Industry Update,” p.14)? Paltry selection of titles? Virtually no PR to expose the general public?

Though these criticisms aren’t new, they bear repeating because now, instead of the real issues being properly addressed, it appears from the Kellogg letter that it is the press that’s being blamed for DVD-Audio’s problems.

By contrast, Sony appears to be in it for the long haul. After all, there’s more than just the glory of launching a successful format at stake: those nifty SACD and DVD-A patent royalties (as CIJ patents begin to run out), and the head start that Sony’s music and audio-hardware divisions can gain as sales reach critical mass, can’t hurt. But in the meantime, Sony has got to be losing money on SACD hand over fist. With no proven audiophile demand for multichannel audio or mass-market demand for higher-fidelity music, only a long-term view would facilitate launching and sustaining something like SACD — especially with DVD-A lurking in the shadows.

Maybe Sony has a 10- or 20-year (or longer) plan for SACD. Is the current battle just an early bump on the road to a grander vision, in which the world is converted from PCM-based digital audio to DSD? Have we yet to see the real barrage of SACD PR, which is being held back until just the right moment?

Can DVD-Audio demonstrate a similar resolve and survive? Or, as the going continues to be rough, will its backers persist in pointing their fingers instead of getting down to work?
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**Tact M2150**

Digital integrated amplifier based on the World known Millennium Mk. II. DSP-based crossover. 24/192kHz compatible. 2x300W/4ohms. Optional 24/192kHz AD converter for analog input. Software & hardware upgradeable. Available as power-amp - S2150.

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- **MH-1** 2-way Floorstander (left)
- **C-1** 2-way Center channel
- **W210** 2x10" Subwoofer (left)
- **W410** 4x10” subwoofer

When Tact Audio introduced the Tact Millennium, the world's first true digital amplifier, back in 1998 it was not only heralded as the most important technological breakthrough in decades, it was also immediately recognized as the greatest sonic improvement in amplification ever.

The audio press was unanimous in its praise: "Without any true competition", "It sounded much more like live music than anything else I had heard", "Overwhelming transparency".

Yet another breakthrough was introduced not long after the Millennium amplifier: the Tact Room Correction System - and again, the audio press praised the performance: "The walls melted away. I was transported to the performance. The speakers disappeared. A veil was lifted.", "an almost scarily clear sound", "for the first time I could really hear just how good my speakers were".

The latest additions to the line of digital components are the new “digital” loudspeakers, the RCS2.2X room correction system, and the 2150 digital amplifiers. The loudspeakers are designed to take full advantage of the room correction system and the advanced features available in the 2150 digital amplifiers. The amplifiers and the RCS/TCS correction systems can be used as stand-alone, together, or in a fully digital setup with the new loudspeakers.

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The cost of admission  
Editor:  
Your July issue highlights what's wrong with our hobby in general and with Stereophile in particular. Do you realize that the average retail price of the seven pieces of equipment reviewed in this issue is $12,800, and the lowest is $2595? Including Sam Tellig's column — the main reason I've bought your magazine every month for the last 10 years — there is no single piece of equipment reviewed that costs less than $1490. How do we expect to attract new people to our hobby if the perceived price of admission is so high? 

I have only one friend whom I would consider an audiophile. He is looking to replace his main system's CD player; his budget is $600. I have spent "only" around $3000 on my whole system (a simple two-channel, single-source system: Rega Planets, Kimber Hero, Creek 4330, AudioQuest Crystal, B&W CDM-1SE, Creek OBH-11, Grado SR-125). Even so, most of my friends (and my wife) think I'm crazy spending this kind of money on audio. 

But there is hope. About four months ago, a longtime friend who had never before shown any interest in audio equipment asked me for advice. The Sony boombox he'd got as a wedding gift some seven years ago had broken down and he wanted to replace it with something that sounded better. I suggested he get a receiver, a CD player, and a set of decent speakers. "But my boombox speakers are okay!" he exclaimed. 

"If you want better sound, listen to me and get a decent set of speakers. You can save some money if you use your existing DVD player as your CD source." 

"What about surround?" 

"You can go that way if you like action movies, which I know you don't. With surround, you'll end up spending more money and getting less quality sound." 

He settled on a $200 Yamaha stereo receiver and a pair of B&W DM303 speakers, and is using his DVD player to play CDs. He is now thinking about moving his speakers off the bookshelf and onto custom-made stands for better sound. I think we have an audiophile in the making here — all thanks to the availability of a good pair of speakers for $350. 

How about a policy that requires reviewers to write about budget equipment? If Stereophile reviews seven pieces of equipment per issue, you can feature two items below $1500, two below $3000, and two below $12,000. 

Maybe if we make accessing this hobby easier, we will have more friends turned audiophiles. —Eduardo Barberena D. Mexico, ebarberena@elyhetec.com.mx

A flawed review?  
Editor:  
I must take issue with John Atkinson's review of the Chord DAC64 in the July 2002 Stereophile. This review does a fundamental disservice to Chord Electronics and the DAC64, which is, in my opinion, a breakthrough product. I own a DAC64 and have had the opportunity to listen to most of your Class A digital "Recommended Components." The DAC64 clearly competes with and exceeds the performance of many components costing three to ten times its retail price of $3040. 

In his article, JA repeatedly commented on the "sourness" of the sound, only to reveal late in the piece that his review sample was defective. At the end, he backhandedly conceded that the DAC64 is kind of okay, finally recommending it. Would it have taken too much time for him to rewrite his article once he had a properly functioning unit? 

It is true, the bass of the DAC64 is slightly tipped up (possibly an advantage for those not in possession of speakers with tremendous bass output), but to describe it as "bloatless" is a gross misstatement. The DAC64's highs are certainly sweet, as JA admits, but when it is used with well-matched components, the soundstaging is both broad and deep. Retrieval of inner detail and dynamics by the Chord is on a par with the very best digital at any price. Maybe it's a poor match for the, in my opinion, lifeless Levinson components in JA's reference system. 

I enjoy reading Stereophile each month, but the objectivity and quality of the reviews seem to be slipping. —Thomas Salmon res02p961@gnc.net

With respect, Mr. Salmon, I thought I had made it clear that I did hold off writing the DAC64 review until Chord could supply a properly functioning sample. I also thought it was made clear, at the beginning of the "Listening" section of my review, that the "sourness" was associated with the earlier sample of the DAC64 used with its RAM buffer disabled, not with the sound sample. However, the magazine's policy has always been to describe our experiences with all samples of a product under review. —JA

We'll still be here  
Editor:  
Got your renewal offer. Let's see, J. Gordon Holt (in whose cars we trust) jumped ship in 1999. And now Jonathan Scull has gone. Well, you sold out to an international conglomerate and all you get is sold down the drain. 

Your offer is for $11.97 a year. Guess you know what the magazine is worth. Wait, Sam Tellig is still with you. He's worth $11.97. I just hope he doesn't go over to The Absolute Sound, too, before the year is up. 

I remember when Stereophile was hard to fit in the mailbox. Now it is slipped under the door. Hey, why don't you rename it StereoReview Lite? 

Okay, I sent in my renewal. Hope you last another year. —Gary Covert gcovert@hotmail.com
**Industry Update**

Like collectors who revere first-pressing mono LPs, Hobson understands that jazz is ideally heard in mono. "The way jazz was originally recorded and mixed was conducive to mono," he says. "In classical music, mono makes things sound stacked, not real. With jazz, there's this feeling that you're listening to great music in a club."

As Michael Fremer reported in "Analog Corner" in the April Stereophile, Classic has employed all mono gear—either at Bernie Grundman's mastering studio, or at Record Technology, Inc. (RTI), where the discs were pressed—in manufacturing its first releases: two Miles Davis 10" LPs (5013 and 5040), followed by Mobley's 1568, out in July, and Morgan's *Candy*, issued in August.

The equipment includes a Studer A80 playback tape deck fitted with a mono head, all-tube mastering with playback electronics from an Ampex 300 tape recorder, a Western Electric mono cutting arm, and a restored Westrex 2B mono cutter head fitted to a Scully lathe. Finally, after sawing an old Blue Note in half and observing its remarkably flat profile, Classic ordered new discs for the pressing stampers to ensure an LP that was flat from the nongroove-guard edge to the spindle hole.

According to Hobson, these albums' level of technical authenticity is unprecedented. For example, the Westrex mono cutting head is really important. "When you try to cut mono on a stereo cutting head," he says, "you get crosstalk resulting in a kind of faux stereo that's very available to the ear when compared with a pure-mono-system LP."

Also, the revamped cutting head allows for more higher and more lower frequencies, which were rolled off in early LP pressings because cutting heads and amps couldn't handle those extreme frequencies and would distort—perhaps resulting in some of the raw, immediate sound that devotees associate with first-pressing Blue Notes.

"Early cutting systems were not capable of producing what was on the master tape," Hobson states. "Instead, what you got was a very good interpretation of that tape. And since this is a sound people have gotten used to, we tried to go in the same direction as those albums but extend the frequency response. What we feel that people will now get with this series is the true reflection of what [famed Blue Note engineer] Rudy Van Gelder mixed directly to mono."

So far, 25 titles are scheduled to be released in the Classic/Blue Note Signature Series, with *Introducing Johnny Griffin* (1533) or *J.R. Moultrie* (1536) up next. The LPs are priced at $30; the original release $600-$2500 on eBay.

**US: YOUR LOCAL MEDIA HUT**

**Jon Iverson**

Things are looking up for high-resolution audio, with price reductions for DVD-Audio discs announced by one major record label in a move to attract a larger audience.

In mid-June, Warner Music Group (WMG) issued a statement that it would begin pricing its DVD-A titles "as equivalent to CD pricing as possible." The decision means an effective reduction of 25-35% in DVD-A prices, according to the announcement. WMG believes that equivalent pricing will induce consumers to opt for the DVDs rather than the CDs, especially because Warner discs are encoded with Dolby Digital 5.1 tracks that can play in any DVD machine. Warner's back-catalog CDs, typically sold at deep discounts, won't be included in the price-matching program.

Warner Home Entertainment (WHE), the music group's sister company, has been extremely aggressive about reducing the prices of DVD movies. WHE president Warren Lieberfarb was an industry leader in opposing the defunct DivX format, and has often stated that "DVDS are sell-through, not rental product." Some Warner video titles can be found in retail outlets for as little as $12.95. WMG's $24.95 DVD-Audio titles will drop to approximately $18.95 each, according to the announcement.

Warner's price reductions will force the entire industry "to take a look at this and how this may influence the audio format," said 5.1 Entertainment sales and marketing VP Jeff Dean. "Warner Music Group has instituted an aggressive pricing policy that bears review by all labels supporting the DVD-Audio format," Dean said.

Telarc has recently cut its retail prices for SACD recordings by 20%, lowering the tab from around $25 to $20. The label has only two DVD-A titles in its catalog, both with $24.98 suggested retail prices. EM1 will continue to support $24.95 prices for its DVD-A titles. Curiously, EM1 emphasizes DVD-Audio in North America and SACD elsewhere in the world, perhaps because of the deep market penetration of DVD-Video players here. Many record labels are said to favor SACD because that format doesn't require menu structures or video content.

**US: SILICON VALLEY**

**Barry Willis**

Using personal computers to listen to music may be heresy in some audiophile circles, but the practice is definitely on the rise. Recognition of the fact has led at least one maker of computer motherboards to introduce a model

**Calendar**

75th St., Woodridge) is proud to sponsor an Electrocompaniet listening event. Personnel from Jason Scott Distributing, the Electrocompaniet distributor, will be available to demonstrate products and answer any questions. For more information, call Holm Audio, (630) 663-1298.

**OREGON**

- Saturday, September 14, 5pm: The Audio Gallery (16318 SW Bryant Rd., Lake Oswego) welcomes you to a seminar with Richard Vandersteen on the importance of waveform preservation. RSVP: (503) 699-8888.
- Tuesday, September 17, 7pm: Bradford's Hi-Fidelity (942 Olive St, Eugene) is proud to announce an evening seminar with Richard Vandersteen on the importance of waveform preservation. RSVP: (541) 344-8287.

**WASHINGTON**

- Thursday, September 19, 7pm: Advanced Audio Systems (6450 Tacoma Mall Blvd., Tacoma) will host a seminar with Richard Vandersteen on the importance of waveform preservation in loudspeakers. RSVP: (253) 472-3133.
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"Stereo Sound" (Japan) Best Buy Component 2001 Award
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"Radio Technique" (Japan) Best Stereo Component Grand Prix 2001 Awards
'Grand Prix Award for No.1 Power Amplifier in all price categories'

"Super AV" magazine (Hong Kong)
'The Outstanding Power Amplifier 2001'

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with a vacuum-tube audio circuit. In June, AOpen, Inc., based in San Jose, California, announced a new Windows PC Pentium 4 motherboard, due to hit the streets this summer. An early-June announcement from AOpen touts the audio capabilities of their AX4B-533 Tube Motherboard, so called because of an onboard dual triode, a Sovtek 6922. (A true “tube motherboard” with Pentium 4 performance would be the size of several football fields, dwarfing the early Univac.)

Recognizing that tube amps have long been favored by guitar players and audiophiles—and that there must be some reason for this other than blind faith—AOpen engineers decided to include the tube circuitry as an audio buffer for stereo playback, or for the left and right front channels in a surround-sound system. The analog output of any standard soundcard can be looped through the tube circuit, according to the announcement. We can only speculate as to why company engineers decided to put the tube circuit on the motherboard rather than on an add-on soundcard. The reason is probably the need for high voltages; the mystery will surely be solved once the product reaches audiophiles’ eager hands.

Audiophile components such as Rel-Caps and Cardas wiring are used where applicable, and AOpen claims to have solved the problems of using tubes in a computer’s electrically noisy environment. Generating stable high-DC voltages for the tubes’ plates was another problem AOpen had to solve, one that most of the company’s engineers had likely never encountered. Windows PC computers work entirely off highly regulated +12V and ±5V DC derived from switching power supplies, themselves inherently noisy devices.

The AX4B-533 is intended primarily for audiophiles, music lovers, and “serious gamers” who want the best possible sound, according to AOpen product manager Al Peng, a self-described “audiophile for more than 10 years.” Some company engineers derided the concept, but Peng said that their “laughter turned into raves a few months later when we did our first lab demo…. The reproduced sound was absolutely amazing. It left everyone stunned. What we realized at that moment was how the limitations of typical audio output from a PC as we knew it had come to an end—and what we were pioneering was a way to literally combine the best of two audio worlds, old and new.”

The AX4B-533 Tube Motherboard has a projected average lifespan (“mean time before failure,” or MTBF) of 50,000 hours on the board, 35,000 hours on the “tube circuitry,” and 4000–5000 hours on the tube itself. The announcement does not mention whether AOpen has provided a way to put the dual triode in standby mode or to turn it off when not in use. The estimated street price of the AX4B-533 is $215.

**United Kingdom**

**Paul Messenger**

Creating genuine surround sound from a solitary loudspeaker location has long been regarded as one of the Holy Grails of sound reproduction, and is all the more so now as multichannel sound continues to rise in popularity. Single-source surround sound is a particularly desirable goal for those trying to popularize surround-sound television in the mass market, where there’s strong resistance to multiple speakers and wiring.

Digital signal processing has enabled simulated “virtual sound” systems to go some way down this road, using algorithms based on head-related transfer functions (HRTFs) and cross-talk cancellation to generate surround effects from a stereo speaker pair. These do widen the front soundstage and achieve a degree of surround sound, but the effect tends to be fragile—it works only within a limited listening zone, and is adversely affected by head movements and room acoustics.

Now 1Limited, a company based in the university city of Cambridge, England, has come up with a strikingly original and different approach to delivering multichannel surround sound from a single array. 1Limited’s Digital Sound Projector (dSP) not only comes with a thoroughly persuasive theoretical basis, but has also, over the past several years, been developed into a genuine, demonstrable, and salable product. Although oriented more toward the reproduction of movie soundtracks than of music, its modus operandi is so radical it has its own fascination.

Although work began on the project in 1995, the dSP made its British debut, at the CEDIA UK Expo, only in June 2002. It was the hit of the show. “I’ve heard the future,” one seasoned observer commented, qualifying the remark with some doubts about the business model being adopted.

The basis of the Digital Sound Projector is a matrix array of 254 drive-units, each 1” wide, actively driven by its own amplifier, and arranged on a panel 38” wide, 26.5” high, and just 4” deep. Logically, such a panel is most likely to be built into the support frame for a plasma video display, or placed behind a perforated projection screen.

Each driver resembles a tweeter, with what looks like a 19mm inverted metal-dome diaphragm suspended within a long-throw rubber roll surround. Although these look conventional enough, they’re quite radical: rather than the usual electromagnetic motors, they use a ceramic actuator technology known as Helimorph.

The basic Helimorph principle is to use massive digital processing so that the dSP array can simultaneously generate up to eight channels of sound, each as a discrete beam with its own direction and focus. These sound beams are normally configured so that they bounce off the room boundaries in such a way as to create a normal surround-sound effect.

Typically, the front center-channel signal comes direct from the center-front array, with a relatively wide-angle beam. The main left and right channels are reflected off the side walls using a somewhat tighter beam, while the surround channels are normally delivered in still tighter beams so they can bounce off the ceiling above the listening zone, and then the side and rear walls. Although converting the input signal and tailoring the multiple sound-beam outputs uses some 12 Gigaflops (12 billion operations per second) of processing power, there’s enough left over to provide
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appropriate time delay for the various channels, plus an ability to provide equalization to compensate for variations in the reflectivity characteristics of the various surfaces off which the beams are bounced. The technical approach has much in common with solutions originally developed for radar and sonar systems. Take, for example, a multivibrator "line source." In "raw" form, such a source will generate a cylindrical waveform that tends to avoid floor and ceiling reflections, rather in the manner of the original THX specification. But by progressively delaying the signals feeding the drivers toward the middle of the line, a physically flat surface can behave as though it's concave, and therefore focus the vertical distribution of the sound into a beam horizontally narrow but laterally quite wide. Similar focusing can be achieved laterally by using a horizontal array to put the two together. Combining a two-dimensional matrix of horizontal and vertical sources, it's possible to create a spotlight-like beam of sound. This in turn can be focused and steered according to how the delays and phase shifts are applied. It's the opposite approach to that used in the Quad electrostatic loudspeakers, which progressively delay concentric rings so that a flat panel behaves like a pulsating sphere.

The dSP can handle up to eight channels simultaneously, so it's well-suited to 5.1- or 7.1-channel operation, with the intriguing possibility that a "spare" channel could be used to reinforce the dialogue reproduction for a member of the family with hearing difficulties, for example. One obvious difficulty lies in its reliance on room boundaries, which could prove something of a constraint, especially for the front left and right channels in larger rooms. Another constraint, inherent in the physics of wavelengths and their propagation, is that the generation and directional control of sound beams is simply not possible at low frequencies. The dSP therefore operates only above 300Hz; all bass frequencies are passed to a subwoofer. Another practical constraint is the dSP's pricetag of £25,000, which should guarantee that demand won't outstrip supply. I got the impression that Limited might be more interested in licensing the technology to manufacturers with greater production and marketing resources than in becoming a manufacturer itself. Whether a Digital Sound Projector of some sort can be made cheaply enough to become a serious marketplace contender remains to be seen, but that doesn't make this extraordinary device any less intriguing.

**US: THE INTERNET**

**Barry Willis**

It's still too early in the game to guess what a profitable music-download business might look like, but it's clear that it won't involve highly restricted access—or high prices.

Sony Music Entertainment and Universal Music Group acknowledged this marketplace reality in early June, announcing price reductions for tunes downloaded over the Internet. This summer, UMG, in partnership with Liquid Audio, offered single tracks for 99 cents each and full albums for $9.99—with the capability of transfer to MP3 players and other portable devices. Sony will drop its price per track to $1.49, and Warner Music Group, a division of AOL Time Warner, is reportedly experimenting with affordable downloads that will be burnable to CD-R. No timetable was announced for the price reductions, but a Sony Music spokesperson did say they would be instituted "shortly."

Sony and UMG are partners in pressplay, a music-download service launched this year. MusicNet, a similar service backed by Warner Music Group, Bertelsmann's BMG, and EMI Recorded Music, has yet to make a move toward loosening restrictions on its downloadable tunes, which can't be transferred off a user's hard drive. Pressplay does allow its subscribers to transfer some of their downloads to other devices. EMI is participating with Liquid Audio and Diamond Multimedia, maker of the popular Rio MP3 player, in a trial run of a service called BurnItFirst.com, which allows users to transfer audio files to portable players or burn them onto CD-Rs.

Liquid Audio, based in Redwood City, California, is one of the few online music sources that have been legitimate from the beginning, having signed distribution agreements with copyright holders when most other startups were offering free music. Liquid Audio's service provides secure digital music to many retailers, among them Amazon.com, Barnes & Noble, BestBuy.com, CDNow, Sam Goody, and Sony Music Club. Many music startups that arose at the same time as Liquid Audio have since been neutered by buyouts or forced out of business by the cost of fighting copyright-infringement lawsuits. Near-legendary Napster recently declared bankruptcy at the end of protracted litigation, as it was being acquired by German media conglomerate Bertelsmann.

Traditional music retailers are worried about being cut out of the distribution chain as the music industry moves to a direct-sales model. Bricks-and-mortar businesses will never disappear, but their role seems destined to diminish as the Internet grows.

**US: WASHINGTON, DC**

**Barry Willis**

The music industry is reportedly preparing to open a new front in its war on piracy. This time, the enemy isn't commercial, for-profit websites offering free music downloads with a ton of paid advertising. It's individual music fans eager to share their stashes of tunes.

The Recording Industry Association of America (RIAA) is preparing to file copyright-infringement lawsuits against those it determines are the most egregious file-sharers on the Internet, according to reports in early July. The purported move against individuals follows successful copyright litigation against several commercial ventures, including the neutering of Napster, the grandaddy of them all. If carried out, an attack on music fans would put the music industry in the curious position of intentionally alienating its own customers.

While commercial piracy is clearly illegal, it's not clear that that is true of music shared free of charge. It's also not clear that all of the five big media conglomerates that dominate the music industry support an attack on private individuals. At a trade association meeting held late this past spring, music industry executives tentatively agreed to a strategy of pursuing the largest file-sharers. Warner Music Group was said to offer only lukewarm support for the effort, because it would create a conflict with its parent company, AOL Time Warner, operator of America Online, the world's most popular Internet service.

The idea appeals to executives who are enduring the second year of the longest post-WWII sales drought the recorded-music industry has yet experienced, but it is fraught with legal and logistical problems. The industry is aware of major file-sharers, because their frequently accessed databases appear as so-called "supernodes" in peer-to-peer networks. Discovering the identities of the individuals behind these databases may be difficult or impossible, because those identities are known only to their Internet service providers, who may not be required to divulge information. Many computers
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generate new IP addresses each time they're turned on—which means they can’t be tracked on a day-to-day basis—or have multiple users, which would make identifying a single guilty party extremely difficult.

The industry is also toying with technological tactics in its battle to regain control of distribution of its products. One possibility involves generating “dummy files” of popular songs, although it’s uncertain whether that would be any more problematic for downloaders than the frequent broken links and partial files they now encounter. Another widely discussed antipiracy measure involves probing users’ computers for illicit files and planting viruses. Some of these tactics are of questionable legality; Congressman Howard Berman, a Democrat from Los Angeles, plans to introduce legislation to protect copyright owners from the legal backlash that might result from damaging private databases or operating systems.

The threat of lawsuits may be enough to discourage some file-sharers. Few, if any, music fans with large music databases would be able to afford to mount legal defenses against the multi-billion-dollar record industry, even if noncommercial file-sharing were ultimately determined to be perfectly legal.

**US: BERKELEY**

**Barry Willis**

If you’ve ever hunted for a song title or a performer’s name on the Internet, you’ve probably used CDDB, the Compact Disc Database.

Operated by Gracenote, based in Berkeley, California, CDDB is the world’s largest online database of CD album information, enabling music fans to access information about recordings by album or song title, genre, or artist. The company’s continually updated server computers contain information on 1.4 million albums encompassing 18 million songs, and are accessed each month by approximately 30 million users.

On June 17, Gracenote announced a plan to expand its database into consumer-electronics products, to make it easier for music fans to access needed information. Using Gracenote’s waveform-analysis technology and embedded databases, new generations of consumer electronics could display essential information—song title, artist, label—without the need for an Internet connection. Already incorporated in some computer audio players such as RealPlayer and Winamp, and in some hard-disk-based “megachangers,” Gracenote’s database will next be expanded to automotive audio products, according to CEO and audiophile David Hyman.

The “embedded solution” eliminates the need for an Internet connection, he said, although some sort of connection will be needed for periodic data downloads—much in the way satellite receivers and TiVo-type hard-disk recorders have telephone lines for weekly updates. Always-on connections, such as high-speed digital subscriber lines (DSL), are more efficient, but impractical for most audio devices.

Gracenote envisions weekly updates via temporary hookups, said marketing director Ross Blanchard, who noted that the essential information for each song amounts to only about 2kB of data. Pioneer Electronics has already begun marketing a hard-drive head unit with embedded CDDB database, he noted. The head unit can be updated by inserting a flash memory card like those used in digital cameras. Coming versions of hard-disk players will be updatable with CD-ROMs, with the database occupying only about 350MB, and with most of the drivers’ 10–30GB storage capacity devoted to music. Gracenote’s database
covers CDs only; DVD-Audio discs and SACDs have insufficient market penetration at present to be included, Hyman said.

As part of its expansion, Gracenote has acquired Cantametrix, a music-waveform analysis and identification company. Under terms of the agreement announced June 17, Gracenote will assume ownership of Cantametrix's intellectual property portfolio, including its MusicDNA waveform-recognition technology and other assets. Gracenote intends to incorporate Cantametrix technology into its existing suite of recognition products, which include CD, MP3, and DVD recognition.

"When combined with Gracenote's comprehensive database of music information, [Cantametrix's] waveform recognition will enable Gracenote to recognize audio signals from any source, including terrestrial radio and other analog sources." Potential uses include portable MP3 players, car stereos, and peer-to-peer networks, among others," a company press release stated. "Adding Cantametrix's technology and patent portfolio to our family of recognition products secures our central role in the music experience of the future," said David Hyman. "This extremely flexible technology will also allow us to expand our core service and extend our offering to new products and new markets."

Gracenote's music-recognition technology is licensed to more than 4000 software developers worldwide, and to many electronics manufacturers.

UNITED KINGDOM
Paul Messenger
It had been three years since I'd traveled to the south coast of England to visit B&W Loudspeakers. By a substantial margin, B&W is the UK's largest specialist hi-fi company, and the biggest name in hi-fi speakers worldwide, with total turnover (including distribution) of around £85 million ($120 million). It's an impressive story, given the massive estate taxes that were levied following the death of founder John Bowers 1987, and a tribute to the flexibility and effectiveness of private ownership.

For much of the next decade, Robert Trunz ran B&W, before bowing out in 1996 in favor of current owner, Canadian Joe Atkins (who bought into the company in 1994). Since then, B&W seems to have gone from strength to strength, probably helped somewhat by the fact that home-theater customers need many more loudspeakers than do those who restrict themselves to two channels.

But there's much more to it than that. B&W's Nautilus 800 series of upmarket models, launched in 1998, has been a resounding success all over the world, and contributes as much to the company's sales as the beer-budget 600-series models. And if the 1998 Nautilus models remain the pinnacle of many consumer aspirations, the 2001 Nautilus/Signature 800 models (see the June 2002 Stereophile) seem to have already moved the goalposts a significant distance further down the field.

I spent the morning of my visit at B&W's research facility, far from the madding factory, in the beautiful medieval village of Steyning. I'd recently received a pair of Nautilus 800s for review in UK magazines, and the engineers thought I'd be interested in hearing a comparison among the 800, 801, and 802—something not easy to organize at home. Hooked up to a Naim CDS II CD player, a passive line stage, and a pair of giant Mark Levinson No.33 monoblock power amplifiers, all three speakers had genuine merit. But I was amazed at how clearly superior to the earlier models the 800 sounded, especially in its dynamic range and relative lack of time smear.

Summer 2001 saw the launch of the massive 800; in summer 2002, B&W goes to the opposite extreme, with a new Signature variation on the two-way, stand-mounted theme of the 805. The Signature 805 is very much an enhancement of rather than a replacement for the Nautilus 805 (reviewed in October 1999). It was originally conceived as a limited edition targeting the Japanese market, with fancy cabinetwork of high-gloss gray tiger's-eye or red bird's-eye maple, both of which take six days of preparation. However, the Signature 805 has now gone into full production, and will begin shipping to the US this month.

Though the Signature 805 shares the Nautilus 805's basic dimensions and two-way configuration, it costs around 75% more, and features some substantial differences in the drivers and crossover network. The woofer has a much more elaborate motor, with a 40% larger magnet, a copper-plated polepiece to reduce nonlinearities, and an aluminum "bullet" instead of a dustcap. Distortion is reduced to about a third of the level recorded by the Nautilus 805, especially through the midband.

The tweeter has new silver-plated metalwork that reduces the inductance and consequent nonlinearities and extends the bandwidth, and a new alloy
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diaphragm and voice-coil former that extends the first breakup mode to 32kHz. The bass alignment has been improved, and the bass-mid driver is now fed via a first-order network. A lot of time and effort have gone into auditioning different components; thick-film resistors from Caddock are used alongside very-low-loss ICW capacitors and air-cored chokes.

Once again, the listening comparison was very persuasive. My notes described the Nautilus 805 as "slightly boxy but with great focus and imaging. A good dynamic range but some time smear; could have more dynamic punch and drive." The Signature 805, however, sounded "cleaner, clearer, and more dynamic, with a much wider dynamic range and less background 'fur.' Great silences and low-level resolution; strings sound smoother and silkier."

When, a week prior to my trip to Steyning, Steve Pearce and Tom O'Brien had brought the Nautilus 800s to my place, we'd discussed my farfield-averaging analog measuring technique, which consistently shows a broad depression through the presence region (–2 to –3dB from 2 to 4kHz) with B＆W loudspeakers. This depression was visible with the Nautilus 800, just as it had been with the Nautilus 801 in 1998—and, indeed, with a 602 from 1995 (from a graph plucked at random from my box of curves).

During the intervening week the guys at Steyning had spent some time worrying about this measurement, and had come up with something of an explanation. I discussed this with B＆W's Director of R＆D, Dr. Peter Fryer, down the pub over lunch, and it seems likely to result from several different factors.

First, B＆W uses its 6.5" drivers up to a highish nominal crossover point of 4kHz, so the depressed zone is all about the top end of the midrange driver's range, in the part of the spectrum where the cone is already starting to flex. B＆W's explanation of the behavior of Kevlar cones was discussed in my "Industry Update" piece in the January 2000 issue (Vol.23 No.1). The short version is that the propagation of soundwaves within a woven matrix cone, from voice-coil out to edge/surround, varies according to the weave of the material. Bending waves travel more slowly in the less stiff directions of the warp and woof and more quickly across the stiffer bias of the cloth. This creates four "fast" tracks interspersed with four "slow" tracks, making the circular diaphragm "acoustically square."

With a homogenous cone, the edge will start to flex as a whole, in and out of phase with the central section, causing considerable interference. In contrast, the woven cone goes into so-called "octopole" bell modes. Alternate segments at the periphery flex out of phase with one another, effectively canceling each other out, generating little net output and hence relatively little interference with the pistonic radiation of the central portion of the diaphragm. In theory, at least, the Nautilus "surround-less" midrange driver behaves pistonically up to 3kHz; then the effective radiating area is roughly halved by 4kHz, and reduced to one quarter by 6kHz, so that more or less constant directivity ought to be maintained.

In practice, however, it seems that output is rather less than predicted as one moves beyond 35°–40° off-axis. Presumably, the octopole edge effects interfere with the sound distribution from the central pistonic section, restricting lateral distribution to a narrower cone than normal theory would predict. This could well explain the loss of presence energy when measured in the farfield, because the farther one moves back from the speakers, the greater the contribution of off-axis room-reflected components in the total mix of direct and reflected sound picked up by the measuring microphone.
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Vicenza is home to some of Italy's greatest architecture and finest hi-fi firms.

Andrea Palladio (1508–1580) made the place famous for his reinterpretations of classical architecture. Many, if not most, of his structures still stand—including the fantastico Teatro Olimpico, modeled on the amphitheaters of ancient Rome. Plays and concerts have been performed there for more than 400 years. Palladio inspired Thomas Jefferson and the Colonial style of architecture in the US. More than anything else, Palladio cleared away clutter; his style is austere, yet he managed to avoid sterility.

What is it about Vicenza?

Paolo Andriolo, of Pathos Acoustics, thinks the city breeds innovation and invention today just as it did in the 16th century. Maybe that’s one reason Vicenza, and not some other Italian city, is the location of three of Italy's best-known hi-fi firms: Sonus Faber, Unison Research, and Pathos Acoustics.

It's the region, too. The University of Padua, nearby, is one of Europe's oldest and best—and particularly strong in the sciences. Cremona, about 60 miles away, was the home of the great Italian instrument makers Amati, Stradivari, and Guarneri. If you visit, don't miss the Stradivarian Museum, in Cremona, and the Roman ruins and superb restaurants in neighboring Brescia.

Various influences seem to converge in Vicenza and to help shape the unique character of Italian hi-fi: innovation, a long tradition of handcraftsmanship, and a conviction that, in matters of music, the ear is the final arbiter. Italian hi-fi products tend to look—and sound—distinctively Italian. This flourishing of Italian hi-fi is all the more remarkable when one considers that the Italian hi-fi industry hardly existed 20 years ago.

“We used to import hi-fi gear from Britain and the US,” one Italian manufacturer told me, off the record. “Then we decided we could make it better ourselves.”

Italian hi-fi firms are Italian-owned and run by strong personalities, like Giuseppe Blanda and his son Stafano, of Audio Analogue, and Giovanni Nasta, of Opera Loudspeakers. Their products, too, have individuality and character.

Today, as the economy becomes more and more global, hi-fi products (especially speakers) from various countries have tended to lose something of their national identity and sound more... well, international. This is akin to what has happened with symphony orchestras and conductors.

If you visit Vicenza, splurge a little (but only a little) by staying at the Villa Michelangelo, on the city's outskirts, one of the finest villa hotels in Italy. You'll need a car, but you'll find the location convenient for day trips to Verona, Padua, Cremona, Brescia, etc. Vicenza and its environs are filled with particularly fine restaurants, most of them reasonably priced. If you see smoked horseshoe carpaccio on the menu, order it.

Or roast pig.

The Unison Research facility is nestled into a mountainside overlooking Vicenza from the north. The view, looking down toward the city, is breathtaking. The smell, from up the mountainside, can also take your breath away—Unison Research is located next to one of north east Italy's larger pig farms. Imagine my delight, as a lover of all things porcine, when, from the parking lot, I heard the squeals of little porkers. Music to my ears, if not my nose.

Unison's managing director, Giovanni Maria Sachetti, is looking for new digs away from the piggies. I don't blame him for that, or for avoiding roast pork that night at dinner. The piggies aren't the main problem, though. The aging factory is far too small—bursting at the seams producing, for the most part, single-ended triode (SET) tube amps.

Unison Research comes under the umbrella of ARIA, which stands for Advanced Research In Audio. The company is partly owned by Giovanni Nasta, managing director of Opera Loudspeakers. (Otherwise, the two companies are entirely separate.)

Mr. Sachetti—after two visits, I now call him Gianni—was trained as an electrical engineer and often lectures at the University of Padua. His design partner is a full-time professor there, Leopoldo Rossetto. Il Professorre reminded me that the university was founded in 1222 by students fleeing some baloney at the University of Bologna. Galileo taught there. Dante, Tasso, and Petrarch were students.

Professor Rossetto will teach you all he can about electrical engineering in whatever time you give him. He can't resist reaching for some poster paper or heading for a blackboard to diagram amplifier circuits—original circuits, he says. It's obvious that il Professorre loves what he does. Thankfully, part of what he does is help design hi-fi.

While Unison is best known for SET tube amps, the company has steered clear of the 300B and 2A3 tubes. Gianni told me that he likes the 845 output tube in particular—robust, reliable, good-sounding. A single 845 can easily deliver 18W without having to be pushed into overdrive.

Gianni told me that he's looking into having a new output tube produced, which, if it comes to fruition, will deliver...
upward of 100W of SET power, Unison is actively involved in the tube's design but wouldn't actually make it. And yes, the tube, if it does go into production, is likely to become available to other manufacturers. (I don't want to give too much away.) There's more work to be done, but Gianni showed me a prototype. The resulting amplifier might look like something out of Flash Gordon.

Gianni Sachetti is quiet, low-key, down-to-earth. Fortunately, he speaks excellent English (my Italian is coming along slowly), so I was able to have several informal conversations, if not a sit-down interview. I don't want to work too hard while in Italy.

I asked Gianni why Unison Research has so many different designs. Some use the 845 output tube, but others use the KT88 or EL34, tubes not usually associated with single-ended triode designs. Most of Unison's amplifiers are all-tube, but some are tube/solid-state hybrids. Why so many different design approaches?

Gianni said that there are different ways to get good sound (I paraphrase). Each output tube, for instance, has its own advantages and disadvantages. Sachetti admitted that the 300B has a very special sound, but said he had concerns about cost and reliability.

Meanwhile, Gianni had a new product to show me — and a surprise at that.

**Unison Research Unico integrated amplifier**

The Unico is an integrated amplifier that won't scare off the public the way an all-tube amp might — its line stage feeds into a solid-state power stage. The Unico retails in the US for $1295 as a line-level integrated, or $1395 with a phono card that can accommodate moving-magnet and moving-coil cartridges. The card is a snap to install. Literally.

The Unico is rated to deliver 80Wpc into 8 ohms and 120Wpc into 4 ohms. This is about as much juice as anyone can go from the single pair of MOSFET output transistors per side.

Perhaps the best way to spoil an otherwise great amplifier design is to use multiple pairs of output transistors per channel in order to achieve the magic (for marketing reasons) 100W or more. Over the years, some of the best-sounding solid-state and integrated amplifiers I've heard have used a single pair of MOSFETs. There can be magic about that single pair — a purity of sound thatamps with multiple pairs of MOSFETs (or bipolar) have difficulty achieving.

Matching seems to be an issue. Hard enough to match one pair of output devices, let alone two or three. You can get "current hogging." (I have Antony Michaelson, of Musical Fidelity, to thank for putting me on to the term.) If not ideally matched, one pair of output devices might be significantly stronger than another, or others. The strong pair then shoulders most of the work, "hogging the current," the sound suffering as a result. Preamp failure might be the result.

The Unico's build quality is astonishing. Look at and touch this integrated amp and you might be willing to fork over $2500 or $3000. The aluminum faceplate is more than half an inch thick. Gianni Sachetti finishes each one himself, using a sandblasting machine and ceramic sand imported from Japan. It's the silkiest faceplate I've ever touched, rounded at the corners and as smooth as a baby's bottom.

And look at those knockers — cr., knobs. The two control knobs are likewise machined of anodized aluminum and sandblasted for a smooth, silky feel. I don't think I've ever encountered so luxurious a look and feel in such a modestly priced hi-fi product.

There are two pairs of multiway, very-high-quality speaker-binding posts. RCA inputs and outputs are gold-plated to resist corrosion. At 31 lbs, the Unico even has the heft of a $2500 or $3000 amp. That price again — $1295, or $1395 with phono. If Unison Research charged $1995, they could get it with hardly a word of protest, and Gianni Sachetti knows this. He's also aware, as he told me, that these days he has to deliver something really special, at a great price, to get attention for a two-channel hi-fi product.

Inside, the circuit board is meticulously laid out. There's an oversize heatsink that hardly got hot, even in July without air conditioning. There's a large toroidal power-supply transformer, and ceramic sockets for the 12AU7 line-stage tubes.

And dig that radio-frequency-controlled remote, housed in solid wood so you can cradle it in your hand, not grab for it like some plastic piece of crud. The remote sees through walls. You can adjust volume from an adjacent room. I love it. I can turn Al Bowlly or Bing Crosby up or down from our dining room.

Always the teacher, Il Professore (that's Leopoldo Rossetto) sent me a white paper on the Unico's design, from which I now crib. (Grazie, professore.)

The line stage consists of two triode amplifiers. The first is "a typical gain stage in common cathode configuration, which mainly contributes to amplifier gain. Global feedback of the whole amplifier is reported to the cathode of the first triode, as in most valve amplifiers." (The amount of global feedback is specified as 9.5dB.)

The second triode amplifier adapts the impedance between the tube line stage (high output impedance) and the solid-state power-amp stage (low input impedance). Rossetto said he did not use the usual cathode-follower configuration, which he described as having "a high local feedback factor."

"It is quite easy to find systems where the high-order harmonic content is increased and not reduced because of the presence of feedback," he noted. The Unico's global feedback is kept low, and "the final value has been tuned with many listening tests."

Rossetto described the power-amp stage as "dynamic class-A." This means, he wrote, "that the bias current level changes with the signal amplitude." In other words, he has devised a sliding class-A bias circuit. Rossetto noted that this circuit is designed so the MOSFET current is always greater than zero. At idle, the amp draws just a few watts from the wall,
Exceptional Sound.
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Choosing a better surround-sound preamplifier isn’t about having the latest software decoder. Although, with Rotel’s new 7.1 system, even the most demanding audio/videophile will appreciate RSP-1066’s advanced processor with XS (eXpanded Surround). It’s designed to handle all of the home theater formats now available, including 5.1, 6.1 and the enhanced surround of 7.1. Further, its software can be upgraded to make your investment last well into the future.

RSP1066’s performance, however, is what makes this preamplifier-processor shine. Rotel has been building superb audio/video products for over 40 years. We know how to engineer rock solid power supplies and fine tune critical circuitry to provide outstanding sound for your movie and music entertainment. Hear the new RSP-1066 and all of the other exceptional Rotel components, only at your authorized Rotel dealer.
but working in overdrive, the Unico can drain up to 340W.

Safety first.

The Unico is intended not just for audiophiles, but for music lovers—people who might not have great familiarity with hi-fi equipment. Accordingly, the amplifier is designed with protection circuitry—an “output current limiter,” said Rossetto. This can be bypassed by moving four jumpers on the circuit board. “The limiter has been included only to prevent damage due to wrong connections or output short-circuit.”

Gianni Sachetti told me that the current limiter hardly compromises the sound at all; and for non-audiophiles, this is likely true. However, I greatly preferred the sound of the Unico with the protection circuitry out of the way. I heard a gain in overall transparency, improved dynamics, and tighter, more extended bass delivery. I got the feeling that the protection circuitry reined in the amp, making it safe but a little boring.

Live life on the edge! Just be careful not to short-circuit the speaker outputs. The Unico is sparse on features—no tone or balance controls, no preamp output for those who want to bamp or hook up a powered subwoofer. The robust On/Off switch is on the back, as if to say, “Leave the Unico on while at home.” There are four line-level inputs (three if the phono card is installed), plus a tape input and output. When the unit is first turned on, two LEDs blink for a couple of minutes, letting you know that the unit is muted while the tubed line stage stabilizes.

I used the Unico in our living room with the recently arrived Sonus Faber Cremona speakers, also from Vicenza. (Designed in Vicenza, the Unico is actually assembled at the new Opera factory in the neighboring town called Dosson di Casier.) Later, in my listening room, I used the Unico with the Quad ESL-989 speakers and the latest version of the Opera Super Pavarotti (see below).

The Sonus Faber Cremonas cost $7500/pair, so many buyers will probably look for something more pricey than the Unico. Perhaps they shouldn’t. The combination of Unico and Cremonas was splendid. Both the Cremona and the Unico are the creations of Vicenzans, remember. (And yes, Giovanni Maria Sachetti, of Unison, and Franco Serlini, of Sonus Faber, know one other. The two firms aren’t close, but neither are they foes, as sometimes happens in Italian hi-fi.)

The Unico is intended not just for audiophiles, but for music lovers.

The CD source in our living room was the Musical Fidelity A3.2 CD player. I reviewed it in July. For occasional analog, I used my Rega D25 turntable with Goldring 1042 moving-magnet cartridge. In my listening room, I used the Musical Fidelity NuVista 3D CD player.

I was struck immediately by a sweetness of sound, a lack of any edginess, and midrange bloom and body. And the bass—I heard extension and authority that I probably wouldn’t hear from tubes. But no bloat. With its mere 80W into whatever, the Unico shook the floor with Gustav Mahler. I’m not sure most of Gianni Sachetti’s pure-tube designs could have done the same.

I trotted out a new CD from Naxos that you need to get: *Spanish Dances* by Enrique Granados, performed by the Barcelona Symphony and Catalonia National Orchestra, conducted by Salvador Brotons (Naxos 8.555956). A superb performance and a stunning recording, with bass that can take you by surprise. The Sonus Faber Cremonas certainly delivered superb basso when hooked up to the Unico.

John Atkinson says that the equipment you have influences the recordings you listen to. True enough. But with the Unico and the Cremonas, I was listening to everything. String quartets. Solo piano. Large-scale orchestral works. Pop music and jazz of the 1920s and ’30s.

I didn’t confine my auditioning to the Cremonas. I took the Unico up into the listening room for use with the Opera Super Pavarotti and Quad ESL-989s. Again, I thought the Unico hit the harmonics just right, delivering authoritative bass and excellent resolution. (For analog, I used an Ortofon Kontrapunkt B cartridge in my SME 309 tonearm, mounted on my new-venerable AR ES-1 turntable. Of course, I remembered to change the settings on the Unico’s phono board.)

I noted that the Unico was able to produce a deep, wide soundstage. With the Quads, as with the Sonus Faber Cremonas, I could scarcely believe I was listening to a $1295 integrated amp. Suddenly, all the bullshit—tubes vs solid-state, single-ended vs push-pull (obviously, the Unico is push-pull)—didn’t matter much.

Years ago, I came up with the term “MOSFET mist” to describe a certain fuzzy, phasey quality I heard with some MOSFET amps. I heard no MOSFET mist with the Unico. To be fair, recently I haven’t heard much mist from other MOSFET amplifiers, either. Perhaps the devices have improved over the years. Maybe designs are getting better. I do think that bipolar output transistors tend to deliver just a tad more definition, detail, and dynamic authority than their MOSFET counterparts, but at the expense of a certain harmonic righteousness. To my ears, MOSFET output devices still tend to sound more tubelike—more musical, less sterile—than bipolars.

In any event, seldom have I heard tubed and solid-state devices come together as successfully as they did in the Unico, and never before at this price. There was a smoothness, sweetness, and rightness to the harmonic presentation that had me thinking I was listening to an all-tube design. Then a bass note would come along to remind me that the output devices were solid-state and capable of delivering some current (with the protection circuitry bypassed).

The phono card was outstanding, considering that it adds a mere $100 to the retail price. If you have any records at all, get the phono card.

However, compared to my Acous-Tech PH-1 Premium Edition phono preamp, I lost some definition and detail, some sense of ambiance. In our liv-
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ing room, where phono is an occasional source, the Unico's phono card was more than adequate—it was downright enjoyable. At $1350, the AcousTech Premium Edition sells for almost as much as the entire Unico.

Since you can adjust the Unico's phono card for moving-magnet or moving-coil, you won't be out of luck if you decide to switch from MM to MC. (I can't imagine, now, going the other way. You can also add 10dB of gain to the phono section with either MM or MC. It's hard to imagine any cartridge that can't be accommodated, even the lowest-output MC wuss.

As for power, I could occasionally hear the amplifier starting to clip, and I backed off accordingly. (The sound congested, the soundstage shrank, the otherwise beautiful midrange and treble began to sound shrill.) But unless you have very insensitive speakers in a very large room, or you must play your music pazzo forte (crazy loud), I doubt you'll run out of power. Remember, too, that the Unico's power limitation (not all that limited) may be its strength.

I know of no other integrated amplifier for under $3000—let alone for $1300—that is this musical, this convincing when it comes to reproducing the harmonics of instruments and of the human voice. This is what the Unico does superbly well, and perhaps uniquely well for the price: it preserves the harmonic structure of the music. More power? More resolution? Yes, but for how much money? And why spend it? Better to buy the Unico and spend those euros staying at the Villa Michelangelo.

Like other great Italian hi-fi products, the Unico never sounded lean, mechanical, or sterile. It did not rob music of body and beauty so as to wow with more apparent detail or toe-tapping drive. That's a hi-fi trick: render the music threadbare. The Italians are onto this: they know it's done, and they know it's wrong.

Was the Unico neutral? *Non me ne importa! (I don't care)!* It's probably not a question that an Italian audiophile, and certainly not a musicophile, would even ask. Did Amati or Stradivari or Guarneri ask if a violin or a cello was neutral? Did the idea of neutrality even arise in their minds? What were they making—musical instruments or laboratory instruments? Never mind the science; where's the heart, the soul, the music? And who better to ask and answer these questions than Italians?

The Unico is *fantastico.*

A matching CD player will be available by the end of this year. Gianni Sachetti says it will have up-sampling and a tubed analog output stage. And yes, he'll sandblast the faceplates himself.

**Opera Super Pavarotti loudspeaker**

Space is at a premium at Unison Research, alongside *allevamento di suini* (pig-raising). So the Unico is being assembled in Doxson di Casier, in a more industrial, less agricultural environment. My wife, Marina, and I were on our way to Venice for some opera and a concert by I Solisti Veneti. We caught Opera's opening day on the way.

Giovanni Nasta, of Opera, is one of the great personalities of Italian hi-fi. Warm, friendly, from the south of Italy (Sorrento), always ready with a smile and a joke, Giavanni appears passionate about everything. Food. Wine. Gelato (especially gelato). Espresso machines. Dean Martin records. Olive trees. Giovanni Nasta is Italy, overflowing with life. And Gianni Nasta loves wood.

It should come as no surprise that Italian manufacturers are good with wood. Even so, Gianni Nasta is especially gifted when it comes to cabinettaking. It's his pride, his joy, his craft.

"Any kind of wood, I can get it for you," he told me the last time I visited him, a year ago. "But only farm-raised wood—renewable stuff. No endangered wood."

Like Gianni Sachetti, who sandblasts each Unico faceplate, Gianni Nasta cuts the wood for every speaker cabinet he makes. Other workers assemble and finish the cabinets, but Gianni likes to cut it.

Gianni uses solid wood, no veneers, for his speaker cabinets. The back of his new factory looks like a lumberyard because it is, in effect, a lumberyard. But not quite. You don't usually see logs in a lumberyard. Gianni Nasta buys logs.

Gianni is proud of the factory, which includes spacious, beautifully appointed offices, three viewing and listening rooms, and a *affl* featuring a magnificent brass espresso and cappuccino maker. For entertaining visitors, of course.

One of the home-theater demo rooms is the finest I've ever seen—in terms not of expense: 'I've seen more extravagant' but of good taste. The room is exquisite, with stadium seating and flickering stars inside the walls and ceiling.

Gianni mopped his brow, laughed, and said, in effect, "Now I have to pay for all of this." (With Gianni, there's always a joke, even when he's serious.) I suspect he'll have no problem.

While I was visiting the factory, I heard the latest version (new drivers) of a long-established Opera favorite: the Super Pavarotti, a relatively small floorstander (39" high by 5.5" wide by 8" deep) with a narrow front baffle. Each speaker weighs 23 lbs. The Super Pavarotti is available in solid African mahogany ("from plantations only," says
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Gianni Nasta) for $1695/pair. American Cherry and Italian walnut are available by special order for $1895. If you want something else, just give Gianni some time to buy a log.

The three drivers come from SEAS, of Norway: a 1” silk-treated, soft-dome tweeter (upgraded from the older Super Pavarotti), and two 4.3” drive-units with polypropylene cones and butyl rubber surrounds. These last two, while identical, are not wired in parallel. One handles the bass, the other the midrange. The crossover points are at 120kHz and 2.8kHz.

The two chambers are not entirely separate. There’s a port below the bass driver, which fires into a chamber in the lower half of the cabinet. This chamber, in turn, ports into the bottom of the cabinet, which is elevated about an inch from the integral cabinet base by four metal feet. Floor spikes fit into the base. The chambers are of slightly different volumes. The idea is to achieve greater bass extension from a system with a small enclosure and small drivers.

The speaker’s sensitivity is specified as 87dB/W/m, the nominal impedance as 6 ohms, dipping to only 4 ohms. Note that there is just one pair of speaker terminals, 27” up from the base, which might mean you’ll need longer speaker wires—especially since the Super Pavarotti lent themselves to nearfield positioning, spread far apart and placed way out into the room. Sometimes when I try this with other speakers, the high frequencies seem to gather around the tweeters, spoiling the disappearing act. Not here.

The Super Pavarotti is shielded for home-theater use. In a way, it seems absurd to use such a refined and delicate speaker in a home theater; and for most Americans, it probably is absurd. On the other hand, if you’re into film scores more than sound effects, then the Super Pavarotti might be the refreshing change you’re looking for in a home-theater speaker. Why put up with shity sound and crappy looks just because it’s home theater? Why own speakers that wouldn’t be just as happy playing string quartets as movie soundtracks?

These are wonderful speakers—very Italian in their looks, craftsmanship, and sound. The Super Pavarotti is not for those who crave hi-fi excitement, however. The soft-dome silk tweeter didn’t give me the most crisply articulated detail. On the other hand, the tweeter didn’t give me a case of metal-dome tweeteritis. The upper midrange and treble were sweet, smooth, nicely extended—pleasant, easy on the ear, without a trace of hardness, harshness, or peakiness. This speaker sang; it didn’t zing.

Don’t get the idea that the Super Pavarotti was bland, however. There was plenty of excitement to be had, especially when I placed the speakers far apart and nearfield, as I had the Audio Physic Spark IIIIs—nearly halfway into the listening room and about 3’ away from each side wall. Like the Spark IIIIs, the Super Pavarottis pulled a disappearing act, and a brilliant one. I achieved a very wide, deep, and seamless soundstage with perfect center fill.

The biggest surprise was the bass: very dynamic, quite tight, and extended without bloat. For the most part I used the 80Wpc Unison Research Unico, an ideal combination—not some powerhouse amp. With the Super Pavarotti, the Unico, and the forthcoming Unico CD player, you could put together a stunning Italian-made system for under $5000. I can imagine this system in an elegant Manhattan apartment. (In New York, see Steve Mishoe at In Living Stereo, 13 E. Fourth St., in Greenwich Village.)

I did lose some of the soundstage magic—and some of the dynamic drive—when I moved the Super Pavarotti closer together and nearer my back wall. In my listening room, I preferred nearfield listening but didn’t consider it essential. My guess is that this speaker will be easy to work with in a variety of rooms—but I wouldn’t expect big sound in a very large room. The Super Pavarotti is a small speaker with small drive-units. Having said that, the bass was superbly tight and extended, and the macrodynamics were great in my squarish (17’ by 19’) listening room.

Opera Loudspeakers are well-known and widely distributed in Asia and in the UK. More to the point, perhaps, Operas sell well in Italy—the brand is not for export only. (There is some obscure Italian gear that, apparently, few Italians pay attention to. My late friend, Lars—see “Industry Update”—latched on to some of it.) Distribution in North America is only now gearing up; you may have to travel out of your way to find an Opera dealer. When you do find one, you’re likely to find a Unison Research dealer, too. Same distributor.

The cabinetry of Opera loudspeakers embarrasses that of most other manufacturers. Solid wood. No veneer. Superb finish. High-quality drivers. Civilized sound that I, for one, could live with for years. And reasonable selling prices. A loudspeaker is furniture, after all. You have to look at it, not just listen.

But beware. If you let your wife see the Opera Super Pavarotti, she’ll want to buy it, leaving you with no choice in the matter. The cabinetwork is that good, and puts most British, French, and American loudspeakers to shame, no matter how expensive. This loudspeaker could only be Italian. Fortunately, with the Super Pavarotti you get a great speaker and great furniture, and you get it for what looks like a song.

I can just hear Gianni Nasta driving along, doing his Dean Martin impression.

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as I spoiled by the pro-

liferation of analog gear at the High End 2002 show in Frankfurt, Germany? (See last month's col-

umn.) Nah. Home Entertainment 2002 just wasn't a very analog show. Some new and ex-

citing gear appeared, and there were plenty of turntables playing vinyl. But the agenda of HE2002 was multichannel sound and home theater. That's what the organizers wanted, and, at least on the surface, that's what they got. They also got almost 15,000 attendees — a major in-

crease over last year's turnout at the same venue, the New York Hilton. By all indications, the Show was a hit. The elevators worked this time, and no one got trampled, despite the upsurge in attendance.

More big video names participated this year, including Philips, Samsung, Sony, Sharp, and Zenith; there were more seminars about home theater, HDTV, and multichannel DVD-Audio and SACD, and one fewer about anal-

og (not my choice). What that means is that there were no seminars about analog. Don't think I didn't hear about it in the crowded upstairs corridors, where the two-channel audio displays were concentrated.

Stereophile's "Ask the Editors" session, once a highlight of these shows, was rel-

egated to the Friday-morning gulag instead of the prime Saturday spot, which went instead to Home Theater magazine. There was even a seminar on "home networking," one of the most oversold, overstuffed, and un-

appealing ideas to come down the pike since MP3 as successor to CD. Like the dot.comers who predicted the end of bricks-and-mortar retailing during the boom years of the mid-'90s, the home networks en-

vision a "wired home" of the future with PCs and servers controlling everything, and a video screen as the hearth. Never mind what consumers think now, they'll just have to come along, the thinking goes.

Yet, as the headline of a recent Reuters (fch!) Internet Report stated, "Consumers Snub Costs, Complexity of Home Networking": "Nobody's convinced consumers they [devices] all need to talk to each other; the stereo to the PC to the game box," said Charles Roussel, a Boston-based partner in the high-tech group of Accenture, formerly Andersen Consulting," the story reported.

Folks don't want all of their home electronics tied together into one complex knot just because it can be done.

No one ever will, in my opinion. Yes, a refrigerator can be de-

signed to go online and order replacement food as you remove and consume it, but who wants or needs that? To most con-

sumers, computers and home theaters, like refrigerators, are appliances. Complicated ones. "They think 'If I can't make my PC work, or my DVD, and I link them together, my house will ex-

plode,'" Roussel went on. No wonder 57% of consumers sur-

veyed for that story said they don't have, nor do they want, a wired home network. The number was up to 66% for wireless.

Folks don't want all of their home electronics tied together into one complex knot just because it can be done. My kitchen has running water, but that doesn't mean I want to install a toilet in the middle of it just because I could. And as much as I love watching movies at home on a big screen with 7.1-channel sound, I don't think home theater will ever attain audio's "hobby status," or incite the passions of its devotees, the way hi-fi does and has for more than 50 years.

That's why few of us on the Stereophile "Ask the Editors" panel were surprised by the SRO crowd that gathered on that workday morning. And fewer were sur-

prised by the response to panel moder-

ator John Atkinson's question: "How many of you still have turntables and still play records?" In the year 2002, the overwhelming majority of hands went up. Put that in your home net-

work and smoke it.

New and Exciting

Still in the prototype stage, VPI's TNT HR-X turntable was pre-

viewed at HE2002 in the 'Toys from the Attic' room. The alu-

minum-slab plinth shown in the photos has since been changed to an aluminum-on-acrylic sandwich for practical, aesthetic, and possibly sonic considerations. When I spoke to designer Harry Weisfeld shortly after the Show, he told me the motor assembly was already in production,
and that he’d signed the purchase order for the first batch of plinths that day.

The HR-X’s four-poster design is similar to the current TNT’s, but the overall footprint has been greatly reduced to a more easily manageable 25” by 19’ thanks to a large plinth cut-out and the new compact, self-contained, "vertically configured” isolated drive-unit containing two smaller 24-pole motors flanking a large, flywheel. The motors are driven 75” out of phase from each other, which is said to give the essentially cogless performance of a single 48-pole motor. With both motors driving only the flywheel, and the flywheel driving only the platter, sufficient isolation is said to be provided to nullify the potential two-motor negatives of added noise and “jitter” caused by machining (in) tolerances in the belt and pulley.

Another big change in TNT HR-X from the current TNT is the bearing design and its interface with the platter. The current bearing features a standard ball/thrust plate with the platter riding on an integral shaft flange via three adjustable, pointed set screws. The new bearing appears to be a far more stable inverted design, with the 60-Rockwell-hardness stainless-steel shaft — hardened, ground and polished—anchored to a recess in the plinth. A larger tungsten-carbide ball mounted atop the shaft rides on a soft Teflon thrust plate fitted inside the 28-lb. plate. Stainless-steel-on-acrylic sandwich laminated and bolted together. The platter rotates around a long oil-impregnated brass sleeve set inside a stainless-steel boss mounted to the platter bottom. The sleeve is cut out in the center to the shaft contacts only its top and bottom. When Weisfeld first assembled the bearing, it fit so securely that he couldn’t remove the platter. He had to fashion a special first-sized tool that screws onto the spindle. Weisfeld told me that the idea for the Teflon thrust plate came from an impressive-sounding, superbly built Kenwood LD07; tunable he’d come across that cost $2900 in 1980. After 22 years of use the Kenwood’s thrust plate exhibited little wear.

The new table will have a removable armboard. Weisfeld told me after the show, he’d then had been toy with the idea of trying a totally independent arm platform that would sit in a plinth without the separating the arm from any bearing noise. The tradeoff, of course, is that the arm stand would then be sitting on the same platform as the motor assembly. Another option might be to offer the TNT HR-X with or without the air-bladder suspension. The “without” version would allow for the use of cones inside the towers, centered with an elastomer doughnut, for “a totally different sound,” said Weisfeld. He’s also considering making the platter slightly oversized to accommodate a record ring with an automatically centered perimeter (a clamp will also be included). He’s certain the TNT HR-X’s final cost will be under $10,000. The ‘table has that “right” vibe about it; I hope to get one for review ASAP.

Oddly enough, many of the ideas used in the HR-X resulted from the development of the $1500 Scout, which comes complete with JMW-9 arm. To keep the Scout’s costs down, Weisfeld resorted to simplicity in the bearing assembly and in the arm/plinth interface. The resulting sound so intrigued him that he decided to apply some of these ideas to the big ‘table.

**Aesthetix (distributed by Musical Surroundings)**

Aesthetix exhibited finished versions of the tube Saturn Series of electronics, shown only in prototype form at CES: the Rhea phono stage ($3500), Calypso line stage ($4500), and Janus full-function preamp ($6500). The Rhea has selectable gain up to 70dB and fully balanced internal circuitry, with gain and loading adjustable by remote control. How great is that? It uses 12AX7 and 6922 tubes and features three independently configurable phono inputs and a built-in cartridge demagnetizer. The Calypso, which also uses 12AX7 and 6922 tubes, offers balanced and unbalanced inputs and outputs, home theater processor bypass, and remote control, while the Janus combines on the same chassis a
version of the Rhea with a single phono input and the Calypso line stage. These very ambitious, reasonably priced products.

In the same Musical Surroundings-Halcro-Rockport room was the new 0.6mV Clearaudio Harmony cartridge, available with a wood or magnesium body for $6000. Such a curious assemblage of manufacturers brings me to my second sermonette of this column: a comment on some of the clueless criticism I read online about this Show. On a site whose URL I can’t recall, someone wondered why Andy Payor, no fan of the Souther-based Clearaudio tonearm, would show his speakers in conjunction with Clearaudio importer Musical Surroundings. I read other comments criticizing some of the other combinations found in certain rooms, and many criticisms of the sounds heard at the Show and the demo music used.

Participating in the Home Entertainment and Consumer Electronics Shows is extremely expensive: there’s the room cost, the shipping costs, the cost of getting the crates from the storage area to the rooms and back (often more expensive than the shipping itself, thanks to the Teamsters), the cost of brochures, of traveling to the location, room and board, theft, breakage, and on and on. The total can easily run to tens of thousands of dollars per participating company. In order to keep these costs down, manufacturers share rooms, and this sometimes results in strange bedfellows. The Rockport-Halcro combo was a no-brainer, and tonearm duties were shared by the Clearaudio and Graham Engineering 2.2, both of which were mounted on a Clearaudio Maximum Solution turntable. Would Andy Payor have preferred to use his System III Sirius table? Do you have to ask?

Another reason you find such odd groupings in rooms is the dealer connection: local dealers often sponsor rooms (while making the manufacturers pay for them), and need to show all of their lines. This sometimes leads to uncomfortable and/or unfortunate combinations. Logic and good sound sometimes take a back seat to exposure.

Given the need to attract a crowd and keep them in the room, most participants are loath to play long, complex pieces of music. Variety is key, and so, unfortunately, is accessibility. If you bring in some 12-tone Webern work, don’t expect to hear it, or any piece that runs longer than 10 minutes. Shallow? No. It’s a show, and you have to give people what they want. If your tastes run to classical, choose something light and lively if you want to get it played.

All that said, yes—there was too much audiophile tripe. I ran from rooms playing Jennifer Warnes’ Fannin Blue Raincoat or Rebecca Hidgeon—not that there’s anything wrong with either of them, but why not play new and interesting music instead of the same old same old?

As for the sound at the Show, cut these guys some slack. They have very little time to deliver the goods in unfamiliar rooms that are mostly too small, too crowded, and supplied with grungy AC. Yes, some rooms sounded fantastic, but it’s not fair to denigrate the guys who couldn’t get it to work. In my experience, if the show sound is good, odds are the products are good; if the show sound is bad, you can’t draw any conclusions. But if the sound sucks and the host says it sounds great, he’s made his own bed, and you have every right to make him lie in it.

Analog-Like News

My Show assignment was to cover analog, but I stretched it to include the “analog-like” as well. Into that category fell ABKCO Records, which used HE2002 to announce that it was reissuing the entire Decca/London Rolling Stones catalog—22 albums in all—on SACDs. ABKCO VP Jody Klein, ABKCO founder Allan B. Klein’s son, made the announcement, followed by demos across the hall in Sony’s room, equipped with VTL amps and EgglestonWorks speakers. The sound was extremely promising—no surprise, given how the transfers are being made. Klein went back to the original tapes on both sides of the Atlantic to find the ones that sounded best. The tracks were transferred flat to DSD using converters modified by Ed Mcinerney, and an analog playback deck modified by Mike Spitz of ATR Service Company.

The final mastering of the Stones SACDs is being done by Bob Ludwig of Gateway Sound in Maine, who told me, “I’ve got my Well Tempered Turntable with [Manley] Steelhead phono preamp at work as we compare both the original London and Decca pressings on nearly every song (as well as the 1986 CD). We are keeping totally to the spirit (and speed!) …and channel assignment!!! of the original recordings. …I’ve never worked with a record company that is trying like hell to do something as right as humanly possible. …I can’t tell you how many times I thought we had an approved album when a better source turned up from one of the Stones’ personal collection or some place like that and we redo the whole thing again! …I can say with confidence that there are no electronically reprocessed stereo tracks anywhere and there are plenty of SACD mono tracks!!

The discs will be SACD/CD hybrids, making them accessible to everyone, nor will ABKCO charge extra for SACD: the single-disc list price will be $18.98. The CD sound will be so much better than the current ABKCO ver-
sions that even Stones fans without SACD players will hear the improvements and eat them up. How long before they hear the discs on an SACD player? More important, how long before the Beatles survivors and heirs want a piece of that action? With EMI signed on to SACD, I figure it won't be long.

And rumor has it that 180gm vinyl of the Stones albums, sourced from the DSD masters, or from analog copies made simultaneously, and pressed at RTI, could be in the works. Where they'll be mastered has yet to be determined, but I'm on cloud 9 over this.

More Analog at HE2002, Including Software

Unless I missed something, the only other analog news at Home Entertainment 2002 was the Magic Diamond moving-coil cartridge ($4650), imported by Walker Audio. Its output is 0.38mV; its tracking range 2.2–2.5gpm. Lloyd Walker offered me one to review; when my headshell clears, I'll take him up on it.

The usual turntable suspects were spinning in rooms throughout the Show: the V.G.E.R. Indian Reference, the Walker Proscenium Gold, the Music Hall MMF-5, the Clearaudio Maximum Solution (with the Clearaudio-Souter and Graham 2.2 tonarms), the Immedia RPM-1 with RPM-2 arm, and the Avid Acutus with SME V arm. I spied a vintage EMT transcription turntable and a Goldmund Studietto, as well as a really great-looking one-off carbon-fiber 'table in the Nearfield Acoustics–Tenor Audio room. Even Dave Wilson of Wilson Audio Specialties was spinning vinyl and extolling its virtues in his big room on a Well Tempered 'table.

In short, there was plenty of analog, but not plenty of analog news. The only other analog-like news worth mentioning was the launch of VTL's new, groundbreaking, two-chassis Reference preamplifier ($10,000). That was on another reporter's beat, but I'm hoping to snap one for review.

Over in the ballroom retail area, vinyl business was exceptionally brisk, according to Acoustic Sounds' Chad Kassem, Sundazed Records' Bob Irwin, Red Trumpet's Rick Flynn, Elusive Disc's Bob Bantz, and Music Direct's Jeff Bizar. Most said they'd surpassed last year's sales by early Saturday. Mobile Fidelity Sound Lab's technical director, John Wood, handed me a test lacquer cut on MoFi's upgraded lathe, and when I got home I found the sound to be exceptionally rich and clean. Hopefully, new MoFi releases will come shortly.

Speaking of which, I ran into Classic Records' Mike Hobson and Colie Brice proudly carrying around test pressings of the two-LP soundtrack album to Vanilla Sky. Hobson is friends with director and vinyl fanatic Cameron Crowe, whose film-production company is called Vinyl Films—hence the appearance on Classic of this soundtrack and the one to Crowe's Almost Famous. The superb packaging includes a four-page, full-sized insert in black-and-white and color featuring candid shots of the stars and crew. I received a copy of the set after the Show, and whatever the source material was for this compilation, the sound is terrific. The eclectic soundtrack includes R.E.M., Paul McCartney (title track), Peter Gabriel, Red House Painters, and Jeff Buckley. I have the double 10" UK import of Radiohead's Kid A, and somehow Classic got "Everything in its Right Place" to sound even cleaner and more dynamic.

Bob Irwin promised I'd be getting the first two Lovin' Spoonful albums on Sundazed LPs (with bonus tracks) after the Show, and test pressings arrived today, along with another package from Classic, containing the label's first 200gm Quiec SV-1 (super vinyl profile) pressing: Hanik Mobley (Blue Note 1568). The album is almost impossible to find in an original pressing, and when you do, it's impossible to afford. As will all of Classic's Blue Note reissues, this monophonic disc reproduces the original "deep groove" label and non-groove-guard, flat-LP profile. Also included was a 180gm pressing from the same stamper, to compare with the 200gm. Classic claims it's easy to hear the improvement—when I finish this column, I'll give them a listen. I also received the second set of Fantasy OJC LPs from Acoustic Sounds, pressed by RTI on 180gm vinyl: classic jazz titles from Wes Montgomery, John Coltrane, Coleman Hawkins, and others at $20 a pop.

Personally Speaking

The most fun I had at HE2002 was playing a CD-R compilation I'd made
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using the Boulder phono section, Simon Yorke turntable, Immedia RPM-2 tonearm, and a prototype Lyra Titan cartridge. The first track is the 12" 45rpm version of Led Zeppelin's "Stairway to Heaven" that Classic made but for some reason never released. I'll never forget what happened in the large Tenor Audio–Nearfield room: as the

By the end of "Stairway to Heaven" the room was SRO. When [it was over], there was applause.

track began, sounding unmistakably better on the Pipedreams speakers than "Stairway" had ever sounded to anyone, the seats began to fill, and by the end of the track the room was SRO. When it ended, there was applause.

I played "Stairway" unannounced in John Rutan's room (he owns Audio Connection in Verona, New Jersey) on the modestly priced Vanderbilt Audio 2Cc Signatures, and after just a few bars John's jaw dropped. "What the hell is that?" he asked.

And so it went. In some rooms the CD-R sounded awful, in others superb, and in those rooms I found myself staying and listening to at least half of the 80-minute disc, with no complaints from the crowd.

Mikey's Best Sound at HE2002

I didn't have time to visit every room because of my duties as Show Spokesperson, but here are my top 11 best-sounding rooms at Home Entertainment 2002:

1) Kharma Ceramique 3.2, Lamm electronics
2) Joseph Audio, Manley electronics
3) Rockport, Halcro, Clearaudio, Graham
4) Pipedreams, Tenor Audio
5) Wilson Audio Specialties, VTL electronics
6) Naim Audio
7) PBN Montana EPS speakers, darTZeel electronics
8) Merlin, Joule Electra (what else is new?)
9) Vanderbilt, Ayre
10) Creek, Epos
11) Meadowlark.
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In the February 2002 issue I chose Morten Lauridsen’s luminous work for chorus and orchestra, *Lux Aeterna*, as a Record To Die For. This five-movement setting of Latin texts from the Roman Catholic Mass for the dead (omitting the *Dies Irae*) is a work of remarkable beauty, originality, and, ultimately, humility, in that Lauridsen patterned his work on the architecture and gravitas of Brahms’ *Requiem*. No slave-ish imitator, Lauridsen composes using his own voice, which is distinctly American and modern, but neither self-aggrandizing nor sterile.

Although *Lux Aeterna* is not the absolute best job of recording I have ever heard, it is really quite fine. The beginning of its opening movement is a wonderful hi-fi demo track, in that the work’s opening choral (on D) is six octaves tall, and leads into an austere haunting divided bass line, followed by a memorably evocative choral entrance. All of this takes place in two minutes and five seconds, which allows one to get a good fix on how a system sounds without causing too much emotional distress to those audiophiles who can’t go for much longer than two minutes without once again hearing a dour, dire, or depressing female pop or “jazz” vocal. Crimeiny.

I must confess to some “family” connections with Morten Lauridsen. He was the composition teacher of Nathaniel Rosen, the star cellist of my JMR label, when Rosen was studying at USC, and the chorus my wife and kids belong to has sung *Lux Aeterna*. So it came to pass that, in my preparations for Home Entertainment 2002, I sent an e-mail to Morten suggesting that his taking a trip to NYC with a box of demo discs to hand out would not turn out to be the dumbest thing he had ever done. While he liked the idea, his schedule did not permit him to act upon it.

Morten’s label, RCM, accepted my Plan B to offer to play Santa’s elf in their behalf. The day before I had to leave for the Show, a box of demo, half the CDs being *Lux Aeterna* and the other half the nearly as treasurable RCM pairing of the same Los Angeles Master Chorale performing Dominick Argento’s *Te Deum* (imagine a John Williams orchestration of Britten’s *A Ceremony of Carols*, and I mean that as a compliment) with Maurice Duruflé’s chant-based *Mass* for organ and male chorus. The Argento-Duruflé discs had all been signed by Maestro Paul Salamunovich, to commemorate that it was his valedictory recording with the Chorale, which has performed and recorded with the Los Angeles Philharmonic.

I started out as Santa’s elf but soon turned into the Pied Piper of Hamlin. After I played either of these discs in a display room, showgoers would follow me down the hotel corridor asking for the recording’s specifics and how to obtain it. Amazon site has sound bytes. (I gave copies to John Atkinson, Sam Tellig, and Kalman Rubinson, who perhaps will comment on them in these pages.)

In addition to the opening track of *Lux Aeterna*, from the same disc I often selected two of Lauridsen’s settings of Rainer Maria Rilke’s French love poetry. “Contre Qui, Rose” is a part-song of exceptional grace, while the transition from the preceding song to the opening of “Dirait-On” (with Lauridsen himself playing the piano) is one of those “hair standing up on the back of one’s neck” moments.

Track 1 of the Argento *Te Deum* got heavy rotation, as they say, but just as often I requested the soulful, dark-toned opening of the Duruflé *Mass* for massed baritones. That cut in particular appealed to violinist Arturo Dehnini, who, after having discharged his playing duties on Sunday, walked the halls with me in search of exceptional sound.

During the question-and-answer period following one of Arturo’s recitals (his Saturday performance with guitarist David Burgess was the high point of the weekend for me), Arturo was on the receiving end of a pointed question (which I tried to deflect) about what stereo equipment he himself owns — as though that proves anything.

Arturo graciously answered that the speakers he has always found to be the most revealing, while still eminently listenable, are Quads, either ESL-57s or -63s. (Neither of us has heard the new ones.) Arturo’s own primary speakers are an old pair of Ed Meitner–designed Muscatex planar dipoles. But again, all that proves is that Arturo is not a compulsive stereo shopper — he still has the Dynaco stuff he bought while studying at Juilliard.

Without question, the Lauridsen, Argento, and Duruflé tracks sounded great in the two Pipedreams rooms (with Tenor and Gamut amps), through Dynaudio’s new Confidence C4s (Naim amps), and Rockport’s Antareses (Halcon amps) — but of course they should have. These were cost-no-object (or cost-no-big-object) systems set up by
people we can presume basically know what they're doing. The costs in most cases were prohibitive or obscene, depending on one's perspective. For that kind of money one probably could hear the Los Angeles Master Chorale live, privately, and then feed them all afterward.

I did not get a chance to request my own program material at the Wilson Audio Specialties display, but the sound there was similarly first-rate. In both the Sony SACD and Toes from the Attic demo rooms, EgglestonWorks' speakers sounded better than I had ever heard them before.

There were a few other demo tracks I used when I had the time, and when the exhibitors consented. The JA-recorded vocal spectacular *Let Your Voice Be Heard* by Cantus (available from www.stereophile.com) is a wonderful test of midrange tonal purity, especially "Shenandoah" and "Danny Boy." The Handel-Halvorsen *Passacaglia* — the last track of my own label's *Music for a Glass Bead Game*; a disc of violin-cello duos — can point out any tendencies toward treble stringency or peakiness. (*Music for a Glass Bead Game* is also available — at 33½ off — from www.stereophile.com.) The third installment of *Rejöie*!, JMR's string-quartet (mostly) Christmas series, was recorded about 50 blocks north of the Show's Hilton venue, at Riverside Church, to take advantage (for three tracks) of Riverside's magnificent Aeolian-Skinner organs, which total more than 12,000 pipes and include true 32' pedal pipes. Track 4 of *Rejöie! Volume Three* is a transcription for organ and violin of the slow movement of Marcello's Oboe Concerto, and it is a very revealing test of bass control and treble sweetness. And some great playing, too.

I also carted around some demo discs that are not commercially available. First of these was a compilation of live recordings I made while researching and evaluating the sensibly priced semi-professional stereo digital recording equipment I wrote about in last month's column. Wally the singing finch, Vinny Fraioli playing classical guitar during a thunderstorm, and my testing a church organ were the cuts I most often played. The reactions were very gratifying.

For pure silliness in a good cause, I also brought along some award-winning radio commercials. No one who heard the one-minute drama of computer programmer Paul uncontrollably belching at lingerie model Jessica is likely to forget it soon! Similarly, I expect that the bank's new voice-mail menu, the sultry babe extolling the virtues of hard cider, and the disappointed blind date leaving her envoy in lipstick on the car's windshield, will be permanent fixtures in quite a few peoples' personal memory banks. Radio commercials are a very competitive industrial art form, and the best of them can tell you a lot about a system's resolving power and neutrality. Those guys and girls not only play for keepsies, they also play for the annual Arbitron Radio-Mercury prize of $100,000.

So, on to the rooms I found particularly noteworthy in terms of both musical enjoyment and (at least comparative) value for money. The Balanced Audio Technology/System Audio room was very musically coherent and nonfatiguing. BAT's one-box CD player ($6000) was playing through their integrated amp (at $4000), which drove System Audio's SA2K speakers ($3000). While on paper one might surmise that the tail was wagging the dog, the speakers did not sound overmatched in any way. This may have been due in part to fastidious setup with Echo Busters, but I'm sure that Nordost's Valhalla cables (which probably cost more than the speakers) did not hurt in the least.

DarTZeel is an anagram of the Swiss principal's surname, Delétraz. *Bel et bon. Après vous. Mon nouveau amplificateur sera appelé Le Skamm. Back to reality.* First, I must thank Maria Rosa for leaving husband Hervé holding the bag so she could enjoy Arturo's sweet and soulful recital with guitarist David Burgess. Second, although I am not a huge chocolate fan, the cumulative 10 kilos the Delétrazes handed out in bite-sized chunks were appreciated by all. Third, DarTZeel's $10,000, 150Wpc, solid-state amp was driving PBN Montana EPS speakers better than I had ever heard them, with great clarity and power.

DarTZeel's amp combines Swiss-watch craftsmanship with characterfully idiosyncratic industrial design. I'm sure that the jewel-like Nagra preamp they were using helped, but I was mystified by DarTZeel's 50 ohm interface, which puts 100m of cable between preamp and amp. Just have the waiter bring more Campari and I'm sure it will all be fine. [Thus the noteworthy Mr. Marks reveals that he failed to assimilate Hervé Delétraz's article in the November 2001 Stereophile on impedance-matched signal transmission. — Ed.]

Distribution realities and practicalities make for strange bedfellows, so finding Amphion's Creon ($2000) and Xenon ($3000) speakers powered by Thor Audio's admittedly luscious but nonetheless $16,740, 60Wpc mono tube amps was perhaps less of a cognitive-dissonance jolt than it might have been. The sound, especially with the less expensive Creons, was enviable,
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and this has nothing to do with the fact that Amphion’s elegantly turned-out and eminently personable Anssi Hyvönen is a Formula One racing e-mail chum of mine and JA’s, or — perish the thought — that Thor Audio’s avuncular presence was none other than Paul (no relation) Marks.

Wilson Benesch’s decision to display only their two smallest speakers, the Arc and the Discovery, seemed at first a goof, but once I heard the Arcs in full cry I had to admit it was the only thing to do. No poor relation, the Arcs pack a shocking amount of the house sound I’ve heard from the Bishops ($30,000), the Chimeras ($21,000), and the Discoverys ($8200) into a room-friendly and elegant package selling for $3825 (stands included). The Arcs were driven by Chord’s integrated amp ($8950), while the source was a Chord RAM-buffered DAC ($3000) — the music keeps on going even after the disc has been ejected — fed by an Exposure transport. Best sound of the Show? Perhaps not. But it was the setup that came closest to what I would want to live with, at a price I could readily justify.

Totem was showing their $3000 Forest speakers (no funny spelling, and I am very grateful), powered by their own Amber integrated amplifier ($5000), playing SACDs through a Sony SCD-777ES. The sound was confident, consistent, coherent, and probably a few other modifiers beginning with c. Ah! Canadian. Great value for money.

Audes was playing their Soul vented three-way speakers ($2000) in a system that was all-Audes, except for wire goods from Soundstring. Building the speakers in Estonia confers a substantial price advantage, and the Souls sounded wonderfully rich and nearly full-range. I give them a “$$$” for value.

Triangle’s North American main man, Richard Kohlruss, had the assembled mob fairly agog with the crisp yet stress-free sounds he was conjuring up from an all-French system combining Cairn’s 4808A amp and Fog CI7 player, with Triangle’s Zerius speakers at the Heimlich-me price of $1095/pair. Total system price: a wake-me-I’m-dreaming $4400 or so.

Wilson Benesch’s Craig Milnes poses with the new Arc speaker.

**The Fifth Element**

The most emotionally arresting playback I heard at the Show was Innersound’s hybrid electrostatic—transmission-line speakers.

To keep the mob hysteria somewhat under control: Triangle’s house sound is still one or two clicks too far in the direction of favoring the treble at the expense of the all-important midrange for my long-term enrapturedness (though the new speakers are substantial improvements in this regard), and the Zerius are nowhere near full-range. The shade of Pliny the Elder intones “Nuncquam prandium liberuny” and vanishes. But on certain recordings, the presentation was as good as you would expect for three times the money.

I’m always reluctant to draw conclusions from brief auditions at shows. I lived with the Shahinian Obelisks for nearly a year, and only then did I feel that I had a real handle on how they would act with different amps and in different rooms. Furthermore, I have learned over the course of many years that speakers that excel at one performance criterion — sometimes almost to the exclusion of all others — are not the key to long-term happiness for me. However, with those caveats firmly in mind, I must tell you that the most emotionally arresting playback I heard at the Show was Innersound’s hybrid electrostatic—transmission-line speakers, driven on the bottom by their own amp and on the top by Smart Theater Systems’ MOSFET hybrid stereo amp.

I suspect that, even accounting for the setup in the room (the prime seat was in the extreme nearfield; any closer, and I would have been wearing the speakers as head-phones), the images might be smaller than life — but better that than artificially larger. The dynamics might be a bit muted or even discontinuous.

But golly, the transparency, the articulation, the speed. I played one of the last tracks of my evaluation compilation, from a Priory disc of works by Jonathan Wilcock: the “Et misericordia” for soprano, chorus, trumpet, and organ, from his **Magnificat**. It brought tears to my eyes.

The Innersounds are not up to the industrial design and fit and finish of their better-known hybrid competitors, and again, I’m reluctant to draw conclusions from a 15-minute encounter, but I’m glad and grateful that I had that experience. At $6000 all-in for the hybrid speakers, electronic crossover, and 600Wpc stereo solid-state amp for the bass, I’m robustly confident that the package is a fairly priced labor of love. But your mileage may vary.

Coming up later: I’ve requested evaluation samples of the FPS Penguin computer speakers, as well as Gradient’s new Prelude concentric-driver bookshelf speakers.

Heartfelt thanks to all who attended Arturo’s recitals, and to all who worked to set the Show up, make it run smoothly, and worked flat-out to make real for us their love of music, in whatever way.

Extravagant praise, passionate refutations, or just plain questions: jmrcds@ jmrcds.com.
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REPORT FROM HOME ENTERTAINMENT 2002 HELD IN MANHATTAN AT THE END OF MAY.
Sonic Highlights

Having attended various iterations of America’s annual celebration of high-end audio and video — as civilian, retailer, Stereophile staffer, flack, journalist, and friend — I consider myself something of an expert on the subject. I must say, however, that Home Entertainment 2002 ranks among the best-run, most enjoyable audio shows I’ve ever attended. It wasn’t just that the Show went well, which it did. The sound in the rooms was uniformly good, there were lots of great new products at every price point on display, and the people attending were enthusiastic and happy. I can’t stress enough what a difference this last point makes — if you’re going to be stuck in a hotel with a bunch of strangers for four days, it makes all the difference in the world if they’re happy!

HE2002’s first day was filled with press conferences, and the one I anticipated most keenly was Dynaudio’s introduction of its new Confidence line of speakers. [Unless otherwise noted, all speaker prices in all the reports are per pair — Ed] The C-4 ($16,000) and C-2 ($12,000) were on display, but they’ll be joined by a center speaker, surrounds, and in-wall on-wall models. The C-4 is a handsome floorstander with a “floating” baffle and two 8” woofers, two 5” midrange drivers, and two of Dynaudio’s new Esotar tweeters. The two-way C-2 has pairs of 7” woofers and Esotar’s. Despite the generally hectic show conditions, the C-4s sounded not just promising, but fabulous, in demo. Their bass was deep and well-defined, and the speakers, driven by Naim amplification and CD player, had a top end as airy and silky as [gasp] the real thing. The C-4s were a better restoration on a busy Show day than a draught of strong spirits.

Another extremely impressive loudspeaker was Wilson Audio Specialties’ WATT/Puppy System 7 ($22,400). Fresh on the heels of the successful Sophia (reviewed in the July Stereophile), the latest version of this venerable classic employs a new cabinet material and crossover on the WATT, while the Puppy sports new proprietary drivers, a new crossover, and new, improved Puppy Wings (I’m not making this up), which align the WATT to the Puppy. The differences in sound between the 7 and previous models were not subtle — gone, apparently, is all vestige of the Puppy’s bass hump. Also on display was Wilson’s Watchdog subwoofer ($9850 each), which seemed extremely impressive in demonstration.

VTI was showing off a new preamp, the TL7.5 Reference Line ($10,000), a software-driven two-box hybrid design (tube gain, MOSFET output) that seems a total change for the Chino, California-based company. Boasting sleek, elegant metalwork and brimming with innovative technology, the TL7.5 drew a collective “Wow!” from a roomful of jaded reviewers. Fully differentially balanced circuits are housed in an enclosure separate from the controls — a classic “dirty box/clean box” assembly, according to VTL’s Luke Manley. Also slick was the software-driven control system and clever resistor-ladder volume control. This one’s worth a trip to the dealer to see.

Wandering around the Show, I was struck by how good most of the speakers I was hearing were— not just the cost-logic designs, but pretty much all of them. Are we audiophiles lucky or what?

Nearfield Acoustics’ PipeDreams Reference 18 ($65,000/system), with four (count ‘em!) four subwoofers, was sounding mighty impressive driven by an Audio Aero Capitole CD player ($8500) and Tenor 75Wpc amps ($19,000/pair). A Plinius SA250 Mk.IV 250Wpc amp drove the woofers. The PipeDreams re-created the transient attack of a trumpet with such staggering realism that they could probably have blown out a candle with all that tightly focused air.

At the opposite extreme, the Triangle Zerius ($1095) sounded natural and dynamic with Cairns’s Fog 24-bit/192kHz upsampling CD player ($1595) and 30Wpc 4808A integrated amp ($1595). The sound achieved in a small hotel room by this Sam Tellig-approved $4300 system was nothing short of magical. Sometimes less is more. Cairns apparently hews closely to this philosophy, or so their cute little 80Wpc Loco monoblock amp ($495 each) would have you believe. You could probably fit two of them in a shoebox.

Another surprise awaited in the North Acoustics room. The company displayed a pair of Tempest minitorsowers ($8800) in drop-dead-gorgeous figured sapele veneer — actually, in that veneer, they’re probably $10,000. DiMarzio cables connected the Tempests to brand-new electronics from van den Hul: an elegant preamp (VDH A1 Array) and a 100Wpc stereo power amp (VDH Array S1). Also available is the VDH M1 125W monoblock. Prices? $3999 each. The sound was big and brawny, with an extremely laid-back top end. The Tempest sports a 28mm Scan-Speak Revelator tweeter and a pair of Scan-Speak-sourced 7” woofers.

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David... Chesky... was... demonstrating... a... new... Web-marketed,... three-driver,... two-way... loudspeaker,... the... C1... ($3995)... “Well,... I... have... to... have... something... to... do... once... Napster... puts... us... out... of... business,”... the... label... owner... said... “These... would... cost... $8000... if... sold... in... stores.”... They... did... sound... like... a... lot... of... speaker... lively... and... articulate... and... they... imaged... like... all... get-out... and... the... elegant... (“I... designed... ’em,”... said... Chesky... proudly)... towers,... manufactured... I... was... later... to... find... out... by... Utah-based... Talon,... were... almost... sculptural...—... the... C1... is... uncommonly... decorator-friendly.

mbl... was... proud... of... its... new... 1118... radial... loudspeaker... and... 9011... monoblock... amplifier... Why... not?... They... sounded... and... looked... out... of... this... world... and... are... priced... accordingly... But... the... 1011... Analog... Multichannel... Audio... Processor... (price... to... be... determined),... shown... in... prototype... form,... was... breathtaking... It... made... John... Atkinson’s... and... my... purist... two-channel... CD’s... sound... spacious... and... enveloping... without... sacrificing... their... pinpoint... imaging... We... never... would... have... believed... it... if... we... hadn’t... heard... it... ourselves... And... the... all-mbl... five-channel... system... they’d... set... up... was... extremely... easy... to... like... I... could... stand... being... spoiled... like... that.

John... and... I... were... also... knocked... out... by... Joseph... Audio’s... two-cabinet... Pearls... ($20,000),... driven... by... Manley... 250... monoblocks... ($9000/pair)... Jeff... Joseph... explained... how... moved... he... was... by... good... audio’s... ability... to... overcome... time...—... on... the... wings... of... high-end... sound,... we... can... enjoy... 50-year-old... performances... as... though... we... were... at... the... music's... creation... Pretty... words... but... darned... if... he... didn’t... prove... to... them... true... with... a... recording... of... the... Louis... Armstrong... All... Stars... performing... “St... James... Infirmary,”... Armstrong... was... all... but... physically... present... as... he... delivered... the... song’s... lyrics... And... then... he... began... to... play... He... was... here,... or... we... were... there,... or... something...—... all... I... know... is... that... when... it... ended,... everyone... in... the... room... remained... silent... as... we... all... slowly... returned... to... the... New... York... City... of... June... 1, 2002... Music... may... be... art... and... audio... may... be... engineering,... but... sometimes,... if... we’re... very... lucky,... the... combination... can... be... magic... Go... hear... the... Pearls;... I... suspect... magic... happens... around... them... a... lot.

Finally... Linn... Products... nearly... brought... the... house... down... with... its... display... piece... an... Aston... Martin... Vanquish... which... sports... an... OEM... sound... system... sourced... by... the... Scottish... firm... Seems... the... show’s... set-up... man... wasn’t... familiar... with... racing... clutches... and... spun... the... wheels... maneuvering... the... car... into... position... —... the... V12... nearly... stood... up... on... its... rear... wheels... and... took... off... Lucky... thing... its... brakes... are... heavy-duty... too... Even... more... impressive... in... a... quieter... way... was... Linn’s... Classic... high-fidelity... and... sound... system... which... looked... and... sounding... stunning.

—... Wes... Phillips

Digital

by... Kalman... Rubin

There... was... a... buzz... of... anticipation... that... Sony... would... make... an... important... announcement... at... Home... Entertainment... 2002... regarding... SACD... The... fires... were... fanned... by... rumors... from... Europe... that... “Red... Hook”... CD... production... would... be... entirely... replaced... by... the... making... of... hybrid... SACDs,
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thereby providing retailers with a single inventory and leading the mass market by the nose into the new format. And Sony itself had stated that there would, indeed, be important news.

Well, Sony’s opening-day news was that the first 22 Rolling Stones albums, remastered by Bob Ludwig, would be reissued as hybrid SACD/CDs (for back-compatibility with CD-only players) by Ahkco/London/Decca Records at a suggested list price of $18.98 — big news for Stones fans. I suppose. As for the expected announcement of a paradigm shift in production and distribution, Sony and Philips said only that Sonopress will double capacity by opening a new production line for SACD/CD hybrid discs this month and that Crest National will open a production line for hybrid discs in Hollywood sometime this year. Some might interpret this as the necessary preconditions for the hallywood shift from the “Red Book” standard.

Succeeding days offered HE2002 panel discussions hosted by proponents from the two format camps, SACD and DVD-Audio. Each seminar emphasized the back-compatibility of its format (hybrid SACDs with CD players, DVD-A with DVD players) and maintained its technical superiority over the other. Although each panel comprised an impressive panel of experts, the verbal arguments were inconclusive. The DVD-A seminar was marked by some verbal sparring between consumers and industry reps, particularly regarding the interrelated issues of intellectual property protection (particularly of video content) and digital intercomponent connections. At the same seminar, Andy Regan of Meridian argued that the market will decide between the formats on the basis of musical content. If so, both sides have their work cut out for them — neither has yet released a “killer app” that will induce non-audiophiles, the big dog whose tail we audiophiles represent, to grab one of the new players off the shelf.

Both SACD and DVD-A offered continuous demonstrations throughout the Show, with varying success, depending on one’s musical preferences and tolerance for gratuitous effects. Most appealing to me were the DVD-A demos — via a Meridian 800/861 Reference player and Piega speakers in the Sanibel room — conducted by AIX’s Mark Waldrep with his own releases and, particularly, with prerelease excerpts from orchestral recordings he’d recently made in Bucharest. Despite the far-from-ideal setup required by show conditions, the relatively quiet passages preceding the finale of Stravinsky’s Firebird Suite were simply beguiling. Big and loud is easy; such a convincing simulation of quiet strings in a large acoustic space is a rare and satisfying experience.

The hardware side of digital was somewhat less interesting — most of the new players and DACs had already been unveiled or announced at last January’s Consumer Electronics Show. Of course, it’s newsworthy that some of those products are now actually available to buy. For example, Ayre Acoustics showed their new CX-7 player, which features a multistage digital filter, differential-output DACs, balanced analog output, and AES/EBU digital output. As sleekly styled as Ayre’s other designs, the CX-7 is available for $2950.

Equally stylish was the Opus 21 2-box CD player from the newly resurgent Resolution Audio. Offered directly from their website (www.resolutionaudio.com/product.html) for $3000, the Opus 21 sports 16x upsampling, four Burr-Brown 24-bit DACs, and an analog-domain volume control feeding balanced and single-ended outputs. The greatly anticipated Moon Nova CD player, derived by Simaudio from its acclaimed Moon Eclipse, sounded clear and fluid through Sim amplification, JPS cables, and Merlin speakers. The Nova on display was a prototype; production is expected later this summer at a retail price of $2895.

Sakura Systems had yet another eye- and ear-catching 47 Laboratory setup with its model 4716 transport ($1750), which spins a CD in the air as if it were an LP. 47 Lab’s non-oversampling, analog-filterless, passive I/V 4715 DAC ($1250) is built as two modules, each the size of a toy block. Equally fascinating was Reimyo’s CDP-777 transport/player ($15,000) and DAP-777 DAC ($5000), seen both in the GamuT demo room and on silent display at the May Audio booth. Both are 20-bit processors with balanced and unbalanced output, the player offering 4x oversampling, the multiple-input DAC 8x oversampling. What makes them special is the incorporation of Extended K2 Processing, a key component...
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## The Best Sound at Home Entertainment 2002

<table>
<thead>
<tr>
<th>EXHIBITOR</th>
<th>OTHER BRANDS SHOWN</th>
<th>PERCENTAGE OF VOTES CAST</th>
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<tbody>
<tr>
<td>Joseph Audio</td>
<td>Manley Laboratories, Cardas, La Luce, Classe SACD, Equi-Tech</td>
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<td>Wilson Audio</td>
<td>Audio Research, VTL, Transparent, Well Tempered, Lyra</td>
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<td>Toys From the Attic</td>
<td>Convergent Audio Technology, VPI, Dream Vision, Harmonic Technology, Furnitech, EgglestonWorks, Electrocompaniet</td>
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<td>TacT Audio</td>
<td>Halcro, Aesthetix, Clearaudio, Graham, Koetsu, Musical Surroundings, Rix Rax</td>
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<td>Rockport Technologies</td>
<td>Walker Audio, Silent Source, Viva Musica</td>
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<tr>
<td>Silverline Audio Technology</td>
<td>Audio Aero, Pinius, Aesthetix, Custom Power Cord, Harmonic Resolutions</td>
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<td>Tenor Audio, PipeDreams</td>
<td>Krell, Runco, Synergistic Research</td>
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<td>Sound By Singer</td>
<td>Kora, AudioNote, SMB, C.E.C.</td>
<td>3.3%</td>
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<td>Plinius, MSB, Sony SACD</td>
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<td>MBL of America</td>
<td>Naim</td>
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<td>Gersman Acoustics</td>
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<td>PipeDreams by Nearfield Acoustics, Harmonix by Combal, Reimyo</td>
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<td>Eggelston Works, VTL</td>
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<td>Viola Audio Labs</td>
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<td>Musical Surroundings★</td>
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<td>Denon America</td>
<td>Mission</td>
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All other exhibitors each scored less than 1% of the votes cast. —Emily Helming & Stephen Mejias

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*When an exhibitor had more than one room, it did not prove possible to distinguish between the votes cast.*
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top-shelf sound once found only in separates can now be commonly found in sophisticated single-box designs.

Chord Electronics showed their powerhouse CPM 1100 integrated (220Wpc, $9000) with Wilson Benesch’s
top-of-the-line Arc speakers ($3600 including stands) to create a compact, powerful, and wonderfully balanced sys-
tem. Balanced Audio Technology unwrapped the VK-300x integrated, a sexy-looking amplifier featur-
ing the 6H30 Super Tube in the driver stage and a MOSFET output stage capable of 150Wpc into 8 ohms or 300Wpc into 4 ohms. Equipped with Super Tube and remote control, the BAT lists at $5500; a phono section can be added for $500. With System Audio’s little giant SA-2K mini-monitors ($3500) and BAT’s DS-SE CD player, this made another system that took up little space while delivering big-time performance.

Kora paired their smart Explorer 90SI hybrid integrated ($1000) with the floorstanding Cameleon speaker from
Gershman Acoustics ($1800) in an excellent and dynamic system at an affordable price. Plinius introduced the updated
8200 Mk.II integrated (175Wpc, $2995 with remote and phono stage), teamed with Roman Audio’s Centurion loudspeakers to excellent effect.

New Zealand’s Perreaux, once again available in the US thanks to Audio Advisor, debuted the beefy Radiance inte-
grated. Dual-mono in every way except its single power cord, the $3495 Radiance packs 200Wpc into a sleekly styled package. The single-ended triode brigade also got in on the integrated act.

Italy’s Viva Musica introduced the Solista integrated ($9500), based on their acclaimed Aurora and Verona power amps. The Solista features direct-heated 845 or 211 power tubes operating in pure class-A with no nega-
tive feedback. It sang sweetly in tandem with Silverline’s potent, full-range La Folia floorstanders and the imposing Walker Audio Proscenium Gold turntable and phono stage.

Bel Canto and Ayre each exhibited integrated systems. Ayre Acoustics introduced the new
AX-7 integrated (60Wpc, $2950) and showed off the latest
K-1x line stage ($6750; options include a $250 remote control and a $1600 phono stage) and V-1x power amp ($9000). The beautifully styled AX-7 made inviting sounds through Vandersteen Audio 2CG speakers. Bel Canto presented a range of components including the cVo 21 integrated amp (120Wpc, $3200), the multichannel Pr6 preamp ($3500), and the highly regarded cVo2 stereo power amp ($2900).

From the ashes of Cello Audio Systems has risen Viola Audio Laboratories, with designers Paul Jaylon and Tom Colangelo still aboard. Viola introduced the stunning Bravo Reference Amp and Spiritu Reference Preamp. The Spiritu is a purely modular design, its basic “mainframe” equipped with one input module (which accommodates three sources) and one output module: $17800. Additional input modules are available for $4500, additional output modules for $5400: a phono module is forthcoming. The software-based Spiritu will be updatable via Internet downloads, features a touch-
screen controller on its front panel, and uses a PalmPilot as a remote-control unit. The massive, two-chassis Bravo packs 350Wpc as a stereo amp, and, if too mush is not enough, the bridged monoblock version ($17990/pair) will generate 12 kilowatts apiece. The Viola gear is built with the heft and lux-
urious accoutrements of an ocean liner.

Speaking of massive, Germany’s mbl introduced the gar-
gantuan 9011 monoblocks ($56,000/pair). These monsters sounded deliciously delicate and refined in a surround setup anchored by the 6010D preamplifier ($13,800) and the always-
striking Radialstrahler 1011 loudspeakers. The 9011S will double their power rating all the way up to 1400W into a 2 ohm load.

Also standing tall in the land of the giants were Ole Lund Christensen’s GamuT electronics. The mighty S-300 stereo power amplifier (401 lbs, $30,000) dominates a room as few components can. If the S-300’s 300Wpc at 8 ohms (600Wpc into 4 ohms) aren’t enough, the beast is also available in monoblock form at the 600Wpc/8 ohm S-600 M, floor reinforcement not included. With GamuT’s C2R line stage ($2950, plus $490 for phono stage) the S-300 sounded astonishingly dynamic and thrillingly refined driving the main towers of Nearfield Acoustics’ PipeDreams 15 speaker system, with a pair of M-250 monoblocks ($250Wpc, $11,000) on the Pipes’ woofers. The room was far too small for the Pipes’ massive bass output, but the sound was noteworthy for its
naturalness from the midbass on up. On the opposite end of the power spectrum, Aude showed off their NS 11 triode monoblocks ($3999/pair)—seven of the biggest-sounding watts to be found—on their Blues speaker system.

Merlin’s Bobby Palkovic teamed his VSM Millennium speakers with both solid-state and tubed electronics. One Merlin room featured the Simaudio Moon P-5 preamplifier ($3995) and W-5 dual-mono power amp ($4995); the other Joule Electra’s sumptuous LAP-150 preamp ($4775) and VZN-100 Marquis OTL monoblocks ($13,000). The 100W Marquis uses six 6C33 Russian power triodes, but if this does not suit your system, a stereo version (the 80W VZN-80 Emerald) and two more powerful monoblock versions (the 160W VZN-160 Grand Marquis and the 220W VZN-220 Rite of Passage) are also available. More 6C33C OTL monoblocks, from Canada’s Tenor Audio, were found in the Nearfield Acoustics room, where the towers of the PipeDreams’ 18 drivers were powered by Tenor’s very handsome amplifiers (75Wpc, $19,900).

VTL formally introduced the new 75 line stage ($10,000) to the world in two rooms. Most spectacularly, the 75 and its sibling MJ-750 Signature monoblocks shone in the Wilson Audio Specialties room, which held the outstanding new WATT/Puppy System 7. The 75 is the result of more than three years of development work by Luke Manley, Bea Lam, and the VTL engineering team, and uses only two tubes in its audio stage. It sports separate chassis for power supply/ control functions and the fully differential audio circuitry, RCA and XLR jacks for all inputs and outputs, and the flexibility needed to serve as the center of a complex audio-video system as you might care to dream up. An eight-function remote control tops off this very impressive addition to the VTL line.

Yet more tubes were making excellent sounds in the Atma-Sphere room. As usual, Atma-Sphere’s MP-1 Mk.II full-function preamp ($9400) and MA-1 Mk.II.2 monoblock amplifiers ($9800/pair) were linked to Classic Audio Reproductions speakers and, as usual, the sound was first-rate. Lammi, exhibiting with their New York dealer Sound by Singer, pulled out all the stops, with JMLab Grande Utopia speakers fed by Lamm’s L2 Reference preamp ($13,690) and biamped with two pairs of ML1 monoblocks ($19,990/pair). Instant bliss was the message.

Art Audio debuted the beautiful Adagio monoblocks ($20,000/pair). Joe Fratus’s latest SET creation puts out 44Wpc and was designed around the new KR Audio 521BK triode. Or you can opt for KR’s T-100 output tubes and get 60Wpc. The stunning chrome-and-glass Adagio was as wonderful to hear as to see, powering Ensemble Figara loudspeakers. Thor Audio’s TA-100 line stage ($7990) and TPA-60 monoblocks ($15,990/pair) matched up in a highly enjoyable and musical synergy with the Amphion Xenos speakers.

Manley Labs featured the neat little Shrimp preamp ($1880), together with the mighty Steelhead phono stage and 250 Neo-Classic tube monoblocks that I review elsewhere in this issue.

Aesthetix tube electronics were popular, with the Callisto Signature preamplifier ($10,000) and Io Signature phono stage ($9000) chosen by Halcro and Nearfield Acoustics for their rooms. Aesthetix also premiered the new Calypso line stage ($4500), a modular design based on the Callisto’s circuitry but in a more affordable one-box configuration. The Janus full-function preamp ($6500) combines the Calypso with a single-input version of the new Rhea phono stage ($3500 by itself) in one sleek component.

Odyssey brought their Tempest preamplifier ($950, including moving-magnet phono) and Stratus dual-mono power amplifier ($1795). These are surely some of the most value-intensive components to be found. The designs are licensed from Rolf Gemein’s Symphonic-Line, and made in the US to reduce costs. The rock-solid Odyssey components sounded powerful and refined paired with the company’s Lorelei loudspeaker ($2500), another Gemein design licensed and made in the US by Odyssey.

A new Swiss manufacturer, Déletraz Engineering, debuted by introducing what may be a very special amplifier, the darTZeel
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NHB-108 ($9898). Designer Hervé Delétraz’s circuit runs the audio signal through only six transistors and uses no negative feedback. Together with a Nagra PL-L preamplifier and PSB Montana speakers, the daTZeel sounded as creamy and delicate as a fine low-powered tube amp, but had the control and low-end force of solid-state. With 100W/pc into 8 or 2 ohm loads and 160W/pc into 4 or 1 ohms, there’s plenty of power for most speakers.

Finally, the Australian Halcro dm58 monoblocks ($25,000/pair, review to come) were paired with Rockport Technologies’ Antares speakers ($41,500). Despite a somewhat uncooperative speaker/room interface, the sound was enormously dynamic, transparent, and detailed. I can’t wait to hear the Halcros in my own system; Stereophile’s readers will be promptly apprised of the results. Mike Fremer filled you in on the Antares last month.

— Paul Bolin

Speakers Under $3000/pair

by Robert J. Reina

I had two pleasant surprises at Home Entertainment 2002. First, two-channel audio proliferated; there were very few slam-bang-boom home-theater earthshakers creating loud, annoying distractions. In fact, in many home-theater setups, the manufacturers were excited about playing quality two-channel music, when requested. Second, I was unprepared for the tremendous increase over last year in the number of rooms sporting active turntable demoes and tube electronics. I guess two-channel is not dead yet.

What I found rather disturbing, however, was how little correlation there was between the quality of sound emanating from the Hilton rooms and the prices of the equipment in those rooms. There were exceptions: I thought the Joseph Audio Pearls ($20,000), driven by Manley electronics, and the Wilson Audio Specialties WATT/Puppy 7 ($22,400), driven by Audio Research and VTL electronics, had the best overall sound. However, the rooms presented very few acoustical problems—I could count on one hand those with anecdotally bad acoustics—and the Hilton displayed a cornucopia of speakers costing less than $3000/pair (in other words, affordable).

Finland’s Amphion was displaying the attractive Creon, a three-way, cardiod, vented floorstander sporting a 1” titanium tweeter, and polypropylene midrange and woofer drivers ($2299-$2699, depending on finish).

Estonia’s Audes was getting crisp, clear sound from their Blues ($1999), a floorstander sporting a silk-dome SEAS tweeter, two SEAS midrange units, and a side-firing proprietary woofer, all driven by Audes’ own single-ended triode amplifiers. The company makes another speaker for the same price, the Soul, which has only one midrange driver and a front-firing woofer in a ported cabinet, designed for more rock-oriented music. (The Blues is the company’s “classical” design.)

Mike Creek’s two-way Epos speakers were unchanged from last year’s Show, but, as always, produced an involving sound with Creek electronics. The floorstanding M15 is $1395, the satellite M12 $995.

DeVore Fidelity featured their floorstanding Gibbon 8 ($2850, plus $575 for short Sound Anchor stands), a two-way ported speaker with proprietary cloth-and-paper drivers and an innovative crossover designed to make the speaker easy to drive. A smaller, bookshelf version of the Gibbon III ($1950). DeVore speakers are designed and manufactured in New York City.

Gallo Acoustics’ attractive, wall-mounted, dual-driver Dues ($1200) were generating fine sound from both two-channel and surround sources when paired with the MPS150 powered subwoofer ($750), crossed over at 80Hz.

Gershman Acoustics had one of the most exciting exhibits at HE2002. Their Cameleon is an attractive, triangular floorstander with a 1”-thick front baffle, a 1” dome tweeter, and an 8” woofer. The exciting part was the fact that this speaker, driven naturally but forcefully by a modest integrated amp, was the least expensive Gershman speaker ever introduced at a show: $1800, thanks to the weakening Canadian dollar.

One of the best-sounding inexpensive rooms was Kirk-saeter’s, which featured the Silverline 60 two-way bookshelf speaker ($698) driven by Blue Circle electronics. The company keeps costs down by designing in Norway and manufacturing in Poland—the Silverline series is actually their more expensive line. I can’t wait to get my hands on the less expensive Prism series (models from $460). Kirskaeter claims the Prisms sound comparable to the Silverlines, with less elaborate cosmetics. Although Linn displayed both their two-way Katan satellite ($945) and its floorstanding...

Meadowlark’s new Swift seemed ready to take flight.

Stereophile, September 2002
signature

phoenix
GRAND SPEAKER SERIES BY CALIX

OUR SHOW NEWS:
BEIJING HI-END SHOW: NOVEMBER 1-3, 2002
ROOM: HUANGPU 1 PRESIDENTIAL PLAZA BEIJING
9 FUCHENG MENWAI ROAD XICHENG DISTRICT BEIJING

SIGNATURE: 5WAY 5UNIT • 20Hz-40KHz • 60.88db SIZE: 160Hx58Wx100D(cm)

CALIX. CALIX TECHNOLOGY CO., LTD.
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cousin ($1495), both of which feature neodymium-magnet tweeters and proprietary midrange drivers, the big buzz was the sound system Linn had built into the Aston Martin Vanquish on display. This made Aston Martin the most expensive maker of speaker cabinets at the Show.

Meadowlark Acoustics won the "sounds a lot more than it looks" award with a gorgeous triangular floorstander, the Swift ($995). Driven by Rogue electronics, this two-way, front-ported speaker presented an open, detailed, and airy sound. The 4'-tall Swift has a very small footprint, and its gorgeous ash enclosure reminded me of the body of one of my handmade Robin guitars.

New drivers were the cause of the redesign of Monitor Audio's Silver series, now dubbed the Silver S. The five speakers in the new line range from the two-way Silver S1 bookshelf model ($599) to the Silver S10, a three-way, dual-woofered, ported floorstander ($1999).

The Morel Supra system was the only home-theater system I listened to more than once. $2399 (excluding stands) seemed an incredible bargain for four tiny two-way Soundsport SA-2 speakers, a C-5 center-channel speaker, and a Soundsport IS-9A active subwoofer. The sound was big, open, and airy, and the system took up very little space on the listening-room floor.

The Odyssey Lorelei, a two-way ported floorstander, features a 1" dome tweeter and a 7" midbass driver. It created crisp, vibrant sound from a live guitar recording using Odyssey's proprietary electronics. The speakers are designed in Germany, manufactured in the US, and sold factory-direct.

Opera Loudspeakers, from Italy, in addition to showing their Super Pavarotti, a dual-woofered two-way ($1695), showcased their new SP3 ($2995). The SP3's beautiful, front-ported hardwood cabinet features a ScanSpeak dome tweeter and two SEAS midbass driver-units. Opera boasts of a high degree of linearity in the tweeter's performance, which, they say, will result in lower amplifier distortion.

Paradigm's music-and-home-theater display was built around the Reference Studio 100 three-way, four-driver floorstander ($1900-$2400) and their three-driver Reference Studio/40 bookshelf speaker ($900-$1200).

The most impressive and well-organized audio- and home-theater demo was in the Polk Audio suite, with a system showcasing two models in Polk's Lsi series: the flagship three-way, four-driver Lsi25 floorstander ($3000), and the two-way, three-driver Lsi9 bookshelf ($1040). The sound was superior to that in most rooms at the Hilton that were doing demos speaking success in excess of $3000.

Stay tuned for my review of the entry-level model in this series, the Lsi7 ($810).

PSB's entire Alpha line was set up as a home-theater surround sys-
**New Products**

Garrett Brothers
G-Point $450

Hot Rod Re-tip your Sumiko Blue Point Special for a fantastic Final-grade you’ll love.

**Clearaudio**

Maxim Solution $7,000
$12,140 w/T01 & Discovery. Save $960!

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**Acoustic Signature**

Analog One MK II $3,500
Special $3,900 w/ RB900 & Garrott FGS. Save $2,200!

...strike me as being among the best buys out there today...” Stereophile Analog Comer M. Fremer 4/02

Rega P 25 $1,275

**Rega P 3**

$750 / P2 $495

**Denon DP-47F**

$650

**Thornes TD-190**

...$570

**Pro-ject RM-9**

$1,495

$1,845 w/Blue Point Special

**JA Michell Orbe SE**

$3,500
$4,550 w/RB 900 & Garrott P77. Save $450!

**Bluenote Bellavista**

$1,295

$1,995 w/Borghese arm & Boboli. Save $690!

**Basis**

$1,200

$1,995 w/RB250 & Glider. Save $325!

**Clearaudio**

Champion $1,000

$1,560 w/RB250 & Aurum Beta S. Save $215!

**Stanton**

ST-100

ST-80

ST-80

ST-80

ST-80

**Rega Bias**

$225

**Dynavector DRT XV-1**

$7,500

**EMT TU-3**

$3,200

**Koetsu Onyx**

$7,500

**Graham**

$3,800

**Nightingale**

$3,500

**Dynavector TE Kaitara**

$2,495

**Lyra Heilikon SL**

$2,195

**Benz Ref 2 Silver**

$2,000

**Lyra Heilikon**

$1,995

**Ortolon Jubilee**

$1,950

**Benz-Micro Gilder**

$795

**EMT TU-2**

$1,795

**Bluenote Baldinotti**

$1,795

**London Decca Jubilee**

$1,750

**Dynavector XX2**

$1,695

**Garrett FGS**

$1,600

**Transfiguratio Sprint**

$1,500

**Sumiko Celebration**

$1,500

**clearaudio Sigma Wood**

$1,200

**Lyra Lydian B**

$995

**Ortolon Kontrapunkt A**

$560

**Grado Exact**

$595

**Dynavector DV-20X**

$525

**Rega Super Elys**

$395

**Ortolon X5-MC**

$325

**Sumiko BP3**

$349

**Shure $325**

**Grado K-2**

$300

**Ortofon OM-30**

$285

**Ortofon X3-MC**

$275

**Ortofon MC 15**

$250

**Sumiko S209**

$299

**Rega Elys**

$225

**Garrett K-3**

$400

**Ortofon OM-20**

$195

**Denon DL-103**

$200

**Ortofon 881 MKII**

$145

**Ortofon 881 MKII**

$145

**Ortofon 881 MKII**

$145

**Stanton 681MKII**

$130

**Rega Bias**

$125

**Grado Red**

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**Audio Technica 440 ML**

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**Shure M57X/E**

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$5495 w/RPM Tonearm

**Save $500!**

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$4,995 w/Borromeo arm & Baldinotti. Save $500!

**Bluenote Deck 12**

$695

$920 w/RB 250 & Garrott K1. Save $300!
### Stereophile 2001 Analog Product Of the Year Runner-Up

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<td>Creek OBH-8 mm</td>
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### Other Products

- **Rega Jupiter** | **Rega** | $1,995
- **2001 Digital Component Of the Year Runner-Up**
- **Rega Planet** | **Rega** | $950
- **2001 Budget Component Of the Year Runner-Up**

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**Note:** Prices subject to change without notice. Some pictures are representations of products.
Experienced observers of the art have oft noted that it is frequently the second-from-the-top that offers the optimal balance of performance and value. So it is with the all-new Strauss™, derived from the award winning Mahler. At slightly more than half the price, Strauss looks, sounds, and is built like a Mahler but is tuned for optimal performance in standard-sized rooms.

Designed as the perfect match for Mahler and Strauss when used in a reference-caliber theater, Oratorio™ brings true reference quality in a center channel. While indisputably grand in scale, its performance justifies its size with profound bass extension more common to better subwoofers. These two new additions form the basis of a World Class theater or music system. Strauss and Oratorio, from Vienna Acoustics.
The best thing about our upbringing,” Bucky Pizzarelli says, leaning across the table with a serious look, “is that we had our own heroes and not the Downbeat heroes.”

The “our” he speaks of includes himself and his 42-year-old son, guitarist-singer John Pizzarelli. It’s not often these days that you hear musician fathers and sons lumped together stylistically, but these two are determined traditionalists who don’t care who knows it.

“Downbeat as in the magazine?” I ask.

“Downbeat the magazine,” he nods, “as in this guy’s the greatest.” Who cares? I don’t give a shit. We go ahead and play. Those guys want to go ahead and hear us play; their eyes are going to open up. Any one of ’em. Those are not our heroes. Our heroes are Joe Mooney, Nat King Cole, Benny Goodman, Zoot Sims...Django too!”

Bucky Pizzarelli has earned his say. At 76, after nearly 60 years playing music, he is a noted jazz guitar stylist and one of the few survivors of the big-band generation to still play and record. Ignored by most recent jazz reference books despite more than 20 albums listed for sale on Amazon.com, he’s experienced something of a late career renaissance, sparked by his 2001 live album, Swing Live (Chesky), Stereophile’s “Recording of the Month” for March 2002.

Although he began under his father’s wing, John Pizzarelli has steadily made a separate name for himself as a cool and classy singer who pioneered the populist approach to playing and singing standards that’s since been taken to greater heights of accessibility by Harry Connick, Jr., and, more recently, by Diana Krall. John’s recordings, mainstream and pitched more to fans of singing than of playing, run into the same criticisms directed at Connick and Krall: too blissful, too eager to please, not interested enough in any kind of innovation. These sus-
“The beauty is that Bucky can go in a room by himself and play the guitar for people and they know the songs. And he survived playing that music for 58 years.”

-JOHN PIZZARELLI

picians have been heightened, at least on the East Coast, by John’s appearance in a widely shown television commercial touting Connecticut’s cheesy Foxwoods Casino.

When together, as they were for this interview at one of their favorite restaurants, Gino (an upper-east-side Italian little changed since its opening in 1945), the Pizzarellis are a charming if eccentric duo: Bucky the outspoken traditionalist, John more gentle and wary — his career still ahead of him. Both are throwbacks clearly devoted to cabaret and small band swing, a stance that makes them as oddly frozen in time as the restaurant they chose.

Still, in an era when musical families are more often legal opponents than stylistic allies, it’s enjoyable to see the genuine affection and respect the Pizzarellis have for each other. That extends to carrying the torch for the ever-shrinking school of thought that still holds that, ever since bebop, jazz has gone to hell.

“The thing is,” Bucky begins, “today what’s ruining all these young kids, [what] they are so swayed by, is Giant Steps. Holy Christ! Worst piece of shit I ever heard.”

When I laugh — surprised by the ire Bucky can still whip up for John Coltrane and a 43-year-old album — John, who’s been smiling and making a joke out of helping me spell s-l-i-s-t in my notebook, steps up to translate.

“The beauty is that [Bucky] can go in a room by himself and play the guitar for people and they know the songs. And he survived playing that music for 58 years. You can’t play ‘Milestones’ in this room right now. But if we were to say, ‘Listen, everybody, be quiet — he’s gonna play a song,’ and he played ‘More Than You Know’ or ‘Smoke Gets In Your Eyes,’ everybody is going to stop and say, ‘What the hell is he doing?’”

What both Pizzarellis do these days is keep alive a jazz tradition that’s almost gone: small group jazz from the big band era which in Bucky’s case means being a rhythm guitarist in the mold of Freddie Green, and a chord soloist like one of his heroes, George Van Eps. John, on the other hand, has cast his net wider, in hopes of being a singer in the mold of Nat King Cole.

It’s on the guitar, however, where the two often meet, both on record and as part of a live act that plays high-end rooms like Feinstein’s, at the Regency Hotel in New York. In recent years the pair have made a number of albums together, including: Live from Studio A in New York City, with Johnny Frigo (Chesky, 1987); Live at the Vineyard Theatre (Challenge, 1996); Solos & Duets (Jazz Classics, 1996); and Contraits (Arbors, 1999). The pair, backed by John’s working trio of his bassist brother, Martin, and pianist Ray Kennedy, were the musical highlight of Home Entertainment 2002, the high-end hardware show sponsored by Primedia’s High Technology group, which includes Stereophile. When I ask what his son has learned from his father, Bucky knows a straight line when he hears it.

“He stole it, he stole everything,” he says, barely able to hold a straight face. He calls his son’s style more “up to date” than his own.

“But I think he does more with what he learns from me [than the other way around],” John says seriously. His father nods in agreement. “His approach is the same [as mine],” John continues. “We just come in different cars to get there. His is a big, comfortable car, and mine’s a little teeny car with a couple of dents in the fenders.”

With a thick New York accent and a gruff edge regularly leavened by a wide, disarming grin, John “Bucky” Pizzarelli’s Caddy began rolling when he joined Vaughan Monroe’s band in 1943.

“Family. Family. Every Sunday, everybody played guitar. If you wanted to join in, you had to learn a few chords; so I learned a few chords and I joined in on the fun. My two uncles were expert guitar players, Peter and Bobby Dominick. Bobby Dominick went on the road in the 1940s with the bands of Bob Chester, Raymond Scott, and others. “So that’s how it came about. That’s why I was able to play with Vaughan Monroe’s band when I was 17.”

After two years in the army during World War II, Bucky
Touch Screen Learning Remote Controls

Automate your home entertainment system with the innovative, stylish and intuitive Marantz line of interactive, programmable remote controls. The RC9200, RC5200 and RC3200 incorporate a customizable, illuminated touch screen panel with back lighting, advanced functionality and a trend setting ergonomic design. Sophisticated setup, PC connectivity with downloadable software at marantz.com and a large memory capacity make programming and learning a breeze. Shape ideas, take your creativity to a new level and enjoy the endless control in Marantz style.

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Everything you'd expect from a world class tube amplifier with just one exception...

the tubes.

After auditioning the MF2500 and MF5000 the critics agree, Conrad-Johnson solid-state amplifiers embody the same highly prized qualities that make Conrad-Johnson a leader in vacuum-tube technology. Warm up to either at a nearby Conrad-Johnson dealer today.

Martin Colloms on the MF 2500 stereo amplifier (Stereophile, Dec. 1999)
"its sound conveyed much of the general nature of a fine tube amplifier .... coupled with greater dynamic range and sheer load-driving grunt"
"vocals in general were handled with near-tubelike quality"
"It closely approaches the classic tonal character of a fine tubed amplifier - a C-J hallmark"

Michael Treb on the MF 5000 five-channel amplifier (Home Theater, Feb 2000)
"C-J is well known for endowing their transistor products with a generous helping of tube musicality"
"Here, finally, is a solid-state amp that can really deliver some of the sonic advantages of a good tube amp"
"I could happily use this amp every day in my two-channel stereo system and not really miss a thing over my regular, exotic, single-ended tube amp - and that's saying a lot."

conrad-johnson
It just sounds right.
Although he'd played in rock bands in college, John's professional career began in 1980, when he played eight weeks at the Pierre Hotel in New York as a sideman for Bucky. That baptism of fire was just after their first record together, 1979's 2x7=Pizzarelli (Stash). In 1983, John had his first success as a vocalist with the novelty song "I Like Jersey Best." His singing career began in earnest in 1990, when he recorded My Blue Heaven for Chesky Records. He promoted that album with an appearance at that year's edition of the forerunner of the Home Entertainment shows, Stereophile's Hi-Fi Show.

John describes his vocal style as "Chet Baker meets Nat King Cole and Michael Franks." After My Blue Heaven, he signed in 1991 with RCA/Novus, for which he's since made 10 records, mostly small groups with horns, some exclusively for the Japanese market, like 1996's PS. Mr. Cole. An excellent Christmas album, Let's Share Christmas, was released on RCA in 1996. In 2000 he made Brazil with the late Rosemary Clooney. John's only misstep during this time was his stab at turning the Beatles into cocktail jazz, John Pizzarelli Meets the Beatles (RCA Victor, 1998).

John then switched labels again, this time to audiophile imprint Telarc, Records, with which he's made what are perhaps his most fully realized and successful records, in terms of both sales and artistry: Let There Be Love (2000), Kisses in the Rain (2001), and The Rare Delight of You (2002).

In the late 1980's, just after John began making his mark as a guitarist, vocalist, and entertainer is the only time he and his father have ever been apart professionally.

"Norman Chesky [co-owner of Chesky Records] said, 'Get yourself a booking agent and a manager...

"We were a tried-and-true act. We could go anywhere and wipe anybody out. People didn't want us to open for them after a while."

—JOHN PIZZARELLI

"We weren't just callin' songs and playing solos," John continues. "We'd play Ellington songs, and we'd play Carl Kress guitar duets, then we'd sing a number and we'd play 'Sing, Sing, Sing' and people'd say, 'What the hell was that?'"

John recently released his first SACD on Telarc, The Rare Delight of You, a session with British pianist George Shearing.

"There are those nine people with the [SACD] players," he says, repeating a joke that got a big laugh between songs at HE2002. "In a couple of years, when people have the stuff...? For jazz records, it's kind of interesting because you can feel like you're in the group.

"But making records for Telarc has been interesting because I don't use headphones, and they do everything sort of live, and we also sit this close together. You're sort of singing like you're performing."

John admits that he'd rather be known as the best entertainer than a great jazz musician, although he admits to being slightly less attractive than Diana Krall.

"Just a little," he smiles, closing the space between his thumb and forefinger. He admires the way Krall draws crowds despite taking a critical pounding, a theme that runs through the afternoon's conversation.

"Hey, Krall fills halls," Bucky says. "That saxophone player [relative unknown Mark Turner, who at the time of the interview had just been acclaimed jazz savior by a ridiculous rave in The New York Times] won't get 50 people."

By afternoon's end we're back to the topic of making a living by being an impoverished jazz immortals, between playing easy-to-love melodies or skronky bebop—"I saw it all happen. I played with all those guys. I played with Charlie Parker. I played with Miles Davis, but it didn't faze me at all. There was something else around then. If you ever look up the John Mooney Quartet, you'll know where we're from. The guy's the boss... of chords. That has nothing to do with bebop. We were lucky to know guys who were not involved in that."

Again, it's left to John to focus and soften the final words.

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There are two Nashvilles in Tennessee.

One Nashville is all Music Row, mainstream country stars, and big corporations like Viacom, which owns CMT and TNN. That Nashville is laying off employees, selling fewer records, and when it comes to making music, in more than a few cases seems fresh out of ideas.

The other Nashville, the one that exists on the fringes, the one that embraces Emmylou Harris, Steve Earle, and Buddy Miller — in short, the interesting one — is about songwriting and staying creative. In more than a few cases, including that of Allison Moorer, this Nashville is trying to create its own categories.

"Nothing that's in mainstream country is happening at the moment," the singer says during an interview at the offices of her public-relations firm in New York. "I don't know where I go. That alt-country thing, as cool as it is, that's a box too. Everything's got its own set of rules. Little cliques. I'm not interested." Moorer comes by her iconoclasm naturally — it runs in her family. Her sister is the ornery, angular Shelby Lynne.

Allison Moorer now has a chance at a fresh start. After two albums and four years on mainstream MCA/Nashville, she's signed with Universal South, the new Nashville-based label run by Nashville power brokers and producers Tim
DuBois and Tony Brown. Her new album, Miss Fortune, is one of the label’s first releases. On it, Moorer moves away from country music, instead trying—with her husband and songwriting collaborator, Doyle “Butch” Prim— to fashion a white-soul hybrid of country, folk, rock, and a little old-fashioned torch singing. Miss Fortune is even punctuated by horn accents, an experience that’s convinced Moorer that, if she’s ever able to, she’d love to bring “a string quartet and four horns” on the road with her.

Most acts pay lip service to the concepts of “being hard to classify” and “doing their own thing,” but few actually pull a Wilco and make it happen. With Miss Fortune, Moorer’s life story is headed in a more promising direction.

“I like records, albums that take you somewhere,” she says. “[This time] I’m definitely more confident [about making a record]. I have way more control because I’ve done it before.

“Country music? I feel like I’ve moved beyond that musically. And I think it’s almost a blessing that I haven’t been commercially successful at country. Because I think if I had been, I’d be locked into something I’m already past. I think where I need to be is in a place where I can just make the music I want to make.

“Unfortunately, when you’re that kind of artist, you don’t fit in at any radio. And people need to know where to look for records in the record store, don’t they? They should just put them all in alphabetical order. [At home], mine are in alphabetical order.”

Moorer’s odyssey in music began early, in her hometown of Frankville, Alabama; as far back as she can remember, she and sister Shelby sang. Her childhood was also marred by a tragedy—now infamous, thanks to the widely known Shelby Lynne life story. Their father killed the girls’ mother, then turned the gun on himself. After this turbulent beginning, Moorer moved on to the University of South Alabama, where she learned to play guitar. On her graduation in 1993, she moved to Nashville, where she began cutting demos and singing backup behind her sister, who had by then begun her own career. When asked whether she and Shelby will ever make a record together, Moorer shifts uncomfortably and smiles, not entirely convincingly. “Who knows? I’m not revealing anything like that.”

Despite her photogenic qualities, the redhead Moorer, now 29, didn’t allow the Nashville star machine to suck her in. After adding background vocals to alt-country singer-songwriter Lonesome Bob’s Things Fall Apart, she landed her big break, singing “A Soft Place to Fall” on the soundtrack of Robert Redford’s The Horse Whisperer. The song was nominated for an Academy Award for Best Original Song of 1998. She then signed with MCA, who released 1998’s Alabama Song (which includes “A Soft Place to Fall”) and the even more accomplished The Hardest Part (2000). Looking back, she’s glad she’s mowed on.

“I’m grateful that they signed me and I got to make two records that I love. I’m proud of what I did. I knew it wasn’t going to work again. I had been bitten on the ass two times and I didn’t want to do it again. I was just lost there. I couldn’t get any attention. That label is so top-heavy with superstars that there’s no money left to spend on little old me who they consider an ‘artist’ in quotation marks.”

But “artists” were one of the things that Tony Brown and Tim DuBois were looking for at Universal South—an all-new major-label imprint launched, incredibly, at a time when the record business is in horrific financial and artistic straits. But the consensus is that if anyone can pull it off in these tough economic times, DuBois, who ran Arista Nashville and launched Alan Jackson’s career, and Brown, who led the mid-90s Nashville renaissance that included signing to MCA Steve Earle and Lyle Lovett, are it.

“Tony was leaving [MCA], and he had the opportunity to start this label with Tim DuBois. I pretty much said, ‘If you’re not here, I’m not here, so please take me with you. And if you don’t take me with you, I’m not making another record for this label.’ I think he was always planning on taking me with him.”

Brown knew he could count on one aspect of Moorer’s art: her growing prowess as a songwriter. Although she began writing relatively late in life, her songs have grown stronger, cut by cut and album by album.

“I like Kris Kristofferson,” she says when asked to list the songwriters who’ve influenced her most. “Dylan, of course. I love, love, love the songs that The Band did. What a force. Listen to ‘King Harvest’; it’s one of the coolest songs I’ve heard.”
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- Noel Keywood (Hi-Fi World)

"By any measure, the 989 is a triumph, as well as a bargain in high-end terms."
- Ken Kessler (Hi-Fi News)

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Ten of the songs on the new album were co-written with Primm, who once fronted a Norman, Oklahoma rock band called the Silver-Tongued Devils. ("They sold a lot of beer," says Moores.) Although she’s written with Bruce Robison and Gwil Owen ("A Soft Place to Fall"), the Moores-Primm collaboration seems to be one of those rare partnerships that works both at home and in the studio.

"It’s totally ongoing. We don’t ever quite write. We don’t have a process, really. We just do it in whatever way we can. He’ll come up with something, or I’ll come up with something. We both do both words and music.

"I just like sharing this with him. I don’t feel like this is my record—I feel like it’s our record. And I want to do it. I want to do the work not just for myself, but for the people who helped me make this record. I want to honor their contributions, because I couldn’t have made that record by myself."

A key contributor to Miss Fortune was R.S. "Bobby" Field, who’s produced projects by Buddy Guy, Sonny Landreth, and Los Straitjackets. Another creative voice that helped shaped the final product was that of former Wilco guitarist/keyboard magician Jay Bennett, who in collaboration with fellow multi-multi-instrumentalist Edward Burch has just released his own quirky, poppy duo project, The Palace at 4am (Part 1) (Undertow).

"Jay spent two and a half weeks with us. He’s so great and so creative. I love having his energy around when I’m making a record. He just brings more to the table than your average bear. I tried to make him go out on the road with me this year, but he’s doing his Ed Burch thing, which is great."

Sparer than Moores’ two previous records, Miss Fortune is built around the sound and nuances of her voice, which has never sounded better. When asked which singers she listens to and admires most, Moores lists Aretha Franklin, Billie Holiday, Tammy Wynette, Chrissie Hynde, and Gladys Knight.

Asked what she likes to sing most, she says, “It depends on what emotion you want to express. I can get mad as hell on ‘Ruby Jewel Was Here’ from Miss Fortune, and I do. I almost cry at the end, because it’s such a sad story to me. ‘Going Down’ [a rocker on the new album], that’s the first chance I’ve had to do that. I’ve never really done a ball-out vocal like that on a record. I think a lot of people don’t know that I can do that. But I prefer a ballad, because that’s when I get to do my real thing.”

Moores, who recently gave a hit performance at Joe’s Pub in New York to celebrate the release of Miss Fortune, clearly pours a lot of herself into the act of singing.

"It’s exhausting. When I get done with an hour-and-a-half show, I’m exhausted in every possible way. I’m not one of those prissy girl singers. I mean, I sweat. I get overwhelmed with it. It takes physical strength to sing the way I sing, because I sing loud," she laughs, "and from the toes. You gotta stay in shape and take care of yourself, because it takes it out of you."

From the sound of Miss Fortune, Allison Moores is just beginning to give.
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In the past year, Stereophile has reviewed a number of cost-no-object flagship loudspeakers. B&W's Signature 800, MartinLogan's Prodigy, Burmester's B-99, Snell's XA Reference Tower, Krell's LAT-1, Linn's Komri, Dynaudio's Evidence Temptation, Sony's ES SS-M9ED, and Rockport's Antares have all passed through the review mill. Manufacturers like to submit their flagships for review for a number of reasons, not the least of which is the pride they take in showing what their engineers can do when given a blank check. However, while all these models do indeed provide great (if different) sound for the tens of thousands of dollars they demand from their owners, they are out of reach of the majority of audiophiles. It is important, therefore, for reviewers to spend time with real-world designs; when I heard the $1990/pair CS1.6 from Kentucky's Thiel at the 2002 CES last January, I requested a pair for review.

A Coherent Source

The CS1.6 is the successor to Thiel's CS1.5, a denizen of this magazine's "Recommended Components" listing ever since Sam Tellig enthused over it in August 1994. (His report is available online at www.stereophile.com/showarchives.cgi?227; he also wrote about it in May '96, while Muse Kastanovich's November '95 review included a full set of measurements.) Like the '1.5, the '1.6 is a floorstanding two-way design with a sloped-back front baffle. That's where the resemblance ends, however, as every other aspect of the 2002 speaker's design is new.

Whereas the CS1.5's baffle was flat, with step-backs for the hefty grille, the '1.6's is elegantly sculpted with a CNC machine to optimize dispersion, the minimal grille fitting into a shallow depression and held with concealed magnets. With the grille removed, the most obvious visible feature is a long vertical slot beneath the woofer, surrounded by a machined flare. This slot acts as the reflex port, but its geometry is claimed to minimize wind noise and any modification of its tuning by the grille.

The 6.5" woofer, designed and manufactured in-house, uses a 3" voice-coil to drive the metal cone closer to its perimeter than usual. This is said to increase the stiffness of the cone, pushing the inevitable breakup modes much higher in frequency than with a conventional cone and voice-coil. The large coil allows the neodymium magnet to be housed completely within the voice-coil former, inherently shielding the magnet. The 1" tweeter uses a metal dome and, like the woofer, features a short coil with a copper distortion-reducing ring, operating in a long gap. The tweeter dome is recessed slightly in a front plate with a short flare, which will increase its on-axis sensitivity to match the efficient woofer, at the expense of restricting the unit's dispersion in the top octave.

The crossover is, as is usual in Thiel's Coherent Source designs, a phase-optimal first-order type. This and the sloping back baffle allow the sounds from both drivers to arrive at the listener's ears at the same time. In a welcome departure from earlier Thiel speakers, the CS1.6's sturdy terminal posts are sited on the rear of its cabinet rather than the base.

System

The analog source was my Linn Sondek/Cirkus/Trampolin/Lingo/Ekos /Arkiv LP player sitting on a Sound Organisation table and amplified by a Linn Linto, while the digital source was primarily a Mark Levinson No.315 CD transport driving a Mark Levinson No.306 D/A processor via a Kimber Illuminations Orchid AES/EBU data-link. An Acuphase DP-85 SACD player, a Technics DVD-A10 DVD-Audio player, and a Musical Fidelity No-Vista 3D CD player also saw service.

A Mark Levinson No.380S line preamp drove Mark Levinson No.331 monoblocks. Interconnects were Madrigal CZ Gel-1 (balanced) and DiMarzio (unbalanced), speaker cables were Synergistic Research Designers' Reference2, and AC cables were Synergistic Research Designers' Reference2 and PS Audio Lab Cable. A PS Audio Power Plant 300 running at 90Hz supplied power to the preamp and CD players.

Sound

Setting up the CS1.6s involved finding positions for them that gave the optimum balance among four nonrelated aspects of sound quality. The speaker's bass region is intrinsically shelved-down. However, moving the speakers close to the sidewalls to give some boundary reinforcement of the low frequencies also emphasized some residual hardness in the low treble, and resulted in a balance that was too bright with the speakers facing straight ahead. Moving

### Description:

Two-way, magnetically shielded, floorstanding loudspeaker. Drive-units: 1" (25mm) aluminum-dome tweeter, 6.5" (165mm) metal-cone woofer with 3" voice-coil. Crossover frequency: 3kHz. Crossover slopes: first-order, 6dB/octave. Frequency response: 50Hz–20kHz, ±2dB. Phase response: ±1° maximum. Sensitivity: 90dB/W/m. Nominal impedance: 4 ohms, 8 ohms minimum. Recommended Power: 50–300W.

### Dimensions:

35.5" (902mm) H by 9" (229mm) W by 11.5" (292mm) D.

### Weight:

38 lbs (17.3kg) each.

### Finishes:

Painted black; wood veneers available at extra cost.

### Serial numbers of units reviewed:

459, 460.

### Price:

$1990/pair in black; $2390/pair in wood veneers. Optional outrigger supports cost $200/pair. Approximate number of dealers: 82.

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the speakers well away from the sidewalls gave a sound that was clean and clear, but with insufficient bass. Keeping the speakers where they had the most extended bass but toeing them in so that they faced the listening seat reduced the harshness, added some useful top-octave air, and gave a soundstage that was superbly detailed and stable. On the down side, the overall sound was still a little bright for my tastes and system.

Ultimately, I moved each speaker forward along the line joining its acoustic center to the listening position, noting how the drop in bass weight was balanced by a corresponding drop in low-treble hardness. This sounds more straightforward than it was because the CS1.6’s overall sound changed more during the break-in process than I am used to. Thiel recommends 50 hours "at moderately loud levels," but at the end of the month during which I used the Thie ls for my everyday listening, I was still not sure that they’d reached equilibrium.

But what had begun as brightness had been transformed into superb resolution of detail. What had started out as a lightweight, not too well-defined low-frequency register ended up as a balance that worked well on such superb double-bass recordings as Edgar Meyer’s new disc of concertos, by himself and Bottesini, with the St. Paul Chamber Orchestra (Sony Classical SK 60956). Meyer’s Concerto in D starts with some E-string grumbling and portamento slides, all rendered perfectly clearly on the CS1.6s, without any boom obscuring the instrument's pitch.

At the end of a month of everyday listening, I was still not sure the CS1.6s had reached equilibrium.

**Measurements**

Thiel’s literature goes into the efforts made by Jim Thiel to increase the CS1.6’s sensitivity, and the speaker did indeed prove very sensitive, my estimate coming in at dB above average, and dB above Thiel’s own figure, at . This seemed unlikely, so I repeated the measurement, only to get the same result. However, the ’16 does suck more than twice as much current as an 8 ohm speaker from the amplifier to achieve that high sensitivity, as revealed by its plot of impedance magnitude and electrical phase against frequency (fig.1). The phase angle is generally low—a good thing, in that it doesn’t amplify the speaker’s current demands—but the combination of ohms magnitude and 48° capacitive phase at Hz might stress an optimistically specified receiver or amplifier.

The saddle in the magnitude trace at Hz indicates the tuning frequency of the reflex slot, which in turn implies only moderate low-frequency extension. Unusually, there is no evidence of the tweeter’s aluminum dome above kHz, but there is a peculiar step at Hz in both magnitude and phase traces, which indicates that there is some sort of resonant problem present at that frequency.

The fig.1 traces are also free from glitches in the midrange that would indicate the presence of cabinet resonant modes. However, listening to the CS1.6’s cabinet with a stethoscope did reveal some high-level cabinet “talk” in the upper midrange. A waterfall plot calculated from the output of a plastic tape accelerometer fastened to the center of a sidewall (not shown) indicated some flexing at the reflex tuning frequency. More bothersome are some high-level modes between Hz and Hz. These are even higher in frequency on the rear panel (not shown). In general, my experience has been that resonant modes this high in frequency tend not to be as subjectively bothersome as ones lower in frequency, where they will be excited more often and ring longer. However, I did wonder if this cabinet behavior was related to the midrange hardness at high playback levels that I noted in my auditioning.

To the right of fig.2 is shown the Thiel's farfield frequency response on its tweeter axis, averaged across a horizontal window, while on the left are shown the nearfield responses of the woofer and port and the complex sum of these two responses, taking

The ½-octave warble tones on Stereophile's Test CD 3 were reproduced in full measure down to the 80Hz band. The 63Hz band is always weak in my room; such was the case with the CS1.6 unless I moved my chair back against the wall behind it, but the 50Hz band was moderately high in level. It was only at 40Hz and below that the speaker was obviously rolling off rapidly. The story was the same with the series of half-step-spaced tonebursts that I included on Test CD 3, the speaker's bass response falling off rapidly below G at 49Hz.

This series of tonebursts also revealed the Thiel to be a little lively in a narrow band in the upper midrange. I suspect that this liveliness correlated both with the superb sense of detail possessed by the ’16 and with the latent feeling of hardness I occasionally experienced.

1 I created this track for Test CD 3 because I find it invaluable for setting up speakers. It has puzzled me that more reviewers have not made use of it. —JA
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the positive side, the CS1.6 offered a superbly clear view into the recorded soundstage. While preparing this review, I was also mastering a new CD of classical music I had recorded with Cantus, the Minnesota-based male choir. (You can find the article on the making of their 2001 CD, Let Your Voice Be Heard, in our online archives.) The program this time varied enormously, from quiet, reflective pieces for unaccompanied voices, through a Debussy work for choir and piano, to a piece by the modern Finnish composer Veijo Torniis, which climaxes with the voices being drowned by someone beating hell out of a large gong. (From the score: "The sound must be so loud that the chorus entrance is not heard.") I therefore had to adjust the microphone preamp gain for each work during the sessions, meaning that I had to compensate accordingly for each track during the editing and mastering.

However, the ambient background noise in the chapel where we had made the recording had not been consistent, due to wind, distant traffic, and even the occasional bat! I hadn't thought this would be a problem at the time, because the peak level of this noise was between -57dBFS and -63dBFS, and any changes in the spectra, almost always LF in nature (other than the bat), should not have been audible. But the differences were disturbingly obvious via the

### Measurements

acoustic phase into account. The usual notch in the woofer's output at the port tuning frequency can be seen at 49Hz, with the port's bandpass response peaking at the same frequency. On the face of things, these curves suggest reasonably good bass performance. However, the nearfield measurement technique does boost the apparent level of bass frequencies by 3dB, so it is probable that the CS1.6's low frequencies are actually shivedown a little, which is what I heard in my auditioning.

Higher in frequency, the Thiel's balance is basically flat, though some small peaks can be seen in the upper midrange, where I had noted some peakiness in my listening. A slight rising trend is also apparent in the midtreble. The response falls off a little above 11kHz, though not enough in itself to make the top octave sound lacking in air, as I had found.

Fig.3 shows the CS1.6's lateral dispersion; i.e., how the speaker's response changes as the measuring microphone moves to the side of the tweeter axis. The on-axis notch at 13.6kHz fills in to the sides, but while there is overall a little more off-axis energy above 11kHz than there is on-axis, this is not enough to compensate for the top-octave rolloff.

Lower in frequency, the contour lines in this graph are evenly spaced, which correlates with the stable, well-defined stereo imaging I noted in my auditioning. However, note the depression in the off-axis traces between 1kHz and 3kHz. This is due to the woofer becoming directional at the top of its passband, by contrast with the tweeter, which radiates at full strength to the sides at the bottom of its passband. In all but very dead rooms, this off-axis flare in the presence region can make a speaker sound bright unless it is balanced by an on-axis response that is slightly dished in the same region.

A similar graph, showing the radiation pattern in the vertical plane (not shown), reveals that a suckout appears at the crossover frequency if you sit higher than the tweeter, just 30" from the floor. It might be thought that this suckout could counteract the tweeter's lateral off-axis flare. However, it is a little low in frequency to do so optimally, and the top-octave energy drops somewhat above the tweeter axis.

Fig.4, produced by averaging 120 measurements for the left and right speakers individually, shows how all this added up in my listening room. Overall, the ThIELs produced an impressively flat curve. However, within

![Fig.3 Thiel CS1.6, lateral response family at 50° with grille on, normalized to response on tweeter axis, from back to front: differences in response 180°–5° off-axis, reference response, differences in response 5°–180° off-axis.](image)

![Fig.4 Thiel CS1.6, spatially averaged, 1/3-octave, freefield response in JA's listening room.](image)
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this issue's "Recording of the Month" (Sony Classical SK 89505) hung at the center front of the stage, without any sense that its sound was originating from loudspeakers. True virtual reality.

An aspect of the setup that caused me some bother was choosing the listening axis. The tweeters are a low 30" from the floor when the speakers are used with their stabilizing feet, but my ears are 6" higher than that when I'm slouched in my listening chair, and a couple of inches higher when I'm sitting at attention. There was a slight hollowness to the 'L6's balance in this situation that was particularly noticeable on recorded piano. I ended up using a single tall Tiptoe under the front of each speaker, therefore, to tilt it back slightly. This minimized this residual upper-midrange coloration, but, with the mass of the drive-units' magnets being quite high, it also made the speakers marginally unstable. Thiel can provide optional outriggers that raise the CS1.6 an inch or so. Unless you have a very low listening chair, these outriggers should probably be regarded as mandatory.

Perhaps it was partly because the omnidirectional mbl 111Bs, with their ethereal, filigreed top octave, had preceded the Thieis in my room, but I was bothered by a slight lack of top-octave air, which is partly why I toed-in the speakers. In itself, this is not a limitation, but it does tend to make the octave between 5 and 10kHz sound a little more forward. Not only was this character demanding when it came to choosing matching components, but it imposed an ultimate loudness limit. The brightness was acceptable at low to moderately loud playback levels, but it imposed a dynamic limitation, particularly on voice, by turning into hardness at very high levels.

Peculiarly, this was less of an issue with LP playback, perhaps because my Linn Arkiv cartridge has a slight energy trough in the same region. Whatever the reason, LPs sounded great through the Thieis. The Classic Records reissue of the first Crosby, Stills & Nash LP, with its admittedly fat-assed lows, sounded superb, there not being a clue that the album celebrated its 33rd birthday this summer.

**Conclusion**

Once the Thiel CS1.6s had been broken in—assuming they were; after a month of heavy-duty playing, I can't swear that the midbass wasn't still creeping up in level—and I'd found the positions in my room where they worked best, I enjoyed my time with them, particularly for LP playback. The speaker's small footprint and well-engineered acoustic design at what, all things considered, is an affordable price, will give musically enjoyable results in rooms of small to moderate size. Thiel's CS1.6 is recommended, therefore, provided its prospective owner has front-end components that err on the mellow side.

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**Measurements**

that flammes it can be seen that there is a slight excess of energy in the low treble and a slight reduction in the lower midrange. The top octave is shelved down a little, as expected from the quasi-anechoic measurements—but more important, so is the entire low-frequency region. Now it's true that the speakers were positioned where I found their balance to sound the most integrated through the midrange and treble, not where they produced the most bass. And, as I've pointed out in other reviews, my room does tend to lack energy in the 63Hz 5-octave band when measured at the listening chair. But the relative lack of low-frequency energy in-room will exaggerate the CS1.6's tendency to sound a little treble-dominant.

In the time domain, the impulse response (not shown) is beautifully time-coherent, and the related step response (fig.5) has an excellent right-triangle shape. A slight reflection can be seen about 2.5ms after the initial rise of the step. I have no idea what this is due to, as my measuring environment has nothing close enough to produce such a reflection.

Finally, the Thiel's waterfall plot on the tweeter axis (fig.6), calculated from the impulse response with that early reflection windowed out, shows a superbly clean initial decay, which correlates well with the grain-free sound. The notch just below 14kHz is associated with some delayed energy, which suggests it is an interference phenomenon, while some delayed energy can be seen in the low treble.

All things considered, the Thiel CS1.6's measurements suggest a speaker that will not be very forgiving of ancillary components that are themselves balanced on the bright side. It will also perform best in a room that offers more midbass support than mine.

—John Atkinson

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**Fig.5** Thiel CS1.6, on-axis step response at 50° (5ms time window, 30kHz bandwidth).

**Fig.6** Thiel CS1.6, cumulative spectral-decay plot at 50° (0.15ms risetime).
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Paradigm Atom v.3 loudspeaker

I had mixed feelings about reviewing the $189/pair Paradigm Atom loudspeaker. Although I’ve been favorably impressed with Paradigm’s speakers—the $600/pair Reference Studio 20 remains one of my favorite affordables—Budget Bob tends to get a bit nervous when a speaker’s price drops below $250/pair. In my experience, even when the most talented speaker designers attempt to make a speaker to sell at such a low price, the result is often a very small cabinet with limited bass extension and inferior high-level dynamics.

As a rule, I’m not impressed with $200/pair speakers that sound like $400/pair models with attenuated bass reproduction. Nor do I believe that a subwoofer is the most practical solution for bass extension in most two-channel systems—I’ve heard plenty of subwooferless speakers with realistic bass performance for less than $500/pair. (I define “realistic bass performance” as the convincing reproduction of 55Hz frequencies in music programs.) Nevertheless, I’d been sufficiently impressed with a quick demo of Paradigm’s Atom at Home Entertainment 2001 to be willing to give it a whirl.

The Atom is the second model in Paradigm’s affordable Performance series, which includes five models ranging in price from $159 to $749/pair. The overall design parameters of the series are simple: to reduce manufacturing costs by using simpler crossovers, drivers with smaller magnets and coils, and less labor-intensive cabinet construction; and to include as much engineering and design effort as Paradigm puts into its medium-priced Monitor and high-priced Reference series.

The Atom is a two-way bass-reflex miniature speaker, with a 0.75” ceramic-metal dome tweeter and a 5.5” polypropylene-cone woofer. The Atom’s grille and MDF baffle are integrated into a single unit that can’t be removed; magnetic shielding is available as an option for $20/pair. I auditioned the Atoms on Celestion Si stands loaded with sand and lead shot.

Big sound from a small package?

My bass concerns evaporated in my first hour of listening—in fact, its bass performance turned out to be one of the Atom’s greatest strengths. The entire midbass region, although a touch warm and rounded, was well-defined and uncolored. On Jim Hall’s Jim Hall and Bases (Telarc CDJ-83506), the master guitarist is paired in duets with a serial Who’s Who of the bass fiddle, and on every track the various basses sounded natural, articulate, and well-defined throughout the instrument’s range, with no trace of overhang. The Atom’s convincing reproduction extended into the midbass region with no loss of definition, weight, or impact. In fact, when I dared to fire up John Rutter’s Requiem (Reference Recordings RR-57CD), I was amazed at the Atom’s reproduction of the pipe organ’s nether regions. The pedal pipes sounded uncolored, with tons of air and bloom—I rubbed my eyes several times to convince myself that no larger speakers were lurking in the room. I’ve never heard more realistic pipe organ from a speaker under $600/pair.

On rock recordings, the bass definition kicked major butt, even at high volumes. While ostensibly a jazz recording, John Scofield’s Überjam (Verve 314 586-2) is grounded in hip-hop and groove rhythms, and through the Atom, the bass lines were fast, punchy, and appropriately in my face. Überjam highlighted the Paradigm’s second greatest strength: a level of transient articulation, clarity, and naturalness in the upper midrange and lower highs that reproduced percussion with startling realism. I found myself focusing on the drummer’s tightly wound snare work and cymbal articulation, at times to the exclusion of the rest of the music. The Atom may be the affordable speaker for use by percussion students to analyze the styles of the

**Description:** Two-way, reflex-loaded, stand-mounted loudspeaker. Drive-units: 0.75” ceramic-metal dome tweeter, 5.5” polypropylene-cone bass/midrange driver with die-cast chassis. Frequency response: 70Hz–20kHz, ±2dB on axis, 70Hz–16kHz, ±2dB off axis. Impedance: “compatible with 8 ohms.” Sensitivity: 89dB in room, 86dB anechoic. Recommended amplification: 15–80W. **Dimensions:** 10.5” H by 6.5” W by 8.5” D. Weight: 13 lbs/pair. **Finish:** Black vinyl. **Serial numbers of units reviewed:** 296193 & 4. **Price:** $189/pair; magnetic shielding adds $20/pair. Approximate number of dealers: 250. **Manufacturer:** Paradigm Electronics Inc., 205 Annagem Blvd., Mississauga, Ontario L5T 2V1, Canada. Tel: (905) 632-0180. Fax: (905) 632-0183. Web: www.paradigm.com.
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Moreover, on the Schofield recording, the speaker did not run out of steam as I cranked the volume higher still. I was playing the Atoms in excess of 95dB for background music during a recent cleanup of my listening room, and was so distracted by the pulsing groove that I couldn't stop myself from dancing around the room, thus seriously delaying the completion of my housekeeping chores. Although the Atom did compress a bit during orchestral fortissimos on classical works, I'd never heard this level of high-level dynamic realism from such a tiny speaker.

The Atom's tonal balance in other regions was quite good overall. Although the lower high frequencies were impressive, the extreme top end seemed a bit rolled-off—mallet percussion, violins, and piccolos seemed to lack that last bit of upper-end sparkle and air. The vocal region of the midrange was uncolored, detailed, and transparent. Female vocals on such well-recorded albums as Aimee Mann's The Last Remains of the Dodo (Super Ego SE-2) and Madeline Peyroux's Dreamland (Atlantic 82916-2) were tactile, seductive, and three-dimensional. Gary Wilson's closely miked voice on "6.4 = Make Out," from the recent reissue of his masterpiece, You Think You Really Know Me (Motel MRCDJ007), was well-defined, with a natural sense of warmth.

The only aspect of the Atom's performance that I found problematic was in a narrow region of the lower midrange: there was a thick chestiness when I played certain recordings that have significant energy in this region. It seemed to bother me most on electric-guitar recordings, most notably when Jim Hall played his 1971's Acoustic archtop on the aforementioned ...and Bases. The guitar seemed overly resonant and out of proportion, but this problem disappeared when Hall switched to a Taylor acoustic 12-string flattop. Similarly, Kevin Barry's Fender Stratocaster on Mighty Sam McClain's Give It Up to Love (JVC JVCXR-0012-2) was warmer than usual, sounding more akin to a Gibson ES-335 semi-hollowbody. Finally, Marc Rubot's metal-bodied Dobro on the Peyroux disc seemed as if it had grown some wood on its lower bout.

**Measurements**

Paradigm specifies the Atom v.3's anechoic sensitivity as 86dB/2.83V/m, which is just below average.

![Fig.1 Paradigm Atom v.3, electrical impedance (solid) and phase (dashed). (2 ohms/vertical div.)](image1)

![Fig.2 Paradigm Atom v.3, cumulative spectral-decay plot of accelerometer output fastened to center of side panel. (MLS driving voltage to speaker, 755V; measurement bandwidth, 2kHz.)](image2)

My estimate was 86.5dB(B), which is within experimental error of the specified figure. The Atom's electrical impedance (fig.1) changes considerably over the audible band, with a minimum value of 4.4 ohms at 220Hz. The small glitch just above 30kHz indicates the presence of the tweeter's main dome resonance, which is higher in frequency than we usually see. The saddle in the magnitude trace at 66Hz indicates the tuning frequency of the port.

The fig.1 traces are free from wrinkles that would imply the existence of cabinet resonances. Fig.2, a waterfall plot calculated from the output of a simple plastic-tape accelerometer fastened to the center of a side panel, shows that a high-level mode is present at 600Hz. While this mode was detectable on all of the cabinet's surfaces, it might be sufficiently high in frequency not to have too much of a subjective effect. However, the fact that BJR was bothered by an occasional "thick chestiness" might well be associated with this resonant mode.

The traces to the left of fig.3 show the responses of the woofer and port, taken in the nearfield, with their complex sum. The woofer's output has the notch at the tuning frequency of 66Hz, as expected, this roughly...
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Though each link in the audio chain is significant in its own way, we seem to spend more time agonizing over the choice and setup of loudspeakers than any other component. Floorstanding or stand-mounted? Full-range frequency extension or monitor coherence? Multiple-driver complexity or two-way simplicity? Measurable and forgiving or resolved and revealing? And even when money is no object, how much speaker do you really want...or need? It might sound splendid in the shop, but how will it couple with your room? How will it integrate with your other gear? Is it easy to set up and drive or will it involve specialized gear and a massive overhaul of your current rig?

First Order of Business
Speaker designer Pat McGinty of Meadowlark Audio makes such decisions comparatively easy. When he introduced the original Meadowlark Kestrel in the mid-1990s, McGinty had already cultivated a reputation among audiophiles in the San Diego area for designing a series of one-off speakers employing every variety of driver, loading, and crossover configuration. The Kestrel filled a niche in the marketplace: for a two-way floorstanding design, with good bass extension and dynamics, that was affordable, forgiving, and easy to drive.

"The original Shearwater was an extrapolation of the Kestrel in a slightly larger cabinet," McGinty recalls, "based on two premium drivers, which met the demand for more revealing performance with tighter, deeper bass, better midrange resolution, more natural-sounding treble, and enhanced dynamics across the board—all based on our philosophy of extreme simplicity and time-coherence."

Said philosophy was arrived at through trial and error, but the day Pat purchased an affordable MLSSA analyzer afforded him insight into the speaker-design process. This led in turn to his unshakable conviction that using the best drivers...
speakers, McGinty experimented with several different combinations of parts before formalizing what Meadowlark calls their HotRod configuration: Cardas Solis copper binding posts, point-to-point internal wiring with TARA Labs Rectangular Solid Core, silver solder throughout, Auric capacitors, heatsunk Caddock resistors, and a 14-gauge Perfect Lay inductor for the bass circuit. The basic Shearwater is priced at $2695/pair, the HotRod version sent for review costs $3195/pair.

Swooning in a Sepia Glow
For the Shearwaters' initial break-in period, Meadowlark suggests at least 300 hours! Over time, I observed how the tweeter's performance grew sweeter and more open, while the bass driver's focus grew firmer and more dynamic. Thereafter, week by week, they had a greater sense of ease, balance, and focus, which translated into improved midrange lucidity with a commensurate increase in depth and detail.

To optimize the sweet spot, I needed to be fastidious about setup. This has a lot to do with the integration of the drivers in a time-coherent, first-order design—as I discovered during close encounters with the Vandersteen 2Ce Signature when I reviewed it for the October 2000 Stereophile. As I stood up, sat down, or moved from side to side, I noticed subtle shifts in perspective with the Shearwaters, as if looking at a hologram from different angles. Not that the Shearwaters weren't pleasing off-axis, but the optimum sweet spot was narrower than what I'd experienced with the steep-filtered Joseph RM33si Signatures that preceded them.

The Shearwaters ended up farther apart than the RM33si's had been, and closer to the back wall of my 12' by 20' room. With the Shearwater speakers in the same positions as the Josephs, I was

Measurements
ified crossover frequency of 2.7kHz is only approximate.

Fig.4 shows the complex sum of the woofer and port responses spliced to the Shearwater's response on the tweeter axis, averaged across a 30° lateral window. The overall low-frequency response is well-extended, with a -6dB point around 30Hz, but a severe notch is apparent at 150Hz. This suggests that the peak in the port output at this frequency is in antiphase to the woofer's output, reinforcing the suckout in the latter's response. However, it is fair to note that Chip noted nothing untoward in the upper bass, which suggests that this acoustic problem looks worse than it sounds.

Higher in frequency, the Shearwater's balance is broken by small peaks and dips, though as the latter are around the same width and depth as the former, the subjective effect will be neutral overall. The tweeter peaks a little before rolling off above 11kHz. Though this rolloff will be primarily due to the HF unit's restricted dispersion in its top octave, the presence of the slight peak might have contributed to Chip's not wanting to sit too close to the loudspeaker.

This limited top-octave dispersion can be seen in fig.5, which shows the Meadowlark's radiation pattern nor-

![Fig.5](image1.png)


![Fig.6](image2.png)

getting a thickening of some midrange frequencies. So I moved them about a foot back, which put them 57" from the back wall (as measured from the center of the woofer on the front baffle). This opened up and clarified the sound. Then I moved them farther apart—24.5" from the left wall (a fully laden CD cabinet) and 17.5" from the right (a chest of drawers piled high with books and gear), which helped break up first reflections. Now a full 7' apart (measured from the dunes of the centrally placed tweeters), and with my listening chair 7'-9" away, the Shearwaters' sweet spot blossomed and bloomed. Soundstaging snapped into focus with commensurate levels of depth, lateral coherence, and inner illumination that were realistic, involving, and utterly magical.

Still, the Shearwaters did not recommend themselves as nearfield monitors. When I sat too close, they tended to sound a bit harsh; when I sat too far back and too low, the dimensional aspects and microdynamic cues that lent such vibrancy and realism to the soundstaging were reduced in scale.

But right away, I was captivated by the quality and quantity of the Shearwater's bass: extraordinarily taut and snappy, yet richly detailed and warmly focused. I ran the HotRods through a gauntlet of percussion and bass to confirm my initial impressions of their transient speed and dynamics, low-end weight and accuracy, midrange transparency and articulation, and top-end smoothness and extension. On a 1977 LP reissue of the 1950 Edgard Varése sessions produced by Jack Skirnick and originally released on EMS 401 (Finnadar SR 9018), there is a satisfying oomph and earthy undertone to the big calfskin-headed bass drum on this legendary performance of Ionisation that I could feel right in the small of my back. The Shearwater reproduced both the initial attack and its complex rever-

Figure 7: Meadowlark Shearwater, step response on tweeter axis at 50° (5ms time window, 30kHz bandwidth).

Figure 8: Meadowlark Shearwater, step responses of woofer (blue) and tweeter (red) on tweeter axis at 50° (5ms time window, 30kHz bandwidth).

Figure 9: Meadowlark Shearwater, cumulative spectral-decay plot at 50° (0.15ms risetime).
Steve Hoffman (left) teamed with Kevin Gray to remaster seven Creedence Clearwater Revival albums for Analogue Productions.

Kevin Gray scribbling a freshly-cut lacquer of Creedence Clearwater Revival.

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The transparency, transient SNAP and overall clarity without brightness or edge is phenomenal! This is as close to listening to a master tape as I’ve heard from vinyl—not hyperbole. Based on this, I think Kevin has put together the best-sounding lathe/cutting setup I’ve heard yet.

—Michael Fremer
Senior Contributing Editor, Stereophile
Music Editor, Listener Magazine

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a receding vision of heaven. And, in the English sea shanty “What Shall We Do with a Drunken Sailor” and the Venezuelan joropo “Mata del Anima Sola,” from Let Your Voice Be Heard (Cantus CTS-1201) by the male vocal ensemble Cantus, the Shearwaters easily sorted out the complex layering and intermingling of the basses, baritones, and tenors while maintaining ensemble integrity, delineating individual details, and reproducing the sublime recorded acoustic that Stereophile’s own John Atkinson has so meticulously captured — all in a perfect symmetry of rhythmic, textural, and ambient cues.

In a last, conclusive test, I listened to two inspiring solo-piano recordings: Sviatoslav Richter’s Richter Rediscovered: Carnegie Hall Recital, December 26, 1960 ( RCA 63844-2), and Arcadi Volodos’ disc of solo piano works by Schubert (Sony Classical SK 89647). The Shearwaters brought me closer to the subtle percussive clack of the hammers as they struck the strings, and I apprehended no strain or ringing as they reproduced the transient snap of Richter’s dazzling percussive articulations and expressive palette of tonal colors in the Allegro of Haydn’s Sonata in C.

The Schubert disc was recorded direct to DSD last summer in the acoustic grandeur of Vienna’s Sofiensaal, a balcony where Johann Strauss II’s orchestra kept ‘em dancing (sadly, it burned to the ground barely a month later). This amazing recording showcases the depth of Volodos’ touch on Schubert’s Sonata in G. The young virtuoso patiently builds momentum throughout the long opening movement in waves of chorale-like lyricism and layers of nuanced textures as he rises from ppp to fff. Throughout, the Shearwaters maintained a perfect stereo image without grain or compression, while conveying the organic interplay of the piano and the resonant venue.

**Goodness In, Goodness Out**
In the Meadowlark HotRod Shearwater, designer Pat McGinty’s determination to maintain the absolute integrity of the musical waveform has resulted in a presentation that is accurate without being analytical: spectrally balanced, dimensionally full, and a dream to drive. Talk about cruise control — it displayed terrific speed and bass extension with a modishly powered solid-state integrated amp like the Simaudio i-5, and a gloriously deep, detailed midrange with a tubed juggernaut such as the VTL MB-450. Stacked up against the best two-way floorstanding designs I’ve experienced up close and personal, the no-compromise HotRod Shearwater more than held its own against such worthies as the ProAc 2.5 and the Merlin VTM (which employ roughly the same ScanSpeak woofer), and for considerably less money.

But while I rarely found the Shearwater wanting in its presentation of raw rock or R&B recordings, it might be too mannerly and refined for some tastes. If you’re not going to mate it with high-resolution components, or dedicate an acoustic space to proper and meticulous setup, then the forward presentation of the more forgiving Kestrel might be right up your alley — for half the price. The Kestrel has a punchy midbass/lower-midrange character that the more revealing, transparent Shearwater does not.

Still, I never found the HotRod Shearwater wanting for drive, and it never failed to offer me a direct spiritual connection to the music, more than living up to its advance billing as “a two-way lover’s two-way.” If the two-way Joseph RM223i Signature I was so enamored of a few years back reminds me of a refined white wine, then the HotRod Shearwater suggested a hearty, full-bodied Merlot — earthy and textured, with a robust clarity.

Now if that ain’t enough performance for $3195/pair, then dig deeper, son, because you need more speaker. Meadowlark Audio’s flagship two-way is an utterly non-fatiguing, elegantly dynamic loudspeaker that plays nice and loud without distortion, and should illuminate all the most subtle aspects of your upstream equipment while portraying the spatial dimensions and acoustic signature of fine recordings with luminescent ease and grace. The HotRod Shearwater is the kind of clear, captivating, straightforward loudspeaker around which you can assemble a true high-resolution sound system, secure in the knowledge that goodness in will translate into goodness out.
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True, if you're buying one of these expensive players, your dealer will most likely guide you through the maze, but how hard would it be for the instructions to identify the products to which it refers? I had to go online to discover that the DC-330 is Accuphase's digital preamplifier and the DP-35 is a digital crossover network.

Right out of the box, what you get for your $16.5k is a heavy, silky-smooth, sophisticated-looking hunk of machinery with an understated, eye-caressing satin-gold faceplate and a matching remote. The DP-35's rear connections allow both balanced and unbalanced analog outputs, TosLink and coaxial digital inputs, and HS-link and coaxial digital optical inputs. There are also three slots for optional circuit boards, and one for an external digital signal processing device, but more about that later.

Power up the DP-85, hit the Open/Close button, and the disc tray slides out silently, slowly (but not too slowly), and oh, so smoothly. You deserve that for $16.5k. Unlike most players — especially first-generation ones — when toggling between SACD and CD layers, the DP-85 worked flat, thanks to its single-lens, twin-pickup mechanism. It's able to scan a disc's table of contents in a few seconds, as opposed to the forever that early SACD players took. You deserve that, too, for bleeding your savings account. The transport also includes a digital servo with dedicated DSP for "highly accurate signal pickup," according to an Accuphase blurb. The DP-85 plays CD-Rs but not CD-RWs.

The front panel is laid out cleanly enough to make using the DP-85 a pleasure. With the disc in, you push Play to start at track 1, or, after hitting Play, rotate the "Track knob clockwise or counter-clockwise to move through and select a track, which will then play automatically. Text information is automatically displayed. From Stop, you can rotate the knob to a chosen track, then access it by pushing in the button. The rectangular

**Measurements**

Unless indicated otherwise, I measured the DP-85's performance from its balanced jacks. The maximum output level for CD replay was 2.5V from both balanced and unbalanced jacks — nearly 2dB higher than the CD Standard's 2V RMS — and fractionally lower at 2.47V for SACD playback (assessed using Sony's "tentative" test SACD). The digital volume control offered accurate 1dB attenuation steps down to -60dB.

The source impedance was a low 47 ohms from both sets of jacks over most of the audioband, this increasing inconsequentially to 54 ohms at 20kHz from the RCA outputs, and to 68 ohms from the XLRs. The output polarity was noninverting from the unbalanced RCAs but inverting from the balanced XLRs, these apparently wired with pin 3 rather than pin 2 "hot." Error correction for CD playback was superb, the Accuphase coping with gaps in the data spiral up to 2mm long without missing a beat.

Frequency response for CD playback was flat within the audioband (fig.1, upper pair of traces), and de-emphasis error was negligible (fig.1, bottom traces). With SACDs, the ultrasonic response rolled off to -3dB at 50kHz, -6dB at 60kHz (fig.2), as suggested by the SACD license. With external 96kHz-sampled PCM data — the DP-85's data input successfully locked to sample rates up to 96kHz — the response gently rolled off above 30kHz before dropping like a stone above 45kHz (not shown). Channel separation (also not shown) was superb, at better than 120dB across the audioband and around 130dB at 1kHz.

Fig.3 shows spectral analyses performed on the DP-85's analog output when its external data input was driven by 44.1kHz PCM data representing a dithered 1kHz tone at -90dBFS with both 16- and 24-bit word lengths. The increase in bit depth drops the noise floor by 12dB or so, suggesting a dynamic range of around 18 bits, which is excellent. Small peaks at 60kHz and 120kHz can be seen in the 24-bit traces (unchanged when I tried floating the AC supply ground), but as these are better than 133dB down from peak level, their presence will be subjectively benign.

Fig.4 shows similar analyses performed with the Accuphase playing back 1kHz tones at -90dBFS and -110dBFS from SACD. Again the player's excellent dynamic range is revealed, at least in the low treble and below. Note, however, the rise in the...
buttons of the remote's number pad access tracks conventionally.

Hold in Stop for more than a few seconds and the Track button becomes a function control that allows you to adjust the brightness of the display, set the unit to go into Play mode on power-up if a disc is in the tray, and select an Auto Pause mode with intervals of 1-5 seconds. Or you can easily revert to factory default settings. All of the common CD playback and programming functions, such as track sequencing, A-B repeat, and Shuffle play, are included. There's also a digital volume control good to -60dB, but there's no switch for inverting polarity (or absolute phase, or whatever you wanna call it) — something many buyers at this price point insist on having.

To use the DP-85 as a processor, connect an outboard transport's digital output to the rear panel's digital input and select the appropriate input via the Input Selector switch. The internal Multiple Delta Sigma (MDS) 1-bit D/A converters (two sets of six running in parallel) can process up to 24/96 multi-bit digital audio signals via the rear panel inputs, or — with an optional card in one of the rear panel's slots — 2.83MHz DSD data and 24/192, even though the unit's front panel is engraved "192-24." The DACs can do 24/192, but the standard coax/TosLink inputs can't crunch that many data. I never did learn whether the unit "upsamples" or "oversamples" 16-bit/44.1kHz signals. Accuphase doesn't discuss this in the instruction manual or the product brochure — probably a good thing, given the confusion the subject generates.

Curiously, the instructions mention CD, Minidisc, DAT, or "other" digital signals as possible sources for the processor's optical and coaxial inputs, but not DVD-based 24/96 audio. So one of the first things I did was to connect the DP-85 to the coaxial digital output of an Arcam DV27 DVD player (which doesn't downconvert the 96kHz bitstream to 48kHz, as do some DVD players) to see whether the Accuphase would process 24/96 DAD discs like those from Classic, Chesky, and Hi-Res. It locked on to the signal. This makes the omission from the instructions even more curious, given the market segment at which this product is aimed. Here, with the addition of an

**Measurements**

noise floor above 2kHz, this due to the aggressive noise-shaping used by the SACD's DSD encoding. By comparing fig.4 with fig.3, you can see that SACD has less inherent dynamic range above 10kHz than CD, though this is largely academic, I feel.

Fig.5 shows a similar spectral analysis, extended up to 200kHz, with the player decoding both DSD and 24-bit 44.1kHz PCM representing a dithered 1kHz tone at -150dBFS. It's well below the analog noise floor. (I use this test signal rather than "digital black" because so many players and processors mute their analog outputs when they detect the latter signal.) The DP-85's background noise for 24-bit playback (bottom traces) is "white"; it rises slightly with frequency on this logarithmically scaled graph. By contrast, SACD's noise floor rises dramatically above the audioband, peaking at around ~53dB below 60kHz and 80kHz. This means that DSD encoding really has only about 10 bits of dynamic range in the octave between 40kHz and 80kHz. However, I don't see this as a real problem, given how little audio information there is above 35kHz.

The Accuphase's DAC linearity error, assessed using 16-bit CD data (fig.6), was negligible down to below -110dBFS, confirming the player's high dynamic range. As a result, the DP-85's playback of 16- and 24-bit undithered tones at -90.31dBFS (fig.7 and 8, respectively) was essentially perfect.

As is usual these days with digital source components, there was almost no harmonic distortion present in the DP-85's output. Playing back 24-bit digital data representing a full-scale 50Hz tone, the only harmonic present, even into the demanding 600 ohm load, was the third (fig.9), at -97dB (0.0014%). Intermodulation distortion (fig.10) was also vanishingly low in level.

Michael Fremer was disappointed with the DP-85's playback of CD data, yet there was nothing in the measured data above that would indicate why. When I examined the player's susceptibility to word-clock jitter, however, it definitely stumbled on CD playback. Using the Miller Jitter Analyzer to search the Accuphase's
inexpensive DVD player that can output a true 24/96 bitstream—Panasonic, Pioneers—is a semi-universal player, at least for devotees of twocchannel sound.

**Tightly Sprung CD Sound**

Since most digital discs in my collection are CDs, I'm most interested in how an SACD player processes those. So, after a week's warmup of casual listening—I did all of my listening single-ended, by the way—I spent my first audition day comparing the DP-85 to my reference Musical Fidelity 3D, which, at $4995, costs about a third the price. To keep the playing field level, both players were fitted with identical lengths of Wireworld Gold Eclipse interconnect and Wireworld Silver Electra power cord.

I went into this comparison somewhat prejudiced: while at the Frankfurt hi-fi show back in May, I heard grumbling from a number of exhibitors who were using DP-85s as their CD source component. Their biggest complaint was that the sound, though highly resolved and abundant with detail, wasn't fully developed harmonically, and that the full sonic picture did not hang together. That I heard this complaint in more than one room was surprising, but I wasn't sure what these folks were getting at, and besides, you can't draw reliable conclusions about unfamiliar systems by listening under show conditions.

The biggest beef I had with the early SACD players I auditioned was the soft, almost soggy and uninvolving sound delivered from plain old CDs. Almost as if overcompensating for that performance deficit, the DP-85 delivered the opposite: fast, lively, tightly sprung CD sound, as if the music was bouncing off of a piece of fabric stretched almost to the ripping point. The DP-85 produced ultra-resolution of inner detail, razor-sharp transients, firm deep bass, and an exciting, almost Naim-like rhythmic swagger. But it was free of grain, etch, and other negatives you don't want to be hearing from a $16,500 *anything*.

When I switched to the Musical Fidelity 3D, I heard what the Frankfurt folks were complaining about. It was almost as if the DP-85 was so interested in keeping my foot tapping that it was more concerned with musical flow than with letting the harmonics ripen and develop. That's not necessarily a bad

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**Accuphase DP-85**

Analog output from jitter-related sidebands while it played back a CD-R containing the diagnostic test signal, I found an extremely high 4.26 nanoseconds of peak-peak jitter. This is more than 20 times higher than I have found in the best CD players and processors.

The grayed-out trace in fig.11 shows the spectrum of this jitter. Data-related sidebands (red numeric markers) are very low in level, almost all the jitter coming from pairs of sidebands at ±42.5 kHz and its harmonics (circled in magenta). This behavior was not affected by turning off the supply, nor by floating the player's AC supply ground. What I did find surprising was that when I fed the DP-85's S/PDIF data input with 16-bit data of the same signal, the measured jitter level dropped to a respectable 511 picoseconds (foreground trace in fig.11). I don't have an SACD with the diagnostic jitter signal on it, but the "tentative" Sony test SACD does include a high-level 11.025kHz signal. Spectral analysis of the Accuphase's analog output while it played this revealed behavior similar to the way it had performed with external PCM data. Other than the high level of wordclock jitter for CD playback, the DP-85 offered a respectable set of measurements.

—John Atkinson
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thing—compared to the CD performance of the first Sony and Marantz SACD players, the DP-85 injected a welcome shot of adrenaline into the music’s veins. But it also seemed to skim the harmonic surfaces of instruments, suggesting rather than delivering their full timbral expression.

The pace seemed to slow a bit with the Musical Fidelity 3D, allowing the picture to linger on the overtones, and on the aftermath of the events actually producing the sound. The result was a richness of tone and a roundness of images that more than compensated for the more leisurely pace—at least in my system. However, there’s no doubt that the DP-85’s brand of sonic performance will be superb in warm, slightly “ripe” systems.

The JVC XRCD2 of Jacintha’s Lush Life (JVCXR-0217-2) arrived mid-review, giving me access to four versions of this superbly recorded, arranged, and performed set of standards. With Bill Cunliffe’s ingenious string arrangements augmenting his trio, and the addition of the multifaceted guitarist Anthony Wilson among the many musicians, this set transcends “audiophilia.” The sensual singer has never sounded more assured, nor has her phrasing been as alluring. Lush Life is the Jacintha album to have if you’re having only one. In addition to the new XRCD, the album is available in two versions on a hybrid SACD/CD, and on 180gm vinyl—including a bonus 45rpm.

First, I compared the CD layer on the hybrid (Groove Note 11013-3) to the XRCD through the Accuphase and the Musical Fidelity 3D. Through both players, the XRCD had more warmth, texture, and image three-dimensionality, without suturing transients and with no loss of fine detail. Derek Oles’ bass had greater weight and definition, and the image of Jacintha standing before the microphone was far more convincing. Cunliffe’s piano sounded more woody and nuanced, less tingly. As you might expect, the 3D’s richer presentation made the Groove Note CD’s leaner sound more pleasing.

Yet when I compared the Groove Note’s SACD layer to its CD layer on the Accuphase, or to the XRCD through the Accuphase, it was no contest: the SACD layer through the Accuphase was the most convincing, fleshing out the rich ambient field behind the music and portraying its decay with analog-like assurance. Jacintha’s sibilants might have been smoother via the XRCD played on the 3D, but they sounded more real from SACD via the Accuphase. The soundstage opened and deepened, and the images became more focused and more three-dimensional, yet pushed farther back in space. In other words, the Accuphase is a stunning SACD player combining exciting rhythm and pacing, full harmonic development, high resolution, and precise imaging and soundstaging. The presentation reminded me of good vinyl. Playing the Jacintha vinyl confirmed it.

The SACD layer through the Accuphase was the most convincing, fleshing out the rich ambient field behind the music and portraying its decay with analog-like assurance.

All of my comments about the Groove Note hybrid were also true of Mobile Fidelity’s superb SACD/CD transfer of Patricia Barber’s Café Blue (UHDSACD 2002). The CD layer was richer, weightier, and generally more pleasing through the 3D, but the SACD layer transformed the DP-85, giving the picture depth, dimensionality, weight, and harmonic richness, but not at the expense of the player’s transient purity and snap. The bass line of “Ode to Billy Joe” was sensationally rich yet perfectly focused, and Barber’s finger-snaps were fast and tight while still sounding like flesh—not wood, as they did on the original CD compared to the 180gm vinyl issue.

Even though Clark Terry’s wonderful One on One (Chesky SACD231) was probably recorded in 24/96 LPCM and upconverted to SACD, the difference between it and the CD version (J1198) was enormous. Whatever advantage the Musical Fidelity 3D had over the Accuphase as a CD player, the DP-85’s SACD side easily won the shootout with this disc of duets. The Accuphase convincing placed the trumpeter and a series of pianists in the recording venue’s rich, delicate ambience, offering palpable, precisely focused, three-dimensional images of the instruments and suffusing them with a plausible tonal palette. The CD layer (or the regular CD) through the 3D presented Terry’s horn as warm yet brassy, and the Bösendorfer 290 Imperial Grand with
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Options
The DP-85's rear slots permit too many input/output connection options to go into here in detail, especially if you're into surrounding the player with Accuphase's amplifiers, digital preamplifier, and digital crossover network, in which case you can keep the signal in the digital domain until it has to be amplified. Optional cards can provide an HS-link input to the DP-85's SACD processor and 24/192 Dacs, as well as AES/EBU, BNC, and ST-type glass-fiber optical cable. (Remember what a big fuss that last a few years ago?)

A Quick Comparison
Marantz's SA-14 SACD player ($2900) has been in the queue waiting to be reviewed, so I'll just sneak in a quick comparison of it here to the DP-85, for those enticed by SACD but not prepared to spend $16.5k. Though the SA-14, too, has balanced connections, I ran it only single-ended.

Also very well built—especially given its reasonable price—and handsome to look at, the SA-14 didn't scale the SACD sonic heights reached by the DP-85, particularly when it came to transparency, liquidity, image dimensionality, high-frequency bloom, and ease of musical flow, but it did offer outstanding detail and fine tonal balance. The SA-14 communicated SACD's attractive sonic attributes, but was somewhat drier and less generous in its presentation of air, space, and overall flow. Its physical presentation was somewhat more flat and literal—kind of like the difference between a very good $1500 phono cartridge and one of the greats costing far more.

Switching to the CD layer of SACD/CD hybrids was always a letdown—as it should be—but, surprisingly, not quite as much of one as doing same with the DP-85. But that was mostly because of the DP-85's stunning, almost overwhelming SACD performance—the best digital sound I've heard in my system. Though it had a very substantial bottom-end foundation, was very well balanced, and had no serious flaws, the SA-14's CD performance sounded more mechanical, and somewhat more closed-in on top, than the Musical Fidelity 3D and the DP-85.

Basically, the SA-14 is a very accomplished, superbly built, $2900 CD player that tosses in SACD for an extra $500 (at street price). If you want to experience SACD's musical satisfaction, the SA-14 will give it to you without putting a sonic damper on your CD collection—unless you've already been spoiled by a far more accomplished and expensive player.

Conclusion
Close to deadline time, ABKCO Records threw an old-fashioned listening party at the Russian Tea Room in Manhattan to announce the release of the 22 SACD/CD Rolling Stones remasters. The press kit included a 21-track sampler, and with the Accuphase DP-85 in my system, the timing couldn't have been better. I've got clean vinyl versions of most of the original UK Decca Stones albums, so I thought I was well prepared for what these carefully mastered SACDs might sound like.

I wasn't. The detail revealed by the DP-85 was jaw-dropping. I heard things in very familiar tunes I'd never heard before, and going back to the original vinyl was a bit of a shock to my systems, both personal and electronic. The SACD edition of "I Am Waiting," from Aftermath, recorded by Dave Hassinger at RCA Hollywood, was more dynamic, more detailed and present, than I remember ever hearing from UK vinyl—though, to even the score, the vinyl had a few attributes the SACD lacked. Hopefully, there will be 180gm vinyl from either the DSD master or, preferably, the 30ips, 1/2" analog transfers made simultaneously.

In any case, in every performance parameter you can think of, the SACD layer through the DP-85 positively smoked the CD layer through my reference Musical Fidelity Nu-Vista 3D CD player, though I preferred the CD layer through the 3D. But forget about comparisons—the DP-85's SACD performance set a new standard for digital anything in my system and in my experience. It produced the ease, relaxation, transparency, air, bloom, space, and—most important—plain old musical pleasure I had heretofore associated only with fine analog playback. Twenty years of CD playback, no matter what tricks are played with it—laser-disc transports, glass-fiber optic cable, oversampling, upsampling, reclocking, green paint, outer rings, inner rings, smoke rings, you name it—has always fallen short, and has always required an asterisk and an excuse.

The Accuphase DP-85 put an end to that, at least in SACD mode. While I was somewhat disappointed with its CD performance, the results in your system might be different. If you're shopping at this price point, be sure to check out the DP-85.
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Manley also knows sound, and spends much of her professional life catering to an even pickier crowd than us hi-fi hounds: Manley Labs is a major presence in the pro audio and recording markets. The Manley Labs VoxBox microphone preamp and vocal processor, Slam limiting and mic preamp, and Massive Passive stereo EQ are but a few of the highly regarded Manley professional products found in top studios around the world. Not surprisingly, tubes are a central part of each of them.

While Manley Labs could happily perk along solely as a premier pro-audio company, EveAnna Manley wants equally great sound at home, and since she's the boss, there is also a complete line of Manley Labs audio gear. From the highly practical Shrimp preamp and Stingray integrated amp to the mighty Steelhead phono stage and the 250 Neo-Classic, there's a Manley component for almost every system and budget. And every one is tubed.

Nuts and Bolts, Tubes and Transformers

The 250 Neo-Classic is a stem-to-stern update and revision of the Reference 240 amplifier, reviewed in Stereophile in May 1996 (Vol.19 No.5). Its circuitry is as straightforward and rugged as a V-twin motorcycle engine, devoid of anything extraneous: the input stage is a paralleled dual-triode 12AT7WA from E1 in Yugoslavia. The 12AT7WA is coupled to the driver/phase-splitter stage by a polypropylene rolled film-and-foil capacitor. There, two dual-triode 6414s (or 12BH7As, if available) are set up in a long-tailed splitter configuration — but the 250 parallels the tube stages, which, according to Manley, "yields more gain by doubling the transconductance of the tube, [resulting] in higher headroom with lower noise."

The signal's positive and negative phases then head for the output stage, where 10 Sovtek EL34G/Electro-Harmonix EL34EH tubes provide the electromotive force. The output tubes are biased to 27mA at idle, and bias adjustments for each tube are accessed behind the amp's nameplate, which has a diagram and adjustment instructions etched on its back side. Global negative feedback is limited to a modest 12dB.

While Manley will happily talk about the circuitry of the 250, she uncharacteristically clams up when it comes to the specially designed output transformer. Unlike most amp

Description: Tube monoblock power amplifier with solid-state rectification. Tube complement: one 12AT7WA, two 6414s or 12BH7As, ten EL34Gs. Output power: 250W at 1.5% THD into 5 ohm load (tetrode), 100W at 1.5% THD into 5 ohm load (triode). Input sensitivity: 1V. Input impedance: 100k ohms. S/N ratio: 80dB.

Dynamic range: 93dB. Frequency response: 10Hz-80kHz, ±0.5dB. Power consumption: 30W in standby, 815W at full power.

Dimensions: 19" W by 9" H by 13" D. Shipping weight: 73 lbs each.


1 Manley Labs uses only tubes that are readily available to large quantities to ensure that their amps will remain in service for years, with no need to search for esoteric tube types.

Stereophile, September 2002
Last week, I was in bed with my wife when she whispered in my ear "what turns you on?" I thought carefully about my answer. "Finding a stash of Mullard 12AX7s! Talk about HOT!" She laughed, "Stop! Now... what REALLY turns you on?" OK... think man, think. "Uh... the Cary SLI-80 Signature? Switchable from triode to ultralinear on the fly!"

According to her, I got two wrong answers. But they're right to me, and this sofa doesn't feel too bad. If you're an occasional sofa-sleeper, you're my kind of audiophile. Here's some more woody material.

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—Dick Olsher, Senior Editor, www.enjoythemusic.com

4.9 out of 5 stars at www.audioreview.com
Manley 250 Neo-Classic

With both balanced and unbalanced inputs and an output stage capable of operating in both tetrode and triode modes, the Manley 250 Neo-Classic is four amplifiers in one chassis and thus represents four times as much labor in the measuring lab. I therefore reduced the variables by performing a complete set of tests running the amplifier balanced in tetrode mode, and repeated several of the tests in triode mode and via the unbalanced input, as necessary.

The Manley amplifier is noninverting through both inputs, the XLR wired with pin 2 hot. The input impedance at 1kHz was very high, at 300K ohms balanced and 128K ohms unbalanced, though these figures fell to a still high 90K ohms and 81K ohms, respectively, at 20kHz. The unbalanced tetrode sensitivity into 8 ohms was average, at 25.9dB. However, the balanced input reduced this to 18.8dB, and changing to triode mode reduced it further, to 17.4dB. If you wish to drive the Manley's balanced input directly, without a preamp, very few CD players have enough output voltage to drive the amplifier even close to clipping.

The output impedance at 1kHz was quite low for a tube design, at 0.7 ohm in tetrode mode and 0.6 ohm triode, these figures rising in consequence by 0.05 ohm at the edges of the audio band. The interaction between the 250 Neo-Classic's source impedance and Stereophile's standard simulated speaker load was a moderate ±0.4dB in either mode, which can be seen in the plots of the amplifier's frequency response (fig.1, tetrode; fig.2, triode).

What is more apparent in these graphs is the presence of a response peak at 70kHz. This is higher in tetrode mode than in triode, reaching 4dB compared with 1.2dB. The height of the peak also decreases into lower impedances, but only in triode mode. The subjective consequences of the peak are probably mild to nonexistent, but might suggest a modicum of sensitivity to cable choice. These graphs were taken with a balanced input; the picture was very similar via the unbalanced input, but with a slightly less high ultrasonic peak: 2.4dB vs 4dB in tetrode mode.

Where the peak does reveal itself is in the Manley's squarewave responses. Fig.3 shows the output waveform with the amplifier in tetrode mode driving 10kHz into 8 ohms; fig.4 is with the amplifier in triode mode. As anticipated from the response graphs, there is less ringing, with less of a lead-

Measurements

Manley Labs manufactures all of its transformers in-house, at its Manley Magnetics division. The 250's output transformer embodies, on a much larger scale, advances in transformer design made while developing the Stingray integrated amp. Manley asserts that it is this transformer that is largely responsible for the amp's sound, and is the primary contributor to the 250's bass performance.

A particularly cool feature of the Neo-Classic is its ability to operate in both triode and tetrode modes. In tetrode mode, the 250 delivers 250W into a 5 ohm load and, with the flick of a front-panel switch, 100W of triode power are available. In tetrode mode, the screen grids of the output tubes are attached to the center tap of the output transformer's primary windings. Switching to triode mode hooks up the screen grids to the anodes, electrically rendering the EL34 a three-element tube.

The power supply is proportionately beefy, uses high-speed solid-state rectifiers, and provides 320 joules of power storage for the amp's B+ voltage rail. The 250's thirst for electricity mandates a two-stage soft startup; the mains switch puts the amp into Standby/Ever Warm. At this point, the primaries see only half of the full-power-on voltages; throwing the Standby switch brings the amp up to its full operating voltages. Flick off the Input Mute switch and you're ready to go. The handy slanted back panel provides a stout set of WBT speaker posts, access to fuses, and a switch to select between the single-ended and transformer-coupled balanced inputs.

System Specifics

I listened to the Manley 250 Neo-Classics on and off for several months to
acclimate myself to their character within the context of my system, then settled down to the serious business of review listening. The 250s sat atop shot-loaded Grand Prix Audio Monaco amplifier stands and were hooked up with Wireworld Gold Eclipse III+ interconnects and biwire speaker cables. For triode-mode listening I also used my efficient, sweet-tempered Silverline Sonatas as an alternate reference to my usual Apogee Duettas Signature. As the 250s particularly liked the CPCC Top Gun and Wireworld Silver Electra III+ power cords, I used them for all evaluative listening.

Like most tube amplifiers, the Neo-Classics didn't need a lengthy break-in period—a couple of weekends' listening and they'd settled down nicely. If there were any significant sonic changes after that point, they were too subtle for me to notice. I make a point of firing up tube amps at least an hour before doing any serious listening, the better to let everything thermally stabilize, and apart from one check of the output tubes' bias, that was all the attention the Manleys required. There was nothing intimidating about living with the 250s; if you can read the manual and use a screwdriver and a multi-meter, you're all set.

Tetrodes, Torque, and Traction

I began with the Manleys in tetrode mode. Unsurprisingly, they made a strong initial impression of relaxed but enormous strength. These amps took 3 Only two tubes in each amp needed minor tweaks to get their biases back squarely on spec, where they remained without further twiddling.

22Hz–22kHz—and by more, to 89.6dB, when the reading was A-weighted, due to the weighting filter rejecting a very small amount of 60Hz hum. Figs.5 and 6 show how the Manley's small-signal distortion+noise reading varied with frequency in tetrode and triode modes, respectively. The level is higher in triode mode than in tetrode, but both modes are respectively low into impedances of 4 ohms and higher, at least between the midbass and the top audio octave. There is a small rise in tetrode distortion in the low bass—unusually, this is greatest into 16 ohms—and a greater low-frequency rise in triode mode. Of more consequence is the rise in distortion at the top of the audio band, which is greater in tetrode mode.

The distortion in either mode is heavily second-harmonic (fig.7, tetrode; fig.8, triode), and the increase at low frequencies and at higher currents seems to be due to an increase in the third harmonic (figs.9 and 10).

The poor ultrasonic linearity implied by the distortion-frequency graphs results in quite high levels of intermodulation distortion, particularly in tetrode mode. Fig.11 shows the spectrum of the amplifier's output while it reproduced an equal mix of 19kHz and 20kHz tones at 33W into 8 ohms. The higher-frequency intermodulation products all lie below -60dB (0.1%), but the 1kHz difference-frequency component lies at -47dB (0.5%), even though the amplifier is nowhere near clipping at this output power. Halving the load impedance doesn't affect the level of the signal and controlled it effortlessly. My Apogee Duettas are quite power-hungry, but the 250s never seemed to be doing anything but loafing along, even at very high volumes. Take "Fracture," from King Crimson's Starless and Bible Black (LP, Editions EG EGK7). Here, Crimson explores the gamut of dynamics, from quiet bits of skeletal solo guitar and electric violin to the terrifying roar of the tune's recapitulation. When the band slams in out of nowhere at apocalyptic volume for the last statement of the theme, a listener should be startled. I've heard this piece hundreds of times, but the Manley-Apogee combination made me almost jump through the ceiling. To do this requires immense reserves of power, and that the Neo-Classics had. Oh brother, did they ever.
Power and control are fine, but even more important are fidelity to timbre and to the sound of the original recording acoustic. The 250 was slightly laid-back in its overall presentation. While revealing, it didn't throw the sonic failings of bad recordings directly into my face. The amp passed flawed recordings with a kind of good-natured resignation, as if to say it would appreciate something that could let it show off to the fullest.

The 250's bass immediately grabbed my attention. Manley's claims for their output transformers were backed by the amp's performance. Just what proprietary magic is wrapped up in those transformers EveAnna Manley isn't telling, but the bass performance of the Neo-Classic was right at the state of the art for tube amplifiers, and mightily impressive for any amp.

4 Kruder and Dorfmuister's "Jazz Master," from The KED Sessions (CD), G-Stone K-7073CD), and "The Robots," from Kraftwerk's The Mix (CD, Elektra 60869-2), have monstrous deep bass; the 250's shook the walls of my listening room with ease.

The 250 wasn't just about bass power; it could boogie, too. The Manley hit me with its rhythm stick in a big way on Talking Heads' Remain in Light (LP, Sire SRK 6095), throwing down the bass-heavy funk of "The Great Curve" and "Crosseyed and Faintless." The machine-gun exchanges between Victor Wooten's bass and Future Man's electronic "drumitar" on Bela Fleck and the Flecktones' Live Art (CD, Warner Bros. 46247-2) never smeared or concealed, remaining calmly separated in space so I could groove on the amazing musicianship of both players.

The 250's performance with acoustic bass instruments was, if anything, even more impressive. The amp dug into upright bass, providing a tremendous sense of grip and control while letting the resonance of the instrument's big body bloom naturally into the room. The growling basses on "Journey to the Line," from The Thin Red Line soundtrack (CD, RCA 63382-2), had the necessary sense of oppressive weight and deep mournfulness the music demands.

A sexy, smoochy, harmonically rich midrange is to be expected from a great 1kHz component, but does increase the level of the 18kHz and 21kHz products by almost 10dB (not shown).

Figs. 12 and 13 show how the Manley's distortion and noise percentage changes as the output power increases in tetrode and triode modes. In triode, the amplifier appears to more than meet its 100W/5 ohms specification at the usual 1% THD+noise clipping point. It actually puts out 132W into 8 ohms (21.1dBW) and 165W into 4 ohms (19.2dBW). In tetrode mode, however, the clipping point has to be relaxed to almost 3% THD+N for the amplifier to put out 250W into 4 ohms (24dBW). Into 8 ohms, 3W0W was available at the 3% clipping point (23.6dBW), and 218W at 1% THD (23.4dBW). Bearing in mind my earlier comments about the amplifier's low sensitivity in balanced mode, it took 4V or more of input drive to reach these output levels.

With its ten EL34 output tubes, the Manley 250 Neo-Classic is indeed a powerhouse, and it doesn't seem to sacrifice much of that power when those tubes run in the smoother-sounding triode mode. However, I was bothered by the poor linearity at the top of the audioband, which resulted in the higher-than-normal level of intermodulation products with the admittedly demanding mix of 1kHz and 20kHz tones I use to assess this aspect of an amplifier's performance. Nevertheless, it's fair to point out that PB wasn't bothered by subjective problems that could be laid at the feet of this fault. —John Atkinson

1 The Lamm ML1 is the only other tube amp I know with similar bass quantity and quality. It can't be a coincidence that Vladimir Lamm is also notoriously close-mouthed about his output transformers.

Manley 250 Neo-Classic

Stereophile, September 2002
Oh, man, you missed it!

With close to 15,000 miles of road gone under the tires of the company van, HeadRoom’s World of Headphones Tour is now safe and sound back home, and Tyll and Todd have fully recovered to their normal state—which isn’t saying much. The big question is: Was it worthwhile? We think the tour visitors say it best:

“What a great show it was! I can’t believe the selection of headphones whose quality is way above what’s being sold at the typical mass-market superstore! I wonder how those stores can get away with peddling such craptacularly-over-priced headphones to the Average Joe?”

- Randall from Melrose Park, IL

“If you are even vaguely interested in anything headphone related, and the tour is coming anywhere near you, DON’T MISS THIS! It’s the only place in the world that you can not only see, but actually get your hands on such a large variety of headphone equipment.”

- Steve from St. Louis, MO

“I had never considered buying a headphone amp, until I heard how much they enhance the pleasure of using headphones. I will definitely be purchasing an amp from you soon.”

- Todd from Orlando, FL

“When you factor in the money, the BlockHead or the Max really smoked everything else, hands down.”

- Matt from Denver, CO

“I own an old Cosmic and was aware of the upgrade. Well, reading about it & hearing it are two ENTIRELY DIFFERENT stories. Plus, thanks to Tyll, I now have a plan of action. New Power Supply, Cardas (wow!) cable for my Sennheiser 600’s, and that incredible new electronics module for my Cosmic. Makes a geek like me real happy.”

- Gary from Dearborn, MI

“To wrap up, I may have been a blockhead to travel that far. But I didn’t leave a total airhead on the subject of headphones & came away with the supreme knowledge about the use of Amps & Headphones to enhance my enjoyment of listening to music; that left me in a cosmic state all the way home. Thanks Again.”

- Charles from Mountville, PA

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tube amp, and it was assuredly on display with the Neo-Classics. Carly Simon's "Last Night (When We Were Young)," from \textit{Film Noir} (CD, Arista 18984-2), was so seductive and enticing through the Manleys that it would have taken a first-class heel to complain about anything. All I wanted to do was pour the lovely lady a drink and listen to her sing to me, oblivious to the rest of the world. The 250s were just as fine with orchestral material. When I played excerpts from \textit{Aida} and \textit{Samson et Dalila} (LP, \textit{Ballet from the Opera}, RCA Victor/Classic LSC-2400), the Manleys presented a big, open, well-defined acoustic, and clearly described the various sections of the orchestra. The sounds of Zino Francescatti's solo violin and the orchestra's massed strings in Beethoven's Violin Concerto (LP, Columbia Masterworks MS 6263) were marvelous, and the 250s did a particularly fine job of handling the tonal subtleties of the woodwind parts. And all that power on tap allowed the concerto's noble themes to be stated with majestic weight and dynamics. I occasionally found myself wishing for just a bit more spritziness in the top treble, but the 250's smooth, balanced upper octaves were so perfectly in tune with the rest of the amp's burnished but detailed sound that it would probably have been a bit distracting and out of character. Could there have been just a bit more sheen on massed violins? Yes, but the overall presentation of orchestral material was so continuous and convincing that, the longer I listened, the more pointless nit-picky such criticism seemed. Concert-hall sound is detailed and lively, not hi-fi bright. So was the Manley. The Neo-Classics' transient response was as good as that of any transformer-coupled tube amplifier I've heard. The attacks of aggressively bowed violins and percussion instruments of all kinds were convincing and true in character. The leading edges of cymbal, triangle, and piano transients and the picked strings of acoustic guitars were well-defined, with just the right blend of immediacy and freedom from etch or exaggeration.

\textbf{The ability to switch between tetrode and triode modes makes the 250 an audio neurotic's dream.}

Soundstaging was another of the Neo-Classics' strengths. The vast spaces created by Future Sound of London's Brian Dougans and Garry Cobain on the stunning \textit{Papua New Guinea Translations} (UK CD, Jumpin' and Pumpin' CD TOTS2) were deep, rich, and densely filled with sonic exotica. FSoL creates an alternate sonic universe, and the Manleys threw me straight onto the holodeck. \textit{Papua New Guinea} 's highly complex mixes have layer upon layer arranged in multiplicities of interlocking patterns. The Neo-Classics managed to effortlessly sort it all out, and brought out the organic, holistic nature of this ultrahip, postmodern trip through the cosmic tropics (or is it the tropical cosmos?). The 250s were flat-out great at giving me not only the sound but the feel of all the music I played through them. King Crimson's \textit{The ConstruKtion of Light} (CD, Virgin 49261-2) is an assault—a jarringly industrial, dark, dense, and claustrophobic sonic world that is, if you can take it, compelling and exciting music. The Manleys made it as physically punishing as three rounds with Lemmox Lewis, just as Crimson intended it to be, but never lost track of the musical content. Nothing could be more different from \textit{ConstruKtion} than The Band's eponymous second album (CD, Capitol 25389-2-8). \textit{The Band} is steeped in the feel of the post-Civil War era—homespun, rural, and earthy—and the plaintive harmonies, resonant guitars, and gloriously woody thud of Levon Helm's kick drum were simply sublime. Through the 250s, Helm's keening vocal on "The Night They Drove Old Dixie Down" took me to a time and place far from my listening room in suburban Minneapolis in a display of pure musical alchemy.

\textbf{Triodes, Tasty and Touchable}

The ability to switch between tetrode and triode modes makes the 250 an audio neurotic's dream. While power output is reduced in triode mode, it has its own rewards. Not that 100Wpc of tetrode power is anything to sneeze at—that was enough to drive my Apogees without clipping on anything but the largest-scaled music. In triode mode, the Manleys handled the 93dB/W Silverline Sonatas as effortlessly as tetrode mode dealt with the Apogees. Which is to say that they could bounce the speakers around the room like raquetballs if I cared to listen at such crazy levels. The 250's character was not all that different in triode and tetrode modes, but some of the differences were worth exploring. Triode mode gave a wonderfully intimate sound, more rich and luscious than tetrode mode, but exacted a slight tradeoff, with slightly reduced back-of-the-stage resolution. With big orchestral music, tetrode gave a slightly clearer look to the farthest reaches of the stage with the Apogees and the Silverlines, but triode really shone with smaller ensembles.

Listening to Jesse Cook's \textit{Free Fall} (CD, Narada 49290-0-8), bass definition and extension remained topnotch, and while a wee bit of tetrode's sense of space and air was sacrificed, there was no loss of focus to Cook's lightning-fast guitar work. Even the 
\textit{routioed} flamenco technique, in which the fingers are flicked downward in rapid succession over the strings, was snappily defined.

\textbf{Associated Equipment}

\begin{center}
\textbf{Analog source:} SOTA Cosmos turntable, Graham 2.2 tonearm, Dynavector DRT XV-1 cartridge.
\textbf{Digital sources:} Classe Omega SACD/CD player, Ayre D-1x CD/DVD-Audio player.
\textbf{Preamplification:} Jeff Rowland Design Group Cadence phono stage and Synergy H Infinity line stage; Manley Labs Steelhead phono stages; Ayre K-1x full-function preamplifier.
\textbf{Loudspeakers:} Apogee Duetta Signature, Silverline Sonatas.
\end{center}


\textbf{Accessories:} CPCR Top Gun Super Power Block; Grand Prix Audio Monaco modular and Ultra Resolution Technologies Bedrock equipment stands; Nordost Ti Pulsar Points, UltraDynamic, and Ganymede isolation footers; WallyTools analog setup equipment; Argent Room Lenses.

\textbf{Paul Bolin}

\begin{center}
\textit{Stereophile, September 2002} 131
\end{center}
DVD-Audio: Dispelling the Myths

The introduction of any new audio format is a challenge for consumer electronics companies responsible for manufacturing the hardware and for record companies large and small. The core of the problem is education. As I read and post on several of the "hi-res" internet forums, I am amazed at the lack of information that circulates among the contributors... and these are people that read the right publications and visit the shows that promote these very same formats. This month, and in the months to come, these couple of columns are dedicated to addressing the "myths" associated with the DVD-Audio format. I have always figured the more you know the better off you are... that's why I went to college for 22 years and graduated 6 times (it can become a disease!) So in an effort to clear up some of the confusion, here's some of the straight scoop.

Myth No. 1: A TV monitor is required.

Almost all DVD-Audio players are actually "combi" or "universal" units, which means they should more accurately be called DVD-Audio/Video machines. The same unit can double as an audio and video playback device. However, a properly set up 5.1 listening environment requires the placement of five identical full range speakers in a circle around the central listening position. What that means is that there is not really a place for your big screen TV right smack in the middle of the front. No TV to view the menus or on screen graphics means DVD-Audio is flawed in the minds of some audio purists. Wrong!

The DVD-Audio format specifies that discs are broken into the same Tracks and Indexes that we have been using with CDs for over 20 years. There is, however, another higher organizational level known as Groups. A DVD-Audio disc, therefore, can be broken down into 9 Groups containing up to 99 Tracks which can be further divided into as many as 99 Indexes. Groups are used to segregate the different playlists contained on a single disc. A full 5.1 channel surround mix might be placed in Group 1 while a dedicated stereo mix would be in Group 2. For example, some of our newest classical releases contain 4 Groups allocated in the following manner: Group 1: 96/24/5.1 MLP "audience" mix, Group 2: 96/24/2.0 PCM stereo mix, Group 3: 5.1 "audience" Dolby Digital mix, and Group 4: 5.1 "stage" DTS mix. As for compatibility, only the MLP mixes require the new DVD-Audio/Video hardware.

So by using your remote controller or the front buttons the unit itself, an audiophile user can access any of the audio tracks without the benefit of a TV monitor... just like a CD. However, that same disc in a home theater environment, which does have a TV monitor, provides the same navigational access AND a whole bunch of cool extra features. Things like music videos, interviews, lyrics, album art and literally anything you can digitize can be added to the same disc. On all AIX Records releases, one side carries the high-resolution MLP tracks and the other side contains 400 screens, interviews, artworks, alternate mixes, tech info etc. Give me great music and the extras!

High-Resolution Realities

Just what is high-resolution audio? Is it any track that lights up the 96 kHz/24 bit indicator on the front of your DVD-Audio/Video deck? Or maybe it's the sound of a two-track analog master tape created years ago on an Ampex ATR-100... could it be 180 gram vinyl done with half speed mastering? With the advent of consumer formats capable of delivering "high-resolution" audio, it might be worth taking a closer look at the concept.

There are basically three categories of high-resolution audio being delivered to consumers. First, there are two track analog masters that get transferred to 96 kHz/24 bit PCM (or higher if you want to limit playback to DVD-Audio only machines). Next are the archived multi-track masters that get remixed to 5.1 channel surround sound through analog mixing...
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consoles and outboard processors before being captured using 96 kHz/24 bit A/D converters. And finally, there are new recordings done at 96 kHz/24 bits when the musicians were present to play the tracks.

Currently, there is no way to distinguish which is which by observing the label or watching the indicators on the front of your deck. Each category brings benefits to those lucky enough to have a high-resolution setup, but the highest possible dynamic range and frequency response is available only to their third group.

Think of the following scenario...you take a pristine copy of your 8mm Christmas films from 1959 to the local HD telecine house. They transfer your film to HiDef 1080i videotape and you bring it up on the latest HD plasma monitor. What do you see? Now think about a new production using HD cameras, state-of-the-art lenses, the latest lighting equipment and digital color correction processors. Which one takes full advantage of the HD format? The answer is obvious. The same situation is true for HD audio. The analog masters sound better than CDs, the 5.1 mixes from source multisound great but until you’ve heard a new production done with the latest audio equipment...you haven’t heard HD audio. Check it out, see what you think....when you do you’ll be excited about the potential of REAL high resolution audio!

Mark Waldrep, Ph.D. is the founder and chief engineer at AIX Records, a company dedicated to recording and producing multi-channel music using state-of-the-art, high-resolution equipment. He is also on the BMA faculty of CSUSB in SoCal. Email him or visit the website:
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BEETHOVEN & MENDELSSOHN
Violin Concertos
Joshua Bell, violin; Roger Norrington, Camerata Salzburg
Sony Classical SK 89505 (CD), 2002. Andrew Reiner, prod.; Ame
Akselberg, eng. DDD. TT: 69:58
Performance ****
Sonics ****

S
o it's still possible for Joshua Bell to make a serious recording. How quickly that Bell was once a strictly classical recording artist who, with Roger Norrington, premiered and recorded the great and massive Violin Concerto of Nicholas Maw. Since then, each of Bell's crossover recordings have him photographed in a different designer outfit, looking dour, aloof, and determinedly closemouthed, and the performances have been increasingly less convincing. There are credible ears for whom Bell really can swing, as a Stephane Grappelli idolater, I hear only a contrived series of finger slides.

But even in the most Faustian bargains, he who has sold his soul can still do good works before being condemned to an eternity of Boston Pops concerts. In Bell's case, the good works are these new recordings of the most well-worn concertos in the violin repertory, the Beethoven and the Mendelssohn (in e, Op.64). They're fresh, wonderful performances, the likes of which I'd not thought possible in this age of masterpiece overexposure. I always knew Bell could do it, but wondered if he ever would. That he has done so in the somewhat one-dimensional acoustic of the Salzburg Mozarteum (probably too small a venue for this enterprise) is only a minor drawback.

Bell has been performing the Mendelssohn since he was 12. I heard him play it two years later, and am relieved that this performance has infinitely greater interpretive specificity. His tone is the violin counterpart of the mid-Atlantic accent: not bland so much as neutral, which is fine when the musician behind the tone has something to say. That's the case here. Each phrase is decisively shaped in ways that grow out of the previous idea and are thus perfectly in tune with the music's rigorous yet seemingly effortless symphonic progression. In keeping with this long view of the piece, Bell makes a good case for not indulging in any emotional displays that are too extravagant; he leaves that to Norrington, whose treatment of the first movement sounds suitably dire, to a degree matched by few others.

The performance of the Beethoven is full of interpretive touches characteristic of Norrington. There's often a palpable sense of subtext — of questioning, pondering, and reaffirmation — as the first movement goes from exposition to development to recapitulation. The conductor's trademark sense of dance is piquantly evident in his treatment of the pizzicato string figures that, in other performances, are frequently lost in the orchestral wash. Though the Camerata Salzburg isn't an authentic-instrument band, its use of vibrato is minimal, and achieves the same admirable goal as have Norrington's best efforts with the London Classical Players: an engaging sense of musical narrative, as opposed to the succession of pretty sounds likely to be heard a generation ago from another Salzburg-based conductor, the late Herbert von Karajan.

It's tempting to credit Norrington more than Bell with the success of this recording, but it couldn't have succeeded without the conductor's synergy with the violinist, who is more convincing here than he has been in years. There's still a sense of detachment — Bell fans would call it dignity or classical distance — but even that is absent from Bell's arresting treatment of the cadenzas. Then comes the final surprise: Bell wrote all of the cadenzas, and they're knockouts, full of violinistic fireworks and emotional substance. The first-movement cadenza of the Beethoven has not-inappropriate stylistic allusions to the Bach Sonatas and Partitas for Unaccompanied Violin. Maybe Bell needs to do less performing and more composing. If he plays his own works with as much inspiration as he does these cadenzas, I promise I won't question the music's quality — at least while the performance is happening.

— David Patrick Stearns
Committed to contemporary composers, and longtime advocates of pulling in composers from outside the general Eurocentric sphere of classical music, the Kronos Quartet has patiently studied Mexican music in its diverse accents for over a decade. The resulting Nuevo is an ambitious disc even from this group, whose repertoire reaches from Jimi Hendrix to the African continent. It would be easy enough to program pieces from Mexico’s best-known classical composers — Revueltas alone left a significant body of innovative quartets. Instead, Kronos has teamed up with innovative arrangers Osvaldo Golijov, Stephen Prutsman, and Ricardo Gallardo, and sought out a remix of one tune by Plankton Man, to take in a broader swath of Mexican music. The tunes range from traditional folk melodies from the son huasteco and corrido (ballad) genres to popular radio-type fare, television themes, Cuban-flavored song, serious classical music, and experimental pop. Woven into it all are fragmental aural snapshots of Mexican urban and rural life. The result is less a survey of Mexican classical music than a surreal sampling of the aura of contemporary Mexico in all its peculiar and energetic flavors.

Golijov contributes the bulk of the arrangements. In them one hears his admirable command of regional idioms, along with his gift for orchestration in the manner of his former teacher, George Crumb. Like Crumb, Golijov tinkers with sonorities to create illusionary amalgams. Severiano Briseño’s “El Sinaloense (The Man from Sinaloa)” is recorded and mixed in a strange way to lend it the feel of an old recording made with a horn rather than a microphone. Kronos launches deftly into the work’s lively, galloping rhythms, cellist Jennifer Culp in particular capturing both the tone and oblique rhythms of the tube, which anchors the oom-pah foundations of Sinaloa’s banda tradition.

On Mexican pop composer Agustín Lara’s “Se Me Hizo Fácil (It Was Easy for Me),” Golijov goes for the sentimentality and rich vitality of the sophisticated ballad, coloring it with choice harmonic effects and cartoonish drama. In his setting of Space Age Bachelor Pad composer Juan García Esquivel’s “Mini Skirt,” Golijov makes the quartet sound like steel drums by having the violin in whistling harmonics underpinned by low strings doubled in pizzicato. There are also some notable Theremin-like violin effects. Various studio touches, whistling, and “wows” echo Esquivel’s own sonic mischief.

Some are the regional roots music of Mexico’s mariachi tradition; the son huasteco tradition hails from northeast Mexico and is characterized by lively polyrhythms hipopangos in % rhythm. It is one of the most complex folk musics in the world. For the traditional son huasteco “El Llorar (Crying),” Golijov plays things fairly straight, his arrangement capturing its downhill-skier-on-an-avalanche intensity. Golijov lets the vauling rhythms and soaring, free-rhythm vocal and violin lines leap ecstatically over the zigzagging rhythmic undercurrents. Complete with whistling and shouts, it sounds like the real thing.

Stephen Prutsman’s best work is found in his reduction of Mexican classical composer Silvestre Revueltas’ 1937 Sensomaya, generally heard in orchestral form. Prutsman makes violist Hank Dutt sound like a brass section as Culp crisply intones the Indian-like ritual bass line. Backed by the Tambuco Percussion Ensemble, Kronos’ reading has all the violent power and drama of the orchestral score. The quartet rightly plays up the work’s Rite of Spring influences.

Kronos has long taken a pastiche approach to assembling its albums, welding disparate musical elements to sculpt new sonic frontiers. But Nuevo represents a new high-water mark that signifies a deep, genuine interest in the broad musical panorama of the US’s close neighbor to the south, and a commitment to break intelligently from the shackles of convention to explore worthy new musical worlds.

— Daniel Buckley
Mozart in Vienna

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ural after Stefani, "Another washes, merely engineered, Mornings"; (featuring Ladies") The You revisit created the lead-in Still, "Southside" here:

And can many stars and Moby, the formerly artist O'Connor, unlike the former DIY gifts (to his Tiané and the national Dickinson, sax; Moby's electronic-based work, seems like the electronic-based stuff. as Christian beliefs), and the individual pieces mostly work as songs, something electronic-based music still accomplishes all too rarely. Among the many highlights are the dreamy opening number, "We Are All Made of Stars"; the sly, insistent "Another Woman"; the hip-hop-meets-electronica throwdown "Jam for the Ladies" (featuring Stone and MC Lyte); the gentle, guitar-based () "Harbour" (featuring O'Connor); and the gorgeous, orchestral title track.

Naysayers will claim that Moby has crafted a formula that works and is now merely repeating himself. I say he's operating at a high enough level that it doesn't matter. Line up Play and 18 in your CD player and pretend they're one long, continuous piece of work. And enjoy.

— Daniel Durchholz

jazz

BILLY BANG

Vietnam: The Aftermath
Billy Bang, violin; Sonny Fortune, flute; Frank Lowe, tenor sax; Ted Daniel, trumpet; John Hicks, piano; Curtis Lundy, bass; Michael Carvin, drums; Ron Brown, percussion; Butch Morris, conductor ("Tet Offensive")
Sonics ****

S
ince the early 1970s, violinist Billy Bang has been an active and respected contributor to New York's avant-garde jazz scene. But in the late 1960s, in Vietnam, Bang was Sergeant E5 William Walker. In the liner notes to Vietnam: The Aftermath, he states that his war experience has haunted him for "at least 30 years," and that his inability to face these memories led to "severe nightmares of death and destruction," as well as escape into alcohol and drugs. When his producer at Justin Time Records, Jean-Pierre Leduc, suggested that he make an album based on his Vietnam experience, Bang at first resisted. Then he sequestered himself in his New York apartment for several weeks and wrote the music for this recording.

It is like nothing you have ever heard. Bang's eight compositions evoke their milieu through tonal and harmonic references to Southeast Asian music and the sudden, dislocated cymbal crashes of drummer Michael Carvin. Pieces like "Vo! Ho Chi Minh is in the House," a wildly careening vamp, and the rolling, seething "Tet Offensive," are visceral, physically affecting portrayals of fear and confusion and deadly danger. Even the song titles painfully convey the trauma that Bang is revisiting: "Tunnel Rat (Flashlight and a 45)"); "Fire in the Hole." But the range of feeling is broad enough to touch grotesque humor ("Saigon Phunk") and reveries of remembered beauty only tinged with menace ("Mystery of the Mekong").

Nine players appear on the album, in configurations from quartet to septet. Six are Vietnam veterans, their ranks and serial numbers provided in the liner notes. (Within the densities of Bang's ensembles, instruments are vividly discriminated by the typically precise engineering of Jim Anderson.) Tenor saxophonist Frank Lowe, trumpeter Ted Daniel, flutist Sonny Fortune, and pianist John Hicks all play with a concentrated passion that confirms their dedication to this project.

But Bang's voice is what rivets the attention. His violin is the perfect medium for his subject. He can pluck it like an Asian stringed instrument, or scrape it into alien shrieks and keenings, or sing sweetly, or weep. One of the most moving jazz performances in recent years is Bang's dirge for his fallen comrades, "Moments for the KIAMA." In its gentle theme, stark with grief, the intolerable, inescapable reality of what happened is encountered head-on.

Bang's suite reaches shattering catharsis in the concluding 12 minutes of "Saigon Phunk." Daniel and Lowe each break out into screaming release from the nightmare before turning it over to Bang, who somehow kicks it up a level, first riding the "phunk" of Michael Carvin's manic backbeat, then flailing and sawing until the music becomes one jagged wall of sound, and then smashing through it like a man taking a sword to his demons.

Billy Bang reports that making this album helped him to find peace. Vietnam: The Aftermath is an act of personal courage. Through the objectivity imposed by art, it goes beyond the personal to confront some of the darkest repressed memories in our national psyche.

— Thomas Conrad
RON CARTER

Stardust

Ron Carter, bass; Benny Golson, tenor sax; Joe Locke, vibes; Sir Roland Hanna, piano; Lenny White, drums
Performance ****½
Sonic ****½

There's little doubt that bassist Ron Carter is chiefly renowned as the linchpin in the rhythm section of Miles Davis' classic mid-1960s quintet, in which Carter, Herbie Hancock, Tony Williams, and Wayne Shorter teamed with Davis to deliver extremely plastic renditions that were inches away from being completely free.

Carter's own albums have revealed a more melodic, mainstream bent. On such memorable efforts as 1999's Orfeo (Blue Note), he deliciously exploited mostly Brazilian songs with tenorman Houston Person and guitarist Bill Frisell, and on 1998's So What (Blue Note), with pianist Kenny Barron and drummer Lewis Nash, Carter rendered originals and standards in an adventuresome yet accessible manner.

The elegant, ear-friendly stance of Stardust is thus no surprise. Carter gathers a top-drawer crew of tenorman Benny Golson, vibist Joe Locke, pianist Sir Roland Hanna, and drummer Lenny White to pay tribute to bassist Oscar Pettiford—a founding father of the modern jazz bass. The collection includes compositions by Pettiford and Carter as well as the ever-engaging title track, and should enchant those who like jazz played with endearing tunefulness, assured rhythm, intellect, nuance, and grace.

Pettiford's buoyant 'Bohemia After Dark' spotlights one of several sterling solos by Carter, who craftily mixes thumping, rhythmic ideas with flowing, choice-noted lines. The magisterial Golson, who wrote 'I Remember Clifford,' works songlike, offering relaxed ideas and more intense ones, all in breathy, glorious tone. White, who can bash with the best, kicks with subdued ferocity. Pettiford's 'Tamalpais' has Latin, classical, and swinging sections. Here, Hanna says much simply, as Carter and White support softly.

Carter's 'Nearly' is a luxuriously slow blues that never loses its thrust during a +10-minute run, and his 'Too Deep' finds Locke digging out crisp bop lines that are often tinted with gritty blues tones. On 'Stardust,' a fitting closer, Carter, with Hanna accompanying, uses keen notes to render both verse and chorus.

This rewarding music is made easily accessible via sound that focuses on clarity and accuracy from a close-in nightclub seat. The potentially clashing ranges of the various instruments are presented without distortion, and the fine points, from the lightest of White's drum taps to the soft gleam of Locke's vibes, stand right out.

—Zan Stewart

YAYA3

yaya3

Joshua Redman, tenor & soprano sax; Sam Yahel, Hammond B-3 organ; Brian Blade, drums
Loma 48277 2 (2002). Joshua Redman, Sam Yahel, Brian Blade, prods.; James Farber, eng. DDD. TT: 53:40
Performance ****½
Sonic ****

A jazz band that comes into existence from thin air always makes for a good story: serendipitous meeting and instantaneous telepathy, resulting in new material that's road-tested, then documented in the studio with the juices still flowing.

Such is the case with yaya3, a makeshift trio comprising saxophonist Joshua Redman, drummer Brian Blade, and Hammond B-3 player Sam Yahel. While their self-titled album (no doubt a one-off; each member leads his own group) is informed by the organ-trio tradition, it reaches beyond the pre-
dictable soul-jazz zone thanks to each musician's improvisational prowess. There’s good-time groove, a bent for lyricism, and an absence of ego, most prominently evidenced in the lack of overblowing. Redman, Yahel, and Blade are in sync, listening — and responding — to each other. It's team play for him's sake rather than a contest of one-upmanship.

The trio was born in the tiny West Village jazz club Small's, well known as an incubator of young jassers testing out new material in late-night/early-morning jams. Yahel held down a regular gig there, while Redman and Blade often dropped by for the open sessions. Because of a last-minute personnel scratch, Yahel enlisted Redman as a sub and the three took the stage one night sans rehearsal. It was a fit, and led to a road show, then a recording deal arranged through Redman's label, Warner Bros. Instead of confusing the disc with the saxophonist's solo work, WB resurrected the long-dormant Loma Records — the R&B imprint from the '60s and '70s that Ike and Tina Turner, Charles Wright, and Lorraine Ellison recorded for — to issue john3.

The nine-tune collection includes five Yahel tunes and two each by Redman and Blade. Redman frequently cuts loose, exhilarating the set on both tenor and soprano; Blade delivers a rhythm show with his finest-topunch beats; and Yahel keeps the groove solid with his fat pedal bass lines. Highlights include Redman's "Switchblade," taken for a jaunty spin with the sax man stretching for high notes and Blade drumming rock-em-sock-em style; Yahel's "One More Time," with emotive tenor/B-3 harmonies and a Blade frolic at the end; and the trio musing on Blade's moving ballad "The Spirit Lives On." The strongest track is the longest and most improvisationally expansive: Redman's "Two Remember, One Forgets," a summer samba-like piece that is both breezy and melodically potent.

john3 has the relaxed feel of a group playing for the sake of the music. As such, it's a pleasant listen. However, it's rarely rapturous and — disputing the label's hype of this being "a new kind of jazz" and "the music of quiet revolution" — certainly not earthshattering.

—Don Omellette
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Manufacturers' Comments

mbl 111B
Editor:
We at mbl would like to thank John Atkinson for doing his usual studious review in auditioning the mbl 111B in the August issue. Ultimately, Mr. Atkinson points out the (fortunate) tension that we at mbl face on a daily basis: How to take the superlative designs created by Jürgen Reis and his team and turn them into an eye-appealing work of art (in other words, how to balance form with function). We are very happy to confirm that Mr. Atkinson thinks as we do—we got the performance right—and we built a speaker that "looks drop-dead gorgeous with the grille in place!" The mbl 111Bs were designed to be auditioned without grilles and coupled to the ground with spikes. Full stop. What we did, aesthetically, is mess with the design team's work after the fact, so as to make the 111Bs appealing to even the most visually discerning significant other. What is our recommendation, and Mr. Atkinson's conclusion? Listen to these speakers without their grilles, and use these grilles only when prying fingers of young children, or the prying eyes of adults, put these unique omnidirectional drivers at risk.

A minor erratum: The review mentions that we use two "plastic-cone lower-midrange units." In actuality, we use two metal-cone drivers, mbl has never used plastic in the design of any of its audio products.

Peter F. Alexander
President, mbl of America

Rockport Antares
Editor:
I'd like to thank Mikey for the huge amount of time and effort that he put into his August review of the Antares, and of course I'm especially pleased with his ability to capture—and communicate—the essence of the product. I know he likes to chide me on matters of technospeak, but he certainly makes a good case for relevant applied technology.

As regards the nearfield measurements, I would like to clarify that the woofer's response actually continues to fall off to about -55dB before leveling out somewhat. What is depicted (and is exactly what we measure with the midrange unit connected) is the midrange unit's cross-communication with the microphone, coupling to the nearfield woofer response at roughly -20dB. Because of the limited amount of time and the logistical issues surrounding removal of the crossover and unsoldering the midrange leads, it was not practical to disconnect the midrange driver for the measurement. I'm also puzzled by the glitch at 1kHz, since this is an area where the Antares' response curve is typically extremely linear. If only it were a perfect world...

Andrew Pozer
Rockport Technologies

Meadowlark HotRod Shearwater
Editor:
Thanks so much for the wonderful review of our Meadowlark Shearwater. Chip Stern seemed to have a lot of fun listening to it, and did an excellent job of portraying the musical and emotional spirit of the speaker.

The musical performance of the Shearwater derives from its simple design. The Shearwater uses a ScanSpeak 12905/95000 tweeter, high-passed with a capacitor and then shelled to the level of the ScanSpeak 18W8545 woofer with a resistor, which is low-passed with an inductor. Since the performance characteristics of both drivers are well-established and are implemented in such a straightforward manner, the technical conclusions regarding sensitivity and treble extension were a bit surprising.

Part of our motivation in moving our facilities from southern California to northern New York last fall was to exert total control over the cabinetmaking part of the production process by bringing it all under our own roof. Our new factory has been in full operation since spring 2002, and our investment in sophisticated new technologies has enabled us to implement new cabinetmaking techniques that have exceeded our expectations for improving both build quality and aesthetic refinements in finish and design. The cabinets we are building today are noticeably "harder" than their predecessors.

I hope that, as we begin to flex our newfound manufacturing muscle by bringing new products to market, you and your readers will take an interest.

Pat McGinty
Meadowlark Audio

Manley 250 Neo-Classic
Editor:
VROOM VROOM!

It was way too bloody hot here in southern California today to come to work in an un-air-conditioned cage (it's an Alfa 164 and the AC must be following European holiday schedules, whaddaya expect...), so the better choice was to hop on my bike. My trusty '91 H-D FXLR roared me up to the factory, where, most appropriately, Paul Bolin's Manley Neo 250 review awaited me. As my poor, tortured ears readjusted to the sudden relative silence, the thrill of the ride flowed into the thrill of the read, and man, have I been stoked all day. Paul, thank you. It is such an honor to be personally appreciated for whatever I am, and even more of a compliment for that piece of my own soul I try to get into my gear to be recognized.

I do want to humbly and publicly thank my crew of 40 here at Manley Labs as well, especially my transformer-development team: Joe Rodriguez, Michael Hunter, Hutch, and Paul Fargo, as well as Baltazar Hernandez, who created the cosmetics and did all the layout drafting for this project. We are a team here. My boyz truly are the engine. I just happen to be the steering. We are all revved up about this powerful review.

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Inside the blizzard of urban legends surrounding the Rolling Stones—a compendium of which would dwarf ten Encyclopedia Britannica—is the old tale about how their recorded legacy exists in a variety of states, scattered across time zones, in studios and record label outposts all over the world. "It certainly was," says Jody Klein, senior VP at ABKCO Records.

One of the tantalizing (or far-fetched) nuggets is that a Stones tape was once found in Kuala Lumpur. "I've certainly visited Kuala Lumpur, and I won't comment any further than that," says a laughing Klein, the man in charge of ABKCO's The Rolling Stones Remastered Project.

Nothing was found at the North or South Pole, though—right, Jody? "No, but that was a suggestion as to where to store our archives."

"With all the threats of terrorism, we wanted to make sure they were safe," adds Terri Landi, the sound engineer who supervised the tape research and transfers for ABKCO.

The Rolling Stones Remastered is the long-awaited revival of the Stones ABKCO catalog—22 albums recorded between 1963 and 1970, all to be released on August 20. All discs will be dual-layer SACD/CD hybrids, and so will be back-and-forward-compatible—the series' main selling point. "SACD's [single layer] is great for the 5 or 10 people who have this technology," says Klein. (See John Pizzarelli's similar statement on p.79.)

The grand undertaking began when ABKCO began searching for a way to preserve the Stones' tape catalog. Assembling the sources was an enormous task. For example, "(I Can't Get No) Satisfaction," one of their greatest singles, exists in a finished version that was cut in Chicago but the form we all know is from a second session that occurred days later at RCA Studios in Hollywood. Retouching, finishing, or re-recording entirely were commonplace with this band.

Once the sources had been assembled, Terri Landi began sorting through the tapes, at first apprehensive about what she'd find. But "the tapes were really in excellent condition. We basically had four different types of tape that we were dealing with. Everything was mostly done on Scotch 120 and RCA Red Seal, which are acetate tapes. Or BASF and EMI tape, which were actually better. The problem you run into with acetate tapes is that it has a tendency to shed, where the oxide will just completely fall off the tape. We didn't run into any of those problems. We were very, very lucky."

Such classics as Aftermath, Let It Bleed, and Beggars Banquet have all been sonically refreshed, thanks to Sony's DSD (Direct Stream Digital) technology. Three albums—Out of Our Heads, Aftermath, and Between the Buttons—are being released in both the original US and UK versions. Metamorphosis, released on LP in 1975 in the US and never before available on CD, will be released in its original UK form, which includes two tracks unavailable on the US LP.

The dual-layer reissues add their own layers of intellectual mischief to the already garbled Stones catalog. While those terrible "electronically reprocessed for stereo" recordings have, for the most part, been replaced by mono mixes, some 13 original mono mixes have been replaced by stereo mixes, a move that affects such tunes as "(I Can't Get No) Satisfaction" and "Paint It Black."

Some fascinating aspects of the Stones' legacy were uncovered during the remastering process. For example, Landi found that the Stones' 1969 masterwork, Let It Bleed—for my money, the best studio effort of the 22 reissues—had A- and B-side master reels assembled from splices of BASF, EMI, and Scotch 120 tape. "We found that the songs that were recorded on the BASF had significant quality differences from those recorded on the Scotch 120," Landi says.

Landi singles out two machines that proved invaluable in the process: an ATR Ampex 100 with Aria electronics, rebuilt by Mike Spitz of ATR Service Co. in York, Pennsylvania; and a 1950s-vintage Ampex 351, its original tube electronics rebuilt by Bill Wells of Wells Audio in Brooklyn, New York.

Another unexpected discovery was the fact that a surprising number of the recordings had to be speed-corrected. The clearest example of this, according to Klein and Landi, was 1968's Beggars Banquet—the production master was recorded on a tape machine running at a faster speed, which meant it played back slower on a machine running at the correct speed. "That was a case where what you believe is reality for the past 30 or 40 years was not," says Klein. ABKCO hopes these new reissues will become the new reality for Stones fans.

Of course, all of this returning to the original master tapes makes one wonder: Is there a wealth of unreleased material? If so, why wasn't any included on these new discs?

"There are unreleased recordings by the Rolling Stones," Klein says in measured tones. "Our philosophy is that [the released versions] are the versions that they approved, and they are what we continue to sell and release."

Translation: As long as Mick and Keith are breathing, no unreleased Stones material will appear—much the same story as with the trove of unreleased Beatles material and Paul McCartney's and Ringo's continued robust health.

Virgin Records, which owns the rest of the Stones' catalog, is reportedly negotiating with Sony to release those recordings in new DSD remasters. Can the Beatles be far behind?

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